

An Evaluation of the Transportation Component of the Real Choices Systems Change Grant in Montana

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And

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1. EXECUTIVE SUMMARY

The Real Choices Systems Change Grant project was a three-year effort in Montana to provide “systems change” in three areas: housing, individualized services, and transportation. This report focuses exclusively on the transportation component of the Real Choices Systems Change Grant project. The overall goal of the transportation component was to develop two coordinated transportation systems in Montana, glean lessons learned and best practices, and share that information with providers in the rest of the state, and nationally.

While there was an emphasis to ensure that the transportation changes met the specific needs of people with disabilities, it was anticipated that improved service would be available to the entire community. The project was administered on behalf of the Montana Department of Public Health and Human Services (DPHHS) by the Montana Transportation Partnership (MTP). The Western Transportation Institute (WTI) provided technical support for the project.

The project began with the task of selecting two communities in the state. MTP developed a list of criteria that were used to select communities for the project. Proposals were solicited from fifteen communities in Montana, fourteen of which already had a public transportation system operating (FTA Section 5307 or 5311). After receiving several proposals, Helena and Ravalli County (Hamilton) were ultimately selected to receive funding and technical assistance.

In order to bring change to the transportation systems in Helena and Ravalli County (Hamilton), MTP had developed a list of tasks to be accomplished as the project progressed. These tasks included developing and implementing a coordination plan that provides quality and efficient service in Helena and Ravalli County and developing a statewide reporting system to collect and disseminate data on transportation services provided to persons with disabilities. The final tasks involved evaluating the system and providing sustainability reports that can be shared with other communities throughout Montana.

The general goals in Helena and Ravalli County were to assist individuals dependent on public transportation, increase the general public’s use of the transportation system and increase efficiency. In Helena, working through the Transportation Advisory Committee, many providers worked together to initiate service to a new area (East Helena/East Valley) and to increase efficiencies by combining resources and increasing coordination. In Ravalli County, these goals were met by implementing a flex route (checkpoint) service for Hamilton and the surrounding area, and changing a state law to increase the flexibility of providers to implement changes to their transportation systems so that they may better serve the needs of their clients.

The results of the Systems Change Grant project in Helena and Ravalli County are significant. In Helena, the new service to East Helena now provides over 700 rides per month. Further, a continuation of efforts may lead to further coordination, which may increase the amount of funding for transportation in the greater Helena area. This may lead to additional transit services where no service currently exists.

In comparison to Helena, the results from the Ravalli County area are yet to be fully realized. This is due in part to the fact that many of the changes planned for as part of the Systems Change Grant project in Ravalli County could not be fully implemented until a law was changed. House Bill 273, which exempted all rural public transportation providers (FTA Section 5311) from Public Service Commission oversight, and was signed by the Governor in March 2005, allowed BitterRoot Bus in Ravalli County to have the flexibility it needed to implement services that met

the needs of its customers. These needs included lower fares and the introduction of a fixed route service. However, because the law was not changed until six months before the Systems Change Grant project ended, the true effects/impacts of the project are yet to come.

There are further effects from the Systems Change Grant project that will be realized over the next few years. Passage of House Bill 273 not only affected the operation of BitterRoot Bus, but of other providers, elsewhere within Montana. In addition, the results of the Systems Change Grant project are going to be shared with transportation providers, local governments and state agencies, who will hopefully utilize the lessons learned and best practices from this three-year project.

A summary of the lessons learned and best practices include:

- A vibrant, engaged Transportation Advisory Committee (TAC) is vital if changes are going to occur in a given community;
- A Transportation Advisory Committee needs to include people who are known as being “transportation disadvantaged”: persons with disabilities, senior citizens, and those with low incomes;
- Transportation providers must be willing to make changes to their services, based on plans developed with input from the TAC;
- A failure to plan is a plan to fail. While a plan doesn’t have to be voluminous or formalized, a planning process allows all options to be considered.
- Change takes time. No significant change can occur overnight, and as evidenced by the ridership figures for the East Helena route, nine months may be needed to truly establish results.
- The only thing that is constant is change. Change is going to occur whether we want it to or not. Our only decision is whether we are going to be proactive or reactive to change.
- Institutional support is necessary. While change can take place at a local level without support from state institutions, if significant progress is going to be made, support is needed at all levels, locally and on a state agency basis.

The remainder of this document provides the details of the transportation component of the Real Choices Systems Change Grant project, a three-year project that provided tangible improvements to the transportation systems in Helena, Ravalli County, and the rest of Montana.

2. INTRODUCTION

“I am not against progress, I just don’t like change”

Q: How many psychiatrists does it take to change a light bulb?

A: Only one, but the light bulb has to want to change!

These two humorous passages note that there are many feelings and perspectives about change. Implementing change can often bring with it a host of emotions and the difficulty of the process can run the spectrum from easy to impossible. Therefore, working on a project that is focused on change is nearly certain to be interesting, to say the least.

The focus of the CMS Real Choices Systems Change Grant project was a three-year effort in Montana to provide “systems change” in three areas: housing, individualized services, and transportation. This report focuses exclusively on the transportation component of the Real Choices Systems Change Grant project. The overall goal of the transportation component was to develop two coordinated transportation systems in Montana, glean lessons learned and best practices, and share that information with providers in the rest of the state, and nationally.

While there was an emphasis to ensure that the transportation changes met the specific needs of people with disabilities, it was anticipated that improved service would be available to the entire community. The project was administered on behalf of the Montana Department of Public Health and Human Services by the Montana Transportation Partnership (MTP).

2.1. Montana Transportation Partnership

The Montana Transportation Partnership (MTP) is an organization that was founded in 1999 with a mission to, “ensure Montanans, in their community of choice, have accessible, safe, affordable, and reliable transportation services through the development of coordinated systems.” MTP is a coalition of partners, including persons with disabilities; seniors, and other groups considered to be transportation disadvantaged; transportation service providers; transportation associations; nonprofit advocacy organizations and state human service agency representatives. The partnership fulfills its mission through advocacy and planning for the coordination of transportation resources.

After receiving funding for the three year project, the MTP contracted with the Western Transportation Institute (WTI) to provide technical assistance to two communities that would be selected to participate in the program. WTI would also provide technical assistance to other areas within Montana on an “as needed” basis.

In addition to the Systems Change Grant project, money was obtained through an Administration on Developmental Disabilities (ADD) Project of National Significance grant that provided funding for the support of two people, Mike and June Hermanson. Mike and June were invaluable in working with the two pilot communities selected for the Systems Change Grant project, as well as providing transportation and coordination information throughout Montana.

2.2. Initial Tasks

The initial tasks were developed at the beginning of the project to allow a framework for the overall System Change Grant project. Subsequently, many of the same tasks were also applied to the projects in the two “pilot” communities.

1. **Project Management**- This task provided for the oversight of the project.
2. **Coordination Plan Development** - The coordination plan for the local planning portion of this project included both an institutional component and a technical component. Under this task, project participants, roles, and responsibilities were defined.
3. **Coordination Implementation** – When the coordination plan was in place, the selected pilot community began the implementation process.
4. **Technical Implementation** - This task was undertaken for to implement the selected pilot community’s deployment of new technology tools (such as a shared ride computer system, smart cards, virtual transit mall or other options).
5. **Operations & Maintenance** - The technology component of the coordination effort went into the operations phase when any new tools were implemented as outlined in the coordination plan. The milestones completed during this task were initial operations and transitioning from development to operations and maintenance
6. **Statewide Reporting Requirements** – WTI worked with MTP, the Department of Health and Human Services, and other reporting agencies to develop the requirements for a statewide reporting system that collects and disseminates data on transportation services provided to persons with disabilities.
7. **Evaluation & Sustainability** - To help ensure the pilot project component will be beneficial beyond the period of the grant; WTI evaluated the system and developed a sustainability report. WTI collected and evaluated information related to the objectives of the system:
 - Increase the number of trips
 - Improve utilization of available vehicles
 - Improve utilization of staff
 - Decrease long-term administrative costs per trip
 - Improve customer satisfaction
 - Improve job satisfaction
8. **Outreach & Follow-up** - MTP is sharing findings from this study with organizations and communities in Montana. WTI prepared and distributed documents as requested and approved by MTP.

Once the overall project was set, the Montana Transportation Partnership then needed to select two pilot communities.

2.3. Selection Process

After the Systems Change Grant funding was secured, one of the first steps was to select two communities that would act as “pilot” communities for the project. When selected, the two communities would receive funding and other assistance to aid in the “change” of their public and specialized transportation systems. A letter was sent to Federal Transit Administration (FTA) section 5307/5311 providers in Montana (Table 1), asking them to apply to participate in the Systems Change Grant project. In addition, the community of Bozeman was asked to apply.

Table 1: List of Providers

City	Provider
<u>FTA Section 5307</u>	
Billings	MET Transit
Great Falls	Great Falls Transit
Missoula	Mountain Line
<u>FTA Section 5311</u>	
Browning	Blackfeet Transit
Butte	Butte-Silver Bow Transit
Glendive	Dawson County Transit
Lewistown	Fergus County COA
Poplar	Fort Peck Transportation
Jordan	Big Dry Transit
Helena	HATS
Kalispell	Eagle Transit
Glasgow	Valley County Transit
Hamilton	BitterRoot Bus
Broadus	Powder River Transportation

The selection process was based on the following criteria:

- Urban/rural components
- Native American (Reservation) population
- Number of trips (not primary)
- Ability to show change
- City separate from rural area
- Linked trips
- Champions/advocates
- Impact of change on development patterns
- Participation of providers
- Cost of implementation
- Sustainability

The Montana Transportation Partnership ultimately selected Helena and Ravalli County (Hamilton) to receive funding assistance to make changes to their current transportation systems. The proposals sent in by Helena and Ravalli County each had a different plan for how they would achieve change within their public and specialized transportation systems. The specific plans of each community and other aspects of the Systems Change Grant project are detailed in the sections that follow.

2.4. Document Map

The remainder of this document details the projects that were a result of the overall Real Choices Systems Change Grant Project. Chapter 3 focuses on the Helena project, and Chapter 4 focuses on the Ravalli County project. Chapter 5 details projects or concepts that were not part of the Helena and/or Ravalli County efforts, but were initiated by the Montana Transportation Partnership, under the umbrella of the Systems Change Grant project (such as the Statewide Reporting Requirements task). The conclusions of the project are presented in Chapter 6, and Chapter 7 provides recommendations. A glossary in Chapter 8 provides a list of acronyms used in this report, and Chapter 9 contains the references cited in this document. Appendices follow Chapter 9.

3. HELENA

This section highlights many of the activities of the Systems Change Grant project in the Helena area. Appendix A contains the initial Coordination Plan that was created for the Helena area.

3.1. Initial Plan

The initial plan presented to the Montana Transportation Partnership was to create a transportation link to the East Helena (East Valley) area. As shown in Figure 1, East Helena lies approximately 5 miles east of Helena. Previously, there was no public or specialized transportation to this area.

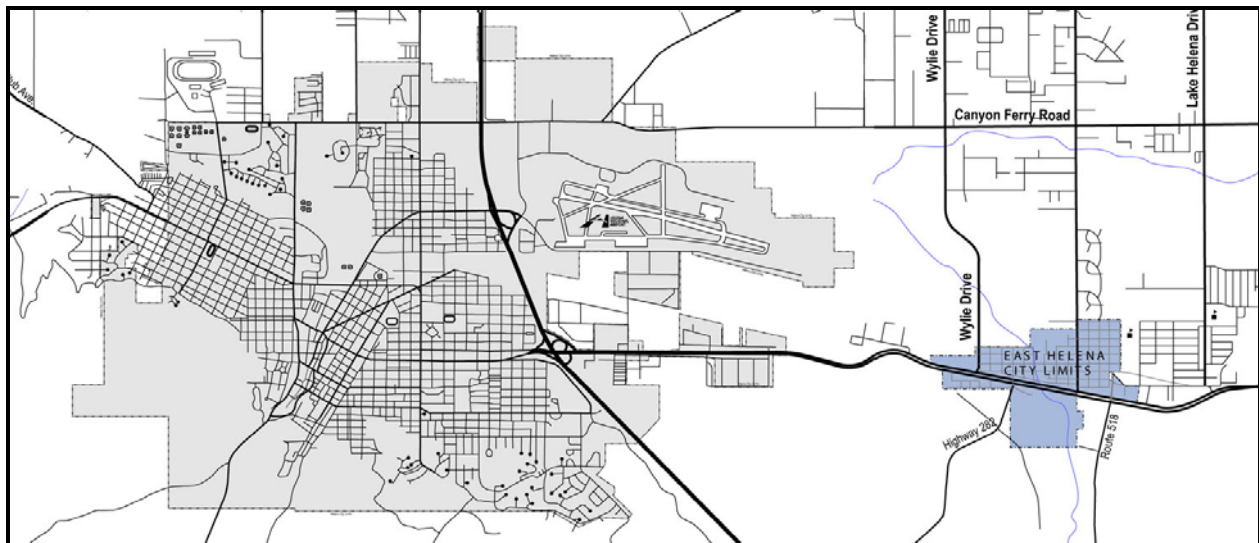


Figure 1: Helena – East Helena Area

As noted in *The Greater Helena Area 2001 Transportation Development Plan Update* [1], one of the short-term recommendations (Item #9) was to implement transit service between Helena and East Helena. While a contract was signed between the Montana Transportation Partnership and the Rocky Mountain Development Council to provide funding and technical assistance for this effort, many other individuals and organizations were involved in this effort.

Already existing in Helena was a group known as the Helena Area Transportation Council (HATC). HATC is the Transportation Advisory Committee (or TAC) in the Helena area. The roles and responsibilities for a TAC are defined by the Montana Department of Transportation, and are shown in Appendix C. Initially, the Helena Area Transportation Council consisted primarily of the providers of transportation services, with little representation from persons who are transportation disadvantaged. However, as the Systems Change Grant project progressed, the HATC expanded to include transportation dependent individuals, as well as advocates from various Human Services providers and advocates in the Helena area. As the HATC grew, regular attendance to the meetings included the following agencies:

- City of Helena, Helena Area Transit Services (HATS)

- Rocky Mountain Development Council (RMDC)
- Montana Council on Developmental Disabilities
- Spring Meadow Resources, Inc.
- Westmont, Inc.
- Montana Department of Transportation
- Area IV Agency on Aging
- Capital City Chapter of the Montana Association for the Blind
- Montana Transportation Partnerships
- RMDC Headstart

As noted in the HATC Bylaws, “It shall be the purpose of the organization to provide:

- Information and referral exchange among paratransit agencies;
- Volume purchasing of goods and services;
- Coordination, cooperation, and advocacy for the improvement and provision of transportation services within the greater Helena area to all individuals desiring or requiring public transportation services;
- Acquisition of local, state, federal, and private funding for the purpose of coordination and operation of public and specialized transportation services.”

In general, the Transportation Advisory Committee (HATC in Helena) is the one group that “serves as the local planning group that reviews local transportation needs and resources” [2]. It is by working with the HATC that all transportation needs can be reviewed, and plans discussed to address those needs.

As a result, the Helena Area Transportation Council became the focal point for all discussion related to the Real Choices Systems Change Grant project in the Helena area.

3.2. Implementation

After an initial route and timetable was set for the new East Helena (East Valley) route, service began in July 2003. The route in East Helena was a flexible route, in that the bus could make deviations to pick people up at their house, instead of people having to go to a designated bus stop. The initial service operated from 9 am to Noon, and 1 pm to 4 pm, Monday through Friday. One of the initial schedules is shown in Figure 2.

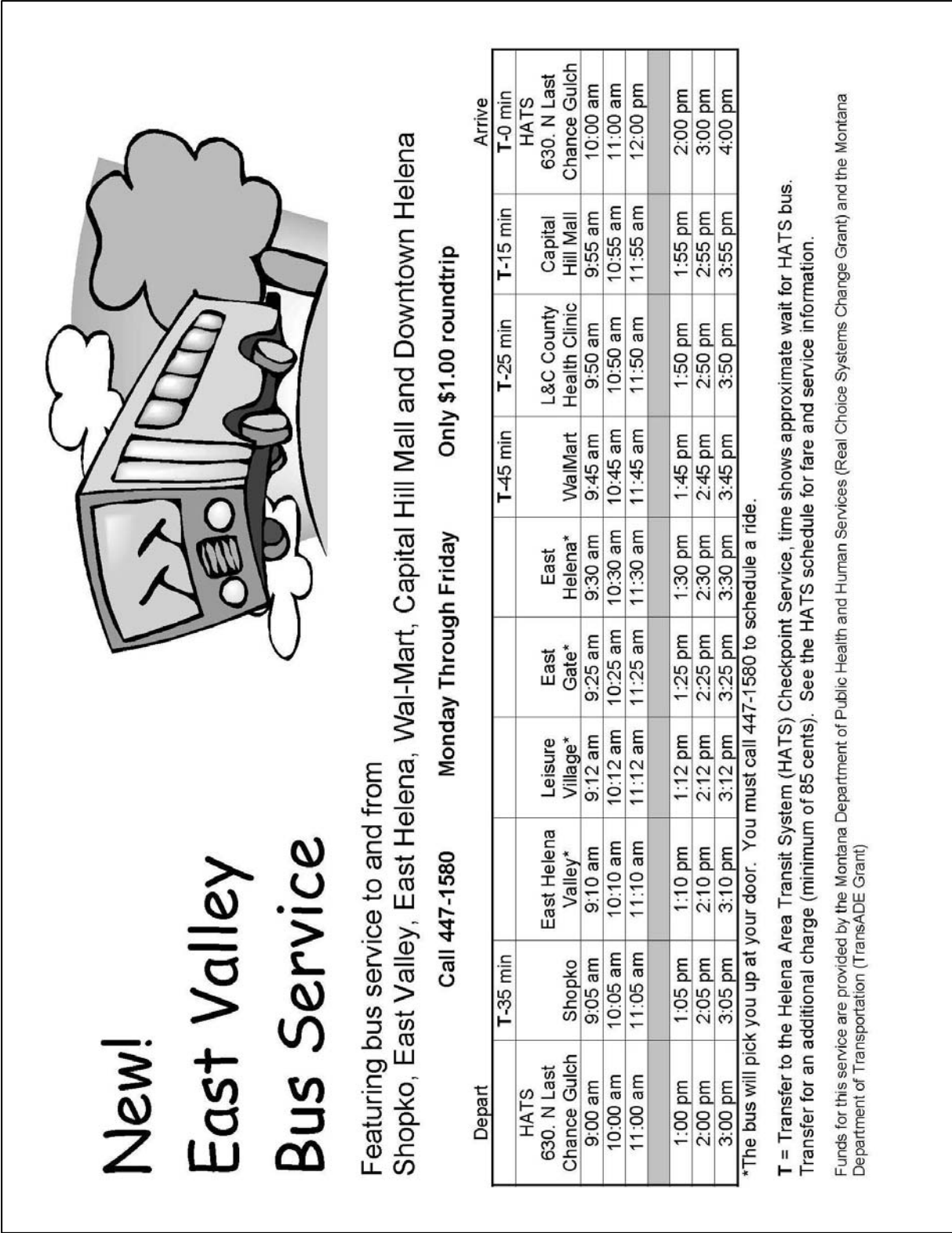


Figure 2: Initial East Helena Schedule

The Helena Area Transportation Council had agreed that the goal was to achieve approximately 200-250 rides per month on the new service. In July 2003, the first month of service, only 15 rides were provided. During its monthly meetings, members of the HATC noted that there needed to be increased marketing of the new service, and that travel training was needed so that the public could understand how to use the new service.

3.3. Progress

By the sixth month of service (December 2003), the number of monthly rides had grown to 186 (Table 3). However, discussion still focused on how to make the system more usable. One discussion was focused on the hours of service. Because of the limited hours of operation, it was believed that most people could use the service only for medical appointments and shopping purposes. While these trips are very important, it was believed that by expanding the hours, more people would use the system.

Discussion focused on how to expand the hours of service from 7 am until 7 pm, Monday through Friday. After a review of budgets and other information, it was decided that the service would be expanded to those hours in April 2004; just 10 months after the service began. Ridership continued to grow, and in July 2004, one year after the service had been implemented, ridership had grown to 556 rides per month. While everyone involved with the Helena Area Transportation Council (HATC) was thrilled with the improvement in ridership on the East Helena bus route, it was understood that the Systems Change Grant project was about more than just the new service.

It was decided that the Western Transportation Institute would work with the HATC and its members to create an initial coordination plan. Through a series of work meetings, HATC was able to review possible coordination efforts, and prioritize what issues were the most important. This information helped determine the actions required to increase efficiency and quality of service for the Helena area. While the initial coordination plan is shown in Appendix A, it is important to remember that coordination is an on-going, fluid process.

Many of the discussions about how to coordinate and what should be done are reflected in the minutes of the HATC meetings (which are available from HATC). While it is important to gather and analyze information, and establish goals for the coordination process, it is also important to be flexible in the process so that new challenges can be addressed, and new ideas can be added to the discussion.

3.3.1. Goals

The Western Transportation Institute worked with the Helena Area Transportation Council to establish a set of possible coordination activities. These activities were derived from a list of challenges relating to transportation in the Helena area. These activities were then assigned a priority, a cost and a timeframe for implementation. Table 2 shows the goals and related information.

Table 2: Possible Coordination Activities in Helena

Description	Level of Coordination	Priority	Cost	Time Frame
Vehicle and Trip Sharing	One agency allows other agencies to use its vehicles, which would otherwise not be in use.	High	Low	Implement as soon as possible.
Shared Communication and Technology	Coordinate communication and technology solutions.	High	Medium-High	Implement as soon as possible.
Joint Maintenance	Single maintenance shop or contracting maintenance for participants.	High	Low	Implement when all vehicles are pooled.
Joint Purchasing	Bulk discounts save money for participating agencies.	Medium	Low	Implement as agencies pool resources.
Shared Training	Standardization of training programs.	High	Low	Implement as soon as possible.
Information and Referral	Participants are aware of services provided and can properly direct customers.	High	Low	Implement as soon as participants have combined resources.
Assistant Services	Coordinate among participants the enlistment of volunteers for assistance programs for customers requiring access to transportation.	High	None	Implementation can take place immediately.
Marketing	After participating agencies have joined, increase public knowledge of all services available.	High	Low-Medium	Implement as agencies pool resources.
Grant Applications	Evidence of coordination is required for many transportation related funding programs. Document coordination activities for use in grant applications.	High	Low	Implement as soon as possible.

With these general goals in place, the Helena Area Transportation Council (HATC) could then direct their efforts. As previously noted, it was also important to be able to modify these goals and efforts based on new opportunities and information.

Further research was needed to determine the best way to achieve the goals. For example, one goal was joint maintenance of vehicles owned by the four main providers that are part of the Helena Area Transportation Council (HATC): Helena Area Transit Service (HATS), Rocky Mountain Development Council (RMDC), Spring Meadow Resources (SMR) and West Mont (WM). One of the first things that had to be done was to find out how many vehicles existed between these organizations. WTI conducted a quick survey and found out that 39 vehicles were operated by the four agencies.

One issue that came up regarding maintenance was that HATS is a part of the City of Helena, and had its own maintenance shop. Therefore, instead of having the various operators pool their vehicles and have a combined bid for maintenance services, it was proposed that HATS could likely perform the maintenance on the other agencies' vehicles. This would not likely occur, however, until HATS could complete a new facility.

Another goal was to ensure that the riders on the East Helena service would be able to easily transfer to the check-point route operating in Helena. The East Helena service was being operated by RMDC, and the Helena service by HATS. The communication between these organizations was important. While a significant number of issues were discussed in the context of the Helena Area Transportation Council, communication also occurred directly between the various organizations that were part of the HATC.

In addition to schedule coordination, it was important to coordinate fares, so clients could easily transfer between the two routes. The Western Transportation Institute conducted a brief survey to determine the fares being charged by public transportation agencies within Montana. WTI put this information, plus recommendations for a fare structure for the Helena area, into a short document, which was provided to the HATC. This coordination between HATS and RMDC is less of an issue as the project ends, as HATS took over the operating of the East Helena route.

The goals shown in Table 2 and the goals discussed above were focused on achieving changes to the transportation system in the Helena area. The Real Choices Systems Change Grant not only focused on making changes, but also on evaluating the outcomes of changes, and providing sustainability of the changes made within the transportation systems in the two pilot communities. The evaluation and sustainability of the effort in the Helena area is addressed in the following sections.

3.4. Evaluation

Because a primary focus of the Helena project dealt with implementing a new transportation service to the East Helena area, one evaluation method would be to see how many rides were provided by the new service. Table 3 shows the ridership on the East Helena route during the Systems Change Grant period.

Table 3 East Helena Ridership

Month/Year	Monthly Rides
July 2003	15
August 2003	26
September 2003	65
October 2003	66
November 2003	63
December 2003	186
January 2004	311
February 2004	273
March 2004	320
April 2004	410
May 2004	423
June 2004	547
July 2004	556
August 2004	477
September 2004	732
October 2004	622
November 2004	493
December 2004	479
January 2005	652
February 2005	619
March 2005	747
April 2005	715
May 2005	664
June 2005	727
July 2005	1,099
August 2005	1,283
September 2005	1,042

When viewing the ridership, it is important to note that when the service began, the hours of operation were 9:00 am to noon, and 1:00 pm to 4:00 pm, Monday through Friday. Beginning in April 2004, the hours were expanded to 7:00 am to 7:00 pm, Monday through Friday. The expansion of operating hours allowed individuals who lived in East Helena, and had an 8-5 or 9-5 job in Helena, to use the service.

In addition to the ridership figures, another way to evaluate the service is through a survey of those riding the bus. In December 2004, Montana State University-Billings conducted a survey on the buses as part of their work on the Systems Change Grant project. The response rate for the surveys was fairly low, and in the end only a total of 17 partially or fully completed surveys were collected. However, the responses to the survey indicated that riders were pleased with the service.

The responses to four questions from the survey are highlighted here. The results from the entire survey can be reviewed in Appendix D. In addition to two demographic questions, the survey included eight questions/statements. Respondents could use a five-point scale to indicate their level of agreement with the various statements. The specific responses included “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree”. Four questions from the survey related to various aspects of the service are shown in Figure 3 through Figure 6.

The percentage of responses in each category is based on the total number of responses to that question. Therefore, if only 15 people answered a question, the percentage is based on 15, not the total number of 17 people who handed in a survey.

Question 3 of the survey asked respondents their level of agreement with the statement, “The cost of transportation is reasonable.” The responses to this statement are shown in Figure 3.

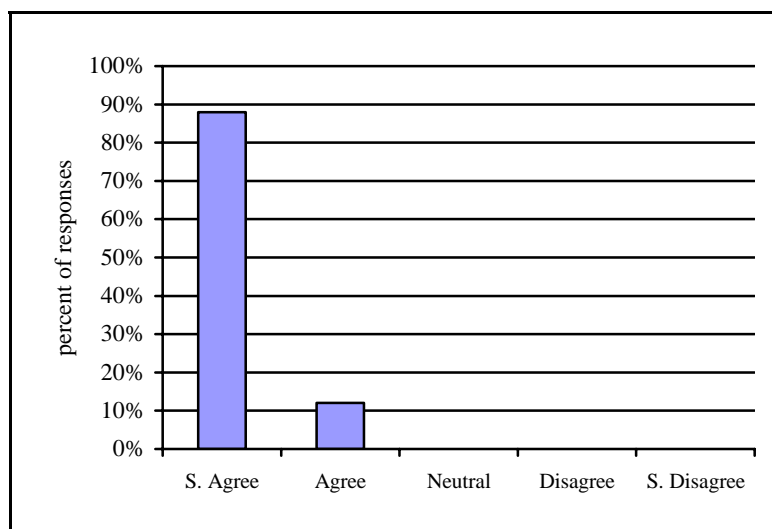


Figure 3: Responses to Survey Question 3

The fourth question of the survey asked respondents their level of agreement with the statement, “The service meets my expectations.” The responses to that statement are shown in Figure 4.

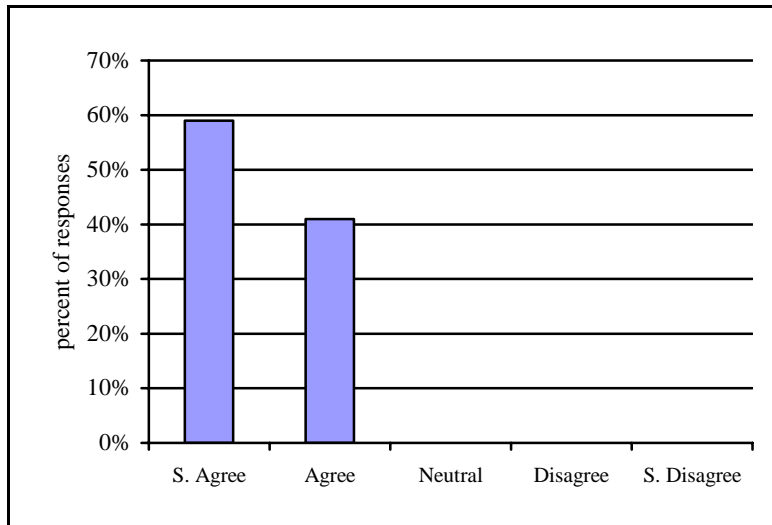


Figure 4: Responses to Survey Question 4

An important feature of a transportation system is its ability to get people to where they need to go, on time. Question 6 of the survey asked respondents their level of agreement with the statement “I get to my destination on time.” The responses to this question and related statement are shown in Figure 5.

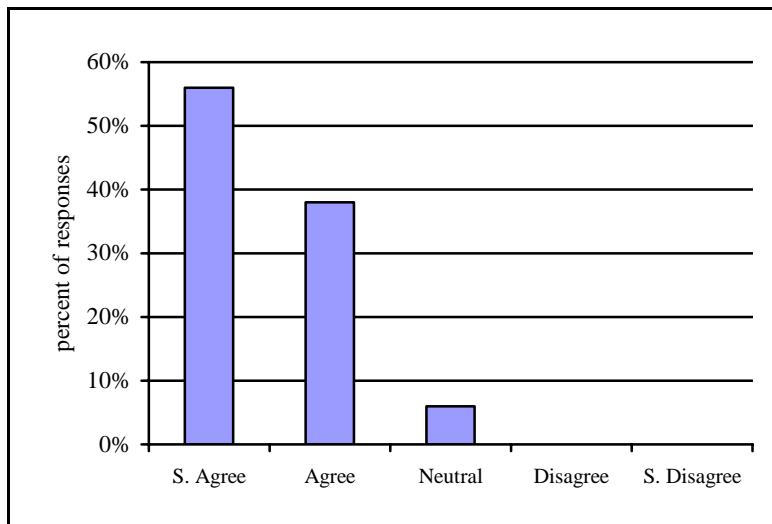


Figure 5: Responses to Survey Question 6

While the transit system is open to everyone, the Real Choices Systems Change Grant project focused on persons with disabilities and senior citizens. An important aspect is therefore the perceived safety of the transit system. Question 7 of the survey asked respondents their level of agreement with the following statement, “I feel safe using the system.” The responses to this question and statement are shown in Figure 6.

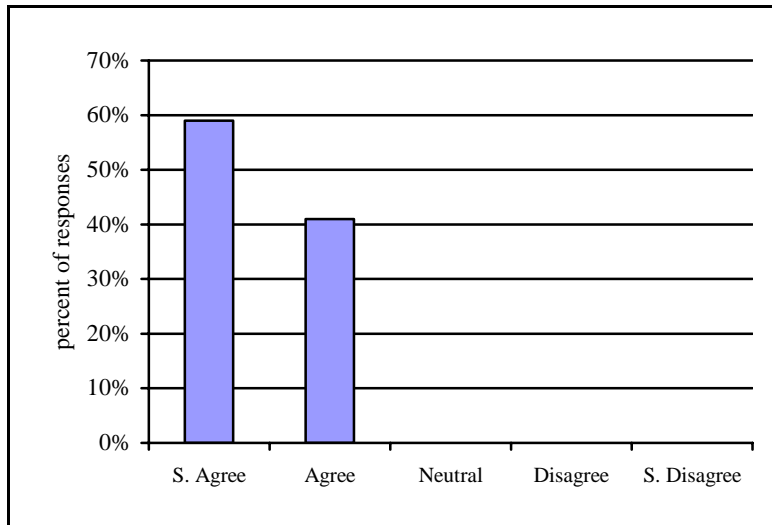


Figure 6: Responses to Survey Question 7

The results from the survey, combined with the ridership figures indicate that the East Helena service was a tremendous success. While the new route and several coordination initiatives were successful, the process of addressing transportation issues is an ongoing process, and there is work that will need to be completed after the Real Choices Systems Change Grant ends. The following section looks at some of the next steps that will likely occur after the project has concluded.

3.5. Next Steps

The success of the Real Choices Systems Change Grant project in Helena has attracted the attention of people in other communities. Individuals associated with two other communities have approached the Helena Area Transportation Council (HATC) about new transportation services linking their communities with Helena.

The first town is Lincoln, is a small community about a 60 mile drive from Helena (Figure 7). The only medical clinic and pharmacy in the town closed in early 2005, and the residents need a source of reliable transportation into Helena for basic medical purposes. While the discussion about providing transportation to Lincoln began during the term of the Real Choices Systems Change Grant, further discussion and the possible implementation of service to Lincoln will occur after the Real Choices Systems Change Grant has ended. This underscores the point that changing transportation services is an on-going process.

Another issue that will continue after the Systems Change Grant project has ended is providing service between Townsend and Helena. Townsend is a community of approximately 2,000 residents about 32 miles from Helena. In a preliminary discussion between an individual from Townsend and the HATC, transportation issues in Townsend included the need for more trips for medical purposes to Helena, and trips for employment purposes. One issue that will need to be resolved as this discussion moves forward is the fact that Townsend is the county seat for Broadwater County, while Helena is the county seat for Lewis and Clark County, in addition to being the State Capital. Therefore, there are jurisdictional issues that must be addressed.

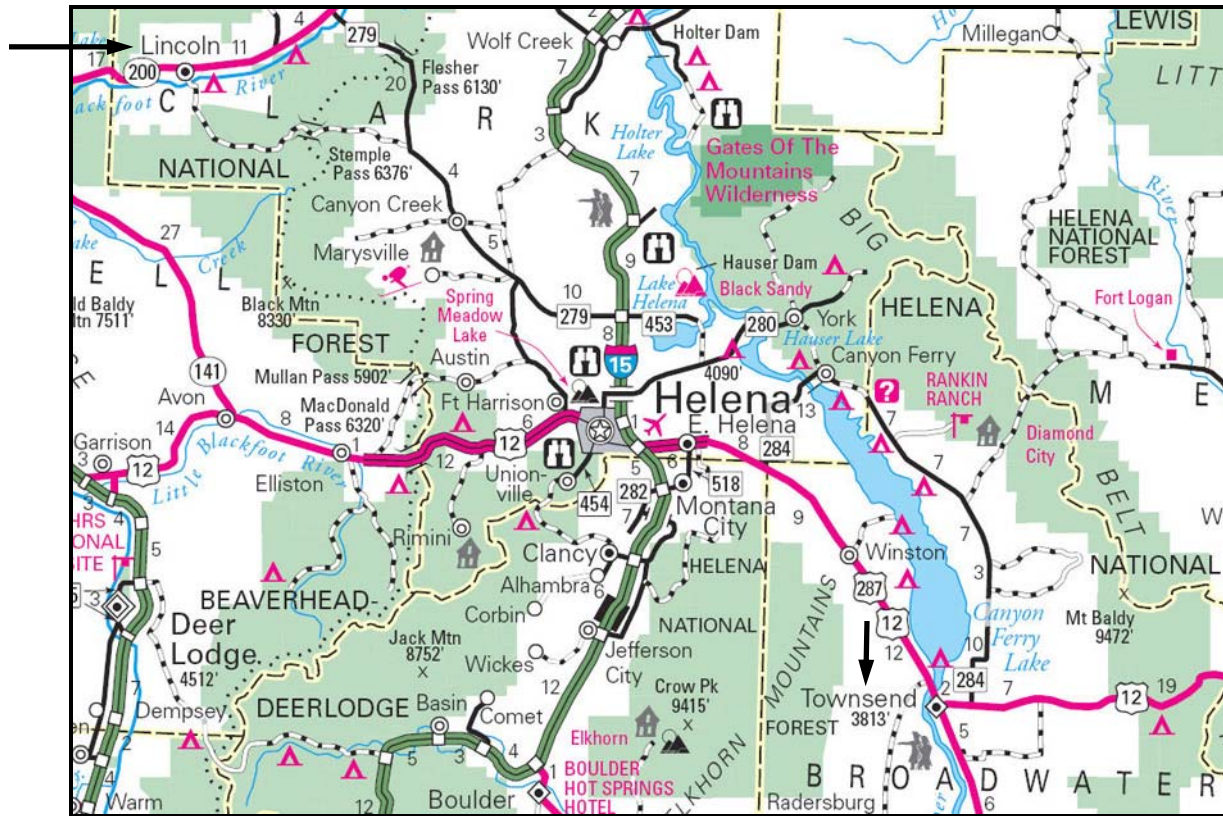


Figure 7: Helena-Lincoln-Townsend Area

A concept that has been discussed within the framework of the Real Choices Systems Change Grant has been the use of volunteer drivers to drive people between various communities. If there are a reasonable number of people who drive between Lincoln and Helena, or Townsend and Helena, there may be a way to tap these resources, and provide rides for people who need transportation between these communities for medical purposes. Further research into these opportunities will likely continue after the Systems Change Grant project has ended.

Technology was another issue that was not resolved by the time the Systems Change Grant project ended. The CARDS[®] software created by the Western Transportation Institute was tested by the Helena Area Transit Service (HATS), but due to some technical issues (hardware issues) the software was never installed and used by HATS. There was a desire to use the CARDS software, as the Helena Area Transit Service was basically scheduling all rides by hand. HATS was using a word processing software to print manifests, but rides were written in by hand, and ridership was counted using a ledger book and 10-key adding machine.

Another issue that will continue to move forward is the further coordination, cooperation and possible consolidation between the four main transportation providers in Helena: Helena Area Transit Service (HATS), Rocky Mountain Development Council (RMDC), Spring Meadow Resources (SMR) and West Mont (WM). In June 2005 a Memorandum of Understanding was signed between HATS (the City of Helena), RMDC, and Lewis & Clark County. This MOU allowed County money that was going to RMDC to now go to HATS.

HATS can use the County money as “local match” and obtain more Federal Transit Administration (FTA) Section 5311 money for transportation services. This will allow for the sustainability of the East Helena service, and may leave additional monies for other transportation purposes.

Current FTA regulations also allow “contracts for services” to be used as local match, so Helena Area Transit Service (HATS) may be able to contract with Spring Meadow Resources and West Mont to provide transportation, and use the revenue received as additional match for Section 5311 funds. Discussion about the possible consolidation of transportation services in Helena occurred during the Helena Area Transportation Council (HATC) meetings, beginning in the summer of 2004. Due to the on-going nature of systems change, the possibility of a further consolidation of transportation providers in Helena is a possibility, but this goal would have to remain a focus of the HATC.

3.6. Lessons Learned & Best Practices

One goal of the Real Choices Systems Change Grant Project was to take the lessons learned from the two pilot projects, identify best practices, and share that information with others. This section of the report focuses on lessons learned and best practices from the Helena project.

3.6.1. Lessons Learned

As noted in the Transportation Advisory Committee (TAC) information provided by the Montana Department of Transportation (Appendix C), a TAC “consisting of local transportation providers and interested residents, serves as the local planning group that reviews local transportation needs and resources.” One of the most important lessons learned in Helena was that for Systems Change to succeed, a strong TAC is vital.

The Helena Area Transportation Council (HATC) was revitalized during the Systems Change Grant process, and in the revitalization, began to discuss transportation challenges not only in Helena, but in other communities as previously noted. The HATC provided a forum for an exchange of ideas, and if someone in the community had a transportation-related issue, they knew that they could discuss that issue with the appropriate people by attending an HATC meeting.

As important as the TAC is, it is also likely that many people don’t realize it exists, or understand its purpose. Because of the success of the East Helena bus service, and publicity surrounding the service, more people became aware of the TAC in Helena. However, in many communities in Montana, the TAC’s may have limited membership, and many people in the community may not be familiar with its purpose. As the new Surface Transportation Bill (SAFETEA-LU) has a greater emphasis on local planning, it is hopeful that the TAC’s in all communities will see the level of participation and activity that occurred in Helena.

Another lesson learned is that change takes time. As shown in the ridership data in Table 3, it took seven months before the ridership of the East Helena bus service met the goals established. Further, it was ten months after the service started that the hours were expanded to provide service that better met the needs of the customers (as evidenced by the increase in ridership).

It took time to work on funding arrangements, hire sufficient personnel, ensure that there was adequate equipment for the project, and many other aspects that were all related to providing a

reliable transit service. It also took time to make sure all necessary rules and regulations were followed. Having a good working relationship with the Department of Transportation is also essential to make sure that changes can occur in a timely manner. Once the changes do occur, it is also important to make sure that the changes are sustainable.

A major emphasis of the Real Choices Systems Change Grant project was that the changes made to the transportation system be sustainable. At first, participants were primarily focused on expanding service; therefore, it took time to shift attention to sustainability issues. The sustainability was complicated because it called for funding that was being received by the Rocky Mountain Development Council (RMDC) to be transferred to the Helena Area Transit Service (HATS). This transfer of funds also included Lewis & Clark County and the City of Helena. The success of the East Helena service made it easier for people to see the benefits of sustaining the project. The Memorandum of Understanding (MOU) that was eventually signed provides the funding that will allow the sustainability for the East Helena route.

In summary, the lessons learned from the Helena project were that: change takes time; it is important to have a vibrant, committed TAC, including persons who are transportation disadvantaged (persons with disabilities, senior citizens, low-income individuals); and that the transportation changes that are implemented must be sustainable. One other lesson learned is to remain flexible. As more people join the TAC or are aware of it, more transportation issues may be presented to the TAC. It is important to incorporate new challenges and solutions into the process, and not get fixated on one specific issue. Planning for transportation is an on-going process, and it is important to celebrate the successes along the way, while recognizing that there will always be more that can be done.

The lessons learned from Helena can be translated into “best practices” that others can use to make changes to the transportation systems in their particular communities.

3.6.2. Best Practices

The following best practices could be used in any community to help address transportation-related issues. The majority of these practices focus on having an inclusive group to discuss the issues, and having adequate time and other resources for proper planning and communication. The best practices noted below are not in any specific order.

1) **A strong TAC is vital.** It is nearly impossible to address the transportation issues in a community unless there is a forum for discussion of those issues. The TAC needs to be that forum for discussion about the issues and solutions to the problems.

2) **A strong TAC is a diverse TAC.** Unfortunately, in some areas, the TAC only consists of the transportation providers in a region, and does not include “the public”. As noted in Appendix C, “TAC’s should include representatives from the following: Developmental Disabilities Organizations, Senior Citizen Centers, Hospitals, Nursing Homes, Retirement Facilities, Local Elected Public Officials, General Public Transportation Providers, Interested citizens including transportation users.” It is also important to include private transportation providers, such as taxi companies, as much as possible.

3) **Planning is essential.** In order to develop a plan that will address as many of the transportation-related issues that exist in a community, it is important to gather data as to what resources exist in the community. These resources include vehicles, capital (funding) and

knowledge (human capital). The *Montana Coordinated Transportation Handbook* has a wealth of information on the planning process, and should be used as a resource for planning and other transportation coordination activities.

4) **Remain flexible.** While many issues will be addressed through a proper planning process, things change over time. New rules and regulations may come into effect, funding sources may change, and it is important to adapt to these changes. One way to address an ever changing environment is to plan for periodic (annual, biennial) reviews of the transportation plan.

5) **Celebrate your successes.** While making changes to a transportation system is an ongoing process, it is possible to have significant impacts on the system. It is important to take the time to recognize the successes that have occurred. This way, people can remain energized about the challenges that still exist.

4. RAVALLI COUNTY

Ravalli County was the second of the two “communities” selected under the Real Choices Systems Change Grant Project. Ravalli County (county seat Hamilton) lies in the western part of Montana, on the border with Idaho. Although it has a relatively small population, Ravalli County is one of the fastest growing counties in Montana.

This chapter discusses the overall efforts and outcomes related to the Systems Change Grant efforts in Ravalli County. The initial detailed *Ravalli County Transit Service Improvement Plan* can be found in Appendix B.

Note: During the three-year project, Ravalli County Transit changed its name to BitterRoot Bus. The majority of this document refers to the transit system as BitterRoot Bus; however, the former name of Ravalli County Transit may be used.

4.1. Initial Plan

The BitterRoot Bus (formerly Ravalli County Transit) has been operating as a public transportation agency (FTA Section 5311 provider) since 1999. Due to many factors, the system provided service mainly to senior citizens and persons with disabilities. The overall plan for “systems change” was to increase the use of the system by the general public. In addition to securing assistance from the Systems Change Grant, BitterRoot Bus also received a Marketing Plan from Peter Schauer (a consultant, and principal of Peter Schauer Associates), through funding from the Montana Department of Transportation.

4.1.1. Goals

While each individual goal listed here is important, developing a system that can obtain all (or a majority) of the goals would be ideal. Therefore, it was important to remember which goal(s) was most important, and that the importance of goals may change over time. The three main goals initially identified were:

- Assist individuals who are transportation dependent to remain a part of the community by accommodating their needs and providing transportation alternatives,
- Increase the general public’s use of the transportation system, and
- Enhance efficiency –lower cost per ride and increase number of rides per hour and rides per mile.

These goals were general in nature, so specific, measurable objectives were created so that change could be measured. The first goal focused on BitterRoot Bus’s initial status as a system that served senior and other individuals who had a lack of transportation alternatives.

Objectives under this goal included:

- Surveying riders annually to determine if changes to service are necessary, and
- Ensuring a current rider is on the BitterRoot Bus Board.

For the second goal, increasing the general public’s use of the transit system, objectives were:

- Implementing a checkpoint system (flexible route) to encourage use;

- Developing a marketing plan and promotional materials that advertise that the transit system is for all individuals; and
- Surveying non-riders to determine what type of a system they would ride.

The third goal, increasing efficiency, is sometimes at odds with the first two goals. In other words, a system that is very responsive and flexible tends to have some inefficiency. However, due to limited resources, it is always important to strive to have a system that is as efficient as possible. Specific objectives for this goal were to:

- Increase the number of rides per hour,
- Increase the number of rides per mile, and
- Decrease the cost per ride.

4.1.2. Service Alternatives

To meet the goals and objectives described in the previous section, changes to the system were necessary. These changes were based on the fact that the BitterRoot Bus operated in a Demand Responsive mode, that is to say that people had to call to schedule a ride. While there are certain advantages to this mode of operation, it is generally accepted that the general public prefers a scheduled or fixed route service.

The Western Transportation Institute developed the *Ravalli County Transit Service Improvement Plan* (Appendix B), which outlined three alternatives for restructuring the transit service in and around Hamilton (Figure 8). Ultimately, it was decided to implement a checkpoint service (flexible fixed route) in the area.

Unfortunately, due to some communication errors, and state regulations that were in place at the time, the new route began before it was truly accessible by the general public. The route began operating in March 2004, and operated on Saturdays. While the service provided a fixed route, the general public (individuals who are not senior citizens or persons with disabilities) still had to call in to schedule a pickup. This factor, along with high fares for the general public, led to a lack of ridership. While an attempt was made to attract ridership to the route, the service was discontinued in January 2005 until several issues could be resolved.

One of the major issues that needed to be resolved was that BitterRoot Bus had oversight from both the Montana Department of Transportation (MDT), and the Public Service Commission (PSC). The additional oversight from the PSC was due to the fact that BitterRoot Bus was governed by the Ravalli County Council on Aging. This issue is discussed in detail in Chapter 5. Even with the problems associated with the dual oversight, progress was made in making changes to the transportation system in Ravalli County.

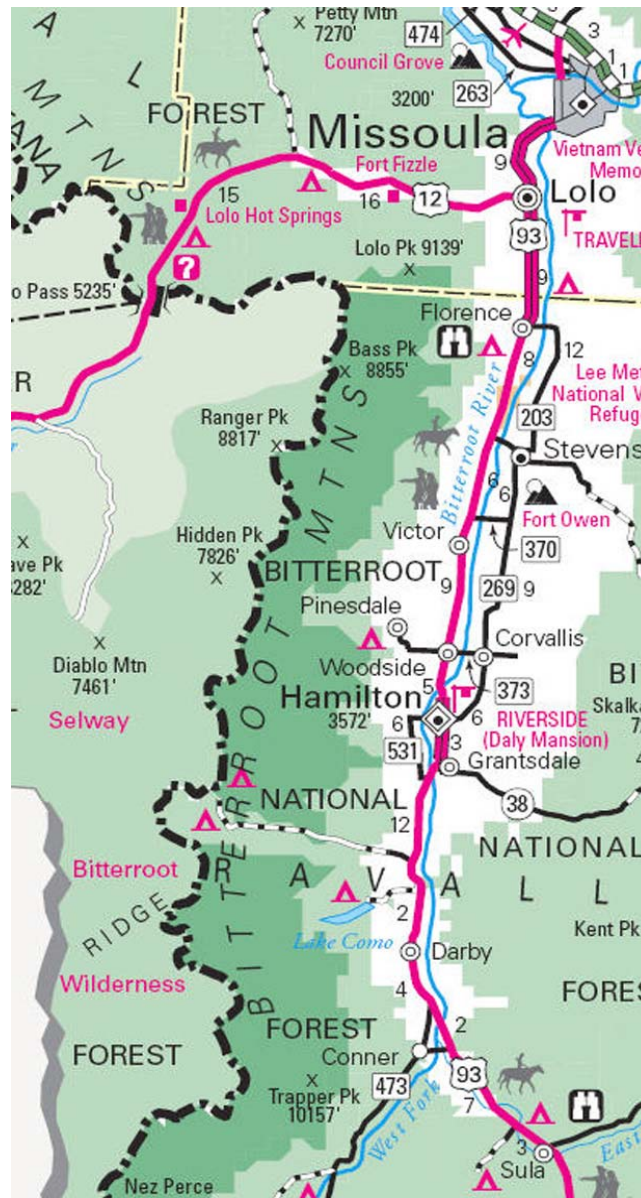


Figure 8: Hamilton/Ravalli County Area

4.2. Progress

When recommending changes to the BitterRoot Bus system, the Western Transportation Institute's goal was to look at improvements that would have a minimal impact on current riders, while making changes that will make the system more appealing to non-riders. It was also important to focus on changes that would not overwhelm the resources (including staff) of BitterRoot Bus. In making recommendations about the BitterRoot Bus system, WTI worked through the Ravalli County TAC. While some meetings were held separately between WTI and the BitterRoot Bus staff, most activities occurred in conjunction with, or by collaborating with the Ravalli County TAC.

This remainder of this section describes the actions taken by the organizations involved in order to achieve the goals noted above.

4.2.1. Improve Fare Structure

It was agreed that in order to become a true “general public” transportation system, BitterRoot Bus needed to flatten its fare structure. Previously, the general public paid fares that were more similar to a taxi service than a general public transit system (fares were charged on a “per mile” basis). BitterRoot Bus made a request to the Montana Public Service Commission (PSC) that included: a general public fare for trips to Missoula (Montana); Saturday service with same fare for the general public and seniors and persons with disabilities; and the implementation of a zone fare for demand responsive service (Figures 5 and 6 in the appended RCT Service Improvement Plan show the zones and fares for these service).

Due to PSC regulations, and the resultant process, not all of the requests to change the fares were granted. This led to a discussion of how to change regulations so that the PSC and their processes would not cause an undue burden on transit providers. Further discussion on this issue can be found in Chapter 5. In addition to changing the fare structure of the transportation system, it was also discussed whether the area served by the transit system needed to be changed.

4.2.2. Define the Service Area

It was agreed to at various meetings that zones would be used to define when service would be provided. An initial analysis by the Western Transportation Institute indicated that almost 90 percent of the population of Ravalli County lived within 5 miles of U.S. Highway 93 (Figure 1, Ravalli County Transit Service Improvement Plan-Appendix B). With the knowledge of where the population resided, and after analyzing ridership data, it was easier to define what levels of service should be provided to each area of the county. Further, by defining the service area, BitterRoot Bus should be able to increase efficiency by better grouping rides.

Defining the service area also allowed for creating zones for fares, as previously noted. As Ravalli County continues to grow, it will be important to review census and ridership data to ensure that transit service is being provided to the relevant areas of the county. Also, based on ridership data and budget data, it may be necessary to adjust the zones that are used for fare purposes.

4.2.3. Expand Weekday Service Hours

During the planning process, it was discussed that a transit system that operated from 8:00 am until 5:00 pm would not allow individuals with an “8-5 job” to utilize the service. However, it was noted that with the current restrictions in place due to PSC regulations and their resultant effect, it would not make sense to increase the hours of service until other restrictions were eliminated. Once BitterRoot Bus had more freedom to set its fares, service hours, and other service-related items, this issue would be revisited.

While it was a goal of the project to modify and expand service to attract the general public on to the transit system, increased ridership could not sacrifice the efficiency of the system.

4.2.4. Increase Efficiency

Early in the planning process the Western Transportation Institute conducted a time study of the current demand responsive transit system in Hamilton. The time study showed that the average ride in Hamilton took 6 minutes, including loading and unloading time. BitterRoot Bus used a scheduling system that generally allowed 15 minutes for each ride. When this time study data was presented to the BitterRoot Bus management, it was decided that the scheduling would remain as it had, using a 15-minute window.

In order to gain efficiencies in demand responsive systems, the time for rides needs to be shortened, or more rides need to be grouped on the vehicles. The scheduling of rides at BitterRoot Bus is done by hand (with limited use of Microsoft Excel[®]), as it is with the majority of smaller transit systems. As part of the planning process, WTI reviewed various software solutions that had the potential to increase the efficiency of the BitterRoot Bus system.

4.2.5. Software

The Western Transportation Institute (WTI) reviewed several software packages, to see if there was a software system that could increase the productivity of BitterRoot Bus. Much of the information that was used was based on a project that WTI completed for MET Transit in Billings [3]. This information showed that most software systems were relatively expensive (starting at \$25,000) and were designed for transportation systems that operated at least 6-10 vehicles. However, there were a couple of options for no-cost or low-cost software.

Based on information from visiting several smaller transportation providers in Montana, WTI had created the CARDS[®] software system. This software system is a client-management system that allows a dispatcher/scheduler to quickly enter client data and ride requests. This system also allows reports to be easily printed anytime data is needed, such as when quarterly reports are due to the Montana Department of Transportation. In addition to CARDS[®], the Montana Transit Association (MTA) developed a software program called Transitcal[®].

Transitcal[®] is also a client-management software, in that it does not schedule the rides itself. Transitcal does, however, allow transit providers to link their schedules, so that if one provider does not have a “slot” for a ride, they can view the schedule of other providers, and schedule a ride on another entity. While there was an attempt to look at the benefits of integrating the two software systems together, this has not been accomplished as of September 2005.

BitterRoot Bus did test both the CARDS[®] and Transitcal[®] software. However, after reviewing both software systems, BitterRoot Bus decided to use the same scheduling/dispatching system that it used before the Systems Change Grant project began. The software BitterRoot Bus uses is a basic Excel[®] spreadsheet application.

The decision to remain with its previous software is also due to the fact that there were not other transportation providers to coordinate with in the area, and the fact that BitterRoot Bus typically has only two to three vehicles scheduled for service during the day. Also, because there was not a requirement to integrate into a statewide reporting system, it was easier for BitterRoot Bus to keep its current system. There is a further discussion of the software issue in Chapter 5.

4.2.6. Communications

When the Systems Change Grant project began, BitterRoot Bus was communicating using individual cell phones. Each driver had a cell phone, and the main office (base) would call each driver as necessary to update them on the schedule. This method of communication had several problems, including:

- The main office could not communicate with all drivers at once
- If drivers communicated between themselves, the main office would not know if changes were being made to the schedule
- Cell phones incurred an operational (monthly) expense.

It was discussed that a two-way radio system would likely improve the flow of communications between the drivers and from dispatch to the drivers. WTI provided data that a two-way system would cost approximately \$500 for each vehicle; while a base station could cost as much as \$3,000. David Kack from WTI did mention that GALAVAN in Bozeman used a “vehicle” radio as the base station. Judee Harrison from the Missoula-Ravalli Transportation Management Association (MR TMA) noted the possibility of using Nextel® phones or a similar system that had the capability of being a two-way radio and a cell phone. Further investigation indicated that as of February 4, 2004 Nextel did not have any service within Montana, eliminating this option as a possibility. However, this type of service did later become available, and as of February 2005, BitterRoot Bus began using this communication system.

In the future, it still may be advantageous to use a two-way radio system. This is based primarily on the fact that purchasing capital equipment, such as two-way radio systems, costs the local transportation provider only 13 cents on the dollar, or 13 percent of the total cost of the capital equipment (based on the Surface Transportation Bill passed August 2005: SAFETEA-LU). However, operational expenses, such as the monthly cost of cell-phone service, require the local transportation provider to pay 46% of the cost. Therefore, over a period of time, a cost/benefit analysis may show the two-way radio system to be fiscally prudent.

4.3. Evaluation

Many of the changes that will occur with BitterRoot Bus will happen after the Systems Change Grant Project has ended. This is based primarily on the fact that after the passage of House Bill 273 (HB 273) in March 2005, BitterRoot Bus had more freedom to establish rates, routes and hours of service. Prior to passage of HB 273, it was a very time consuming effort to get changes made to the transit system. With the changes, BitterRoot Bus will have the flexibility to implement changes to better serve its clients (see Chapter 5 for more details on the provisions of this legislation).

One change that began in January 2005 was the implementation of a fixed route that provided service in Hamilton, with service from Hamilton to Grantsdale and Corvallis as well. While the ridership on this route has been in flux, it appears that the concept of fixed route service will remain in Hamilton. Continued marketing, and continued operation of the route, should entice more people to use the service.

The Ravalli County Transportation Advisory Committee (TAC) continues to promote the BitterRoot Bus, and to recruit members to join the TAC. As noted in Chapter 3 for the Helena project, a vibrant TAC is essential to identify and address issues with the specialized and public

transportation systems in an area. A vibrant TAC includes a diverse group of people, including persons with disabilities, persons with low incomes, and senior citizens. As of August 2005, the Ravalli County TAC is working to attract members from outside of the Hamilton area. The work of the TAC and its members, including BitterRoot Bus, will be part of the Next Steps, as the Systems Change Grant Project ends.

4.4. Next Steps

While some changes have occurred with the public transportation system in Ravalli County and Hamilton, much of the work lies ahead. This is due in large part to the fact that laws had to be changed to allow the BitterRoot Bus system to have the flexibility it needed to respond to its clients' needs.

Prior to the passage of House Bill 273 (HB 273), BitterRoot Bus faced a challenging process to make changes to its service. Therefore, the service remained primarily a demand response service that provided rides to mostly senior citizens and persons with disabilities. With the passage of HB 273, BitterRoot Bus now has the ability to quickly change its service to provide more options to the general public. This is true of the implementation of its fixed route service.

BitterRoot Bus will need to continue to modify its fixed route service to entice more passengers onto the bus. BitterRoot Bus will also need to provide training and support to customers, so that they will move from the more expensive demand response service to the fixed route service. BitterRoot Bus will also need to continue to implement the marketing solutions that were presented in the Marketing Plan completed by Peter Schauer.

BitterRoot Bus is fortunate that there is an active Transportation Advisory Committee (TAC) in Ravalli County. BitterRoot Bus should continue to be actively involved in the TAC, and utilize the TAC to provide suggested improvements to the transit services in Ravalli County and Hamilton.

4.5. Lessons Learned & Best Practices

As noted with the Helena Area project, one lesson learned from Ravalli County is that an active TAC is vital. Further, the TAC should include people who are known as being "transportation disadvantaged," including persons with disabilities, persons with low incomes, and senior citizens. A group of concerned, knowledgeable individuals (the TAC) is very important if a public transportation system is going to thrive. An active TAC allows the exchange of ideas, and acts as a focal point for the discussion of public and specialized transportation services.

It is important to remember, however, that the TAC is an advisory group and does not have "management authority" over participating agencies. The organizations that belong to the TAC need to view the TAC as a group that can provide a broad range of ideas and insight into the transportation system in a particular area. The transportation providers, specifically, need to be open to the recommendations of the TAC.

There were some recommendations made by the Ravalli County TAC that were not implemented by BitterRoot Bus. This situation may have been somewhat caused by turfism, as management of the BitterRoot Bus may have tried to prove that the TAC does not run the bus system. The situation may also have been caused by a lack of communication and establishing short-term and

long-term goals. Whatever the reason for some recommendations from the TAC not being implemented by BitterRoot Bus, ultimately BitterRoot Bus does recognize the value of the TAC.

It was the TAC that recognized that the processes involved due to the oversight from the Public Service Commission were limiting options for BitterRoot Bus. A lesson learned from Ravalli County is that sometimes laws and regulations need to be changed to allow transit services to better serve their customers.

One barrier to change that often is cited is that something cannot be done because of a law or regulation. However, the Systems Change Grant showed that it is relatively easy to change a law, when a clear benefit can be shown. By working together, a law was changed, and now public and specialized transportation providers in Montana have more flexibility in the services they can provide their clients.

In summary, perhaps the most important lesson learned from the Ravalli County project is that one should never give up. It took almost six years from the time BitterRoot Bus identified the effects of the Public Service Commission oversight until the law was changed. However, the change did occur, and the benefits will be realized for many years to come.

5. RELATED ISSUES

While the Systems Change Grant project focused on two primary communities, other efforts/issues were addressed through the course of the project. Those related efforts are detailed in this Chapter.

5.1. House Bill 273 (Legislative Reform)

As noted in Chapter 4, a primary effort surrounding the Ravalli County project was to change the laws/regulations concerning Public Service Commission (PSC) oversight of certain transportation providers in Montana. Before House Bill 273, only certain types of transportation services were exempt from oversight from the PSC. As noted in Montana Code Annotated 69-12-102 (MCA 69-12-102) [4], some of those exemptions included:

“(h) the operation of:

- (i) a transportation system by a municipality or transportation district as provided in Title 7, chapter 14, part 2; or
- (ii) municipal bus service pursuant to Title 7, chapter 14, part 44;...
- (k) the transportation of disabled or elderly persons provided by private, nonprofit organizations...”

BitterRoot Bus is operated by Ravalli County Council on Aging, and provided service to the general public as well as persons with disabilities and elderly persons. Therefore, BitterRoot Bus had oversight from the Public Service Commission. This was in addition to the oversight provided by the Montana Department of Transportation.

With the oversight from the PSC came related rules and procedures. The one procedure that was most troublesome for BitterRoot Bus was the procedure that dealt with making changes to fares and service. When BitterRoot Bus wanted to make a change, it first had to provide written notification to the Public Service Commission. The PSC would then send on the proposed changes to all transportation providers who were under the PSC’s oversight (including taxi companies and other “for profit” agencies).

Other providers could protest the proposed changes, and if that occurred, a hearing would have to be scheduled to discuss the issues with the proposed changes. Unfortunately, there was a taxi company operating in Ravalli County that protested almost every change proposed by the BitterRoot Bus. Even if the changes were eventually allowed, the time and money spent dealing with the process meant that the BitterRoot Bus could not provide the service to its clients in a timely and cost effective manner.

In addition to BitterRoot Bus, there were other public and specialized transportation systems that had to deal with the effects of this law (MCA 69-12-102). Given that one goal of the Systems Change Grant Project was to make it easier for transportation systems to coordinate with each other, it became apparent that a change would need to be made, so that PSC oversight was eliminated from certain transportation providers.

With support from the Montana Independent Living Centers and their main lobbyist, June Hermanson, House Bill 273 was passed by the Montana Legislature, and signed by the Governor

in March 2005. In short, House Bill 273 [5] exempted more transportation providers from PSC oversight. A summary of the additional exemptions includes:

“(iii) any public transportation system recognized by the Montana Department of Transportation as a federal transit administration provider pursuant to 49 U.S.C. 5311;

(k) the transportation of persons provided by private, nonprofit organizations, including those recognized by the Montana Department of Transportation as federal transit administration providers pursuant to 49 U.S.C. 5310.”

With House Bill 273 becoming law, all rural general public transportation providers (FTA Section 5311) and FTA Section 5310 providers (senior citizens and persons with disabilities) became exempt from Public Service Commission oversight. Due to the fact that this bill did not become law until March 2005, the full impacts of its passage have yet to be realized. However, several changes that have occurred with various transit systems in Montana, show that this bill has already had a major impact on public and specialized transportation systems in Montana.

5.2. Executive Order

On February 26, 2004, President George Bush signed Executive Order 13330, which outlined a Human Service Transportation Coordination plan [6]. On a national level, it was hoped that this initiative would increase the amount of coordination between the various Federal agencies that provided funding for transportation services. On a statewide level, the Montana Transportation Partnership (MTP) hoped that a similar Executive Order, initially to be considered a working document, could be signed by the Governor of Montana, and that additional state agencies would focus on the coordination of transportation services within Montana. It was not clear if the Executive Order would be signed by outgoing Governor Martz, or the incoming Governor Schweitzer.

Two of the members of the Montana Transportation Partnership, most notably the Montana Transit Association (MTA), took issue with the Executive Order. The issues cited by the MTA included: coordination plans to be developed before transit providers could apply for funding, membership of the Partnership, the decision-making process of the Partnership, and several other general concerns as to how the Partnership would operate and the powers it would have.

The decision to proceed with development and support of an Executive Order was passed on a 12-2 vote; however, with the change in the Governor's Office, and several other factors, the Executive Order was not presented to the Governor for consideration. In collaboration with the Statewide Independent Living Council, an option to use the Legislative process to support the principles and goals noted in the Executive Order was proposed.

The Partnership has formalized its membership and continues to support a philosophy of consumer participation and inclusion of those directly affected by transportation barriers; and agencies working to remove barriers. A large majority of the Partnership members continue to support policy recommendations, such as established coordination plans prior to funding approval. This recommendation parallels past and current FTA and other Federal coordination philosophies and state agreements dating back to the 1980s between the Montana Department of Public Health and Human Services and the Montana Department of Transportation (then known

as the departments of Social and Rehabilitation Services, and Commerce (and its Transportation Division).

As of the writing of this report, and the end of the Real Choice Systems Change Grant Project, it is still the intent of the Montana Transportation Partnership to be formally recognized, so it can help address transportation and coordination issues within Montana.

5.3. Technology Plan

Technology can have an impact on improving coordination, and the overall efficiency of transportation operations. However, technology cannot succeed unless it is part of an integrated plan. In addition, there must be institutional support at all levels for coordination and the application of advanced technologies. Figure 9 shows how there must be support and planning before advanced technologies can be implemented.

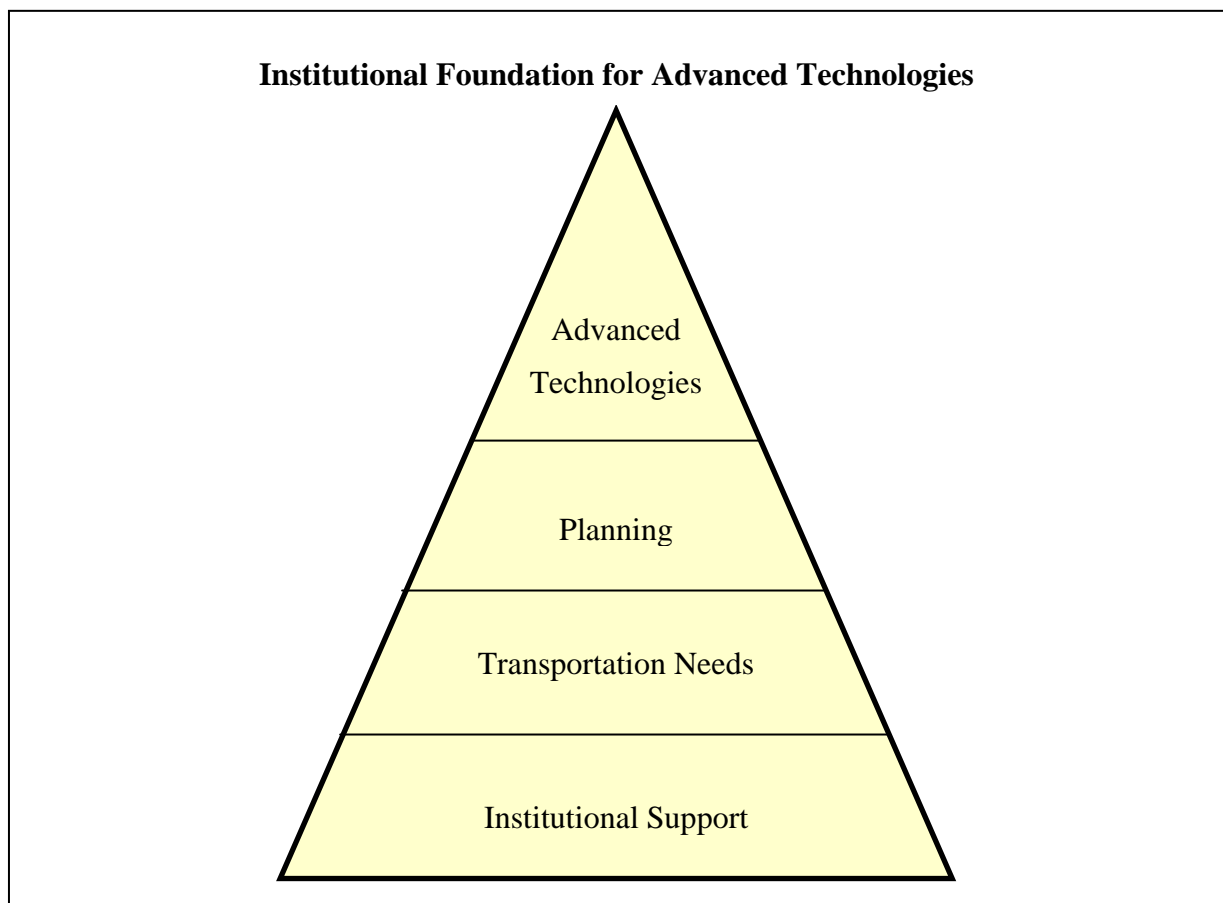


Figure 9: Foundation for Advanced Technologies

The Systems Change Grant project included plans for two levels of technology initiatives. Initially, work focused on identifying technologies that would have an impact on the projects at the two pilot locations. At the state level, project partners investigated developing requirements for a statewide reporting system.

5.3.1. Local Technology Initiatives

Computer Aided Scheduling and Dispatching (CASD) software has had a significant impact on many transit operations. For example, in Santa Clara County, California, a paratransit operator, OUTREACH, utilized CASD software and was able to reduce its number of vehicles in service from 200 to 130. Using CASD software, the Winston-Salem Transit Authority was able to reduce their operating cost per vehicle-mile 8.5% and their operating cost per passenger 2.4% [3].

As discussed in Chapter 4, two different software systems have been developed in Montana in the past few years, CARDS[®] and Transitcal[®]. CARDS[®] was developed by the Western Transportation Institute-Montana State University, and Transitcal[®] was developed by Centric Internet Services in Missoula, Montana on behalf of the Montana Transit Association. Unfortunately, the Western Transportation Institute was unaware of the development of Transitcal at the time it was developing CARDS. As is the case in many coordination efforts, communications are critical. While there has been some communication about integrating the two software systems to form a single, more robust software package, efforts have been unsuccessful as of December 2005.

BitterRoot Bus in Hamilton (Ravalli County) tried both the CARDS and Transitcal systems, and decided to continue to use the basic spreadsheet system they already had been using. The Helena Area Transit System (HATS) had planned to install the CARDS program; however an initial problem with the computer system at HATS delayed installation. Since the computer problem was not resolved, no additional software was installed in Helena before the conclusion of the Systems Change Grant project.

5.3.2. Statewide Technology Initiative

Task #6 of the Systems Change Grant project called for WTI to work with MTP, the Department of Health and Human Services, and other reporting agencies (such as the Montana Department of Transportation) to develop the requirements for a statewide reporting system that would collect and disseminate data on transportation services provided to persons with disabilities. Throughout this project, WTI, DPHHS and several other members of MTP collected and analyzed transportation services data that could be the foundation of a statewide reporting system. However, there was insufficient time during this project to build support among, and coordinate with, all of the other agencies in the state that would be necessary for development of a comprehensive system.

The Western Transportation Institute, based on work done for a project in California [7], created the *Montana Transportation Coordination and Technology Plan: Concept Document* [8]. This document (see Appendix E), provided a list of technologies that could be implemented within Montana. The list of technologies included Computer-Assisted Scheduling and Dispatch (CASD) software for transit providers, Automatic Vehicle Location (AVL) and Mobile Data Communication (MDC) within vehicles, as well as possible creation of a Trip Planning Tool (TPT). The technologies selected for further investigation, and likely implementation, were based on the following priorities:

Essential capabilities:

- One-stop shop
- Provide service information
- Use existing technology
- Highlight intercity service

Desirable features:

- Automated trip planner
- Individual transit web sites
- Efficient interoperability
- Input data once, use it many times
- Tool for maintaining data

Optional features:

- All forms of transportation
- Transportation schedules for regional destinations

At the time the Concept Document was developed, there was discussion that the Client Referral, Ridership, and Financial Tracking (CRRAFT) software developed in New Mexico could be a used as a foundation for a system. The overall concept was to improve the coordination among providers, and allow individuals to more easily plan their own trip itineraries. The initial plan was that a Mobility Management Center would be created along with implementation of a Trip Planning Tool (TPT). In addition, the Client Referral, Ridership and Financial Tracking (CRRAFT) software could be implemented, allowing all transportation providers in the region to easily manage their data and increase the efficiency of their operations. Figure 10 shows the basic components of the proposed system.

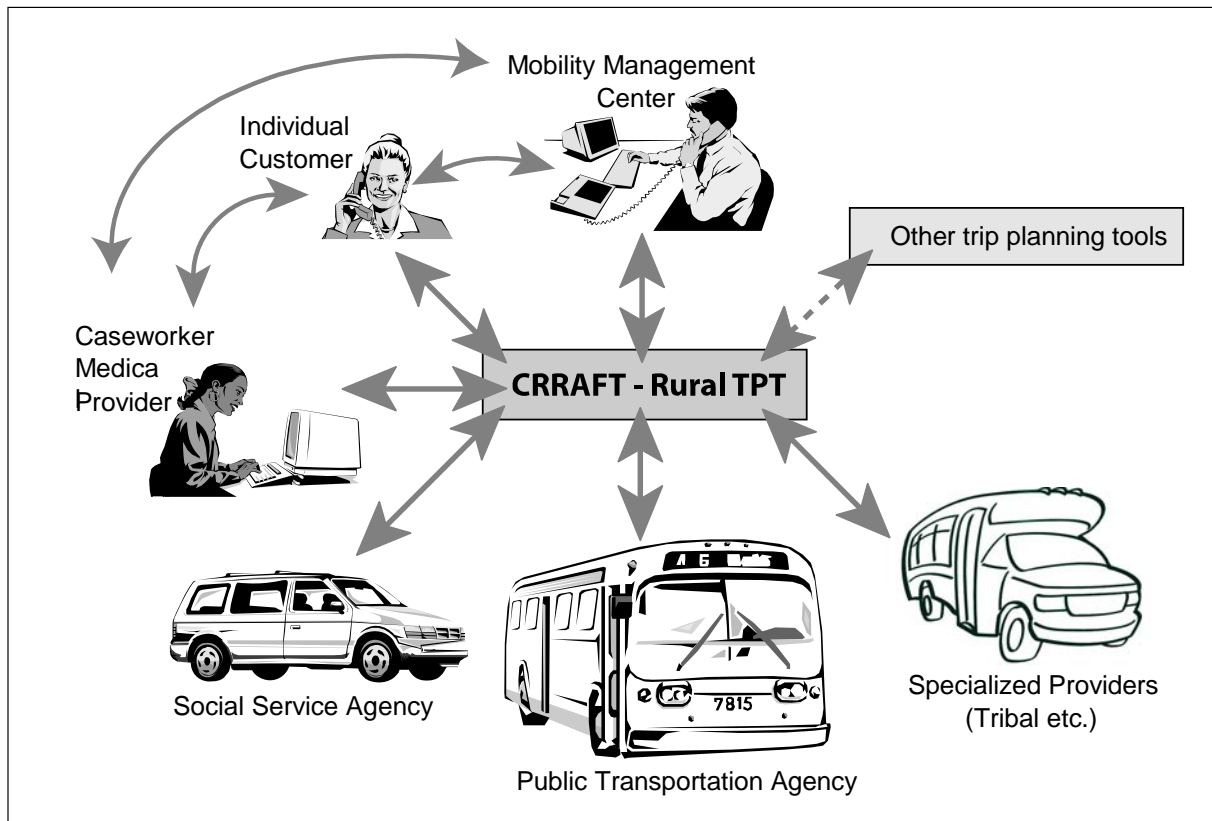


Figure 10: Statewide Technology System Concept

The Mobility Management Center (MMC) is essentially a person who has access to the TPT. If an individual in the State does not have access to the Internet, they could call the MMC, and the person at the MMC could complete a trip itinerary for that person. The person at the MMC would also be able to view the schedules of all transportation providers that were participating in the process, and would be able to see opportunities for coordination.

The MMC would, through this process, become an “additional staff member” of participating providers. This is due to the fact that an individual could call the MMC for transportation information, instead of a particular provider. The person at the MMC would also have a better sense of how individual providers’ schedules could be modified to enhance the opportunity for intercity travel within the region.

Advanced technologies were researched and developed to a conceptual level during the Systems Change Grant project. However, a lack of coordinated institutional support on a statewide level and a lack of time meant that advanced technology issues did not move beyond the concept stage. Despite this situation, however, a research statement that was coordinated through the Montana Transportation Partnership that focused on creating a One-stop shop appears to be moving forward.

The research statement was submitted to the Montana Department of Transportation (MDT), who accepted it, and put together a technical panel to oversee a research project that would investigate creating a one-stop shop. During the preliminary discussion participants conceived a one-stop shop that would provide information on all public and specialized transportation

providers in Montana. Access to the information could be provided through a number of sources, including the 5-1-1 Traveler Information number, the 2-1-1 Human Services referral number, the Internet, and other sources.

It is likely that the one-stop shop will provide a single access point for transportation information within Montana, and can be built upon the work that was done as part of the Montana Coordinated Transportation Handbook project. This project included the creation of a website that was designed, in part, to show the transportation services and assets that existed in Montana. Although the information contained within the website (<http://www.mtddd.org/trcordn/>) is several years old, it provides a firm foundation of relevant data.

Another possibility for the one-stop shop is the addition of a trip scheduling system. This system would allow individuals to enter an origin and destination, whether across town or across the state, and the system would show if the trip could be made using public transportation. The Western Transportation Institute already completed some research into this possibility [7,8]. Depending upon the resources available, and the direction of the one-stop shop research, this concept could improve ridership of public and specialized transportation systems within Montana.

5.4. Fort Peck/Northeast Montana TAC

Although they were not selected as pilot projects for the Real Choice Systems Change Grant, the Fort Peck Indian Reservation and the Northeast Montana Transportation Advisory Committee did receive support from the Montana Transportation Partnership through the Systems Change Grant and the Administration on Developmental Disabilities grant. In addition, funding was received through Easter Seals Project ACTION to provide support.

Located in the northeast corner of Montana, the Fort Peck Indian Reservation is served by the Fort Peck Transportation System (FPTS). Although operated by the Tribe, FPTS is open to the general public (tribal and non-tribal members) and is operated as an FTA Section 5311 provider. FPTS provides fixed route and demand response services.

As is the case with many areas in Montana, the Fort Peck Indian Reservation has a number of organizations that provide transportation. Unfortunately not all of these organizations communicate with each other, which can lead to an overlap of resources. One case in point is that during an initial meeting to discuss transportation coordination, three separate organizations noted that they had sent a vehicle from the Reservation to Billings that exact day. Billings, Montana is approximately 300 miles (one way) from the Reservation, a significant trip length. Unfortunately, due to a lack of coordination, three vehicles were sent to Billings instead of one. This incident did, however, provide a perfect example of why coordination is so important.

One immediate outcome of this meeting was that entities on the Reservation began to communicate and coordinate their transportation. In addition, coordination started to happen with organizations outside of the Reservation. A group was formed; the Northeast Montana Transportation Advisory Committee (or Northeast Montana TAC) to discuss transportation and coordination issues for Daniels, Phillips, Roosevelt, Sheridan and Valley counties (Figure 11).

This TAC was formed to look at transportation issues on a regional basis. Many of the smaller communities within these five counties all travel to similar destinations (such as Billings, MT or Williston, ND) for certain medical trips. The goal of the regional TAC was to coordinate among

the various transportation providers in the five-county area, and provide better, more effective transportation services. This TAC provides a very valuable lesson for those involved in coordination: not only is coordination important to look at on a local (town, city) level; but it is also important to consider coordination on a regional (county or multi-county) level.

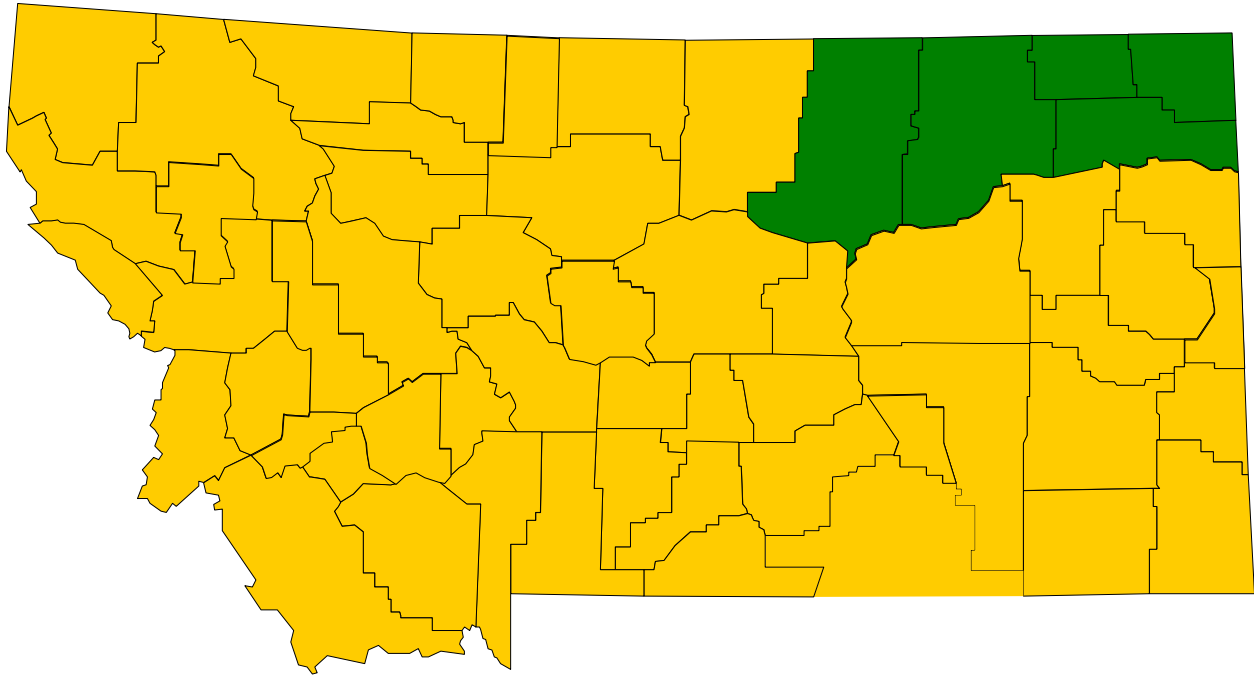


Figure 11: Counties in Northeast Montana TAC

6. CONCLUSIONS

The Ohio Department of Transportation noted that, “coordinating transportation is the best way to stretch scarce resources and improve mobility for everyone.” The Real Choices Systems Change Grant project focused not only on coordination, but improving mobility in the two project sites, and on a statewide basis, as well. The Systems Change Grant project clearly met its goals, although the project was not without its challenges.

In the Helena area, the new route established in the East Helena area has been a tremendous success. The ridership averaging over 700 rides per month is more than twice the original goal. In addition, funds were secured so that the East Helena route can continue, and further coordination may lead to even more service in the greater Helena area. During the Systems Change Grant project, discussions began between the Helena Area Transit Service (HATS) and the Rocky Mountain Development Council (RMDC) that may lead to RMDC contracting with HATS to provide the Head Start transportation in the greater Helena area.

If this occurs, HATS can use the funds (a contract for services) as local match to secure more FTA Section 5311 funding. The additional funding could be used to provide more service within Helena, to East Helena, or to other areas in the greater Helena area. This continued discussion of coordination will likely occur within the Helena Transportation Advisory Committee (or Helena TAC), known as the Helena Area Transportation Committee or HATC.

As previously noted for both the Helena and Ravalli County projects, a strong Transportation Advisory Committee (TAC) is critical for progress to be made in a community, as the TAC is the focal point for discussion about transportation issues in a given “service area”. A strong TAC includes a diverse group of people, including persons with disabilities, persons with low incomes, and senior citizens. The TAC’s allow transportation providers and interested citizens a forum to discuss issues and recommend plans of action. It is hard to think that the improvements could have happened without the energy and involvement of the Helena Area and Ravalli County TAC’s.

The challenges facing the Ravalli County TAC were somewhat different than those facing the Helena TAC, but the challenges were met head on, and in the end, the Ravalli County TAC and all public and specialized transportation providers succeeded. The biggest challenge facing Ravalli County (Hamilton) was to transform a system that had primarily served senior citizens and persons with disabilities. Hampering this effort was a law that allowed oversight of the Ravalli County system not only from the Montana Department of Transportation (MDT) but from the Montana Public Service Commission (PSC), as well.

While the system in Ravalli County began with basic changes, such as changing its name from Ravalli County Transit to BitterRoot Bus and coming up with a new logo, much larger issues loomed over the system. Due to a series of agreements, BitterRoot Bus charged the general public fares similar to a taxi system. The mileage based fares meant the most rides within Hamilton would cost the rider nearly \$6 round-trip. In order to truly become a public transportation system, BitterRoot Bus needed to modify its fares and service.

With the introduction and eventual passage of House Bill 273, BitterRoot Bus finally had the freedom to make changes to its services and fares without having to obtain permission from the Public Service Commission. While there is still oversight of the BitterRoot Bus service by the Montana Department of Transportation, there is much more flexibility for BitterRoot Bus to

implement services to improve public transportation in Ravalli County. The passage of House Bill 273 not only improved the transportation laws for BitterRoot Bus, but for other transportation providers as well.

While there were numerous and significant achievements during and because of the Real Choices Systems Change Grant project, there were also difficulties. One of the most often cited barriers to coordination is “turfism”. Turfism can generally be thought of as protecting one’s “turf” or one’s territory. This can occur on a local basis, such as a transportation provider not wanting to share resources; or on a statewide or Federal basis, such as agencies not working together toward a common goal.

Unfortunately, some turfism, or perhaps more a lack of communication and trust, occurred during Systems Change Grant project. This lack of communication created some misunderstandings and sometimes a duplication of efforts. This lack of communication occurred more between state agencies than on a local level, and had an impact on the technology component of the Systems Change Grant project. In addition, a lack of coordination within some agencies/departments led to results which were less than anticipated.

Within the Montana Department of Public Health and Human Services (DPHHS), there are at least eight different divisions and/or program that are spending over \$9 million on transportation services. In many of these programs, transportation is not a line item, so it is difficult to track the expenditures on transportation. It is also difficult to sometime coordinate between the programs.

Some progress was made during the Systems Change Grant project to establish a working group within DPHHS to discuss transportation issues and possible coordination activities. Another step forward in coordination effort was the discussion of creating a Transportation Coordinator position within DPHHS. The Transportation Coordinator would be the focal point for transportation issues within DPHHS, and could then communicate and collaborate on behalf of DPHHS with other agencies, such as the Department of Transportation. As the Systems Change Grant project ended, it was anticipated that the Coordinator would be hired by the end of October 2005.

Even with all of the difficulties such as turfism and scattered departments and programs, there was significant progress made within the state. Progress was made within the local areas that were part of the Real Choices Systems Change Grant project, and progress was made within the entire state. The next chapter provides recommendations to keep the momentum moving forward, and ways to build on the successes already achieved.

7. RECOMMENDATIONS

The only thing that is constant is change. It is inevitable that change is going to occur. The only real decision to be made is that if a person, organization or government is going to be proactive or reactive to the change. During the Real Choices Systems Change Grant project, a proactive approach was used.

It is strongly recommended that a proactive approach to change continue into the future. Transportation organizations, concerned citizens and government agencies need to come together to plan for how transportation systems should function; i.e., the route structure, the hours of service, and realistic fares. The best way for the planning to occur is within the structure of an active, vital Transportation Advisory Committee (TAC) which must include representation of people who use and need the system, including persons with disabilities, persons with low incomes, and senior citizens.

The major successes of the Systems Change Grant project occurred because a strong TAC allowed a complete discussion of the issues, addressed potential solutions, and developed a plan of action. This process was dependent upon transportation providers and government agencies willing to listen to citizens' concerns, and being flexible in their approach to providing and regulating transportation services. The process included having to think outside the box, and sometimes changing the box (changing laws) to allow progress.

The Surface Transportation Bill (known as SAFETEA-LU) that was signed into law in August 2005 provides a stronger basis for local coordinated transportation planning. The law states that for certain programs, including the FTA Section 5310 program, "the projects selected were derived from a locally developed, coordinated public transit-human services transportation plan; and the plan was developed through a process that included representatives of public, private, and nonprofit transportation and human services providers and participation by the public" [9].

The Transportation Advisory Committees around the state can serve as the focal point for this type of coordinated, integrated planning. As has been shown by the outcomes of the Real Choices Systems Change Grant project in Montana, active TAC's that include persons who are transportation disadvantaged; and representatives and advocates for the transportation disadvantaged are vital in developing transportation systems that meet the needs of many individuals. The Montana Department of Transportation needs to work with the Montana Department of Public Health and Human Services and other agencies to ensure that the local TAC's are active, and have the support necessary to fulfill their mission. Local and County governments will need to recognize the importance of TAC's and provide support, as well.

Planning is important, as it was once said that, "if you fail to plan, you plan to fail." Planning for improved, coordinated transportation services is vital if public and specialized transportation services are to improve locally and on a statewide basis. This planning must happen locally with the TAC's and on a statewide basis, within the framework of a group that represents various state agencies, and individuals, as well.

The Montana Transportation Partnership set out to be this type of organization. Governor Brian Schweitzer has designated the Montana Department of Public Health and Human Services to hire a transportation coordinator. There is only one task left to finalize the Montana Transportation Partnership, and that will require legislative action and funding.

If failing to plan truly leads to planning to fail; then local, county, regional and statewide agencies and governments need to focus on planning for improved and coordinated transportation services. A report by the Montana Department of Transportation in 1999 noted that, “the State of Montana is meeting 17 percent of its need with the existing public and nonprofit transit services” [10]. If Montana is going to meet the needs of its citizens, it must plan for the future, and provide transit services that are efficient and coordinated.

If the only thing that is constant is change, then a proactive approach to planning and implementing a comprehensive plan for transportation services within Montana is vital. The Real Choices Systems Change Grant project took a significant step forward in this process. However, to continue the process, the lessons learned from this effort must be recognized, and the recommendations noted herein must be implemented if the initial successes realized will continue.

8. GLOSSARY

ADD	Administration on Developmental Disabilities
FPTS	Fort Peck Transportation System
HATC	Helena Area Transportation Committee
HATS	Helena Area Transit Service
MDT	Montana Department of Transportation
MTA	Montana Transit Association
MTP	Montana Transportation Partnership
RMDC	Rocky Mountain Development Council
SMR	Spring Meadow Resources
TAC	Transportation Advisory Committee
WTI	Western Transportation Institute
WM	WestMont

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10. APPENDIX A: HELENA PLAN

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Helena System Change Coordination Plan

by

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Prepared for the

Helena Area Transportation Council
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Version 1.2

August 24, 2004

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1. INTRODUCTION

Transportation coordination refers to two or more agencies working together to achieve a more efficient service, better quality service, increased capacity, and doing more with less. The key element of coordination is working together to improve services. Coordination programs reduce duplication of services and tap into economies of scale, saving money through bulk purchasing. Additionally, coordination can result in more access to funding, by coordinating with organizations serving different passenger groups and utilizing funding sources that require commitment to coordination.

Most coordination efforts are undertaken to benefit a group of people generally known as being “transportation disadvantaged.” The transportation disadvantaged are those people who are unable to transport themselves or purchase transportation because of mental or physical disabilities, age, or income status.

Coordination typically begins at the local level. Usually citywide or countywide programs, as transportation and social service providers, operate at this level. State and federal programs provide frameworks through which coordination is encouraged to occur at local levels. In Montana, this framework is provided through funding sources requiring and encouraging coordination.

Under the current method of providing transportation services, the transportation needs of persons with disabilities are not being fully met. While local service providers are in the best position to identify these transportation needs, they may not have the knowledge and time to set up a coordination plan in the community. Intelligent Transportation Systems (ITS) can help in increasing efficiency of coordinated transportation systems, but Montana service providers do not have experience with ITS, and need technical assistance to identify ITS options that they may want to include in a local plan. State agencies want to assist in providing coordinated planning and services, but lack comprehensive statewide data.

To address these problems, the Montana Department of Public Health and Human Services (DPHHS) secured funding for the Real Choices Systems Change Grant. The Grant is managed by the Montana Transportation Partnership (MTP). MTP contracted with Western Transportation Institute (WTI) to provide technical assistance to the communities selected. The project goal is to assist one or more communities in planning and implementing a coordinated transportation system including technological and other components to enhance the coordination capabilities.

Communities were to be selected based on a list of criteria, such as size and diversity of population, presence of Native American reservations, potential for improvement, existence of local champions, etc. The selection was made by the Montana Transportation Partnership (MTP) an organization that was founded in 1999 with a mission to ensure Montanans, in their community of choice, have accessible, safe, affordable, and reliable transportation services through the development of coordinated systems. MTP is a coalition of partners, including persons with disabilities, seniors, other groups considered transportation disadvantaged, transportation service providers, transportation associations, and state human service agency representatives. The partnership fulfills its mission through advocacy and the coordination of funding for projects.

As part of the project WTI will develop the requirements for a statewide reporting system that facilitates sharing of data on transportation services with other state agencies, in cooperation with

MTP. WTI envisions a computer-based system that allows service providers to enter client and service data once, which would then be forwarded electronically to all applicable departments.

1.1. Goals

1. To assist one or more communities in developing coordinated transportation plans that meet the specific needs of the people with disabilities in their area, while also providing improved service to the entire community.
2. Build or support one or more transportation models that can be replicated statewide.
3. Identify Intelligent Transportation Systems technologies and other coordination tools that the communities can consider for inclusion in their coordination plan.
4. Develop system requirements for a statewide computer system to collect and disseminate billing information and other data for transportation services to persons with disabilities.

1.2. Concept

The Montana Systems Change Grant will allocate monies to assist the Helena area in developing a coordinated transportation plan that will enhance the way transportation is provided. Coordination of existing transportation through joint use of vehicles, joint training, and possible trip sharing will enhance the present system. When implemented, this project will provide improvements in mobility through a technologically enhanced coordinated transportation system. The Systems Change Grant will increase the effectiveness and efficiency of transportation, leading to an improved quality of life for the transportation dependent population.

The Helena Area Transportation Council is the association conducting the process of assisting with the coordination effort. Helena Area Transportation Council consists of the local transportation providers and Human Services providers in the Helena area. Members include the following agencies:

- City of Helena, Helena Area Transit Services (formerly Dial-A-Ride)
- Rocky Mountain Development Council
- Montana Council on Developmental Disabilities
- Spring Meadow Resources, Inc.
- Westmont, Inc.
- Veteran's Administration
- Montana Department of Transportation
- Area IV Agency on Aging
- Capital City Chapter of the Montana Association for the Blind
- Montana Transportation Partnerships

- RMDC Headstart
- Career Training Institute

The purpose of the Helena Area Transportation Council is to provide information and referral exchange among paratransit agencies, and to utilize volume purchasing of goods and services. They will also provide coordination, cooperation, and advocacy for the improvement and provision of transportation services in the Helena area. Collaboration will allow these agencies to acquire local, state, federal, and private funding for the purpose of coordination and operation of public and specialized transportation services.

1.3. Levels of Coordination

Coordination can generally be classified into three levels. These levels are communication, collaboration and consolidation.

Communication	The exchange of information between parties. Informally working together toward common goals.
Collaboration	The formalization of the process of two or more organizations working together, typically involving contracts or agreements. Includes organizations sharing vehicles to provide more transportation services.
Consolidation	Two or more organizations combine their resources for the benefit of all participants.

Coordination at the communication level is often intended as a starting point towards higher levels of coordination. In most cases, coordination is already occurring at the communication level in a community. Often, it will be occurring without the participants even realizing that they are coordinating. Simply participating in the local Transportation Advisory Committee (TAC), or any other transportation organization, with the purpose of prioritizing plans for transportation falls under the definition of communication.

Deciding which activities to coordinate is the beginning of the collaboration process. Activities can range from information and referral, and assistant services to vehicle sharing and ride sharing. The latter of which is the heart of the collaboration level.

Consolidation takes place when two or more organizations give their resources (e.g., vehicles) to an “umbrella” organization, which may be an existing or new organization. The various agencies then contract with the umbrella organization to provide the transportation services for their respective customers. For some communities, consolidation offers the most potential benefits for coordination, but may also be the most complicated to initiate.

When determining the agency to take on the role of sole transportation provider, there are two choices: selecting an existing agency or creating a new one.

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2. GAP ANALYSIS

Current Services	Projected Service Plan	Gap in Service
Serve the City of Helena, East Helena, and occasionally transportation outside Helena.	Provide service to customers in the more rural areas of Helena.	Service is limited to Helena.
Fixed route and door-to-door service.	Establish additional routes.	Rural Helena has no transportation service.
Service is provided to everyone, particularly the elderly and disabled.	Encourage those without disabilities to utilize transportation more.	Lack of general public riders.
Service provided Monday-Friday.	Increase days of operation, and hours per day.	There is no service on weekends or in the evening.
The majority of vehicle maintenance is contracted to outside vendors.	Single maintenance shop or contracting maintenance for participants.	Some oil changes are performed in the city shop, the rest are contracted to outside vendors. Major maintenance is performed at multiple shops in Helena.
Some agencies share radio communication.	Share communication and technology.	Two agencies share communication while the other two agencies have no means of communicating.

Service improvements should be considered in the following areas:

- Increase Service Area
- Serve More Customer Groups
- Increase Trips Provided
- Increase Service Hours/Days/Weeks
- Establish One Maintenance Shop
- Establish Radio System With One Base Station

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3. AREA SERVICE PROVIDERS

Organization	Service Area	Type of Service	People Served	Days of Operation	Vehicles	Vehicle Maintenance
Helena Area Transit Services	City of Helena; East Helena	Fixed route and door-to-door transportation. \$.85 to \$1.50.	Service is not limited, provided to anyone. 10% of customers require a wheelchair lift. 5% of customers require some limited assistance.	Monday – Friday 7:00 am-7:00pm, 52 weeks per year.	Operate 5 buses with wheelchair lifts.	Performed in-house; limited services performed by outside vendors.
Rocky Mountain Development Council	City of Helena	Door-to-door	Customers with transportation limitations. Ages 60 and older. 5% of customers require a wheelchair lift.	Monday – Friday 7:00 am-5:00pm 52 weeks per year.	Operate 2 buses with wheelchair lifts.	Contracted to outside vendor.
Spring Meadow Resources	City of Helena	Door-to-door	Clients in 5 group homes. Ages 19 and older.	Seven days a week 24 hours per day 52 weeks per year.	Operate 9 vehicles, 2 have wheelchair lifts.	Contracted to outside vendor.

Organization	Service Area	Type of Service	People Served	Days of Operation	Vehicles	Vehicle Maintenance
West Mont Independent Support Services	Helena, and medical or social transportation out of Helena as needed	Door-to-door	<p>Clients in 7 group homes.</p> <p>Ages 19 and older.</p> <p>21% of clients require a wheelchair lift.</p> <p>100% of clients require physical assistance/supervision.</p>	Monday – Friday 52 weeks per year.	Operate 16 vehicles, 4 have wheelchair lifts, 2 are 15 passenger vans.	Contracted to outside vendor.

3.1. Current Vehicle Roster and Utilization

Helena Area Transit Services

Vehicle Roster	Vehicle Utilization
<ul style="list-style-type: none"> 1996 Ford bus, 15 passenger, with a wheelchair lift, radio equipped. 	Not specified
<ul style="list-style-type: none"> 2000 Ford bus, 17 passenger, with a wheelchair lift, radio equipped. 	Mon-Fri, 7 am-11 am and 12 pm-7 pm
<ul style="list-style-type: none"> 2001 Chevrolet bus, 15 passenger, with a wheelchair lift, radio equipped. 	Mon-Fri, 7 am-11 am and 12 pm-7 pm

<ul style="list-style-type: none"> • 2002 Chevrolet bus, 17 passenger, with a wheelchair lift, radio equipped. 	Mon-Fri, 7 am-1 pm and 2 pm-7 pm
<ul style="list-style-type: none"> • 1998 Chevrolet bus, 15 passenger, with a wheelchair lift, radio equipped. 	Mon-Fri, 8 am-10 am and 11 pm-7 pm

Rocky Mountain Development Council

Vehicle Roster	Vehicle Utilization
<ul style="list-style-type: none"> • 1995 Ford bus, 12 passenger, with wheelchair lift, radio equipped. 	Mon-Fri, 11 am-1 pm
<ul style="list-style-type: none"> • 2001 Chevrolet bus, 12 passenger, with wheelchair lift, radio equipped. 	Mon-Fri, 7 am-5 pm

Spring Meadow Resources

Vehicle Roster	Vehicle Utilization
<ul style="list-style-type: none"> • Not Specified 	Not Specified

West Mont Independent Support Services

Vehicle Roster	Vehicle Utilization
<ul style="list-style-type: none"> • 1980 Chevrolet truck/SUV, 3 passenger, no wheelchair lift. 	Not specified

<ul style="list-style-type: none"> • 1993 Chevrolet van, 8 passenger, no wheelchair lift. 	Mon-Fri, 8 am-6 pm
<ul style="list-style-type: none"> • 1993 Chevrolet van, 12 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1993 Chevrolet van, 15 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1994 Dodge van, 15 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1996 Dodge van, 7 passenger, no wheelchair lift. 	Mon-Fri, 8 am-6 pm and 10 pm-1 am, Sat-Sun, 1 am-7 am
<ul style="list-style-type: none"> • 1995 Ford truck/SUV, 2 passenger, no wheelchair lift. 	Not specified
<ul style="list-style-type: none"> • 1995 Dodge van, 15 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1995 Dodge van, 9 passenger, with a wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1998 Dodge van, 15 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1998 Subaru, 6 passenger, no wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 1999 Dodge van, 7 passenger, no wheelchair lift. 	Mon-Fri, 8 am-9 pm
<ul style="list-style-type: none"> • 1997 Dodge van, 5 passenger, with a wheelchair lift. 	Sat-Sun, 8 am-9 pm
<ul style="list-style-type: none"> • 2000 Dodge van, 9 passenger, with a wheelchair lift. 	Sat-Sun, 8 am-9 pm

4. POSSIBLE ACTIVITIES

Description	Level of Coordination	Priority	Cost	Time Frame
Vehicle and Trip Sharing	One agency allows other agencies to use its vehicles, which would otherwise not be in use.	High	Low	Implement as soon as possible.
Shared Communication and Technology	Coordinate communication and technology solutions.	High	Medium-High	Implement as soon as possible.
Joint Maintenance	Single maintenance shop or contracting maintenance for participants.	High	Low	Implement when all vehicles are pooled.
Joint Purchasing	Bulk discounts save money for participating agencies.	Medium	Low	Implement as agencies pool resources.
Shared Training	Standardization of training programs.	High	Low	Implement as soon as possible.
Information and Referral	Participants are aware of services provided and can properly direct customers.	High	Low	Implement as soon as participants have combined resources.
Assistant Services	Coordinate among participants the enlistment of volunteers for assistance programs for customers requiring access to transportation.	High	None	Implementation can take place immediately.
Marketing	After participating agencies have joined increase public knowledge of all services available.	High	Low-Medium	Implement as agencies pool resources.
Grant Applications	Evidence of coordination is required for many transportation related funding programs.	High	Low	Implement as soon as possible.

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5. COORDINATION PROGRESS

The following progress has been made toward the coordination process as of June 30, 2003:

1) Stakeholders have been identified, and contacted
a) Continue searching for others to participate

2) Organizational procedures have been established
a) Refer to Helena Area Transportation Council Bylaws
b) Leadership provided by the chair of the Council

3) Data collection was accomplished through an agency wide survey
a) Application letters were sent to agencies across Montana
b) Helena and Missoula were chosen as the communities to proceed with developing a coordination plan

4) Current services and resources have been analyzed
a) Agencies have inventoried existing vehicle resources
b) Lists of services have been provided

5) Deficiencies
a) Duplicate services
b) Areas not served by any transportation
c) Vehicle idle time
d) Fleet size and vehicle capacity
e) Lack of wheelchair accessible vehicles
f) Understaffed transportation work force

6) Possible improvements and expansions
a) Increase service area
b) Increase the hours and days of trips provided

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6. INITIAL ACTIVITIES

The purpose of the System Change coordination plan is to develop a coordinated transportation plan that will meet the specific needs of people with disabilities, while also providing improved service to the entire community. The plan is to build and support a more coordinated transportation model that can be replicated statewide. An Intelligent Transportation System to ease scheduling and accounting burdens, and maximize passenger usage will be identified along with other coordination tools that communities can consider for inclusion in their coordination plan. A statewide computer system may be developed to collect and disseminate billing information and other data for transportation services to assist community transportation systems.

6.1. Who is Responsible

The Montana Department of Public Health and Human Services, Disability Services Division, Montana Transportation Partnership, Western Transportation Institute, and the community of Helena are responsible for preparing a coordinated transportation system in the Helena area. These agencies will work together to provide coordination and technical assistance for the Helena transportation project.

6.2. Goals

A goal of a coordination plan is the collaboration of agencies that will result in increased levels of formalizing alliances. This collaboration will result in joint use of vehicles, joint training, trip sharing, and a shared ride computer system. Collaboration allows individual agencies to retain their separate identities, and attain the goal of sharing services. Another goal will be a consolidation process that will strive to achieve a level of total alliance with all agencies involved. The result will be lower costs, more and better service, and relieving the burden of providing transportation service on an individual agency.

6.3. Time Line

The term of this grant for purpose of delivery of services is from October 1, 2002 through September 30, 2005. This grant may not be extended for any period beyond that specified. Therefore, implementation of the coordination program must take place as soon as possible. The time frame exhibited in the table "POSSIBLE ACTIVITIES" should be an informational guideline for implementation and completion of certain areas of the project.

6.4. Helena Budget

The community of Helena, through a contract with RMDC, will receive approximately \$55,000 per year during the course of the project to assist with coordination efforts.

6.5. Agreements

A contract has been made between The Montana Department of Public Health and Human Services and Western Transportation Institute to assist in the coordination of a transportation system within two communities in Montana.

An agreement was also entered into by Rocky Mountain Development Council (RMDC) and the Montana Department of Public Health and Human Services (DPHHS), which defines funding and reporting requirements.

In addition, a Memorandum of Understanding was entered into between Rocky Mountain Development Council, the City of Helena, Westmont, Inc., and Spring Meadow Resources, Inc. for purpose of improving coordination among the providers. They expect to respond to customer needs so it is important that the program be flexible and modified as needed to be successful in its operation. With this in mind, these agencies agree to work cooperatively and in good faith to solve any problems or make changes as needed throughout the duration of this agreement.

7. MEDIUM TO LONG TERM ACTIVITIES

7.1. Extended Service

After a coordination plan is in place in the Helena area, service could be extended to Fort Harrison (wheelchair service), Whitehall, Townsend, and White Sulphur Springs. Service hours in Helena could be extended providing night/evening service, weekend service, or early morning service.

7.2. Technology Solutions

A computerized ride and scheduling software will maximize passenger usage, and ease scheduling and reporting burdens. A computer-based system would allow service providers to enter client and service data once, which would then be forwarded electronically to all applicable departments. This would eventually lead to a statewide computer-based system to collect and disseminate billing information and other data for transportation services available to transportation dependent persons.

7.3. Other Activities

Periodic meetings should take place to review the progress of coordination. Additional data may be collected to promote further progress.

7.4. Evolving Process

Because of the length of the project, as activities are coordinated there may be changes in priority of items or tasks. Additional data collected may modify current efforts.

7.5. Evaluation Plan

In order to determine if a coordination program is reaping benefits over previously uncoordinated transportation, compare data from the current coordination program to data from the prior system as much as possible. If current participants in the coordination program had poor data collection procedures prior to joining the program, it may be difficult or impossible to compare some or all evaluative measures. It is imperative to ensure that the measures being compared are measuring the same thing. Otherwise, any comparisons are completely meaningless.

If good data is collected from the transportation provided prior to the implementation of the coordination program, then evaluating the success of the transportation program will be possible. If good data is not collected prior to implementation initial evaluation efforts will have to rely upon estimates and qualitative impressions until better quality data has been coming in for a period of time. Generating reports is the most effective way to keep track of the progress of the coordination program. Reports should be generated over a standard time period, such as weekly, monthly, quarterly, yearly, or some combination of these.

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Helena Area Transportation Council Bylaws.

LSC Transportation Consultants, Inc. Montana Rural Passenger Needs Study. Final Report. March 2001.

Robert Peccia & Associates. The Greater Helena Area 2001 Transportation Development Plan Update. December 2001.

11. APPENDIX B: RAVALLI COUNTY PLAN

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**Montana Real Choices Systems Change Grant:
Ravalli County Transit Service Improvement Plan
Version 1.0**

by

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DISCLAIMER

The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the Western Transportation Institute, Montana State University, the Montana Department of Public Health & Human Services, the Montana Transportation Partnership, or the Montana Department of Transportation.

Alternative accessible formats of this document will be provided upon request. Persons with disabilities who need an alternative accessible format of this information, or who require some other reasonable accommodation to participate, should contact Kate Heidkamp, Communications and Information Systems Manager, Western Transportation Institute, Montana State University-Bozeman, PO Box 174250, Bozeman, MT 59717-4250, telephone number 406-994-7018, e-mail: KateL@coe.montana.edu.

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1. INTRODUCTION

The Western Transportation Institute (WTI) at Montana State University is currently under contract with the Montana Transportation Partnership to provide technical assistance through the Real Choices Systems Change Grant Project. As part of this project, two communities, Helena and Ravalli County (Hamilton), were selected for implementation of “system changes” to their transportation systems. This document focuses on initial proposed alternatives to the current transportation system in Ravalli County.

A contract currently exists between the Montana Transportation Partnership and Missoula Aging Services, the “parent” organization for Ravalli Aging Services or the Ravalli County Council on Aging. The Ravalli County Council on Aging is the main operator of transportation services, through the Ravalli County Transit. The name, Ravalli County Transit, was recently introduced to emphasize the move to make the transportation system open to the general public without limiting service to seniors and people with disabilities.

In addition to working with Missoula Aging Services and Ravalli County Transit, the Ravalli County Transportation Advisory Council (TAC) is actively involved in pursuing improved transportation throughout Ravalli County.

1.1. Document overview

The purpose of this document is to identify and recommend changes that will result in increased ridership and to further the goal of making Ravalli County Transit a general public transit system.

This document was revised after an initial meeting with the Ravalli County TAC on December 10, 2003, and after a “working group” meeting of the TAC on January 7 & 8, 2004. This version (1.0) should be considered a baseline document, including the recommended changes that were agreed to by those attending the working group session. In addition to this Service Improvement Plan, an Implementation Plan and Coordination Plan will also be created for Ravalli County Transit.

This document, consisting of seven chapters, contains a description and analysis of the existing situation and proposed system. Chapter 1 provides the scope of this document and the system being analyzed. Chapter 2 describes the current transportation system. Chapter 3 outlines the goals of the project. Chapter 4 explains the possible alternatives for improvements to the system, or changes that will help stakeholder agencies reach the goals identified in Chapter 3. Chapter 5 describes the recommended changes and Chapter 6 presents scenarios for how the changes should be implemented. Finally, Chapter 7 provides the conclusions of the recommendations.

1.2. Project Description

This project is part of the Real Choices Systems Change Grant project, an effort in Montana to provide “systems change” in three areas: housing, individualized services, and transportation. The transportation portion of the program is being administered by the Montana Transportation

Partnership (on behalf of the Montana Department of Public Health and Human Services), with the Western Transportation Institute (WTI) providing technical assistance.

With assistance from WTI, the Montana Transportation Partnership ultimately selected the communities of Hamilton (Ravalli County) and Helena to receive funding assistance to make changes to their current transportation systems.

As part of the Systems Change Grant, the purpose of this plan is to establish actions that will aid Ravalli County Transit in reaching the goals (listed in Table 1) established by Missoula Aging Services and the Montana Transportation Partnership. This project also includes the efforts of other organizations such as the Ravalli County TAC, the Missoula TAC and Specialized Transportation Advisory Committee (STAC), the Montana Transit Association, the Missoula Ravalli Transportation Management Association (MRTMA) and the Montana Department of Transportation.

In addition to this project, a separate marketing plan is being developed by the Ravalli County TAC in cooperation with the Montana Department of Transportation and Peter Schauer and Associates. To the maximum extent possible, this project will work to incorporate the relevant goals and objectives identified in the marketing plan and the Transportation Development Plan that have been, or are in the process of being, developed for Ravalli County and Ravalli County Transit.

Table 1: Grant Goals and Objectives for Ravalli/Missoula

Goals	Objectives
Assist Ravalli County Transit in strengthening their available transportation, as demonstrated by increased ridership, through a coordinated transportation plan and system that is sustainable in Ravalli County	Ensure appropriate staffing to support the outcomes of the Partnership grant
	Conduct an analysis of the current Ravalli County Transit to identify and recommend changes that will result in increased ridership
	Increase ridership within Ravalli County and into Missoula County
Develop marketing strategies that will result in increased consumer awareness of available transportation services in Ravalli County	Develop, print, and distribute a brochure that promotes existing transportation options in Ravalli County
	Contract with marketing consultant to recommend additional marketing activities to promote transportation services in Ravalli County
	Implement financially feasible recommendations
Assess current status of transportation coordination efforts/needs in Lake, Missoula, Ravalli and Sanders counties utilizing the TAC's and develop a workshop to offer technical assistance	In conjunction with Montana Transportation Partnership, Missoula STAC will develop at least five one-day workshops to provide technical assistance on transportation coordination for Lake, Missoula, Ravalli and Sanders TAC's

Goals	Objectives
Develop a sustainable transportation coordination system in Ravalli County	Identify potential funding sources and partnerships to provide necessary funding to maintain coordination staff
Assist Missoula STAC in their effort to increase ridership through both coordination and increased service for Missoula’s seniors and persons with disabilities as demonstrated by increased ridership	Utilize the provider subcommittee of STAC to pilot MTA Active Cal as a tool for transit provider coordination and tracking coordinated rides
	Establish maximum efficiency through coordination efforts and identify service expansion needs in order to cultivate financial partnerships to meet these needs

1.3. Methodology

The Western Transportation Institute used the methodology presented in Table 2 to produce the recommendations presented herein.

Table 2: Service Improvement Plan Methodology

Action	Process	Outcome
Establish Goals	Review documents to determine goals of the project	Establish targets
Data Collection and Analysis	Literature review as well as visits to RCT to gather and analyze system data	Determine current levels of service, system parameters
Gap Analysis	Investigate difference between where the system is, and where it should be	Establish initial recommendations
Draft Document	Present initial findings and recommendations	Determine feasible course of action
Baseline Document (v1.0)	Revise initial recommendations based on input from RCT and TAC	Set action (implementation) plan

These initial recommendations are based on several data sources, including:

- Visits by WTI Staff, including an on-board bus analysis;
- Ravalli County Transit manifests;
- The Ravalli County Council on Aging Transit Development Plan Update 2003-2007;
- GIS population and ridership analysis;
- The Ravalli County Marketing Plan; and
- The Montana Coordinated Transportation Handbook.

The information contained within this document provided the basis for preliminary recommendations that were presented to the Ravalli County TAC on December 10, 2003. These recommendations were further refined after working group meetings that took place on January 7 & 8, 2004. This document and the recommendations contained herein are based on the consensus of the working group members.

The recommendations within this document are based on various sources of data, with information supplemented by individuals who were present at the working group meetings. Due to the ever-changing nature of a transportation system, it is anticipated that the recommendations and the order in which they may be implemented will change based upon certain factors such as funding availability, regulations and the ability to modify the service based on requests to regulatory agencies, and how customers may react to the changes. The recommendations may also be modified based on additional meetings, and as further data is collected and analyzed.

It is important to remember the fluid nature of a transportation system as the recommendations (Chapter 5), implementation (Chapter 6) and conclusions (Chapter 7) are presented.

2. CURRENT SITUATION

This chapter provides background information relating to Ravalli County, Ravalli County Transit's operational policies and constraints, and a description of Ravalli County Transit, including data that describes the riders and ridership patterns. This information is based on an analysis of data from June through September 2003.

2.1. Background Information

Ravalli County, on the southwest edge of Montana, south of Missoula, contains the incorporated areas of Darby, Hamilton, Pinesdale, and Stevensville, and the unincorporated areas of Conner, Corvallis, Florence, Sula, and Victor. The 2000 census reported that the 36,070 residents of Ravalli County lived in the fastest growing county in the state. Hamilton, the largest community and the county seat, had a population of 3,705 according to the census. Eighty-nine percent of the residents live within 5 miles of US 93 (Figure 1). The northern communities can be considered bedroom communities of Missoula. Most of the services in the county are located in Hamilton, with the majority of the county's population concentrated in the Hamilton area or north of it. A small portion of the county's population lives south of the Hamilton area, with Darby, population 710, being the largest community in that area.

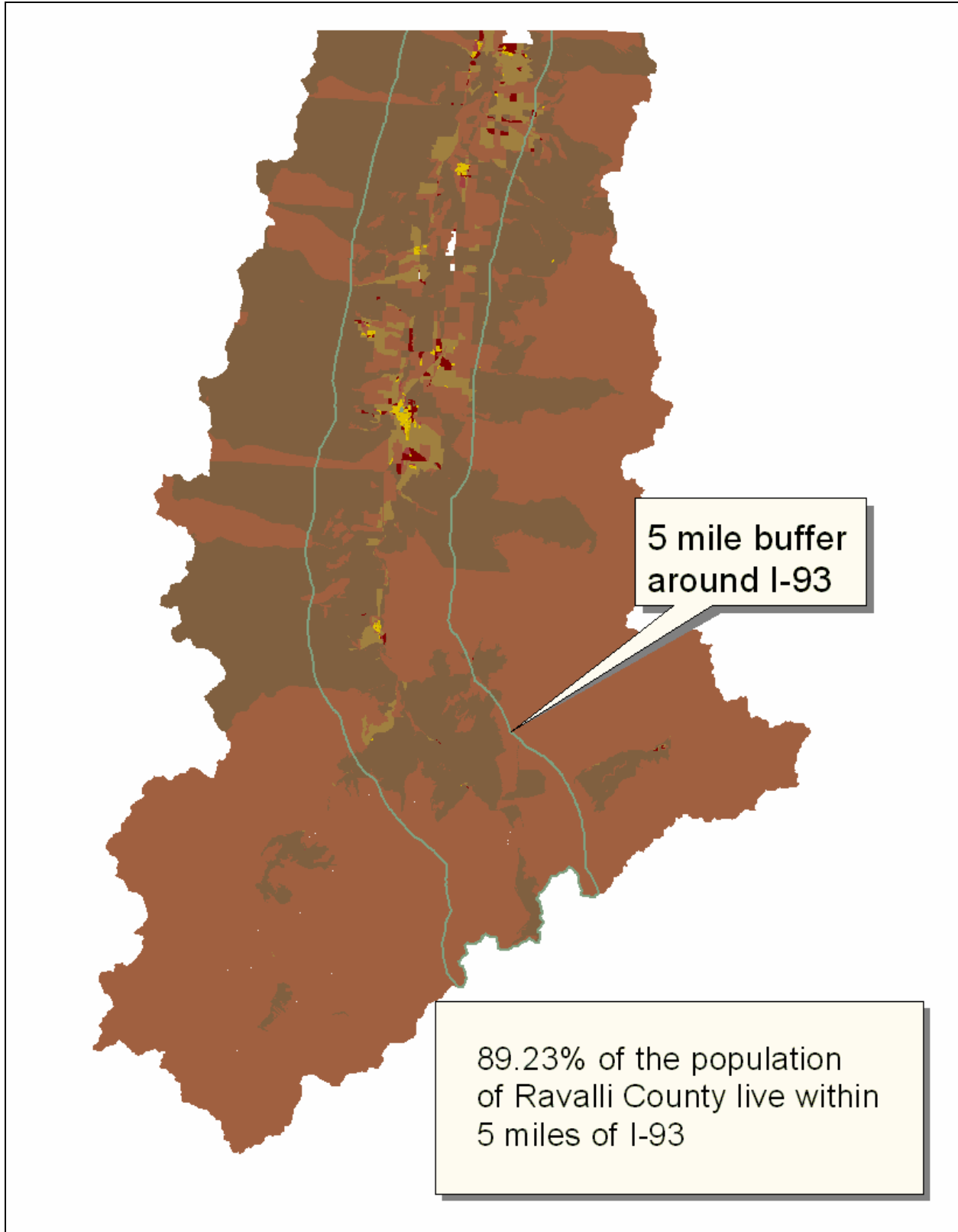


Figure 1: Population density map.

Ravalli County Transit (RCT) serves the general public throughout the county on a demand-responsive basis. In 1999, the service transitioned from one that was limited to seniors and people with disabilities to one that is open to the entire population. Although it is open to the public, as indicated by the ridership analysis by the Transit Development Plan (Figure 2), the majority of riders are still 60 years of age or older.

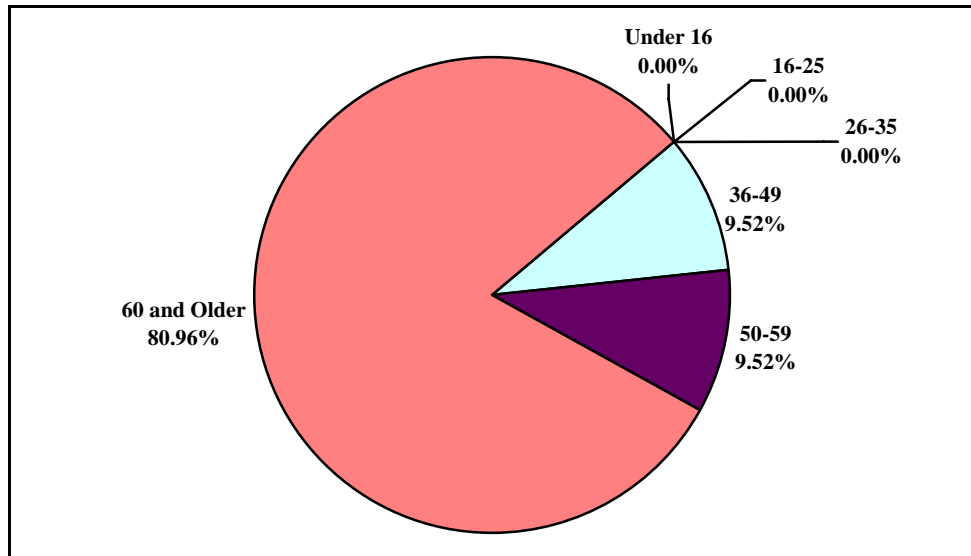


Figure 2: Age Distribution of Riders

Currently, Ravalli County Transit (RCT) provides rides to virtually any location in the county. However, as shown in Figure 3, the majority of the riders are based in Hamilton (Zone 4) and in areas just to the north and south of Hamilton (Zones 3 & 5). Figure 4 shows these zones in reference to Ravalli County.

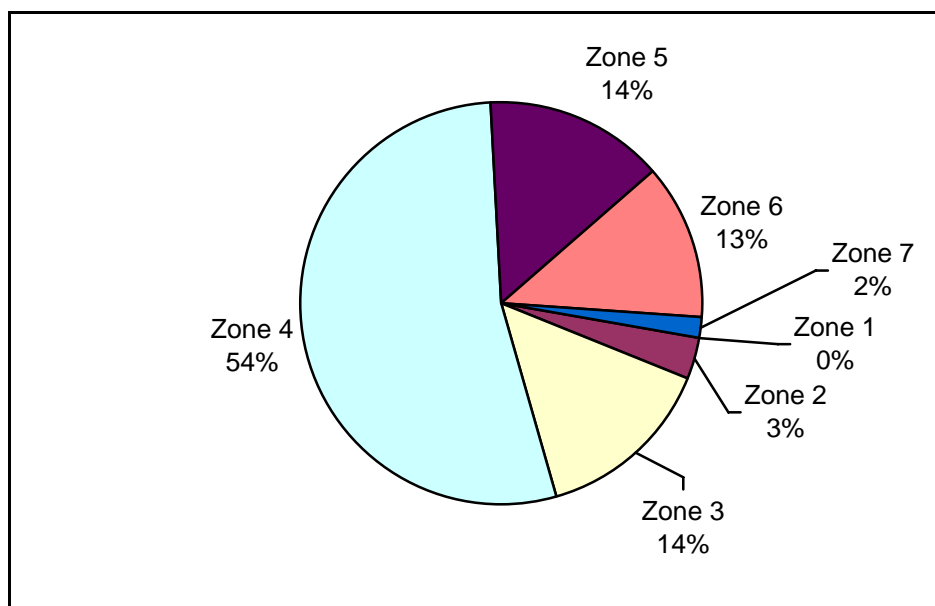


Figure 3: Distribution of riders by location.

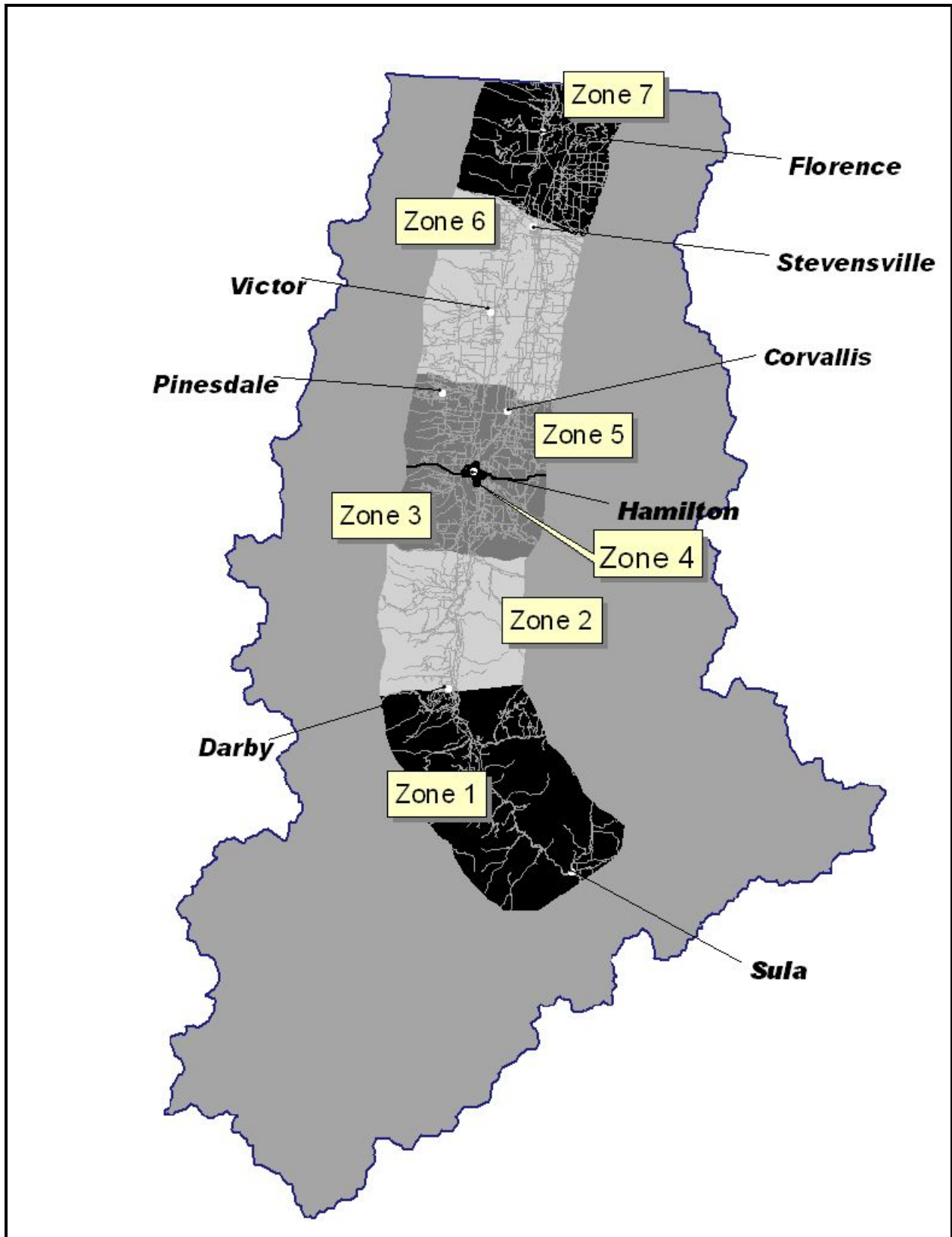


Figure 4: Ridership Analysis Zones

2.2. Operational Policies and Constraints

Ravalli County is rural and covers a large geographic area. Hamilton, the home to Ravalli County Transit, is approximately 35 miles south of the northern end and approximately 50 miles north of the southern end of the county. The distance within the county and the lack of significant population densities tends to strain transportation services. In addition, Ravalli County Transit faces various regulatory challenges.

Because Ravalli County Transit (RCT) is currently operated by the Ravalli County Council on Aging and is not established as a municipal bus service or an Urban Transportation District (UTD), it falls under the jurisdiction of the Public Service Commission. Operationally, this prevents Ravalli County Transit from having the ultimate authority to set fares or operational policies, such as the service area. These policies and fares must be set in conjunction with the Public Service Commission (PSC). The PSC typically deals with for-profit organizations, such as charter bus and taxi companies.

As a result of working with the PSC, RCT has a low number of general public riders, likely due to the fact that PSC regulations require a fee for the general public that is based on the cost of a taxi service. These regulations also prevent RCT from providing general public rides across the county line into Missoula.

In addition to the PSC, Ravalli County Transit is governed by the Federal Transit Administration, and must comply with regulations concerning the Americans with Disabilities Act (ADA) and various funding sources, such as Title III. While some of these operational constraints could be eliminated with the establishment of a UTD, other constraints would remain.

2.3. Description of Current System

As described in sections 2.1 and 2.2, Ravalli County Transit (RCT) is currently a demand-responsive transportation system (door-to-door) that is operated by the Ravalli County Council on Aging. Service is offered Monday through Friday, from 8:00AM until 5:00PM. The system currently operates with four vehicles: two 7-passenger vans and two 13-passenger buses. On average, Ravalli County Transit provides 30 rides per day, utilizing 2 of their vehicles. Tuesday, Wednesday, and Thursday are the highest travel days. Tables 2-4 show an analysis of the ridership of RCT for the period of June 1-September 30, 2003. Table 3 shows the time of day and day of the week for each ride, Table 4 shows the percentage of rides in each time period, and Table 5 shows the percentage of rides for each day of the week.

The information shown in Tables 2-4 comes from the utilization report function of the CARDS[®] software, and shows outputs for days of the week (Saturday and Sunday) and times of the day (after 5:00 pm) that RCT does not currently operate, although this may change. The CARDS[®] software may be utilized by RCT and is further explained in section 4.4.

Table 3: RCT Ridership Analysis-Days and Hours

Time	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Totals
7:00 AM	0	0	0	0	1	0	0	1
8:00 AM	0	26	53	35	25	31	0	170
9:00 AM	0	12	69	71	40	50	0	242
10:00 AM	0	25	95	79	67	53	0	319
11:00 AM	0	33	102	53	68	80	0	336
12:00 PM	0	13	33	23	28	36	0	133
1:00 PM	0	34	63	46	46	39	0	228
2:00 PM	0	24	35	40	42	29	0	170
3:00 PM	0	1	14	23	12	21	0	71
4:00 PM	0	3	3	5	0	1	0	12
5:00 PM	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0
Totals	0	171	467	375	329	340	0	1682

Table 4: RCT Ridership Analysis-Total Rides by Hour

Hour	% of total rides
7:00 AM	0.06%
8:00 AM	10.11%
9:00 AM	14.39%
10:00 AM	18.97%
11:00 AM	19.98%
12:00 PM	7.91%
1:00 PM	13.56%
2:00 PM	10.11%
3:00 PM	4.22%
4:00 PM	0.71%
5:00 PM	0.00%
6:00 PM	0.00%
7:00 PM	0.00%
8:00 PM	0.00%

Table 5: RCT Ridership Analysis-Total Rides by Day

Day of week	% of total rides
Sunday	0.00%
Monday	10.17%
Tuesday	27.76%
Wednesday	22.29%
Thursday	19.56%
Friday	20.21%
Saturday	0.00%

As is true with most demand-responsive systems, in order to receive a ride, an individual must call a day prior to when the ride is needed to make a request. When a ride request is made, the dispatcher checks to see if there is a space available at the time requested, and if so, enters the information onto the manifest. The drivers are then provided with the manifests.

Due to the rural nature of the county, RCT has tried various service options. At one point, RCT based a van in Darby but moved it back to Hamilton because of lack of demand. Currently, most of the ride requests from Darby are in the afternoon. Until 6 months ago, the primary user of the service from Darby was a dialysis patient who made trips 3 days per week from Darby to the Hamilton Dialysis center.

In addition to individual riders, RCT has contracts with some retirement homes, Willow Court (subsidized housing) and Remington (private), where the riders get billed each month instead of paying when they board the bus. The Bitterroot Living Center in Stevensville has their own vehicle, but some clients use RCT's service to Missoula.

As previously noted, RCT struggles with the long trip distances in the county. For example, one senior rider lives in Rye Creek (Dug Out), 56 miles south of Hamilton. To accommodate the rider, RCT told them that they could only ride on days when the service is less busy as the ride would require 90 minutes round-trip from Hamilton.

One service that could have been coordinated to help with the long trip distances was Community and Rural Transportation (CART). CART used to operate intercity bus transportation from Idaho through Ravalli County on the way to Missoula. However, CART has terminated this service. A few other providers in Ravalli County may present coordination opportunities, but, at this point in time, RCT is focused on improving its operation before coordinating with other organizations.

One area on which RCT is focusing improvement is marketing. Currently, RCT has a limited marketing budget, with most information spread by word-of-mouth. Additionally, an advertisement runs in the local newspaper once a month. Peter Schauer is currently completing a marketing review for RCT, and elements of the review may be incorporated into future plans.

Given the Ravalli County Transit system's current state, it is important to review the goals for moving the system forward.

3. VISION AND GOALS

The vision and goals for Ravalli County Transit are grounded in the Mission Statement, which is as follows:

The mission of the COA transit program is to provide safe, reliable public transportation to the residents of the county and to promote their self-sufficiency. Public transportation in Ravalli County will meet the needs of residents and visitors by providing access to employment, recreation, and essential services, while enhancing the quality of life and protecting the environment.

-Source: 2003-2007 Transit Development Plan (LSC, Inc.)

3.1. Unconstrained System

Ideally, a system would provide “family style” transportation. This concept, described to Peter Schauer, means that an individual without a vehicle could go wherever they wanted, whenever they wanted. Similar to a taxi service, a fleet of vehicles would be used to provide door-to-door service in a timely manner. The charges for the service would have to be attractive, so that people would want to use the transit system.

While the system described above would be ideal, most systems do not have the money and other resources necessary to deliver such service. Therefore, based on the input from RCT and the Ravalli County TAC, the Western Transportation Institute has identified the realistic goals described in the next section.

3.2. Goals

While each individual goal is important, developing a system that can obtain all (or a majority) of the goals is ideal. Therefore, it is important to remember which goal(s) is most important, and that the importance of goals may change over time. The three main goals currently identified are:

- Assist individuals who are transportation dependent to remain a part of the community by accommodating their needs and providing transportation alternatives,
- Increase the general public’s use of the transportation system, and
- Enhance efficiency –lower cost per ride and increase number of rides per hour and rides per mile.

These goals are general in nature, and must have specific, measurable objectives tied to them to be achievable. The first goal focuses on Ravalli County Transit’s initial status as a system that served senior and other individuals who had a lack of transportation alternatives. Objectives under this goal may include:

- Surveying riders annually to determine if changes to service are necessary or
- Ensuring a current rider is on the RCT Board.

For the second goal, increasing the general public’s use of the transit system, objectives may be:

- Implementing a checkpoint system to encourage use;
- Developing a marketing plan and promotional materials that advertise that the transit system is for all individuals; or
- Surveying non-riders to determine what type of a system they would ride.

The third goal, increasing efficiency, is usually at odds with the first two goals. In other words, a system that is very responsive and flexible tends to have some inefficiency. However, due to limited resources, it is always important to strive to have a system that is as efficient as possible. Specific objectives for this goal would be to:

- Increase the number of rides per hour,
- Increase the number of rides per mile, and
- Decrease the cost per ride.

In addition, each of the objectives listed above would be further defined, with even more detail including specific timelines for each action.

As stated previously, to achieve the goals and objectives, it is important to be able to “measure” the system to evaluate changes. Table 6 shows some of the measures of effectiveness that can be used to evaluate changes to the system.

Table 6: Goals and Measures of Effectiveness

Goals	Measures of Effectiveness	Data Sources
Increased Service Efficiency (Overall)	<ul style="list-style-type: none"> • Trips per Mile/Hour/Operating Day/ Vehicle Operating Day (+) • Miles/Hours per Vehicle Operating Day (+) 	Vehicle Logs
Increased Vehicle Capacity per Trip	<ul style="list-style-type: none"> • Trips per Revenue Mile/Hour (+) 	Vehicle Logs
Decreased Deadhead	<ul style="list-style-type: none"> • Trips per Revenue Mile/Hour (+) 	Vehicle Logs
Decreased Travel Time	<ul style="list-style-type: none"> • Average Trip Length (-) • Average Trip Time (-) 	Vehicle Logs
Decreased Costs	<ul style="list-style-type: none"> • Cost per Trip/Mile/Hour (-) • Revenue per Trip/Mile/Hour (+) • Deficit per Trip/Mile/Hour (-) 	Vehicle Logs, Financial Records
Increased Provision of Trips/Rides	<ul style="list-style-type: none"> • Total Trips/Rides (+) 	Vehicle Logs
Better Quality Service	<ul style="list-style-type: none"> • Complaints per 1,000 Trips (-) • Accidents per 10,000 Trips (-) 	Vehicle Logs, Incident Records, Customer Service Records

In order to determine if the changes to the transportation system have achieved the goals and objectives stated, data from the “changed” system would be compared with data from the period

prior to the changes. If there are poor data collection procedures in place prior to the changes, it may be difficult or impossible to compare some, or all, measures of effectiveness. Standardized data collection should be implemented during the planning phases so that there will be at least a minimum data set regarding operations of the previous system.

Even when comparing data from the coordinated system to data from the system in operation prior to the coordination program, it will be necessary to ensure that the data being compared are measuring the same thing. Otherwise, any comparisons are meaningless. For example, two cost per trip measures—one referring to total costs, the other to operating costs—could not be adequately or effectively compared because the points of comparison are not the same. The measure with total cost would probably be higher as it includes administrative, capital and operating costs.

When making the initial comparison between the “changed” system and the previous system, it may be difficult to determine if numbers indicate that the program is successful, particularly if the data collected prior to the implementation of the change was of poor quality. Likewise, with the extensive variability possible in such factors as customer groups served, service provided, and service area covered, defining a universal set of numbers indicating “good” or “bad” performance is nearly impossible. For example, a rural transportation system providing fewer rides and covering more miles could be more efficient than an urban system providing more rides and covering fewer miles. Furthermore, a transportation system serving mobility-challenged passengers in which the drivers assist the passengers from their door to the vehicles may have comparably lower vehicle miles per hour and higher average trip length than a system serving mostly ambulatory individuals with curbside pickup, and yet, may be operating just as efficiently.

It is important to be careful with the evaluation and to pay attention to the numbers relating to the current goals of the transportation system. As an example, if a goal is to increase service by decreasing the time passengers spend on vehicles; the average trip time will decrease over time as the system shows progress toward its goals. However, if a goal is to increase the service area of the transportation system, average trip time may increase over time as a result of the increased distances vehicles travel.

It is also possible to compare the measures of effectiveness of a transportation system with those of similar transportation systems in Montana or in other states. Because no two transportation systems are exactly the same, the comparisons made with other transportation systems will be relative comparisons. It is best to compare several similar systems to obtain a more accurate picture of current standards of performance, while concurrently determining whether the system’s measures of effectiveness are similar with those of like providers.

Measures of effectiveness in the same range as similar providers in the region indicate that the system is probably performing in line with accepted standards. Small variances in measures may be related to the nature of the services provided by the system. For instance, a fixed-route system may be less expensive to operate than a door-to-door system operating at similar capacities. If measures vary greatly, the difference is more likely to be accounted for by performance disparities. If one system’s cost per ride is substantially higher than other systems’ cost per ride, this may indicate a need to improve efficiency of service. On the other hand, if one

system's cost per ride is substantially lower than other systems' cost per ride, this may indicate that this system is performing with very high efficiency, the systems of comparison are operating with low efficiency, or both. The Montana Transit Association, Montana Transportation Partnership, MDT, or DPHHS may be sources of information on similar systems in the state.

4. ALTERNATIVES FOR IMPROVEMENTS

To meet the goals and objectives described in Chapter 3, changes to the current system are necessary. The first section in this chapter describes service (route) alternatives, with the second section focusing on the service area of RCT. In the third section, alternatives for the fare structure are presented. In the fourth section, enhancements to technology are offered, followed by a discussion on service hours in the fifth section. In the sixth section, operational adjustments are presented, followed by the final two sections, which discuss a coordination plan and marketing alternatives.

4.1. Service Alternatives

This section presents three alternatives for how service could be structured within Ravalli County. Each alternative is described in detail, along with the pros and cons of each alternative and its cost. All three alternatives use the concept of a Hamilton checkpoint route. It is anticipated that this route would provide service from 7:30AM until 5:30PM. Demand-responsive service could continue with its current hours, or match the 7:30-5:30 timeframe. The service hours described would allow someone who has an “8 to 5” job to use the service.

It is anticipated that the checkpoint route would provide service to all current demand-responsive users in the Hamilton area. Further, the checkpoint service might be seen as more of a “general public” service than the current demand-responsive service, encouraging those individuals under age 50, currently only ten percent of the ridership, to increase their use of Ravalli County Transit.

The Helena Area Transit Service, HATS, utilizes both checkpoint and demand-responsive services for their clients. The Helena system typically has one bus on the checkpoint route, and two vehicles operating demand-responsive service, with each vehicle concentrating on a particular portion of the city. The checkpoint service normally services 40-45 percent of the total riders in the Helena area, acting as more of a “general public” service with about half of the clients not classified as seniors or people with disabilities. Only about 5 percent of the demand-responsive clients would fit the “general public” description.

Checkpoint service, in addition to attracting “general public” clients, also allows for more flexibility for seniors and people with disabilities. When WTI surveyed clients of GALAVAN, a transit provider for seniors and people with disabilities in Gallatin County, many respondents noted that they would like to have service without having to make a reservation the day before. As one individual commented, “Only thing is, I can’t always plan ahead for a ride.”

In order for the checkpoint service to be effective, the cost per ride must be attractive. We suggest that a daily pass fare of \$1.00 would be ideal. Further, a monthly pass should be established if possible. If additional routes are established, such as those listed in Alternatives 2 and 3, we believe a zone fare system could work.

All three alternatives allow for a spare vehicle (although Alternative 3 uses the spare vehicle on Tuesdays for service to Missoula) to allow for adequate vehicle maintenance time and for unforeseen accidents or circumstances that could result in an out-of-service vehicle.

In “costing” the alternatives, several assumptions were made. As is true with most systems, Ravalli County Transit spends roughly 75 percent of its budget on personnel. Therefore, the cost of each alternative is mostly dependent on the hours of service provided. Further, it is assumed that modifying the routing of the vehicles will not impact the need for more administrative costs, or change the fixed costs, as shown in Table 7.

Table 7: Ravalli County Cost Allocation Model

Item	Budgeted Amount	Vehicle-Hours	Vehicle-Miles	Fixed Cost
Admin. Salaries/Wages/Benefits	\$4,335			\$4,335
Op. Salaries/Wages/Benefits	\$70,933	\$70,933		
Maintenance Services	\$4,265		\$4,265	
Utilities	\$4,137			\$4,137
Travel/Meetings/Misc.	\$1,630			\$1,630
Fuel/Oil/Tires	\$5,049		\$5,049	
Insurance	\$5,020			\$5,020
TOTAL OPERATING COSTS	\$95,369	\$70,933	\$9,314	\$15,122
Service Variable Quantities		Veh-hours	Veh-miles	Fixed
		5,200	45,000	N/A
		\$13.64	\$0.21	\$15,122
TOTAL BUDGET	\$95,369			

Source: 2003-2007 Ravalli County Transit Development Plan Update

To simplify the ability to estimate the costs of the alternatives, the costs for “vehicle hours” and “vehicle miles” shown above were combined for a total of \$80,247. This total was then divided by the 5,200 vehicle hours noted above to calculate an hourly rate of \$15.43 per service hour. This rate will be used to determine the cost of each alternative.

All three alternatives assume that service will be provided Monday-Friday, 52 weeks per year. However, with some holidays occurring during the week, it is assumed that 255 days of service will be provided. The annual cost of each alternative can therefore be calculated with the following formula:

Cost for alternative = [255 (days of service) X 10 (hours of service/day) X number of vehicles in service X \$15.43] + \$15,122 (fixed costs)

For example, Alternative 1 assumes three in-service vehicles each day. Therefore, using the formula above, the total annual cost for this alternative is:

Cost for Alternative 1 = [255 X 10 X 3 X \$15.43] + \$15,122

Cost for Alternative 1 = \$118,040 + \$15,122 = \$133,162

Each alternative described below uses this formula to obtain its total costs. These totals can then be compared against the current budget of \$95,369 to determine the additional funding that would be needed to implement each alternative.

The following three alternatives are listed in order of how much they would “change” or increase the structure of the current system. Alternative 1, “Limited Structure”, would introduce the Hamilton Checkpoint Route, but allow for demand responsive service in the remainder of the county. Alternative 2, “Moderate Structure”, would utilize the checkpoint route, and structure service to Stevensville and Darby. Alternative 3, “Highly Structured”, would set a schedule for service to each part of Ravalli County. The alternatives are described below.

4.1.1. Alternative 1 – Limited Structured Service

Hamilton Checkpoint Route, and North and South Demand Responsive Service

This alternative (Table 8) would provide for a checkpoint route in Hamilton while allowing for one demand-responsive vehicle for service in the north and south parts of the county. Since there is a smaller population base south of Hamilton, the “south” vehicle would be used on Tuesdays to provide service to Missoula.

Table 8: Service Alternative 1

Vehicle	Day of the Week				
	Monday	Tuesday	Wednesday	Thursday	Friday
1	Hamilton	Hamilton	Hamilton	Hamilton	Hamilton
2	DR-North	DR-North	DR-North	DR-North	DR-North
3	DR-South	Missoula	DR-South	DR-South	DR-South
4	Spare	Spare	Spare	Spare	Spare

This alternative would allow for the creation of the checkpoint route, while maintaining the flexibility of the current system, by only using the remaining vehicles when needed, thus creating minimal change for Ravalli County Transit and the riders. Table 9 shows the pros and cons of this alternative, along with its cost.

Table 9: Service Alternative 1 Analysis

Pros	Cons
<ul style="list-style-type: none"> Establishes “general public” checkpoint route Allows flexibility for demand-responsive service 	<ul style="list-style-type: none"> May cause a perceived decline in customer service (limits door-to-door service in Hamilton)
<p>Cost \$133, 162. This is \$37,793 more than the current budget.</p>	

4.1.2. Alternative 2 – Moderately Structured Service

Hamilton Checkpoint Route, Stevensville and Darby service, and North Demand Responsive Service

This alternative (Table 10) would provide for a checkpoint route in Hamilton with scheduled services to Stevensville three times per week and to Darby two times per week. A third vehicle would be used to provide demand-responsive service to the north of Hamilton four times per week (M, W, R, F) and to Missoula on Tuesdays.

Table 10: Service Alternative 2

Vehicle	Day of the Week				
	Monday	Tuesday	Wednesday	Thursday	Friday
1	Hamilton	Hamilton	Hamilton	Hamilton	Hamilton
2	Stevensville	Darby	Stevensville	Darby	Stevensville
3	DR-North	Missoula	DR-North	DR-North	DR-North
4	Spare	Spare	Spare	Spare	Spare

This alternative would build on the service currently being provided to Stevensville three times per week for a dialysis patient. With a number of “set runs” the general public could utilize this service to Hamilton, knowing that there is also the checkpoint route in Hamilton.

On the service from Stevensville to Hamilton, stops would be established on Highway 93 near Victor, Pinesdale, and Corvallis to facilitate service to these communities. If an individual could not reach the stops along Highway 93, the demand-responsive service would be utilized. Table 11 shows the pros and cons of this alternative, along with its cost.

Table 11: Service Alternative 2 Analysis

Pros	Cons
<ul style="list-style-type: none"> Establishes “general public” checkpoint route Builds on current service to Stevensville May “group” service to the south (Darby) 	<ul style="list-style-type: none"> May cause a perceived decline in customer service (limits door-to-door service in Hamilton) Limits service south of Hamilton to two days per week
<p>Cost \$133, 162. This is #37,793 more than the current budget.</p>	

4.1.3. Alternative 3 – Highly Structured Service

Hamilton Checkpoint Route, Stevensville and Darby service, Pinesdale and Victor service.

Alternative 3 (Table 12) is more structured, in that most service is limited to certain days. In addition to the Hamilton checkpoint route, service would include one vehicle accommodating Stevensville and Darby on alternating days of the week and one vehicle providing alternating service for Corvallis and Victor, and Pinesdale. This alternative would use the “spare” vehicle for the weekly run to Missoula.

Table 12: Service Alternative 3

Vehicle	Day of the Week				
	Monday	Tuesday	Wednesday	Thursday	Friday
1	Hamilton	Hamilton	Hamilton	Hamilton	Hamilton
2	Stevensville	Darby	Stevensville	Darby	Stevensville
3	Corv./Victor	Pinesdale	Cov./Victor	Pinesdale	Cov./Victor
4	Spare	Missoula	Spare	Spare	Spare

Alternative 3 is the most structured of the alternatives, and perhaps the least flexible. This alternative defines when service will be available to a certain area of the county. While this alternative limits the amount of service to certain areas of the county, it may help group rides because clients know when service is available to their community. Table 13 shows the cost of this alternative along with its pros and cons.

Table 13: Service Alternative 3 Analysis

Pros	Cons
<ul style="list-style-type: none"> Establishes “general public” checkpoint route Builds on current service to Stevensville May “group” rides to the south (Darby) Should group rides in Corvallis, Victor and Pinesdale 	<ul style="list-style-type: none"> May cause a perceived decline in customer service (limits door-to-door service in Hamilton) Limits service south of Hamilton to two days per week Provides less flexibility for riders to ride when they want Creates largest change to the current system
<p>Cost \$140,877. This is \$45,508 more than the current budget.</p>	

4.2. Define Service Area

Because of the rural nature of Ravalli County, and the lack of a concentration of clients, it may be necessary for Ravalli County Transit to better define its service area, so clients know if they will be able to request a ride. This section defines two service area alternatives. If either of these service area alternatives were selected, it would have to be combined with the service (route) alternatives in Section 4.1.

4.2.1. Alternative 1 – No Service Outside Core Area

This alternative would limit the service area of Ravalli County Transit to Darby in the south and Stevensville in the north. Clients would have to be within five miles of Highway 93 to be within the service area. This alternative would maintain weekly service to Missoula with its pick up in Florence. This alternative would allow Ravalli County Transit to focus its resources on the area of the county that has the highest concentration of people. Service to an individual in a community such as Sula, though important, takes resources (drivers, vehicles) away from areas or communities that have more potential riders.

Pros

- Allows Ravalli County Transit to focus on core area of county
- Allocates resources in a more efficient manner

Cons

- Eliminates service to certain parts of the county

4.2.2. Alternative 2 – Limited service outside Core Area (1x per week)

This alternative would allow service to the entire county, but would limit outlying areas to once-a-week service. Depending on the service/routing alternative selected, an area such as Sula may only receive service on Tuesdays and Florence might only receive service on Wednesdays.

Pros

- Allows service to the entire county
- Groups rides in outlying communities/areas

Cons

- May cause resources to be ineffectively allocated (serve distant areas)

4.3. Improve Fare Structure

An improved fare structure, including a possible monthly pass, will further the effort to make Ravalli County Transit a general public system. As noted in the Transit Development Plan, Ravalli County Transit currently works with the Public Service Commission (PSC) to set its fares. In general, the PSC regulates for-profit entities, such as taxis, and therefore may not allow for the flexibility in fares that a transit system might require. The Western Transportation Institute suggests implementing a zone approach to fares. The zone system would mirror the fare system currently in use in that fares would increase relative to a rider's distance from Hamilton. The zone system could thus clarify why certain people are paying more than others.

4.3.1. Work through PSC

Once a new fare policy is established, Ravalli County Transit will have to present the changes to the PSC. The Western Transportation Institute, if requested, could provide support for this effort.

4.3.2. Form an Urban Transportation District

As discussed in the Transportation Development Plan, creating an Urban Transportation District (UTD) in Ravalli County would lead to several improvements. With a UTD in place, Ravalli County Transit would no longer need PSC approval of fare changes. The Urban Transportation District board's right to set fares would allow for more timely fare changes.

Other benefits of an Urban Transportation District include the ability to levy funds for capital and operating match and the right to make decisions on a local level without the need for approval from agencies such as the PSC.

4.4. Upgrade Technology

In order to analyze a transportation system, information such as the total number of rides provided, the origin and destination of each ride, and the clients who take each ride is vital. Unfortunately, many rural transportation systems in Montana use handwritten paper documents to manage their system. The Western Transportation Institute recommends improving RCT's technology to assist in gathering data and managing the transportation system.

4.4.1. CARDS[®]

Description

The Computer-Aided Reporting and Dispatching Software (CARDS[®]) system was initially created by the Western Transportation Institute (WTI) for GALAVAN. However, WTI quickly realized that other demand-responsive transportation providers would benefit from using the CARDS[®] system. Demand-response rides will be scheduled, as usual, with the passenger calling for a ride. The CARDS solution will change how rides get scheduled and how last minute changes to the schedule are handled. Implementing the CARDS system will result in more accurate recording of passenger information and allow changes to be made at any time. Anticipated improvements to the CARDS system may also allow for the initial scheduling of rides by the software.

Using CARDS[®] should improve the reporting of passenger and vehicle use and transportation information. The scheduling software will also keep track of information about the demographics of the passengers. Once a passenger has been entered in the system, all of their information will be stored in the software, only requiring updates when necessary. Monthly reports can be easily generated; and other reports can be generated using the Microsoft Access[®] database.

The CARDS[®] system should reduce the time required for data input and analysis, allowing Ravalli County Transit's dispatchers and management to focus on more important issues.

Pros

- Allows for better data management, which is important when trying to measure the impacts of various service changes
- Should allow easier scheduling of rides

Cons

- Software is designed around the concept of door-to-door instead of deviated route

Cost

There would be no cost to Ravalli County Transit for using the CARDS system.

4.4.2. MTA coordination software, activecal.com[®]

The Montana Transit Association (MTA) is currently working on software to improve coordination among transportation providers in a service area. This software, activecal.com[®], allows transportation providers to view each other's schedules. If a client of Agency A called in for a ride, and a ride was not available, Agency A would be able to look at the schedules of Agencies B and C to see if there was a ride available from either of those providers.

The software is currently being tested in the Missoula area. The benefits of the software to a single provider in an area, such as Ravalli County Transit, remain to be proven.

It should be noted that WTI and MTA have had preliminary discussions about combining the two software packages (CARDS[®] and activecal.com[®]) into a single system.

4.4.3. Use radios instead of cell phones

In managing a transit system, a change for one driver will typically affect another. For example, if a driver is waiting for a rider who is running late, another driver may have to adjust their schedule to help with the driver who will be late. Communicating these changes over a cell phone would take two or three calls.

First, the driver that will be running late must call the dispatcher and alert them to the situation. After making a decision as to how to adjust the schedule, the dispatcher must then call a second driver to advise them of the need to adjust their schedule to help the late driver. The dispatcher may then need to call the late driver to let them know of the adjustment. Using a radio system simplifies the process.

With a radio system, all drivers would hear the announcement that one driver is running late. A driver may even offer their assistance without the dispatcher having to enter the conversation. If a solution is offered, the dispatcher can simply acknowledge the change to the manifest.

Pros

- Enables all drivers to hear information that may affect them
- Allows for solutions without the possible involvement of the dispatcher
- May be able to network with other transportation providers in the area

Cons

- May have limited coverage (rural areas)
- Additional new cost

Cost

Costs vary for two-way radio systems, but can typically be included in the purchase of vehicles. RCT could make a separate request for funds through the 5311 program to provide the majority (80%) of the cost of the radio system.

4.5. Service Hours**4.5.1. Expand Weekday Service – 7:30AM-5:30PM**

A general public system is typically designed to take people where they need to go, when they need to go. While some people have jobs that fall outside of the typical 8AM to 5PM timeframe, many general public systems try to accommodate the “8 to 5” job. Therefore, a system that starts at 8:00AM would not allow someone with an “8 to 5” job to use the morning service. Likewise, if the service ends as the person leaves work, they cannot use the transit system for their transportation home.

With a half-hour checkpoint route, with service beginning at 7:30AM and ending at 5:30PM, Ravalli County Transit should be able to offer individuals a choice for their commute to and from work, thus increasing the system’s appeal to the general public.

The cost for adding an additional hour of service (based on the current hours of 8:00AM to 5:00PM) would depend on changes to the demand-responsive service. If only the checkpoint route operated from 7:30AM to 5:30PM, the change would cost a total of \$3,935. Depending on the service alternative selected (Section 4.1) the change could cost an additional \$11,805. This additional cost could be offset somewhat by applying for TransADE funding.

4.5.2. Weekend Service

One complaint often heard from clients of smaller transit systems is that life does not occur only between Monday and Friday; therefore transit services should be available on the weekend. Weekend service allows those individuals who are transportation dependent to have a quality of life similar to those with access to a vehicle.

Some transit systems offer service on Saturdays, not Sundays; others offer service on both days of the weekend. Almost all transit systems reduce their hours of service, and service frequency, on the weekend. Surveying Ravalli County Transit riders and non-riders could determine the demand for weekend service.

Pros

- More opportunities for the transportation dependent
- Additional service may entice use by the general public

Cons

- Additional cost for the transit system
- Need for weekend drivers

- May reduce time needed for vehicle repair and maintenance

Cost

The cost for the weekend service would depend on the number of vehicles in service, and on which weekend days service was offered. If service were offered on Saturdays from 8:30AM until 3:30PM (an 8 hour shift for a driver, including pre- and post-trip activities) on one vehicle, the Hamilton checkpoint route for instance, the cost would be approximately \$6,419. An additional vehicle (for demand-responsive service) on Saturdays or operating the Hamilton checkpoint route on Sundays would add an additional \$6,419. The Montana Department of Transportation's TransADE program could provide one-half of the funding for this service. The FTA Section 5311 program could also provide funding for this service.

4.6. Operational Adjustments

4.6.1. Shorten Time Slots

The Western Transportation Institute conducted a "time study" of the current service provided by Ravalli County Transit. The study highlighted a couple of important issues. Currently, each ride (one person) within the Hamilton area is provided a 15-minute time slot. This leads to approximately four rides per hour. The time study found that the average trip in Hamilton takes 6 minutes, including loading and unloading. Therefore, on average, up to ten trips per hour could be scheduled. Even a 10-minute time allocation per ride would allow Ravalli County transit to schedule 6 trips per hour, an increase of 50 percent efficiency from the current system.

The time study also evaluated the "out of town" trips. While the initial analysis indicated that efficiencies could be gained, a further analysis of the data is necessary to present any relevant conclusions.

It should be noted that implementing the checkpoint route in Hamilton should group rides, leading to a more efficient system. Further, if rides from the areas north or south of Hamilton are grouped, as could be achieved in Service Alternatives 2 or 3, the number of rides per mile and rides per hour should increase.

4.6.2. Increase Efficiency

Many transit systems judge their efficiency by the cost per ride, rides per mile, and rides per hour. These measures are dependent on the total number of people who ride the system, as well as how efficiently rides can be "grouped" on a vehicle. This plan provides two main alternatives for increasing the efficiency of the system: use the checkpoint system to group rides and make the service more attractive to the general public and tighten the timeslots allowed for rides both inside and outside of Hamilton.

While some "slack" must be built into any transit schedule to allow for weather and traffic conditions, etc., too much slack leads to an inefficient system. An inefficient system equates to a high cost per ride, with a low number of rides per mile or rides per hour.

By creating a checkpoint service in Hamilton, individuals will modify their travel patterns to coincide with the bus schedule. This should lead to an easier grouping of rides, as well as a service that is attractive to the general public. By having more people use the service, the cost per ride should decrease, while the number of rides per mile and rides per hour should increase.

Even if a checkpoint service in Hamilton is not implemented, tightening the demand-responsive schedule, as noted in Section 4.6.1, should allow for a 50 % increase in the number of rides provided in a given hour in the Hamilton area. This would lead to an increase in the number of rides per hour. However, unless rides are better grouped, or more people use the system, the cost per ride may not decrease, and the number of rides per mile may not increase.

4.7. Develop a Documented Coordination Plan

As part of the Systems Change Grant project, the Western Transportation Institute is also working with the community of Helena to increase coordination and effect a change in the transportation system in the area. As part of the system change process, a documented coordination plan was developed. The plan provides a foundation (data) for identifying possible changes, a strategy for implementing selected changes, and an evaluation process for changes made.

This document, although not labeled as such, will provide the foundation for a coordination plan. Additional meetings with the Hamilton TAC and various parties from the Hamilton and Missoula area will be requisite to a finalized draft of the plan.

4.7.1. Coordinate with Missoula Providers

One of the more popular services offered by Ravalli County Transit is the weekly service to Missoula. Further, the Ravalli County Transit Development Plan emphasized the possibility of a Highway 93 commuter service from Hamilton to Missoula. Considering the flow of individuals between the Hamilton area and Missoula, a discussion between all transportation providers in Ravalli and Missoula counties would be beneficial.

Coordination could lead to Ravalli County passengers riding on vehicles operated by Missoula County providers, such as Mountain Line, or vice versa. Further, driver training, marketing, vehicle maintenance, and insurance might be coordinated as well. While there are many possibilities, a meeting between the Hamilton and Missoula TAC's would allow coordination issues to be discussed and prioritized.

4.7.2. Continued TAC Leadership

As the largest provider of transportation in Ravalli County, Ravalli County Transit must continue to support and be part of a strong, unified TAC that is capable of providing a voice for improved transit service in Ravalli County. The TAC can be a tool to lobby both city and county officials for funding, legislation to create an Urban Transportation District, and other issues that affect public mobility in Ravalli County.

4.7.3. Identify coordination opportunities within Ravalli County

While Ravalli County Transit is the largest provider of transportation services within Ravalli County, there are other organizations within the county that have vehicles and provide transportation services. Ravalli County Transit must continue to dialogue with these organizations and begin the process of discussing opportunities for coordinated activities. As noted above in Section 4.7.1, these activities can include the coordination of maintenance, marketing and driver training. Almost any activity undertaken by a transportation provider can be coordinated.

The Western Transportation Institute is willing to provide technical support to help identify and implement coordination efforts within Ravalli County. The Montana Coordinated Transportation Handbook, written by WTI through funding provided by the Montana Council on Developmental Disabilities (MCDD, formerly DDPAC), should also aid in the process of developing a coordinated transportation system in Ravalli County.

4.8. Marketing

To impact the transportation system in Ravalli County, it is not only important to make changes to the system, but to communicate those changes to both riders and non-riders of the system. Depending on the service alternatives that are ultimately selected for implementation, a marketing effort will be necessary to increase public awareness of the services offered. Peter Schauer is working with the Hamilton TAC to create a marketing plan. Depending upon the outcome of that plan, and the service alternatives selected, WTI is willing to provide technical assistance in creating a marketing campaign that will highlight the new features of the Ravalli County Transit system.

While incorporating a marketing plan in this document is premature, it should be noted that whatever changes are made to the current system, a marketing plan is very important to the success of the Ravalli County Transit system.

5. RECOMMENDATIONS

The ability to create an ideal transportation system is constrained by the amount of resources available. Knowing that there are limits to the resources available to Ravalli County Transit, the alternatives listed in Chapter 4 must be prioritized. This chapter prioritizes the improvements suggested by the Western Transportation Institute. Chapter 6 provides information on how to implement these recommendations.

5.1. Alternatives

As discussed in Chapter 3, the three main goals for the current system are to:

- Assist individuals who are transportation dependent to remain a part of the community by accommodating their needs and providing transportation alternatives,
- Increase the general public's use of the transportation system, and
- Enhance efficiency –lower cost per ride and increase number of rides per hour and rides per mile.

The Western Transportation Institute recommends implementing specific actions that will help to achieve all three goals. Table 14 shows the recommendations, along with their associated costs, timeframes and ability to achieve the above listed goals. The next section, 5.2, lists the priorities for the alternatives.

Table 14: Recommended Actions

Action	Change in Costs	Implementation Timeframe	Ability to Achieve Goals	Degree of Change
Develop Hamilton checkpoint route	\$37,793	Begin July 2004	Moderate	Moderate
Schedule service to areas of the county	Unknown		Low-Moderate	Low
Use two-way radios instead of cell phones	Unknown	July 2005	Low	Low
Utilize CARDS [®] Software	None	ASAP	Moderate	Low
Utilize ActiveCAL Software	\$300/year	TBD	Low	Low
Expand weekday service hours	Up to \$11,805	July 2004	Low-Moderate	Moderate
Weekend service	Up to \$12,838	TBD	Low-Moderate	High
Shorten timeslots (increase efficiency)	None	ASAP	Moderate	Low
Improve fare structure	None	ASAP	Low-Moderate	Low
Create an Urban Transportation District	Unknown	TBD	Moderate	Moderate

5.2. Priorities

The alternatives herein are based on the data collected and analyzed by WTI. Further discussions with Ravalli County Transit and the Ravalli County TAC will clarify the rankings. It is also important to note that many of these priorities can be achieved concurrently. The rankings for the priorities are listed as “high”, “moderate” or “low.”

HIGH

Improve Fare Structure. Work with the PSC to make fares more applicable to a transit system, less like a taxi service. If the PSC limits the ability to make changes to the current fare structure, work to begin implementing an Urban Transportation District (UTD). This recommendation includes developing zone fares.

Begin using CARDS[®]. Install the CARDS system and begin tracking data electronically. This is important to look for efficiencies in the current system, and to be able to evaluate changes.

Increase Efficiency. Shorten the time slots for rides within Hamilton, and to the outlying communities. This should allow for more rides per hour.

MODERATE

Implement a Hamilton Checkpoint Route (Alternative 1). Working with WTI and the TAC, Ravalli County Transit should start planning to implement a checkpoint route within Hamilton by July 2004.

Define the Service Area. Use zones to define when customers will receive service, and the cost of the service. Current customers outside of the service area would be “grandfathered in.”

Expand Weekday Service. Change the hours of operation to 7:30AM – 5:30PM. This is important for the checkpoint service as it will allow individuals with “8-5” jobs to use the transit system.

LOW

Develop a Coordination Plan. Work with the other transportation providers in Ravalli County, as well as those in Missoula County to develop a coordination plan. The coordination plan can incorporate issues such as maintenance, marketing, vehicle sharing, etc.

Weekend Service. Offer service on the Hamilton checkpoint route on Saturdays from 8:30AM until 3:30PM. Sunday service could be offered as well. WTI is not currently recommending weekend demand-responsive service.

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6. IMPLEMENTATION

On January 7 & 8, 2004, Matt Anderson and David Kack from WTI met in Hamilton with members of Ravalli County Transit and the Ravalli County TAC to further discuss the recommendations herein, which were presented at the December 8 Ravalli County TAC meeting. The purpose of the January 7 & 8 meeting was to refine and decide which recommendations may be implemented, and a timeline for implementing the recommendations. This section details the results of that meeting.

6.1. Implementation Plan

When recommending changes to Ravalli County Transit, WTI's goal was to look at improvements that have a minimal impact on current riders, while making changes that will make the system more appealing to non-riders. It is also important to focus on changes that will not overwhelm the resources (including staff) of RCT.

By implementing these changes, Ravalli County Transit should be able to improve its efficiency, while making its services more appealing to the general public. The operational impacts should be a more efficient organization with better data collection, a better-defined service area, and logical fares.

6.1.1. Improve Fare Structure

It was agreed that in order to become a true "general public" transportation system, Ravalli County Transit (soon to be the Bitterroot Bus) has to flatten its fare structure. Currently, the general public pays fares that are more similar to a taxi service than a general public transit system. Ravalli County Transit will be making a request to the Montana Public Service Commission (PSC) that will have three components:

- 1) Have a general public fare for trips to Missoula (\$20 roundtrip)
- 2) Implement Saturday service with zone fares, with the same fare for the general public, and seniors and people with disabilities.
- 3) Implement zone fare on the demand responsive service for seniors and people with disabilities (SD) and the general public (GP).

Ravalli County Transit will be making a request no later than February to the PSC for the changes noted above. Figure 5 shows the zones and fares for the Saturday service, while Figure 6 shows the information for the demand responsive service.

The fare for the Hamilton checkpoint route would be \$1 for any individual, and would allow unlimited rides for the day. The fares from zones 1, 2, 4 and 5 (Figure 5) are based on a roundtrip and include unlimited rides on the Hamilton checkpoint route.

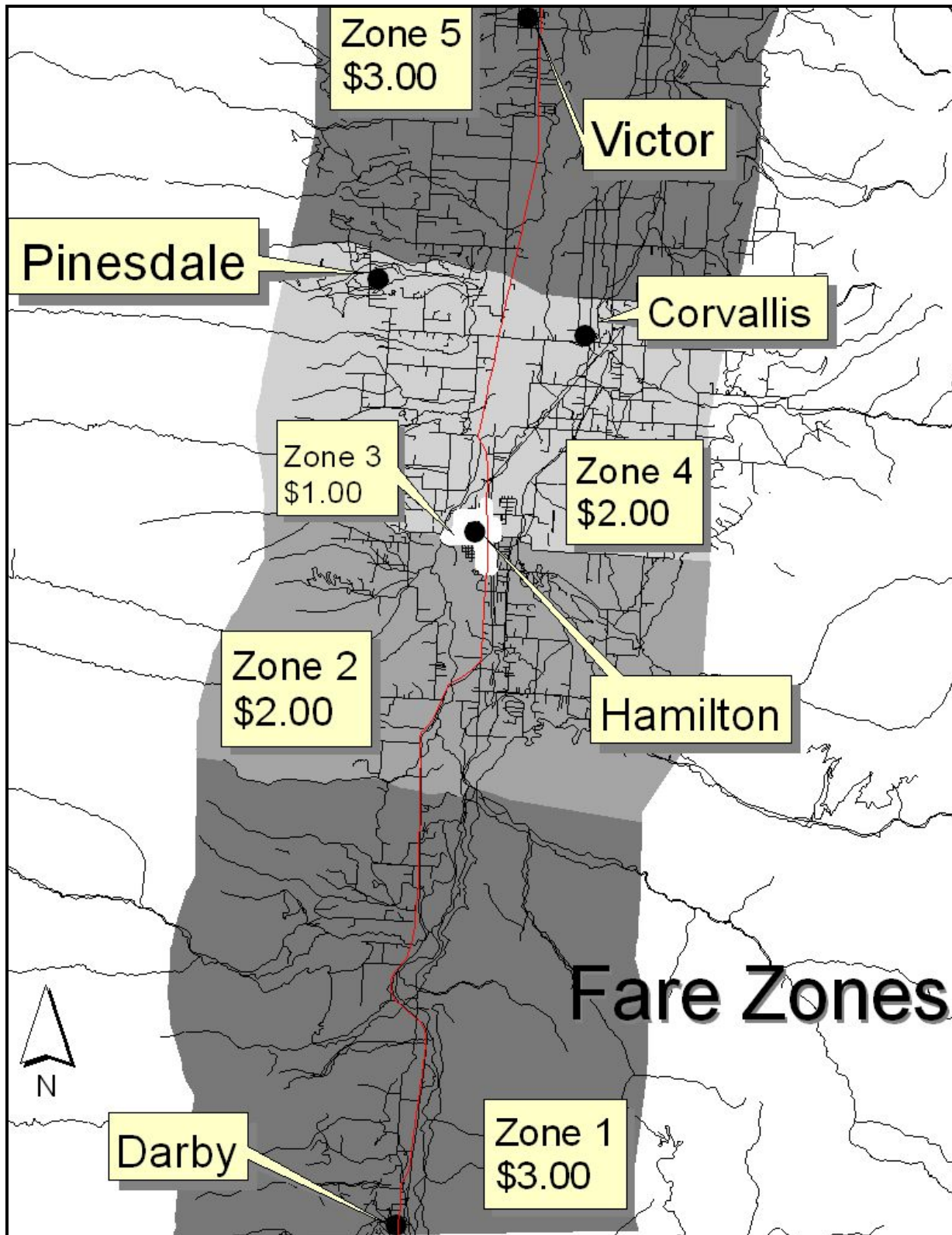


Figure 5: Proposed Zones and Fares-Saturday Service

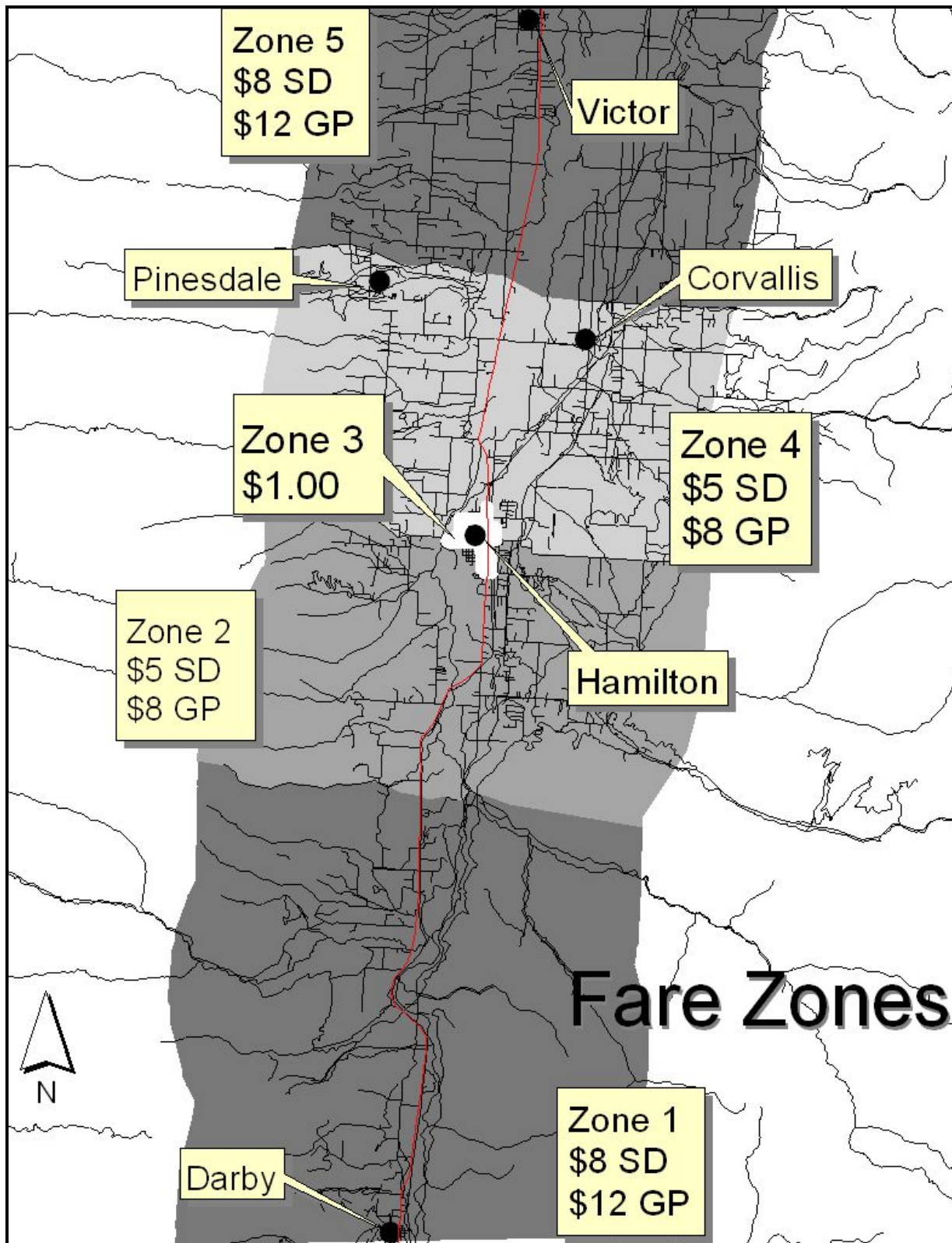


Figure 6: Proposed Zones and Fares-Demand Responsive Service

6.1.2. Implement Saturday Service

After the working group meeting, it was agreed that the Hamilton checkpoint route would be implemented on Saturdays, with the first Saturday with service to be March 6, 2004. The Hamilton checkpoint route would be implemented in addition to a “county” checkpoint route that would service communities to the north and south of Hamilton on Saturdays. If successful, the Hamilton checkpoint route would be implemented during the week (Monday – Friday) after July 1, 2004. Figure 7 illustrates the Hamilton checkpoint route, while Figure 8 shows the north portion of the “county” checkpoint, and Figure 9 shows the southern portion of the county route.

As shown in Figure 7 a checkpoint route has a “buffer” around it that allows for deviation of the route as necessary. This route would have a two block buffer around it to allow for deviation for door-to-door service for those who could not walk to a checkpoint.

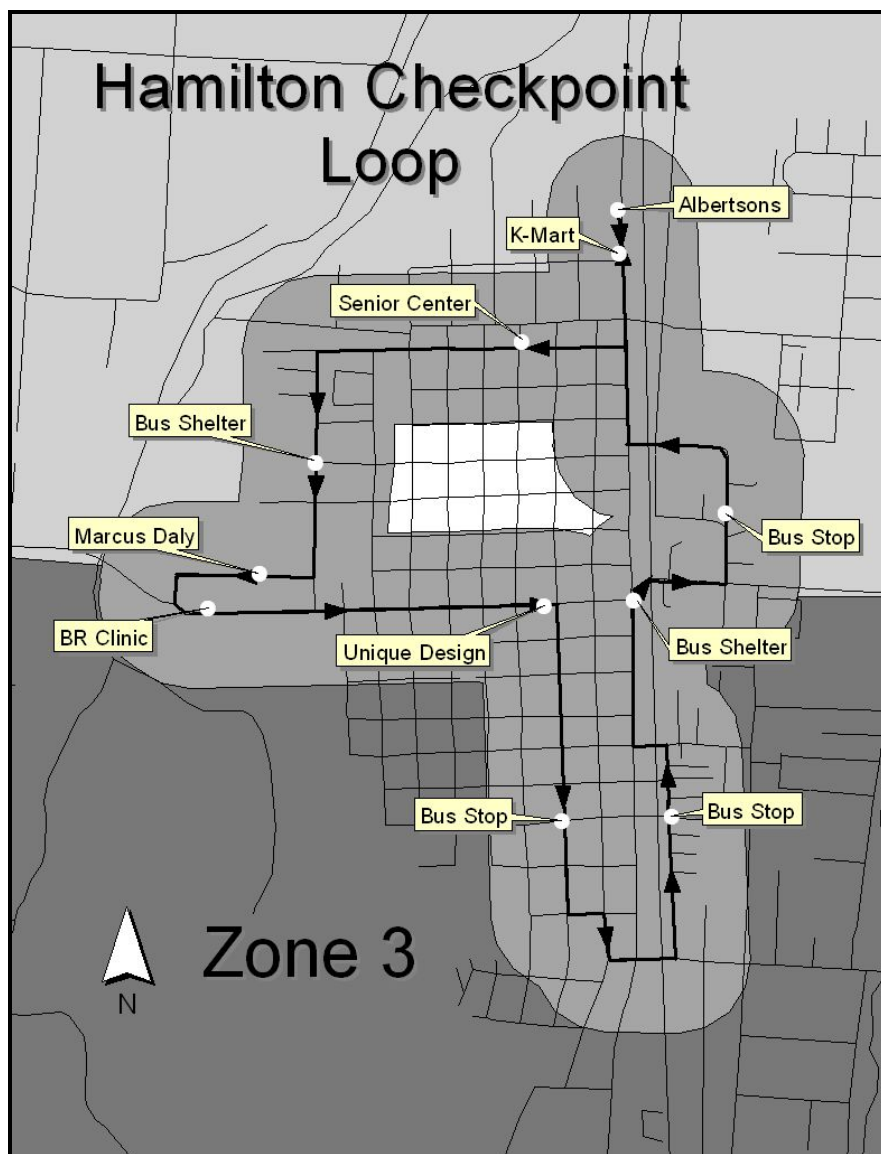


Figure 7: Hamilton Checkpoint Route

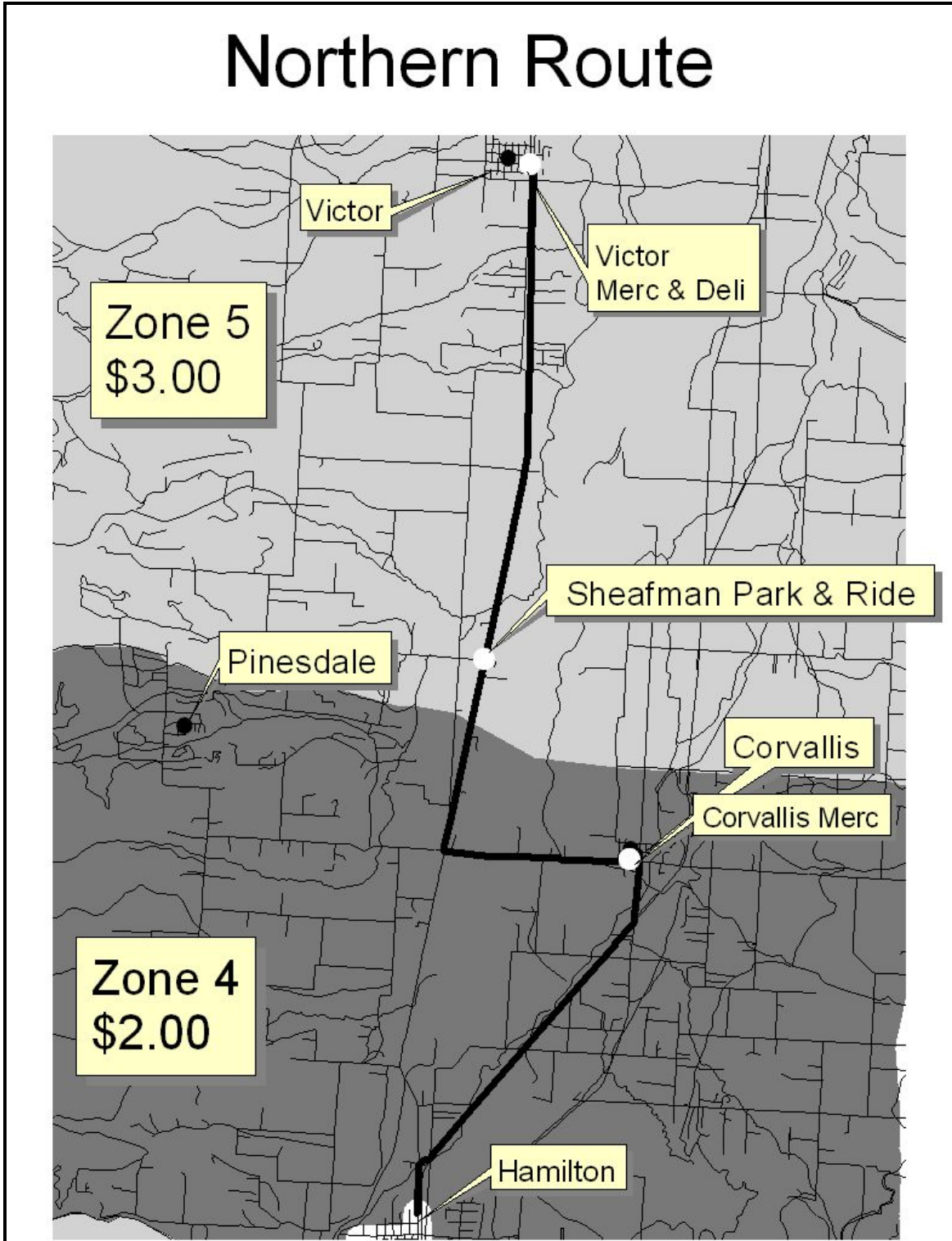


Figure 8: North Checkpoint Route – Saturday Service

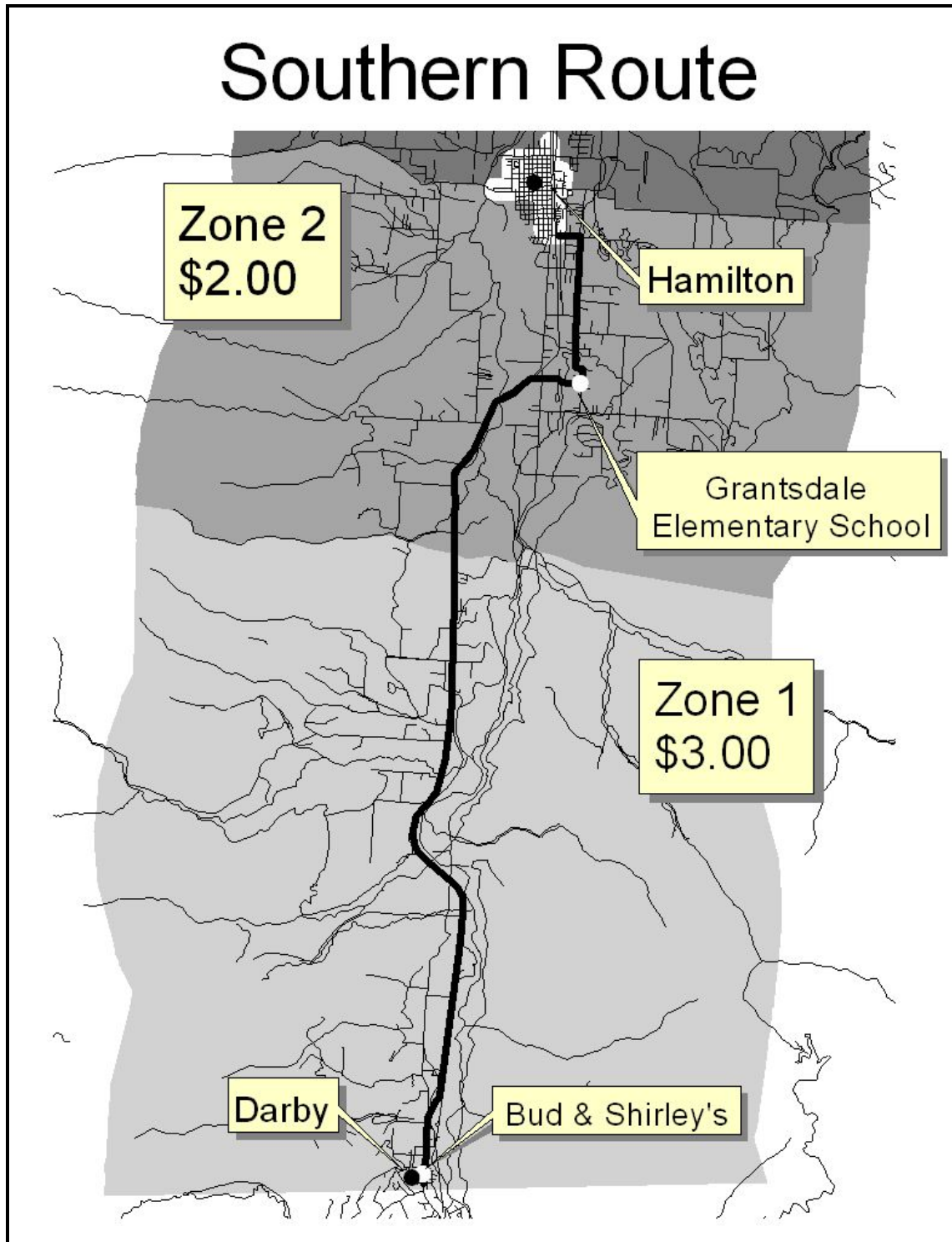


Figure 9: South Checkpoint Route – Saturday Service

The implementation of these routes is dependent upon the PSC granting changes to the fare structure and implementing the zone system of charging fares. WTI will continue to work with RCT to further refine and implement these changes.

After a discussion with the Montana Department of Transportation, funding for additional service will likely come from an increase in funds from the Section 5311 program. A grant application for TransADE funds may also be submitted. Grant requests are due to MDT by February 3, 2004. No additional funding can be received until July 1, 2004, the start of the State's new fiscal year.

6.1.3. Define the Service Area

It was agreed to at the working group meetings that zones would be used to define when service would be provided. Currently, there will be no changes in weekday service until at least July 1, 2004. At that point, Alternative 2 (Section 4.1.2) may be implemented. This alternative would structure when demand responsive service was available in the county. In addition, it was agreed that based on ridership, service was no longer to be provided south of Darby, or north of Stevensville. Florence, which is north of Stevensville, would still be able to utilize the Missoula service, however. By defining the service area, Ravalli County Transit should be able to increase efficiency by better grouping rides.

6.1.4. Weekend Service

Based on the working group discussions, Saturday service will be implemented beginning March 6, 2004 utilizing the Hamilton and "county" checkpoint routes. The service hours of these routes will be from 9:00 am until 4:00 pm. The Hamilton checkpoint route will provide half-hourly service, while the county route will provide two roundtrips to the north and south.

6.1.5. Expand Weekday Service Hours

It was discussed during the working group sessions that a system that operated from 8:00 am until 5:00 pm would not allow individuals with an "8-5 job" to utilize the service. However, because the Hamilton checkpoint route will not be implemented during the weekday until at least July 1, 2004, it was decided that the weekday service hours would remain at the current 8 am until 5 pm. The hours may be expanded if the Hamilton checkpoint route is implemented during the week (Monday – Friday).

6.1.6. Increase Efficiency

The time study conducted by WTI was discussed. While the study showed that the average ride in Hamilton was 6 minutes, including loading and unloading time, it was agreed by the working group that the current time slots of 15 minutes would continue to be used. It was discussed that Sharna (the coordinator/main dispatcher) may be able to fit more rides into an hour with the knowledge that rides within Hamilton by ambulatory individuals should take no more than 10 minutes. It is also possible that improvements to the CARDS[®] software system may make it possible to initially schedule the rides, saving time for the dispatcher.

6.1.7. Software

An analysis will be conducted to determine if the CARDS[®] system or ActiveCAL system would be more advantageous for Ravalli County Transit. RCT should install the software that will offer the organization the best tools for increasing effectiveness and efficiency. This analysis will hopefully occur by the end of February.

6.1.8. Communications

At the working group meeting it was discussed that a two-way radio system would likely improve the flow of communications between the drivers and from dispatch to the drivers. WTI provided data that a two-way system would cost approximately \$500 for each vehicle, while a base station could cost as much as \$3,000. David Kack from WTI did mention that GALAVAN in Bozeman used a “vehicle” radio as the base station. Judee Harrison from MR TMA mentioned the possibility of using Nextel phones that had the capability of being a two-way radio and a cell phone. Further investigation indicated that as of February 4, 2004 Nextel did not have any service within Montana, eliminating the Nextel option as a communications tool at this time.

6.1.9. Develop a Coordination Plan

RCT, in conjunction with WTI and the Ravalli County TAC, would host a series of meetings with other transportation providers in Ravalli County to discuss what items, such as marketing, maintenance, etc., could be coordinated. After deciding what areas to coordinate, specific plans would be developed. The coordination effort would likely include providers from Missoula County as well.

It is important to remember that the Western Transportation Institute bases the recommendations and implementation strategies on preliminary discussions and data analyses. While the working group meetings on January 7 & 8, 2004 provided substantial direction, further refinement of the actions to be implemented are necessary.

6.2. Timeline

This section defines the preliminary timelines for implementing and finalizing the changes and improvements listed in Section 6.1. This timeline is current as of January 19, 2004, and will be modified as activities occur. Table 15 shows the activities and planned dates for the completion of planning for each activity, and its proposed implementation date.

Table 15: Implementation Schedule (Short-term improvements)

Activity	Planning Completed	Implementation
PSC Request (fare structure, etc.)	January 23, 2004	March 6, 2004
Hamilton Checkpoint Route (Sat. Service)	January 30, 2004	March 6, 2004
“County” Checkpoint Route (Sat. Service)	January 30, 2004	March 6, 2004
5311 & TransADE Grants	February 3, 2004	July 1, 2004
Marketing Campaign (Bitterroot Bus, etc.)	February 29, 2004	ASAP
Computer Software	February 29, 2004	ASAP
Communications Equipment	February 29, 2004	ASAP
Hamilton Checkpoint Route (M-F Service)	March 26, 2004	July 1, 2004
Structured County Service (Alternative 2)	April 30, 2004	July 1, 2004
Coordination Plan	On-going	On-going

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7. CONCLUSIONS

This document is part of an on-going process that provides documentation of the changes made to Ravalli County Transit's operations. The changes are based on the goals outlined by Missoula Aging Services, the Transit Development Plan, and conversations with individuals from RCT, MAS and the Ravalli County TAC. While the Western Transportation Institute developed an initial set of recommendations and implementation strategies, further meetings with RCT and the Ravalli County TAC will continue to refine the actions implemented. Based on the working group meeting of January 7 & 8, 2004, the implementation plan (action plan) is as defined in the following section.

7.1. Short-term Recommended Improvements

The following improvements and changes would take place by June 2004, if not sooner.

Improve Fare Structure. Work with the PSC to make fares more applicable to a transit system, less like a taxi service. The request to the PSC will include three requests:

- 1) Implement fares for Saturday service;
- 2) Implement zone fares for weekday demand responsive service, including more reasonable general public fares; and,
- 3) Allow for, and set a fare for carrying the general public to Missoula.

If the PSC limits the ability to make changes to the current fare structure, work to begin implementing an Urban Transportation District (UTD).

Define the Service Area. The request to the PSC will utilize zones to define when customers will receive service, and the cost of the service. The current zones would eliminate service to the most southern part of the county (Sula) and would provide service to the most northern part of the county (Florence) only on the Missoula route.

Implement a Hamilton Checkpoint Route. The checkpoint route would be utilized on Saturdays, along with a "county" checkpoint route. The Hamilton and County routes would initially be on Saturdays only, with the possibility of the Hamilton Checkpoint route operating Monday through Friday beginning in July 2004.

Select and implement new technology. Determine which software (CARDS[®] or ActiveCAL) will provide the most improvement to RCT's operations, and begin using that software. Further, determine the cost and issues of implementing a two-way radio communications network for Ravalli County Transit.

Increase Efficiency. Knowing that the average ride for an ambulatory individual in Hamilton takes only 6 minutes (including loading and unloading time), work to tighten the schedule as much as possible.

7.2. Long-term Recommended Improvements

These improvements would begin no earlier than July 2004.

Implement a Hamilton Checkpoint Route. If found to be successful during Saturday service, implement the Hamilton checkpoint route during weekday service (Monday – Friday).

Define the Service Area. Use the zones established to further establish when demand responsive service will be available in a certain area. For example, service to Stevensville (Zone 5) may be available only on Mondays, Wednesdays and Fridays.

Implement a UTD. Proposed changes to service and fares must be submitted to the Public Service Commission. By implementing an Urban Transportation District (UTD), Ravalli County Transit will be able to implement changes without first having to receive PSC approval.

We believe the improvements listed above will help to improve the efficiency of Ravalli County Transit (soon to be the Bitterroot Bus), while having positive impacts on current customers. In addition, these changes should make Ravalli County Transit more appealing to the general public.

7.3. Limitations

These recommendations cannot overcome all of the obstacles facing RCT, such as

- the long distances between origins and destinations in the county,
- some individuals' (clients or staff) resistance to changes in the status quo,
- regulatory issues such as the PSC.

However, these recommendations can set Ravalli County Transit on the path to reach the goals defined in Chapter 3.

8. REFERENCES

The following documents were used to develop this Service Improvement Plan and are referenced throughout the document:

Greater Helena Area 2001 Transportation Development Plan Update, Robert Peccia & Associates. Helena, MT.

Helena System Change Coordination Plan, version 1.2, August 25, 2003

Montana Coordinated Transportation Handbook, November 2003 Draft, Western Transportation Institute

Montana Department of Public Health and Human Services Contract Summary.

Ravalli County Council on Aging Transit Development Plan Update 2003-2007, LSC Transportation Consultants, Inc.

Ravalli County Transit Marketing Plan, November 2003 Draft, Peter Schauer and Associates.

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9. APPENDICES

Forms used by Ravalli County TAC, brochures, maps, etc.

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10.GLOSSARY

5311 – Federal Transit Administration program, administered by the Montana Department of Transportation that provides funding for rural (population less than 50,000) general public transportation systems.

ActiveCAL – Software system developed by the Montana Transit Association.

CARDS – Computer-Assisted Reporting and Dispatching Software. Software developed by the Western Transportation Institute.

FTA – Federal Transit Administration

MAS – Missoula Aging Services

MDT – Montana Department of Transportation

MTA – Montana Transit Association

PSC – (Montana) Public Service Commission

RCT – Ravalli County Transit

TAC – Transportation Advisory Council

TransADE – (Montana) Transportation Assistance for the Disabled and Elderly. A Montana Department of Transportation funding program.

UTD – Urban Transportation District. A legal entity to supply transportation services. See Montana Code Annotated 7-14-201.

WTI – Western Transportation Institute

12. APPENDIX C: TAC INFORMATION

Transportation Advisory Committee (TAC) Information
Available from the Montana Department of Transportation
Rail, Transit and Planning Division
Transit Section

Each local transportation service area must have a Transportation Advisory Committee (TAC). There should be **ONE** TAC per service area. This committee, consisting of local transportation providers and interested residents, serves as the local planning group that reviews local transportation needs and resources.

An agency's transportation board is different from a TAC. The transportation board is a governing body for an agency. The TAC is not a governing body but rather an **advisory group** that cooperatively assists local transportation providers in assessing and prioritizing local needs.

TACs should include representatives from the following:

- Developmental Disabilities Organizations
- Senior Citizens Centers
- Hospitals, Nursing Homes, Retirement Facilities
- Local Elected Public Officials
- General Public Transportation Providers
- Interested citizens including transportation users

MDT and the State Selection and Screening Committee recommend that TACs meet at least quarterly.

Each TAC should elect a chairperson who will be responsible for calling meetings on a quarterly basis. The TAC should elect a person to record and distribute minutes.

Coordination is a high priority at the Federal, State and local levels.

What is Coordination?

“A process through which representatives of different agencies work together to achieve any one or all of the following goals: more cost-effective service delivery; increased capacity to serve unmet needs; improved quality of service; and, services which are more easily understood and accessed by riders.”

- Coordinating transportation means providing more services with existing resources by working with other agencies.
- Coordinating transportation services must be tailored based on each community's unique needs, skills, and resources.

13. APPENDIX D: EAST HELENA RIDERSHIP SURVEY

Consumer Satisfaction Survey Report

East Valley Bus

Montana Transportation Partnership

December 21, 2004

Consumers of the East Valley Bus Route were surveyed regarding their satisfaction with the service. The East Valley Bus Route was initiated through subcontract funds from the Montana Real Choice Systems Change Project. The Rocky Mountain Development Council initiated the service to demonstrate how coordination between their program and the Helena Area Transportation Service could increase transportation services in the Helena area.

The survey was conducted by the driver handing out surveys to passengers on the targeted route. The passengers were requested to complete the survey and return them to the driver. Instructions on the survey requested that respondents only complete one survey, even though they may have several opportunities to participate if they rode the bus more than once. After one week of distribution, all returned surveys were forwarded to Montana Transportation Partnership representatives at Montana State University - Billings for tabulation and analysis.

Seventeen surveys were submitted to Montana State University - Billings. The following tables report the responses of the surveys submitted.

Age of Respondents

18 or under	19-30	31-40	41-59	60-70	71-84	85 and over	No Response
2	3	2	8	1	1	0	0

Self Report of Disability

I have a disability	I do not have a disability
10	7

Narrative report on the nature of disability indicated 4 persons with a mental health disability, 1 with a vision disability, 1 with a mobility disability, 1 with a seizure disability, and 3 did not specify the nature of their disability.

The Cost of Transportation is Reasonable

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
15	2	0	0	0	0

The Service Meets My Expectations

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
10	7	0	0	0	0

The Service Arrives on Time

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
13	2	2	0	0	0

I Get To My Destination on Time

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
9	6	1	0	0	1

I Feel Safe Using the Service

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
10	7	0	0	0	0

The Vehicle(s) is/are Comfortable

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
7	9	1	0	0	0

It is Easy to Follow the Schedule of the Service

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
7	8	2	0	0	0

The Staff of the Service are Friendly and Courteous

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
12	5	0	0	0	0

The respondents were also requested to provide additional narrative if they desired. The following additional comments were provided:

- I like the people on the bus - I like the bus drivers - the cost is reasonable.
- The bus schedule is one of the best things to happen for this town in a long time, I don't know what I'd do without it. Thank you very much.
- No matter how I feel, the drivers on East Valley Bus always greet me with a smile and a happy hello. Not having a vehicle that runs, having this bus sure helps me to get around.
- Thank you for your service.
- Your Service is very helpful!! Thank you.
- Wonderful & friendly & caring people! We need you and want you to stay on. Thanks, please don't stop! Merry Xmas

The results indicate the survey respondents have high satisfaction with the service. While there is some variation in the scatter of responses, there were no negative responses in the surveys returned. Some additional analysis was completed because the focus of the Real Choice Systems Change Project relates to persons with disabilities and elderly. The two surveys with responses that indicated a respondent over the age of sixty did not report having a disability; therefore 12 of the 17 respondents were in the target population of the project. Also, a chi square analysis was conducted to determine if the disability/elderly responses differed significantly from the other responses on the satisfaction factors. There were no significant differences between the target population responses and other responses on any of the satisfaction factors.

**14.APPENDIX E: MONTANA TRANSPORTATION COORDINATION
AND TECHNOLOGY PLAN**

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Montana Transportation Coordination and Technology Plan

Concept Document

by
David Kack
Research Associate

of the

Western Transportation Institute
College of Engineering
Montana State University – Bozeman

Prepared for

Montana Department of Health and Human Services
Transportation Committee

December 28, 2004



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PREFACE

This document provides a concept that may be further explored. Implementation of such a concept will be dependent upon additional information gained, and decisions made as a project may move forward. This document should serve as a foundation for creating a coordinated transportation system within Montana, with an emphasis on rural areas/counties. In order to exploit coordination, technology should be used to the maximum extent possible.

The objectives of this document are as follows:

- Provide an overview of the benefits of public transportation and coordination.
- Provide an overview of the benefits of technology in public transportation.
- Identify a vision of the concept.
- Document the existing transportation system, including the need for change.
- Provide a conceptual overview of the desired system, including the advantages and limitations of the proposed technologies.
- Identify the next steps (action items) of the concept.

ACRONYMS

The following acronyms are used in this document:

ATRI	Alliance for Transportation Research Institute
AVL	Automatic Vehicle Location
CASD	Computer Assisted Scheduling and Dispatching
CREST	Carson Ridgecrest Eastern Sierra Transit
CRRAFT	Client Referral Ridership and Financial Tracking
DOT	Department Of Transportation
GIS	Geographic Information System
ITS	Intelligent Transportation Systems
MDC	Mobile Data Communications
MDT	Mobile Data Terminals
MTA	Metropolitan Transportation Authority
ND	North Dakota
ODOT	Oregon Department Of Transportation
SQL	Structured Query Language
TPT	Trip Planning Tool
US	United States
WTI	Western Transportation Institute
WSDOT	Washington State Department Of Transportation

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1. INTRODUCTION

This chapter provides an overview of the benefits of public transportation and coordination, and how technology can be used as a tool to improve the effectiveness of public transportation systems and coordination efforts. This chapter also provides an overview of the concept of how various technologies may be utilized in Montana.

1.1. Concept

The purpose of this document is to identify various technologies that will increase the effectiveness and efficiency of individual transportation providers in Montana, and increase the coordination between the various transportation providers.

To enhance the information available to the public, one of the technologies that may be implemented is a Trip Planning Tool (TPT). A TPT would allow an individual to enter an origin and destination, and have the computer plan a trip based on public transportation schedules. Another likely component would be the establishment of a Mobility Management Center (MMC) that would provide a “one stop shop” for transportation information within the State.

The concept (technology) may be implemented in phases, having a certain region implement and test the selected technologies, before deployment throughout the State. The Western Transportation Institute - Montana State University (WTI) is working on a similar concept in Modoc, Lassen, Plumas, Mono and Inyo counties in California (Figure 1) [1].

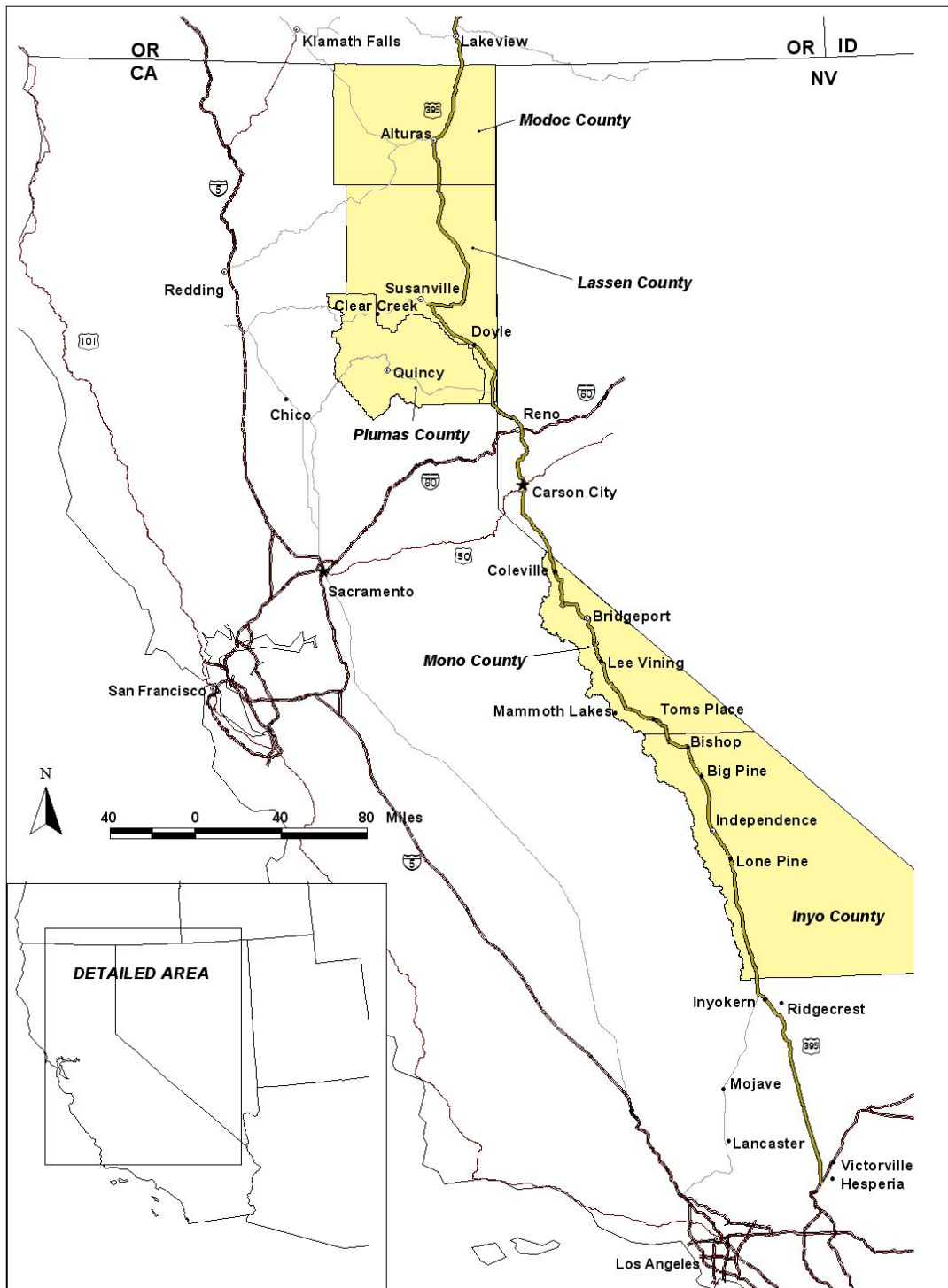


Figure 1: California Project Region

1.2. Benefits of Public Transportation and Coordination

The following sections (1.2.1 and 1.2.2) highlight the overall benefits of public transportation and the coordination of transportation services.

1.2.1. Public Transportation Benefits

An investment in public transportation, and coordinating those resources, has a direct benefit to the public. In *Assessment of the Economic Impacts of Rural Public Transportation* [2], it was determined that most rural transportation systems studied had an average benefit/cost ratio of 3.1 to one, and that it was likely that these benefits were understated. Further, a recent study funded by the Wisconsin Department of Transportation stated that, “Every dollar invested in public transportation provides \$6 in economic returns” [3].

Public transportation is most important for those individuals who are referred to as being transportation disadvantaged, or transportation dependent. These are individuals who rely on public or specialized transportation due to income, disability or age.

1.2.2. Coordination and its Benefits

“Coordination is a technique for better resource management. It means working together with people from different agencies and backgrounds. It requires shared power: shared responsibility, management, and funding. Coordination is effective in reducing service duplication and improving resource utilization” [4].

“... can make substantial improvements in the efficiency and effectiveness of transportation services in their states. Effective state coordination can...provide broader and better transportation access and service without major new transportation investments” [5].

Coordination efforts received a boost, when President Bush issued Executive Order 13330 on February 24, 2004, which called for Human Service Transportation Coordination. The order stated in part that, “Transportation plays a critical role in providing access to employment, medical and health care, education, and other community services and amenities. The importance of this role is underscored by the variety of transportation programs that have been created in conjunction with health and human service programs, and by the significant Federal investment in accessible public transportation systems throughout the Nation” [6].

Where successful coordination efforts are underway, key factors to success have been identified, including:

- leadership-advocating, general support, and instituting mechanisms for coordination;
- participation-brining the right state, regional, and local stakeholders to the table; and,
- continuity-ensuring an ongoing forum and executive leadership that stays focused on overall transportation goals and responds to ever-changing needs [5].

By establishing and supporting formal transportation coordination mechanisms, governors can leverage state, federal, local and private resources to provide more effective transportation

solutions that can lead to reduced congestion, better access to jobs, and more efficient provision of transportation services [5].

The benefits of coordination have been documented. TCRP Report 91, *Economic Benefits of Coordinating Human Service Transportation and Transit Services* [4], sites the following examples:

- Martin County Transit in North Carolina employs a brokerage system with centralized dispatching and vehicle ownership. The 44,000 trips that Martin County Transit provided in 1999 for \$156,000 would have cost an additional \$178,000 if provided at the precoordination cost per trip of \$7.60
- R.Y.D.E. (Reach Your Destination Easily) Transit in Buffalo County is the first brokered transit system to operate in Nebraska. R.Y.D.E.'s current operations cost Buffalo County \$400,000 less than the same number of trips would have cost if provided at the precoordination costs.
- The Mason County Transportation Authority in rural Mason County, Washington, coordinates school district and public transit resources, saving Mason County Transit and the Mason County School Bus Transportation Co-op over \$20,000 per year in annual operating expenses, \$120,000 in vehicle purchase costs, and \$84,000 in annual fuel costs in 2001.

Coordination can also help save resources in Montana. For example, at a 2004 meeting discussing coordination on the Ft. Peck Reservation, it was discovered that on one day, three different agencies had vehicles in Billings. All of the passengers would have been able to be accommodated in one vehicle. Based on an average cost of \$30.00 per hour to operate a vehicle, this lack of coordination cost \$900 per day (2 extra vehicles @ \$30/hr x 30 hours). If this lack of coordination occurred only once per month, the annual loss would be \$10,800.

As highlighted in Section 1.2, there are documented benefits to public transportation and coordination. As discussed in the following section (1.3), technology can be used to enhance the effectiveness and efficiency of public transportation and coordination efforts.

1.3. Technology Overview

Advances in technology along with Federal and State transportation initiatives in the United States over the last decade have provided an impetus for demand-responsive operators to invest in technological upgrades such as computer-assisted dispatching, automatic vehicle location and advanced communication technologies. Computer-assisted scheduling and dispatching (CASD) software has the potential to improve performance in a number of ways, including increased vehicle load ratios, interagency connections, interactive voice driven reservation systems and dramatically streamlined billing operations [7].

While computer-assisted scheduling and dispatching software on its own has the potential to improve the efficiency of paratransit operations, many transportation providers are also adding Automatic Vehicle Location (AVL) and Mobile Data Communication (MDC) technologies. The now common use of Global Position Satellite (GPS) technology has further increased the use of

AVL/MDC technologies [8]. The AVL/MDC technologies interface with CASD to provide a powerful tool to increase the efficiency of a transportation provider.

1.3.1. Software

Computer-assisted scheduling and dispatching (CASD) software is used to assign demand-responsive transit customers to vehicles. The software makes recommendations, in either real-time or batch processing mode, on which vehicle run to place a requested trip. The software may use Geographic Information Systems to map source and destination address for making recommendations [8].

Because it is difficult for a human mind to keep track of more than about three vehicles at a time, the CASD software is valuable in providing an initial solution. The dispatcher can then review the manifests (schedule) and make any changes necessary. CASD can be a powerful tool for increasing a transportation provider's efficiency.

In Santa Clara County, California, a paratransit operator, OUTREACH, utilized CASD software and was able to reduce its number of vehicles in service from 200 to 130. Using CASD software, the Winston-Salem Transit Authority was able to reduce their operating cost per vehicle-mile 8.5% and their operating cost per passenger 2.4% [1].

1.3.2. Other Technologies

While computer-assisted scheduling and dispatching software is a powerful tool alone, utilizing it in conjunction automatic vehicle location and mobile data communications expands the power of the software.

Automatic vehicle location (AVL) technologies measure the real-time position of vehicles using onboard computers and a positioning system (such as a global positioning system) and relay this information to a central location (such as the dispatching office). With an AVL system, the dispatcher, or CASD software, knows the exact position of each paratransit vehicle and can use that information to assign a ride (such as a "will call" or same day request) to the nearest vehicle. When changes are made to the schedule, or ride requests are processed, agencies typically use a radio to notify drivers of the change. However, many agencies are now using mobile data communications to relay this information between the drivers and the dispatching center. Mobile data communications (MDC) are accomplished by providing a link between the dispatch center and the transit vehicle, equipped with a mobile data terminal (MDT).

Mobile data terminals are small computer terminals in the vehicle that allows a driver to receive and send text and numerical data by radio signal. This communication system, when tied into an AVL and CASD software package allows the dispatcher to make changes to schedules and relay those changes without making a radio call. Further, by monitoring the progress of the schedules, the CASD/AVL/MDC system can alert the dispatcher if any of the transit vehicles are falling behind schedule, and can provide recommendations for shifting rides to other vehicles. While each of the technologies, CASD, AVL and MDC, provide a unique advantage, the true power of the technologies are most effective when they are combined.

This Chapter, Chapter 1, focused on the benefits of public transportation and the coordination among transportation providers. The chapter also noted how technologies can be used to improve the effectiveness and efficiency of public transportation providers and coordination efforts. The next chapter, Chapter 2, discusses the current transportation situation in Montana, and how there is a need to change the way the current transportation system operates.

2. CURRENT SITUATION AND NEED FOR CHANGE

This section focuses on the current transportation situation in Montana, and provides an example of issues faced by individuals trying to access the transportation system in the state. This chapter also highlights the reasons to modify how the transportation services and information about those services, is currently being provided.

2.1. Current Situation

There are currently 14 public transportation providers in Montana (Figure 2). The larger systems provide fixed-route services, while most of the smaller providers utilize demand responsive service.

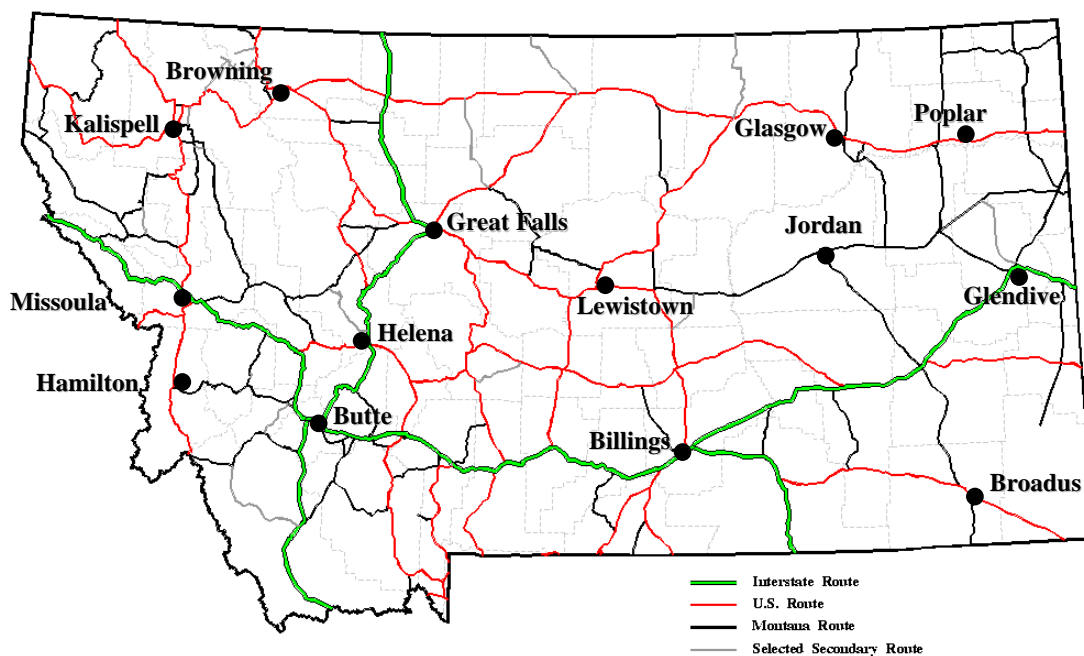


Figure 2: Public Transportation Providers In Montana

The majority of these transportation systems only serve their local community, however, several of the providers schedule trips to other communities on an infrequent basis (e.g., once-a-week, or twice per month). The ability to move between communities “inter-city transportation” has been limited in Montana, and has further declined due to recent cutbacks in service by Greyhound.

In addition to a lack of transportation services in areas of the State, there is no single source of information for the various transportation options within the State. While some of the individual public transportation providers (5 of 14) in Montana have websites, there is no “one stop shop” that individuals can view to determine transportation options within Montana.

To get a general idea of the challenges facing individuals planning an inter-city trip, the following scenario is presented. While this scenario is based on a trip in California, it highlights the challenges faced in Montana. In fact, it may actually be easier to plan a trip in California, as many of the smaller transportation systems in Montana do not have websites.

2.1.1. Trip Planning Scenario

Suppose David, a college-educated, computer-literate potential rider, needed to use web-based information to schedule a trip from Alturas in Modoc County to Lone Pine in Inyo County. To determine how to make this trip, he could start with the Sage Stage web site [10]. The web site gives information about the current schedules and a map showing the routes and stops. The information from the website is shown in Figure 3, Figure 4, and Figure 5.

SAGE STAGE

Call Us for a Ride
(530) 233-3883

Your comments and suggestions are important!
Please call or write us about Sage Stage service

Public Agency Operator
MODOC TRANSPORTATION AGENCY
P.O. Box 999, Alturas, CA 96101
Pam Couch, Executive Director
Phone (530) 233-6422 • Fax 233-6424
Cindy Imbach, Mobility Manager
Phone (530) 640-1988

Contractor/Service Provider
MV TRANSPORTATION, INC.
Office (707) 863-8980 in Fairfield, CA

Schedule effective August 30, 2004

Sage Stage Bus is Safe, Comfortable and Reliable!

- Because of distances and costs, Sage Stage operates on *reservation basis*. This means that we don't run unless passengers are scheduled. Likewise, we don't stop at every stop, only those with scheduled passengers.
- Call (530) 233-3883 to schedule one (1) day ahead.
- But, if something comes up, please call! We'll try to meet your same-day request. Drivers have cell phones.
- When calling after-hours, leave message with your name, telephone number, preferred travel date, destination, number of passengers and whether you're making connections to other transportation. **Your trip isn't reserved until confirmed!**
- Sage Stage will stop at safe places to pick up "flagging" passengers along regular routes and directions.
- No bus service on these holiday observances: Labor Day (9/6/04), Thanksgiving (11/25/04), Christmas Day (12/25/04), New Year's Day (1/1/05) and Memorial Day (5/31/05), and Independence Day (7/4/05).
- **Driver must leave on time!** We don't want to leave anyone behind, but we really must stick to the schedule. Please, be ready to go at the designated time and place!
- Have your **exact fare ready** - bills, currency or farecard. Keep in mind, drivers **cannot** make change.
- Passengers are limited to **(2) carry-on items** - unless more space is available. Extra fare for excess baggage.
- Minimum 2 fare-paying passengers per Inter-city route.
- We carry packages and some freight; call us for rates.

RENO (Mon, Wed & Fri)

For Your Safety and Comfort - PLEASE!

- **All passengers must wear seat belts & remain seated.**
- **Children less than 6 yrs or 60 lbs must use safety seat.**
- Adult must accompany children under 6 yrs. old.
- Alcoholic beverages are **not** allowed on bus.
- Inebriated or unruly passengers may **not** ride the bus.
- Any behavior or loud discussion that distracts driver or annoys other passengers is **never** permitted.
- Driver issues one warning; subsequent misbehavior is grounds for removal from bus by peace officer.
- Because of distances and costs, Sage Stage doesn't run unless passengers are scheduled. Likewise, we don't stop at every stop, only those with scheduled passengers.

Call (530) 233-3883

♿ All vehicles are wheelchair accessible ♿

Figure 3 - Sage Stage Website Page 1

As David browses the web page, he notices the map that shows that service is available to Reno on Mondays, Wednesdays and Fridays. As David scrolls down to the second page on the website, Figure 4, he sees the schedule for the service from Alturas to Reno.

REGULAR AND DISCOUNT* FARES Per Passenger per One-Way Trip at Boarding							
DIAL-A-RIDE						DIS	GEN
0.0 – 2.0 miles	within City of Alturas					\$1	\$2
2.1 – 5.0 miles	to Modoc Estates					\$2	\$4
5.1 – 10.0 miles	to Cal Pines					\$3	\$6

FIXED ROUTES	Alturas	Likely	Madeline	Terro	Susanville	Reno
ALTURAS - RENO						
Alturas		\$6	\$10	\$12	\$16	\$24
Likely	\$3		\$6	\$8	\$14	\$22
Madeline	\$5	\$3		\$6	\$10	\$18
Terro	\$6	\$4	\$3		\$10	\$18
Susanville	\$8	\$7	\$5	\$5		\$20
Reno	\$12	\$11	\$9	\$9	\$10	

ALTURAS-REDDING	Alturas	Canby	Adin	Bieber	Burney	Redding
Alturas		\$6	\$8	\$10	\$14	\$18
Canby	\$3		\$8	\$8	\$12	\$18
Adin	\$4	\$4		\$6	\$10	\$16
Bieber	\$5	\$4	\$3		\$8	\$14
Burney	\$7	\$6	\$5	\$4		\$10
Redding	\$9	\$9	\$8	\$7	\$5	

ALTURAS-TULELAKE / KLAMATH FALLS	Alturas	Canby	Newell	Tulelake	Merrill	K. Falls
Alturas		\$6	\$12	\$12	\$12	\$14
Canby	\$3		\$10	\$10	\$12	\$14
Newell	\$6	\$5		\$4	\$6	\$8
Tulelake	\$6	\$5	\$2		\$4	\$8
Merrill	\$6	\$6	\$3	\$2		\$8
Klamath Falls	\$7	\$7	\$4	\$4	\$4	

* Seniors¹, Disabled² or Youth³ pay Discount Fares

¹ Seniors are persons 60 years or older with Medicare or ID card.
² Disabled discount only for persons who meet ADA definitions with valid Sage Stage (or other transit agency) card + picture ID.
³ Youth are children (0-12 yrs) or students with school ID (13-18 yrs).

ALTURAS DIAL-A-RIDE

EVERY WEEKDAY

Shared transportation within 10 miles of Alturas, operating Monday - Friday. First pick up 8 AM and last drop off 5 PM. Priority for trips to appointments.

Routes and travel times vary by demand and travel conditions. Allow extra time, as scheduled pick up or drop off may be ± 15 minutes. Subscription service is available for routine transportation (to/from work or school). **First-come, first-served!** Call (530) 233-3883 to schedule at least one (1) business day ahead.

Cancel without penalty (fare): one hour before scheduled time for separate trip; one day before subscription trip.

ALTURAS - SUSANVILLE - RENO

MONDAY - WEDNESDAY - FRIDAY

Time	Bus Stop	Location
5:45 AM	Special Pick Up as Arranged *	
6:00 AM	Alturas	Black Bear
6:20 AM	Likely	General Store
6:40 AM	Madeline	Old Chevron
8:00 AM	Susanville	Apple Peddler
9:30-10:00 AM	Reno	Connections

10:00 AM-1:00 PM Lunch/Excursion Trips w/in Reno

Time	Bus Stop	Location
1:00 - 1:20 PM	Reno	Connections
1:30 PM	Reno/Tahoe Airport	Door "D"
3:00 PM	Susanville	Apple Peddler
4:20 PM	Madeline	Old Chevron
4:40 PM	Likely	General Store
5:00 PM	Alturas	Black Bear
5:15 PM	Special Drop Off as Arranged *	

Transportation Connections - Susanville, CA & Reno, NV

- ① Lassen Rural Bus Susanville routes (530) 252-7433
- ② RTC Citifare Bus 23 local routes (775) 348-7433
- ③ CREST Bus (Reno/Carson-Bishop) (800) 922-1930
- ④ Amtrak (775) 329-8638 or (800) 872-7245
- ⑤ Greyhound (775) 332-2970 or (800) 231-2222
- ⑥ Reno/Tahoe Airport Administration (775) 328-5400






Figure 4 - Sage Stage Website Page 2

David sees the schedule for service between Alturas and Reno, notes the times of service, and the cost (\$24). David sees the “Transportation Connections” that show the CREST Bus service to Bishop, but is still unsure of how to get from Reno to Lone Pine. David could call the 800 number noted on the website to get further information, or continue to look on the Internet to complete planning his trip.

ALTURAS - REDDING			ALTURAS - KLAMATH FALLS		
TUESDAY - THURSDAY			WEDNESDAY		
Time	Bus Stop	Location	Time	Bus Stop	Location
6:45 AM	Special Pick Up as Arranged *		7:45 AM	Special Pick Up as Arranged *	
7:00 AM	Alturas	Black Bear	8:00 AM	Alturas	Black Bear
7:20 AM	Canby	Clinic/Chevron	8:20 AM	Canby	Clinic/Chevron
7:40 AM	Adin	Adin Supply	9:10 AM	Newell	Market
7:55 AM	Bieber	Kathy's Corner	9:20 AM	Tulelake	Jock's Market
8:20 AM	Fall River Mills	H&C Cookhouse	9:50-10:00 AM	Klamath Falls	Connections
8:40 AM	Burney	McDonalds	<i>10:00 AM-1:30 PM Lunch/Excursion Trips w/in K. Falls</i>		
10:00-10:30 AM	Redding	Connections	1:30-1:50 PM	Klamath Falls	As Needed
<i>10:30 AM-1:30 PM Lunch/Excursion Trips w/in Redding</i>			2:00 PM	Transit Center	Near K-Mart
1:30-1:50 PM	Redding	As Needed	2:30 PM	Tulelake	Jock's Market
2:00 PM	Transit Center	California Street	2:40 PM	Newell	Market
3:10 PM	Burney	McDonalds	3:25 PM	Canby	Clinic/Chevron
3:30 PM	Fall River Mills	H&C Cookhouse	3:45 PM	Alturas	Black Bear
3:55 PM	Bieber	Kathy's Corner	4:00 PM	Special Drop Off as Arranged *	
4:10 PM	Adin	Adin Supply	<i>Transportation Connections in Klamath Falls, OR</i>		
4:40 PM	Canby	Clinic/Chevron	① Basin Transit local bus routes	(541) 883-2877	
5:00 PM	Alturas	Black Bear	② Shuttle to Medford or Lakeview, OR	(541) 883-2609	
5:15 PM	Special Drop Off as Arranged *		③ Amtrak	(541) 884-2822 or (800) 872-7245	
<i>Transportation Connections in Redding, CA</i>			④ Greyhound	(541) 882-4616 or (800) 231-2222	
① RABA (Redding Area Bus Authority)	(530) 241-2877		⑤ Klamath Falls Airport	Admin. (541) 883-5372	
② Amtrak feeder bus	(800) 872-7245 or amtrak.com		CANBY CONNECTIONS		
③ Greyhound	(530) 241-2070 or (800) 231-2222		WEDNESDAY		
④ ABC Cab Co	(530) 233-5909		Time	Bus Stop / Location	
⑤ ABC Taxi	(530) 244-5909		8:00 AM	(Via K Falls Bus)	Alturas
⑥ Redding Yellow Cab	(530) 222-1234		8:20 AM		Canby (Clinic)
SPECIAL PICK UP/DROP OFF FARES			10:40 AM		Alturas (Black Bear)
Before / After Intercity Trip Alturas DAR zone & fares			11:00 AM	(Round Trip 1)	Canby / Clinic
~~~~~			11:20 AM		Alturas (Black Bear)
<b>EXCURSION FARES</b>			12:40 PM		Alturas (Black Bear)
Shuttle service <5 miles during layover in terminus city			1:00 PM	(Round Trip 2)	Canby / Clinic
<b>\$6</b> / regular passenger	<b>\$3</b> / discount passenger		1:20 PM		Alturas (Black Bear)
			3:25 PM	(Via K Falls Bus)	Canby / Clinic
			3:45 PM		Alturas

Figure 5: Sage State Website Page 3

Since David's destination is in Inyo County, David next searches to find out about bus services in Inyo County. David finds the Inyo Mono website [11] shown in Figure 6.

Home

**INYO MONO TRANSIT**

- [Routes, Schedules & Fares](#)
- [Holidays](#)
- [Passenger Rules](#)
- [Charter Information](#)
- [News Releases](#)
- [Job Opportunities](#)
- [Links](#)

**Contact us at by:**  
**Phone:** (760) 872-1901  
(800) 922-1930  
**FAX:** (760) 872-0936  
**Mail:** P.O. Box 1357  
Bishop, CA 93515  
**E-mail:** [imtransit@schat.com](mailto:imtransit@schat.com)



**!Coming Soon - Lone Pine, Olancha, and Keeler  
!New, CREST Route BISHOP-RENO!  
New earlier evening departures from Mammoth to  
Bishop!**

*Inyo Mono Transit offers affordable transportation throughout Inyo and Mono Counties.  
IMT operates door-to-door bus service in the communities of Bishop, Mammoth, Lone Pine, and Walker, as well as operating the Eastern Sierra's only  
interregional routes between Reno and Ridgecrest. IMT offers twice-daily service between Lone Pine and Bishop. Two round trips daily between Bishop and  
Mammoth Lakes.*

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**Disclaimer:**  
The Inyo/Mono Transit Office reserves the right to make changes and improvements to its Web site at any time and without notice, and assumes no liability for damages incurred directly or indirectly as a  
result of errors, omissions or discrepancies.

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Last Updated: August 06, 2004

**Figure 6: Inyo Mono Transit Homepage**

David sees the link highlighting the new route from Reno to Bishop and clicks on that link. The link takes him to the schedule and fare information, shown in Figure 7 and Figure 8.



**Figure 7: Reno-Bishop Fares**

<b>Traveling NORTH Between Bishop and Reno Tuesdays-Thursday-Friday</b>			<b>Traveling SOUTH Between Mammoth and Ridgecrest Monday-Wednesday-Friday</b>		
<b>Location</b>	<b>A.M. Departure Times</b>	<b>P.M. Return Times</b>	<b>Location</b>	<b>A.M. Departure Times</b>	<b>P.M. Return Times</b>
Bishop 201 S. Warren terminal	7:00 am	5:30 pm	Mammoth Mc Donald's	8:05 am	4:50 pm
Tom's Place ** Storefront	7:30 am	5:00 pm	Crowley Crowley lake Store	8:20 am	4:35 pm
Crowley Lake ** Crowley Storefront	7:35 am	4:55 pm	Tom's Place	8:25 am	4:30 pm
Mammoth McDonalds	7:50 am	4:40 pm	Bishop 201 S. Warren terminal	9:15 am	3:50 pm
June Lake ** Fire House	8:15 am	4:15 pm	Big Pine Texaco Bench	9:30 am	3:35 pm
Lee Vining Caltrans Yard	8:25 am	4:05 pm	Aberdeen ** Storefront	9:45 am	3:20 pm
Mono City **	8:35 am	3:55 pm	Independence Mair's Market	10:00 am	3:05 pm
Bridgeport Bridgeport General Store	8:55 am	3:35 pm	Lone Pine Statham Hall	10:25 am	2:50 pm
Walker Walker Sporting Goods	9:35 am	2:55 pm	Olancha ** Ranch house restaurant	11:45 am	2:30 pm
Coleville ** Across from Post Office	9:45 am	2:45 pm	Coso Junction ** Rest stop	11:05 am	2:10 pm
Topaz ** Trailer Park Entry	10:00 am	2:30 pm	Pearsonville ** Texaco Parking Lot	11:20 am	1:55 pm
Gardnerville **	10:35 am	2:15 pm	Ridgecrest City Hall 100 W. California Ave.	11:45 pm	1:30 pm
Carson City - Nugget Robinson St. & Hwy 395	10:45 am	1:45 pm	<b>** By request stops only</b>		
Reno Airport	11:45 am	11:45 am			
<b>** By request stops only</b>					

**Figure 8: Reno-Bishop Schedule**

David reviews the information and sees that he would have a layover in Reno from about 10:00 am until 11:45 am. David sees that he would depart Reno at 11:45 am and arrive in Bishop at 5:30 pm.


David then goes back to the Inyo Mono Transit homepage to figure out how to get from Bishop to Lone Pine. After David sees the link for “Route Maps, Schedules and Fares” Figure 9, he clicks on the “Lone Pine to Bishop” link and sees the specific route and fare information (Figure 10).

## Route Maps, Schedules and Fares

INYO MONO TRANSIT

- [C.R.E.S.T.](#)
- [Bishop Fixed Route](#)
- [Bishop Dial-a-Ride](#)
- [Nite Rider - Bishop](#)
- [Lone Pine to Bishop](#)
- [Local Lone Pine](#)
- [Lone Pine to Olancha & Keeler](#)
- [Bishop to Mammoth Saturday Service](#)
- [Bishop to Mammoth Commuter Service](#)
- [Mammoth Dial-a-Ride](#)
- [Local Mammoth Lakes](#)
- [Transportación en Mammoth Lakes \(Español\)](#)
- [Benton to Bishop](#)
- [Local Benton](#)
- [Walker to Bishop](#)
- [Bridgeport to Carson City](#)
- [Local Walker, Coleville, Topaz](#)
- [Tecopa to Pahrump](#)
- [Tecopa to Victorville](#)

**Please call dispatcher for help on which is the most appropriate system to meet your needs.  
(760) 872-1901 or (800) 922-1930**



The map displays the Inyo and Mono counties in California, highlighting various transit routes. Key locations marked include Benton, Bishop, Mammoth Lakes, Lone Pine, Olancha, Kings Canyon, Independence, Death Valley National Park, Sequoia National Park, Inyo, Ridgecrest, Tehachas, Mojave, California City, and Victorville. Different colored regions on the map correspond to the transit services listed in the adjacent text box.

[Home](#)

Figure 9: Inyo Mono Transit Route Map and Schedules



Lone Pine to Bishop

INYO MONO TRANSIT

**INYO MONO TRANSIT  
LONE PINE TO BISHOP**

**Monday thru Friday  
Two Round Trips Daily**

	MORNINGS		AFTERNOON	
	Arrive	Depart	Arrive	Depart
Lone Pine - Statham Hall		6:30 am		12:30 pm
Independence - Austin's Mkt.	6:45	6:45	12:47	12:47
Aberdeen - Store**	7:00	7:00	1:03	1:03
Big Pine - Carroll's Mkt.	7:20	7:20	1:22	1:22
Bishop - Kmart	7:40		1:45	
Bishop - Kmart		12:00 (noon)		5:30 pm
Big Pine - Texaco	12:15	12:15	5:45	5:45
Aberdeen - Store**	12:30	12:30	6:05	6:05
Independence - Mairs Mkt.	12:45	12:45	6:20	6:20
Lone Pine - Statham Hall	1:00		6:40	

** Must call day prior to request bus.

**FIRST SATURDAY OF EVERY MONTH**

Departs		Departs	
Lone Pine – Statham Hall	8:30 am	Bishop - Kmart	3:00 pm
Independence – Austin's Mkt.	8:45	Big Pine - Texaco	3:15
Big Pine – Carroll's Mkt.	9:15	Independence - Mair Mkt.	3:45
Bishop – Kmart	9:30	Lone Pine - Statham Hall	4:00

**Figure 10: Bishop to Lone Pine Schedule**

David sees that he can leave Bishop at 5:30 pm and arrive in Lone Pine at 6:40 pm. David's trip itinerary is shown in Table 1:

**Table 1: Alturas-Lone Pine Trip Itinerary**

Action	Time	Service	Cost
Depart Alturas	6:00 am		
Arrive Reno	10:00 am	Sage Stage	\$ 24.00
Depart Reno	11:45 am		
Arrive Bishop	5:30 pm	CREST	\$ 28.00
Depart Bishop	5:30 pm		
Arrive Lone Pine	6:40 pm	Inyo Mono Transit	\$ 4.00
Totals	12 hours 40 min.	3 providers	\$ 56.00

### **2.1.2. Trip Planning Summary**

For David, who has proficient computer skills and a decent understanding of bus schedules, it could take at least 30 minutes to put together this itinerary using the current system. A person who is unfamiliar with the Internet would likely take longer and may not be able to identify the trip at all. Of course, another option would be to call the various providers directly. When calling the providers, the individual would hope that the providers know of the possible transfers, and the other providers' services, so they could suggest possible routings to complete the trip.

The above scenario shows how difficult it currently is for an individual to plan a trip from one town to another. In addition, it is difficult for a single transportation operator to have detailed information about all the various transportation options within the region. This scenario shows how important it is to have a one stop shop, or a single source for transportation options within a region or state.

The scenario also shows how current information is critical to the concept of trip planning. As schedules change, new brochures must be produced, and webpages must be updated. Dispatchers must be educated of changes, and the new information must be shared with current and potential riders.

With the current system, a change with one transportation provider may have an impact on clients of other transportation providers. The current system makes it harder to maintain current information, and share any changes to schedules, routes, etc., with the public or other providers. With the current system, individual transit providers are responsible for maintaining their web sites, ensuring that all information about the transit system is current.

Further, individuals at the transit systems are typically available to answer questions during normal office hours (8:00AM – 5:00PM). Therefore, if someone wanted to plan a trip during the evening or weekends, they may have limited access to the information they need to plan the trip.

All of the issues concerning trip planning and transportation information noted in this section highlight the need for changes to the current system, which are discussed in detail in the next section.

## **2.2. Need for Change**

As previously noted, only 5 of the 14 public transportation providers in Montana have a website. While having a website is not necessary, the Internet continues to be a significant source of information. Websites can be a quick and convenient source of information about transportation providers' schedules, routes, and fares. The information on the websites that do exist is somewhat limited in scope in that they usually provide information only about their own service. Information regarding possible connections with other transit services is typically not provided.

Potential customers or clients can, however, get information about transit in their county through paper schedules or by calling the transit provider. However, making phone calls may entail having to call directory assistance (information) and the caller may incur long-distance and other phone charges. While planning a trip on a transit system in a single community may be straightforward,

as the earlier scenario showed, if the desired trip requires changing providers, the methodology is more complicated.

The customer must first identify the counties he or she has to pass through. Then he/she contacts the individual county transit services including their origin, intermediate points and destination. The customer may need to explain the purpose of the trip to all service providers to obtain information about the routes, timings, restrictions, and transfers. Once the customer gathers all the information, the customer identifies the transit services he or she needs to use to reach the destination. The timings get calculated and if the customer comes up with a feasible trip plan, then the individual agencies are called and reservations are made if necessary. This process could be vastly improved (simplified) by implementing a single source of transportation information and a trip planning tool.

In addition to the usual lack of a single source of transportation information, rural transit operates differently than urban or suburban transit due to the characteristics of a rural environment. Rural transit systems' vehicles are often smaller. Demand responsive service or deviated routes are common. Often, rural service includes routes to urban centers, and frequency can be in terms of days as opposed to minutes in the urban environment. In addition, many urban transit providers have implemented various technologies to improve the efficiency of their operations, and increase the use of technology by their customers. Some of these technologies include:

- Automatic Vehicle Location (AVL) and Mobil Data Communications (MDC)
- Next Bus Signs
- Trip Planning Tools

However, there are limited deployments of such systems in rural environments. Technology can be used to improve the effectiveness and efficiency of individual transportation providers, and to enhance transportation coordination.

The benefits of coordinated transportation have been document in various sources, including the recent publication of *TCRP Report 91: Economic Benefits of Coordinating Human Service Transportation and Transit Services* [4]. In fact, the Ohio Department of Transportation noted that coordinating transportation services is “the best way to stretch scarce resources and improve mobility for everyone.” Coordination efforts can be enhanced through the use of technology. As shown in Table 2, there are a host of technologies that can be utilized to enhance not only coordination, but the operations of individual public transportation providers.

**Table 2: Transportation Provider’s Needs vs. Technologies**

NEEDS	APPLICATIONS														
	Accounting Software	Automatic Passenger Counters	Automatic Vehicle Location Systems (AVL)	Communications	Customized Spreadsheets and Databases	Demand-Responsive Transit Software - Automated	Demand-Responsive Transit Software – Computer Assisted	Electronic Payment Systems	Geographic Information Systems (GIS)	Internet website	Maintenance Software	Silent Alarm System	Mobil Data Communications / Terminal	Palmtop Electronic Manifest Device	Personnel Management Software
More Accurate, Easier Reporting and Record Keeping	X				X									X	X
More Efficient Service Coordination		X	X	X	X	X	X		X				X		
Safer, More Accurate Cash Handling					X								X	X	
Improved Operations, Staff Performance, and Productivity			X		X	X	X		X				X	X	
More Effective Maintenance Tracking					X						X		X		
Clearer Communication			X	X									X	X	
More Effective Dispatching			X	X	X	X	X				X			X	
Faster, More Efficient Trip Request Processing						X	X		X	X					
Improved Scheduling Productivity			X		X	X	X		X				X		
Improved Service Quality			X		X	X	X		X				X		
Greater Safety			X		X	X	X						X		
More Accessible, More Useful Customer Information			X		X	X	X		X	X					

Source: Technology In Rural Transit: Linking People With Their Community [12]

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In short, the following factors point to the need for changing the way transportation information and services are provided in Montana:

- Currently there is no trip planning capability; the burden of obtaining information, planning the trip, and making necessary reservations or arrangements between the service providers rests on the shoulders of the customer.
- The dispatcher for an individual service provider has limited information about other service providers in the State.
- Each transit website in the State describes their service in a different way. This complicates a customer's attempt to understand service in Montana. Furthermore, some of the transportation services are eligibility oriented, and other services such as door to door paratransit systems need 24 hour advance reservations.
- Coordination between transit services is limited to informal communication, although in Missoula a basic software system has been implemented.
- If information were more easily available, people may be encouraged to try public transportation services.
- Coordination is a proven tool to increase the effectiveness and efficiency of transportation (transit) providers.

Chapter 2 highlighted how the current transportation system operates, and the need for changes to the current system. The next chapter, Chapter 3, describes the proposed changes to the system.

### 3. NEW SYSTEM CONCEPT

This chapter of the report defines the features and characteristics of a proposed system that would implement a Mobility Management Center (MMC), or one stop shop; and how various technologies could be utilized to increase coordination and improve the efficiency of local rural transportation providers.

#### 3.1. Overall Concept

To improve the coordination among providers, and allow individuals to more easily plan their own trip itineraries, a Mobility Management Center would be created along with implementing a Trip Planning Tool (TPT). In addition, the Client Referral, Ridership, and Financial Tracking (CRAFT) software could be implemented, allowing all transportation providers in the region to easily manage their data and increase the efficiency of their operations. Figure 11 shows the basic components of the proposed system.

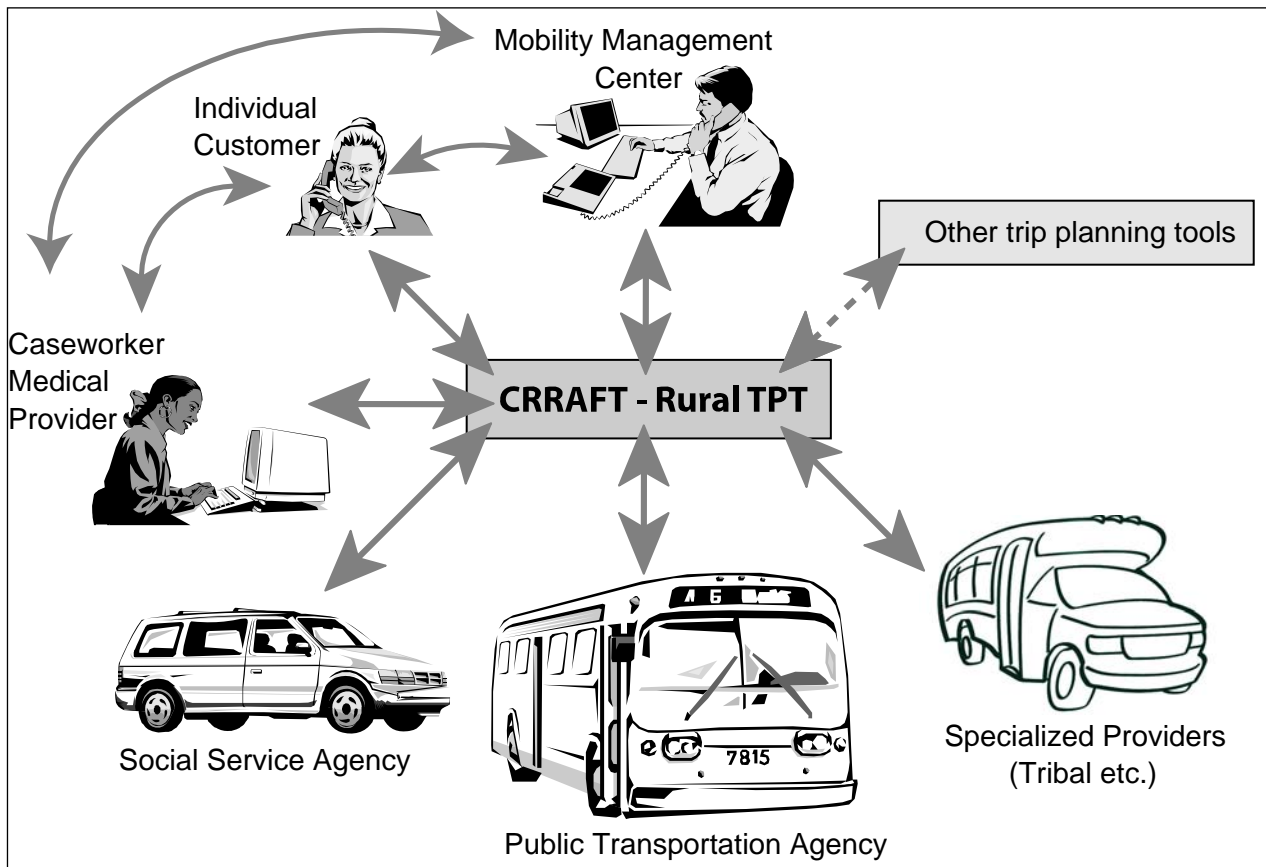


Figure 11: System Concept

The Mobility Management Center (MMC) is in reality a person who has access to the TPT. If an individual in the State did not have access to the Internet, they could call the MMC, and the person at the MMC could complete a trip itinerary for that person. The person at the MMC would also be able to view the schedules of all transportation providers that were participating in the process, and would be able to see opportunities for coordination.

The MMC would, through this process, become an “additional staff member” of participating providers. This is due to the fact that an individual could call the MMC for transportation information, instead of a particular provider. The person at the MMC would also have a better sense of how individual providers’ schedules may be modified to enhance the opportunity for intercity travel within the region.

### **3.2. Technology Components**

There are two technologies that have been initially identified as having the potential to meet the objectives of this project, they are:

- **CRRAFT: Client Referral, Ridership, and Financial Tracking.** This software system has been developed by the Alliance for Transportation Research Institute (ATRI) at the University of New Mexico. This software is currently being modified to an open architecture.
- **TPT: Trip Planning Tool.** This software would be created, and implemented to aid customers and agencies in planning public transportation trips. The initial focus of this tool would be on planning trips in Montana, with the possibility for the system to be expanded to include trip planning for origins and/or destinations in other states.

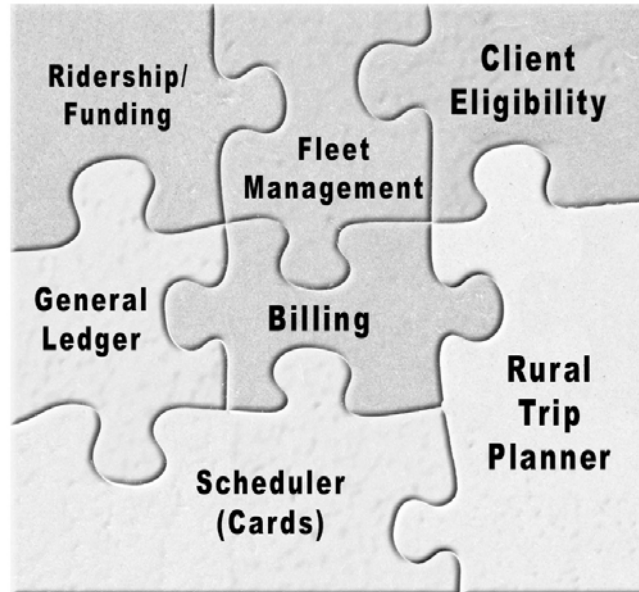
The envisioned Trip Planning Tool would be a web-based application that would help the potential transit users to obtain information about available transportation options in Montana. The TPT would contain information about all the transit providers in the State combined with their fixed route schedule, contact information, eligibility requirements, fares, and other relevant information. A traveler would use the system to indicate their origin and destination, and the TPT would provide transportation options between the origin and destination.

A low-level needs assessment for a project in California [1] indicated that a trip planning tool should include the following key features:

- Include as many sources of transportation as possible, including fixed route, demand responsive, intercity bus (public and private), and taxis
- Easy to use and understand
- Easy for the transportation providers to maintain the data
- Speedy information retrieval via the web
- Low cost for implementation
- Low cost for ongoing support
- Desirable to re-use an application that has already been developed
- Configured to easily share data with other applications
- Designed to meet future, more advanced capabilities.

The TPT may become a “module” of the CRRAFT software that was developed by ATRI at the University of New Mexico. Current discussions are aimed at determining the best way to develop

and integrate the TPT and CRRAFT. It is important to note that any technologies implemented would need to follow national and state architecture. Also, the technologies implemented would remain as open as possible, so that they may be modified to communicate with other systems. Figure 12 shows the concept of the technologies that may be implemented.



**Figure 12: Technology Concept**

As Figure 12 shows, a scheduling module may be added as well, to enhance the usefulness of the CRRAFT software. In addition, the accounting module of CRRAFT could be modified to include a full general ledger system compatible with current Montana regulations.

Ideally, a traveler would enter their origin and destination into the TPT by entering an address, an intersection, or a point of interest. The system would then provide a complete listing of all potential itineraries, along with attributes such as travel time and cost. The user would be able to sort this list according to any of the selected attributes. Then the user would select a potential itinerary to view the details. The user can return to the itinerary list to select an alternative. A comprehensive trip planning tool would provide:

- All options for traveling between selected origins and destinations
- The name of the service or services the customer has to use to reach from origin to destination.
- Number and name of transfer points. This will help the user know how many different providers may be involved in the trip.
- Details, such as bus number, route number, type of vehicle and accessibility options that will allow the user to identify any special needs or eligibility criteria for using the service.
- Time spent at various transfer points.



- The details of fares and modes of payment, so the passenger knows the full cost of the trip.
- Distance and expected duration of the trip. This information lets the user know how long he or she needs to spend on each vehicle for each leg of the journey.
- Alternatives with indication of travel time, distance, fare, waiting time, and number of transfer points.

### **3.3. Concept Priorities**

During discussions about implementing the new concept in California [1], the following priorities were established:

Essential capabilities:

- One-stop shop
- Provide service information
- Use existing technology
- Highlight intercity service

Desirable features:

- Automated trip planner
- Individual transit web sites
- Efficient interoperability
- Input data once, use it many times
- Tool for maintaining data

Optional features:

- All forms of transportation
- Transportation schedules for regional destinations

The trip planning tool will need to operate within the existing operational policies and constraints of the existing transit systems. It would remain the prerogative of the individual transportation agencies to modify their schedules and services.

### **3.4. Summary of Impacts**

This section highlights the impacts the proposed system would have on the various entities involved.

### **3.4.1. Customer/Client Impacts**

The proposed system will have a significant impact on customers who can use the Internet. The Trip Planning Tool (TPT) would allow customers to quickly access information, not only for local trips, but would significantly reduce the amount of time to plan an intercity, or statewide trip. The TPT should allow for easy access to accurate and timely information. For those people without access to the Internet, the Mobility Management Center (MMC) would provide a single source for transportation options within the region.

If successful, the MMC and TPT should result in increased ridership and more transfers between providers. Customer satisfaction should increase as customers have the ability to quickly determine trip routings and gain access to transportation information.

### **3.4.2. Organizational Impacts**

For transit agencies, the MMC and TPT should result in fewer calls to their dispatcher(s). With access to information readily available, more people will access transit system information on their own, and reduce the burden on dispatchers, allowing dispatchers to focus on efficiently scheduling trips.

In addition, the MMC should be able to assist organizations with coordination opportunities, and be able to suggest routing/schedule changes that would increase the opportunity for people to transfer between various providers.

With the introduction of the modified CRRRAFT software, providers should be able to improve their data management, including the ability to spot trends in their ridership statistics.

The bulk of the impacts will fall upon the agency that will act as the server host. This agency will likely be responsible for on-going system administration support, in addition to overall project management.

With the new technologies, transit agencies will have an increased responsibility for maintaining the accuracy of their schedules. However, if the technologies are structure as planned, individual transit agencies should need to commit minimal staff time to keep information current. There should be few, if any, negative impacts to the transit agencies that participate in the program.

### **3.4.3. Impacts during Development**

Because the technologies planned are not currently in place with any of the providers, impacts during development should be minimal. Managers from the various transit agencies will need to participate in development process, and be ready to dedicate resources to implementing the various technologies. The benefits from the various components: CRRRAFT, MMC and TPT, should decrease the time staff dedicate to updating information, responding to customer inquiries, and may even reduce printing costs as fewer schedules may have to be printed for customers.

While this section focused on the impacts of the proposed system, the next section focuses on the advantages and disadvantages of the proposed system.

### **3.5. Analysis of the Proposed Concept**

This section provides a summary of the advantages and disadvantages of the proposed concept, including implementation of a Trip Planning Tool. A summary of other trip planning alternatives and their likely trade-offs is also discussed.

#### **3.5.1. Summary of Advantages**

The TPT and MMC will provide travelers in Montana with a one-stop shop for trip planning purposes. The development and installation of such a system will aid the customer in planning inter-county trips using the available information. Additionally, the MMC and TPT should help agencies enhance their understanding of regional services and identify routes that can be coordinated more efficiently.

#### **3.5.2. Summary of Disadvantages/Limitations**

The identified solution also poses some possible disadvantages:

- The Los Angeles Trip Master system was designed for urban areas. Because of this, extensive modifications may be necessary.
- The Oregon-Washington system is at least one year away from implementation, and has been delayed in the past.
- The MTA system has no options for deviated routes and human service transportation.
- The MTA system involves Linux and MySQL, which are stable and robust, yet technicians proficient in system administration for these servers are more difficult to find.

#### **3.5.3. Alternatives and Trade-offs Considered**

In recommending the CRRAFT, MMC, TPT system, there were several other alternatives that were considered:

- Do nothing – Maintaining the status quo does not recognize the benefits of the various technologies, and limits the opportunities for coordination. This also does not recognize the vital necessity of rural transportation.
- Database of information – This is a low-cost alternative, but has certain disadvantages. The main disadvantage is that a schedule change is a time consuming issue. Thus maintaining the credibility of the information is difficult. Also, this alternative does not create a MMC, or provide the transportation agencies with the CRRAFT software.
- North Dakota system – ND Info, includes information on all modes of transportation. It appears to be an unsophisticated application, and doesn't provide information on how to link between various providers. This alternative also does not create a MMC or provide the transportation agencies the CRRAFT software.
- Utilize the MTA or Oregon-Washington software as a stand alone system – Each of these individual systems has their own strengths and weaknesses. As mentioned before, the MTA is primarily an urban based system and the applications may not be as readily transferable. The Oregon-Washington system will not be operational for at least another year, and would cost a significant amount of money to obtain. Implementing

either of these systems alone would not create the MMC, and would not introduce the CRRAFT software.

- Paper Based Origin-Destination Chart - This is another inexpensive alternative to the Trip Planning Tool. This would integrate the schedules of all providers in the State. However, this would have to be updated any time a provider modified their schedule. Also, this alternative would not likely introduce the CRRAFT software, and may not create the MMC.
- Off The Shelf Software – This is another option, to utilize commercial software that has shown promise in other areas. The Western Transportation Institute conducted an analysis some of these commercial software for MET Transit in Billings [13].

Technology has improved to a point where information that used to be presented in a paper format is now being presented electronically. There would be multiple benefits to increasing the use of technology by public transportation providers in Montana, and implementing an electronic based trip planning tool. While this chapter (Chapter 3) focused on a proposed concept (system), Chapter 4 provides the conclusions and recommendations based on information collected to date.

## 4. CONCLUSIONS AND RECOMMENDATIONS

The Western Transportation Institute (WTI) developed this Concept based on information obtained as part of the Real Choices Systems Change Grant project, on-going meetings of the Montana Transportation Partnership, and similar projects being conducted by WTI. After reviewing current technologies, it is proposed that implementing a solution that includes CRRAFT, a Mobility Management Center (MMC), and a Trip Planning Tool, should assist in coordinating service between different transportation providers, increase the dissemination of timely and accurate information, and provide both transit agencies and their clients with a tool to enhance intercity and regional trip planning.

This document discusses the problems with the current methods of planning systems, the justification for a new system, and the concept for the new system. In the remainder of this section, the action steps that are needed to implement and evaluate the proposed system are outlined.

### 4.1. Action Plan/Next Steps

To further this concept, additional information and decisions are necessary. In general, the action steps are as follows:

- Obtain support for the basic concept
- Acquire additional information on potential technologies
- Obtain agreement on a plan of action to test/implement the technologies
- Implement and test the various technologies and other systems
- Evaluate the various components of the project

While the Western Transportation Institute has conducted research on transit related technologies, if the concept were to move forward, decisions would have to be made as the best way to proceed. For example, there would be various technologies and software to evaluate. Table 3, shows how a computer-aided scheduling and dispatching software may be evaluated.

**Table 3: Software Evaluation Scoring**

<b>Factor</b>	<b>Factor Weight</b>	<b>Score Software 1</b>	<b>Score Software 2</b>	<b>Score Software 3</b>
Ease of Use	5.0	3.0	4.8	3.0
Routing Algorithm	4.7	3.8	4.7	2.6
Customer Service	4.7	3.7	4.7	3.4
Training	4.7	4.3	4.0	3.2
Report Capabilities	4.3	3.9	4.4	2.4
AVL/MDT Integration	4.2	3.4	5.0	1.8
Stability of Company	4.2	3.2	3.3	5.0
Philosophy of Company	4.0	4.5	4.2	2.4
Quality of Product	4.8	2.8	4.0	2.6

There are other sources of information/documents that can help evaluate the technologies necessary, and help select the best one. As shown in Table 2, there are technologies that can help transportation providers deal with a number of issues.

In summary, this concept (document) recognizes the benefits of public transportation and coordination. The proposed concept is based on the fact that technology can be used to increase the efficiency of transportation providers and increase opportunities for coordination. The Trip Planning Tool should increase the ability for individuals to quickly plan a trip within the state. In addition, the Mobility Management Center will provide a one stop shop for transportation information, and increase the possibilities for coordination, which has been proven to increase the effectiveness and efficiency of transportation systems.

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