

Draft

Summary Report

Commuter Bus Feasibility Study



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1. Introduction

One of the short-term strategies recommended in the 2007 *Red Rock Corridor Alternatives Analysis* is to build a stronger transit base in the corridor by expanding bus service, increasing bus frequency and providing additional park-and-ride facilities. In October 2008, the Red Rock Corridor Commission began the *Commuter Bus Feasibility Study* to evaluate options for adding/expanding bus service and park-and-ride facilities along the Red Rock Corridor from Lower Afton Road in St Paul, Newport, Cottage Grove, Hastings, Prairie Island Indian Community and Red Wing to both downtown St. Paul and Minneapolis in a manner that supports the Commission's long-range vision for commuter rail service in the corridor. The project scope had four parts:

- Assess travel needs within the corridor
- Develop operating concepts to serve travel needs
- Evaluate operating concepts
- Develop recommended service plan with the following components:
 - Service delivery
 - Financial plan
 - Implementation plan

Over the course of the Study, six Technical Advisory Committee (TAC) meetings consisting of representatives from Corridor Counties and Cities, the Prairie Island Indian Community, the Metropolitan Council, Metro Transit and the Minnesota Department of Transportation (Mn/DOT) were held to develop and review potential operating alignments and segments. Initially, four scenarios were created. The first three only traveled as far as Hastings with variations in service span and intermediate stops. The fourth scenario was the longest, bringing service further south to Prairie Island Indian Community and Red Wing.

Ultimately, the stakeholders selected a modified version of the second scenario. This version provides eight daily trips (four in the morning and four in the afternoon) between Hastings and Minneapolis and six daily trips (three in the morning and three in the afternoon) between Hastings and St. Paul. This scenario was the most direct with no deviations off of TH 61. Projected ridership is 200 riders per day on the Minneapolis route and 160 riders per day on the St. Paul route. Annual ridership projections for the two routes are 91,800 passenger trips.

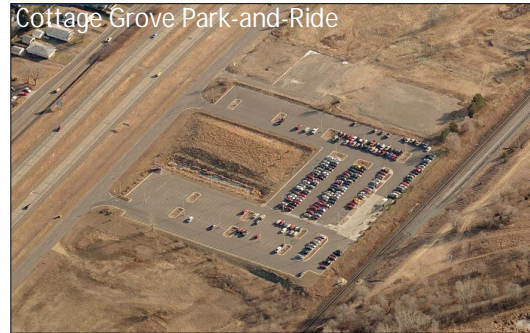
A service implementation plan has been developed that addresses management and oversight, fare policy and funding, marketing and branding, procurement, facilities development, and implementation schedule. This *Summary Report* presents the salient



points of the *Commuter Bus Feasibility Study*; details of the technical analysis completed for the Study are documented in Technical Memorandums 1 through 4, provided under separate cover.

1.1 Existing Corridor Conditions

- The Corridor is served by three transit routes. Metro Transit Routes 361 and 365 provide express service to downtown St. Paul and Minneapolis, respectively. Route 364 through the Metropolitan Transportation Services also serves downtown St. Paul via St. Paul Park and Newport.
- There are two existing park-and-ride lots along the Corridor. Access to the Cottage Grove park-and-ride lot is through the west TH 61 frontage road south of the 80th Street interchange. It has 490 parking spaces and is served by Routes 361 and 365. The Lower Afton park-and-ride is located at the southeast corner of Lower Afton Road and TH 61. It has 110 parking spaces and is currently over capacity.



1.2 Existing Transit Needs

Table 1 presents the range of existing potential transit ridership for the Red Rock Corridor using 2006 Longitudinal Employer-Household Dynamics (LEHD) data and a range of mode split values from the Northstar commuter coach service, Hiawatha LRT line, and Metro Transit's 2008 park-and-ride survey.

Table 1. 2006 Range of Potential Ridership by Origin¹

Origin	Daily Transit-Trips to/from Downtowns					
	Low		Medium		High	
	Minneapolis	St. Paul	Minneapolis	St. Paul	Minneapolis	St. Paul
Lower Afton Road	180	100	220	140	240	220
Newport	140	60	160	80	180	120
St. Paul Park	80	60	100	80	120	120
Cottage Grove	400	200	460	300	520	440

¹ Estimated 2006 ridership by origin and destination is based on 2006 Longitudinal Employer-Household Dynamics data.



Origin	Daily Transit-Trips to/from Downtowns					
	Low		Medium		High	
	Minneapolis	St. Paul	Minneapolis	St. Paul	Minneapolis	St. Paul
Hastings	160	80	180	120	220	160
Prairie Island	20	20	20	20	20	20
Red Wing	40	0	40	0	40	20
Total	1,000	500	1,160	720	1,320	1,080

1.3 Case Studies

The Case Studies presented select characteristics of existing commuter bus services in peer U.S. cities to help guide the *Feasibility Study*. Highlights of lessons learned are:

- Define appropriate fare structure to encourage ridership.
- Design routes and locate park-and-ride facilities to optimize travel time.
- Provide direct service to multiple locations to optimize ridership.
- Operate buses from park-and-ride facilities where commuter rail stations will be located to maximize capital investment along with training patrons to use the facility in the interim, with the long-term focus of commuter rail service.

1.4 Alternatives Considered

Four scenarios were considered for proposed commuter bus service in the Corridor. Each of the four scenarios include a new park-and-ride facility in Newport (to be served by Route 364) to provide capacity relief for the Lower Afton Road park-and-ride and a new park-and-ride facility at the Hastings Depot. Table 2 summarizes select characteristics of each scenario.

Table 2. Description of Operating Scenarios

Scenario Description	Bus Trips per Day	Fleet Requirement: Peak [Total]	Estimated Gross Additional Ridership (Transit Trips) ^{2, 3}	Capital Cost: ⁴ Bus Purchase/ [Bus Leasing]	O&M Cost: ⁴ Bus Purchase/ [Bus Leasing]
1: Extension of Routes 361 and 365 to Hastings	Minneapolis: 10 St. Paul: 6	7 [9]	Minneapolis: 160/day ⁵ St. Paul: 80/day Total Annual: 61,200 Net Annual: 35,700	\$8.38 million/ [\$1.45 million]	\$650,000 - \$850,000 [\$1,100,000 - \$1,325,000]

² Total Daily Transit Trips x 255 weekdays per year on average.

³ Based on Metro Transit's 2008 park-and-ride survey, which indicated that approximately 50 vehicles parked at the Lower Afton and Cottage Grove facilities had license plates originating south of Cottage Grove including Hastings and points south.

⁴ Year 2009 dollars.

⁵ The new bus trips from Hastings will have longer travel times relative to other scenarios due to the route deviation and stop in Cottage Grove.



Scenario Description	Bus Trips per Day	Fleet Requirement: Peak [Total]	Estimated Gross Additional Ridership (Transit Trips) ^{2, 3}	Capital Cost: ⁴ Bus Purchase/ [Bus Leasing]	O&M Cost: ⁴ Bus Purchase/ [Bus Leasing]
2: Introduce new commuter coach service to/from Hastings	Minneapolis: 10 St. Paul: 6	8 [10]	Minneapolis: 220/day ⁶ St. Paul: 160/day Total Annual: 96,900 Net Annual: 71,400	\$11.40 million [\$1.86 million]	\$600,000 - \$850,000 [\$1,025,000-\$1,375,000]
3: Scenario 2 plus midday service	Minneapolis: 12 St. Paul: 8	8 [10]	Minneapolis: 250/day ⁷ St. Paul: 200/day Total Annual: 114,750 Net Annual: 89,250	\$11.59 million [\$2.05 million]	\$825,000 - \$1,000,000 [\$1,375,000-\$1,550,000]
4: Scenario 3 plus service to Prairie Island Indian Community and/or Red Wing	Minneapolis: 12 St. Paul: 8	8 [10]	Minneapolis: 290/day ⁸ St. Paul: 220/day Total Annual: 130,050 Net Annual: 104,550	\$12.28 million [\$2.74 million]	\$975,000 - \$1,225,000 [\$1,650,000 - \$1,750,000]

1.5 Evaluation of Alternatives

Each of the four service plan scenarios were evaluated using the following criteria and for options with bus purchase and with bus leasing.

- O&M Cost Effectiveness
 - Cost per Passenger Trip
 - Cost per In-Service Hour
- Ridership Effectiveness
 - Riders per Bus-Trip
 - Riders per Bus Hour
- Annualized Cost per Passenger Trip
- Annual Operating Subsidy Required.

1.6 Recommended Scenario

Table 3 presents results for each effectiveness measure as well as a comprehensive ranking. The ranking system is based on a four-point system, with 1 being given to the highest-rated scenario for a specific measure and 4 to the lowest-rated scenario.

⁶ Scenario 2 ridership estimate assumes medium-range estimate because of added connectivity via the future Central Corridor LRT line, scheduled to begin revenue service in 2014.

⁷ Scenario 3 ridership estimate assumes the midpoint between medium- and high-range estimates because of added connectivity provided by the future Central Corridor LRT line, scheduled to begin revenue service in 2014 and midday service.

⁸ Scenario 4 ridership is based on Scenario 3 plus potential ridership from the Prairie Island Indian Community and Red Wing.



- Scenario 2 is the recommended operating scenario. Discuss implementation of Scenarios 3 and/or 4 within the context of broader Corridor policies.
- Explore bus leasing for the initial introduction of commuter bus service in this corridor to reduce initial capital outlay; test service and facilitate service adjustments; and avoid long lead times typically associated with bus procurement.
- Develop Alternate Scenario 2 that reduces the number of trips between Hastings and Minneapolis and identify its potential operating efficiencies, summarized as follows:
 - Fleet Requirement – Seven peak/nine total from eight peak/10 total
 - Annual In-Service Hours – Reduced from 4,080 to 3,500
 - Potential Ridership Reduced – From 220 to 200 transit trips per day
 - Annual O&M Cost –Annual cost savings of \$75,000 to \$100,000 with bus purchase; \$150,000 with bus leasing.
 - Annual Operating Subsidy – Potential reduction of \$75,000 with bus purchase; just under \$200,000 with bus leasing.

Table 3. Comprehensive Ranking of Scenarios

Effectiveness Measure	Scenarios With Bus Purchase				Scenarios With Bus Leasing			
	1	2	3	4	1	2	3	4
Cost per Passenger Trip	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd
Cost per In-Service Hour	3 rd	4 th	1 st	2 nd	3 rd	4 th	2 nd	1 st
Riders per Trip	4 th	2 nd	3 rd	1 st	4 th	2 nd	3 rd	1 st
Riders per In-Service Hour	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd
Annual Cost per Passenger Trip (O&M + Capital)	4 th	3 rd	2 nd	1 st	4 th	1 st	2 nd	3 rd
Annual Subsidy	2 nd	1 st	3 rd	4 th	2 nd	1 st	3 rd	4 th
Comprehensive Score	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd



2. Implementation Plan

Based on the recommendation to proceed with Alternate Scenario 2, following is a summary of the proposed implementation plan for the Red Rock Corridor commuter coach service:

2.1 Management and Oversight

- Potential responsible agents:
 - *Metropolitan Council (Metro Transit)* – Metro Transit has in-house technical expertise to manage daily operations. There may be efficiencies provided when integrating the proposed service plan into its existing operations. However, its long-range plans and current funding commitments do not identify implementing the expansion of express bus service and construction of a new park-and-ride in Hastings between 2013 and 2030. If this option is pursued, then continued advocacy for and coordination with the Metropolitan Council are recommended on extending Routes 361 and 365 to Hastings, although this option will not guarantee that service will be expanded within the next 12 to 18 months, which is a goal of this Study.
 - *Red Rock Corridor Commission* – The Red Rock Corridor Commission (“Corridor Commission”) could be the responsible agent and take the lead in implementing the preferred expanded service scenario. The Corridor Commission would be responsible for obtaining funding for both the capital and operating expenses, is similar to the existing arrangement for Route 888 commuter coach service (Elk River) through the Northstar Corridor Development Authority’s contract with Laidlaw. Under this option, the Corridor Commission will need to determine if the preferred operating service scenario will be implemented for a short term period as a demonstration project (typically from 1 to 3 years) or as a permanent service that will need to be funded on an annual basis.

The following information assumes that the Corridor Commission could be the responsible agent and take the lead in implementing the preferred expanded service scenario.

Daily Operations Management

- Funnel coordination of all functions through one designated governmental entity.
- Day-to-day staff time would be most intense before service start-up, tapering down to 30 to 50 percent afterwards.



- Pre-start-up responsibilities: service contract development and procurement; vehicle and equipment procurement; facilities development; and preparation of a marketing plan. Post-start-up: service contract management service monitoring. Some functions may be provided by the contracted service provider, depending on the provisions in the service contract.

Service Contracting and Staffing

- Recommended contracting the service in the short-term to minimize initial capital outlay and desire to implement service within 12 to 18 months.
- Staffing requirements to be part of service contract and will include these functions: Administrative (e.g. Accounting, Human Resources); Operations (e.g. operators and supervisors); and Maintenance (e.g. mechanics).

2.2 Fare Policy and Funding

Fare Policy

- Proposed one-way cash fare: Hastings to St. Paul - \$3.25; Hastings to Minneapolis - \$4.75.⁹
- Considerations:
 - *Fare reciprocity* with other regional providers to ensure full system integration.
 - *Cash handling* using the regionally-approved electronic farebox.

⁹ These proposed fares will be reviewed as part of the next steps towards service implementation, and will be done to ensure that proposed fares can be properly accommodated within the regional fare system.



Potential Funding Sources

The subsidy calculations in this *Study* assume that discounted fares result in a net collection of 70 percent of the defined cash fares, resulting in a net subsidy requirement of \$788,100. To cover this gap, Table 4 the following potential funding sources are identified for consideration:

Table 4. Summary of Potential Funding Sources

Potential Funding Source	Can be Used for:		Funding Source	Comments
	Capital?	Operating?		
CMAQ	Yes	Yes	Federal, with local match requirement	Next opportunity to apply is in 2011 for project implementation in 2015 or 2016. Funding may be used for demonstration projects for up to three years in duration.
CTIB	See Comments.		Local (5 Twin Cities Counties)	Limited funds are available. Washington County has some flexibility to use its share of the funds for the next three years.
Mn/DOT Bridge Replacement Funds	See Comments.		State	Requires direction from the State Legislature or special appropriations as part of the next bonding bill.
Greater Minnesota Transit Grants	Yes	Yes	Federal (formula funds) and State	Cities and counties outside the seven-county Twin Cities metropolitan area are eligible, such as the City of Red Wing. Includes FTA Section 5311 funds.
Local Government General Funds	See Comments.		Local	Potential funds include TIF and bonds, whose uses vary.
Regional Transit Capital Communities	Yes	Yes	Local	Formerly known as the Transit Taxing District. Joining the RTCC (i.e. the City of Hastings) does not guarantee transit service or facilities through this tax levy.
Chapter 152 Statewide Transit Enhancement Funds	Yes	Yes	State	Mn/DOT's <i>2009-2028 Statewide Highway Investment Plan</i> includes \$50 million for statewide transit facility improvements as specified in 2008 Chapter 152 legislation. Mn/DOT will issue solicitations in August 2009. Applications due in September 2009. Maximum individual award is \$6 million. ¹⁰
Public Transportation on Indian Reservations (5311(c))	Yes	Yes	Federal	Created through SAFETEA-LU and funded as a takedown under Section 5311 program. Based upon an annual national competitive selection process by FTA. ¹¹

¹⁰ Source: *Minnesota Statewide Transportation Plan 2009-2028*, Minnesota Department of Transportation.

¹¹ Source: http://www.fta.dot.gov/printer_friendly/grands_financing_3553.html.



2.3 Procurement Process

Prior to the start-up of service, the Corridor Commission will need to enter into a procurement process for vehicles and equipment, and/or service:

Vehicle and Equipment Procurement

- *Considerations regarding vehicle purchase* – Lessens annual contract costs for O&M, but requires more capital outlay at project initiation. Requires more lead time for through competitive bid process that may delay service implementation. Entails long-term investment and commitment from the Corridor Commission. Should the service not meet ridership expectations, the Commission would be shouldered with nine transit coaches and no place to use them.
- *Service contract procurement* – Allow for sufficient lead time to support pre-bid communications, evaluation, interviews, awards and actual project start-up upon selection.
- *Procurement process* – Initiating a vehicle, equipment, and/or service procurement process requires advance planning by the sponsoring governmental entity.

2.3 Other Implementation Considerations

Operations Plan Refinement

Refinement of Alternate Scenario 2 service plan is required prior to service implementation. Enhancements to the service plan will address schedule and running times, ridership forecasts, and financial assumptions. Updates should capture any refinements related to project definition (e.g. change in proposed service levels, travel times, fares).

Marketing Plan

Potential riders must be aware of the service and its advantages. Develop a marketing strategy to ensure widespread acknowledgement and acceptance of the service amongst users and non-users alike.



Facilities Development

Facilities will potentially require the most lead time out of all of the pre-startup activities for the project. The next step towards service implementation also needs to determine ownership and maintenance responsibility related to new facilities that include costs.

- *Hastings Depot Park-and-Ride* – The initial segment of the Red Rock bus service will originate at a newly developed park-and-ride facility in Hastings. The proposed site (owned by the City of Hastings) is situated along the west side of the Hastings Train Depot, located three blocks east of TH 61. Given the site's proximity to the existing railroad Corridor, this location is ideal for long-term park-and-ride investment. The parking area can transition from a bus-oriented operation to a commuter rail operation with minimal adjustments and cost outside of the initial outlay.
- *Downtown Minneapolis and St. Paul Facilities* – Coordinate existing and future downtown layover facilities and bus stops with Metro Transit (e.g. Minnesota's Union Depot).
- *Lower Afton Road Park-and-Ride* – The current proposed service plan for Red Rock commuter bus service does not assume service a stop at this facility. A future stop here will require discussions with Metro Transit.
- *Maintenance Facility* – With bus leasing, vehicle maintenance should be included as part of any potential contractor's bid.

Service Monitoring Requirements

A service monitoring program is essential for the Corridor Commission to determine the project's long-term sustainability. Ultimately, this program will track daily, monthly and annual ridership and determine if the service is meeting the projected ridership goals.

Future Service Expansion

Other service scenarios were considered in this study that reflected more robust service (e.g. midday trips) and a route extension to the Prairie Island Indian Community and Red Wing. Evaluation of Scenarios 3 and 4 indicates that such service is not warranted at this time. Another potential transit market is the I-494 Corridor between Normandale Boulevard and the Mall of America/Minneapolis-St. Paul International Airport. The I-494 Corridor is outside the Red Rock Corridor, so it was not analyzed to the same degree as the four service plan scenarios. The service monitoring program described earlier in this section and documented customer requests should be used to gauge potential future expansion of Red Rock commuter bus service.



2.5 Implementation Schedule

Red Rock Corridor Commission as Responsible Agent

The process of selecting a contract service provider and completing pre-start-up service tasks cannot begin in earnest until key policy decisions are made by the Corridor Commission. To facilitate these decisions, a series of workshops are suggested as follows, with specific sub-topics for discussion:

- Workshop #1 – Management/Oversight
 - How will the service be funded?
 - Who will be the designated governmental entity responsible for day-to-day operations, including the selection of a Project Manager?
 - Will the service be implemented for a short-term period as a demonstration project or as a permanent service that will require ongoing funding?
 - Are buses going to be purchased or part of a service contract?
 - What functions are to be contracted out vs. directly operated?
 - If any functions are to be directly operated, what are the local government staff requirements?
- Workshop #2 – Funding/Fare Policy
 - What are the established fares?
 - Will discounted fares be offered?
 - What reciprocal fare arrangements will be made with other regional service providers?
 - Where will additional funding be obtained to cover anticipated costs?
- Workshop #3 – Service/Equipment Procurement
 - What is the scope of services/equipment to be described in the RFP?
 - What start-up service tasks should be included in the scope?
 - What performance incentive clauses should be included?
 - What should be the method of payment?
 - What administrative requirements will be included?
 - What criteria shall be used for evaluating proposals?
 - What is the scheduled procurement process?
- Workshop #4 - Marketing
 - Who will be responsible for preparing a marketing plan?
 - What is the designated budget for marketing tasks?
 - Who will be responsible for implementing the marketing plan?

Figure 1 presents the anticipated time required for each start-up task, based on solidified funding commitments.



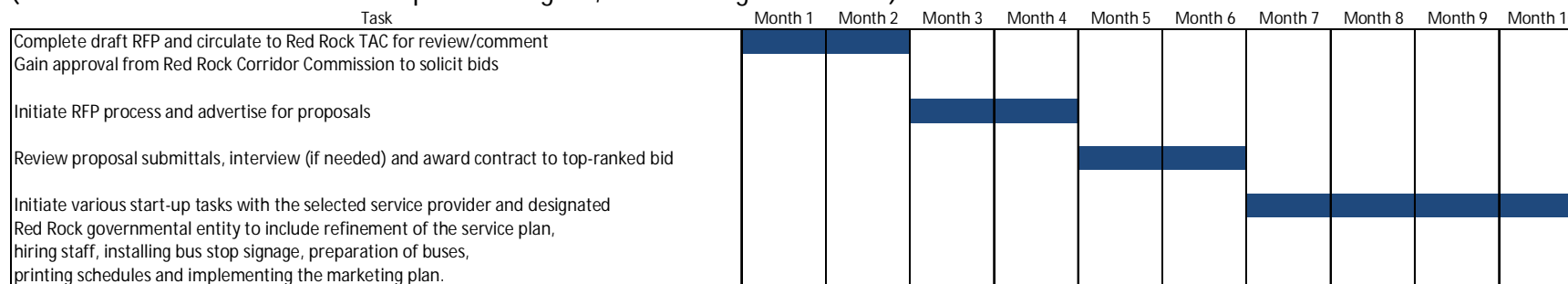
Metropolitan Council (Metro Transit) as Responsible Agent

If the Metropolitan Council (Metro Transit) is the responsible agent, a series of meetings will be required with the Corridor Commission to reach agreement on issues such as:

- Potential requirement of expanding the RTCC to include Hastings and any additional potential funding requirements for the service.
- Specific bus routing and schedules
- Schedule for constructing the Hastings park-and-ride lot
- Schedule for implementing bus service
- Marketing activities and responsibilities for those activities
- Ridership monitoring requirements and service performance standards.



Figure 1. Implementation Timeline for Option 2
 (Red Rock Commission as the Responsible Agent, Contracting the Service)¹²



¹² This Study recommends solidifying funding commitments first before embarking on this implementation schedule.