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## Bay Area Transportation Study

# Transit Service and Coordination Study Final Report



November, 2011

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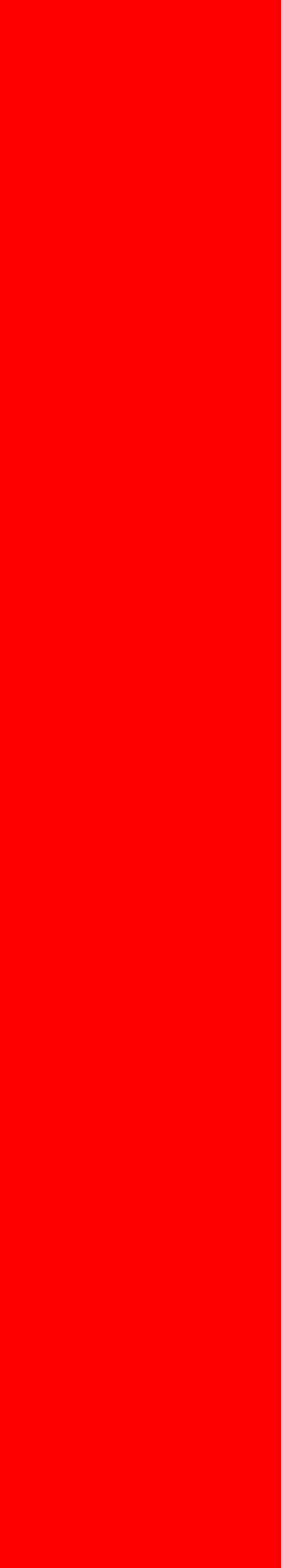
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# **EXECUTIVE SUMMARY**

## EXECUTIVE SUMMARY

The Traverse City region, which enjoys public transportation service provided by the Bay Area Transportation Authority (BATA) in Grand Traverse and Leelanau Counties, is a thriving area with a diverse economy that is largely driven by agriculture and tourism. The transit agency faces the challenges of serving permanent residents throughout a region that, with the exception of downtown Traverse City, is low in density and large in area, requiring long bus routes to connect the activity centers. Other significant challenges are:

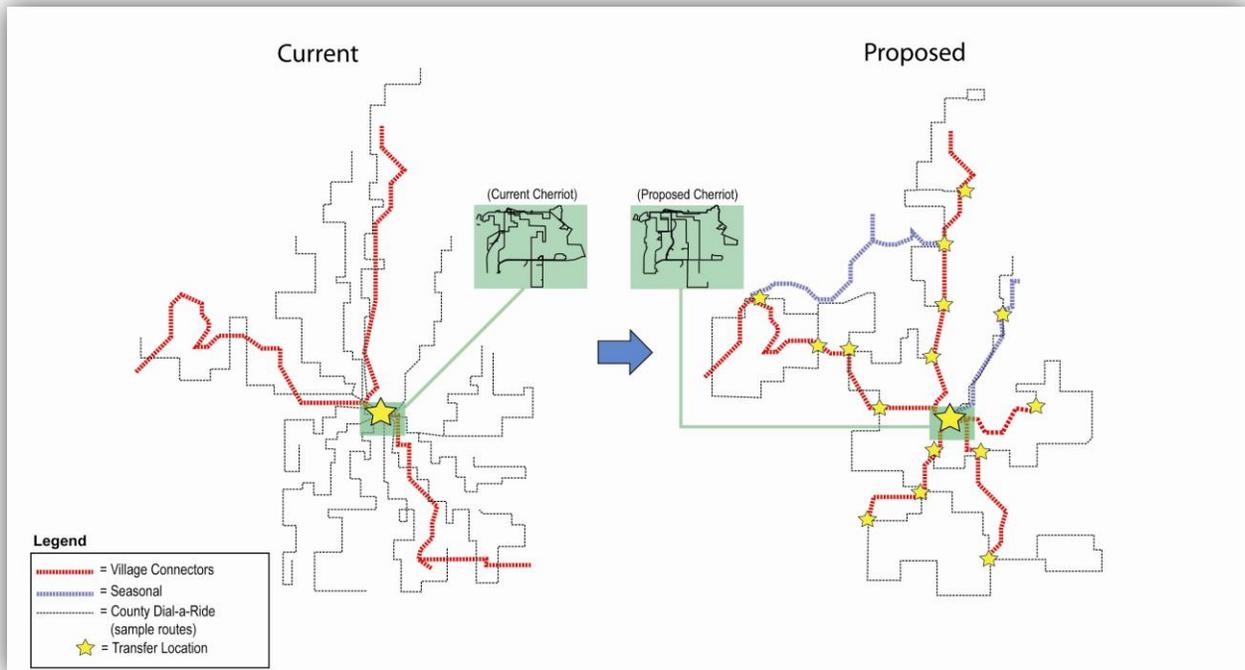
- ▶ Serving high volumes of seasonal tourists who come to the region to enjoy its natural resources and outdoor activities, as well as its festivals and its wineries
- ▶ Relieving congestion on the roadway system that is stressed in high season
- ▶ Contributing to improved environmental quality by operating a high-quality system that encourages people to leave their cars at home and ride transit, and
- ▶ Enhancing BATA's financial wherewithal by increasing revenues and controlling operating costs

Late in 2010, BATA initiated the Transit Service and Coordination Study, and retained VleCIDes-Schroeder Associates, Inc., to develop a plan that addresses these issues. This study has resulted in a series of recommended operations improvements affecting Cherriot, the Village Connectors and County Ride, and it provides for new seasonal services that target new markets. Key features of the proposed operating changes are:

- ▶ Improving the efficiency of the Cherriot system by making the route configurations more direct and spacing the stops more evenly
- ▶ Adding a new Cherriot route that serves the Cass / La Franier corridor
- ▶ Adding a Munson Circulator that will provide exclusive service on the hospital campus
- ▶ Implementing two express shuttles that connect the various campuses of Northwest Michigan College. These services would be supported by a new student pass program
- ▶ Reconfiguring the County Ride system to feed the Village Connectors
- ▶ Increasing frequency on the Village Connectors so that buses will operate on hourly schedules throughout the day
- ▶ Add two new Village Connectors, one to Interlochen and one—called "Resort Row" to Turtle Creek Casino
- ▶ Changing the Village Connectors to flex routes, permitting them to deviate within  $\frac{3}{4}$  mile of the main route to serve passenger needs
- ▶ Introducing three new seasonal or limited services:
  - The Beach Bus, operating exclusively in Leelenau County and providing cross-county service in summer
  - The Winery Circuit, operating on weekends exclusively in the Old Mission Peninsula from May through October
  - The Performing Arts Express, serving scheduled events at Interlochen from downtown Traverse City

Figure ES-1 compares the current BATA system with the proposed changes.

**Figure ES-1:** Current and Proposed BATA Services



Additionally, the study addresses a number of near-term and longer-term policy recommendations in the following areas:

- ▶ Fare initiatives and collection methods
- ▶ Business and intergovernmental partnerships that encourage transit use and interconnection of regional systems. Longer-term initiatives for these partnerships would include initiating vanpool programs and developing park and ride facilities
- ▶ Zoning and land use practices that facilitate access to transit and encourage sustainable development
- ▶ Improved information and public awareness through signage, website enhancements and coordination with tourism-oriented organizations

# CHAPTER 1

## *Introduction & Project Scope*

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## 1.0 INTRODUCTION AND PROJECT SCOPE

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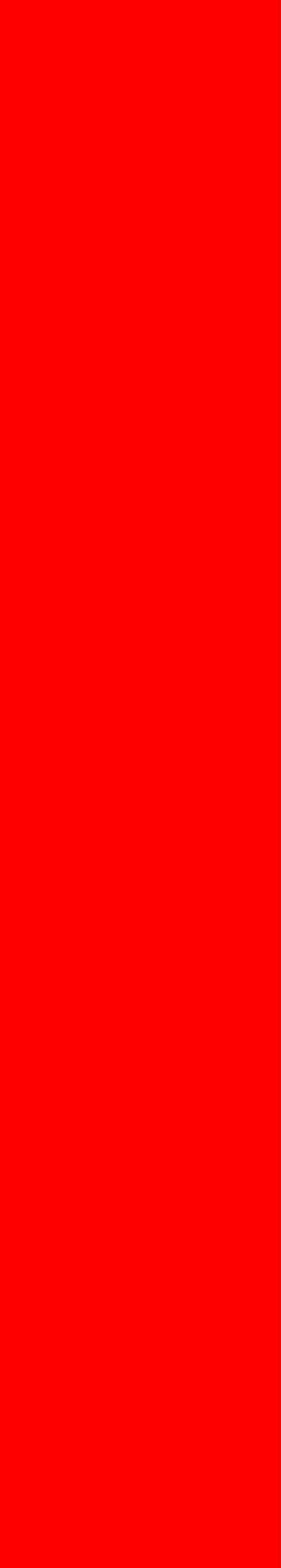
This report summarizes the analysis, findings, and recommendations of the Bay Area Transportation Authority's (BATA) Transit Service and Coordination Study, conducted by VleCIDes-Schroeder Associates, Inc (VSA) during a one-year period.

Chapter 2 presents a brief overview of both BATA and non-BATA public transportation services in the six-county Traverse Bay area; reviews previous studies; and then identifies community goals and objectives that guided project undertakings, based on agency and stakeholder meetings.

The report's main findings are covered in Chapters 3 and 4. Chapter 3 includes analysis of proposed changes to existing services as well as discussion of new services, while Chapter 4 covers proposed policies, business practices, and other general recommendations that BATA may consider.

Following the analysis and project findings, Chapter 5 provides an implementation guide for phasing in project recommendations. Finally, Chapter 6 discusses project conclusions.

Appendices with detailed information on proposed services are also available under separate cover; the report provides references for relevant appendices where appropriate.



# CHAPTER 2

## *Existing Service*

## 2.0 BATA TRANSPORTATION SERVICES OVERVIEW

BATA provides a variety of bus services throughout Grand Traverse and Leelanau Counties. Services are focused on feeding passengers into and throughout downtown Traverse City, and providing door-to-door dial-a-ride (DAR) services. There are eight distinct categories of service –

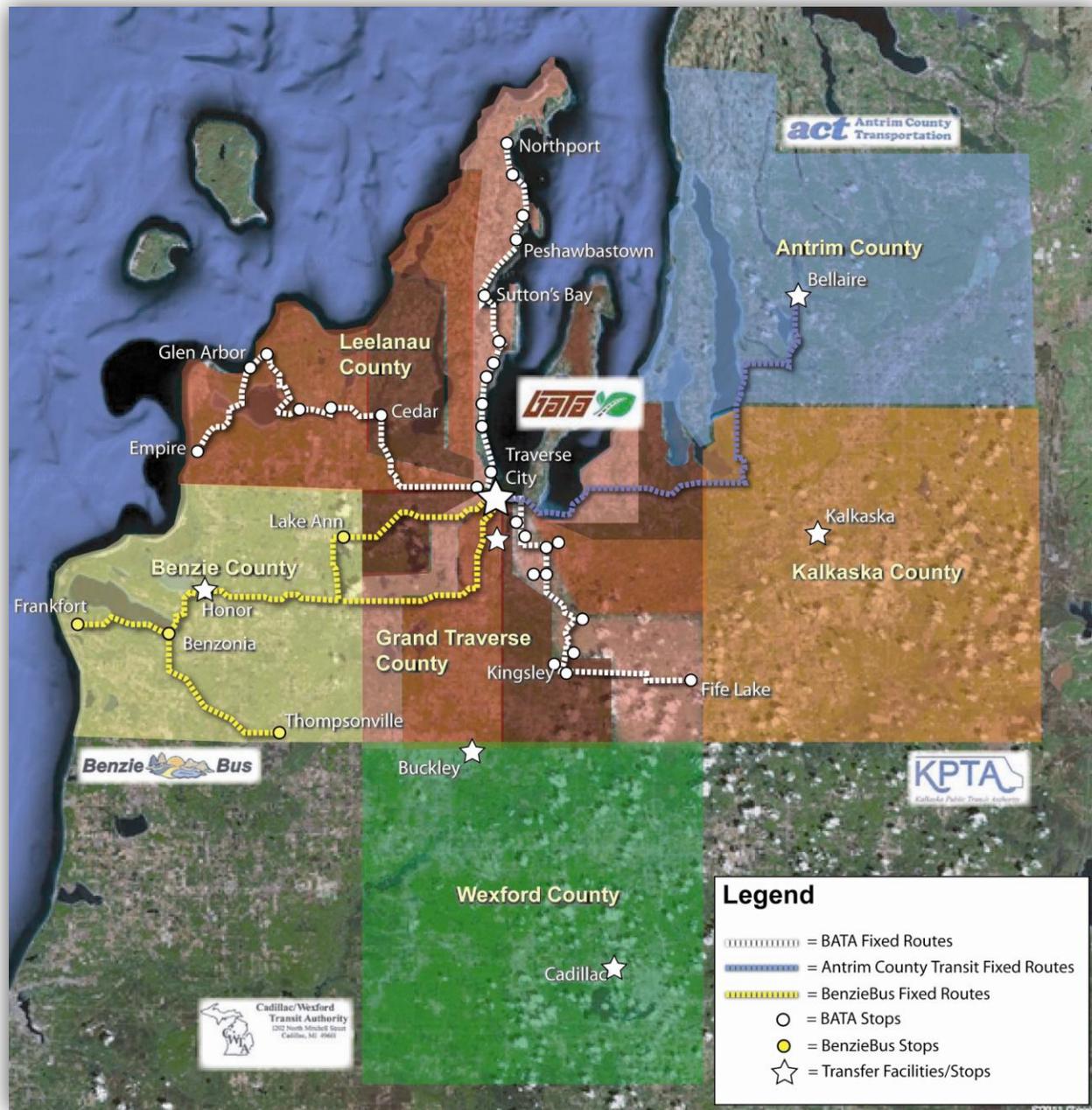
- ▶ **Cherriot:** Traditional urban pulse network, operating along fixed routes and schedules throughout Traverse City proper. It is composed of five local routes and one express route. Most routes feature 30 minute headways
- ▶ **Village Connectors:** Fixed-route, commuter-like service for residents of outlying towns and villages in Grand Traverse and Leelanau Counties. Currently, BATA operates three Village Connectors (Northport, Empire, and Fife Lake)
- ▶ **County Ride:** Also known as “Zone Routes” or “County dial-a-ride.” County Ride is a zone-based dial-a-ride service where 13 buses pick up and drop off passengers within 13 different geographic zones. Zone boundaries radiate from Traverse City outward into the outer reaches of Grand Traverse and Leelanau Counties forming somewhat pie-shaped sectors
- ▶ **City Ride:** BATA’s DAR serving Traverse City proper
- ▶ **Suttons Bay:** Flex routes that connect schools and residential areas in and around the Village of Suttons Bay in Leelanau County by following a preset fixed route that can deviate or “flex” within ¼ mile to meet passengers closer to their point of origin or deliver them to their destination
- ▶ **Community Mental Health:** A special service that BATA provides under contract for the special needs population with mental disabilities to and from adult foster care centers. Features a typical DAR structure; however in order to ensure a safe and secure mode of transport for passengers, only pre-approved qualifying individuals can use it
- ▶ **Health Routes:** Another service BATA provides by contract with the Munson Health Center to provide shuttle service for patients traveling from the hospital to dialysis centers
- ▶ **Parcel Service:** A pickup & delivery service that allows customers to ship small parcels that weigh less than 40 lbs throughout the bi-county service area. The fee is \$4.50 per item or one punch of the 30-ride fare pass. A discounted price of \$3.00 is offered if parcels are brought to the Hall Street Transfer Center by the customer

BATA also operates an After Hours service in Traverse City and provides emergency service using back-up drivers. After Hours is precisely what the name implies – a limited, demand-responsive service for passengers traveling beyond normal service hours. Emergency service is available one-half hour before normal service commences until one-half hour after the end of the normal service day during weekdays, with similar hours on Saturdays.

All of these services are provided by a fleet of 67 vehicles. The eight Suttons Bay Flex Routes do not have ADA-lifts at the time of this publication. Note that the total number of vehicles continually changes as new buses are delivered. However, though some existing buses may be retired, BATA may also evaluate the possibility of instead retaining them for additional service requirements.

Figure 2-1 displays most of the public transportation services available to the six-county area surrounding Traverse City, including both BATA and non-BATA services.

Figure 2-1: Public Transit in the Bay Area Region (both BATA and non-BATA services)



**DEMOGRAPHICS**

While Grand Traverse County grew about 5% and Leelanau 0.5% over the last ten years, Traverse City itself shrunk by about 3.5%. In all, the entire 6-county Bay Area region experienced a total population growth rate of about 3%.

Nearly one-quarter of the region’s population is comprised of students of all ages, with just 0.7% of the population using public transportation. However, in Traverse City itself, where the service level is higher, 2.1% of the population uses public transportation. While Traverse City retains a lower median household income than the region – just over \$40,280 compared to \$45,749 – Grand Traverse and Leelanau Counties demonstrate a higher median household income at \$50,774 and \$56,574 respectively.

While the US Census Bureau is the most authoritative source on demographic information, the “public transportation use” data provided in Table 3-1, and derived from the 2009 Census estimate, may not reflect the full picture. It would have been based on the 2000 Census long form, which is completed by a smaller sample of the population and administered in April, a time when the region is not fully populated. Further, the question is phrased to accommodate multi-modal trips, so an individual who drives to a park and ride then transfers to bus service, but perceives that the auto segment is the longer part of the trip, may not select “bus” as his or her answer. The Census data shows 332 users in Grand Traverse and 47 in Leelanau, figures that are far lower than BATA’s own records which show a daily average of almost 1,000 users (based on 498,507 trips logged between 10/1/2009 and 9/30/2010, divided by 255 work days, and divided again by 2 to account for round trips). Therefore, some discretion should be used when considering public transportation usage based on this data.

**RIDERSHIP DATA AND TRENDS**

Figure 2-2 displays annual ridership statistics for all BATA services for the year starting October 1, 2009 and ending in September 30, 2010. Cherriot fixed-route services in Traverse City make up the bulk of BATA’s riders, but County Ride also represents sizeable number of passengers.

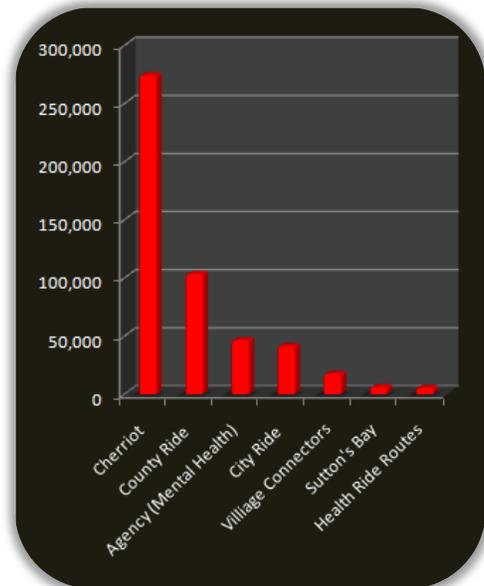
**REVENUE AND COST OF SERVICES**

BATA has consistently operated with a balanced budget for the past few years, with total revenues exceeding expenses by a margin of more than 20%. The retirement of debt has been a key factor in allowing such a healthy margin of cash flow.

The bulk of revenues in 2010, 36%, came from local appropriations (obtained via a local property tax levy), state formula funds (33%), and federal contracts (17%). Revenue from the farebox accounted for only 8% of the total. However, total system-generated revenues, with contract fees and auxiliary transportation revenues, are about 13%.

Typically, transit systems do count all system-generated revenues into the “farebox” recovery ratio.

**Figure 2-2:** 2009 BATA Ridership



BATA’s local appropriation exists as a millage levy, renewed by referendum every five years. The current rate, 0.35 mills, has been extended through 2017 after a large margin of voters approved the extension in a November 2011 referendum. In comparison, Benzie, a more rural county, levies a higher rate—0.6 mills.

Non-transportation revenue and package delivery, an accommodation for local businesses, result only in minimal further revenue enhancements. BATA receives most of its federal funding through the 5311 grant program which provides operating assistance to smaller and rural areas. An additional increment comes from the federal Job Access Reverse Commute program (JARC), designed to help smaller communities and public transportation operators who transport low-income employees to their employment locations.

Additionally, BATA has achieved a 40% increase in passenger fares and a 28% increase in total system-generated revenues from 2009 to 2010. BATA’s farebox recovery ratio, estimated at 13.5% for 2011, is

a key area for focus in this study, with the objective of developing strategies and programs to increase both ridership and revenues, while minimizing operating expenses.

As stated throughout this report, a shift from dial-a-ride to fixed-routes and/or flex routes could be the most effective means of doing this. Contract fees, such as those with local health facilities are an important source of additional revenue. Like all other transit agencies and most businesses in the US, labor and fringe benefits compose the bulk of BATA’s expenses.

Table 2-1 summarizes revenues and expenses for 2010.

**Table 2-1:** 2010 Revenues and Expenses

Revenues		Expenses	
Category	Amount	Category	Amount
Farebox	\$ 511,033	Drivers	\$ 1,875,170
Contract Fees	\$ 343,242	Bus Ops. Management	\$ 174,900
Package Delivery	\$ 7,558	Maintenance	\$ 312,000
Aux. Trans. Revenue	\$ 49,963	Administration	\$ 295,800
Non-Trans. Revenue	\$ 18,928	Dispatch	\$ 379,200
Local Revenues	\$ 2,307,404	Fringe Benefits	\$ 1,376,660
State Formula	\$ 2,095,228	Services	\$ 272,480
Federal Contracts	\$ 836,313	Materials & Supplies	\$ 831,000
Interest Income	\$ 4,373	Utilities	\$ 105,600
Other	\$ 93,635	Insurance	\$ 248,600
-	-	Misc. Expenses	\$ 23,420
-	-	Interest	\$ 4,890
-	-	Op Leases & Rentals	\$ 37,800
-	-	Depreciation	\$ 26,400
<b>Total:</b>	<b>\$ 6,267,677</b>	<b>Total:</b>	<b>\$ 5,963,920</b>
		<b>Net Revenue:</b>	<b>\$ 303,757</b>

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## 2.1 PREVIOUS PLANNING STUDIES

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### THE GRAND VISION

This 2009 study produced a coherent set of ideas that were generated through a partnership among a large number of Bay Area organizations and government agencies, which included BATA.

A key Grand Vision transportation goal is to “maintain and improve the existing road system and place increased investment in public transportation, bicycling and pedestrian infrastructure to maximize system efficiencies, provide choices in mobility and support energy conservation.”<sup>1</sup>

It recommends “Building Blocks” of future growth focus areas, specifically public transit and other non-automobile forms of transportation to serve downtowns and cities, as well as villages and main streets. A significant component of this strategy includes compact neighborhoods and walkable communities – two notions that support public transit and community sustainability.

Most importantly, the report identifies the strengthening of regional connectivity among villages and Traverse City to be of great importance both for growing housing and employment, and for preserving rural, natural, and scenic areas. Thus, enhancing village connectors should be a top priority for this project.

### PUBLIC TRANSPORTATION COORDINATION STUDY FOR GRAND TRAVERSE AND LEELANAU COUNTIES (CORRADINO/WADE-TRIM)

Although the oldest of the studies VSA reviewed (completed in 1998), the Corradino Study recommendations and observations are strikingly similar to many of the current ideas, considerations, and improvement themes presented in more recent studies, observations, and stakeholder feedback.

While BATA has implemented many of the study’s recommendations (such as establishing a fixed-route, fixed-schedule service in Traverse City), others have not yet been realized. These:

- ▶ Coordinate with Traverse City Area Public Schools (TCAPS) to provide service to schools as well as the Career-Tech Center for work-study programs
- ▶ Restrict the demand-response system to ADA-eligible riders and others with special needs as determined by BATA<sup>2</sup>
- ▶ Implement fixed-route service along the Chums Corner/Grawn/Interlochen corridor extending southwest from Traverse City
- ▶ Implement fixed-route service along the Whitewater and Acme Township corridor, and possibly beyond to Grand Traverse Resort; serve the “great density of motel accommodations and restaurants and many service jobs”<sup>3</sup>
- ▶ Designate park-and-ride lots to help promote carpooling and feed village connector routes, perhaps with the assistance of the Michigan Department of Transportation (MDOT), who retains a well-established program
- ▶ Promote a Transit Benefit Program to major employers throughout the region

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<sup>1</sup> (Traverse City Area Transportation and Land Use Study (TC-TALUS) 2009), pg. 4

<sup>2</sup> (Corradino/Wade-Trim 1998), pg. 7-4

<sup>3</sup> (Corradino/Wade-Trim 1998), pg. 7-9

## THE BATA SURVEY (KRIOS)

Results from another recent study, the 2009 BATA community survey, provide valuable insight into what changes would be welcome for both current passengers and non-users of the BATA system. The majority of respondents in this survey were non-users over the age of 50 (with 40% of total respondents over the age of 60).

The major themes identified include:

- ▶ Clearer information on BATA services posted at each bus stop
- ▶ More frequent service and service on weekends
- ▶ More attractive vehicles
- ▶ Continued support of the special needs community

Regarding characteristics that would encourage more patronage of the BATA system, respondents ranked highest: increased frequency, more information at stops, and more fixed routes in the system. Additionally, the majority of those surveyed indicated they would be willing to walk 2-6 blocks (one quarter to one half mile) to access a BATA service; this is an important consideration VSA will use for re-working any route alignments.

Lastly, recommendations beyond those covered by the main themes listed above focused on re-working route alignments along roads with the heaviest traffic volume, as well as implementing fixed seasonal routes to serve major community and tourist events.

## EXPANDING TRANSPORTATION CHOICES IN THE GRAND TRAVERSE REGION (MICHIGAN LAND USE INSTITUTE)

The report suggests that BATA consider providing “a transit system that is fast, reliable, efficient, and runs on a regular schedule with convenient stops. [Furthermore, other] transit agencies need to emphasize fixed routes over demand response service to attract riders by choice.”<sup>4</sup>

Other recommendations and observations from this report mirror issues that VSA has identified for analysis through site visits and ideas from stakeholder meetings:

- ▶ Increase the number of village connectors and phase out the inefficient and cost ineffective zone services (County Ride)
- ▶ Beyond being cost ineffective, DAR services are not as fast or direct as fixed-routes, and also require advance registration as opposed to the set frequency and regularity of fixed-routes; therefore, although DAR provides door-to-door service and alleviates some walking on passengers’ part (unnecessary except for the special needs community), it is overall an inferior service for commuters)
- ▶ In the summer/seasonal months more passengers use the fixed-route village connector services; correspondingly, there is less service in the winter months. Consider expanding summer service along these routes either via an express service, additional headways, or a related set of improvements
- ▶ Combine the use of bicycle, foot, carpooling, personal vehicle, and/or DAR to provide the “last-mile” connections needed to get people riding the Village Connector services at sensible transfer center locations, such as village downtowns
- ▶ Promote environmental benefits and cost-savings to non-riders

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<sup>4</sup> (Lively and Clark 2009), pg. 2

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## 2.2 SUMMARY OF STAKEHOLDER PRIORITIES

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### OVERVIEW

In late October 2009, VSA, in conjunction with BATA, conducted a series of stakeholder meetings in Traverse City.

The purpose of the stakeholder meetings was to gain important information and perspectives from local representatives on how the transit system can or should be improved. The face-to-face conferences allowed both interactive discussion and fact-based comprehension of the project study area, its constraints, and its opportunities.

Stakeholders were assembled into affinity groups by BATA staff according to similar activities, occupations or areas of interest. For example, different school representatives were gathered for one meeting, while festival operators were gathered for another. This allowed focused discussion on transportation issues that were most relevant to each group. The meetings were successful in that most groups were eager to communicate their ideas and engage in constructive discourse resulting in an extensive record of what the Bay Area community envisions for BATA's future.

Please see the *Task 1: Assess Existing Services Memo, Appendix A* for a copy of the presentation that was used for these stakeholder meetings. *Appendix B* of this memo contains detailed notes from scheduled group meetings as they occurred; these are further organized by improvement theme.

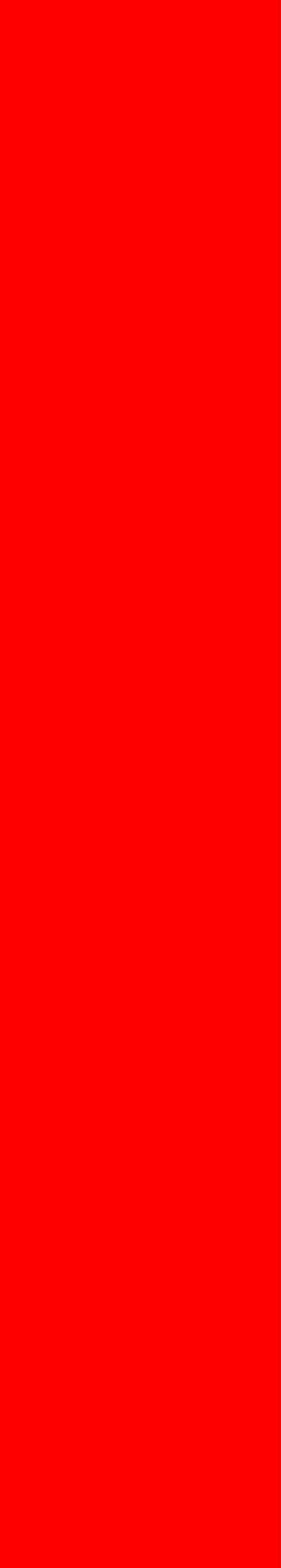
### RECURRING IMPROVEMENT THEMES

Based on the results of these meetings and the findings of previous planning studies, VSA synthesized the various and often recurring improvement ideas and suggestions into seven major themes or categories:

- ▶ Operations Improvements
- ▶ Fare Media and Pricing
- ▶ Service Area and Capital Improvements
- ▶ Intergovernmental and Public-Private Coordination
- ▶ Public Awareness/Marketing Approaches
- ▶ New Markets and Demographics
- ▶ Special Events

These themes provide the framework and guiding principles for the analysis and proposed recommendations provided throughout the rest of the report.

Please see the Appendix for a list of these improvement themes with detailed definitions



# CHAPTER 3

## *Analysis & Findings*

## 3.0 INTRODUCTION

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This section summarizes operations improvements to BATA's existing bus services. It is organized into the following sections:

- ▶ Cherriot
- ▶ Campus Connectors Serving Northwest Michigan College
- ▶ Village Connector
- ▶ Seasonal Services
- ▶ County Ride
- ▶ Transfer Facilities
- ▶ Operation of the New System

The recommendations are based on qualitative and quantitative analysis and are illustrated by maps displaying the proposed changes. Any physical alterations that would be made in order to accommodate the recommended changes are also discussed.

## 3.1 CHERRIOT

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### INTRODUCTION

A comprehensive re-organization of BATA's fixed-route bus system, serving Traverse City and neighboring communities, addresses several goals –

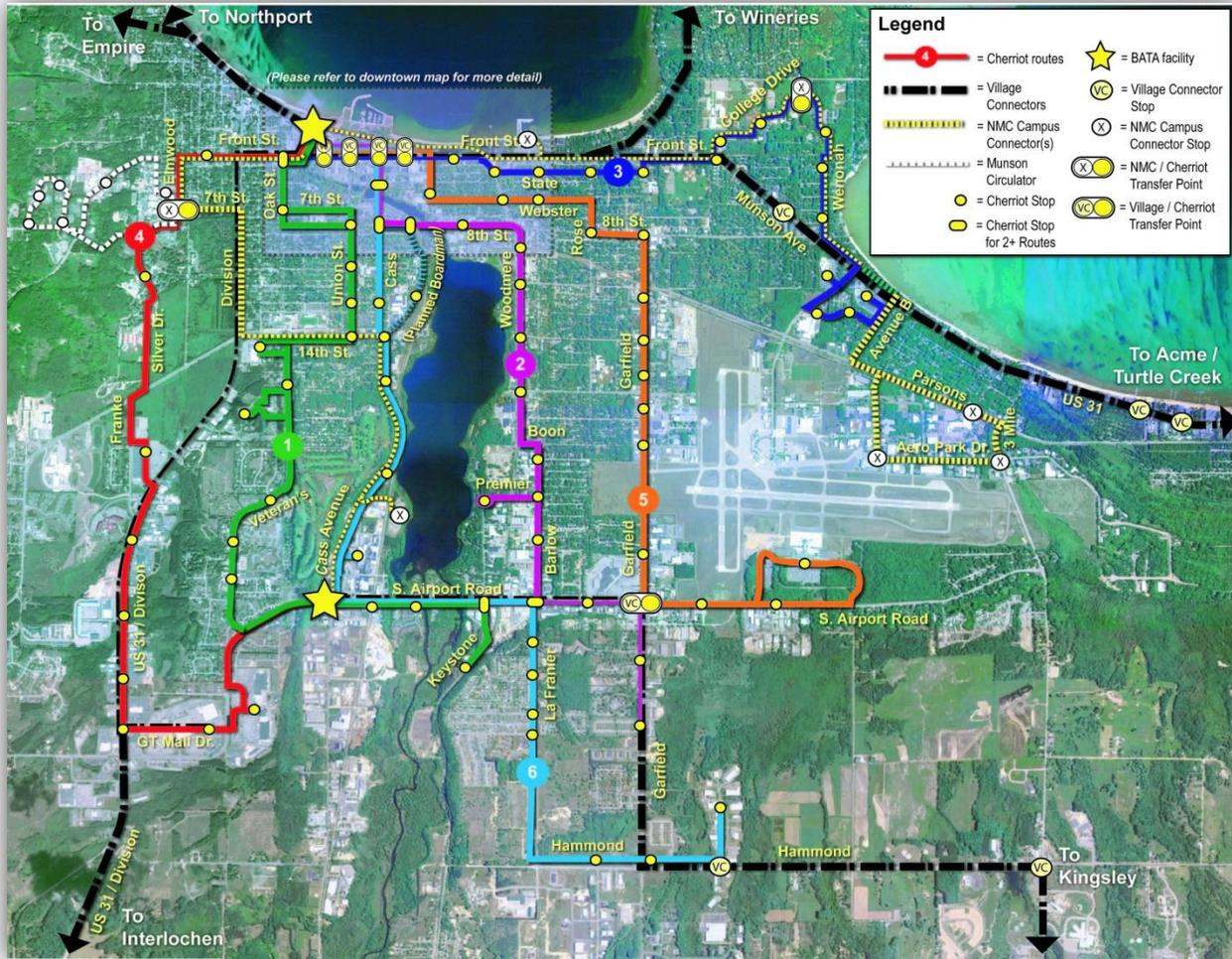
- ▶ Increase the speed of individual routes, thereby allowing extra recovery time between runs
- ▶ Eliminate duplicative service where such occurs
- ▶ Ensure services access the highest possible number of employment, hotels, residences, retail, commercial, industrial, educational, and other activity centers/clusters
- ▶ Retain a planned “pulse” network, where all buses are scheduled to converge at a centralized transfer facility at the same time, allowing convenient transfers to all other parts of the system
- ▶ Enhance transfers among different services, specifically Village Connector routes
- ▶ Make the overall system more intuitive by straightening out route alignments to the extent practical.

### OVERVIEW OF PROPOSED SERVICES

Although the names of most routes are proposed to change to reflect terminal points, the existing route numbering and color scheme are still the same. For example, the existing #1/Grand Traverse Mall route still uses the “#1” designation and is still shown with a green line on the map (see Figure 3-1); however, the route name would change from “Grand Traverse Mall” to “Keystone/Park.”

Most proposed routes are designed to serve markets similar to those served by the existing system. All routes would start at the Hall Street Transfer Facility, yet all but two – #3/Tom's East Bay and #5/Cherry Capitol Airport – have new terminal points. All local routes are planned to accommodate 30-minute headways (express and circulator routes may have different headways). All routes feature fewer stops, helping to keep run times to a minimum. Additionally, stops are planned at more evenly spaced intervals to facilitate pedestrian accessibility.

Figure 3-1: Proposed Cherriot Network



Highlights of the proposed Cherriot service, as well as other changes to the overall BATA system which impact Cherriot, include –

- ▶ Eliminating the Traverse Express route. All but two of the existing stops, which are minimally used, would be served by the re-organized Cherriot routes. The overall purpose of this route – to provide an express service between major trip generators – would be fulfilled in large part by two proposed NMC Campus Connector routes
- ▶ Restructuring the existing #2/Cherryland Center route to connect to a new local circulator serving the Munson Health Center complex. This change permits extending service to a new corridor and adding several stop locations
- ▶ Adding a new connection between downtown and the Cherry Capitol Airport
- ▶ Adding a sixth local route to serve the west side of Boardman Lake and beyond
- ▶ Per BATA’s request, shortening the existing Fife Lake Village Connector (now to terminate at Kingsley) and rerouting it to terminate at the BATA South facility
- ▶ Serving bay-side hotels east of downtown with a proposed Resort Row Village Connector
- ▶ Serving Interlochen via another new Village Connector
- ▶ Providing seasonal service to wineries in the Old Mission Peninsula and beaches in Leelanau

Figure 3-2 illustrates how the system would operate within downtown Traverse City.

Figure 3-2: Proposed Cherriot Network – Downtown Detail



**ROUTE DESCRIPTIONS**

Following are the highlights of each new Cherriot Route. For detailed information on each, please refer to Appendix B.

**ROUTE #1/KEYSTONE/PARK**

This route is designed to replace the existing #1/Grand Traverse Mall. Major features include serving the neighborhoods of Central and Old Town, linking to BATA’s Cass Street facility, providing access to several employment clusters along Airport Road, and serving the Goodwill Center on Keystone Road.

The number of stops will decrease from 21 to 18 and the overall one-way run time will decrease from about 27 minutes to about 24 minutes. The total route length will decrease from 5.5 miles to 4.6 miles.

**ROUTE #2GARFIELD/HEMMINGWAY**

The existing Cherryland Center route is modified and renamed to feature a significant alignment modification that makes the route more efficient. The new routing would follow a straighter path southward along the lake via Woodmere Avenue and Barlow Streets in the western part of Traverse Heights. It will also serve residential areas along Garfield Road south of Airport Road.

The number of stops will decrease from 25 to 18 and the overall one-way run time will decrease from about 28 minutes to 26 minutes. The total route length will increase from 6.1 miles to 5.1 miles.

**ROUTE #3/TOM'S EAST BAY**

This route features an alignment that is similar to the existing #3/Tom's East Bay route but with several modifications. First, instead of traveling on Titus Street, this route would travel via Front Street, then resume the existing alignment that runs through the NMC main campus via College Drive, albeit with fewer stops at more strategic intervals. Service to the senior center along the lakeshore (near the intersection of Barlow/Front) would be transferred to the NMC Campus Connector North route.

The number of stops would decrease from 25 to 19 and the overall one-way run time will decrease from about 33 minutes to 26 minutes – making for a much more reliable, on-time route performance. The total route length will increase slightly from 5.4 miles to 5.6 miles.

If the Campus Connector is not implemented, only minimal changes are recommended in this route.

**ROUTE #4/GRAND TRAVERSE MALL**

The new Grand Traverse Mall route features the most expanded alignment of all proposed route changes. As noted in the *Overview of Proposed Services*, the route would no longer travel through the Munson Medical Center. Instead, it would be replaced by a new Munson Circulator, discussed below, that would connect to the #4/Grand Traverse Mall route. This change permits significant improvements in the reliability, and reach to the existing #4 (currently identified as “Meijer/Olson's West”). Major features include service to Munson Hospital, Meijer, hotels and restaurants near US-31 and Airport Road, the Grand Traverse Mall, and the BATA South Facility on Cass Avenue.

The number of stops would increase from 14 to 16 and the overall one-way run time would remain relatively the same at about 25 minutes. The total route length will increase from 11.8 to 12.4 miles.

**ROUTE #5/CHERRY CAPITOL AIRPORT**

Besides providing a direct connection between the airport and downtown Traverse City, this route serves an area of Traverse City that differs from the existing Route #5/Cherry Capitol Airport. Instead of serving the S. Airport Road corridor, which will now be served by Route #6, the newly aligned route would travel north within the Traverse Heights neighborhood, then east through the communities of Oak Park and Boardman before entering downtown.

The number of stops would remain at 18 and the overall one-way run time will increase slightly from about 24 minutes to 26 minutes. The total route length will decrease from 6.5 to 5.5 miles.

**#6/HAMMOND/TRAVERSEFIELD**

This proposed route would serve an additional corridor of employment, residential, and activity centers along the western shore of Lake Boardman and S. Airport, La Franier, and Hammond Roads, replacing part of the alignment currently served by the #5/Cherry Capitol Airport route ( Important advantages of this realignment are that it provides better access to large employment sites on S. Airport and Garfield Roads while also providing direct connections to downtown for one of the area's largest employers the Sara Lee Bakery Group. Note that a portion of the planned #6 alignment cannot currently be accommodated; the Boardman Avenue portion of the route does not currently exist. Until it is complete, this part of Route #6 will travel via Cass Avenue.

This route, 6.4 miles in length, would feature 16 stops with an overall one-way run time of 26 minutes.

### MUNSON CIRCULATOR

This circulator, planned for the sole purpose of moving passengers around the vast Munson Medical Center complex, requires one bus and one driver. It will provide a high level of service throughout the medical center. The circulator traverses Long Lake Road, Cedar Run Road, Royal Drive, and Medical Campus Drive, serving 9 possible stops.

The shuttle(s) may feature handicapped-accessible lifts or ramps to facilitate boarding of passengers with mobility needs, thus reducing dwell times and enhancing the overall efficiency of the circulator. Service will operate at either 30- or 15-minute headways, depending on resources and demand.

Beyond connecting passengers with the two other BATA services, Route #4 and the NMC Campus Connector, the circulator would also move people around the Munson campus, connecting to both buildings and parking lots. It is a service which Munson Medical Center may wish to market to its employees and patients in a joint effort with BATA.

### OVERALL NETWORK ENHANCEMENTS

Though the new Cherriot routes are designed to all converge or “pulse” at Hall Street, there are also four mini-transfer “hubs” that add to the overall usability of the BATA system. These hubs would alleviate the need of some passengers to travel into downtown Traverse City to connect to another quadrant of the BATA Cherriot system. The four hubs are Munson Medical Center, BATA South, Cherryland Center, and NMC Main Campus.

### MUNSON

At the Munson Medical Center stop, passengers would have the ability to transfer among the Munson Circulator, NMC Campus Connector (north route), and #4/Grand Traverse Mall Cherriot route. Given the proximity of this location to the Hall Street transfer facility, routes could be timed transfers could be scheduled to prevent long wait times and to provide a high level of service for the many potential passengers traveling between the hospital and other locations in the system.

### BATA SOUTH

The existing transit facility at BATA’s main offices is an ideal location for allowing several Cherriot and Village Connector routes to converge. The facility features parking lots, drive-ways, and an indoor passenger waiting area. Two Village Connectors (Interlochen and Kingsley), 2-3 Cherriot routes (#1/Keystone/Park, #4/Grand Traverse Mall, and/or #6/Hammond/ Traversefield), and one or both NMC Campus Connector routes are all planned to either terminate or pass through this location.

### CHERRYLAND CENTER

This location provides a south-east meeting point for some of BATA’s Cherriot and Village Connector services. Cherriot route #5/Cherry Capitol Airport, the Kingsley Village Connector, and the #6/Hammond/Traversefield routes would meet at this location.

### NMC MAIN CAMPUS

At the college’s main campus, the #3/Tom’s East Bay route would meet both NMC Campus connector routes. At this location, passengers could access express service to other NMC campuses, or transfer to the #3 Cherriot route to access downtown and the student neighborhoods south of the campus near Munson Avenue. Please see the next section, *Northwest Michigan College Campus Connectors* for more information on these services.

## 3.2 CAMPUS CONNECTORS SERVING NORTHWEST MICHIGAN COLLEGE

### INTRODUCTION

BATA and Northwest Michigan College (NMC) are interested in bringing a new, fixed-route, public bus service into Traverse City. This service would primarily serve the four campus locations that comprise NMC, along with Munson Hospital, and both BATA facilities. It would operate using two fixed-routes with set schedules. The fare will be consistent with BATA's fare structure for Cherriot services, but students will be able to board with passes.

### STOP LOCATIONS

There are six stop locations that the northern route would serve:

- ▶ NMC Main Campus
- ▶ Great Lakes Maritime Academy at NMC
- ▶ BATA Hall Street Transfer Center
- ▶ Munson Medical Center
- ▶ NMC University Center Campus
- ▶ BATA Cass Avenue Facility

And there are four stop locations that the southern route would serve:

- ▶ NMC Main Campus
- ▶ TBA Career Tech Center
- ▶ Manufacturing Technology Academy
- ▶ Aero Park Campus

Please refer to Figure 3-1 for a map showing the two Campus Connector routes.

### STUDENT PASS AND PARKING PRICING

A policy objective in establishing the campus connector bus service is to minimize parking demand at the campus sites. In many cities and on many university campuses, there is a direct relationship between parking policy and transit use, with parking availability and cost correlating with transit demand. Since NMC experiences parking demand that exceeds supply, it is recommended that the transportation fee structure be developed to cover both parking and transit use.

Each semester, upon registration, all students would be required to pay a transportation fee which entitles them to a parking permit and full use of the transit system throughout BATA's Cherriot service area. The parking permit would assign the vehicle in which it is posted to a specific lot. If the vehicle is parked elsewhere, it would be subject to citation by the campus security personnel. BATA would revise its scheduled route structure to provide frequent and convenient service to other campus locations in Traverse City and Munson Hospital. The transportation fee, which would be remitted to BATA, would permit all students to use all BATA services in Traverse City without additional charges. (A variation on this model could be developed for Munson Hospital which may charge visitors for parking in hospital lots, develop remote lots for hospital personnel, and provide shuttle service from the remote lots to the hospital buildings).

VSA has identified three main issues to be considered if BATA and NMC develop a student pass and parking program –

**PUBLIC TRANSIT USE**

NMC students would be able to board all BATA services by simply showing their student identification card to the bus operator or swiping it through an electronic card reader. Using NMC’s current student ID card provides several advantages; first, students are already issued this card – both BATA and NMC would be relieved from having to produce an additional fare medium; second, dwell times at bus stops could be improved if students need only present or swipe their ID; and third, students would have the advantage boarding buses without paying out-of-pocket, potentially increasing ridership on the system.

Given the fact that all NMC students would be required to pay this transportation fee, bus drivers can be sure that a valid student ID is an acceptable form of fare payment. In this way, BATA does not need to be concerned that non-paying students are getting a free ride.

Furthermore, increasing numbers of students would be likely to use BATA given the convenience of pre-payment for public transportation. This is an important consideration for BATA and NMC: the sight of BATA buses filled with young adults would send a powerful message to the public that the bus system is a viable, safe, clean, and attractive public amenity that they too might also be interested in using.

**PARKING USE**

Beyond public transportation services through BATA, the student transportation fee could also cover a parking permit for each student – something that NMC currently does not require. A parking permit would allow each student to park within a designated lot among each of the four campuses. See Section 3.2 for more detailed information on this proposal.

**PRICING AND MARKETING**

In determining an appropriate estimated price for the student transportation fee, practices at existing Midwest universities that administer this kind of system were examined. One example is the University of Illinois at Urbana-Champaign (UIUC). Students at this institution are charged \$48 dollars per semester (excepting the summer semester which is lower – \$24) and allowed unlimited travel on the Champaign-Urbana Mass Transit District (CUMTD) system. Figure 3-3 displays the breakdown amount of this fee.

**Figure 3-3:** Webpage featuring University of Illinois at Urbana-Champaign transportation fee

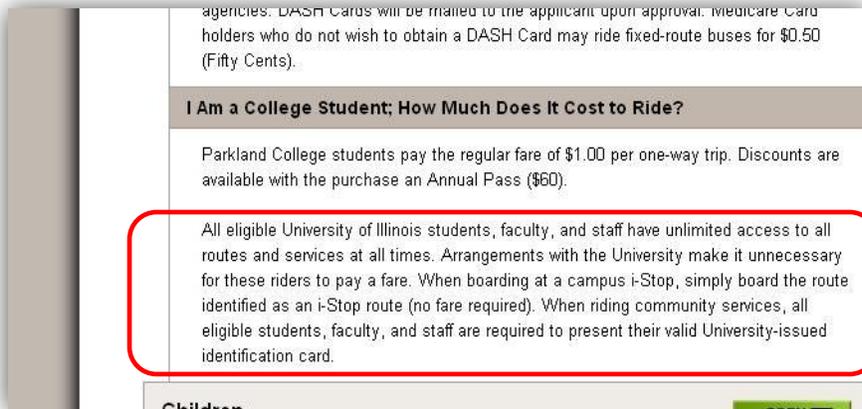
The screenshot shows the '2010-2011 Undergrad Fees' page. A table lists fees by credit range. The 'Transportation Fee' is highlighted with a red box. The table data is as follows:

	Range I (12 or more hours)	Range II (6-11 hours)	Range III (1-5 hours)	Range IV (0 hours)
Service Fee	\$275	\$275	--	--
General Fee	\$262	\$262	\$262	\$262
Health Insurance Fee*	\$206	\$206	\$206	\$206
Health Service Fee	\$25	\$25	--	--
Transportation Fee	\$48	\$48	--	--
CELE (Students for Equal Access to Learning Fee)*	\$0	\$0	--	--

This service is advertised as “free” to students; while this is not technically the case since they are charged a transportation fee as part of their package of tuition and fees, the idea of getting on and off public buses without paying out-of-pocket is a very attractive benefit for students.

Figure 3-4 displays a webpage CUMTD features for fare information on the transit system in Urbana-Champaign, IL.

**Figure 3-4:** Webpage featuring CUMTD policy on UIUC student fare



A similar yet contrasting example of semester-based transportation fees for college students comes from UIUC’s sister school, the University of Illinois at Chicago (UIC). Students are charged \$109 per semester for unlimited use on the Chicago Transit Authority (CTA) system of buses and rapid transit rail lines. This cost is nearly

twice as much as UIUC charges, which is a function of the much greater size, population, and quantity of public transportation options afforded in Chicago. Nevertheless, the “U-Pass” program is very popular among students in both university campuses.

Please refer to the Appendix for more details on this proposed service, as well as information on parking policy logistics.

## 3.3 VILLAGE CONNECTORS

### OVERVIEW OF SYSTEM

The proposed system-wide changes to BATA's Village Connectors are designed to complement the proposed County Ride DAR services discussed in the previous section. This is accomplished by having the Village Connector routes provide "trunk-line" or branch service to downtown Traverse City while County Ride services "feed" the Village Connectors at strategic transfer points and villages centers. This concept of intermodal connectivity is further reinforced by the proposed fare policy which provides for free transfers from zone service to the Village Connectors (see Section 4.0 for more information).

The proposed system addresses several goals –

- ▶ **Attractive Services:** Provides efficient, reliable, and convenient transit services
- ▶ **Regional Coordination:** Locates transfer centers strategically to provide for connections to neighboring counties that are not in BATA's service area
- ▶ **Burnished Image:** Initiates services that tap new markets throughout the agency's service area; and
- ▶ **Customer Savings:** Promotes park-and-ride as a viable alternative to driving into Traverse City which saves passengers money and reduces congestion and greenhouse gas emissions; can also be a boon to bicyclists, carpoolers, pedestrians, and others who seek access to transfer locations

The following sections provide information on the operational format of the system as well as discussions on how BATA may proceed with planning future transfer site locations along Village Connector routes. This information is augmented by plans for individual Village Connectors.

### OPERATIONAL FORMAT

#### ROUTE STRUCTURE

One of the major changes that BATA should consider is re-classifying all Village Connectors from "fixed-route" to "flex route operations." This change would impact operation by allowing passengers to request route deviations of up to a ¾ mile radius of the fixed route, consistent with FTA regulations. The net result of this change would be a service which generally follows a fixed alignment, but the actual path that each bus takes may vary to accommodate deviations. As a matter of policy, BATA can limit the number of deviations per trip to 1 or 2 in order to maintain reasonable schedule adherence.

#### PARATRANSIT COMPONENT

Adding a flex component to the Village Connectors also impacts complementary paratransit requirements of the Americans with Disabilities Act (ADA). For fixed-route transit, the ADA requires that complementary door-to-door or curb-to-curb service be provided within a ¾ mile radius of a fixed-route (per Section 37.123 – 37.133 of the Act). However, complementary paratransit service is not required for flexible transit service. Therefore, when the Village Connectors move from fixed-route operation to a flexible operation, the ADA complementary paratransit requirement no longer applies. This provision of the ADA is offered since the flexing feature of the service can provide curb-to-curb service within ¾ of a mile, essentially replacing the need for paratransit.

## FREQUENCY

Another major proposed change in operational format that would affect all Village Connector routes – both existing and proposed – is increasing bus headways from approximately 2 hours, to 1-hour frequencies.

Currently, BATA's three Village Connector routes are serviced using one bus and driver at a time; when the bus reaches the terminal point along the route, it turns back to begin another run. However, under the proposed system, each route would be assigned two buses and drivers at a time. This would allow an additional bus to leave downtown Traverse City around the same time as the route's previous bus is turning around at the other end of the line.

In order to make this increase of buses and drivers possible, existing resources would need to be shifted from the County Ride system. Please see Section 3.x for more information on this proposed change.

## NEW ROUTES

VSA has designed two new flex routes to enhance the existing Village Connector system, in addition to two new seasonal routes (see Section 3.4 for more information on seasonal services):

- ▶ Interlochen
- ▶ Resort Row
- ▶ Beach Bus (seasonal)
- ▶ Winery Circuit (seasonal)

Together these four routes would help BATA target existing travel markets where there is demand for public transportation – a primary objective of this study. These markets are heavily focused on tourism, major festivals, recreational activities, and visitor accommodations. While each service is intended to primarily serve such tourism-related markets, both the Interlochen and Resort Row routes would provide regular, non-seasonal service using the same operating parameters of the existing Northport, Fife Lake, and Empire Village Connector routes.

The Appendix provides further information about each of these proposed routes, including detailed service and operating plans.

### INTERLOCHEN VILLAGE CONNECTOR

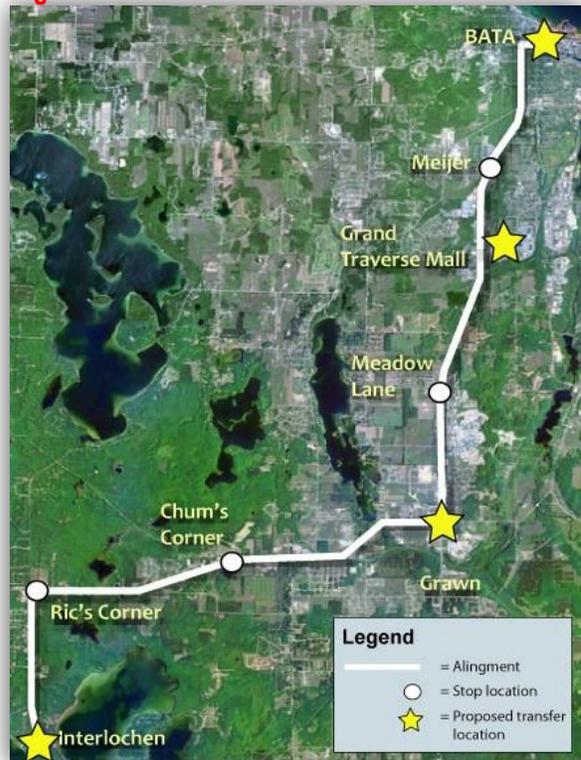
This flex service would operate like BATA’s three existing Village Connector services, which provide limited stop commuter bus service along a fixed routes (again, existing Village Connectors should be changed to flex-route structure).

To this end, the Interlochen service would stop at strategic town and village centers along major arterials in Grand Traverse County such as Chum’s Corner, Grawn, Ric’s Corner, and Interlochen State Park. Other appropriate stops could be added, based on locations of population and employment densities, and public input.

In addition to the Interlochen Village Connector, a special event route – the Interlochen Performing Arts Express – is recommended to operate along this alignment.

Please refer to Section 3.4 for more information on the Interlochen Performing Arts Express, and the Appendix for detailed information on the Interlochen Village Connector.

Figure 3-5: Interlochen Service

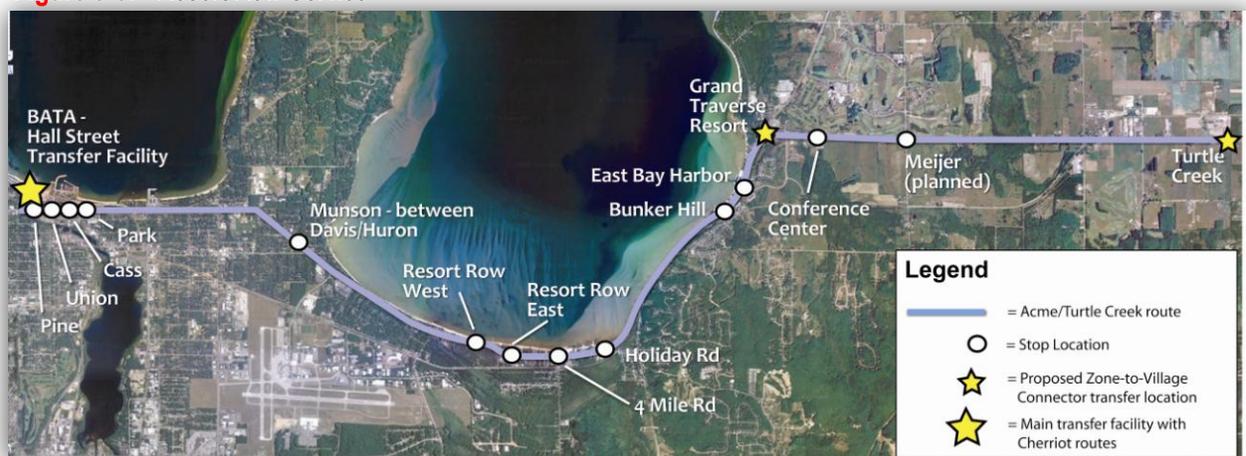


### RESORT ROW

The Resort Row route is designed to shuttle passengers to and from the numerous hotels, resorts, tourist attractions, and guest accommodations along US-31/Munson Avenue and State Route 72.

This service is designed to operate like all other flex-route Village Connector services with hourly headways and limited deviations. However, during the seasonal months it is designed to provide service twice as frequently at 30 minute headways. This increase in frequency will allow Cherriot-level service for these passengers, which is intended to make the service more appealing for tourists and guests – a demographic profile that BATA has stated an interest in attracting.

Figure 3-6: Resort Row Service



VSA recommends that BATA work with the Traverse City Area Hotel & Motel Association to help market this service. Strategies for marketing may include displaying Resort Row brochures/maps as well as BATA system maps at hotel front desks and concierge kiosks. Additionally, BATA should consider requesting that hotels and festival operators provide service information and/or links to BATA's website through their own websites.

Despite the usual drop in tourism during the off-season months, VSA expects that BATA will still see sufficient ridership on the Resort Row route during these times since hotel and resort employees may choose to use this service, in addition to the smaller numbers of tourists who visit in the non-seasonal months.

Please refer to the Appendix for more detailed information on this service.

## 3.4 SEASONAL SERVICES

Among the Bay Area stakeholder's highest priorities, implementing seasonal services helps to strengthen tourism-related businesses, bolster the region's (and BATA's) image, and provide both residents and tourists with a convenient, affordable, and enjoyable option for reaching important sights and attractions.

One of the primary justifications for providing seasonal services is the opportunity to utilize the fleet of buses normally reserved for BATA's Suttons Bay Flex Routes. These buses are only in operation during the school year, and thus are available for seasonal service during the summer months of June, July, and August – the peak tourist season.

The routes are intended to operate on Saturdays, along with complementary elements of the BATA system such as existing Village Connectors, which could also operate on Sundays. New routes would operate on Saturday during the high season when there is demand for these services. Both Winery and Beach Bus services operate on Sunday as well. To complement these services, the Leelanau County Village Connectors (Northport, Empire, and Resort Row) would also provide Sunday service. Additionally, some Cherriot service could be provided on Sundays during festivals on an experimental basis. These complementary weekend services could be provided on a demonstration basis for one year, after which BATA should determine if a permanent service is warranted.

Seasonal services could be promoted as providing Traverse City residents with access to the beaches and recreation areas. Please see Section 4.0, *Service Hours* for a discussion of complementary policy recommendations that BATA may consider for special weekend service related to seasonal events.

The Appendix provides further information about each of these proposed routes, including detailed service and operating plans.

### FTA PROVISIONS REGARDING SPECIAL EVENT SERVICES

Besides existing precedents of other transit agencies providing special event services both in Michigan and nationally, the Federal Transit Administration (FTA) has established guidelines regulating the accommodation special events. Specifically, provisions of the *Charter Service Rule*, 49 U.S.C. 5323(d), as adopted January 14<sup>th</sup>, 2008, delineate when special event services are allowed:

- ▶ A standard fare must be charged to all individual passengers using the same service type; no third party can pay the transit agency for a group of passengers
- ▶ The transit agency collects the fares; a third party cannot collect fares
- ▶ The service must be a regularly scheduled route with posted timetables and information made available to the public
- ▶ The transit agency must determine the route planning, service parameters, and all other aspects of the service; no third party can determine service standards
- ▶ The transit agency can provide service to a special event that occurs on an irregular basis or limited duration, so long as:
  - No premium fare is charged
  - Passenger fares are not paid in part or whole by a third party – the public pays their own fare when they board

Please see the Appendix for more information about FTA provisions.

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## INTERLOCHEN PERFORMING ARTS EXPRESS

### OPERATIONAL FORMAT

Although the Performing Arts Express service would follow an alignment that is the same as the Interlochen Village Connector, it would feature only three stops – BATA Hall Street, a downtown park-n-ride lot, and Interlochen.

For these reasons, passengers would be able to park and ride at the boarding location for this service. Passengers may also have the option of taking other BATA services – primarily Cherriot and Village Connector – on the outbound trip to connect to the Interlochen Performing Arts Express; however, upon the return trip into Traverse City, would likely need to take After Hours dial-a-ride services, or find other options for making their last-mile connection trip.

### FREQUENCY

This service is proposed to operate at least during the summer months of June, July, and August and potentially during May and September and/or during regularly scheduled events throughout the year. Buses would be scheduled to arrive at Interlochen 20-30 minutes prior to scheduled concerts, performances, and other events. Thus, buses for the Performing Arts Express service would be restricted to evenings and weekends. Buses would also begin queuing at Interlochen when concerts and events are scheduled to conclude in order to bring passengers back to Traverse City.

### COORDINATION WITH OTHER BATA SERVICES

BATA should address related scheduling issues if the Interlochen Performing Arts Express is to be implemented. Over the longer term, extending Cherriot and Village Connector service schedules may permit “last mile” connections for those returning to Traverse City after Interlochen performances. However, there is a substantial cost to providing full fixed-route services during evening hours; other demand beyond Interlochen riders should also be present in order to justify this cost. Initially, the Interlochen Performing Arts Express could simply rely on park-and-ride facilities in downtown Traverse City in order to attract ridership.

Finally, BATA should consider scheduling the last Resort Row bus(s) to leave Hall Street after the last Interlochen Performing Arts Express bus(s) arrive there. This will ensure that tourists staying at hotels and resorts along the East Arm of the Traverse Bay will have a means of getting back to their accommodations if they are attending Interlochen events as well.

### LEELANAU BEACH BUS

VSA has proposed this route in order to meet several goals –

- ▶ To provide a cross-county service to the villages of Glen Arbor, Suttons Bay, and Leland
- ▶ To provide connections between Village Connectors outside of Traverse City, specifically Empire and Northport
- ▶ To provide easy access to Lake Michigan beaches and the Sleeping Bear Dunes National Lakeshore park system, and
- ▶ To provide a public transportation service into Traverse City (and beyond) for mariners who dock their vessels at the Leland Township Harbor since most will not have a car or easy means of transportation outside of the town of Leland

### OPERATIONAL FORMAT

The Beach Bus would provide express service between points of interest along the Lake Michigan shore in Leelanau County. It would start in Suttons Bay and end at Sleeping Bear Point, with intermediate stops at Leland, Good Harbor Trail, Homestead, and Glen Arbor.

### FREQUENCY

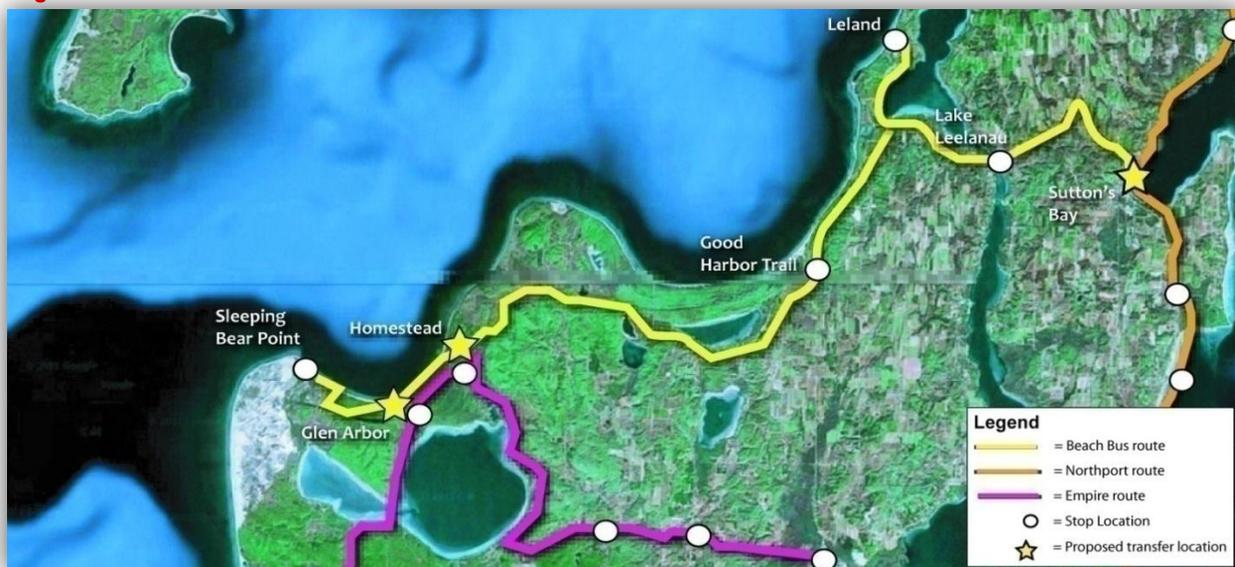
This route is expected to take less than an hour for a one-way trip; therefore, it is possible to operate the Beach Bus at 1-hour headways using two drivers and vehicles, including one scheduled deviation. Service would operate during seasonal months of June, July, and August.

### COORDINATION WITH OTHER BATA SERVICES

Since this route would be BATA’s only flex route service which does not go into Traverse City and the Hall Street Transfer Center, passengers who wish to transfer to other services would be limited accessing the Northport route in Suttons Bay and the Empire route at Glen Arbor or Homestead. Additionally, each of these locations would provide access to County Ride services.

To make the connection with Traverse City by public transportation an attractive option, this service would be scheduled to leave Suttons Bay and/or Glen Arbor after the respective Northport or Empire outbound buses have arrived. Conversely, Beach Bus service should be scheduled to arrive at Suttons Bay and/or Glen Arbor before the respective inbound Northport and Empire routes arrive.

**Figure 3-7:** Beach Bus Service



### WINERY CIRCUIT

The Winery Circuit route is designed to provide a direct public transportation connection to key winery and vineyard establishments situated throughout the Old Mission Peninsula of Grand Traverse County, which protrudes into Lake Michigan from the northeast corner of Traverse City.

Wineries provide another important form of tourism in the Traverse City region. Not only is the Old Mission Peninsula clustered with such wineries, but the geography of the peninsula provides a relatively straight alignment for operating a bus route along Center Road/Route 37.

### OPERATIONAL FORMAT AND FREQUENCY

Figure 3-8 displays the route that would serve the major wineries located in the Old Mission Peninsula. A one-way trip along this route is estimated to take approximately 45 minutes to complete. Therefore, BATA could operate such a service with 1-hour headways using two vehicles and operators, with a generous 15 minutes of recovery time (this run time uses 1.5 minute dwell times to allow passengers extra time to board and alight at each winery).

### COORDINATION WITH OTHER BATA SERVICES

Conveniently, passengers using the Resort Row route would be able to transfer to the Winery Circuit route at the Hall Street Transfer Center. This would allow an easy and affordable transportation connection for tourists and seasonal visitors traveling between their hotels and area wineries.

BATA should work with both wineries and the hotel association to collaborate on mutual promotional strategies. For example, each point of contact could stock brochures for wineries, hotels, and BATA services. Hotel staff could also be trained to provide information on riding BATA for local travel and tours.

Figure 3-8: Winery Circuit Service



## 3.5 COUNTY RIDE

### INTRODUCTION

Two of BATA's primary goals in this study are to eliminate duplicative routes serving the same market, and to reorganize service operations in a way that will increase ridership per vehicle.

The current structure of the County Ride service is costly for BATA since riders have the ability to travel throughout the bi-county service area by paying a single flat fare. They may request a pick-up at any location in the bi-county area, and they are taken to any other requested location within their assigned zone. Alternatively, BATA allows riders to transfer from one County Ride service to another without paying a transfer. Effectively, BATA provides a low-cost taxi service between Traverse City and any other location in Grand Traverse and Leelanau Counties.

The purpose of this effort is to reorganize County Ride services into a more efficient and cost effective system that is designed to strengthen Village Connector ridership leading into Traverse City while continuing to provide door-to-door service for passengers with disabilities who are pre-certified with BATA.

### EXISTING NETWORK

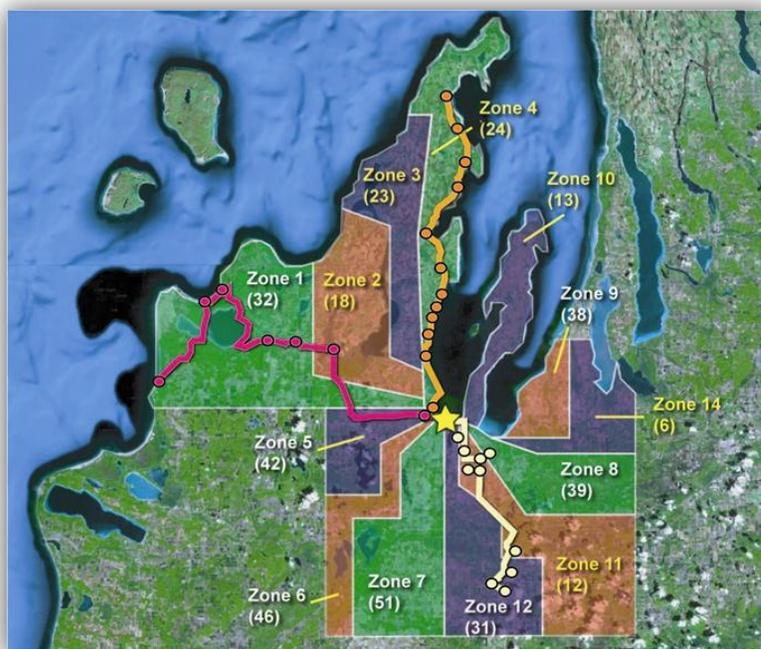
BATA's current County Ride system is based on thirteen geographic zones – four in Leelanau County and nine in Grand Traverse County. These wedge-shaped zones radiate outward from Traverse City, providing direct service to all of the bi-county area. Usually only one bus and operator are assigned to each zone.

Although many people in the region ride the Village Connectors, there is little incentive to do so with BATA providing parallel, "express" dial-a-ride service throughout the region. While County Ride provides a very high level of service for passengers, it is both inefficient and costly.

One objective established early in this study was to improve the effectiveness of the system by shifting towards more fixed or flex route service with regularly scheduled stops. This objective, coupled with improving efficiency and reducing cost, was a guiding principle in developing recommendations for system reorganization.

The map in Figure 3-9 shows BATA's existing County Ride zones and Village Connector routes. Average daily ridership for each zone is shown in parenthesis.

**Figure 3-9:** Existing County Ride Services in the Region



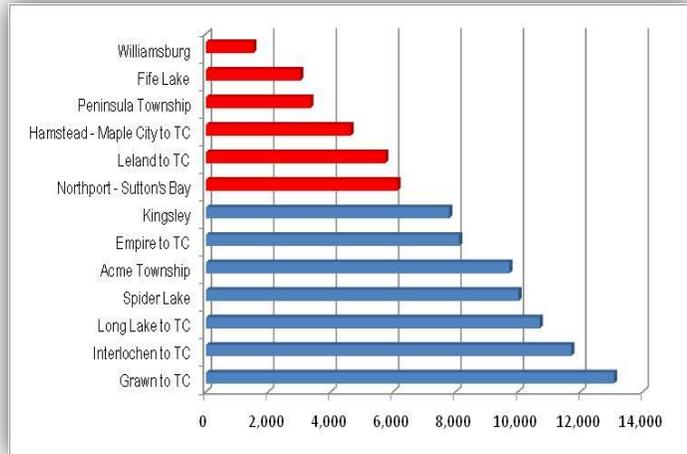
**METHODOLOGY**

Two alternatives were considered for improving the efficiency and reducing the cost of County Ride:

The first was to consolidate existing zones with low ridership in an effort to achieve higher ratios of passengers to vehicles and reduce operating expenses while maintaining the better-performing zones. This approach was eliminated for two important reasons: (1) it did not achieve the objective of shifting riders to the Village Connectors; and (2) some of the combined zones were too large for a single driver and vehicle to cover.

The second alternative involved a complete redesign of the zone system allowing zone buses to intersect and feed the Village Connector system. This is the preferred approach.

**Figure 3-10: Annual County Ride Ridership (< 6000 in red)**



**SERVICE STRUCTURE**

Services are no longer designed to travel into Traverse City, given that new zone boundaries do not penetrate into the Traverse City urbanized area. Instead County Ride and City Ride boundaries are designed to be coterminous. As such, County Ride buses are available to provide a much higher and more frequent level of service within each zone. At the same time, operating costs may be reduced because mileage associated with travel into Traverse City is diminished.

This new zone system is designed to have one vehicle circulate within a designated zone, then “feed” the local Village Connector service at key locations. Given the fact that existing County Ride passengers would be required to take a Village Connector service in order to travel into Traverse City, it is likely that there will be a large shift in ridership from County Ride to Village Connector. As noted in Section 3-3, this shift will be accommodated by increasing the number of Village Connector runs using 1-hour headways, while also scaling back on the number of County Ride services.

Specifically, the proposed number of zones has been reduced to 6 (currently there are 13). Seven of the buses and drivers currently operating along zone routes would be shifted to the Village Connector system.

Figure 3-11 displays this new zone system, overlaid with existing and proposed Village Connectors.

Figure 3-13 (Section 3.7) displays the new zones and Village Connectors with suggested transfer points and general direction of travel, indicated with arrows, for zone services.

## FREQUENCY

County Ride buses would operate continuously throughout the day. Since this is a demand-response operation, service would be available to passengers upon request, using BATA's advanced registration system.

## ALLOWABLE ORIGIN AND DESTINATION POINTS

Since the proposed zones no longer serve Traverse City, the new County Ride system is designed primarily to take passengers from a requested origin to the closest Village Connector transfer point (or, conversely, bring passengers to a requested destination from a Village Connector transfer point).

Like the existing County Ride service, passengers would still be able to choose both an origin and a destination within each zone; however, this higher level of service would entail a higher fare.

BATA staff will now have sufficient time to schedule trips given BATA's embrace of the new 24-hour advanced registration program. This approach will help simplify BATA's dispatch and service planning operations and ensure that County Ride services are not overbooked.

## SPECIAL EXCEPTIONS

Besides continuing to provide "taxi-like" service within each zone for a premium fare, BATA has the option of allowing transfers from one zone service to another at established transfer points if their final destination is not in Traverse City.

**Figure 3-11:** Proposed County Ride Service Zones  
(with Village Connectors and Seasonal routes also shown)



Although scheduling these special trips may prove challenging, VSA expects that demand for them will occur infrequently given that most passengers – including people with disabilities – are currently using County Ride to get to locations in Traverse City, which will no longer be an option. Therefore, most passengers who wish to use the proposed County Ride service will want to transfer at village centers where Village Connectors will now provide more frequent service.

This service format fulfills ADA requirements since vehicles operating on Village Connector routes will all be ADA-accessible.

### 3.6 TRANSFER FACILITIES

While regular bus stops along Village Connector routes may simply feature shelters, benches, and concrete pads, transfer facilities serving multiple uses (Village Connector, County Ride, park-and-ride, etc.) should feature higher design standards and greater amenities. VSA has developed two types of bus transfer facilities featuring park-and-ride: exclusive facility and modified parking lot facility.

#### EXCLUSIVE FACILITY

This is a newly-constructed facility on an open parcel of land which would allow the highest and most appropriate design criteria to be implemented. Features include: wide, smooth bus turn-around lanes, parking lot spaces, bus bays, and attractive waiting areas. While this is the more expensive option of the two, its design and functionality is superior; it would also be a more attractive place for passengers to access.

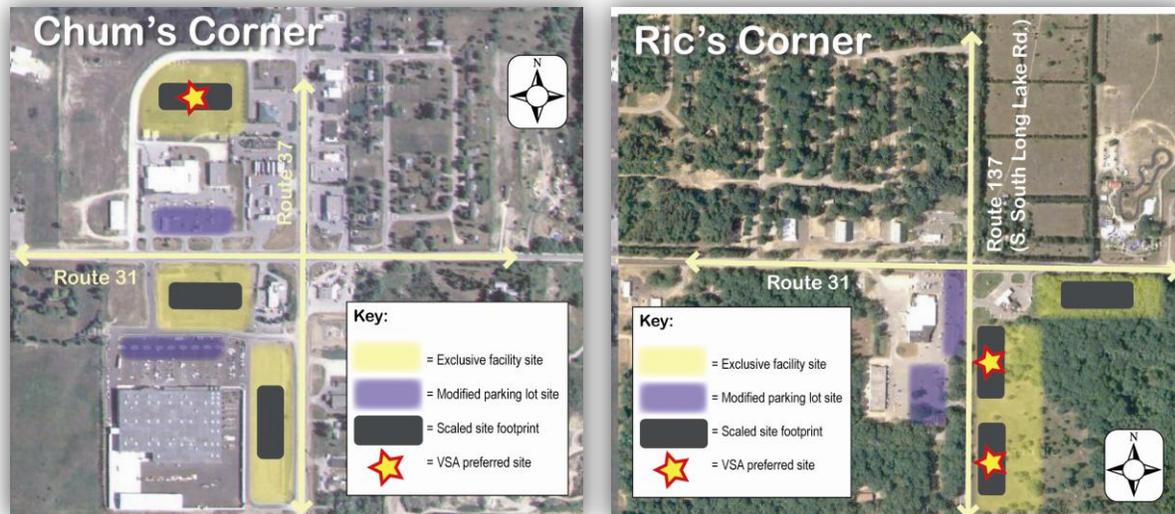
#### MODIFIED PARKING LOT FACILITY

As its name implies, this facility uses excess parking lot capacity at an existing retail, commercial, or industrial property. Such a facility benefits from available parking capacity and a large paved area that can accommodate bus turnarounds. The only new construction would be a waiting area and possibly landscaping, curbed sections, and/or new striping to identify pedestrian and bus paths.

While less expensive, this option is also less attractive since the existing pavement may not be designed to handle frequent use by heavy buses. Moreover, sharing a parking lot presents possible liability issues and traffic conflicts. There is also a possibility that a shared facility may be only temporary in that the land owner may decide to cancel any lease or access agreement. Should a shared facility be preferred, legal agreements that protect the easements and public investment would be necessary.

An example of both types of park-and-ride facilities is provided in Figure 3-3 below, which displays sites for possible development of a transfer facility along the proposed Interlochen route, roughly within a ½ mile radius of both Ric’s Corner and Chum’s Corner (see Section 3.4 for more information on this proposed service).

**Figure 3-12:** Example of Potential Transfer Site Locations along the Proposed Interlochen Route



Please see the Appendix for a detailed plan diagram showing potential design options for a transfer facility that would fit into the scaled site footprints illustrated in Figure 3-1.

## SITE LOCATION

Several criteria apply to selection of appropriate transfer sites –

- ▶ **Safety and security:** Encompasses the station’s visibility to the public, its location relative to well-traveled paths, lighting, and exposure to police patrols. Also includes the provision for maintenance and snow removal
- ▶ **Traffic congestion:** Avoid if possible, as congestion slows down transit vehicle speeds, thus diminishing service quality
- ▶ **Accessibility:** Pertains to how easily vehicles can turn into facility sites, the number of exits and entrances, and the relative distance of access points to intersections. Also addresses pedestrian accessibility and connections to neighboring activities
- ▶ **Real estate footprint:** Involves the amount of available space for a facility to be constructed or shared with an existing use
- ▶ **Real estate value:** Considers the market pressure on preferred development, price points, and infrastructure, among other amenities
- ▶ **Adjacent land use:** Impacts the feasibility of locating a facility on any given site

## MAINTENANCE

Regardless of the type of station that BATA may select, it is important to identify a partner, preferably governmental, who would be responsible for maintaining and policing the site and facility. Provisions for snow plowing, cleaning the waiting areas, safety patrols, restocking of supplies, and other routine tasks should be developed and assigned to this partner. Possible partners may include counties, townships, villages, and other affected stakeholders with an interest in the site. While cost-sharing with BATA may be an option, it is important that a local entity be charged with maintenance because, for example, snow removal must be done on a timely basis.

## PROPOSED TRANSFER LOCATIONS

The following list of stations indicates potential transfer points in the BATA service area. These points would all be directly adjacent to a Village Connector alignment, and many are situated at the boundary line of at least two proposed County Ride zones. While it would be necessary to identify specific sites and types of facilities at these locations, they provide a starting point for BATA to begin analyzing and developing transfer facilities.

### Northport Route –

- ▶ Omena Post Office
- ▶ Suttons Bay
- ▶ Crain Hill Road

### Empire Route –

- ▶ Glen Arbor
- ▶ Maple City
- ▶ Cedar

### Winery Circuit

- ▶ (To be determined)

### Kingsley Route –

- ▶ Olsen’s 3 Mile
- ▶ Kingsley

### Interlochen Route –

- ▶ Grand Traverse Mall
- ▶ Chum’s Corner
- ▶ Interlochen

### Resort Row Route –

- ▶ Turtle Creek Casino OR
- ▶ Planned Meijer store

## LINKS TO NEIGHBORING TRANSIT AGENCIES

Another important feature of select transfer facilities is the potential for providing convenient locations for passengers to switch between BATA and transit services provided by other counties. This effort helps BATA by potentially increasing ridership, while it helps the neighboring transit agencies by eliminating the need to expend time and mileage traveling the full distance into downtown Traverse City, thus reducing costs and making equipment available for increased service in each respective area.

An example of such regional cooperation may include BATA and Benzie Bus sharing a common transfer location at one of several sites along the proposed Interlochen Village Connector. The proposed Interlochen stop along the route is one possible location, though others may be considered as well.

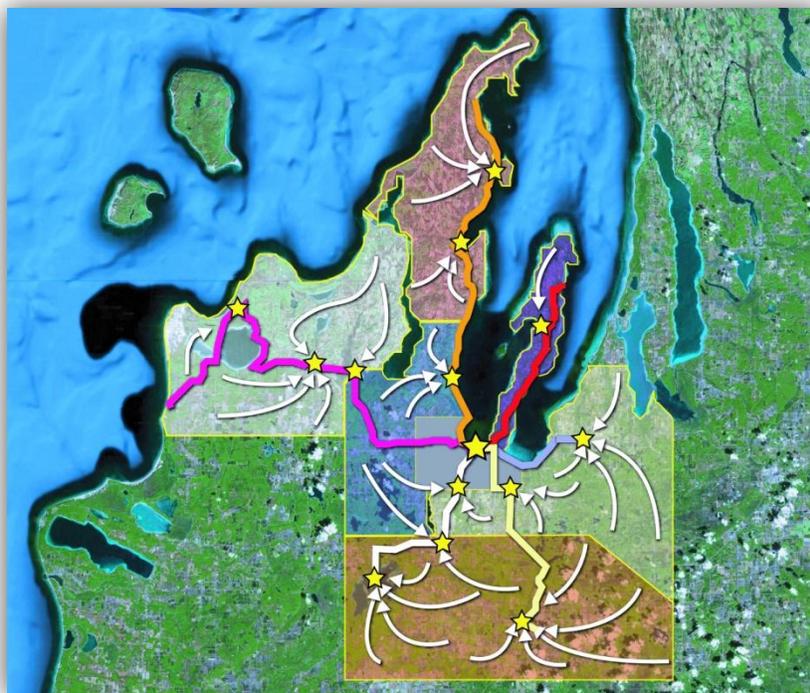
A second high-priority site where BATA could share an inter-county transfer station is along the eastern segment of the proposed Resort Row Village Connector. Both the Turtle Creek Casino and planned Meijer supermarket store would be ideal locations for Antrim County Transit and Kalkaska Public Transit Authority to terminate their existing services that currently go into Traverse City, and collaborate with BATA to establish a transfer policy to the Resort Row (and County Ride) services.

The Cadillac/Wexford Transit Authority could also increase service for its patrons by pursuing a joint transfer policy with BATA at the existing facility in the town of Buckley.

### 3.7 PROJECTED OPERATION OF THE NEW SYSTEM

As illustrated in Figure 3-13, the new Village Connector system and seasonal routes are designed to integrate with the County Ride zone system. Encouraging passengers to transfer to Village Connectors from County Ride will strengthen ridership on the Village Connectors, potentially enhancing their revenues and improving their cost profile. Since more people would travel on a single vehicle, the cost per passenger would decrease.

**Figure 3-13:** New County Ride Service in the Region with Transfer Points



Benefits to the riders include: greater travel flexibility using the reliable, more frequent and regularly scheduled Village Connector service; and lower fares than for a comparable County Ride.

Moreover, the resources (vehicle hours, miles, and drivers) saved by this new system could be shifted to other areas of the transit system; for example, extending service hours, increasing the frequency of Village Connector service, implementing service on weekends, or adding seasonal service.

There are also advantages for customers of County Ride.

First, the new system provides the opportunity to travel to neighboring zones without going into downtown Traverse City, saving substantial travel time. In addition, by shortening the distances vehicles are required to travel to serve a zone, the bus and driver are available to provide much higher trip frequencies, thus potentially increasing service and service levels within zones.

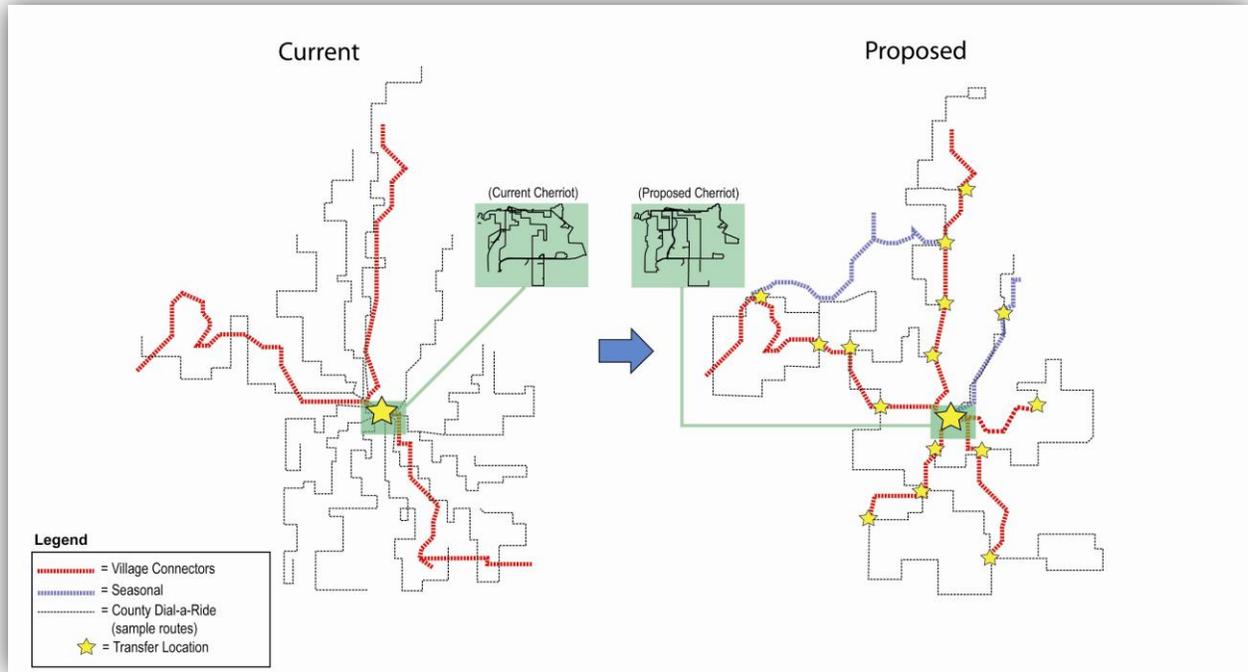
Advantages to the communities include the opportunity for transit-oriented developments (TOD's) at transfer points along Village Connector routes. This is one means of strengthening the economic development of the villages and towns served by BATA as they have the potential to increase pedestrian activity and cultivate opportunities for commercial, retail, tourism, and residential development.

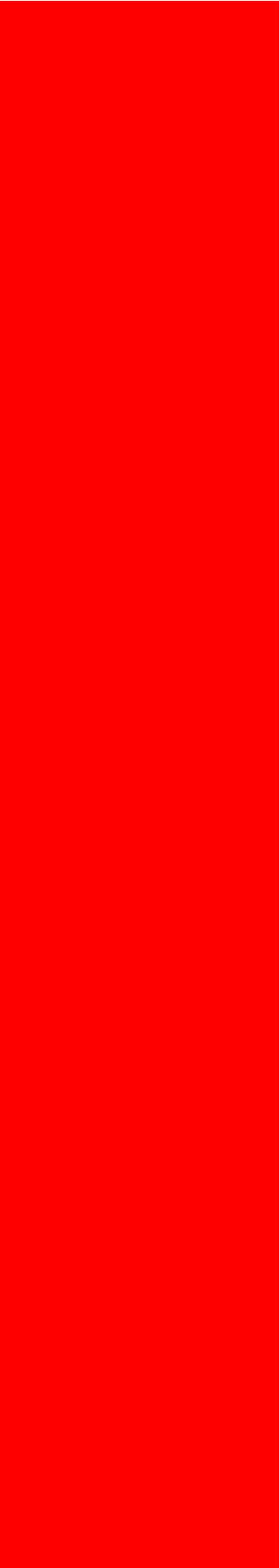
In sum, the benefits extend to BATA, transit riders, and the regional community as a whole.

Figure 3-14 displays an illustration of how the proposed system compares to the current system of Cherriot, Village Connectors, and County Ride services. In this figure, County Ride services are shown as "sample" routes; these are not the set alignments of these services, but examples of the path that a typical route may take within its assigned zone.

This graphic provides a visual clue regarding the reduction of mileage that may result from re-organization, as well as significant improvements to network interconnectivity among many different important activity centers.

Figure 3-14: “Big Picture” Impact of Services





# CHAPTER 4

## *Proposed Policies and Other Recommendations*

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## 4.0 OVERVIEW OF PROPOSED POLICIES

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VSA has developed a package of policy recommendations. While some of these proposed policies are supplemental to proposed service improvements (such as the reorganized County Ride system), others are stand-alone recommendations which may be initiated independent of other improvements.

Policies are based on the same improvement themes and guiding principles that VSA identified during the onset of this project:

- ▶ Operations Improvements
- ▶ Fare Media and Pricing
- ▶ Service Area and Capital Improvements
- ▶ Inter-Governmental and Public-Private Partnerships
- ▶ Public Awareness and Marketing Approaches
- ▶ New Markets and Demographics
- ▶ Special Events

Each of these improvement areas features at least one policy recommendation. Recommended policies usually involve action that would result in a physical improvement or operational change.

## SERVICE HOURS

Increased frequency of service and hours of operation are recommended on select services throughout the system:

- ▶ Throughout the year, upgrade service frequency to hourly on all Village Connectors
- ▶ During the summer months, BATA should provide weekend service, both Saturdays and Sundays, on certain Village Connectors to support the seasonal routes identified below, and to serve the tourism markets:
  - Northport
  - Empire
  - Resort Row

Hours of service on these three Village Connectors should be extended to 10:00 pm during the summer season. Also during the summer season, service should operate every ½ hour on the Resort Row route

- ▶ The new seasonal routes, the Beach Bus and Winery Circuit, should operate hourly both Saturdays and Sundays:
  - The Beach Bus, which is only planned for summer service, would also operate Monday to Friday
  - The Winery Circuit would operate from approximately Memorial Day through the fall color season. Depending on demand and equipment availability it could also provide Friday service
- ▶ The Interlochen Performing Arts Express would serve scheduled events throughout the year
- ▶ Depending on demand, BATA should consider expanding the availability of After Hours service (number of buses and drivers) in Traverse City in order to support the Village Connector and seasonal routes, and to enhance service to the downtown businesses
- ▶ During seasonal festivals, Cherriot service should be extended to evening service.
- ▶ In the future, depending on demand, BATA may wish to consider extending Cherriot service to later hours on Saturday and to introducing some Sunday service

## STOP SPACING

With the operating changes for the BATA system as a whole, the proposed stop locations have been rationalized to accommodate the differences in system characteristics throughout the service area.

- ▶ For the Cherriot system, stops are located approximately every ½ mile along the routes. This means that most passengers will not have to walk more than ¼ mile to access the bus stop
- ▶ For the Village Connectors which serve less densely developed areas, stops are located in village centers, at major intersections or at other activity centers

## FARE POLICY

The following fare policy recommendations result from an examination of best practices:

- ▶ Provide fare incentives to ease riders' transition to the new system configuration. Riders traveling to or from Traverse City would be required to take the Village Connector Service instead of the County Ride. This will help increase overall ridership on the Village Connectors while decreasing the number of County Ride trips. To encourage passengers to transfer from

the County Ride to the Village Connector (and vice versa), BATA would offer a free transfer to or from the Village Connector, and the total ride would be priced at the applicable fare for Village Connector service. Exclusive County Ride service would be priced at two times the Village Connector fare, and is available only under circumstances defined in Section 3.3. In the future, if revenue enhancements are required, BATA could increase the price of a combined trip up to the point of the equivalent fare for a County Ride trip

- ▶ Provide additional and discounted fare packages for passengers. These could include unlimited-use day, weekly, monthly, or seasonal passes. Passes offer both convenience and savings to passengers who plan to use BATA service multiple times per period. For example, day passes are commonly priced at 2.5 times the average one-way transit fare
- ▶ Longer-term and depending on BATA’s need to enhance revenue, consider implementing a new zoned pricing structure. Passengers who travel for longer distances on the Village Connector services would pay higher fares. A total of six zones consisting of 5-mile concentric circles centered on downtown Traverse City are recommended. Passengers would pay one base fare per ride plus an additional smaller zone fare based on the length of their trip (Please see Figure 4-1 below).

**Figure 4-1:** Future Village Connector Fare Zones for Consideration



## FARE MEDIA AND EQUIPMENT

- ▶ Expand the types of fare payments to both cash and magnetic farecards
- ▶ Purchase updated onboard fare boxes that include the following features:
  - Counting and validating cash payments to streamline cash fare processing
  - Accepting both cash payments and farecards that feature encoded magnetic strips
  - Offering change for cash fares only in the form of farecards
  - Issuing transfers only through fareboxes that vend and receive transfer cards thus allowing for seamless transfers and fare coordination between all BATA services (Cherriot, Village Connector, and County Ride services)
  - Providing operator keypads for registering special fares such as reduced fare for seniors to allow improved accounting and reporting
  - Transmitting fare collection data from the farebox computer to the central BATA database using infrared technology
- ▶ Increase the availability of farecards by:
  - Installing fare vending machines at all major transfer centers, as it becomes financially feasible;
  - Developing relationships with area retailers, such as Meijer, who could sell passes like the day pass and stored value cards in their stores. A stored value card permits an individual to purchase a pass at a set value (for example, \$20) and to use it for transit fares up to the value of the card. Some transit agencies discount the card to permit a fare bonus such as one free ride, and
  - Making passes such as 24-hour day passes or weekly passes available for purchase on the buses

## STUDENT FARES

BATA should continue building on the success of the Suttons Bay student pass program. An initiative that would extend passes and service to Northwest Michigan College is detailed earlier in this report. For other students in the area, approaches to expanding service to other age groups should focus on:

- ▶ Selling semester passes at BATA's facilities, either at Cass Road or at Hall Street, and pricing them at approximately \$165 (based on Suttons Bay pricing) per semester
- ▶ Where possible, routing buses so that they serve the schools as part of normal operations

The initiative should target middle and high school students as they represent a likelier market than younger elementary school students.



## VANPOOL PROGRAM

A vanpool program is one means of increasing service in less densely populated areas. Pace, the suburban bus operator in Northeastern Illinois, has established a vanpool program, which recovers all costs and in some years, has actually provided a small profit for the agency. Such a program would entail BATA ownership of a fleet of vans, as well as BATA's paying for maintenance and fuel costs. The program is intended to serve work trips, although the driver is permitted to use the vehicle on a mileage-limited basis for local personal errands. This program would be targeted to people who live close to each other or along a common route, and share similar schedules and a common destination for their daily commuting needs.

Establishing and maintaining a Vanpool Program would require cooperation of local employers' human resources personnel. At least initially, the program should be targeted to the larger employers such as Munson Hospital, an excellent candidate because large numbers of employees work similar shifts, all at the same site. For Munson, if implemented on a large scale, the program would relieve substantial pressure on its parking facilities.

In addition to the driver, who does not pay for transportation, vanpools typically serve at least 4 and up to 14 passengers, and the vehicles are sized accordingly. The fares are on a sliding scale, depending on number of travelers and distance traveled. The driver's responsibilities also include fueling the vehicle and assuring that routing maintenance is performed, and for these costs, he or she is provided with a credit card; all charges are billed to the agency.

This program offers the benefits of private automobile travel at a fraction of the cost of owning and maintaining a car individually. For BATA, the costs would be the minimal and include fuel, maintenance expenses, insurance, and program administration. Federal grant funds are available to support vehicle procurement.

Implementing a Vanpool Program should be a longer-term initiative, planned for 2014 or 2015. Deferring implementation until then would permit BATA to make the other changes in its system (Cherriot, Village Connectors and County Ride), and make the inevitable adjustments that will be necessary to fine-tune the operation. Deferral would also allow for the advance planning that is required to make a Vanpool Program successful.

## BUSINESS PARTNERSHIPS

Traverse City leaders believe that local businesses support BATA and are open to collaborating to strengthen BATA's markets and finances. Techniques for capitalizing on this support are:

- ▶ **Transit Benefit Program:** Working with the Chamber of Commerce to inform local businesses as to the availability and advantages of the Transit Benefit Program. This is a pre-tax benefit for both employees and employers, made available by federal law. The way it works is as follows:
  - On behalf of the employee(s), the employer purchases the monthly pass from BATA. For the purposes of this example, assume the pass is priced at \$120 per month which, without a change in legislation, is expected to be the maximum tax-free limit in 2012. (This price would represent a 10% discount over the daily roundtrip fare on a Village Connector for an average of 22 weekdays days per month)
  - The cost of the pass is deducted from the employee's wages, and its value is exempt from payroll taxes for both employee and employer, thus offsetting the employer's administrative costs

- The pass is also exempt from income taxes, thus affording the employee a small addition to net income
- The benefit to the employer increases with the number of employees who participate. BATA benefits from increased ridership and the community benefits from reduced congestion and pollution
- ▶ **Subscription Services:** BATA could work with larger local employers to develop subscription services that would serve shift start and end times for employees who prefer or require transit service to work. In this instance, the employer could guarantee the cost of providing the service, which would be offset by the fares collected. For example, if the service costs \$75 per hour, and 30 people use it at an average fare of \$1.50, the cost to the employer would be \$30. In addition to being able to get the employees to work, benefits to the employer would include reduced cost of land and facilities to accommodate and maintain parking. This is recommended for consideration as a longer-term initiative since it would require consideration outreach and coordination with Human Resources departments
- ▶ **Munson Parking Policies:** Using the business model established for Northwest Michigan College, Munson and BATA could collaborate to address Munson's parking pressures. Munson should start charging for parking in the immediate vicinity of the hospital and prohibit staff parking there. Elsewhere on the hospital campus, Munson could establish remote parking facilities where staff would be required to park, and where longer-term visitors could park at reduced rates. Revenues from these parking facilities would be used to offset increased frequency of the proposed circulator service. (Refer to Section 3.1 for discussion of the proposed service. Options for 30 minute and 15 minute frequencies are presented, depending on funding availability.)

## INTERGOVERNMENTAL PARTNERSHIPS

There are opportunities to work with other governments in the region to increase the availability of BATA facilities, improve accessibility of transit service and minimize congestion in downtown Traverse City:

- ▶ **Park-and-Ride:** At the locations identified as transfer stations, which are often located in village centers, BATA should partner with the local governments to identify and reserve parking for customers who wish to park their cars and bikes, and transfer to bus service. As part of any agreement, BATA should solicit local government cooperation in policing and maintaining the parking facilities, particularly for snow removal, as it would be very difficult for the agency to perform this function in a timely manner from its central location in Traverse City
- ▶ **Identifying Transfer Stations:** BATA should work with the appropriate government agencies to refine the locations and identify specific sites for development of safe transfer stations that can accommodate Village Connectors, County Ride, park and ride, and shelters
- ▶ **Safe Harbors for Boarding:** At stops along Village Connector routes that are not designated as transfer stations, it is also important for BATA to coordinate stop and shelter locations with appropriate agencies (state, county or local) to develop safe harbors for bus stops and shelters

- ▶ **Advertising:** BATA should work with local governments to revise regulations pertaining to outdoor advertising as it pertains to bus shelters. BATA should be able to post route and schedule information in its shelters, and selling tasteful advertising in the shelters that offsets their costs should be an option as well (see Figure 4-2 of an attractive shelter serving Chicago Transit Authority passengers)

**Figure 4-2:** CTA bus shelter featuring a bench, map, and ads



- ▶ **Regional Transfers:** BATA should take advantage of opportunities to cooperate with neighboring transit agencies for mutual benefit by coordinating transfer at remote locations

Neighboring counties like Benzie and Antrim, as well as Wexford and Kalkaska, and could benefit by minimizing mileage, fuel and time required to travel into the Hall Street transfer center, potentially enhancing their ability to increase service coverage and frequency in their basic service areas, while BATA would realize an increase in ridership

- ▶ **Land Use:** Outside municipal boundaries, BATA should solicit cooperation from the Michigan Land Use Institute and Northwest Michigan Council of Governments to work with township and county governments with the objective of developing transit-friendly land use policies and zoning practices. These may include:
  - Safe pedestrian access to transit stops with particular attention to sidewalks, crosswalks and paved waiting areas
  - Developing new buildings on the street face or with limited setbacks so that transit users do not have to cross large parking areas and drainage facilities to access the stops, and
  - Other practices that support transit-oriented development, the subject of numerous other studies

### INCREASED INFORMATION AT POINTS-OF-CONTACT

- ▶ BATA can reach out to hotel operators, businesses, and major information centers in the area to place brochures and system maps on display, near front desks and information stands.
- ▶ BATA should pay particular attention to places that are near existing bus stops since people who take the brochures will have an immediate opportunity to get on the bus

## VILLAGE SIGNAGE

- ▶ It's important to eliminate the guesswork about the location of bus stops. BATA could attract ridership and increase public awareness about its system by installing directional signs to Village Connector stops in the towns and villages along routes. Such signs could be placed near the outskirts of villages, as well as on the main street and in the downtowns
- ▶ A distinct BATA identity and logo should be developed and displayed on all signs, and the signs should point the way to the stops. Signs should also be posted at the actual stop locations to make them clearly visible to passing motorists and pedestrians. A well-planned signage system throughout the region should heighten awareness of BATA's service and encourage new riders to take the bus



## WEBSITE DEVELOPMENT

- ▶ BATA should consider hiring a web designer to update, modernize, and maintain their website. The site should feature easier navigation to important information such as fare prices, maps, and route schedules. The Rapid in Grand Rapids and the Chicago Transit Authority both have excellent transit websites that could serve as models
- ▶ BATA should solicit the cooperation of local governing agencies, businesses, hotels, and others who would be willing to link their websites to BATA's. This would help redirect traffic to BATA's website and increase people's awareness of the system
- ▶ The web designer should be briefed on all BATA system changes in order to plan ahead for complementary changes to the website. All changes should be announced and highlighted on BATA's home page with links to new maps, information, fares, schedules, etc.
- ▶ An improved website would also allow the development of mobile internet applications for smartphones. Many transit agencies have mobile applications which allow users to search for schedules and maps from their phones, and some have real-time information on the locations of buses and trains to help people plan their transit trips. While BATA need only provide schedule and map information, a polished website and/or mobile application are key components of attracting a younger demographic

# CHAPTER 5

## *Implementation of Recommendations*

## 5.0 IMPLEMENTATION OF RECOMMENDATIONS

### STEP 1: RE-CLASSIFY VILLAGE CONNECTOR ROUTES

**THIS IS A STAND-ALONE STEP THAT CAN BE DONE INDEPENDENTLY, HOWEVER IT MUST COME BEFORE STEPS 2 AND 3**

- ▶ Change the operating structure from “fixed-route” to “flex-route.”
- ▶ Dedicate a portion of the BATA website and update brochures explaining what this is
- ▶ List number of allowable deviations per hour
- ▶ Show “deviation zone” (see attachment from VSA for a map of each route)
- ▶ Explain 24 hour advanced registration for deviations

### STEP 2: INSTITUTE CONSOLIDATED ZONE SYSTEM

**THIS STEP MUST BE COMPLETED IN TANDEM WITH STEP 3**

- ▶ VSA has updated the system to only have six zones instead of ten; basically one bus will cover, on average, two of the previous zones we had illustrated
- ▶ BATA must create guidelines or policies for how dispatchers schedule County Ride trips; basically, it should be a first-come, first-serve basis in order to make timed-transfers with the village connector stops
- ▶ Also need to develop a “what-if” plan for what the buses should do if one cannot make a timed transfer
- ▶ These changes affect BATA drivers, managers, and internal/dispatcher use. As far as the customer is concerned, the only change is that they need to call BATA 24 hours in advance, or else abide by the “will-call” policy

### STEP 3: RE-ALLOCATE BUSES AND DRIVERS

**THIS STEP MUST BE COMPLETED IN TANDEM WITH STEP 2**

- ▶ Currently, BATA has 12 drivers and buses covering 13 zones, and three buses/drivers covering three VC routes
- ▶ Six buses/drivers would stay within the new consolidated County Ride system of six zones
- ▶ Three of the remaining six would be distributed into the existing Village Connectors in order to increase headways at each stop from 2-hours to 1-hour:
  - 1 for Northport
  - 1 for Empire
  - 1 for Kingsley
- ▶ And the last three would be distributed into the proposed Village Connectors:
  - 2 for Interlochen
  - 1 for Resort Row, plus 1 new bus and driver
- ▶ Commence Sunday services for Village Connectors

Overall, BATA would be able to both increase existing service and implement two new services with existing resources, except for one new driver and bus.

**STEP 4: IMPLEMENT SEASONAL SERVICE**

Market and initiate Winery Circuit, Interlochen Performing Arts Express, and Beach Bus services during the summer months of June, July, and August using the Suttons Bay bus fleet.

**THIS STEP CAN BE COMPLETED INDEPENDENTLY OF ANY OTHER STEP**

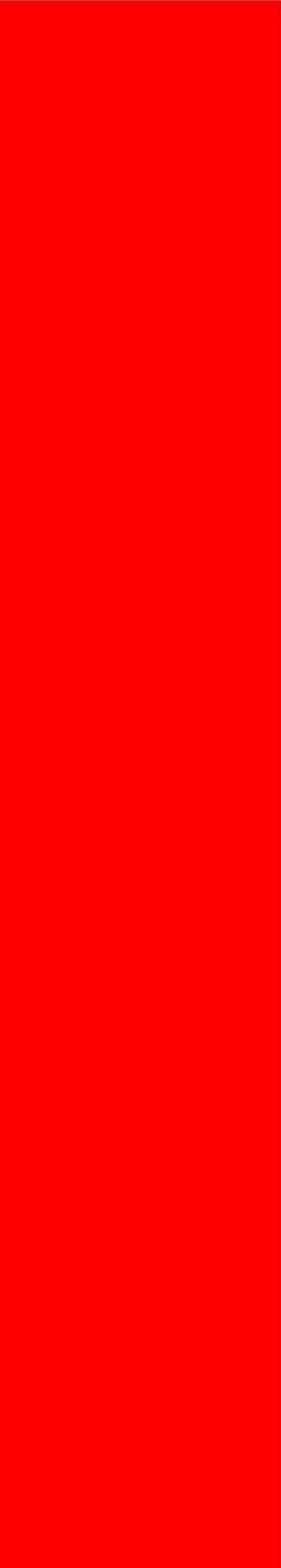
- ▶ Potentially increase Resort Row service to 30-min headways during these months using two more buses from the Suttons Bay fleet, if vehicle availability and drivers permit
- ▶ Retain and advertise Sunday and weekend service for these routes as resources and demand allow

**STEP 5: IMPLEMENT NORTHWEST MICHIGAN COLLEGE CAMPUS CONNECTORS****THIS STEP CAN BE COMPLETED INDEPENDENT OF ANY OTHER PREVIOUS STEP, BUT MUST COME BEFORE STEP 6**

- ▶ This step can only be completed after BATA and NMC have developed a student pass program
- ▶ Must be timed to coincide with the start of a new semester when students will have the passes to board buses and tuition bills to include the new transportation fee.

**STEP 6: IMPLEMENT PREFERRED NEW CHERRIOT SYSTEM****THE PREFERRED CHERRIOT SYSTEM CAN ONLY BE IMPLEMENTED WITH OR AFTER IMPLEMENTATION OF STEP 5**

- ▶ If Step 5 cannot be completed, an alternate Cherriot system can be implemented (see the Appendix for more details on the alternative system).



# CHAPTER 6

## *Project Summary*

## 6.0 PROJECT SUMMARY

To summarize, the study process entailed an existing conditions review, including previous studies and BATA's operating and financial data, meeting with local officials and stakeholders, analyzing and interpreting data, and developing recommendations both for operations and policies. All of these steps were closely coordinated with the client.

### AREAS OF ANALYSIS

- ▶ **POPULATION AND EMPLOYMENT** – Examined and mapped US Census data and conducted geographic analysis of concentrations
- ▶ **ACTIVITY CENTERS** – Identified using site visits, geographic analysis, and agency and stakeholder contributions
- ▶ **FARE POLICY AND FARE MEDIA** – Examined best practices in the industry, and analyzed current technologies and regulations
- ▶ **RIDERSHIP PROFILES** – Analyzed using BATA counts, previous studies, and financial information
- ▶ **SERVICE STANDARDS** – Established using BATA-preferred operating parameters, FTA and ADA regulations, and VSA's expertise
- ▶ **TRAVEL TIME ESTIMATES** – Conducted using mileage measurements, average speed, and industry-standard practices
- ▶ **TRANSFER FACILITY DESIGN** – Produced policies and plan diagrams and for future transfer stations

### RECOMMENDATIONS

- ▶ **EXISTING SERVICES**
  - Cherriot: Re-organized existing routes, increased efficiency, and added new services
  - Village Connector: Recommended structural changes and increased frequencies
  - County Ride: Re-organized and consolidated the zone system; proposed transfer hubs along Village Connector routes; recommended new policies
- ▶ **NEW SERVICES**
  - Village Connectors: Recommended two new routes
  - Seasonal Services: Recommended three new services
  - NMC shuttle: Recommended two express routes to service remote campuses
  - Munson shuttle: Designed a circulator shuttle to increase service to the hospital and improve Cherriot efficiency
- ▶ **POLICY AREAS**
  - Service Hours
  - Stop Spacing
  - Fare Policy
  - Fare Media and Equipment
  - Student Fares
  - Vanpool Program
  - Business Partnerships
  - Intergovernmental Partnerships
  - Increased Information at Points-of-Contact

- Village Signage
- Website Development
  
- ▶ **NO CHANGE**
  - Suttons Bay (although no change to existing services has been proposed, utilization of these vehicles during summer seasonal months has been recommended)
  - Community Mental Health
  - Health Routes
  - Parcel Service