

**YOSEMITE AREA REGIONAL
TRANSPORTATION SYSTEM
(YARTS)**

**SHORT-RANGE
TRANSIT PLAN**

2004 - 2009

October 20, 2003

INTRODUCTION

PURPOSE OF YARTS SHORT-RANGE TRANSIT PLAN

The Short-Range Transit Plan (SRTP) for Yosemite Area Regional Transportation System (YARTS) covers the period FY 2004/2005 through 2008/2009. The plan evaluates the performance of previous years of service, projects future service needs, studies the usage of alternative fuels, and strategizes several service options based upon prospective demands and levels of funding.

The SRTP provides for the continuation and enhancement of transit services within the following areas:

- Highway 140 Corridor.
YARTS provides transit service between communities and major lodging and transportation facilities within the Counties of Mariposa, Merced, and Yosemite National Park.
- Highway 120/395 Corridor.
During the summer, YARTS service extended from Yosemite Valley to Mono County destinations of Lee Vining, June Lake, and Mammoth Lakes.

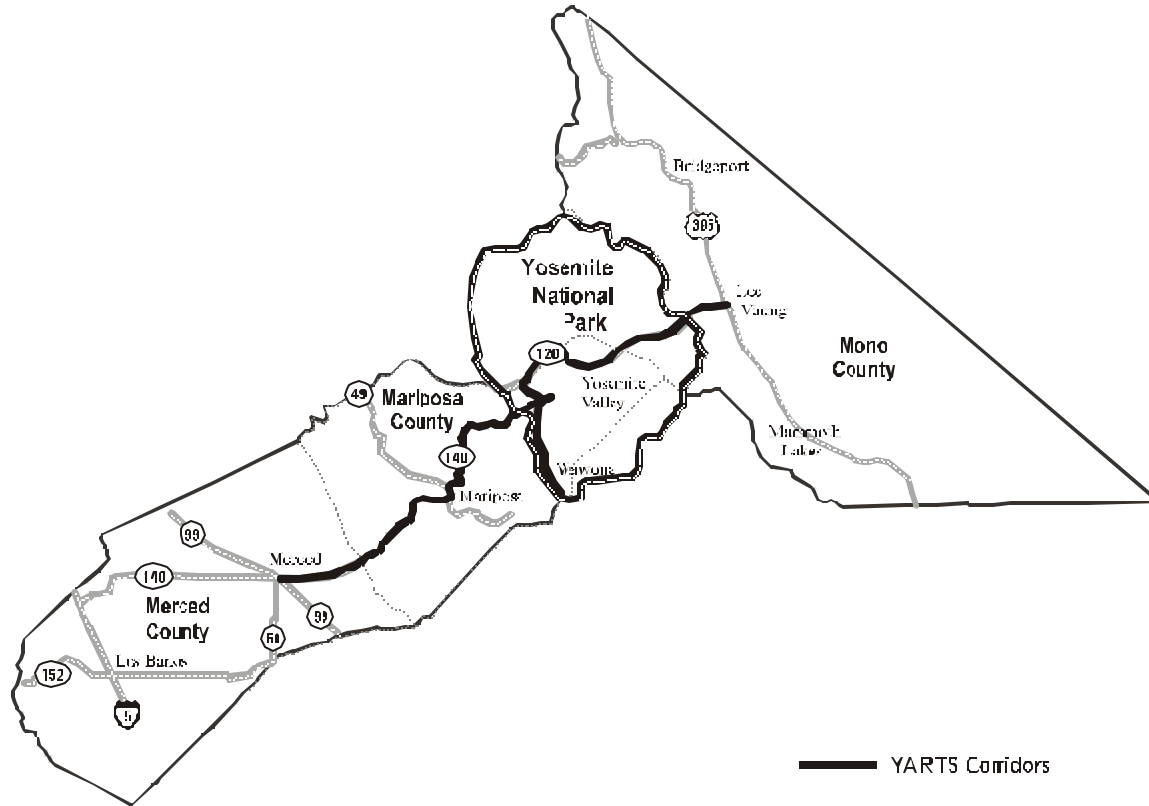
PURPOSE OF YARTS SERVICE

The purpose of the YARTS service is to provide an alternative mode of transportation to and from Yosemite National Park. In particular, the service is designed to serve the following traveling patterns:

1. Visitors staying in the gateway communities and visiting Yosemite National Park.
2. Employees along the Highway 140 corridor who work in El Portal or Yosemite National Park.
3. Students and employees that travel to Merced for school and work.
4. During the summer months only, visitors from Mono County traveling to Yosemite National Park for recreation, such as hiking.

An additional benefit of providing the transit service in and out of Yosemite National Park is that it lessens the demand for parking on the Valley floor. Figure 1 identifies the YARTS service area.

FIGURE 1 – YARTS SERVICE AREA



MISSION STATEMENT

Based on the public comment received throughout the YARTS planning process, the YARTS Policy Board adopted the following mission statement for YARTS, which is still the intent of the YARTS service today:

YARTS will provide a positive alternative method of access to Yosemite National Park, carrying visitors, employees and residents. YARTS service is not intended to replace auto access or trans-Sierra travel, but is intended to provide a viable alternative that offers a positive experience, emphasizing comfort and convenience for riders while guaranteeing access to the Park.

Public comment strongly supported a voluntary system that would encourage ridership through incentives and the quality of service. The following describes the system qualities that the public felt were most necessary for transit to compete with the auto for trips into Yosemite:

- **Voluntary and incentive-based.** There is a need for a balance of access modes to Yosemite.
- **Minimize cost.** The service would need to be cost-competitive with driving.
- **Serve employees as well as visitors.** The YARTS system should encourage employee ridership to Yosemite.

- **Comfortable vehicles with amenities.** Specific recommendations of amenities, such as offering storage for gear and bicycles, comfortable seating with overhead storage for small items, big windows, should be made for comfort and convenience.
- **Offer convenient connections and a reliable service.** Recommendations for frequent service, running on a clear schedule, running early and late enough to be useful, and stopping at key lodging locations should be made.
- **Focus on seasonality.** The service should focus on the summer season when the demand for service is highest, with minimal service during the winter months.

DEFINITION OF TRANSIT SERVICE

The YARTS Joint Powers Authority and Yosemite National Park have worked together to develop the following definition of transit service. “**Transit Service**” has been carefully defined to be separate and distinct from tour bus service.

1. **Transit operators will provide service on a fixed schedule**, regardless of the number of passengers.
2. **Transit operators will accept walk on passengers** at designated stops, and will not rely entirely on pre-sold tickets.
3. **Transit operators will offer a set fare schedule** and will honor monthly and pre-paid passes or third party billing for employees.
4. **Transit operators will support YARTS marketing efforts**, including displaying the YARTS logo, and will be included in YARTS regional promotions.
5. **Transit operators will possess all of the licenses required by the State of California**, and will present verification of their licensing prior to receiving a transit permit for service into Yosemite.
6. **Most importantly, transit operators will operate a “stop, drop and go” service within the YARTS region**, avoiding unnecessary waiting and idling. A terminal layover area will be made available for YARTS buses in the Valley. YARTS buses are expected to remain in motion within the park, unless they are boarding or discharging passengers, except when they are in the terminal layover area.
7. **Transit operators will coordinate service and schedules to allow for connecting route service when feasible.**

INSTITUTIONAL ARRANGEMENT

In 1992, the Mariposa County Board of Supervisors initiated a collaborative planning process with four neighboring counties, the National Park Service, US Forest Service, and the California Department of Transportation to prepare a strategy for providing transit service for visitors and employees into Yosemite National Park from gateway communities. This planning process produced two key products. The first was the formation, in 1999, of a joint powers authority (JPA), made up of the member counties of Mariposa, Merced, and Mono, to implement the

transit service. The second was a proposal for a two-year transit demonstration program, for FY 2000-2001. The JPA, known as the Yosemite Area Regional Transportation System (YARTS), entered into a Cooperative Agreement with the National Park Service for the purposes of coordinating the new transit service with in-Park shuttle transportation, cooperative transit planning, transit service visitor and employee education, and funding support. YARTS contracts with the Merced County Association of Governments for staffing to administer and manage the transit service.

On May 19, 2000, YARTS began providing ongoing “fixed route” transit service throughout the Yosemite Region.

FARE STRUCTURE

To attract visitors who have the choice to drive, including those that have used a car to access the area, riding transit should not cost significantly more than driving a car to access the Park. For this reason, the YARTS roundtrip fares are \$7 from El Portal and \$10 from Mariposa. This will allow a group of two to take transit to the Park for less than it would cost to drive, and a group of three to travel at a comparable cost. Passengers boarding in Merced pay \$20 for a roundtrip. Other passengers, such as those transferring from AMTRAK, would continue to pay AMTRAK’s rate.

In the summer of 2002, on the Highway 140 Corridor, YARTS instituted a multi-day/multi – person pass whereby a person could ride for three days for the price of two or three people could ride for the price of two. Also, the multi-ride pass is available for purchase from ticket sellers. In addition, to promote family ridership, any child 16 and under could ride for free with one paying adult. These changes were requested by the lodging establishments to encourage use of YARTS by groups and families.

Along the Highways 120/395 Corridor, YARTS charges \$20 for roundtrip fares to the Park.

Table 1 shows current the fare structure for Highway 140.

**TABLE 1
HIGHWAY 140 ROUNDRIP FARES
TO YOSEMITE VALLEY**

Fare category	El Portal	Mariposa	Merced
Regular adult	\$7	\$10	\$20
Senior/child	\$6	\$9	\$14

Table 2 shows current the fare structure for Highways 120/395.

**TABLE 2
HIGHWAYS 120/395 ROUNDRIP FARES
TO YOSEMITE VALLEY**

Fare category	Tuolumne Meadows	Lee Vining	Mammoth Mountain
Regular adult	\$20	\$20	\$20
Senior/child	\$10	\$10	\$10
One Way Fares	\$15	\$15	\$15

On Highway 140 there are two types of commuter passes available: a 20 Trip Pass- 20 Round-trip rides per pass, expiring 90 days from purchase- and a Monthly Pass- Unlimited rides for the month. Commuter fares for both types of passes are shown in Table 3.

**TABLE 3
HIGHWAY 140 COMMUTER FARES
TO YOSEMITE VALLEY**

HWY 140	MERCED	CATHEYS VALLEY	MARIPOSA	MIDPINES	EL PORTAL	YOSEMITE VALLEY
MERCED		\$35	\$70	\$90	\$130	\$165
CATHEYS VALLEY	\$35		\$35	\$55	\$95	\$130
MARIPOSA	\$70	\$35		\$20	\$60	\$75
MIDPINES	\$90	\$55	\$20		\$40	\$75
EL PORTAL	\$130	\$95	\$60	\$40		\$35
YOSEMITE VALLEY	\$165	\$130	\$75	\$75	\$35	

OVERALL DISCUSSION OF SERVICE PROVIDED

The mission statement addresses the need for YARTS to provide and maintain a viable transit system to serve visitors, employees, and residents, with positive qualitative properties, while reducing the amount of park congestion- number of single-occupancy vehicles and particulate emissions. Continuously reassessing this need has resulted in numerous adaptations during the past three years of service. These changes were attributable to discernable seasonal trends, observed from collected data, in ridership for both visitors and employees. These changes included adjustments of service providers, routing, scheduling, fares, and funding.

SERVICE CHARACTERISTICS

Initially, YARTS provided service to Merced County on Hwy 140, to Mono County on Hwy 120-395, and to Coulterville on Hwy 132-120. Due to the low ridership and budgetary limitations, the service to Coulterville was discontinued, and the service to Mono County remained active only during the spring and summer months.

YARTS contracted with private companies who provided both vehicles and drivers for transit service. Service on Hwy 140 occurred between Yosemite National Park, Mariposa, and Merced. Its target passengers were visitors staying at lodgings in our communities, day-trippers, Mariposa County students attending Merced College, and employees primarily working in the national park, but also in Merced. Service on Hwy 120-395 occurred between Yosemite National Park and Mono County. Its target passengers were visitors staying at lodging establishments.

HIGHWAY 140- TO MERCED

During the first 17 months of YARTS, Hwy 140 service was provided by Yosemite Concession Services (YCS), who received both subsidy and fares as payment for its service, and VIA Adventures (VIA), who received only fares as payment. Visitor passengers paid fares set by YARTS and could ride either company service on a “space-available” basis. During this period, employees with jobs in the national park could ride the YCS-provided runs free, as the National Park Service provided funding to accommodate their employees. Employees could ride the VIA-provided runs with fare payment.

During the first summer season, 23 to 26 runs between Yosemite, Mariposa, and Merced were provided by YCS and VIA. For the first 6 weeks (mid-May through June 30, 2000) of that season, all passengers, visitors, and employees rode free on just YCS runs to promote the service. During the first winter season, service runs were reduced to 8 runs.

During the winter, the YARTS Board determined that YARTS should become a regular service through the adoption and implementation of its first Short-Range Transit Plan. A new transit service contract was awarded to VIA beginning in September 2001. A phase out schedule for YCS and a phase in schedule for VIA was implemented during the second summer season. During the summer, national park situated employees could ride all the runs, including the additional runs to Merced, on the schedule for free, regardless of which company was providing the service. YCS ended its contract with YARTS on September 9, 2001. VIA became the sole Hwy 140 service provider on September 10, 2001.

Since September 2001, service has stabilized at 12 runs. However, the national park lost its ability to provide funding to subsidize service for both visitors and employees. As a result, effective October 1, 2001, all Yosemite-bound employees were required to pay transit fares or purchase monthly passes. An employee voucher program has been implemented for employees of the park service, which pays most of the cost of monthly employee transit passes. No such program existed for employees of the Yosemite Concession Services or other Yosemite-based employers.

YARTS will begin its third summer with its service agreement with VIA for 12 runs per day during the week and 10 runs per day on weekends. Runs 5 and 9 are provided by VIA at no cost to YARTS. AMTRAK passengers pay a fare through AMTRAK that goes directly to VIA. Therefore, these two runs primarily serve these AMTRAK riders.

HIGHWAYS 120/395- TO MONO

For service to Mono County from 2000-2002, YARTS contracted with Mammoth Mountain Ski Area Inc. (MMSA) to provide service from Mammoth Lakes, June Lake, Lee Vining, and Tuolumne Meadows into the Valley. California Cruisers and Tours took over this service in the summer of 2003.

MMSA provided this service for the farebox revenue. During the first year of the YARTS Demonstration Program, Mammoth Mountain provided just weekend service for farebox revenue only. The second year, there was an extension of the weekend service to seven days a week, using the farebox revenue and a grant from the Federal Transit Agency. The third year, Mammoth Mountain provided this service for farebox revenue only. For the fourth year, California Cruisers and Tours was contracted to be the new service provider. This service is being subsidized using a Federal Transit Administration grant and a private donation from Mammoth Mountain.

RIDERSHIP TRENDS

HIGHWAY 140- TO MERCED

In June 2002, ridership was down to 5,502, compared with 6,250 in June 2001, and 8,015 in June 2000. A closer examination of the details revealed discernable trends. In June 2000, visitors and employees rode free, and no fares were charged on the service provided by YCS. In July 2000, passengers began to pay fares except for Yosemite-oriented employees, who continued to enjoy free service. Thus, this major contributing factor to lower non-employee ridership, between June 2000 and 2001, reflected the economic concept of price elasticity. This factor was also apparent when viewing the employee ridership statistics for the period of August through November 2001. As stated earlier, from mid-May to October 1, 2001, all employees of NPS, YCS, and other Yosemite-affiliated employers rode free. Prior to that period, historical ridership was in the range of 1000-1100 passenger trips per month. During the summer months of June-September 2001, the monthly average rose to 1973 trips. Many YCS employees took advantage of the YARTS service to Merced for shopping and entertainment, during that period. As noted earlier, this no-fare period ended on October 1, 2001, and these employees were required to pay fares. While the NPS had a monthly pass subsidy program that paid most of the cost of the work trip, YCS and other employers did not. It was very apparent that YARTS service to shopping and entertainment venues was taken advantage of and would be used, if priced appropriately. Unfortunately, it

became apparent that even with the positive impact of the subsidized bus pass program, funded by the National Park Service for its employees, ridership was not near the levels from the previous year. Looking at the 2002 summer service, the drops in employee ridership range from 23-45 percent.

Table 4 shows the employee ridership on Highway 140 for 2001-2003.

TABLE 4 – EMPLOYEE RIDERSHIP

EMPLOYEE RIDERSHIP

	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
YCS	-	-	-	-	1,289	1,126	1,189	1,180	1,155	1,026	1,034	978
NPS	-	-	-	-	1,152	978	1,015	775	1,025	906	1,029	978
Other	-	-	-	-	576	319	312	310	345	279	364	375
Total	739	3,236	3,774	3,552	3,017	2,423	2,516	2,265	2,525	2,211	2,427	2,331

	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
YCS	944	1610	2094	2168	1876	692	616	811	823	730	753	678
NPS	919	1020	1173	989	630	1020	650	675	755	699	808	799
Other	411	500	211	174	158	76	134	179	279	236	227	202
Total	2274	3130	3478	3331	2664	1788	1400	1665	1857	1665	1788	1679
	208%	-3%	-8%	-6%	-12%	-26%	-44%	-26%	-26%	-25%	-26%	-28%

	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03
YCS	749	725	828	868	793	748	599	687	716	572	706	617
NPS	752	756	862	824	713	660	626	719	806	798	765	747
Other	247	226	236	237	258	255	223	220	165	184	226	314
Total	1748	1707	1926	1929	1764	1663	1448	1626	1687	1554	1697	1678
	-23%	-45%	-45%	-42%	-34%	-7%	3%	-2%	-9%	-7%	-5%	0%

While employee ridership has fallen, visitor ridership has risen remarkably from year to year, and also based on same month comparisons, with two exceptions. These exceptions included visitors riding free in June 2000, and service impacts, in October 2001, associated with travel decisions related to the September 11 tragedies. For the first operating year, from May 2000 to April 2001, the ridership count was 27,536. For the second operating year, from May 2001 to April 2002, the ridership count was 29,676. This meant an increased ridership of 2140, up 8 percent. For the third operating year, from May 2002 to April 2003, the ridership count was 33,550. This meant an increased ridership of 3874, up 13 percent. For 2000-2001, the smallest increase, by 2 percent, was for September, and the largest increase, by 82 percent, was for December. For 2001-2002, the smallest increase, by 10 percent, was for January, and the largest increase, by 57 percent, was for October.

Table 5 shows the visitor and other ridership on Highway 140 for 2001-2003.

TABLE 5 – VISITOR & OTHER RIDERSHIP

VISITOR & OTHER RIDERSHIP

	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
Total	1541	4779	3370	3707	2793	2096	1418	1131	1514	1452	1647	2088

	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Total	2517	3120	3641	3980	2848	1842	1640	2056	1671	1749	2189	2423
	63%	-35%	8%	7%	2%	-12%	16%	82%	10%	20%	33%	16%

	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03
Total	3496	3795	4670	5019	3682	2896	1785	2517	2088	1560	2042	2412
	39%	22%	28%	26%	29%	57%	9%	22%	25%	-11%	-7%	0%

HIGHWAY 120/395- TO MONO

Annually, there were huge jumps in ridership. These ridership jumps, in the second and third years, resulted from the expansion of service to providing daily runs. There is an interesting trend of the purchase of one-way tickets. Based upon the knowledge of drivers, this is due to backpackers and hikers using YARTS at the beginning or the end of their trips to return to their automobiles. Unfortunately, detailed data, for the service on this corridor during the first three years, is lacking. In the new contract with California Cruisers and Tours, it will be mandatory to collect, record, and submit monthly ridership counts to YARTS. Thus, ridership trends could be continually tracked.

CURRENT SERVICE

HIGHWAY 140- TO MERCED

Balancing the service with the budget and ridership demand, during the previous years, has resulted in the current schedule and fare structure.

For convenience, tickets and passes could be purchased at many key locations. In the fare structure, fares vary by target groups as well as by originations/destinations. Fare programs have been in place to accommodate visitors, employees, commuters, seniors, and children. There are multi-use passes that may be attractive to some visitors. For employees and commuters, there are commuter passes. Seniors and children have been given discount rates. With each paid adult ticket, a child (16 years old and younger) has ridden free. Another notable program, that has recently taken effect, was the 50 percent discount on Merced County's transit system, "The Bus," for YARTS ticket holders. Experiments have been conducted to optimize fares to both market the service and maximize the farebox revenue, used to help subsidize the operating costs. Since the task of balancing of service is continuous, the fluctuations of fares should also be considered ongoing.

The Hwy 140 YARTS schedule focuses on certain target groups. These group-targeted runs, as shown, include runs for visitors (3 In/4 Out), AMTRAK riders (1 Roundtrip), employees (2 In/1 Out), and commuters/Merced College students (1 Roundtrip). Also, the service adjusts to correspond to seasonal and weekend demands.

HIGHWAY 120/395- TO MONO

Tickets can be purchased by reservations, calling the toll-free number, or on the buses from the bus drivers. In the fare structure, fares vary by target groups as well as by originations/destinations. Seniors and children have been given discount rates.

The Hwy 120/395 YARTS schedule identifies the service runs focus on day trips for visitors. The service also adjusts to correspond to climatic conditions, and to seasonal and weekend demands. YARTS will closely monitor the service provided, revise service to improve efficiency and meet public demand, and proactively market the service.

California Cruisers and Tours provides for one (1) run per day for this contracted service. From the beginning of the season through June, the runs are provided on weekends. Starting July 1, runs are available daily through September 2. Starting September 7, the weekend-only service returns until September 29.

EVALUATION OF SERVICE

PERFORMANCE MEASURES

The previous 2001 Short-Range Transit Plan (SRTP) for YARTS included a tabular listing of standards, performance measures, used to evaluate the transit system. The following discussion describes the system’s weaknesses and strengths, where the system is meeting goals and objectives, and where improvements are needed.

1. Provide increased mobility in the Yosemite Region.

YARTS has been providing fixed-route transit service for the counties of Mariposa, Merced, and Mono, targeting visitors, employees, college students, and commuters. Continuous efforts have been made to coordinate the service with other service providers, including AMTRAK, “The Bus” (Merced County Transit), and other interstate transit service at the Merced Transpo Center. There is continuous effort to improve communication with Greyhound to better coordinate the connectivity of services.

2. Provide effective service.

2a. Provide convenient transit service.

- *Transit travel < 1.25x the equivalent auto trip during peak travel hours.*
 Along Highway 140, YARTS takes approximately 3 hours to travel from Merced to Yosemite. Transit travel is less than 1.25 times the peak auto trip time (~ 3.6 hours), as shown in Table 6.

TABLE 6 – HIGHWAY 140 AUTO VERSUS TRANSIT TIME
 Hwy 140

AUTO TRIP TIME:		TRANSIT TIME:	
MapQuest	2Hr 23Min	Minutes	180
Hours	2.38	Hours	3.00
Minutes	143		

1.25 x PEAK AUTO TIME:	
Minutes (Above)	143
Peak Delay Time	30
Peak Auto Time	173
1.25 x Pk.Auto	216
Hours	3.60

FROM:	TO:
710 W 16th St Merced, CA 95340-4626 US	Yosemite - Half Dome Trail Yosemite National Park Yosemite National Park, CA 95389 US
Total Distance: 78.38 miles	
Total Estimated Time: 2 hours, 23 minutes	

Along Highway 140, YARTS takes approximately 3.8 hours to travel from Mammoth Lakes to Yosemite. Transit travel is less than 1.25 times the peak auto trip time (~ 4.2 hours), as shown in Table 7.

TABLE 7 – HIGHWAYS 120/395 AUTO VERSUS TRANSIT TIME

Hwy 120/395

AUTO TRIP TIME:	
MapQues	2Hr 50Min
Hours	2.83
Minutes	170

TRANSIT TIME:	
Minutes	229.8
Hours	3.83

1.25 x PEAK AUTO TIME:	
Minutes (Above)	170
Peak Delay Time	30
Peak Auto Time	200
1.25 x Pk.Auto	250
Hours	4.16

FROM:	TO:
Mammoth Mountain Inn 1 Minaret Rd Mammoth Lakes, CA 93546 US	Yosemite - Half Dome Trail Yosemite National Park Yosemite National Park, CA 95389 US
Total Distance: 98.97 miles	
Total Estimated Time: 2 hours, 50 minutes	

- *Provide hourly runs in the peak travel hours during the peak season.*
The runs have been adjusted to focus on target groups. Expansion of this service has been limited by lack of additional funding.
- *All bus stops will be designated w/ bus stop signs, and shelter & seating where heavily used (> 25 daily boardings).*
Bus signs have marked every stop, and shelters & seating have been established at logistic locations along the routes.
- *There should be < 1 customer complaint per 5000 passengers.*
As with all people-oriented service, there were some complaints. For 2002, there were 63 complaints from the 74,651 passengers serviced by YARTS. This calculates out to be about (1:1185) 1 complaint for every 1185 passengers. Most of these complaints were due to simple misunderstandings. All of these complaints were addressed and cleared up with prompt follow-ups.
- *All buses should have bicycle-carrying capabilities.*
Buses have been equipped for carrying bicycles and, if notice was given, have accommodated for wheelchairs.

2b. Provide reliable transit service.

For the Highway 140 service, YARTS has included performance incentives and penalties in the contract with the service provider. The service provider was rewarded or penalized for on-time service, missed runs, bus cleanliness, and driver trained knowledge.

For 2002, along Highway 140, there were 42 service delays, which were the causes for 21 missed runs, as shown in Table 8. For 2003 (Jan.-May), along Highway 140, there were 17 service delays, which were the causes for 8 missed runs, also shown in Table 8. YARTS has penalized the service provider for these **performance shortfalls**. There were several times when AMTRAK run 10 was noted to run late due to late train arrivals. Fines placed do not seem to deter these service delays. This concern will be addressed with the service provider. Observation of this run will be

conducted for future years. Due to the limited amount of problems, the service provider has consistently been awarded the on-time incentives. Routine inspections of the buses and regular evaluations of the drivers have always qualified the service provider for these incentives. Continued incentives and penalties, and better communication will hopefully resolve current issues and minimize future shortfalls. Overall, the public was generally pleased with the service.

TABLE 8 – HIGHWAY 140 PERFORMANCE SHORTFALLS

2002	Hwy 140	
	Accidents	2
	Service Delays	42
	5	Service delayed due to late AMTRAK arrival.
	2	Customer service delays.
	35	Maintenance problem or Driver/Dispatch Error
	Missed Runs	21
	5	Missed due to late AMTRAK arrival.
	1	Maintenance problem
	15	Driver Error
2003	Hwy 140 Jan-May	
	Accidents	0
	Service Delays	17
	5	Service delayed due to late AMTRAK arrival.
	2	Customer service delays.
	10	Maintenance problem or Driver/Dispatch Error
	Missed Runs	8
	5	Missed due to late AMTRAK arrival.
3	Driver Error	

Performance data was not tracked on the Highways 120/395 service.

2c. Provide safe transit service.

For 2002 and 2003 (Jan.-May), along Highway 140, there were only 2 accidents- one minor and another involving another vehicle, both without injuries. During the peak season, along Highway 140, the service has exceeded capacity several times on the outbound runs from Yosemite Valley. The Short-Range Transit Plan addresses this issue and proposes operational measures. Also, service has been delayed and cancelled due to climatic conditions that may be unsafe for transit travel. Operational data was not kept on the Highways 120/395 service.

2d. Increase service based on market demand.

Service along Highway 140 has been focused on visitors, AMTRAK riders, employees, college students, and commuters. Overcapacities exist for the Highways 140 service during the peak season. It is proposed in the Short-Range Transit Plan to increase the level of service to meet the demand placed on the system. Service along Highways 120/395 has been focused on residents and visitors. The service level is adequate for this market.

2e. Ongoing system performance evaluations.

Along Highway 140, the service provider, has been providing monthly operational reports to YARTS. This and the August 2001 on-board survey of passengers helped

YARTS evaluate the system performance and make necessary adjustments. Regular documented ride-alongs with all YARTS drivers were conducted to review customer service skills and YARTS knowledge.

On Highways 120/395, MMSA provided general ridership statistics but no fare collection data. In the contract with California Cruisers and Tours, fare accounting reports will be prepared.

2f. Promote transit use as an alternative mode.

There have been ongoing efforts to promote YARTS transit service to target groups, through marketing and workshops. Listening to public comment in workshops will provide ideas to enhance the service to make it a more attractive mode.

On the Highway 140 service, the multi-use and multi-trip passes were implemented on the summer schedule. These passes are being sold only by ticket sellers in the communities and are designed to encourage extended stays in the gateway communities. Also, child fares were changed to allow for children ages 16 and under to ride free-one child free per each paid adult. Drivers will be keeping track of the number of free children riding per run. Since the policy was implemented, there have been 2173 multi-use pass riders and 2159 free children riders in 2002-2003(Jan-May). Increased marketing and promotional efforts will be made on the Highways 120/395 service.

3. Provide efficient service.

3a. Minimize operating costs.

The operating cost has not exceeded the 2.5% inflationary increase (CPI). The Short-Range Transit Plan introduces capital investments as a way to reduce operating costs.

3b. Minimize capital costs for vehicle replacement.

The contracted service provider, being VIA for the Highway 140 service, has received incentives from YARTS to have their buses regularly serviced and maintained. California Cruisers and Tours will be receiving similar incentives for the Highways 120/395 service. YARTS does not own or maintain buses.

3c. Maximize use of state and federal funds.

All of the available funds have been utilized to sustain the service level, perform the administration, and promote the system.

3d. Provide productive service.

For 2002-2003 (Jan.-May), on seasonal average, the service was operating at 50% capacity in the peak months and at 35% capacity for the other months. Capacity exceeded 100% on outbound runs several times during the peak months.

There was inadequate detailed data to assess all the performance measures for the Highway 120/395 service. However, in the contract with the new service provider, the contractor must:

- Assist YARTS with public relations and promotional activities.
- Collect, record, and retain fares.
- Prepare and collect financial and non-financial data pertaining to the operation of YARTS transit service and provide progress reports on a monthly basis.

- Collect, record, prepare and submit to YARTS all passenger information and operation data.
- Perform routine maintenance of their vehicles.

Beyond the items considered above, farebox recovery, and congestion reduction should also be considered “performance measures.”

FAREBOX RECOVERY

HIGHWAY 140- TO MERCED

Overall, ridership has generated farebox revenue that was equivalent to 24 percent of the operating costs for the service. This exceeded the California Transportation Development Act (TDA) guideline. The guideline states that the farebox recovery must be a minimum of 10 percent for “rural” transit systems. This compliance assures eligibility of the service for TDA funding.

HIGHWAY 120/395- TO MONO

Prior to the summer of 2003, except in the second year when it received subsidy from a FTA grant, the Hwy 120/395 service was self-sustaining. MMSA provided general ridership statistics but no fare collection data. In the contract with California Cruisers and Tours, fare accounting reports will be prepared. With this fare revenue and the contracted operational cost, financial evaluations will be prepared.

CONGESTION REDUCTION

It is possible to determine the amount of congestion reduction incurred by YARTS. Congestion reduction refers to the fewer single-occupancy vehicles and to less particulate emissions.

Looking at ridership figures, based upon some assumptions regarding carloads, it is possible to estimate the amount of congestion reduction incurred by the YARTS transit system. Assumptions include dividing total riderships by a factor of 2, to correct for roundtrips, and dividing by the count per carload, 2.5 visitors/carload and 1.3 employees/carload.

For the 2002-2003 period, it is possible to determine the net amount of emission reductions using CARB’s emissions worksheet. The net amount of emission reductions equates to the difference between the service’s emissions and the emissions otherwise produced from the riders if they were using their own vehicles ($NET_{NOx/PM10} = BUS_{NOx/PM10} - AUTO_{NOx/PM10}$).

HIGHWAY 140- TO MERCED

For the years of service, from May 2000 to April 2003, YARTS has incurred a total of 47,765 fewer vehicles transversing Hwy 140, as shown in Table 9.

**TABLE 9 – HIGHWAY 140:
LESS CARS (2000-2003)**

	2000-2003
Ridership	166,677
Fewer Trips	83,339
Less Cars	47,765

For the 2002-2003 period, shown in Table 10, YARTS prevented 2.95 tons (5,894 lbs.) of emissions (ROG, NOx, PM10) from being released along Highway 140.

TABLE 10 – HIGHWAY 140 NET EMISSIONS FOR 2002

2002	Auto (lbs/yr)	Bus (lbs/yr)	Net (lbs/yr)		Auto (tons/yr)	Bus (tons/yr)	Net (tons/yr)
Hwy 140	20,365	14,470	5,894		10.18	7.24	2.95

HIGHWAY 120/395- TO MONO

For the years of service, from 2000 to 2002, YARTS has incurred a total of 1,902 fewer vehicles transversing Hwy 120/395, as shown in Table 11. (The higher divisor of 2.5 visitors/carload is used, since a majority of riders from this service are expectantly hotel clientele.)

**TABLE 11 – HIGHWAYS 120/395:
LESS CARS (2000-2003)**

	2000-2003
Ridership	5,435
Fewer Trips	4,756
Less Cars	1,902

For the 2002-2003 period, shown in Table 12, YARTS prevented 0.07 tons (142 lbs.) of emissions (ROG, NOx, PM10) from being released along Highways 120/395.

TABLE 12 – HIGHWAYS 120/395 NET EMISSIONS FOR 2002

2002	Auto (lbs/yr)	Bus (lbs/yr)	Net (lbs/yr)		Auto (tons/yr)	Bus (tons/yr)	Net (tons/yr)
Hwy 120/395	925	783	142		0.46	0.39	0.07

EVALUATION CRITERIA

To evaluate the effectiveness, efficiency, and quality of service the following evaluation criteria will be used as this plan is implemented.

TABLE 13 – FUTURE EVALUATION CRITERIA

Criterion	Quantitative or Qualitative Assessment
Service Effectiveness X Total annual ridership X Peak day vehicles removed X Seasonal vehicles removed	Quantitative Quantitative Quantitative
Service Efficiency C Cost per rider X Boardings per service hour X Subsidy required X Cost per vehicle removed	Quantitative Quantitative Quantitative Quantitative
Quality of Service C Provides a positive visitor experience X Customer satisfaction regarding: <ul style="list-style-type: none"> – comfort – storage – frequency – interpretive information – staging area quality – availability of information – accessibility – reliability 	Qualitative Qualitative
Environmental Preservation X Air quality	Quantitative

PROJECTION OF FUTURE SERVICE NEEDS

Shown in table 14, between the summers of 2001 and 2002, on Highway 140, visitor ridership has increased by 29% while employee ridership has decreased by 38%. The end of free service to employees, effective October 1, 2001, has attributed to the dramatic negative change in employee ridership during this period. With increased marketing and improved customer service, it is expected that the employee ridership will increase for future years.

TABLE 14 – RIDERSHIP TREND

<i>Visitor Ridership</i>		May-01	Jun-01	Jul-01	Aug-01	Sep-01
Total		2517	3120	3641	3980	2848
		May-02	Jun-02	July-02	Aug-02	Sep-02
Total		3496	3795	4670	5019	3682
Change (2001-2002)		979	675	1029	1039	834
%Change		39%	22%	28%	26%	29%
<i>Employee Ridership</i>		May-01	Jun-01	Jul-01	Aug-01	Sep-01
YCS		944	1610	2094	2168	1876
NPS		919	1020	1173	989	630
Other		411	500	211	174	158
Total		2274	3130	3478	3331	2664
		May-02	Jun-02	Jul-02	Aug-02	Sep-02
YCS		749	725	828	868	793
NPS		752	756	862	824	713
Other		247	226	236	237	258
Total		1748	1707	1926	1929	1764
Change (2001-2002)		-526	-1423	-1552	-1402	-900
%Change		-23%	-45%	-45%	-42%	-34%
<i>Visitor Ridership</i>	29%					
<i>Employee Ridership</i>	-38%					
<i>Avg. Ridership Trend</i>	-9%					
Conservative Ridership Projection	5%					

With increased marketing and promotions, ridership is anticipated to rise for the Highways 120/395 service.

For assessment of future system needs, ridership growth is anticipated. Conservatively, overall ridership will increase by 5% annually. If an Employee Ridership Incentive Program, where all Park employees could ride free or with significant discounts on the YARTS transit system, is provided, employee ridership could return to its earlier levels (2001), as shown in Table 15. This increase is set conservatively at 10% a year.

TABLE 15 – EMPLOYEE RIDERSHIP WITH EMPLOYEE RIDERSHIP INCENTIVE PROGRAM

	May-02	Jun-02	Jul-02	Aug-02	Sep-02
Total	1748	1707	1926	1929	1764

	May	Jun	Jul	Aug	Sep
Total	2274	3130	3478	3331	2664
	30%	83%	81%	73%	51%

2001 When Park employees rode FREE.

SYSTEM GOALS & OBJECTIVES

The following goals describe the general purpose and focus of transit services for YARTS:

1. Sustain existing level of service.

- 1.1. Provide 6 inbound / 6 outbound runs to accommodate 75,000 riders along Highway 140, and 1 roundtrip run to accommodate 3,500 riders along Highways 120/395.
- 1.2. Attain funding necessary to sustain existing level of service.
 - For 2003-2004, funds are available to provide the existing level of service. Funding needs to be identified to sustain the existing level of service for future years.

2. Increase ridership.

Historically, along Highway 140, visitor ridership has increased by 29% while employee ridership has decreased by 3%. Ridership on Highways 120/395 is expected to increase. Conservatively, predict overall ridership to increase by 5%. If an Employee Ridership Incentive Program is provided, employee ridership will increase by 10% a year, conservatively.

- 2.1. Increase visitor/resident ridership along Highway 140 by 5% a year.
- 2.2.a. Increase employee ridership along Highway 140 by 5% a year.
- 2.2.b. Increase employee ridership along Highway 140 by 10% a year, if an Employee Ridership Incentive Program is employed.
- 2.3. Increase Mono County ridership by 5% a year.
- 2.4. Increase Merced bound ridership by 5% a year.
- 2.5. Adjust level of service to accommodate ridership growth.
- 2.6. Increase inter-regional ridership by 5% a year.
 - For 2003-2004, funds are available to provide the current level of service. Funding needs to be identified to sustain the existing level of service for future years. To increase the level of service to accommodate growth requires even more funds.

3. Improve air quality.

- 3.1. Reduce the demand for parking in the Park by removing 50 cars per day entering the park.
- 3.2. Comply with the CARB emission standards by selecting the CNG fuel option by either:
 - 3.2.1. YARTS will purchase CNG buses and a fueling/maintenance facility, or
 - 3.2.2. YARTS will contract with a CARB-compliant service provider.
- 3.3. Attain funding necessary to implement capital investments.

ALTERNATIVE SERVICE LEVELS

To meet the system goals and objectives, three alternative scenarios have been prepared.

EXISTING LEVEL OF SERVICE and FUNDING

To be considered are the needs to accommodate increasing riderships and to comply with CARB standards, both of which will add to the operating cost for the service. In this scenario, if the existing level of service is maintained, it will not resolve the expected capacity problems along the Highway 140 corridor.

- If ridership remains fixed (without future growth), or if ridership increases during the off-peak months, or if ridership increases on seating-available runs during the peak months, then the existing system will be able to accommodate the service needs of the region. [Refer to Capacity Study]
- If ridership increases by 5%, as expected, a definite need for additional service, during the peak months by run, to accommodate the growing demand along Highway 140 is revealed, particularly on runs 5, 9, and 11. More service runs would be required to accommodate the expected growth. However, with planned funding to just maintain the level of service, this would not be possible. The level of service along Highways 120/395 would still accommodate for the projected growth. This option would be unable to accommodate the anticipated ridership demand. [Refer to Capacity Study]
- YARTS is beneficial in the reduction of emissions due to fewer single-occupancy vehicles used. Between 2003-2009, predicted congestion reduction for the service would be 104,496 fewer cars, approximately 48 cars/day, as shown in Table 16. This also means the net emissions (ROG, NO_x, PM₁₀) reductions of 9.6 tons (19,116 lbs.). The net emission reductions, as shown in Table 17, equate to the difference between the transit service's emissions and the emissions otherwise produced from the riders if they were using their own vehicles ($NET_{NO_x/PM_{10}} = BUS_{NO_x/PM_{10}} - AUTO_{NO_x/PM_{10}}$).

TABLE 16 – EXISTING L.O.S.: LESS CARS (2003-2009)

Hwy 140	Off-Peak		Hwy 120/395	5% ALL		2003-2009 Less Cars	Hwy 140	Hwy 120/395	System
	2000-2003	2003-2009		2000-2003	2003-2009				
Ridership	166,677	357,110	Ridership	5,435	23,012	Less Cars	96,442	8,054	104,496
Fewer Trips	83,339	178,555	Fewer Trips	4,756	20,135	# of Periods	6		
Less Cars	47,765	96,442	Less Cars	1,902	8,054	Days/Period	365		
						Days		2190	
						Less Cars/Day			48

**TABLE 17 – EXISTING L.O.S.:
NET EMISSIONS (2003-2009)**

2003-2009	Emission Reduction	
	(lbs/yr)	(tons/yr)
Hwy 140	15,724	7.86
Hwy 120/395	3,392	1.70
	19,116	9.56

Table 16.

Along both corridors, after determining the # of trips from the recorded total ridership, the number of fewer cars could be calculated for 2000-2003. Using the projected increase for this scenario, ridership (& less cars) could be predicted for 2003-2009. Refer to Appendix B.

Table 17.

Using CARB's emission reductions worksheet, the amounts along both corridors are determined for this scenario. Refer to Appendix B.

- If the funding was available (\$5,400,000), to comply with the CARB emission standards, 9 new alternative fuel YARTS buses and a fueling/maintenance facility could be purchased. The savings in operating cost, resulting from this investment, could be 24-31%, depending upon which investment strategy is chosen. If the funding was not available, YARTS would need to contract with a service provider who will be in compliance with the standards.

NEW SERVICE and ADDITIONAL FUNDING

To be considered are the needs to accommodate increasing riderships and to comply with CARB standards, both of which will add to the operating cost for the service. In this scenario, the level of service is improved to resolve the expected capacity problems along the Highway 140 corridor.

- If ridership remains fixed (without future growth), or if ridership increases during the off-peak months, or if ridership increases on seating-available runs during the peak months, then the existing system will be able to accommodate the service needs of the region. [Refer to Capacity Study]
- If ridership increases by 5%, as expected, this alternative will accommodate for this growth by adding service (3 additional runs) to supplement runs 5, 9, and 11 along Highway 140. Run 9 is currently suffering from overcapacities and requires more **immediate** action. Overcapacities would occur on runs 5 and 11 starting in **FY 2007-2008**. An additional roundtrip run, from Merced to the Park, at this period would remedy this problem. The level of service along Highways 120/395 would still accommodate for the projected growth. [Refer to Capacity Study]
- YARTS is beneficial in the reduction of emissions due to fewer single-occupancy vehicles used. Between 2003-2009, predicted congestion reduction for the service would be 112,965 fewer cars, approximately 52 cars/day, as shown in Table 18. This also means the net emissions (ROG, NO_x, PM₁₀) reductions of 11.5 tons (22,955 lbs.). The net emission reductions, as shown in Table 19, equate to the difference between the transit service's emissions and the emissions otherwise produced from the riders if they were using their own vehicles ($NET_{NOx/PM10} = BUS_{NOx/PM10} - AUTO_{NOx/PM10}$).

TABLE 18 – NEW SERVICE: LESS CARS (2003-2009)

Hwy 140	5% ALL		Hwy 120/395	5% ALL		2003-2009	Hwy 140	Hwy 120/395	System
	2000-2003	2003-2009		2000-2003	2003-2009				
Ridership	166,677	389,889	Ridership	5,435	23,012	Less Cars	104,911	8,054	112,965
Fewer Trips	83,339	194,944	Fewer Trips	4,756	20,135	# of Periods		6	
Less Cars	47,765	104,911	Less Cars	1,902	8,054	Days/Period		365	
						Days			2190
						Less Cars/Day			52

**TABLE 19 – NEW SERVICE:
NET EMISSIONS (2003-2009)**

2003-2009	Emission Reduction	
	(lbs/yr)	(tons/yr)
Hwy 140	19,563	9.78
Hwy 120/395	3,392	1.70
	22,955	11.48

Table 18.

Along both corridors, after determining the # of trips from the recorded total ridership, the number of fewer cars could be calculated for 2000-2003. Using the projected increase for this scenario, ridership (& less cars) could be predicted for 2003-2009. Refer to Appendix B.

Table 19.

Using CARB's emission reductions worksheet, the amounts along both corridors are determined for this scenario. Refer to Appendix B.

- If the funding was available (\$5,400,000), to comply with the CARB emission standards, 9 new alternative fuel YARTS buses and a fueling/maintenance facility could be purchased. The savings in operating cost, resulting from this investment, could be 24-31%, depending upon which investment strategy is chosen. If the funding was not available, YARTS would need to contract with a service provider who will be in compliance with the standards.

EMPLOYEE RIDERSHIP INCENTIVE PROGRAM

To be considered are the needs to accommodate increasing riderships and to comply with CARB standards, both of which will add to the operating cost for the service. This alternative looks at the impacts of having an Employee Ridership Incentive Program, where all Park employees would ride free or with significant discounts. An employer-established Commuter Benefits Program is such a program that offers benefits, up to \$100/month tax-free, in three different ways:

1. Employer can cover full cost, and have this cost deducted from its federal corporate income taxes.
2. Employees can reserve pre-tax income for transit expenses.
3. Employees can receive direct, non-taxable subsidy from employer, deducted from the employer's payroll taxes, to cover part of the cost.

In this scenario, the level of service is improved to resolve the expected capacity problems along the Highway 140 corridor, particularly those resulting from the Employee Ridership Incentive Program.

- If ridership remains fixed (without future growth), or if ridership increases during the off-peak months, or if ridership increases on seating-available runs during the peak months, then the existing system will be able to accommodate the service needs of the region. [*Refer to Capacity Study*]
- If ridership increases by 5%, and employee ridership increases by 10%, this alternative will accommodate for this growth by adding service (3 additional runs) to supplement runs 5, 9, and 11 along Highway 140. Run 9 is currently suffering from overcapacities and requires more **immediate** action. Overcapacities would occur on runs 5 and 11 starting in **FY 2006-2007**. An additional roundtrip run, from Merced to the Park, at this period would remedy this problem. The level of service along Highways 120/395 would still accommodate for the projected growth. [*Refer to Capacity Study*]
- YARTS is beneficial in the reduction of emissions due to fewer single-occupancy vehicles used. Between 2003-2009, predicted congestion reduction for the service would be 123,534 fewer cars, approximately 56 cars/day, as shown in Table 20. This also means the net emissions (ROG, NO_x, PM₁₀) reductions of 15.4 tons (30,845 lbs.). The net emission reductions, as shown in Table 21, equate to the difference between the transit service's emissions and the emissions otherwise produced from the riders if they were using their own vehicles ($NET_{NOx/PM10} = BUS_{NOx/PM10} - AUTO_{NOx/PM10}$).

TABLE 20 – EMPLOYEE INCENTIVE: LESS CARS (2003-2009)

Hwy 140	Employ Inc		Hwy 120/395	5% ALL		2003-2009 Less Cars	Hwy 140	Hwy 120/395	System
	2000-2003	2003-2009		2000-2003	2003-2009				
Ridership	166,677	417,366	Ridership	5,435	23,012	115,480	8,054	123,534	
Fewer Trips	83,339	208,683	Fewer Trips	4,756	20,135	# of Periods	6		
Less Cars	47,765	115,480	Less Cars	1,902	8,054	Days/Period	365		
						Days	2190		
						Less Cars/Day	56		

**TABLE 21 – EMPLOYEE INCENTIVE:
NET EMISSIONS (2003-2009)**

2003-2009	Emission Reduction	
	(lbs/yr)	(tons/yr)
Hwy 140	27,453	13.73
Hwy 120/395	3,392	1.70
	30,845	15.42

Table 20.

Along both corridors, after determining the # of trips from the recorded total ridership, the number of fewer cars could be calculated for 2000-2003. Using the projected increase for this scenario, ridership (& less cars) could be predicted for 2003-2009. Refer to Appendix B.

Table 21.

Using CARB's emission reductions worksheet, the amounts along both corridors are determined for this scenario. Refer to Appendix B.

- If the funding was available (\$5,400,000), to comply with the CARB emission standards, **9** new alternative fuel YARTS buses and a fueling/maintenance facility could be purchased. The savings in operating cost, resulting from this investment, could be 24-31%, depending upon which investment strategy is chosen. If the funding was not available, YARTS would need to contract with a service provider who will be in compliance with the standards.

SERVICE LEVELS COMPARISON

Looking the expected ridership rise and the system capacity study, only 3 runs (5, 9, 11) need to be reinforced with additional service runs. Thus, to accommodate projected ridership, 3 additional runs (1 inbound, 2 outbound) are recommended.

Table 22 Shows the Service Levels Comparison in terms of operational needs, capital requirements, and costs.

TABLE 22 – SERVICE LEVELS COMPARISON

		Existing Level of Service	New Service	Employee Ridership Incentive Program
Operations:				
	Baseline Service			
	Summer	12	12	12
	Winter	11	11	11
	Improvements			
	Summer	0	3	3
	Winter	0	0	0
Capital Requirements				
	Vehicles	9	9	9
	Fueling/Maintenance Facility	1	1	1
	Staging Areas	3	3	3
Costs				
	Capital	5,400,000	5,400,000	5,400,000
	Operating w/ Capital LNG(out-of-CA)=>CNG	594,370	686,140	686,140
	Operating wo/ Capital	786,620	908,640	908,640

Overcapacity problems would exist on runs 5, 9, and 11 during the peak months. Runs 5 and 9 are not subsidized by YARTS. AMTRAK contracts with VIA to provide service for its passengers. There should be discussion with AMTRAK and VIA to work out the solution to resolve problems on runs 5 and 9. If these problems are not dealt with promptly, then they would generate a lot of negative feedback for YARTS.

RECOMMENDATION OF TARGETED SERVICE LEVEL

Below, in Table 23, is an evaluation of how well each service level option achieves the goals of the YARTS transit system.

TABLE 23 – MEETING SYSTEM GOALS & OBJECTIVES

		Existing Level of Service	New Service	Employee Ridership Incentive Program
1. Sustain existing level of service (LOS).				
1.1.	Provide 6 In/6 Out for Hwy 140 service; Provide 1 Roundtrip of Hwy 120/395 service.	2003-2004 OK; Future years req. funding src	2003-2004 OK; Future years req. funding src	2003-2004 OK; Future years req. funding src
1.2.	Attain funds to sustain existing LOS.	Undetermined	Undetermined	Undetermined
2. Increase level of service (LOS).				
2.1.	Increase visitor/resident ridership by 5%/year.	Yes	Yes	Yes
2.2.	A Increase employee ridership by 5%/year.	Yes	Yes	Yes
2.2.	B Increase employee ridership by 5%/year, if an Employee Incentive Program exists.	Yes	Yes	Yes
2.3.	Increase Mono County ridership by 5%/year.	Yes	Yes	Yes
2.4.	Increase Merced bound ridership by 5%/year.	Yes	Yes	Yes
2.5.	Adjust LOS to accommodate ridership growth.	No*	Yes	Yes
2.6.	Attain funds to increase LOS.	No	Undetermined; Requires identification of additional funds	Undetermined; Requires identification of additional funds
3. Improve air quality.				
3.1.	Remove 50 cars/day entering Park.	Yes	Yes	Yes
3.2.	Select CNG fuel option to comply with the CARB emission standards.	Yes	Yes	Yes
3.3.	Attain funds to implement capital investments.	If funding available	If funding available	If funding available
Meet system goals and objectives.		No	Yes	Yes

*NOTE: To some degree, the schedules could be adjusted to accommodate the highly used runs. To do this, the least used run would be removed so that the bus could supplement a highly used run. The existing level of service could still accommodate growth in ridership for most of the year.

To meet the increasing demands for service, the *NEW SERVICE* option is recommended. This option will accommodate for ridership growth by providing the additional runs between Merced and Yosemite Valley.

ALTERNATIVE FUELS

DISCUSSION OF ISSUE

EPA has designated Mariposa County as an “attainment” area and Merced County as a “nonattainment” area for air quality. EPA classified Mono County (Mammoth Lakes, Mono Basin) as “Moderate” for PM-10, but this is not due to on-road mobile sources (Less than 1%, from the FHWA report titled “Transportation/Air Quality Issues in Rural Areas”). This “nonattainment” designation is given when an area has not been in compliance with the National Ambient Air Quality Standards (NAAQS). Improving air quality requires a reduction in vehicle emissions as well as in stationary sources of air pollution.

The California Air Resources Board (CARB) has jurisdiction over mobile sources of air pollution. CARB has regulated very stringent vehicle emission standards that make California’s standards tougher than the national vehicle emission standards.

In 2001, CARB targeted Public Transit Bus emission reductions in the Public Transit Fleet Rule. As stated by CARB, YARTS is subject to the Rule. This rule requires that YARTS designates an alternative fuel path, provides annual reports of fleet make-up, and complies with the fleet averages for nitrous oxides (smog precursors) and particulate matter (PM) pollutants. CARB believes that “the public transit bus regulation will achieve near-term emission reductions by requiring transit agencies to purchase new low emission buses and retrofit or re-power older, higher-emitting urban bus engines to low emitting configurations. Long-term emissions benefits are achieved through establishing more stringent new engine standards. Consequently, new bus engines with ultra-low, near zero, and zero- emissions will replace the older higher emitting engines over time.”

ALTERNATIVE FUELS STUDY

The findings of the Alternative Fuels Study, prepared by Merced County Association of Governments, will be used as guidelines for future YARTS transit service.

Alternative fuels, as defined by the **Energy Policy Act of 1992 (EPACT)**, are fuels not derived solely from petroleum. Alternative fuels can be derived from plants, chemical reactions or electrical sources. The most common alternative fuels, in use, are: Biodiesel, ethanol, hydrogen, methanol, natural gas, propane, and electricity. Additionally, there are many other newer alternative fuels (Hythane) and advanced propulsion technologies (hybrid-electric) that have promise to produce vehicles with zero or near-zero emissions, yet most are still in the demonstration phase.

The fuels, discussed in detail in the Alternative Fuel Study, are summarized below:

- X **CNG** is short for compressed natural gas and consists mainly of methane.

- X **LPG** stands for liquefied petroleum gas (which is mostly propane) and has comparable qualities to CNG.

- X **Ethanol** is made from fermented carbohydrates and is thus a renewable resource.
- X **Hydrogen** can be burned directly or used in fuel cells. It can be produced through a variety of means.
- X **Biodiesel** is produced from vegetable oils, using for example rapeseed or sunflowers.

Other cleaner burning fuels include:

- **Cleaner Diesel** can reduce emissions from existing diesel vehicles and some parameters such as low sulfur are required to enable an effective operation of advanced emission control devices.
- **Cleaner Gasoline** can refer to lead-free, sulfur-free, or reformulated gasoline (RFG).

Evaluating the fuels involves looking at local availability, costs, and compliancy with CARB standards. The following, Table 24, includes the transit fleet average requirements as well as milestone years of new engine purchases.

TABLE 24 – CARB PUBLIC TRANSIT FLEET RULE EMISSION REQUIREMENTS

	Oct-02		2004-2006		2007	
	NOx	PM	NOx	PM	NOx	PM
Emission Particulates						
Engine Certification Requirements (g/bhp-hr*)	4.8 (Fleet Average)	0.01	0.5	0.01	0.2	0.01
100% Electric	YES	YES	YES	YES	YES	YES
Hybrid Electric Vehicle AVS Capstone CNG Turbine 60 KW	YES	YES	YES	YES	YES	YES
Natural Gas (CNG or LNG)	YES	YES	NO	YES	NO	YES
Detroit Diesel	YES	YES	NO	YES	NO	YES

*gram per brake horsepower/hour

As mandated by CARB, public transit fleets must meet mandated emissions figures in the very near future. Therefore, YARTS must evaluate to determine the most cost-effective, viable means of achieving alternative fuel conversion for the transit service.

According to the information above, only 100% electric vehicles, hybrid electric vehicles with the hybrid fuel being CNG meet the emission standards set by CARB starting in 2004. It is expected that either the industry will improve CNG technologies so there is less NOx emissions or that CARB will make changes in the emissions requirements.

100% Electric ZEV buses have been in service for the last decade, yet they are very costly (\$600,000-\$2,000,000) and have mileage range as well as maximum speed limitations. Rural transit applications of 100% electric buses are very difficult due to these limitations. Electric buses are better used for inter-city transit with fixed routes that demand lower maximum speed. A combination of electric buses, HEVs or natural gas might be an option to meet the needs of a rural transit operation.

Hybrid Electric Vehicles (HEVs) use advanced vehicle technology combining an auxiliary power unit (APU), energy storage system, a controller and drive motor. The APU, a battery system, provides primary energy to the vehicle with the drive motor only used when the APU energy is insufficient. Hybrid-electric technology enables more efficient use of any fuel source whether liquid or gas. Additionally, regenerative braking has been developed to recapture energy lost during braking, thereby, increasing fuel economy. Hybrid Electric Transit buses have been developed to answer specific challenges faced by transit operators, including range, fuel economy, and primarily emissions. Currently, the only HEV transit bus that meets all three-emission milestones (2002, 2004-2006, and 2007) is the Advanced Vehicle Systems Capstone CNG Turbine bus. The cost of an AVS Capstone CNG Turbine bus is \$375,000. Due to the advance technology this bus, the manufacturer and distributor require extensive training included in the procurement package price. The initial system facility setup and training can increase the bus price to \$600,000 or more. After the initial bus procurement package, it is assumed that the price of subsequent bus purchases will be close to the \$375,000 unit price.

In keeping with the Yosemite Valley Plan, Yosemite National Park is looking to replace its currently leased Diesel fleet with new buses, for serving the Valley floor, that must be low emission, low noise, fuel efficient, reliable, and cost-effective. Expectantly, by the summer of 2005, the Park will be operating the Valley floor shuttle service with the procured 14-19 Hybrid Diesel-Electric buses. Unfortunately, due to the inability to handle uphill grades at highway speeds, these Valley-floor, Hybrid Diesel-Electric buses may not be applicable for YARTS.

Natural gas, specifically looking at compressed natural gas (CNG), is currently the most popular alternative fuel choice for transit in the San Joaquin Valley (Kings County 2002 Federal Transportation Improvement Program (FTIP); Tulare County 2002 FTIP; Stanislaus County 2002 FTIP; Kern County 2002 FTIP; Fresno County 2002 FTIP; San Joaquin County 2002 FTIP). CNG is a good source of fuel due to its high-octane fuel rating and market price below that of gasoline and diesel in California. However, CNG requires 3.94 times the amount of one unit of gasoline to produce equal amounts of energy. CNG vehicles have a range 40–50% of the gasoline equivalent, therefore, CNG fueled vehicles require more fuel to travel the same distance as other vehicles. Natural gas is available in California by two primary means. It could be extracted from an extensive, existing network of pipelines throughout California, and compressed for usage. Or, liquid natural gas could be trucked from out-of-state and eventually in-state sources, and compressed for usage. CNG is a stable, long-term abundant domestic resource.

If YARTS purchases alternative-fueled vehicles to comply with CARB standards, CNG would be the recommended option. CNG is the cleanest, most economical, serviceable, and available alternative.

CAPITAL INVESTMENT OPTIONS

Given the available funding, there are some options to making capital investments for the YARTS transit system. These options are dependent upon the type of cleaner fuel used and the location of the facility.

- **9-Cleaner Diesel buses and a Diesel fueling/maintenance facility, or**
- **9-CNG buses and a LCNG fueling/maintenance facility, or**
- **9-CNG buses and CNG conversion of Merced County Transit’s fueling/maintenance facility.**

Utilizing the ridership projections, comparisons could be made between the (3) options and the current service structure, focusing on fuel costs and overall operating costs. The assumption is that YARTS purchased and owned the buses and facility.

DIESEL BUSES & FUELING/MAINTENANCE FACILITY

If YARTS could purchase diesel-engine buses and the facility to service the system, then this option would require the least amount of capital funds. This option will show the savings associated with contracting for just the service. For the existing level of service, with this option’s capital, YARTS would save \$117,339, 15% in operating cost. For the projected level of service (additions of **3** runs along Hwy 140 in the summer months), YARTS would still save \$132,389, 15% in operating cost. [*Refer to Capital Investment Analysis*]

This option does not comply with the CARB regulations.

CNG BUSES & LCNG FUELING/MAINTENANCE FACILITY

If YARTS purchases CARB-compliant CNG buses and establishes a facility in Mariposa/Park, several items would be considered. LNG would need to be transported from “out-of-state” sources, or (in the future) from “in-state” sources. This LNG would be stored in tanks at the facility. The facility would have compression utilities to produce CNG fuel from LNG for the transit system. This option will result in savings from contracting for service only and from the reduced cost for fuel (directly related to operating cost). For the existing level of service, with this option’s capital, YARTS would save: “Out-of-state”- \$192,249, 24% in operating cost; “In-state”- \$245,583, 31% in operating cost. For the projected level of service (additions of **3** runs along Hwy 140 in the summer months), YARTS would still save: “Out-of-state”- \$222,499, 24% in operating cost; “In-state”- \$283,908, 31% in operating cost. [*Refer to Capital Investment Analysis*]

This option does comply with the CARB regulations, and the facility location is desirable to Mariposa County and the Park.

CNG BUSES & CONVERSION TO CNG FUELING/MAINTENANCE FACILITY

What's required for this option are having access to a major natural gas line and having the ability to compress the tapped gas. Merced County Transit has access to these lines and owns a facility that could be converted to supply CNG. The conversion of the facility requires less funding than building a new facility. For the Highways 120/395 service, if CNG is to be employed, usage of ALT's (Applied LNG Technologies) mobile LCNG trailer or some sort of infrastructure would be required for refueling.

This option will result in savings from contracting for service only and from the reduced cost for fuel (directly related to operating cost). For the existing level of service, with this option's capital, YARTS would save \$242,148, 31% in operating cost. For the projected level of service (additions of 3 runs along Hwy 140 in the summer months), YARTS would still save \$279,952, 31% in operating cost. [*Refer to Capital Investment Analysis*]

This option does comply with the CARB regulations. The facility location may be undesirable to Mariposa County and the Park.

CAPITAL INVESTMENTS

Given the available funding, YARTS has to pursue capital improvement projects to abide by the forthcoming emission reduction. The programs include buying clean-air transit vehicles, and procuring a fueling/maintenance facility. The cost of these components would be as follows:

LCNG Fueling and Maintenance Station:	\$1,000,000
Facility setup:	\$ 600,000
9 CNG buses:	\$3,800,000
For a total of:	\$5,400,000

CONCLUSIONS

CARB has indicated that YARTS will be required to meet their emission standards. In order to comply, YARTS needs to look into Alternative Fuels. Either YARTS needs to invest in new capital, or YARTS needs to contract with a service provider who will be compliant with CARB standards.

YARTS has applied for congressionally sponsored funding to purchase new cleaner buses for the YARTS service. In addition to the buses, the proposal also includes a maintenance and fueling facility. If this funding is awarded, YARTS will purchase the vehicles and construct a fueling and maintenance facility.

The facility could fuel other transit system buses, school district buses, County fleet vehicles, solid waste trucks, freight trucks, postal trucks, and personal vehicles. YARTS should look into entering a Public-Private Partnership with these entities to consolidate funding and make this capital investment more economically feasible.

5 YEAR ACTION PLAN

SERVICE PLAN

This section will make recommendations for the future of the YARTS system. All recommendations focus on supporting the goals of the YARTS Transit Joint Powers Authority. These recommendations will improve the transit service and make YARTS an attractive mode of transportation into Yosemite National Park. The following operational improvements can be made to the YARTS transit service.

OPERATIONAL IMPROVEMENTS BY YEAR BY CORRIDOR

HIGHWAY 140- TO MERCED

This corridor provides an opportunity to provide transit service to the visitors as well as the employees that travel into the park each day. Currently, peak season service on Highway 140 is 6 roundtrips on weekdays and 5 roundtrips on weekends. This includes a Merced bound run, from Mariposa to Merced, which serves students and commuters going to Merced College and to jobs in the Merced area. It is assumed that the existing level of service will continue and be added to, as demand warrants. Based on Demonstration Project ridership information, there is a high demand for service going into Yosemite in the morning and leaving Yosemite in the evening. Employees are using the very early morning runs, which arrive in Yosemite Valley before 8:00 am, and both visitors and employees are using the evening runs. The following service increases are recommended to accommodate projected ridership and provide a convenient and flexible schedule for employees and visitors. Improvements will only be implemented if funding is available.

- 2004/05- Add 1 additional daily run (1 Out) in the summer months.
- 2007/08- Add 2 additional daily runs (1 Roundtrip) in the summer months.

HIGHWAY 120/395- TO MONO

This corridor will be monitored in the forthcoming year. No change in service is expected for the planning period. However, annual evaluations of the service will be conducted to assess any need for change.

OTHER SERVICE IMPROVEMENTS

- Coordinate YARTS schedules with other inter-city services such as Mariposa County Transit, Inyo Mono Transit, Carson City Ridgecrest Eastern Sierra Transit (CREST), Greyhound, AMTRAK, and Merced County Transit- “The Bus.”

CAPITAL PLAN

As part of the YARTS Short-Range Transit Plan, YARTS would like to undertake several capital improvement programs, if funding is available. These programs include:

- **Constructing staging areas for visitor and employee parking.**
For the staging areas, YARTS requires \$1.5 Million for construction. This project proposes to establish staging area sites that will provide free parking for people riding the YARTS transit service. Staff needs to complete the engineering and right-of-way acquisition prior to construction.
- **Buying 9 CNG buses.**
For the 9 CNG buses, \$3.8 Million would be required.
 - **Nine vehicles required for the transit service.**
Five forty-five passenger and two twenty-five passenger buses will provide daily transit service between the Yosemite National Park and the communities of El Portal, Midpines, Mariposa, Merced AMTRAK depot, and the intermodal transit facility (the Merced Transpo Center) in downtown Merced, CA. One forty-five passenger bus will provide daily transit service between Mammoth Lakes, June Lake, Lee Vining, and Yosemite Valley. This service will be provided during the summer season as weather and the passage of Tioga Pass permit. One forty-five passenger bus will be used as a spare.
 - **Capital investment in vehicles will reduce operating costs.**
If capital investments were implemented within the SRTP period, how would that affect the contracted service costs? YARTS would no longer be paying for the usage of the contractor's buses and facility. Rather, YARTS would be contracting for just running (dispatchers, drivers) and maintaining (mechanics, servicemen) the service.
 - **Comply with air quality standards.**
Shifting YARTS servicing away from existing diesel buses to CNG buses would slightly improve air quality, since CNG produces the lowest tailpipe emissions.
- **Procuring a CNG fueling and maintenance facility.**
If YARTS used alternatively fueled vehicles, YARTS would need to construct a CNG fueling and maintenance facility, or retrofit an existing facility to handle CNG needs. The facility should be customized to the existing fleet size with room for expansion. For the fueling and maintenance facility, approximately \$1.6 Million would be required. Possible benefits include:
 - **Service YARTS vehicles, and possibly other entities.**
A fueling facility owner can allow fee-based access to the public generating income and reducing the fueling facility capital costs expended. A CNG fuel facility will place YARTS and other users in a good position when hydrogen fuel technology becomes available. Hydrogen fuel utilizes the same fueling components, therefore, a less expensive conversion to hydrogen will be required if a CNG fuel station exists.
 - **Capital investment will reduce operating costs.**
With a CNG fueling and maintenance facility, YARTS could control long-term costs more effectively with bypassing the middle fuel supplier. Also, it is anticipated that there would be more competitive bids for the service from various transit operators because they would not have to set up their own facility.

MARKETING PLAN

The goals and objectives of the Short Range Transit Plan (SRTP) for YARTS call for 5% annual increases in ridership. This marketing element proposes actions to achieve those ridership goals.

In 2002, YARTS carried approximately 59,200 riders of all types and on all runs. The 5% proposed annual increase in ridership would require a minimum of 2,960 new riders, in calendar 2003, and a total increase of 16,354 new riders, by the final year of the plan.

For the purposes of this element and the strategies that will be proposed to achieve ridership goals, four categories of ridership have been defined:

- **Highway 140 Visitors**
- **Highways 120/395 Visitors**
- **Yosemite National Park, Concessionaire, and Other Park Bound Employees.**
- **Work Trip and Student Commuters and Other Mariposa Base Riders to Merced Destinations.**

Each category will require a different set of strategies to achieve the proposed ridership increases.

A limited marketing budget for YARTS will mean that the marketing efforts during the 5-year SRTP will require creativity and ongoing partnerships with the lodging and tourism industry, Yosemite National Park, other Park employers, and local, state and federal partners. Many positive signs of the potential for such partnerships currently exist and will be pursued during the life of the plan.

HIGHWAY 140 VISITORS

For use in this plan, a visitor is defined as a rider who lives outside the service area and is here for a short time for recreational purposes. In calendar year 2002, YARTS carried 35,892 visitors on the Highway 140 Corridor. That figure represented an increase of 7,547 riders over the previous year and a 26.6% increase in visitor ridership.

For the first six months of calendar 2003, visitor ridership was down 2.4%. The monthly fluctuations in ridership, however, prevent being able to predict a trend in either direction at this time.

Visitor ridership is extremely seasonal and fairly closely follows visitation numbers for the Park, with the four summer months of June through September representing 47.98% of the annual ridership total. Table 25 shows monthly visitor ridership and park visitation percentages for 2002.

**TABLE 25 – VISITOR RIDERSHIP
& PARK VISITATION**

Month	Visitor Ridership (%)	Park Visitation (%)
Jan	4.7	3.4
Feb	4.9	4.2
Mar	6.1	5.6
Apr	6.8	8.8
May	9.7	13.0
Jun	10.6	15.3
Jul	13.0	17.0
Aug	14.0	12.7
Sep	10.3	8.9
Oct	8.1	4.5
Nov	5.0	3.4
Dec	7.0	3.2

Seating capacity exists on the Highway 140 Route for additional growth in ridership. Even during the peak season, most inbound and outbound runs have capacity available for more ridership. There is, however, growing stress on one outbound run from the park. At the end of the day, on weekdays during the summer, when employees of the park are headed home, AMTRAK customers and day visitors are also outbound. The convergence of these needs takes Run 9 to beyond capacity with some frequency, during the summer months. Those who might be left behind by a full bus on Run 9 create greater demand on Run 10, which does regularly have capacity. Runs 9 and 10 leave Yosemite Lodge at 4:15 and 4:35 PM, respectively, so there is not a great delay for overflow riders from Run 9. Success in promoting visitor ridership during the peak months of summer is likely to further impact these runs.

The proposed 5% increase in ridership assumes that the current level will be maintained as well. As the current level of ridership is not a given, ongoing marketing will have to be done that promotes ridership even during the peak season. Thus the marketing efforts are two pronged; maintain the current level of ridership year round and promote ridership during times when greater seating capacity is available, i.e. during non-peak months, to achieve the projected 5% rider increase.

MAINTAINING WHAT WE HAVE

A significant amount of current visitor ticket sales come from the lodging industry in Mariposa County. Working with all ticket vendors, but more particularly the lodging industry, including those, which are not ticket vendors, there seems to be potential for increased ridership through greater exposure of literature about YARTS to travelers and greater understanding by the lodging employees of YARTS. This will require the cooperation of the lodging industry.

Over the next year, an effort will be made to put YARTS promotional materials in every room along the Highway 140 Route. Additionally, a continual effort to keep lodging staff well informed about YARTS and supplied with current information regarding rates, run schedules, connections, etc., will be made. This will be done through providing them with an informational

manual that could be kept conveniently located in each lodging business place for any employee to access easily. The more these important people know about and understand YARTS, the greater the opportunity is to encourage ridership. This is planned for a 12-month effort and would be handled by marketing staff. Lost, destroyed and outdated materials mean that this will have to be an ongoing effort to maintain the same level over the life of the plan.

A significant number of ticket sales at the California Welcome Center in Merced come from Greyhound Bus passengers. Misaligned schedules between the Greyhound service to Merced and YARTS may offer some potential for increases. Currently, Greyhound customers coming out of San Francisco arrive in Merced too late to make a timely connection with YARTS. Staff has been in contact with the Greyhound Regional Sales Manager for Northern California and Nevada, seeking to make the fit between the two systems more compatible. Greyhound has expressed interest in seeing a better working relationship. Staff will continue to work with them to see if it is possible to improve the connectivity between the two systems. This will be an ongoing effort by marketing staff and will require the continued cooperation of Greyhound personnel as well.

An annual survey of riders has indicated a very positive response from visitors. Such comments as “very comfortable”, “very economical”, “timely schedule”, and “keep up the good job”, make staff believe that the current service is providing what the customer wants and should be continued. One survey of riders will be conducted during each fiscal year of the plan life to ensure that the level of customer satisfaction is maintained.

Travel writers offer the potential for positive exposure of YARTS to a worldwide audience in newspapers and magazines. Typically, these writers visit tourist destinations and then write articles about their experience for publication in major media outlets. In the past, opportunities to host travel writers on YARTS have come through cooperating with Yosemite Concession Services (YCS) and with major lodging operators. These avenues will continue to be exploited. Working with YCS and major lodging operators, access to the park via YARTS and information about YARTS will be provided to travel writers, whenever possible. Additionally, staff will try to attract these writers to YARTS independently through direct contact. This will be an ongoing effort for the life of the plan.

Tour buses coming to the area are currently providing significant ridership on YARTS. The buses use local lodging as a drop off destination and then the passengers use YARTS to access the park. This arrangement not only benefits YARTS, but the lodging industry as well. Staff will stay in contact with lodging to encourage greater use of this vehicle for increased ridership. This will be an ongoing effort for the life of the plan.

On a daily schedule, Scenic Airlines flies into Merced airport from Los Vegas, bringing tourists to the Yosemite Area. Scenic Airlines has previously agreed to put Yosemite tourist information on their planes, including information about YARTS, which is provided by YARTS staff. Staff will continue to maintain this relationship with Scenic Airlines and seek other cross-promotional opportunities.

USING THE AVAILABLE CAPACITY FOR INCREASED RIDERSHIP

The greatest potential for riders is during the peak tourist season. However, the greatest rider capacity on the YARTS system exists in the non-peak tourist months of October through April. Increases in ridership during these months will cause the least stress on the capacity of the system and could increase farebox revenues without generating the need for additional operating expense. In an effort to use some of the unused capacity to increase ridership, YARTS staff will implement the following strategies.

Currently, the connectivity between YARTS and the Yosemite Concession Services (YCS) bus to Badger Pass for skiers is not ideal. Early runs to the park do connect with the ski bus, but skiers must currently leave the ski slopes about 1:00 PM if they are to catch a YARTS bus out of the park. For most skiers, that is too early to leave the slopes. The later bus from Badger arrives at Yosemite Lodge too late to connect with YARTS. Staff will work with YCS to see if improvements can be made to the schedules of both systems to increase the potential for ridership during the skiing season.

Last year, promotions offering reduced fares to specific groups and/or organizations, during the off-season, saw some success. Targeted groups were organizations that have been supportive of Yosemite National Park, such as the Yosemite Association. The efforts not only saw some ridership from the promotion, but YARTS received good exposure in the organization newsletters. Staff will continue this effort and broaden the scope of groups that are offered the special promotional fares. Examples of such groups might include business groups, senior's organizations, church groups, photography clubs, and school groups. This will be an ongoing effort throughout the life of the plan.

Special promotions in Yosemite National Park, such as the Bracebridge Dinners, Chefs Holidays, and Vintners' Holidays, offer off-season potential for YARTS ridership. These events are typically held during non-peak times of the year, when the greatest capacity exists on YARTS buses and at Park lodging. Staff has had contact with YCS regarding the possibility for joint promotion, promoting the event, and using YARTS to attend, for these events. The idea was well received. An ongoing effort will be made to tie these activities together with using YARTS for transportation. This will require the cooperation of YCS.

The National Park Service also hosts a large number of activities in the park throughout the year. Wherever possible, staff will coordinate with NPS to encourage participants to use YARTS to access the park for these events by including YARTS information in reservation packets.

HIGHWAY 120/395 VISITORS

This service corridor differs greatly from the Highway 140 Corridor. Mono County is rural in nature and currently Inyo Mono Transit provides regional public transit services throughout Mono County. It operates both intracommunity Dial-A-Ride services and intercommunity routes between Mono County communities and north to Carson City and directly to the Reno Airport. However, most who go there do so in their own vehicles. The lack of transit-dependent travelers to the area presents a special challenge to YARTS marketing efforts.

Service levels also differ. The service runs only when Tioga Pass is open (typically Memorial Day through October 1), and there is only one round-trip run daily (Weekends only from Memorial Day to July 1, and Labor Day to October 1). The brevity of the operating season, for this service, also creates challenges to staff in the timely dissemination of information in the area.

Each year of service on this route has seen growth in ridership. In 2000, riders totaled 546. In 2001, ridership rose to 1,667, and in 2002, it reached approximately 2,500 (2,384 plus June figures, which are not available). The change in ridership between 2001 and 2002 amounted to 833 new riders and an approximately 50% increase.

On this route, tickets are sold through reservations and by the drivers only. Lodging does not participate directly in the ticket sales. Having the reservation system allows the contractor to use a bus most correctly sized to the demand each day. California Cruisers and Tours, the current contractor, uses two sizes of buses, 22 and 55 passenger, and size the bus to the known reservations.

This route has virtually no employee/commute ridership.

In establishing capacity on this particular route, it is appropriate to use the capacity of the larger bus only to calculate total capacity for the daily runs and for the season. Making the calculations in that way, capacity for the 2003 season would be 55 per day and 4,290 for the season. Currently, there is capacity on all runs with the weekday runs having the most available. Where the majority of riders on the Highway 140 Corridor are round-trip customers, this is not true on the eastern runs.

A unique feature of the Highways 120/395 service is the number of riders who use the system for only one-way trips. Mammoth Mountain Ski Area, the previous contractor for YARTS on this route, estimated that in 2002, as many as half of all riders were one-way riders. These riders are primarily hikers/backpackers who are using YARTS to access the high country trailheads from Mono County and from the Yosemite Valley floor.

During the summer, the Tioga Pass gate into Yosemite National Park has the highest vehicle count, among the park's five gates, for three of the four months it is open (July, August, and September). Based on the gate counts, significant potential for YARTS ridership seem to exist. Members of the community agree and believe that the greatest potential exists in getting information out to the community, particularly the lodging industry.

To achieve a 5% increase in ridership annually, the following action items will be implemented.

As on the Highway 140 Corridor, staff will work to get YARTS promotional materials into every lodging room possible in the service area. There are approximately 4,000 such rooms in the area. Also, as with the Highway 140 Corridor, staff will distribute YARTS information to lodging personnel, making sure they know how to use it and keep it updated regularly. Both of the above action items will require an ongoing effort to be effective. Because of the travel distances involved, staff will be the lead on this work, but will seek the cooperation of the Mono

County Economic Development Office, whenever possible, in establishing contacts and distributing information. This is anticipated to be a 12 to 18 month effort.

Since such a large number of riders use the system for one-way trips for hiking and backpacking purposes, an effort will be made to make the availability of YARTS known to that specific public. Agencies, such as the U.S. Forest Service, that provide permitting for hiking activities will be asked to cooperate by including YARTS information with packets they disseminate by mail and in person. Additionally, avenues will be sought to get YARTS information to sporting goods retailers that feature hiking activities as well as periodicals that are directed at that audience. A search for travel writers for this activity will also be made.

The Mammoth Lakes Municipal Airport is currently proposed for expansion to allow its use by larger commercial aircraft. Plans call for beginning of this use in the summer of 2004, but that timing is in question. Should the plan be fully implemented, staff will work with air service providers to see where opportunities for promotion of YARTS may exist.

Staff will use the media in Mono County (radio and newspaper) to keep YARTS in front of the public whenever there is something news worthy to talk about.

All of these efforts would be ongoing throughout the life of the plan.

YOSEMITE NATIONAL PARK EMPLOYEES

For clarity, employees mentioned in this section shall refer to employees of the National Park Service (NPS), employees of concessionaires, and others working inside the park boundaries.

When YARTS first began, Yosemite National Park employees were allowed to ride the system free. That use was not limited to commute needs. It allowed employees to travel anywhere on the system and for any reason. Beginning in October 2001, employees were required to pay for their rides. With that change, employee ridership dropped significantly (25-45% depending on month and season).

Since that change, commuter/frequent rider passes have been made available to all Park employees, which offer significant savings off regular daily fares. The National Park Service further offers employer-sponsored vouchers to help pay for the passes. In many cases, this subsidy covers nearly the entire cost of the passes. YCS employees do not have a similar program.

Employee ridership fluctuates monthly, but has been on a downward trend consistently for the past year. Employee ridership is detailed in Table 4 on Page 8 of the SRTP.

Two early runs provide the bulk of the transport of employees (Run 1 at 5:57 AM and Run 2 at 6:29 AM, both from Mariposa). Sufficient capacity exists on both of these runs to accept a 5% increase in ridership. Increases in employee ridership, however, will lead to further stress on the outbound run 9 during the summer months. The more employees that are taken into the park in the morning, the more that will need to exit in the afternoon.

Achieving a 5% increase in ridership in this category will prove to be much more challenging.

YCS has offered to encourage ridership by their employees and to make YARTS information available to their employees at all of the places where employees congregate. Staff has provided the necessary information to YCS. YCS also has agreed to insert YARTS information in the pay envelopes of employees. That information is being prepared. Additionally, the YCS electronic newsletter, “Moments of Truth” has been made available to disseminate YARTS information. A series of messages stating the advantages of YARTS use from different perspectives are being created and will be put into use when ready. These efforts will continue throughout the life of the plan and so long as YCS is willing to provide this access to their employees.

The Yosemite National Park (NPS) management team is supportive of YARTS and has indicated a willingness to promote the use of YARTS by their employees. They have offered YARTS use of the electronic newsletter, “Daily Report”, which goes to all of their employees, as one vehicle to that end. A series of messages listing the benefits of using YARTS are being crafted and will be put into use when completed. Additionally, the current Park Superintendent has indicated that he is willing to personally promote the use of YARTS. This effort, too, will be an ongoing effort throughout the life of the plan and will require the ongoing cooperation of park management.

The SRTP also talks about generating a 10% increase in employee ridership if an incentive plan is instituted. The history of the employee use of YARTS suggests that economics are definitely a factor in employee ridership. Depending on the substance of the incentive, ridership could reasonably be expected to increase with very little marketing effort other than making sure that employees are aware of the incentive. YARTS staff and park management would share in this responsibility.

LOCAL & MERCED BOUND FROM MARIPOSA COUNTY

What was once referred to as the “College Run” is also currently providing commute service to Mariposa County residents who go to school and/or work in Merced County or have business there. Seven stops in Merced make commuting to Merced convenient for workers and other Mariposa residents. A stop at the Merced Transpo Center allows for connection to the countywide “The Bus” transit system and Greyhound. Another stop at the Amtrak station allows for travel by rail. The Merced Airport stop provides a means to connect to air travel. Other stops provide easy access to government offices, major shopping and, of course, Merced College.

One early run is aimed at the Mariposa/Merced commuters. Run 7 leaves the Bug Hostel, in Midpines, at 6:30 AM (weekdays only), arriving in downtown Merced at approximately 7:45 AM, having already stopped at Merced College. This run is currently made with a 21-passenger bus and runs at an average of about 26% of capacity. On occasion, it does, however, run with as many as 16 and 18 passengers. In either case, additional capacity is available by simply using one of the larger 47-passenger buses, if capacity becomes tight on the smaller bus.

Commuter/frequent use passes are available to riders at a reduced price off regular fare structures. One pass is monthly and is aimed at regular riders. The other is a pass aimed at regular, less frequent riders such as students and shoppers.

Local advertising is going to be needed to get the YARTS story out to the traveling public in Mariposa County. Periodic testimonial ads, and ads showing schedules and fares in Mariposa County papers have been used in the past and will be continued. Newspaper articles will be pursued with both local newspapers when newsworthy information is available.

Presentations by YARTS staff at service clubs and other community organizations will offer needed exposure for the system. The goal is to have at least one presentation per month, for the first year and when possible thereafter.

The University of California- Merced (UCM) has expressed interest in using YARTS. They wanted YARTS to transport students from their Sierra Nevada Research Institute to facilities in the mountains. The school is scheduled to open in 2004. No specifics are currently available, but staff will continue to maintain contact with UCM to facilitate this new use. It is also possible that UCM staff and students may end up living in Mariposa County and commuting to school. With the school opening in 2004 and starting small, the potential for this is unknown at this point, but staff will look for opportunities to expose UCM staff to YARTS existence. The connectivity of YARTS to “The Bus” in Merced could make this a possible growth area without any additional stops in Merced at this time.

GENERAL PROMOTION

Some of the marketing efforts do not fit easily into any one of the above categories, but should be mentioned.

CALTRANS maintains low power radio stations aimed at travelers on all highways entering the park. Highway Advisory Radio (HAR) stations typically warn of road closures and hazards, but YARTS has been allowed to put messages on these stations that talk about using YARTS. Staff writes these messages and keeps them updated. This will continue throughout the life of the plan, so long as CALTRANS allows this use.

A prominent ad on the home page of the Yosemite.com website provides a link to YARTS information to potential travelers. Depending on the season, this web site generates 35,000 to 65,000 hits per month. This ad costs \$300 per month at current rates and should be renewed annually during the life of the plan.

The YARTS website (www.yarts.com) is maintained by staff with current information about schedules, rates, and other information necessary for potential riders to make ridership decisions. Phone numbers for personal contact with YARTS contractors on both routes are also there. Additionally, an e-mail link, “Contact YARTS”, provides potential customers a way to get information electronically. YARTS staff responds to these messages.

Not a necessary, but important part of the marketing plan, the site also hosts information on meetings, agendas, minutes, documents and monthly reports by contractors.

GEMCAR ACQUISITION

Recently, through the Superintendent’s Office of Yosemite National Park, local jurisdictions including Mariposa County, Merced County (cities and county), and YARTS were offered the opportunity to receive several GEMcar “street-legal” electric vehicles. The battery-powered vehicles resemble two-seater golf carts with a pick-up truck bed. According to their specifications, the vehicles have a range of 35 miles per battery charge and can travel at 25 to 35 miles per hour. These GEMcars could be rented to run errands or to provide travelers with more dining and lodging options. Prospective usage of these vehicles will enhance travelers’ experience and flexibility, while promoting clean air resources and not impeding further transit service.

ORGANIZATION PLAN

JPA ORGANIZATION

In 1999, to implement the demonstration transit service in the greater Yosemite Region, a joint powers authority (JPA) was formed, made up of the member counties of Mariposa, Merced, and Mono. A three member Board of Commissioners governs the JPA. A county supervisor is appointed to the board of commissioners from each of the above-mentioned member counties. The JPA, known as the Yosemite Area Regional Transportation System (YARTS), determines transit plans, operating and capital budgets, transit fare structure, and capital improvement programs.

EXPANSION OPTIONS

YARTS is a flexible transit service that could expand to other areas if the demand for transit was sufficient to warrant service and the support was there locally to initiate service. Areas of potential expansion on the westside of the Sierras include Fresno County, Madera County, and Tuolumne County. Expansion opportunities on the eastside of the Sierras include servicing more areas in Mono County and expanding service into Inyo County. Staff will monitor the desire to expand the service area and notify the YARTS JPA of the opportunities to expand as they arise.

STAFFING OPTIONS & COSTS

There are organizational structure options that the Board can consider:

- Contract through local agency (MCAG) (existing staffing arrangement)
- Obtain staffing from member county
- Contract with private provider for administrative services
- Hire staff directly

YARTS contracts with the Merced County Association of Governments (MCAG) for staffing to administer and manage the transit service. The contracted activities are provided on an as-needed basis based on an approved budget and include the following tasks:

- Accounting and billing functions for the JPA

- Writing grant applications
- Administration and management of contract
- JPA support services- including meetings, agendas, event scheduling, press releases, and meeting facilitation
- Public education providing bus related literature including schedules, route maps, and pamphlets
- Marketing
- Transit planning
- Public workshops
- Service evaluation

Based on the workload by year, the contract for administration by MCAG is projected to be about \$100,000 per year and this includes direct costs such as marketing.

YARTS could select one of the other three member counties to provide staffing, such as Mariposa County, Merced County, or Mono County.

YARTS could contract with private firm for administrative service. However, this is very similar to the arrangement that the YARTS JPA has with MCAG now and may be more costly. Given the rough \$150 per hour figure, a consultant would have about 55 hours per month to dedicate to YARTS. This may be sufficient but would not allow any funding be used for marketing.

Over time, it is anticipated that YARTS will be outgrowing a part-time, non-exclusive staffing structure. At that time, it is suggested that YARTS hires its own staff. The staff structure may included the following:

- Executive Director/ Transit Operations Manager/ Planning/ Marketing Manager
- Administrative Assistant

In addition to the exclusive staff, YARTS would also need to acquire office space and other supporting equipment such as computers, printers, copiers, phones, etc. It is estimated that with staff salaries, benefits, rent, equipment, and utilities, it would cost about \$180,000 to have YARTS dedicated staffing. This estimate does not include any direct cost such as marketing.

STAFFING RECOMMENDATIONS

If funds are available on a long-term basis, YARTS should provide its own staffing. To meet the increasing demands of YARTS, full time employees need to be hired. Staffing recommendations have been listed previously.

FINANCIAL PLAN

FUNDING OPTIONS

There is always a pressing concern to obtain steady sources of funding for the YARTS transit service. For the upcoming years, there are some potential funding sources:

- Farebox Revenues.
Capacities on the transit service annually hover between 25-35%. If the capacities could be increased, the farebox revenue could be increased, while the operating costs remain the same. In addition, fares can be raised to generate more revenue.
- Transportation Equity Act for the 21st Century (TEA-21):
 - Congestion Mitigation and Air Quality (CMAQ) Funds.
The CMAQ program is authorized by TEA-21 to fund transportation projects and programs in “nonattainment” and maintenance areas that would reduce transportation-related emissions.
 - Surface Transportation Program (STP) Funds.
The STP program is authorized by TEA-21 to provide flexible funding for transit capital projects. Currently, these funds are exchanged for state only dollars and are used for street and road maintenance.
- Park Contributions.
The National Park Service would resume funding YARTS service. Contributions from the National Park Service would require:
 - Passage of “authorization” legislation by Congress THIS year, and
 - A Congressional appropriation or inclusion in the budget for Yosemite National Park.
- Yosemite Concession Services.
- Zone of Benefit (ZOB)- Mariposa County.
A Mariposa County Zone of Benefit would be approved and provide funding for transit service. The establishment of a zone of benefit would require “actions” by the Mariposa County Board of Supervisors and would be subject to a vote of those properties that would be included in the “zone.”
- Zone of Benefit (ZOB)- Merced and Mono Counties.
- Energy Policy Act of 2003 (Radanovich).
Congressman Radanovich and NPS director head the initiative to clean up the air in Yosemite Valley through existing and potential future programs. Some of the project’s objectives are to “deploy safe, economical, and environmentally sound fuel infrastructure including buses” and to reduce energy consumption. Adoption of this act will authorize \$2 M/year for 6 years for these programs.
- Counties of Mariposa, Merced, and Mono.
- Public-Private Partnerships or Private Contributions.

RECOMMENDED FINANCIAL PLAN

SERVICE PLAN

The recommended service plan would accommodate transit demand from the visitors, employees, and other riders. Beyond maintaining existing service levels, this funding scenario would allow for 3 additional runs between Merced and Yosemite Valley. One run is added in FY 04-05, and two more runs are added in FY 07-08. The existing level of service to Mono County would be maintained.

REVENUE ASSUMPTIONS

Fare revenue would increase by 5% for each additional run. The County of Mono (and/or Mammoth Mountain Ski Area) would fund \$21,000 towards its service. The County of Mariposa would provide an additional \$27,640 for FY 04-05 & FY 05-06 and \$52,640 beginning in FY 06-07. The National Park Service would resume funding with \$200,000 in FY 04-05, and \$260,000 for the balance of the short-range transit plan period. A Mariposa County Zone of Benefit would be enacted in FY 04-05 with a preliminary contribution of \$100,000, and \$150,000 a year for the balance of the short-range transit plan period. Funding will need to be available to match federal capital grants.

The financial plan, shown in Table 26, details the expenditure elements and sources of revenue required to operate YARTS service over the next 5 years.

TABLE 26 – RECOMMENDED FINANCIAL PLAN

	Current	Proposed 5 YEAR Budget				
	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09
Expenditures						
140 Svc Contract	\$ 690,000	\$ 690,000	\$ 703,800	\$ 717,876	\$ 732,234	\$ 746,878
Additional 140 Svc (5, 9)		\$ 40,300	\$ 41,106	\$ 41,928	\$ 89,428	\$ 91,217
Additional 140 Svc (11)					\$ 34,300	\$ 34,986
120/395 Svc Contract	\$ 65,000	\$ 65,000	\$ 66,300	\$ 67,626	\$ 68,979	\$ 70,358
Mgmt/Marketing	\$ 150,000	\$ 100,000	\$ 102,000	\$ 104,040	\$ 106,121	\$ 108,243
TOTAL	\$ 905,000	\$ 895,300	\$ 913,206	\$ 931,470	\$1,031,061	\$1,051,682
Revenues						
Balance Fwd	\$ 125,000	\$ 360	\$ 75,200	\$ 117,319	\$ 131,490	\$ 75,094
FTA 5309	\$ 145,000	\$ 179,640	\$ 20,000	\$ -	\$ -	\$ -
FTA 5311	\$ 101,000	\$ -	\$ -	\$ -	\$ -	\$ -
Mariposa Co	\$ 147,360	\$ 175,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
Mono Co (Mammoth Mtn.)	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000
140 Fares	\$ 150,000	\$ 165,000	\$ 173,250	\$ 181,913	\$ 209,199	\$ 219,659
120/395 Fares	\$ 30,000	\$ 31,500	\$ 33,075	\$ 34,729	\$ 36,465	\$ 38,288
NPS Fares	\$ 36,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000
Caltrans PLN	\$ 100,000					
Merced Co	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
NPS (NEW)		\$ 200,000	\$ 260,000	\$ 260,000	\$ 260,000	\$ 260,000
Mariposa (ZOB)		\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
TOTAL	\$ 905,360	\$ 970,500	\$1,030,525	\$1,062,960	\$1,106,155	\$1,062,042
Year-end Balance	\$ 360	\$ 75,200	\$ 117,319	\$ 131,490	\$ 75,094	\$ 10,359

Assumptions:

- | | |
|---|---|
| Add 1 Mariposa to Merced run in FY 04-05 | Fare increase 5% to match each additional service |
| Add 1 Roundtrip run, from Merced to Mariposa, in FY 07-08 | Fare increase 5% resulting from ridership growth |
| No Discretionary Federal Transportation Grants | NPS fund contribution begins in 04-05 |
| Fund Increase from Mariposa County | Mariposa Zone of Benefit begins in 04-05 |
| | Use 2% inflation |

APPENDIX A YARTS SCHEDULES

APPENDIX B PERFORMANCE ISSUES

**APPENDIX C
PERFORMANCE INCENTIVES/PENALTIES
FOR SERVICE PROVIDERS**

APPENDIX D CONGESTION REDUCTION

APPENDIX E CAPACITY STUDY

APPENDIX F

CAPITAL INVESTMENT ANALYSIS

APPENDIX G MARKETING PLAN

APPENDIX H

2001 RIDER SURVEY RESULTS

APPENDIX I PUBLIC COMMENT