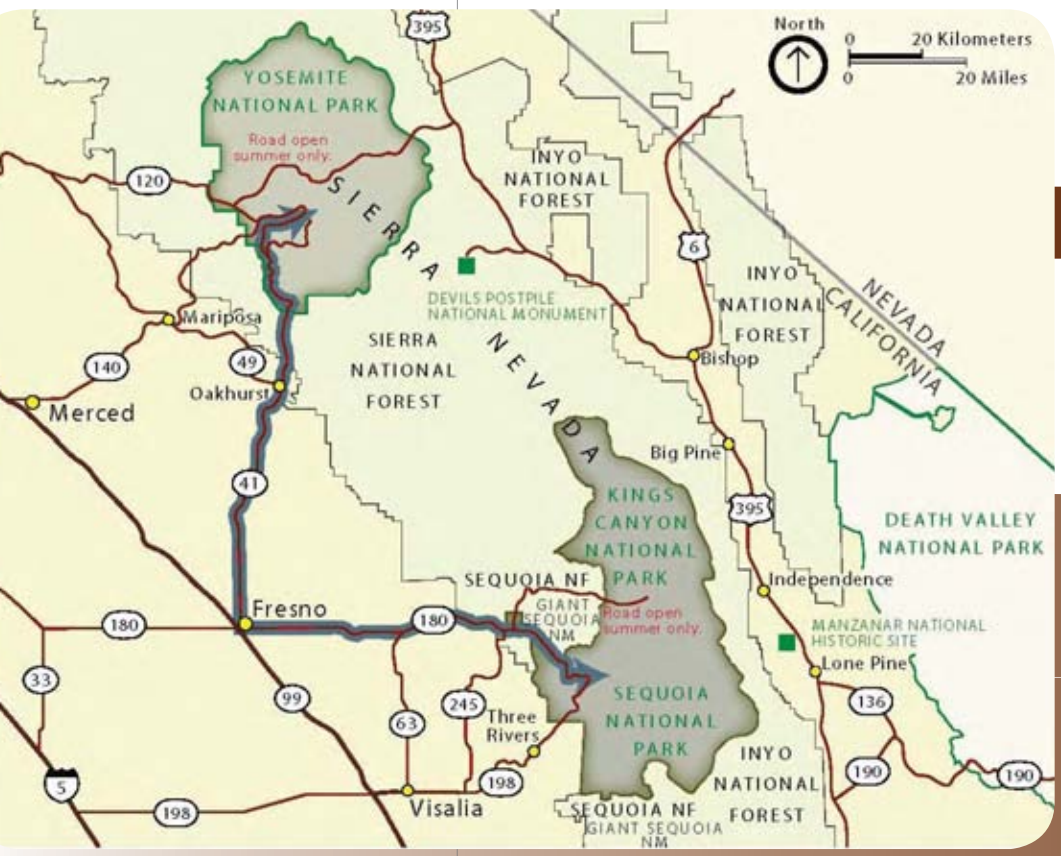
Draft Report

YOSEMITE, SEQUOIA AND KINGS CANYON NATIONAL PARK TRANSIT MARKET ASSESSMENT & FEASIBILITY STUDY



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EXECUTIVE SUMMARY

STUDY PURPOSE

The purpose of this feasibility study is to determine the viability of implementing one or more transit routes between the City of Fresno and Yosemite, Sequoia and Kings Canyon National Parks. Feasibility is assessed based on a number of factors, including local support, ridership potential and financial sustainability.

TRANSIT ROUTES

This feasibility assessment examines two transit routes: one between the City of Fresno and Yosemite National Park and another between the City of Fresno and Sequoia and Kings Canyon National Parks.

The route to Yosemite would begin at the Fresno Greyhound Station (downtown), stop at the Amtrak station, Fresno Yosemite International Airport, Fresno State, north Fresno/State Route (SR) 41 hotels, Chukchansi Gold Resort-Casino and Oakhurst before entering Yosemite National Park (South Entrance) and stopping at Yosemite Village Center, Curry Village, Ahwahnee Hotel and Yosemite Lodge. The route (one-way) is approximately 100 miles, and one-way travel time from the Fresno Greyhound Station to Yosemite Lodge would be about three hours.

The route to Sequoia would begin at the Fresno Greyhound Station (downtown), stop at the Amtrak station, Fresno State and Fresno Yosemite International Airport before entering Kings Canyon (Big Stump entrance) and stopping at Grant Grove (Kings Canyon), Montecito-Sequoia Lodge (Sequoia National Forest), Stony Creek Village (Sequoia National Forest) and Wuksachi Village (Sequoia National Park). The route (one-way) is approximately 85 miles, and one-way travel time from the Fresno Greyhound Station to Wuksachi Village would be about two hours and twenty minutes.

FEASIBILITY SUMMARY

The results of the feasibility assessment indicate that substantial amounts of demand exist for both the Fresno-Yosemite route and the Fresno-Sequoia/Kings Canyon route. This is due to a combination of factors including growing attendance levels at the parks, the large population base of the Fresno region, the major transportation hubs (i.e., Fresno Yosemite International Airport, Greyhound and Amtrak Station) in Fresno, the number of hotel rooms both in Fresno and along the SR 41 corridor (Oakhurst, Wawona, etc.) and major generators such as Fresno State. The success of peer service provided by YARTS (to Yosemite National Park) and Sequoia Shuttle (to Sequoia National Park), from much smaller markets, reinforces the potential for success.

STUDY ORGANIZATION

This feasibility study is organized as follows:

Chapter 1 – Introduction: presents the study purpose, background information and a description of the Study Advisory Committee.

Chapter 2 – Candidate Service Options: presents a description of the service philosophy, candidate travel purposes and preliminary transit service options.

Chapter 3 – Profiles of Comparable Service: provides a profile of the existing YARTS and Sequoia Shuttle service that provide connections to Yosemite and Sequoia National Parks.

Chapter 4 – Stakeholder Interviews: presents a summary of stakeholder interviews that were conducted to gather input on the feasibility assessment.

Chapter 5 – Market Analysis: presents the service alternatives and ridership forecasts for each of the potential Fresno routes.

Chapter 6 – Funding Assessment: presents a description of candidate funding programs, an overview of revenue sources for peer transit service and an evaluation of funding potential.

Chapter 7 – Feasibility Assessment: presents an assessment of the feasibility of implementing a new transit service from Fresno to the three national parks.

Chapter 8 – Operating Plan: presents an operating plan for each of the potential Fresno routes.

Chapter 9 – Next Steps

1. INTRODUCTION

This chapter presents the study purpose, background information and a description of the Study Advisory Committee.

STUDY PURPOSE

The purpose of this feasibility study is to determine the viability of implementing one or more transit routes between the City of Fresno and Yosemite, Sequoia and Kings Canyon National Parks. The feasibility assessment will be determined based on a number of factors, including local support, ridership potential and financial sustainability.

BACKGROUND

In 2009, more than 5.3 million people visited Yosemite, Sequoia and Kings Canyon National Parks. Two public long-distance transit lines currently serve Yosemite and Sequoia National Parks. The Yosemite Area Regional Transportation System (YARTS) serves Yosemite National Park from Merced (population 80,608) along the Highway 140 corridor, and the Sequoia Shuttle serves Sequoia National Park from Visalia (population 123,670) along the Highway 198 corridor. The two parks have separate internal shuttles that transport visitors within the parks. Kings Canyon National Park is not served by a public long-distance transit line and has no internal shuttle system.

Travel data from Yosemite National Park provides an illustration of the importance of transit service. Four million people visit Yosemite National Park every year. That equates to over 800,000 automobiles and over 14,600 buses annually. During the peak season, about 6,000 vehicles enter the Yosemite Valley each day. Parking for those vehicles is sufficient to meet about half of the demand.

No transit service is currently provided from Fresno to any of these three parks, even though Fresno is a much bigger population center (over 500,000 in the City of Fresno and more than 700,000 in the metropolitan area) than Merced or Visalia. Fresno is also centrally located and serves as an ideal starting point to any of the three parks. The Fresno International Airport is the largest in the Central Valley.

STUDY ADVISORY COMMITTEE

The Study Advisory Committee reviewed and provided direction on the two Technical Memorandum, four Working Papers and Draft Report developed as part of this Transit Market Assessment & Feasibility Study. Committee members included representatives from the Fresno COG, Fresno County, the City of Fresno, the Fresno Convention & Visitors Bureau, the Madera County Transportation Commission, Yosemite National Park, Sequoia National Park, Kings Canyon National Park, the Yosemite Area Regional Transportation System (YARTS), Visalia Transit, the National Parks Conservation Association, and Sequoia National Forest.

2. CANDIDATE SERVICE OPTIONS

This chapter presents a description of the service philosophy, candidate travel purposes and preliminary transit service options (i.e., candidate transit routes and stop locations).

SERVICE PHILOSOPHY

The Study Advisory Committee, at the May 4 meeting, indicated a strong preference for the route(s) to and from the National Parks to be as direct as possible with limited stops. The purpose for this policy is to keep travel times somewhat competitive with the private automobile. Local transit service in Fresno and other communities would provide connections to the primary route(s) and stations from areas not directly served.

CANDIDATE TRAVEL PURPOSES

The following is a preliminary list of potential riders and destinations that could be served by the new transit route(s).

- Recreational
  - Tourists with and without an automobile
  - Backpackers currently in or heading to the parks
  - Recreational vehicle (RV) campers parked inside or outside of the parks
  - Tour groups from adjacent communities headed to the parks
  - Casino patrons lodging at casinos
- Commute
  - Park employees (National Park Service, Delaware North, volunteer organizations)
  - Non-park employees (Casino, hotels, other tourist-related industries)
  - Corridor residents commuting to Fresno
- Education
  - Fresno State students, faculty and staff
  - Fresno City College students, faculty and staff

CANDIDATE ROUTES AND STATION OPTIONS

The two primary routes are a direct link to Yosemite National Park along State Route 41 and a direct link to Sequoia National Park via State Route 180. These routes, along with candidate station locations, are shown in Figure 1. An alternate alignment for the Yosemite route, during winter road closures, would be via State Route 49 and State Route 140.

A preliminary list of potential stops for this route that would serve the desired travel markets is listed below.

City of Fresno

- Fresno Yosemite International Airport
- Amtrak Station
- Greyhound Station
- Convention Center

Yosemite Valley

- Visitor Center
- Yosemite Lodge
- Ahwahnee Hotel
- Curry Lodge

State Route 41 Communities/Destinations

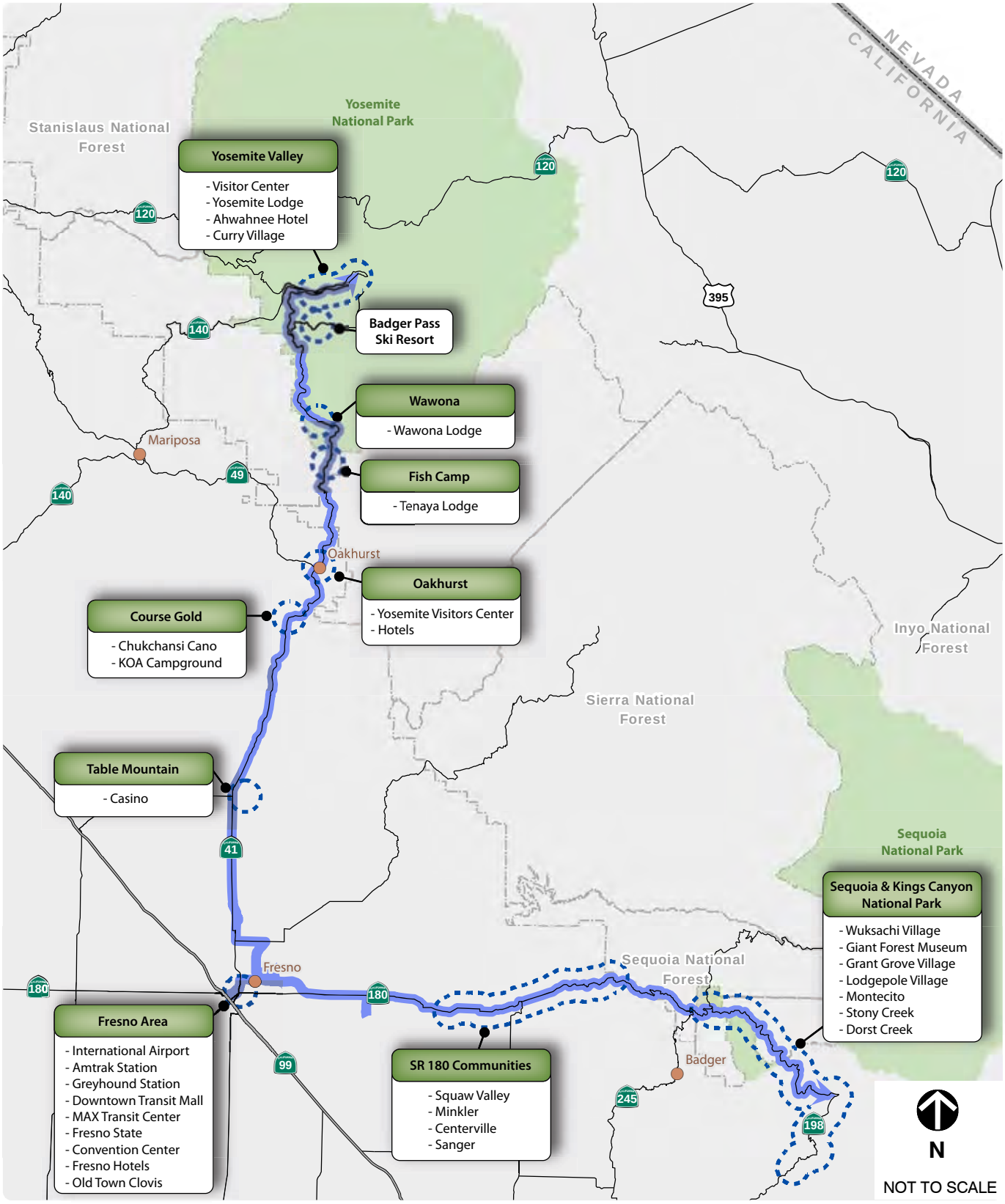
- Wawona and Tenaya Lodge
- Oakhurst
- Coarsegold

Sequoia and Kings Canyon National Parks

- Grant Grove
- Montecito
- Stony Creek
- Dorst Creek
- Wuksachi Village/Lodge
- Lodgepole Village

State Route 180 Communities

- Sanger
- Squaw Valley
- Centerville
- Minkler



FEHR PEERS

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CANDIDATE STATION LOCATIONS

FIGURE 1

3. PROFILES OF COMPARABLE SERVICE

This chapter provides a profile of the existing YARTS and Sequoia Shuttle service that provide connections to Yosemite and Sequoia National Parks.

YOSEMITE AREA REGIONAL TRANSPORTATION SYSTEM (YARTS)

The YARTS was formed in 1992 to explore alternative access options to the Park and reduce the negative impacts of automobile traffic. The management board includes representatives from the three counties surrounding Yosemite, the National Park Service, the National Forest Service and ex-officio members from Caltrans, the Federal Highway Administration and the California State Department of Tourism. An Authority Advisory Committees also has 13 stakeholders.

The YARTS began operations in May 2000 with a demonstration project linking Merced and Yosemite National Park. The YARTS currently provides multiple daily round-trip runs of its primary route on the Highway 140 corridor between Merced and the Yosemite Valley. A second route provides one daily run between Mammoth Lakes and other Mono County communities on Highway 120 East from June through September when the Tioga Pass Road is open.

Route Description

The Highway 140 route runs between Merced, Catheys Valley, Mariposa, Midpines, El Portal and Yosemite Valley (year round). This route serves Yosemite visitors and employees (National Park Service and concession contractors). Inbound runs (to Yosemite) include six on weekdays and five on weekends. Outbound runs (to Merced) include seven on weekdays and six on weekends. The route has 21 stops outside Yosemite and four stops inside the park (all in Yosemite Valley). Most runs do not stop at all stops. Travel time from Merced to Yosemite is approximately three hours, with shorter travel times between mid-route stops (Midpines, Mariposa, El Portal) and Yosemite.

The Highway 120/I-395 route runs between Mammoth Lakes, June Lake, Lee Vining, Tuolumne Meadows, White Wolf, Crane Flat and Yosemite Valley. This service operates during summer months only. A single inbound run and a single outbound run operate daily during July and August. During June and September, the service operates only on weekends. The route has nine stops outside Yosemite and six stops inside the park.

Travel Market

The Highway 140 route serves a wide range of users, including:

- Yosemite visitors (both long-distance from Merced and short-distance from El Portal or Mariposa). Some of the long distance visitors transfer to YARTS from Amtrak and Greyhound.
- Yosemite employees (National Park Service and concession contractors).
- Area residents commuting between towns along the route.

Among the Yosemite visitors, the route serves both long distance travelers from Merced and short distance travelers from El Portal or Mariposa. Amtrak Thruway Service connects long distance train passengers with YARTS at the Merced Amtrak station. The route stops at or close to hotels, which generates important ridership. Merced, Mariposa and El Portal have an estimated 1,400 hotel rooms.

In contrast, the Highway 120/I-395 route targets primarily visitors of Yosemite and the communities in Mono County. The route runs only in the summer due to the winter closure of Tioga Pass, so Yosemite employees cannot use this service year-round.

Fares

Round trip fares to Yosemite Valley run between $6 and $25 (Highway 140 route) and between $5 and $30 (Highway 120/I-395 route). Fares are distance based. Children and seniors pay a discounted fare. One child per adult rides free.

YARTS' goal is to make fares less expensive than driving for two people visiting the park and cost-competitive for three. Monthly commuter and frequent ride passes are also available. National Park Service (NPS) employees receive employer-sponsored vouchers that cover nearly the entire cost of the pass.

Round-trip tickets from Merced to Yosemite National Park are $25 per person and include the park entry fee. YARTS typically uses 40-foot over-the-road coaches, although they do have smaller 18- and 26-passenger buses.

Fleet

YARTS needs nine buses to operate its two routes (that total includes spares). The current fleet consists of a mix of 45-foot coaches and 26-foot cutaway buses. YARTS intends to acquire up to eight new buses over the next 18 months. Its goal is to own all of the buses used to operate the service. Its most recent purchase was a MCI D4500 clean diesel 45-foot over-the-road coach, shown below.

Ridership

YARTS ridership has steadily increased since Fiscal Year (FY) 2006/2007 and peaked on an annual basis during the latest fiscal year (2009/2010) with a total of 72,000 passengers (that total does not include pre-paid transfers from Amtrak). The peak monthly ridership occurred in July 2008, when 10,200 passengers used the system. Approximately five percent of the annual riders are on the single Highway 120/I-395 route, with the remainder on the Highway 140 corridor. Ridership peaks during summer months – June through August – and was up 3.2 percent in FY 2009/2010 over FY 2008/2009.

<u>Ridership by User Type</u>

Table 1 shows total boardings on the Highway 140 route for the first six months of 2010. The first two rows below Boardings illustrate the total boardings attributable to riders traveling to or from Yosemite compared to the percentage of riders using the service for commuting. The third row in the table illustrates the total riders who work in Yosemite, either for the NPS or the park's concession operator. The last row illustrates the total boardings that are transfers from or to Amtrak. Between February and June 2010, the percentage of total boardings attributable to Yosemite ingress or egress rose from one in two boardings in February to two in three boardings in June.

TABLE 1: TOTAL BOARDINGS ON HIGHWAY 140 ROUTE

	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Total Boardings	5,310	4,773	6,081	6,596	8,100	9,197
Yosemite[1]	3,133	2,339	3,284	3,958	5,265	6,254
Intercity[1]	2,177	2,434	2,797	2,638	2,835	2,943
NP Emp.[2]	1,859	1,957	2,189	2,177	2,430	2,575
Amtrak[3]	1,009	668	912	1,055	1,296	1,012

Source: Via Adventures, Inc.

Note:

1. The "Yosemite" row indicates the number of boardings attributable to riders traveling to or from Yosemite National Park. The "Intercity" row indicates all boardings for riders using the service to commute to other destinations. The sum of these two rows is the total boardings.
2. The "NP Emp." row indicates the number of boardings for riders who work in Yosemite, either for the National Park Service or the park's concession operator.
3. The "Amtrak" row indicates the number of boardings that are transfers to or from Amtrak.

Operations and Capital Costs

The FY 2009/2010 operating budget was $1,746,855. Operations costs included the service contract with VIA Adventures, including vehicle leases (87 percent of operating budget), management/accounting/ planning/evaluation (6.5 percent), audit/insurance (1.5 percent), lease (0.3 percent) and marketing/public relations (4.8 percent). Capital costs included the Mariposa park-and-ride facility, bus purchases and Short-Range Transit Plan. Direct farebox receipts and reimbursement for USDOT /NPS employee vouchers are expected to account for 24 percent of operating costs.

Performance Measurement

VIA Adventure reporting provided a monthly breakdown of revenue miles and revenue hours. Table 2 illustrates the performance of the Highway 140 route for the first six months of 2010. Route performance is approximately 50 percent more productive in the summer months than in winter.

TABLE 2: HIGHWAY 140 ROUTE PERFORMANCE

	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Revenue Miles	27,436	24,232	27,238	26,595	29,506	29,937
Pax Trips Per Rev Mile	0.19	0.20	0.22	0.25	0.27	0.31
Revenue Hours	891	785	881	909	1,017	1,038
Pax Trips Per Rev Hour	6.0	6.1	6.9	7.3	8.0	8.9
Load Factor	34%	35%	39%	43%	45%	51%

Source: Via Adventures, Inc.
Pax = Passenger

Cost per revenue hour and cost per revenue mile are two other indicators of performance. While monthly operating costs are not available, yearly operating costs are available from the YARTS annual budget.

For FY 2009/2010, YARTS recorded 72,102 boardings (excluding Amtrak) on both routes and spent $1,746,855 on operations. The system averaged $24.22 per passenger trip in FY 2009/2010. Table 3 shows performance data for YARTS for FY 2009/10.

TABLE 3: PERFORMANCE DATA FOR YARTS (FY 2009/10)	
Performance Metric	**FY09/10 Data**
Revenue Hours	11,873
Revenue Miles	359,319
Operating Cost	$1,746,855
Op Cost per Rev. Hour	$147.13
Op Cost per Rev. Mile	$4.86
Source: Via Adventures, Inc.	

SEQUOIA SHUTTLE

The Sequoia Shuttle is a partnership between the City of Visalia Transit Division and the National Parks Service. The original purpose of the shuttle was to relieve congestion and pollution at Sequoia National Park. An internal park shuttle links travelers to destinations within Sequoia National Park.

Route Description

The Sequoia Shuttle begins at the Visalia Holiday Inn near SR 99 and travels east along SR 198 until it reaches Sequoia National Park's Giant Forest Museum. Runs include four inbound between 7:00 AM and 10:00 AM and four outbound between 3:30 PM and 6:30 PM. Shuttles go to stops only with scheduled reservations. The Sequoia Shuttle runs daily from Memorial Day weekend through Labor Day. The route includes 10 stops on the way to Sequoia National Park and two stops within the park. Travel time from Visalia to Sequoia is approximately 2.5 hours, with shorter travel times between mid-route stops (Three Rivers) and Sequoia.

Travel Market

The travel market consists mainly of area residents and visitors staying in Visalia hotels. Based on data provided by the City of Visalia, 90 percent of riders were from the United States, 8.5 percent were from Europe and the remainder was from Africa, Australia and South America. Of riders residing in the United States, 75 percent were California residents and 70 percent of those were from Central California, indicating a significant number of local riders. Group sales have increased in popularity for the 2010 season.

Fares

The round trip fare to Sequoia National Park is $15 regardless of pickup location. Advance reservations are required. Riders can purchase tickets online or by telephone.

Fleet

The Sequoia Shuttle uses 16-passenger cut-away buses for its operations, as shown in the image below:

Ridership

For the first three years of operation (2007-2009), ridership on the gateway route was stable, as shown in Table 4. While 2010 mid-year totals are not yet available, a recent newspaper article found that June 2010 ticket sales rose 57 percent over the previous year (1,455 to 2,290), indicating greater interest in the shuttle than in years past.

TABLE 4: SEQUOIA SHUTTLE RIDERSHIP

Year	Boardings
2007	5,441
2008	5,430
2009	5,385

Source: Visalia Transit.

Ridership data provided by the City of Visalia included annual (2007-2009) ridership delineated by month and, for 2009, stop-level ridership, ridership by run (departure time) – 9:00 AM is most popular and rider origin (country, and if US based, state and ZIP code). Although official ridership figures are not yet available for 2010, the shuttle ridership for 2010 is expected to exceed 7,000 boardings, a significant increase over boardings for the first three years of operation. The increase is largely attributable to higher levels of group sales.

With 16-passenger buses operating four inbound and four outbound runs per day, total rider capacity is 128 boardings/day. The shuttle operated for 109 days in 2009, suggesting a total passenger capacity of 13,952. The 5,385 boardings indicate that the shuttle is operating at 39 percent capacity over the entire operating period. Visalia Transit reduced service to three round trips in 2010. When advance ticket sales for an individual run exceed the 16-passenger capacity, Visalia Transit adds a second bus to accommodate demand.

Operations and Capital Costs

Operating costs for the 2007 season totaled $238,900, and capital expenditures totaled $584,951 (per the 2007 financials, available from a City Council staff report). Farebox collections totaled approximately $83,000 for 2007, translating into a farebox recovery rate of approximately 35 percent.

Performance Measurement

For 2007, the Sequoia Shuttle recorded 5,441 boardings and spent $238,900 on operations. The system averaged $43.90 per passenger trip in 2007. Vehicle revenue hours and vehicle revenue miles were not available; therefore, no other performance metrics were established for the service.

4. STAKEHOLDER INTERVIEWS

This chapter presents a summary of stakeholder interviews that were conducted to gather input on the feasibility assessment. Interviews were conducted with the following organizations. Attachment A includes additional interview notes.

- Yosemite Area Regional Transportation System
- Visalia Transit Division
- National Parks Conservation Association
- Yosemite National Park
- Sequoia & Kings Canyon National Parks
- Fresno Convention & Visitors Bureau
- Fresno State
- Fresno Yosemite International Airport
- Madera County
- Madera County Transportation Commission
- Oakhurst Chamber of Commerce
- Chukchansi Casino
- Sequoia National Forest

YARTS

General Manager Dick Whittington provided the following input:

- YARTS provides year-round transit service between Merced, Mariposa County and Yosemite National Park. YARTS is in its 11th year of operation.
- A significant share of their demand is regular daily riders that include NPS employees who purchase monthly passes and commuters from Mariposa County who travel to Merced for school or shopping purposes.
- They have a mix of federal, state and local funding sources.
- They have nine large over-the-road coaches (i.e., one owned and eight leased), but plan to purchase eight additional large buses using federal grants and local matching funds.

VISALIA TRANSIT

Transit Manager Monty Cox provided the following input:

- Visalia Transit operates the long-distance shuttle between the City of Visalia and Sequoia National Park. They also operate the internal shuttles within Sequoia National Park.
- The Sequoia Shuttle began service in 2007. The service operates over an approximately 3-month period between Memorial Day and Labor Day.
- Ridership increased substantially in 2010, due to increases in group reservations.
- The primary revenue source for the first three years of operation was a CMAQ grant. When that grant expired, the City of Visalia used an economic development grant to continue the service in 2010.

NATIONAL PARKS CONSERVATION ASSOCIATION

Emily Schrepf provided the following input:

- NPCA is a non-profit that supports National Parks. The Fresno office supports the effort to provide transit options from Fresno to Yosemite, Sequoia and Kings Canyon National Parks to reduce air pollution and its effects on the parks as well as to improve access to a broader range of park users in the Fresno Valley.

YOSEMITE NATIONAL PARK

Superintendant Don Neubacher and Park staff provided the following input:

- Yosemite National Park currently provides several internal shuttles that serve major destinations.
- The Park is currently conducting a major transportation study to evaluate alternative transportation strategies.
- Yosemite National Park is supportive of a new transit service from Fresno and would be open to discussing a financial contribution like that which they provide to YARTS.

SEQUOIA AND KINGS CANYON NATIONAL PARKS

Superintendant Karen Taylor-Goodrich and Park staff provided the following input:

- Sequoia National Park currently provides an internal shuttle, operated by Visalia Transit, during the peak summer months. This shuttle does not serve Kings Canyon National Park. Top park destinations not served by the shuttle include Grant Grove Village in Kings Canyon National Park and Montecito Lodge and Stony Creek Village in Sequoia National Forest. There are no plans to expand the internal shuttle to serve Kings Canyon National Park.
- All National Parks will be conducting an audit of the feasibility of the financial sustainability of their alternative transportation system in the coming year. Sequoia and Kings Canyon National Parks have applied for a grant to study transportation patterns, similar to the effort that is currently under way in Yosemite National Park.

- Most park employees live in Lodgepole or other locations to the west of the park along SR 198 or SR 180 (Squaw Valley).
- Park staff indicated that, if the study does not find a transit route from Fresno to be feasible at this time, it would be helpful for the study to identify what conditions would make the service feasible.

FRESNO CONVENTION AND VISITORS BUREAU

CEO Jeff Eben and Bureau staff provided the following input:

- A new public transit service from Fresno to the National Parks would be a big incentive to attract more convention groups and help extend the stays of visitors.
- A transit stop at the Amtrak station would be close enough to serve the convention center.

FRESNO STATE

Sustainability Coordinator Alaia Howell provided the following input:

- Some faculty and student groups go to the National Parks for coursework and research. Some Fresno State students travel from Oakhurst and other parts of Madera County, and are candidates to use a transit service along the SR 41 corridor. The Student Union organizes annual trips to the National Parks, at a cost of approximately $25 per student.
- The best existing FAX stop for students, should a transit service be implemented to the National Parks, would be near the corner of Cedar Avenue and Shaw Avenue.

Fresno State conducted an on-line survey to gather information from faculty, staff and students. That survey is summarized in Chapter 7.

FRESNO YOSEMITE INTERNATIONAL AIRPORT

Marketing Manager Rhonda Jorn provided the following input:

- The airport is marketed as a “gateway” to Yosemite. Airport peaks in the summer due to leisure and vacation trips.

MADERA COUNTY

County Supervisor Tom Wheeler and County staff provided the following input:

- Supervisor Wheeler indicated that tourism was the #2 business in Madera County.
- Supervisor Wheeler noted that the former Yosemite National Park Superintendent had written a letter several years ago, published in the Sierra Star, which said Yosemite National Park would not close the park to auto access.
- Candidate stop locations should include central Oakhurst (at the proposed Civic Center development location), the Chukchansi Casino and Tenaya Lodge.
- Madera County would be open to having discussions with Fresno County about partnering on the service if they decide to pursue it.

MADERA COUNTY TRANSPORTATION COMMISSION

Executive Director Patricia Taylor and MCTC staff provided the following input:

- This study should demonstrate the benefits of transit service to Oakhurst, such as stopping at local hotels or shopping trip potential for employees.
- This feasibility study should be clear that it does not involve limiting automobiles into Yosemite National Park.

OAKHURST CHAMBER OF COMMERCE

Executive Director Kathy McCorry provided the following input:

- The Chamber voted to support the Yosemite Sierra Visitors Bureau in opposing the extension of YARTS to Oakhurst in 2002. Local opposition largely derives from private tour operators and tourist attraction owners who believe that public bus service will negatively impact their business.
- There are six hotels in Oakhurst with a total of more than 500 rooms. Kathy believed that hotel owners would support a stop in Oakhurst if Fresno decided to implement a public transit service to Yosemite National Park.
- The Delaware North Company ran a ski shuttle from Oakhurst to Badger Pass that stopped at Miller's Mountain Sports in Oakhurst.
- There are plans for a new visitor's center in Oakhurst near the intersection of SR 41 and Road 426.

CHUKCHANSI CASINO

Tour & Travel Manager Kyle Lewis provided the following input:

- The casino currently provides bus service to 20 area cities, including Fresno, for casino guests. Four round-trips are offered daily. Passengers pay $10 for the round trip fare and receive $10 in eCASH for slot play. The bus service is privately operated. On average, the bus from Fresno serves 100-125 guests per day. Most guests riding the bus stay for four hours.
- The casino has 408 hotel rooms. They currently work with Oakhurst hotels to address local capacity issues and refer guests when they are full.
- The casino has between 1,300 and 1,400 employees. Approximately 700 live in Madera, 285 in Coarsegold and 115 in Oakhurst.
- The casino would like to see a public transit service between Fresno and Yosemite National Park, and would be willing to work out a system where they pay the fare for guests brought to the casino.

SEQUOIA NATIONAL FOREST

District Ranger John Exline provided the following input:

- Fresno- and Sequoia-bound commuters in Squaw Valley and other communities along SR 63 may be able to use the transit service.
- Possible destinations in Sequoia National Forest include Hume Lake, Montecito-Sequoia Lodge and Stony Creek Village.

5. MARKET ANALYSIS

This chapter presents the service alternatives and ridership forecasts for each of the potential Fresno routes (Fresno to Yosemite and Fresno to Sequoia/Kings Canyon).

Public transit service to Yosemite, Sequoia and Kings Canyon National Parks from Fresno is envisioned to operate in a similar fashion to the existing services from Merced and Visalia. The Fresno-Yosemite service would operate year-round and the Sequoia/Kings Canyon service would operate during the peak summer period from Memorial Day to Labor Day.

FRESNO-YOSEMITE ROUTE (STATE ROUTE 41)

The peer service for this candidate route is YARTS, as described earlier in this report.

The route to Yosemite would begin at the Fresno Greyhound Station (downtown), stop at the Amtrak station, Fresno Yosemite International Airport, Fresno State, north Fresno/State Route (SR) 41 hotels, Chukchansi Gold Resort-Casino and Oakhurst before entering Yosemite National Park (South Entrance) and stopping at Yosemite Village Center, Curry Village, Ahwahnee Hotel and Yosemite Lodge. The route (one-way) is approximately 100 miles, and one-way travel time from the Fresno Greyhound Station to Yosemite Lodge would be about three hours.

Travel Market

The travel market for the Fresno-Yosemite route would consist of long distance visitors (Fresno via hotels, the airport, or Amtrak), short distance visitors (Oakhurst), Fresno area residents, National Park Service (NPS) and park concessionaire Delaware North Corporation (DNC) employees who live in Fresno or Oakhurst and Fresno State students, faculty and staff. Some potential exists for reverse commuting (Oakhurst to Fresno) or travel between Fresno and the Chukchansi Gold Resort Casino. Oakhurst has 897 hotel rooms (including 408 rooms at the Chukchansi Gold Resort Casino), which is comparable to the Mariposa-El Portal count of 838.

Yosemite has five vehicle entrances, and four of those provide access to Yosemite Valley (Hetch Hetchy is the exception). The Arch Rock Entrance is used by YARTS and generates about 35 percent of total visits to Yosemite during the off-peak (March) and 20 percent during the peak (July). The South Entrance, which the Fresno-Yosemite route would use, typically matches or slightly surpasses the trip generation of the Arch Rock Entrance during the off-peak and is about 50 percent higher during the peak. During the off-peak (March), the South Entrance generates about 40 percent of total visits to Yosemite and during the peak (July) it generates about 30 percent. The SR 41 corridor and South Entrance is a key ingress/egress point for a significant number of Yosemite visitors. This comparison of visitor entries between the Arch Rock and South entrances indicates that a Fresno-Yosemite shuttle route could be as successful as YARTS if it achieved a similar capture rate.

Fresno's demographic characteristics suggest a ridership market that is at least as large as that of Merced. The City's 2010 population is estimated at over 505,000; over 700,000 people live in the Fresno-Clovis metropolitan area. The Fresno area has over 10,400 hotel rooms. Table 5 shows the approximately locations of these hotel rooms. The Fresno Yosemite International Airport is the largest airport in the San Joaquin Valley and serves over 1.4 million passengers annually. Fresno State is the largest university in the San Joaquin Valley and has a student enrollment of over 18,000. Table 6 compares these demographic characteristics to those of Merced.

TABLE 5: FRESNO HOTEL LOCATIONS AND ROOMS

Hotel Location	Number of Hotel Rooms
Downtown	450
Airport Vicinity	586
SR 41 Corridor	2,139
Other	7,258
Total	10,433

Sources: 2011 Smith Travel Research, Inc. and AAA Northern California & Nevada Tour Book, 2010 Edition.

TABLE 6: FRESNO AND MERCED DEMOGRAPHICS

	Fresno	Merced
Population (City)	505,479	80,608
Hotel Rooms	4,118	540
Airport Passengers	1.4 million	8,400
University Enrollment	18,216	3,400

Sources:
1. US Census Data.
2. AAA Northern California & Nevada Tour Book, 2010 Edition.
3. Fresno Yosemite International Airport & Merced Airport.
4. Fresno State and UC Merced.

Ridership

For the Fresno-Yosemite route, ridership is expected to consist of visitor trips to the park, NPS and concession employee trips to the park and a few intercity commuters (Fresno-Oakhurst) and casino trips (Fresno-Chukchansi Gold Resort Casino). Ridership potential was assessed for a mature Fresno-Yosemite service – essentially one that has been operating for 3-5 years. Since the Fresno-Yosemite service would be similar to YARTS, the ridership potential for the Fresno-Yosemite route was initially based on 2009 monthly YARTS and Yosemite data and adjusted based on variables unique to the Fresno-Yosemite route corridor.

For visitor ridership potential, a transit capture rate for the park entrance (Arch Rock) YARTS uses was calculated and applied to the visitor tally at the park entrance (South Entrance) that the Fresno-Yosemite shuttle would use. For employee ridership potential, the number of NPS and DNC employees working in Yosemite and taking YARTS was extracted from the data and used as a surrogate for Fresno-Yosemite employee ridership. To account for the intercity commuters and casino trips, visitor and employee ridership was increased by five percent. This analysis represents the high-end ridership estimate. A low-end estimate was also prepared, which reduces the number of NPS and DNC employees by 50 percent (i.e., to reflect the fact that a significantly higher share of NPS and DNC employees currently live on the SR 140 corridor than the SR 41 corridor) and the number of visitors by 15 percent. The table below summarizes the Fresno-Yosemite route mature ridership projections for a typical peak (July) and off-peak (March) month. Table 7 shows ridership estimates.

TABLE 7: PRELIMINARY FRESNO-YOSEMITE RIDERSHIP ESTIMATES		
	High	**Low**
Peak (July)	9,100	7,200
Off-Peak (March)	3,500	2,600
Source: Fehr & Peers, 2010.		

The ridership projections are comparable to YARTS as they are largely based on the transit capture rate at the Arch Rock entrance and park employee ridership. In March 2009, YARTS recorded 3,070 boardings and alightings in Yosemite Valley, and in July 2009 that ridership figure was 6,270 boardings and alightings. Ridership on the Fresno-Yosemite route is expected to be similar to off-peak YARTS ridership and higher than the peak YARTS ridership. This is due to the sharp increase in visitors who use the South Entrance compared to the Arch Rock Entrance.

FRESNO-SEQUOIA/KINGS CANYON ROUTE (STATE ROUTE 180)

The peer service for this candidate route is the Sequoia Shuttle, as described earlier in this report.

The route to Sequoia would begin at the Fresno Greyhound Station (downtown), stop at the Amtrak station, Fresno State and Fresno Yosemite International Airport before entering Kings Canyon (Big Stump entrance) and stopping at Grant Grove (Kings Canyon), Montecito-Sequoia Lodge (Sequoia National Forest), Stony Creek Village (Sequoia National Forest) and Wuksachi Village (Sequoia National Park). The route (one-way) is approximately 85 miles, and one-way travel time from the Fresno Greyhound Station to Wuksachi Village would be about two hours and twenty minutes.

Travel Market

The travel market for the Fresno-Sequoia/Kings Canyon route would consist of long distance visitors (Fresno via hotels, the airport, or Amtrak), Fresno area residents and Fresno State students, faculty and staff. Some potential exists for commuting by NPS and concession employees traveling to Fresno for shopping or recreation.

Ridership

For the Fresno- Sequoia/Kings Canyon route, ridership is expected to consist of visitor trips to the park and a small number of reverse commute trips by NPS and DNC staff traveling to Fresno for shopping or recreation. Ridership potential was assessed for a mature Fresno-Sequoia/Kings Canyon service – essentially one that has been operating for 3-5 years. Since the Fresno-Sequoia/Kings Canyon service would be similar to the Sequoia Shuttle, the ridership potential for the Fresno-Sequoia/Kings Canyon route was initially based on 2009 monthly Sequoia Shuttle and Sequoia data and adjusted based on variables unique to the Fresno-Sequoia/Kings Canyon route corridor. Table 8 shows ridership estimates.

TABLE 8: PRELIMINARY FRESNO-SEQUOIA/KINGS CANYON RIDERSHIP ESTIMATES		
	High	**Low**
Peak (July)	7,400	4,900
Source: Fehr & Peers, 2010.		

The forecasted ridership for a mature Fresno-Sequoia/Kings Canyon route is appreciably higher than ridership recorded for the Sequoia Shuttle from 2007-2009. Fresno has more than four times the population of Visalia, a large university, an airport with regular commercial flights and an Amtrak station. The Sequoia Shuttle recorded 3,270 boardings in July 2009. The Fresno-Sequoia/Kings Canyon route is predicted to achieve ridership that is 1.5 to 2.3 times greater than the Sequoia Shuttle.

6. FUNDING ASSESSMENT

This chapter presents a description of candidate funding programs, an overview of revenue sources for peer transit service and an evaluation of funding potential.

CANDIDATE FUNDING PROGRAMS

The following provides a description of potential federal, state, regional/local and other funding sources that could be used to fund the candidate service between the City of Fresno and Yosemite, Sequoia and Kings Canyon National Parks.

Federal Sources

The Federal Transit Administration (FTA) operates several grant programs that help fund operating and administrative costs of transit providers and that provide assistance in making capital purchases such as vehicles, facilities and other transit-related equipment. Other opportunities for funding include national park contributions and the use of federal highway program funds.

FTA Section 5320 – Alternative Transportation in Parks and Public Lands

Congress established the Paul S. Sarbanes Transit in the Parks Program, formerly Alternative Transportation in Parks and Public Lands (ATPPL) Program, to enhance the protection of national parks and federal lands and increase the enjoyment of those visiting them. Administered by the Federal Transit Administration in partnership with the Department of the Interior and the Forest Service, the program funds capital and planning expenses for alternative transportation systems such as shuttle buses and bicycle trails in national parks and public lands.

Paul S. Sarbanes Transit in the Parks considers project eligibility within two categories: planning and capital. Planning projects are intended to identify the best alternative solution to a public land's transportation problem. Capital projects are projects that, in general, involve purchasing or constructing alternative transportation facilities or equipment. Operating assistance, such as funding for fuel and vehicle drivers' salaries, is not eligible under the program.

FTA Section 5307 – Urbanized Area Formula Program

These funds are available to urbanized areas of more than 50,000 people. The amount of funding available to a region is determined by a formula that considers population and population density. Funds can be used for transit capital expenditures, operating assistance and transportation planning. These funds are committed for other transportation programs/projects in Fresno, and thus not available for the National Park routes.

FTA Section 5309 – Transit Capital Investment Program

This program provides capital assistance primarily for three purposes:

- New and replacement buses and related facilities
- Modernization of existing rail transit systems
- New fixed guideway transit systems

Bus and Bus-Related Program

Funds granted under this part of the Section 5309 program can be used for purchasing and maintaining buses, maintenance and administrative facilities, transfer facilities, park-and-ride lots, bus stops and shelters and other bus-related items. These funds are typically awarded on a discretionary basis. Since other local Fresno projects compete for this funding program, one or more program champions would have to be identified for the National Park routes to compete for these discretionary funds.

FTA Section 5308 – Clean Fuel Program

This program aims to assist non-attainment and maintenance areas with achieving and maintaining federal standards for ozone and carbon monoxide and to support clean fuel and advanced propulsion technologies for transit. The FTA is responsible for allocating funds under this grant program. The federal match may not exceed 90 percent of the net increment cost of the clean fuels component or 83 percent of vehicle purchases.

Funds from this program may be used for:

- Purchasing or leasing clean fuel buses
- Constructing or leasing clean field (not including clean diesel) bus facilities
- Implementing projects relating to clean fuel, biodiesel, hybrid electric, or zero emissions technology buses that exhibit equivalent or superior emissions reductions to existing clean fuel or hybrid electric technologies

Clean fuel vehicles include vehicles powered by compressed natural gas, liquefied natural gas, biodiesel fuels, batteries, alcohol-based fuels, hybrid electric technology, fuel cells, or clean diesel. They may also include vehicles powered by other low- or zero-emissions technology that the Administrator of the EPQ has certified as sufficiently reducing harmful emission.

Funds made available under this program cannot be used to fund operating expenses or preventive maintenance.

FTA Section 5311(f) – Intercity Bus Program

This program is a non-urbanized area formula program that provides funding for public transit in non-urbanized areas with a population below 50,000 as designated by the Bureau of the Census. FTA apportions funds to governors of each state annually. The California State Department of Transportation (Department) Division of Mass Transportation (DMT) is the delegated grantee.

In California, 15 percent of Section 5311 funds are apportioned for the “Intercity Bus Program” (Section 5311(f)), which promotes intercity transit in the non-urbanized areas of the state. YARTS receives Section 5311(f) funds.

Caltrans provides 75 percent of Section 5311 funds to the regions. These funds are apportioned based on population through Transportation Planning Agencies (TPA) whose county or region contains a non-urbanized area. To date, the regional Section 5311 funds are not available to shuttle programs such as YARTS or Sequoia Shuttle.

National Park Service Contribution

Many national parks allocate a portion of their park entrance fee revenues into a transportation fund that is used to support the capital and operating costs of shuttle systems. This includes Yosemite, Sequoia and Mt. Zion National Parks. These funds can be used for local matching purposes.

Congestion Mitigation/Air Quality (CMAQ) Program

This program provides funds for projects that are likely to contribute to the attainment of national air quality standards, whether through reductions in vehicle miles traveled, fuel consumption, or other factors.

CMAQ funds may be used to establish new or expanded transportation projects or programs that reduce emissions, including capital investments in transportation infrastructure, congestion relief efforts, diesel engine retrofits, or other capital projects.

Operating assistance is limited to new transit services, intermodal facilities, travel demand management strategies (including traffic operation centers) and the incremental cost of expanding existing transit services. In using CMAQ funds for operating assistance, the intent is to help start up viable new transportation services that can demonstrate air quality benefits and eventually cover their costs as much as possible. Other funding sources should supplement and ultimately replace CMAQ funds for operating assistance. With the focus on start-up costs only, operating assistance under the CMAQ program is limited to three years.

Planning studies that are part of the project development pipeline (e.g., preliminary engineering) under NEPA are eligible for CMAQ support, as are FTA's Alternatives Analyses. General studies that fall outside specific project development do not qualify for CMAQ funding.

Federal Highway Funds (STP and NHS)

The Surface Transportation Program (STP) and National Highway System (NHS) programs may be used for transit projects under certain conditions. STP program funds may be used for the capital costs of transit projects including publicly or privately owned vehicles or facilities used for intercity bus service. NHS funds may be used for transit projects as part of a NHS project subject to certain restrictions. Portions of State Route (SR) 41 and SR 180 are NHS routes. Eligible transit projects under the NHS program include fringe and corridor parking facilities, bicycle and pedestrian facilities, carpool and vanpool projects and public transportation facilities in NHS corridors, where they would be cost effective and improve the level of service on a particular NHS limited-access facility.

State Sources

The primary state programs that provide funds for transit projects are the State Transportation Improvement Program (STIP) and the Local Transportation Fund (LTF).

State Transportation Improvement Program (STIP)

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every two years.

Eligible projects include state highway improvements, local road improvements and rehabilitation, public transit, intercity rail, pedestrian and bicycle facilities, grade separation, transportation system management, transportation demand management, sound wall projects, intermodal facilities and safety.

Local Transportation Fund (LTF)

The LTF program is dedicated primarily to funding transit capital and operating needs. Revenues are derived from $.0025 of the statewide sales tax. These funds are for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales and transit performance.

Regional/Local Sources

Regional/local funding programs that can be used for transit include air pollution control district funds, local sales tax programs, local agency contributions from other local programs and economic development funds.

San Joaquin Valley Air Pollution Control District Programs

The "Public Transportation and Commuter Vanpool Subsidy Component" of the Air District's REMOVE II Program provides incentives for public transportation pass subsidies. The purpose of the REMOVE II Program is to assist the District in attaining the requirements of the California Clean Air Act. This is accomplished by allocating funds to cost-effective projects that have the greatest motor vehicle emission reductions resulting in long-term impacts on air pollution problems in the San Joaquin Valley. All projects must have a direct air quality benefit to the District.

Sales Tax Programs (Measures C and T)

Measures C (Fresno County) and T (Madera County) are local transportation programs that are funded by half-cent sales tax increments approved by voters in each county. These funds are committed for other transportation programs/projects in Fresno, and thus not available for the National Park routes.

Since 1986, Measure C has funded a variety of programs that aim to improve the overall quality of Fresno County's transportation system affecting all 15 cities within the County. In its first 20 years, Measure C delivered more than $1 billion of improvements to State highways and County roadways. Measure C was extended for an additional 20 years (2007-2027) and is projected to generate $1.7 billion during that time period. Twenty-four percent of Measure C funds are dedicated to public transportation.

Measure T was approved by Madera County voters in 2006. The program provides funding for improvements to SR 41 (widening and passing lanes). The program also allocates two percent of funds to public transportation.

Local Agency Support

Regional or local agencies can provide contributions of local funds towards transit programs. Examples include Mariposa County and Mono County, which provide approximately $160,000 in annual contributions to YARTS.

Economic Development Funds

Regional or local agencies can provide contributions of economic development funds towards transit programs. Examples include the City of Visalia, which provided the operating subsidies in 2010 for the Sequoia Shuttle.

Other Funding Sources

Other funding come from a range of sources, including rider fares, private sector partnerships and advertising revenues.

Farebox

Rider fares provide approximately 27 percent of the operating costs for YARTS and 16 percent of the operating costs for the Sequoia Shuttle.

Amtrak

Amtrak provides contract payments for throughway bus providers that provide connections between their rail stations and major destinations. Examples include the YARTS service.

Group Sales

Marketing transit service for groups, with or without discounts, can boost ridership and offset operating costs. An example is the Sequoia Shuttle, which offers a discounted $12 per person fare (compared to the regular $15 fare) when groups purchase tickets for eight or more people.

Hotel Occupancy Surcharge

Hotels in Merced, Visalia and along the bus routes are major beneficiaries of the transit service offered by YARTS and Sequoia Shuttle. The establishment of a room night surcharge, that would be dedicated to the National Park transit service, is a candidate for providing local matching funds.

Private Sector Partnerships

Partnerships with major businesses and/or non-profit organizations can provide annual contributions that can offset operating costs and provide some or all of the necessary local match for federal and state funding programs. An example of this is the fare-free Island Explorer, which operates in Acadia National Park. Since 2002, L.L. Bean has provided over $2 million in grants to the Island Explorer for capital and operating expenses.

Advertising

Selling advertising space to businesses in Fresno, as well as those along the SR 41 and SR 180 corridors, can boost revenues and offset operating costs.

REVENUE SOURCES FOR OTHER PEER NATIONAL PARK TRANSIT SERVICE

The following provides information on the revenue sources for YARTS, the Sequoia Shuttle and the Mt. Zion National Park shuttle.

YARTS

YARTS currently provides multiple daily round-trip runs on its primary route on the Highway 140 corridor between Merced and the Yosemite Valley. The Highway 140 route operates year round. A second route provides one daily run between Mammoth Lakes and other Mono County communities on Highway 120 East, from June through September, when the Tioga Pass Road is open.

Fares

Round trip fares to Yosemite Valley run between $6 and $25 (Highway 140 route) and between $5 and $30 (Highway 120/I-395 route). Fares are distance based. Children and seniors pay a discounted fare. One child per adult rides free.

YARTS' goal is to make fares less expensive than driving for two people visiting the park and cost-competitive for three. Monthly commuter and frequent ride passes are also available. National Park Service (NPS) employees receive employer-sponsored vouchers that cover nearly the entire cost of the pass.

Round-trip tickets from Merced to Yosemite National Park are $25 per person and include the park entry fee.

Operating Costs

The Fiscal Year (FY) 2008/2009 operating budget for YARTS was approximately $2.04 million. Operations costs included the service contract with VIA Adventures, including vehicle leases (90.2 percent of operating budget), management/accounting/planning/evaluation (4.3 percent), audit/insurance (1.1 percent), lease (0.4 percent) and marketing/public relations (4.1 percent).

Operating Revenue Sources

Table 9 shows the operating revenues for YARTS for the 2008/09 fiscal year. A summary of the funding sources, grouped into broad categories, is as follows.

- Federal Programs – 36 percent
- Farebox – 27 percent
- Amtrak – 15 percent
- Yosemite contribution – 14 percent
- Local agency contributions – 8 percent

The farebox amount, which includes direct farebox receipts and reimbursement for USDOT/NPS employee vouchers, accounted for approximately 27 percent of operating costs.

TABLE 9: OPERATING REVENUES – YARTS		
Revenue Source	**Details**	**Operating Budget Amount**
FTA Section 5309	Federal earmark	$291,245
FTA Section 5311(f)	Allocation from Caltrans	195,000
FTA Section 5320	Transit in the Parks Program	264,600
Amtrak	Bus link from Amtrak Merced to Yosemite	292,000
NPS Contribution	Yosemite NP	300,000
Farebox – direct fares	General fares	292,300
Farebox – NPS passes	Yosemite NPS employee monthly passes	168,000
Mariposa County	Local contribution	136,360
Mono County	Local contribution	30,000
Merced County	CMAQ grant – Public Education/Media	75,000
	TOTAL	**$2,044,505**
Source: YARTS.		

Sequoia Shuttle

The Sequoia Shuttle begins at the Visalia Holiday Inn near SR 99 and travels east along SR 198 until it reaches Sequoia National Park's Giant Forest Museum. Four inbound shuttles run between 7:00 AM and 10:00 AM and four outbound shuttles run between 3:30 PM and 6:30 PM. Shuttles go to stops only with scheduled reservations. The Sequoia Shuttle runs daily from Memorial Day weekend through Labor Day. The shuttle has 10 stops on the way to Sequoia National Park and two stops within the park. Travel time from Visalia to Sequoia is approximately 2.5 hours, with shorter travel times between mid-route stops (Three Rivers) and Sequoia.

Fares

The round trip fare to Sequoia National Park is $15 regardless of pickup location. Advance reservations are required. Riders can purchase tickets online or by telephone.

Operating Costs

The annual operating cost for 2009 totaled $250,000. The majority of these operating costs went to driver salaries. Farebox collections totaled $40,000 for 2009, translating into a farebox recovery rate of 16 percent.

Operating Revenue Sources

The operating revenue source for 2007 through 2009, the first three years of operation, was a CMAQ grant. The revenue source for 2010 is a local economic development program.

Mt. Zion Shuttle

The Zion Canyon Shuttle System opened on May 26, 2000. The shuttle operates between April and October each year.

The shuttle system is a partnership between Zion National Park and the gateway town of Springdale. Parking in Zion National Park is limited (400 parking spaces at the visitor center at the park's entrance), and typically reaches capacity by 10:00 AM each day. The Town of Springdale supported the shuttle system, helping the park to develop it and providing parking and shuttle stops in their gateway communities. Town businesses share their underused parking (approximately 1,000 spaces) with Zion shuttle passengers, reducing the need for in-park spaces by nearly half.

The shuttle system includes both a Zion Canyon (park) shuttle and a Springdale (town) shuttle. Six shuttle stops and four park-and-ride lots are located along the Springdale (town) shuttle route. The town shuttle's terminus is the Zion Canyon Giant Screen Theater plaza, which also contains restaurants, a market, parking for tour buses and other businesses. Visitors cross a pedestrian bridge over the Virgin River to the visitor center area, where they can access the park shuttle at a nearby transit center.

A typical ride on the park shuttle from the visitor center to the Temple of Sinawava, the last stop in the canyon, covers eight miles and takes approximately 45 minutes.

The initial shuttle fleet included 29 buses and 19 trailers. Each shuttle can accommodate 68 seated visitors (31 in the bus and 37 in an attached trailer). The shuttles run on propane. An average of nearly 3,000 visitors per day boarded the shuttle during its first year of operation.

Operating Costs

Operations and maintenance costs of the shuttles are approximately $2.5 million per year.

The initial capital costs were approximately $19 million. This included the cost of the fleet of buses, a bus maintenance facility and shuttle stops. The capital revenues came primarily from a mix of federal appropriations and park fees. The Zion National History Association donated $50,000 for the Springdale shuttle stops. That contribution served as a match for an additional $550,000 in federal and state funds.

Operating Revenue Sources

The shuttles are free for visitors. To offset operation and maintenance costs, the Park Service raised the per-vehicle park entrance fee from $10 to $20 starting on January 1, 2000. The NPS distributes the revenue from the entrance fees between a transportation fund and a recreation fee demonstration fund.

FUNDING ASSESSMENT OF CANDIDATE FRESNO ROUTES

The following includes a separate funding assessment for the Fresno-Yosemite and the Fresno-Sequoia/Kings Canyon routes.

Fresno-Yosemite Route (State Route 41)

The following funding assessment is based on the assumption that service along the Fresno-Yosemite route will be similar to the existing YARTS service. The following operating characteristics are assumed.

- Year round operations
- 6-8 round trips daily at build-out
- Stop locations
  - Fresno – Fresno Yosemite International Airport, Amtrak Depot, Greyhound Station
  - SR 41 Interim Locations – Chukchansi Casino, Oakhurst, Tenaya Lodge
  - Yosemite NP – Yosemite Lodge, Valley Visitors Center, Ahwahnee Hotel, Curry Village
- Operated on contract basis

Preliminary estimates of the annual operating costs range from approximately $1.8 million to $2.4 million. The initial capital cost, which would be primarily for purchase of 9-12 new large buses, ranges from $6 million to $9 million.

Table 10 provides a preliminary assessment of the potential to obtain funding from each of the programs described in the introduction to this chapter.

Conclusion

The potential to obtain funding to operate a transit route between Fresno and Yosemite National Park is moderate to high. A key factor in the success of any new transportation project or program is having strong local support and a project/program champion(s).

Fresno-Sequoia/Kings Canyon Route (State Route 180)

The following funding assessment is based on the assumption that service along the Fresno-Sequoia/Kings Canyon route will be similar to the existing Sequoia Shuttle service. The following operating characteristics are assumed.

- Seasonal operations – Memorial Day to Labor Day weekends
- 3-4 round trips daily at build-out
- Stop locations
  - Fresno – Fresno Yosemite International Airport, Amtrak Depot, Greyhound Station
  - SR 180 Interim Location – Squaw Valley

  - Sequoia/Kings Canyon – Grant Grove Visitor Center, Montecito-Sequoia Lodge, Stony Creek Village, Dorst Creek Campground, Wuksachi Village/Lodge

- Operated on contract basis

Preliminary estimates of the annual operating costs range from approximately $250,000 to $400,000. The initial capital cost, which would be primarily for purchase of 6-8 new large buses, ranges from $4 million to $6 million.

Table 11 provides a preliminary assessment of the potential to obtain funding from each of the programs described in the introduction to this chapter.

Conclusion

The potential to obtain funding to operate a transit route between Fresno and Sequoia/Kings Canyon National Park is moderate. As described previously, a key factor in the success of any new transportation project or program is having strong local support and a project/program champion(s).

TABLE 10: PRELIMINARY FUNDING ASSESSMENT – FRESNO TO YOSEMITE NATIONAL PARK ROUTE

Funding Source	Applications	Probability (Low-Medium-High)	Likely Level[1] ($ - $$ - $$$ - $$$$)
FTA 5320 – Alt. Transportation in Parks	Capital or Planning	High	$$$$
FTA 5309 – Transit Capital	Capital	High	$$$$
FTA 5308 – Clean Fuel Program	Capital	Medium	$$$$
FTA 5311(f) – Intercity Bus	Operations	High	$$$
National Park Service Contribution	Capital or Operations	High	$$$$
CMAQ Program	Capital or Operations*	Medium	$$$
Federal Programs (STP/NHS)	Capital	Low	$
State - STIP	Capital	Low	$
State – LTF	Capital or Operations	Low	$
San Joaquin Valley APCD Program	Operations	Low	$
Local Agency Support	Capital or Operations	Low	$
Economic Development Funds	Capital or Operations	Low	$
Farebox – General	Operations	High	$$$
Farebox – NPS employees passes	Operations	High	$$$
Amtrak	Operations	High	$$$
Group Sales	Capital or Operations	High	$
Hotel Occupancy Surcharge	Capital or Operations	Medium	$$$
Private Sector Partnerships	Capital or Operations	Low	$
Advertising	Capital or Operations	Medium	$

Note:
[1] Likely Funding Level: $ = $0-50k; $$ = $50-100k; $$$ = $100-200k; $$$$ = $200k or more

TABLE 11: PRELIMINARY FUNDING ASSESSMENT – FRESNO TO SEQUOIA/KINGS CANYON NATIONAL PARK ROUTE

Funding Source	Applications	Probability (Low-Medium-High)	Likely Level[1] ($ - $$ - $$$ - $$$$)
FTA 5320 – Alt. Transportation in Parks	Capital or Planning	High	$$$$
FTA 5309 – Transit Capital	Capital	High	$$$$
FTA 5308 – Clean Fuel Program	Capital	Medium	$$$$
FTA 5311(f) – Intercity Bus	Operations	Low	$$
National Park Service Contribution	Capital or Operations	Low	$
CMAQ Program	Capital or Operations*	High	$$$$
Federal Programs (STP/NHS)	Capital	Low	$
State - STIP	Capital	Low	$
State – LTF	Capital or Operations	Low	$
San Joaquin Valley APCD Program	Operations	Low	$
Local Agency Support	Capital or Operations	Low	$
Economic Development Funds	Capital or Operations	Low	$
Farebox – General	Operations	High	$$$
Farebox – NPS employees passes	Operations	High	$$$
Group Sales	Capital or Operations	High	$
Hotel Occupancy Surcharge	Capital or Operations	Low	$$
Private Sector Partnerships	Capital or Operations	Low	$
Advertising	Capital or Operations	Low	$

Note:
[1] Likely Funding Level: $ = $0-50k; $$ = $50-100k; $$$ = $100-200k; $$$$ = $200k or more

7. FEASIBILITY ASSESSMENT

This chapter presents an assessment of the feasibility of implementing a new transit service from Fresno to the three national parks. In June 2010, the project Stakeholder Advisory Committee (SAC) suggested the following key factors against which to evaluate the feasibility of the transit service alternatives:

- Local Support/Interest – based on SAC input and stakeholder interviews
- Financial Sustainability – based on funding evaluation
- Ridership Potential – based on market evaluation
- Service Standards – based on ability to meet minimum service standards
- Economic Benefit – based on SAC input and stakeholder interviews

LOCAL SUPPORT/INTEREST

Stakeholder interviews were conducted throughout the summer of 2010 and are summarized in Chapter 4 of this report. The 13 stakeholder organizations provided their input on a range of issues. The stakeholder input tended to focus on three of the above factors: local support/interest, ridership potential and economic benefit.

Fresno State Survey

Following their stakeholder interview, Fresno State staff offered to distribute a survey to University students, faculty and staff. The survey was made available through the university's web site and distributed to all University e-mail addresses. Participation in the survey was voluntary. The survey was made available for one month between early August and early September, at the beginning of the Fall 2010 session.

A total of 227 respondents completed the survey. The following is a summary of key findings.

- 56% of survey respondents visited Yosemite National Park in the past 12 months
- 45% of survey respondents visited either Sequoia or Kings Canyon National Parks in the past 12 months
- 68% of survey respondents would be willing to pay at least $20 for round-trip bus service from Fresno to Yosemite National Park
- 59% of survey respondents would be willing to pay at least $20 for round-trip bus service from Fresno to Sequoia and Kings Canyon National Parks
- 73% of survey respondents said they would go to Yosemite National Park more often if convenient regular bus service was available
- 68% of survey respondents said they would go to Sequoia and Kings Canyon National Parks more often if convenient regular bus service was available

The questions asked in the survey, and a complete summary of the survey's responses, are presented in Attachment B.

FEASIBILITY ASSESSMENT FOR FRESNO-YOSEMITE ROUTE (STATE ROUTE 41)

The following feasibility assessment is based on the assumption that service along the Fresno-Yosemite route will be similar to the existing YARTS service.

Local Support/Interest

Through the stakeholder interview process, several organizations indicated that they support the Fresno-Yosemite route:

- Yosemite National Park
- National Parks Conservation Association
- Fresno Convention & Visitors Bureau
- Chukchansi Gold Resort & Casino
- Fresno Yosemite International Airport
- Fresno State
- Madera County

The results of the stakeholder interviews and Fresno State survey results indicate that there is strong local support for a Fresno-Yosemite route. While there are a number of business owners and residents in Oakhurst who are opposed to public transit service to Yosemite National Park, we believe that the service would receive the support of Madera County officials and tourist-related businesses (i.e., hotels, restaurants, retailers, etc.) along the SR 41 corridor based on the stakeholder interviews.

Financial Sustainability

Chapter 6 estimates of the annual operating costs range from approximately $1.8 million to $2.4 million. The initial capital cost, which would be primarily for purchase of 9-12 new large buses, ranges from $6 million to $9 million. Existing funding sources are expected to provide up to 60% of the annual operating costs. New funding sources (federal, City of Fresno, Yosemite National Park, Madera County) would need to provide approximately 30%. Because of the route's high public visibility, the potential for a one-time start-up grant is high.

Ridership Potential

Chapter 5 provides ridership expectations for the Fresno-Yosemite route. The off-peak month ridership is expected to be between 2,600 and 3,500. The peak month ridership is expected to be between 7,200 and 9,100. By comparison, in March 209 YARTS recorded 3,070 boardings in Yosemite Valley, and in July 2009 that ridership figure was 6,270 boardings. The expected annual ridership for the Fresno-Yosemite route is between 50,000 and 65,000; by comparison, YARTS had 72,000 passengers in the fiscal year 2009/10.

The results of the potential service demand indicate that there is sufficient ridership potential for the Fresno-Yosemite route.

Service Standards

In June 2010 the SAC recommended the following service standards for the transit service alternatives:

- Minimum Farebox Recovery: 15%
- Maximum Load Factor: 1.0

A preliminary assessment of service standards using an operating plan and fare structure similar to that of YARTS service shows that the Fresno-Yosemite route can expect a farebox recovery of approximately 15-20%.

The results of the preliminary assessment of service standards indicate that the service standards are appropriately met for the Fresno-Yosemite route.

Economic Benefit

Through the stakeholder interview process, several organizations have indicated that the Fresno-Yosemite route would demonstrate an economic benefit:

- Yosemite National Park
- Fresno Convention & Visitors Bureau
- Chukchansi Gold Resort & Casino
- Fresno Yosemite International Airport
- Madera County

Several business owners in Oakhurst – among them a private tour bus operator and a tourist attraction owner – have expressed opposition to a public bus service on the basis that it would negatively impact their businesses.

FEASIBILITY ASSESSMENT FOR FRESNO-SEQUOIA AND KINGS CANYON ROUTE (STATE ROUTE 180)

The following feasibility assessment is based on the assumption that service along the Fresno-Sequoia/Kings Canyon route will be similar to the existing Sequoia Shuttle service.

Local Support/Interest

Through the stakeholder interview process, several organizations indicated that they support the Fresno-Sequoia/Kings Canyon route:

- Sequoia and Kings Canyon National Parks
- National Parks Conservation Association
- Fresno Convention & Visitors Bureau
- Fresno State
- Fresno Yosemite International Airport
- Sequoia National Forest

The results of the stakeholder interviews and survey results indicate that there is local support and interest in the Fresno-Sequoia/Kings Canyon route.

Financial Sustainability

Preliminary estimates of the annual operating costs range from approximately $450,000 to $600,000. The initial capital cost, which would be primarily for purchase of 6-8 new large buses, ranges from $4 million to $6 million. Existing funding sources are expected to provide up to 30% of the annual operating costs. New funding sources (federal, City of Fresno, Sequoia and Kings Canyon National Parks) would need to provide approximately 60%. Because the public visibility of the Sequoia/Kings Canyon route is not as great as the Yosemite route, the potential for a one-time start-up grant is moderate.

Ridership Potential

Chapter 5 presents ridership expectations for the Fresno-Sequoia/Kings Canyon route. The monthly ridership (June through August only) is expected to be between 4,900 and 7,400; total summer ridership is expected to range between 14,700 and 22,200. By comparison, Sequoia Shuttle recorded over 7,000 boardings in 2010.

The results of the potential service demand indicate that there is sufficient ridership potential for the Fresno-Sequoia/Kings Canyon route.

Service Standards

In June 2010 the SAC recommended the following service standards for the transit service alternatives:

- Minimum Farebox Recovery: 15%
- Maximum Load Factor: 1.0

A preliminary assessment of service standards using an operating plan and fare structure similar to that of the Sequoia Shuttle shows that the Fresno-Sequoia/Kings Canyon route can expect a farebox recovery of approximately 20-35%.

The results of the preliminary assessment of service standards indicate that the service standards are appropriately met for the Fresno-Sequoia/Kings Canyon route.

Economic Benefit

Through the stakeholder interview process, several organizations have indicated that the Fresno-Sequoia/Kings Canyon route would demonstrate an economic benefit:

- Sequoia and Kings Canyon National Parks
- Fresno Convention & Visitors Bureau

FEASIBILITY CONCLUSIONS

The results of the feasibility assessment indicate that substantial amounts of demand exist for both the Fresno-Yosemite route and the Fresno-Sequoia/Kings Canyon route. This is due to a combination of factors including growing attendance levels at the parks, the large population base of the Fresno region, the major transportation hubs (i.e., Fresno Yosemite International Airport and Amtrak Station) in Fresno, the number of hotel rooms both in Fresno and along the SR 41 corridor (Oakhurst, Wawona, etc.) and major generators such as Fresno State. The success of peer service provided by YARTS (to Yosemite National Park) and Sequoia Shuttle (to Sequoia National Park), from much smaller markets, reinforces the potential for success. This is true despite premium fares ($15 to $25 round trip costs) and long travel times (1-1/2 to 3 hours).

Figure 2 provides a matrix of the different key factors used to assess each of the routes.

FEASIBILITY ASSESSMENT MATRIX

CORRIDOR	LOCAL SUPPORT/ INTEREST	FINANCIAL SUSTAINABILITY	RIDERSHIP POTENTIAL	SERVICE STANDARDS	ECONOMIC BENEFITS
Fresno to Yosemite National Park 	Fresno International Airport ● Frenso Visitors Bureau ● Fresno State ◑ Yosemite NP ● Chukchansi Casino ● Madera County ◑ Oakhurst Stakeholders ○ ○ No Support ◑ Support ● Strong Support	Projected Annual Operating Cost: $1.8 - 2.4 million (12 months) Projected Farebox: $ 0.4 - 0.5 million Likely Share from Other Existing Sources: 50 - 60% Share Needed from New Sources: 20 - 30% • $350,000 - 650,000 • Candidate Sources - Federal - City of Fresno - Yosemite NP - Madera County Potential for One-Time Start-Up Funding: High	Annual: 50,000 - 65,000 Peak Months: 7,200 - 9,100 Off-Peak Months: 2,600 - 3,500	Minimum Farebox Recovery: 15% Projected Farebox Recovery: 20 - 40%	Fresno International Airport ● Frenso Visitors Bureau ● Yosemite NP ◑ Chukchansi Casino ◑ Madera County ◑ Oakhurst Stakeholders ◑ ◑ Moderate Benefit ● High Benefit
Fresno to Sequoia and Kings Canyon National Park 	Fresno International Airport ● Frenso Visitors Bureau ● Fresno State ◑ Sequoia/Kings Canyon NP ● Sequoia National Forest ● ○ No Support ◑ Support ● Strong Support	Projected Annual Operating Cost: $450,000 - 600,000 (3 months) Projected Farebox: $110,000 - 165,000 Likely Share from Other Existing Sources: 25 - 30% Share Needed from New Sources: 50 - 60% • $225,000 - 360,000 • Candidate Sources - Federal - City of Fresno - Sequoia/Kings Canyon NP Potential for One-Time Start-Up Funding: Moderate	Annual: 14,700 - 22,200 Peak Months: 4,900 - 7,400	Minimum Farebox Recovery: 15% Projected Farebox Recovery: 20 - 35%	Fresno International Airport ● Frenso Visitors Bureau ● Sequoia/Kings Canyon NP ◑ Sequoia National Forest ◑ ◑ Moderate Benefit ● High Benefit

8. OPERATING PLAN

This chapter presents an operating plan for each of the potential Fresno routes:

- Fresno-Yosemite route (SR 41)
- Fresno-Sequoia/Kings Canyon route (SR 180)

Each route's operating plan documents proposed routing, stops, concept schedule, route infrastructure, fares, fleet, productivity targets and administrative and operational options. While the two plans have overlap (such as shared stops), each is presented independently.

FRESNO-YOSEMITE ROUTE (SR 41) OPERATING PLAN

Proposed Routing and Stops

The Fresno-Yosemite route is 110 miles one-way and is proposed to have 14 stops (six in Fresno, three along rural SR 41 and five in Yosemite). Figure 3 shows the proposed full routing and stops. Figure 4 shows Fresno-specific routing. Suggested routing and stop locations were determined through field tests to ensure accessibility by 45-foot coaches. Passenger loading and unloading was designed, where physically possible, to be conducted off major arterials to maximize safety and passenger experience.

Stop Descriptions

Fresno Greyhound Station

The route's first and last stop would be at the Fresno Greyhound Station. Coaches would use one of the facility's bus bays to load and unload passengers.

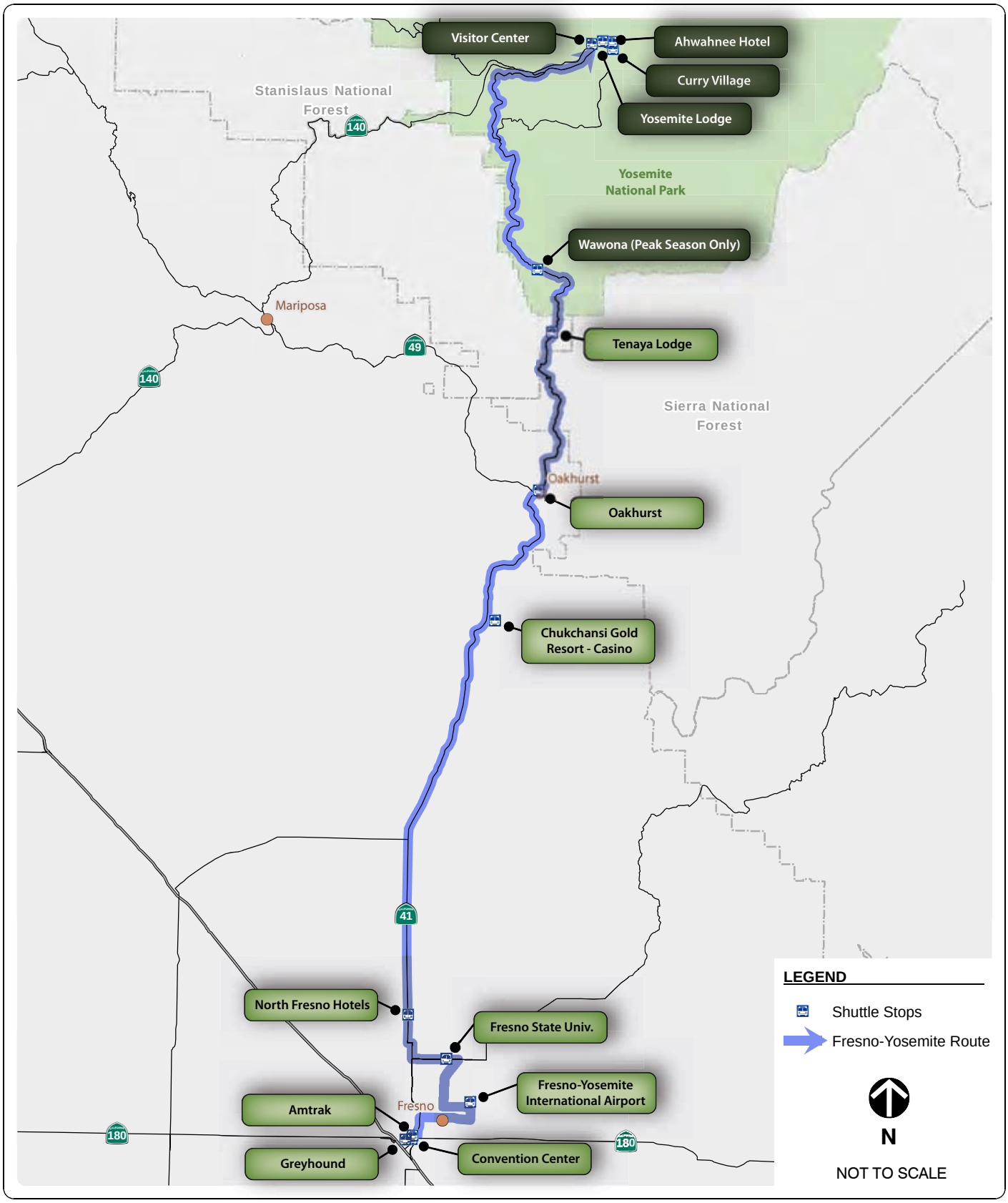
Fresno Amtrak Station

The Fresno Amtrak Station is one of two major access points for out-of-town passengers who will be visiting Yosemite without a car. Inbound and outbound runs would approach the station from the south and stop in the passenger loading/unloading area directly in front of the station. This stop would also serve convention center attendees and potentially downtown Fresno park-and-ride demand. Exhibit halls and the convention center's primary parking structure (1,570) spaces are three blocks from the Amtrak station.

An additional stop location under consideration that would more directly serve the convention center and park-and-ride patrons is in front of the parking garage on Inyo Street between O Street and N street. Currently, no overnight parking is allowed at the garage. This issue would need to be resolved prior to including this stop as part of the route.

Fresno Yosemite International Airport (Park-and-Ride)

This stop would serve airline passengers and hotel guests staying in the immediate area. This stop would serve east Fresno and south Clovis residents, both for drop-off and park-and-ride ($8/day). The Fresno-Yosemite route would use the existing Fresno Area Express (FAX) stop in front of the departures area.



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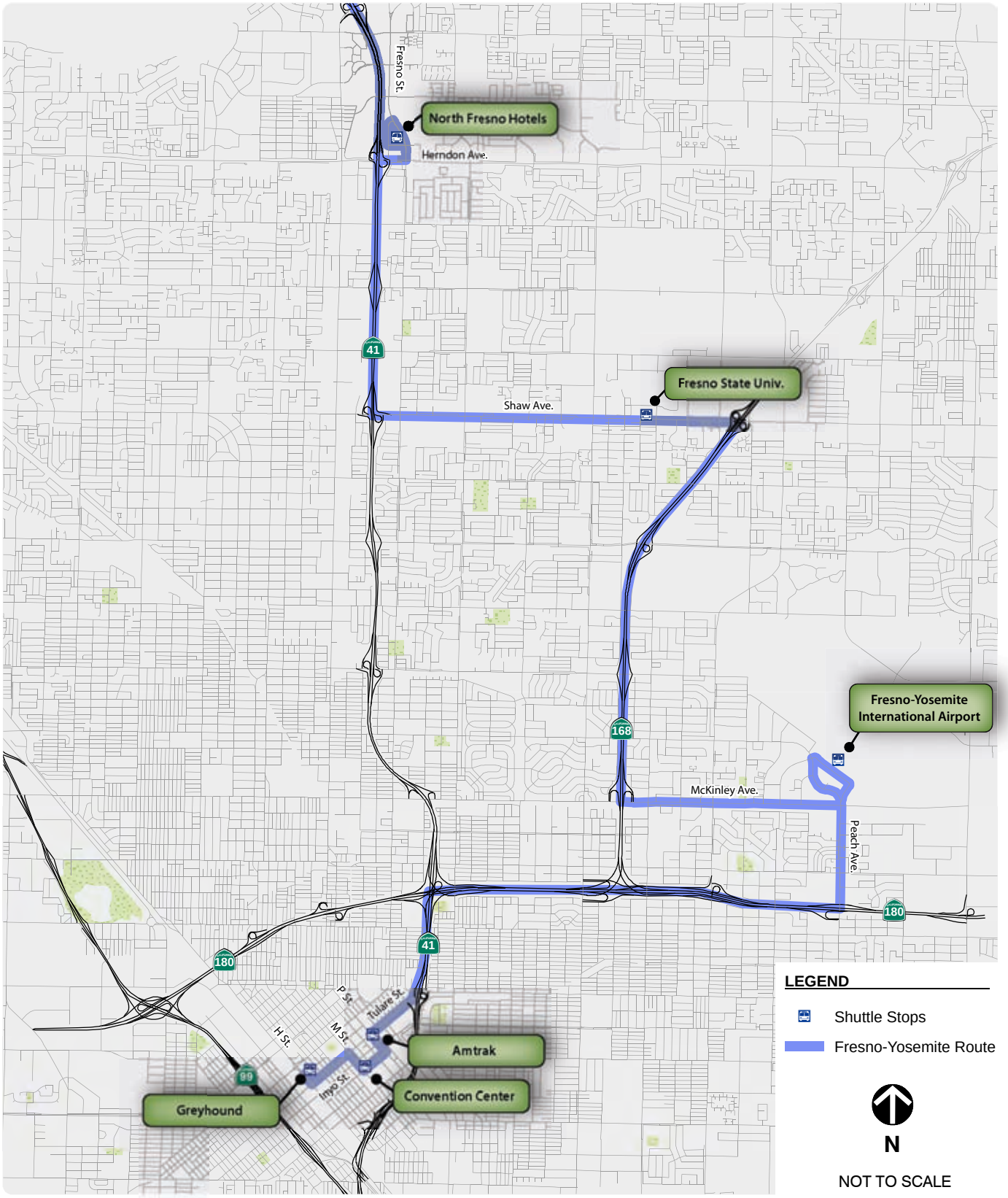
FRESNO-YOSEMITE ROUTE: FULL ROUTING AND STOPS

FIGURE 3



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FRESNO-YOSEMITE ROUTE: FRESNO ROUTING

FIGURE 4

Fresno State

Centrally located on-campus, this off-street stop would provide area residents and Fresno State students, faculty and staff with convenient access to Yosemite. Inbound and outbound trips would use the Maple Avenue turnaround from Shaw Avenue.

North Fresno Hotels

This stop would serve north Fresno and Clovis residents and visitors staying in one of the many hotels concentrated in this area. The proposed stop would be located on Fir Avenue, just west of Fresno Street, in front of the La Quinta Inn & Suites. Other hotels within a half mile of the stop include: Extended Stay America Hotel, Hampton Inn & Suites, Holiday Inn Express Hotel & Suites, Homewood Suites by Hilton, Springhill Suites by Marriott and Towneplace Suites. Budget Inn, Comfort Suites and Rodeway Inn are on the western side of SR 41 just over a half mile from the proposed stop location.

Chukchansi Gold Resort Casino

This stop would serve casino visitors and employees from the Fresno area, and guests making a day-trip to Yosemite.

Oakhurst

As a gateway to Yosemite, Oakhurst offers visitors many hotel options and is the ideal starting point for a day-trip into Yosemite. This stop would also offer access to Yosemite for park employees residing in the area and to Fresno destinations for Oakhurst residents. The wide shoulder would allow coaches to pick up passengers (northbound SR 41) near the Comfort Inn and drop off passengers (southbound SR 41) just south of the Comfort Inn near the "Sign Authority" building. The City of Oakhurst, the Oakhurst Area Chamber of Commerce and the Yosemite Sierra Visitors Bureau are coordinating on the Oakhurst Civic Center project, which will construct a new civic center centrally located near the intersection of SR 41 and Road 426. The Oakhurst Civic Center will become the location of the Yosemite Sierra Visitors Bureau and will have bus parking. The Oakhurst stop should be relocated to the Oakhurst Civic Center when it is completed.

Tenaya Lodge

The 294-room Tenaya Lodge is just two miles south of Yosemite's SR 41 entrance. The lodge itself is set back from SR 41 and the shuttle stop would be in front of the lobby entrance. Lodge guests, conference attendees from the Fresno area and employees would be served by this stop.

Wawona Hotel (Seasonal)

The first stop in Yosemite is the Wawona Hotel. The stop would be located on either side of SR 41 in two cutouts just north of the Wawona Hotel driveway. The Wawona Hotel is open April through November. This stop would also provide car-free access to Yosemite Valley to Wawona guests.

Curry Village

The second stop in Yosemite is Curry Village; the shuttle would use the existing YARTS stop location.

Ahwahnee Hotel

The third stop in Yosemite is the Ahwahnee Hotel; the shuttle would use the existing YARTS stop location.

Yosemite Visitors Center

The fourth stop in Yosemite is the Visitors Center; the shuttle would use the existing YARTS stop location.

Yosemite Valley Lodge

The fifth stop in Yosemite is the Yosemite Valley Lodge; the shuttle would use the existing YARTS stop location.

Infrastructure Requirements

Bus Storage and Maintenance/Layover

The Fresno Area Express (FAX) bus maintenance facility located at 2223 G Street could be used for overnight storage and vehicle service needs[1]. The FAX facility is only a four-minute deadhead to the Fresno Greyhound Station. If a private operator is retained to provide the service, it is possible that they would construct a private maintenance/storage facility in Fresno. For layover, the parking facility at Yosemite Lodge, provided by Yosemite National Park, could be used.

Stop Amenities

The Fresno-Yosemite route would require only minimal infrastructure for route launch. Signage identifying the Fresno-Yosemite route would be needed at each stop location. Nine of the 12 stops have existing stop infrastructure in place. Benches, shelters and trash cans should be considered as a complement to signage at the North Fresno Hotels, Oakhurst and Wawona stops.

Concept Schedule

Three service levels were envisioned for the Fresno-Yosemite route that would accommodate a range of funding levels and match demand with provision of service.

- Service Level 1 - Standard Peak – Operate peak service between May 1 and September 30 with five outbound and five inbound runs per day (seven days a week).
- Service Level 2 - Standard Peak and Reduced Off-Peak – Operate year-round service with five outbound and five inbound runs per day (seven days a week) from May 1 to September 30 and reduced service (three inbound and three outbound runs per day) during the off-peak season from October 1 to April 30.
- Service Level 3 - Expanded Peak and Reduced Off-Peak – Operate year-round service with seven outbound and seven inbound runs per day (seven days a week) from May 1 to September 30 and reduced service (three inbound and three outbound runs per day) during the off-peak season from October 1 to April 30.

Table 12 shows a concept schedule for five daily runs as described for Service Levels 1 and 2. The schedule was optimized to meet Amtrak (inbound and outbound). One-way running time for the 110-mile Fresno-Yosemite route (Greyhound Station to Yosemite Lodge) is anticipated to be 3.5 hours. Travel times were determined by conducting dry runs of the proposed routing. The field tests were conducted on Thursday, October 21 and Friday, October 22, 2010. Each stop was assigned an average dwell time of three minutes based on expected demand. No layover/recovery time was included because each one-way run ends with the coach ending service until a return trip is conducted in the afternoon (inbound) or the next morning (outbound). Additional run time may be needed when inclement weather is present.

1. Further study should be conducted to determine whether the existing FAX facility can accommodate 45' over the road coaches. Length, height, and three-axle operation may pose potential issues for service and/or storage.

The timing at each stop along the route is the expected departure time. Each stop is therefore a timepoint and the bus is expected to wait until the designated departure time even if it arrives early and has loaded or unloaded all expected passengers. The exception to this rule is stops in Fresno (North SR 41 hotels, Fresno State, Fresno Yosemite International Airport, Amtrak Station, Greyhound Station) for the inbound run (unless specifically requested otherwise by a passenger). These stops are for passenger unloading only and early arrival with an early departure would not affect boarding passengers who rely on schedules.

Service Level Recommendation

This study recommends pursuing funding for *Service Level 2 – Standard Peak and Reduced Off-Peak* and operating the service during a demonstration period of one to three years. During the demonstration period, ridership and customer demographics should be evaluated and provision of service should be reassessed and adjusted accordingly.

TABLE 12: CONCEPT SCHEDULE FOR FRESNO-YOSEMITE ROUTE FIVE DAILY RUNS – SERVICE LEVEL 1 OR 2

Outbound (To Yosemite)

Fresno Greyhound	Fresno Amtrak [a]	Fresno Airport	Fresno State	Fresno Hotels	Chukchansi Casino	Oakhurst	Tenaya Resort	Wawona	Curry Village	Ahwahnee Hotel	Visitor Center	Yosemite Lodge
					5:45	6:05	6:26	6:41	7:37	7:42	7:45	7:50
7:00	7:04	7:17	7:31	7:45	8:25	8:45	9:06	9:21	10:17	10:22	10:25	10:29
8:30	8:34	8:47	9:01	9:15	9:55	10:15	10:36	10:51	11:47	11:52	11:55	11:59
10:05	10:09	10:22	10:36	10:50	11:30	11:50	12:11	12:26	13:22	13:27	13:30	13:34
12:15	12:19	12:32	12:46	13:00	13:40	14:00	14:21	14:36	15:32	15:37	15:40	15:44

Inbound (to Fresno)

Curry Village	Ahwahnee Hotel	Visitor Center	Yosemite Lodge	Wawona	Tenaya Resort	Oakhurst	Chukchansi Casino	Fresno Hotels	Fresno State	Fresno Airport	Fresno Amtrak [a]	Fresno Greyhound
10:00	10:05	10:09	10:14	11:09	11:25	11:46	12:06	12:46	12:59	13:12	13:16	13:28
11:30	11:35	11:39	11:44	12:39	12:55	13:16	13:36	14:16	14:29	14:42	14:46	14:58
13:30	13:35	13:39	13:44	14:39	14:55	15:16	15:36	16:16	16:29	16:42	16:46	16:58
17:00	17:05	17:09	17:14	18:09	18:25	18:46	19:06	19:46	19:59	20:12	20:16	20:28
18:00	18:05	18:09	18:14	19:09	19:25	19:46	20:06	20:46	20:59	21:12	21:16	21:28

Source: Fehr & Peers
[a] Schedule optimized to meet Amtrak trains
[b] The schedule for the first outbound bus is designed primarily to serve NPS or park concession employees who would need to reach their Park work destinations by 8:00 am. It would also serve tourists staying at SR 41 hotels who desire an early arrival at Yosemite.

Fare Recommendations

The YARTS service (Merced-Yosemite) charges distance-based fares, and the Sequoia Shuttle (Visalia-Sequoia National Park) charges a flat fare regardless of boarding location. For the YARTS service, round trip fares to Yosemite Valley run between $6 and $25. For the Sequoia Shuttle, the roundtrip fare to Sequoia National Park is $15 regardless of pickup location. These fares include the park entry fee. A distance-based fare structure, similar to YARTS, is recommended for the Fresno-Yosemite route. All fares would include admission into Yosemite. The optimum fare structure for the Fresno-Yosemite route would maximize ridership and farebox revenue (to help defray operating costs). A recent survey of Fresno State students, faculty and staff indicated that a practical price point would be $20 for a round trip fare. Using the 2010 YARTS fares, 2010 Sequoia Shuttle fares and the Fresno State survey as indicators of willingness to pay, the following initial fare structure is recommended:

- $25 – Greyhound Station, Amtrak Station, Fresno Yosemite International Airport, Fresno State, North Fresno Hotels to Yosemite Valley
- $15 –
  - Greyhound Station, Amtrak Station, Fresno Yosemite International Airport, Fresno State, North Fresno Hotels to Wawona
  - Chukchansi Casino, Oakhurst to Yosemite Valley
- $10 –
  - Greyhound Station, Amtrak Station, Fresno Yosemite International Airport, Fresno State, North Fresno Hotels to Chukchansi Casino
  - Tenaya Lodge to Yosemite Valley

Fare Media

All potential ticketing options should be considered and offered if feasible. Cash and credit-card should be offered as payment options.

- Online/phone reservations and sales
- Point of sale sales at hotels and other ticketing partners
- On-board ticket sales
- Group sales online and via phone (may result in additional off-schedule trips)
- Monthly/annual passes for park employees

Fleet Requirements

A positive passenger experience is critical to highly valued word of mouth advertising that generates new business, in addition to generating repeat business from existing customers. Forty-five foot, over-the-road coaches, such those operated by YARTS, are recommended to maximize passenger experience on the three-plus hour trip. These buses typically seat 55 passengers and supply the passenger

comforts and storage space needed for the line-haul service. The MCI D4505 is an example of the type of coach that meets the requirements for this service. The rendering shown here is of a new D4505 model.

Industry standard protocol is to maintain a spare ratio of 20 percent. Service Levels 1 and 2 would require six buses (five revenue vehicles and one spare). Service Level 3 would require nine buses (seven revenue vehicles and two spares. For all service levels, a spare bus and driver would be on-call during operating hours.

Productivity Targets

Ridership estimates (high-end and low-end) for the Fresno-Yosemite route are documented in Chapter 5 of this report. The high-end estimates for the peak season and off-peak season are 9,100 and 3,500 boardings per month, respectively. Using service inputs (peak service days, off-peak service days, route distance, route travel time), annual vehicle revenue hours and vehicles miles were calculated for each service level (shown in Table 13). To achieve (or exceed) the high-end ridership projections, minimum productivity standards must be met. Table 13 shows both the average number of passengers per revenue hour and passengers per revenue hour needed to meet the ridership projections.

TABLE 13: FRESNO-YOSEMITE ROUTE PRODUCTIVITY TARGETS BASED ON RIDERSHIP ESTIMATES

Level	Peak Days	Off Peak Days	Annual Rev. Miles	Annual Rev. Hours	Pax/Rev. Mile Target	Pax/Rev. Hour Target
1	153	0	168,300	5,355	0.27	8.4
2	153	212	308,220	9,807	0.22	7
3	153	212	375,540	11,949	0.24	7.7

Source: Fehr & Peers

Farebox recovery, which is equal to percentage of operating costs[2] covered by farebox revenues, is another common measurement of transit performance. California Transportation Development Act (TDA) guidelines stipulate that farebox recovery must be at least 10 percent for “rural” transit systems to be eligible for TDA funding.

YARTS began operations in May 2000, and for the first three years of service the system recovered 24 percent of operating costs (*Short Range Transit Plan*, Yosemite Area Regional Transportation System, October 2003). Since the service is expected to perform similar to YARTS, an initial target farebox recovery of 25 percent is a reasonable expectation. Once operating costs for the service have been estimated, this productivity target will be revisited and revised, if needed.

For FY 2009/10, YARTS farebox revenue covered 27.6 percent of operating costs. A mature Fresno-Yosemite route should be expected to achieve this level of farebox recovery or better.

Not included in the farebox recovery target estimate is the potential Amtrak contract for Thruway Service. YARTS recovered 17.6 percent of operating costs in FY 2009/10 with its Amtrak Thruway Service contract. If a similar contract is granted for the Fresno-Yosemite route, combined farebox recovery should be expected at 40 percent or greater. Year round operation of the route is a requirement for an Amtrak Thruway Service contract; therefore, Service Level 1 would not be eligible to receive financial support from Amtrak.

2. Operating costs are typically a function of cost per revenue hour and cost per revenue mile. Those costs are inclusive of operations, overhead, and vehicle maintenance.

FRESNO-SEQUOIA/KINGS CANYON ROUTE (SR 180) OPERATING PLAN

The Fresno-Sequoia/Kings Canyon route is 90 miles in each direction and is proposed to have 11 stops (three in Fresno, one along rural SR 180, one in Kings Canyon National Park, two in Sequoia National Forest and four in Sequoia National Park). Figure 5 shows the proposed full routing and stops. Figure 6 shows Fresno-specific routing. Exact routing and stop locations were determined through field tests to ensure accessibility by 45-foot coaches. Passenger loading and unloading was designed, where physically possible, to be conducted off major arterials to maximize safety and passenger experience.

Stop Descriptions

Fresno Greyhound Station

The route's first/last stop would be at the Fresno Greyhound Station. Coaches would use one of the facility's bus bays to load and unload passengers.

Fresno Amtrak Station

The Fresno Amtrak Station is one of two major access points for out-of-town passengers who will be visiting Sequoia/Kings Canyon without a car. Inbound and outbound runs would approach the station from the south and stop in the passenger loading/unloading area directly in front of the station. This stop would also serve convention center attendees and potentially downtown Fresno park-and-ride demand. Exhibit halls and the convention center's primary parking structure (1,570) spaces are three blocks from the Amtrak station.

An additional stop location under consideration that would more directly serve the convention center and park-and-ride patrons is in front of the parking garage on Inyo Street between O Street and N street. Currently, no overnight parking is allowed at the garage. This issue would need to be resolved prior to including this stop as part of the route.

Fresno Yosemite International Airport (Park-and-Ride)

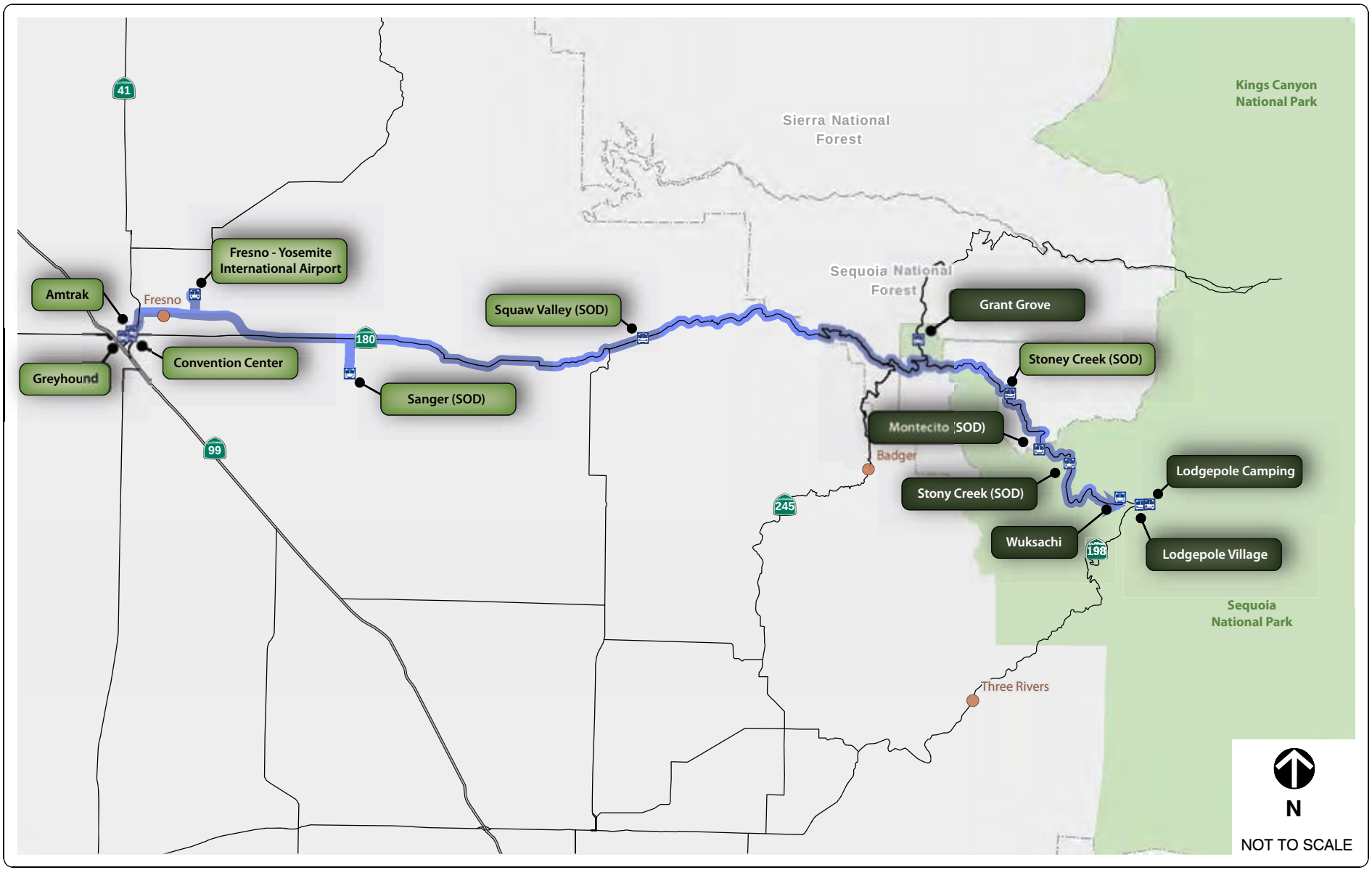
This stop would serve airline passengers and hotel guests staying in the immediate area. This stop would serve east Fresno and south Clovis residents, both for drop-off and park-and-ride ($8/day). The Fresno-Sequoia/Kings Canyon shuttle would use the existing Fresno Area Express (FAX) stop in front of the departures area.

Sanger (SOD)

The stop in Sanger would be at the Chamber of Commerce or an alternate location, and be on-demand only.

Squaw Valley (SOD)

The stop in Squaw Valley would be at the Squaw Valley Trading Center and be on-demand only. This stop would also offer access to Sequoia/Kings Canyon for park employees who reside in the area.



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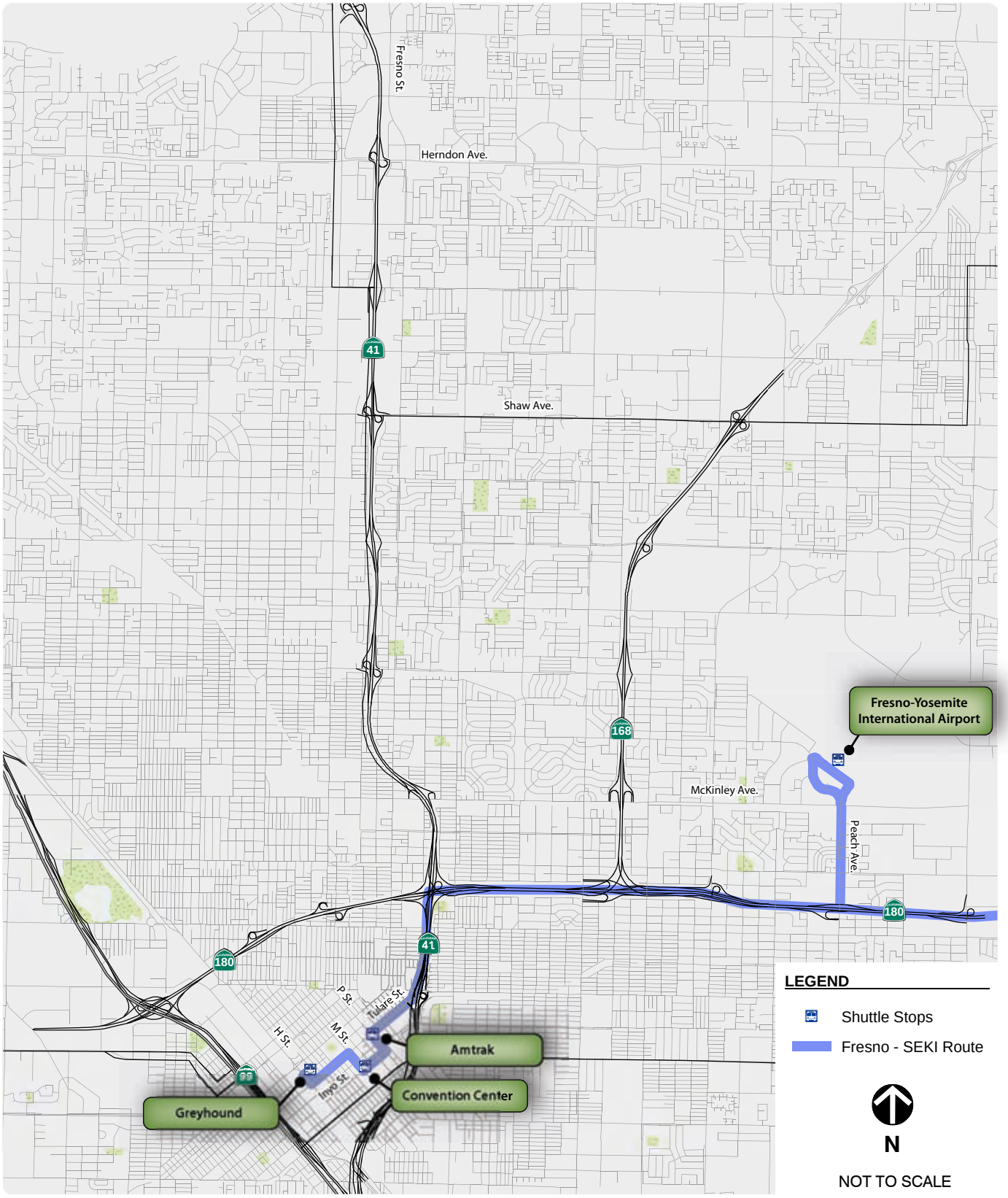
FRESNO - SEKI ROUTE: FULL ROUTING AND STOPS

FIGURE 5



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FRESNO-SEKI ROUTE: FRESNO ROUTING

FIGURE 6

Grant Grove

This is the only stop located inside Kings Canyon; it provides access to the Kings Canyon Visitor Center, campgrounds and Grant Grove Lodge. Coaches would use the existing bus loading area in front of the Grant Grove market.

An optional routing scenario would include a stop at the General Grant Tree. This would add an additional time penalty to the route (approximately 10 minutes).

Montecito-Sequoia Lodge (SOD)

This stop, at a lodge with 52 rooms and several cabins in the Sequoia National Forest, would be on-demand only.

Stony Creek Village (SOD)

This stop, located adjacent to an 11-room lodge with a restaurant and store in the Sequoia National Forest, would be on-demand only.

Dorst Creek Campground (SOD)

The Dorst Creek campground has 204 sites. Initially, this stop within Sequoia National Park would be on-demand only.

Wuksachi Village

Wuksachi Village is a 102-room resort set off from the Generals Highway. This stop would use the Internal Sequoia Shuttle stop.

Lodgepole Campground

The Fresno-Sequoia/Kings Canyon route would stop just before the entrance to Lodgepole campground for passenger pick-up and drop-off.

Lodgepole Visitor Center

This stop provides convenient access to other park locations for car-free visitors. It would use the Internal Sequoia Shuttle stop.

Sequoia-Kings Canyon Internal Park Shuttle (Optional)

As part of the route planning process, an internal park shuttle was considered as a complement to the Fresno-Sequoia/Kings Canyon. The internal park shuttle would provide bi-directional access for park visitors between Grant Grove (Kings Canyon National Park) and Sequoia National Park stops. Each inbound shuttle trip could make one internal park round trip prior to departing for Fresno. The internal park shuttle would operate fare-free, similar to the internal park shuttle that operates exclusively within Sequoia National Park. While operationally feasible, this routing remains optional and should be explored further if demand warrants and/or the National Park Service would offer financial support for the route.

Infrastructure Requirements

Bus Storage and Maintenance/Layover

The Fresno Area Express (FAX) bus maintenance facility located at 2223 G Street could be used for overnight storage and vehicle service needs[3]. The FAX facility is only a four minute deadhead to the Fresno Greyhound Station. If a private operator is retained to provide the service, it is possible that they would construct a private maintenance/storage facility in Fresno. For layover, the Sequoia Shuttle facility across adjacent to Lodgepole Village could be used.

Stop Amenities

The Fresno-Sequoia/Kings Canyon route would require only minimal infrastructure for route launch. Signage identifying the Fresno-Sequoia/Kings Canyon route would be needed at each stop location. Seven of the 11 stops have existing stop infrastructure in place. The remaining four stops are on-demand with lower ridership potential. For infrastructure improvements such as benches, shelters and trash cans, priority should be given to higher-ridership stops over on-demand stops with no infrastructure in place.

Concept Schedule

The internal park shuttle in Sequoia National Park runs from Memorial Day to Labor Day. Without the mobility that the internal park shuttle provides, visiting the park without a car would be difficult. The Fresno-Sequoia/Kings Canyon route is recommended to match the operating schedule of the internal park shuttle and provide service from Memorial Day to Labor Day. During this peak visitation period, the route would operate four outbound and four inbound runs per day (seven days a week).

Table 14 shows a concept schedule for the route. The schedule was optimized to meet Amtrak (inbound and outbound). One-way running time for the 90-mile Fresno-Sequoia/Kings Canyon route (Greyhound Station to Lodgepole Visitor Center) is anticipated to be 2 hours and 40 minutes. Travel times were

3. Further study should be conducted to determine whether the existing FAX facility can accommodate 45' over the road coaches. Length, height, and three-axle operation may pose potential issues for service and/or storage.

determined by conducting dry runs of the proposed routing. The field tests were conducted on Thursday, October 21, 2010. Each stop was assigned a dwell time of two or three minutes based on expected demand. No layover/recovery time was included because each one-way run ends with the coach ending service until a return trip is conducted in the afternoon (inbound) or the next morning (outbound). Additional run time may be needed when inclement weather is present.

The timing at each stop along the route is the expected departure time. Each stop (with the exception of on-demand stops) is therefore a timepoint, and the bus is expected to wait until the designated departure time even if it arrives early and has loaded or unloaded all expected passengers. The exceptions to this rule are the on-demand stops (Squaw Valley, Montecito, Stony Creek, Dorst Creek) and the final three Sequoia National Park stops (Wuksachi Village, Lodgepole Campground, Lodgepole Village) for the outbound run and the stops in Fresno (Fresno Yosemite International Airport, Amtrak Station, Greyhound Station) for the inbound run (unless specifically requested otherwise by a passenger). These end-of-run stops are for passenger unloading only, and early arrival with an early departure would not affect boarding passengers who rely on schedules.

TABLE 14: CONCEPT SCHEDULE FOR FRESNO-SEKI ROUTE

Outbound (To Sequoia/Kings Canyon)										
Fresno Greyhound	**Fresno Amtrak [a]**	**Fresno Airport**	**Squaw Valley (SOD)**	**Grant Grove**	**Montecito Lodge (SOD)**	**Stony Creek (SOD)**	**Dorst Creek (SOD)**	**Wuksachi Village**	**Lodgepole Campground**	**Lodgepole Visitor Center**
6:05	6:09	6:22	7:02	7:44	8:02	8:10	8:20	8:34	8:43	8:45
7:05	7:09	7:22	8:02	8:44	9:02	9:10	9:20	9:34	9:43	9:45
10:10	10:14	10:27	11:07	11:49	12:07	12:15	12:25	12:39	12:48	12:50
12:20	12:24	12:37	13:17	13:59	14:17	14:25	14:35	14:49	14:58	15:00
Inbound (to Fresno)										
Lodgepole Campground	**Lodgepole Visitor Center**	**Wuksachi Village**	**Dorst Creek (SOD)**	**Stony Creek (SOD)**	**Montecito Lodge (SOD)**	**Grant Grove**	**Squaw Valley (SOD)**	**Fresno Airport**	**Fresno Amtrak [a]**	**Fresno Greyhound**
12:00	12:04	12:13	12:27	12:36	12:44	13:02	13:44	14:24	14:37	14:41
14:15	14:19	14:28	14:42	14:51	14:59	15:17	15:59	16:39	16:52	16:56
17:15	17:19	17:28	17:42	17:51	17:59	18:17	18:59	19:39	19:52	19:56
18:30	18:34	18:43	18:57	19:06	19:14	19:32	20:14	20:54	21:07	21:11

Source: Fehr & Peers
[a] Schedule optimized to meet Amtrak trains

Fare Recommendations

The YARTS service (Merced-Yosemite) charges distance-based fares and the Sequoia Shuttle (Visalia-Sequoia National Park) charges a flat fare regardless of boarding location. For the YARTS service, round trip fares to Yosemite Valley run between $6 and $25. For the Sequoia Shuttle, the roundtrip fare to Sequoia National Park is $15 regardless of pickup location. All fares would include park admission. A distance-based fare structure, similar to YARTS, is recommended for the Fresno-Sequoia/Kings Canyon route. The optimum fare structure for the Fresno-Sequoia/Kings Canyon route would maximize ridership and farebox revenue (to help defray operating costs). A recent survey of Fresno State students, faculty and staff indicated that a practical price point would be $20 for a round trip fare. Using the 2010 YARTS fares, 2010 Sequoia Shuttle fares and the Fresno State survey as indicators of willingness to pay, the following initial fare structure is recommended:

- $20 – Greyhound Station, Amtrak Station, Fresno Yosemite International Airport to Montecito Lodge, Stony Creek, Dorst Creek, Wuksachi Village, Lodgepole Campground, Lodgepole Visitor Center
- $15 – Greyhound Station, Amtrak Station, Fresno Yosemite International Airport to Grant Grove
- $10 – Squaw Valley to Montecito Lodge, Stony Creek, Dorst Creek, Wuksachi Village, Lodgepole Campground, Lodgepole Visitor Center
- $5 – Squaw Valley to Grant Grove

Fare Media

All potential ticketing options should be considered and offered if feasible. Cash and credit-card should be offered as payment options.

- Online/phone reservations and sales
- Point of sale sales at hotels and other ticketing partners
- On-board ticket sales
- Group sales online and via phone (may result in additional off-schedule trips)
- Monthly/annual passes for park employees

Fleet Requirements

A positive passenger experience is critical to highly valued word-of-mouth advertising that generates new business, in addition to generating repeat business from existing customers. Forty-five foot, over-the-road coaches, such those operated by YARTS, are recommended to maximize passenger experience on the two and three-quarter hour trip. These buses typically seat 55 passengers and supply the passenger comforts and storage space needed for the line-haul service. The MCI D4505 is an example of the type of coach that meets the requirements for this service.

Industry standard protocol is to maintain a spare ratio of 20 percent. The Fresno-Sequoia/Kings Canyon route would require five buses (four revenue vehicles and one spare). A spare bus and driver would be on-call during operating hours.

Productivity Targets

Ridership estimates (high-end and low-end) for the Fresno-Sequoia/Kings Canyon route are documented in Chapter 5 of this report. The high-end estimate for the peak season was 7,400 boardings per month. Using service inputs (peak service days, off-peak service days, route distance, route travel time), annual vehicle revenue hours and vehicles miles were calculated for each service level (shown in Table 15). To achieve (or exceed) the high-end ridership projection, minimum productivity standards must be met. Table 15 shows both the average number of passengers per revenue hour and passengers per revenue hour needed to meet the ridership projections.

TABLE 15: FRESNO-SEKI ROUTE PRODUCTIVITY TARGETS BASED ON RIDERSHIP ESTIMATES

Peak days	Annual Rev. Miles	Annual Rev. Hours	Pax/Rev. Mile Target	Pax/Rev. Hour Target
102	73,400	2,179	0.33	11.2

Source: Fehr & Peers; Peak days based on 2011 Calendar

Farebox recovery, which is equal to percentage of operating costs[4] covered by farebox revenues, is another common measurement of transit performance. California Transportation Development Act (TDA) guidelines stipulate that farebox recovery must be at least 10 percent for "rural" transit systems to be eligible for TDA funding. In its first year of operation (2007), the Sequoia Shuttle recovered 23.8 percent of operating costs through farebox revenue (more recent operating cost data is not available). In 2008, the round trip fare on the Sequoia Shuttle increased from $10 to $15. All else equal (holding expenditures constant), farebox recovery would have increased to 33.3 percent. For the first year of operation, the Fresno-Sequoia/Kings Canyon route should be expected to perform as least as well as the Sequoia Shuttle, and a target farebox recovery range between 25 percent and 35 percent is a reasonable expectation. Once operating costs for the service have been estimated, this productivity target will be revisited and revised, if needed.

In the Sequoia Shuttle's fourth year of operation (2010), the route saw a sizeable ridership increase compared to consistent ridership totals between 2007 and 2009[5]. This ridership increase, while holding fares constant, indicates that the 2010 operation recovered a greater portion of operating costs than the three previous years.

4. Operating costs are typically a function of cost per revenue hour and cost per revenue mile. Those costs are inclusive of operations, overhead, and vehicle maintenance.
5. The 2010 service was extended two weeks past Labor Day weekend, which was the end date for the service from 2007 to 2009.

Administrative and Operational Roles

Implementation of transit service to Yosemite and/or Sequoia/Kings Canyon National Parks requires consideration of several administrative and operational alternatives, as summarized below.

Administration

The following administrative options are suggested for consideration, given the service options previously described.

1. Fresno COG would create a Joint Powers Authority (JPA) to create identity for service and maximize state and federal funding potential (similar to YARTS).
2. Fresno COG would contract out administration of both routes to YARTS.
3. Fresno COG would contract out the administration of the Fresno-Yosemite route to YARTS and the Fresno-Sequoia/Kings Canyon route to Visalia Transit.
4. Fresno COG would work with YARTS and other agencies to create a regional Yosemite-Sequoia/Kings Canyon transportation entity (essentially an expanded YARTS JPA) to administer transit services for all interested agencies.

Selection of the third option described above may limit the ability of the Fresno COG to receive certain funding sources, mostly notably the Section 5311(f) funding currently received by YARTS. This funding is currently capped at $300,000 annually per agency.

We recommend selecting the second or third administrative model for an initial pilot project. Creating a regional JPA is beneficial, namely because the entity would be a more powerful group to lobby for federal funding for capital and operations costs. This administrative model would succeed best in the long term but would require buy-in from YARTS, Visalia Transit (operators of Sequoia Shuttle) and affected counties (Fresno, Madera, Mariposa, Merced, Tulare).

Operations

We assume that buses will be stored and maintained in the FAX facility. Route operations can be provided by either of the following operation approaches.

- FAX directly operates one or both transit routes
- Service is contracted to a private company (such as Via Adventures, Inc. or MV Transportation)

Both operational models are feasible in the short term. Contracted service can be less expensive than directly operated service.

9. NEXT STEPS

The critical obstacle for either route to prove feasible is the development of a sustainable funding program. Both service routes are likely to be competitive for one-time grant funding to fund service start-up. Ongoing funding sources, which are more challenging, are critical to the long-term success of the service. The creation of a permanent local funding source and a commitment for annual contributions from both parks are key elements of a sustainable funding plan.

The following are suggested funding milestones towards accomplishing a sustainable funding plan.

- Create Implementation Working Group
- Outreach to National Parks staff about collaboration
- Outreach to Madera County Board of Supervisors about coordination and partnership opportunities
- Contact YARTS Board about potential collaboration
- Contact Visalia Transit about potential collaboration
- Work with National Park staff to pursue federal grant funding for start-up service
- Pursue a CMAQ grant for start-up service
- Work with National Park staff to get a commitment towards an annual contribution
- Follow up with Chukchansi Casino and other private entities about partnership opportunities
- Establish local funding sources (City of Fresno, Madera County, etc.)

The above work tasks are suggested for amendment into the Fresno COG Overall Work Plan (OWP) for the current 2010/11 fiscal year and/or inclusion in the 2011/12 fiscal year.