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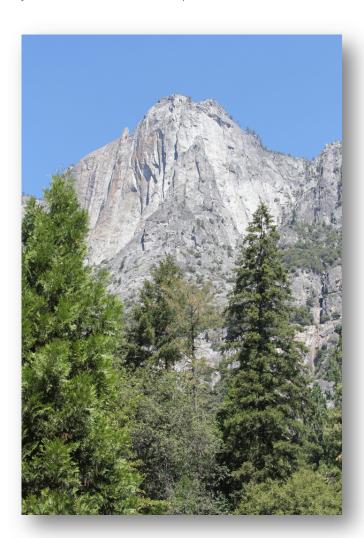
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CHAPTER 1. INTRODUCTION

This report develops a detailed service plan for public transit service between Fresno and Yosemite National Park. This service plan builds off the feasibility study completed in 2011 (*Yosemite, Sequoia, and Kings Canyon National Park Transit Market Assessment & Feasibility Study,* Fehr & Peers). The service plan includes:

- Description of route including route maps
- Summary of stop locations including midday layover in Yosemite National Park
- Concept schedules for 4, 6, and 8 daily roundtrip service levels
- Operating characteristics including vehicle service hours and revenue miles
- Annual operating & maintenance (O&M) cost estimates including vehicle lease
- Capital needs
- Fare structure recommendation
- Funding strategies

In 2012, more than 4 million people visited Yosemite National Park.¹ While many private bus operators serve Yosemite, the only public transit service to the park is the Yosemite Area Regional Transportation System (YARTS) service from Merced (population 78,959)² along the Highway 140 corridor, from Sonora (population 4,903)² along the Highway 120 corridor, and from Mammoth Lakes (population 8,234)² along the Highway 120/395 corridor. No



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¹ http://www.nps.gov/yose/naturescience/park-statistics.htm

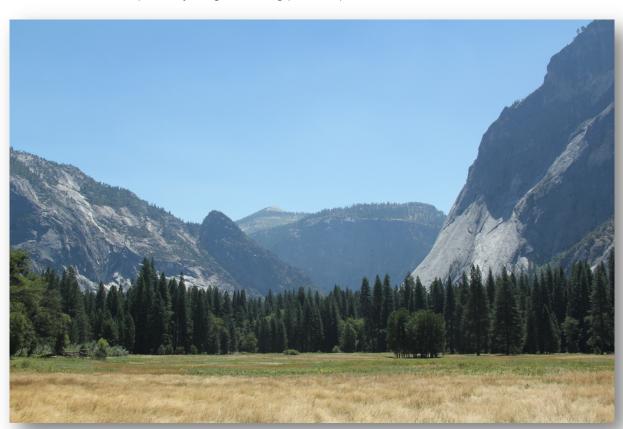
² Population data from 2010 United States Census

public transit service currently serves Yosemite from the Greater Fresno Area (population 1,081,315). To improve mobility and reduce congestion on park roads, the National Park Service (NPS) operates an internal shuttle system within Yosemite National Park:

- Yosemite Valley Shuttle (year round; 7 AM to 10 PM; 10 to 20 minute service; fare free)
- El Capitan Shuttle (mid-June to early October; 9 AM to 6 PM; 10 to 20 minute service; fare free)
- Wawona-Mariposa Grove Shuttle (spring through fall; 30 minute service all-day; fare free)
- Tuolumne Meadows Shuttle (June through mid-September; 7 AM to 6 PM; fare free)
- Wawona to Yosemite Valley Shuttle (Memorial Day to Labor Day; one round trip daily)

1.1 SERVICE AREA BACKGROUND

Consisting of Fresno and Madera counties, Greater Fresno is the second largest Combined Statistical Area (CSA) in Central California behind Greater Sacramento, and is the 43rd largest in the United States. The City of Fresno anchors the CSA with a population of over 500,000, making it the fifth largest city in California, and the 34th largest in the nation. Fresno hosts a large number of universities, including Fresno State (22,565 undergraduate, graduate, and post-doctoral students), conventions, performing arts, theater, minor league baseball (Giants' AAA team), and museums. Fresno is also a major stop along the San Joaquin Amtrak line, has a major airport, and enjoys frequent Greyhound bus service to downtown from throughout California. Fresno lies approximately 75 miles south of Yosemite, accessible via the SR 41 corridor, making its population size, accessibility to out of town visitors, and close proximity a logical starting point for public transit service to Yosemite.



CHAPTER 2. ROUTE DESCRIPTION

The Fresno-Yosemite route is approximately 110 miles in each direction and includes 14 stops, beginning in downtown Fresno and terminating in Yosemite National Park:

- Six in Fresno;
- Three along rural SR 41; and
- Five in Yosemite National Park.

2.1 ROUTING

Figure 2-1 shows the proposed full routing and stops. **Figure 2-2** shows Fresno-specific routing.

Exact routing and stop locations were determined through field tests that also included in-person meetings with Fresno Airport, Fresno State, Chuckchansi Gold Resort and Casino, Tenaya Lodge, and Yosemite NPS staff to determine preferred stop locations and to ensure accessibility



by 45-foot coaches. Passenger loading and unloading was designed, where physically possible, to be conducted off major roadways in order to maximize safety and passenger experience.

2.1.1 Fresno to Yosemite (Outbound) Route Description

Fresno Area

The outbound run would begin at the Fresno Greyhound Station. From the Fresno Greyhound Station, the bus would travel eastbound on Tulare Street, turn right on M Street, and left on Inyo Street to reach the Convention Center stop. Continuing east on Inyo Street, the bus would turn left at Santa Fe Avenue to reach the Fresno Amtrak stop, picking up passengers in the passenger loading area of the Amtrak Station (or in the overflow lot located just after the bus makes the left turn). Leaving the Amtrak Station, the bus would turn right on Tulare Street and take the on-ramp to SR 41 North, then merge onto SR 180 East to the Fresno-Yosemite International Airport. To reach the Fresno-Yosemite International Airport stop, the bus would exit at North Peach Avenue traveling north to the main passenger terminal. After picking up customers, the bus would exit the airport and turn right at McKinley Avenue, enter SR 168 East, continue for about 3 miles, and exit at Shaw Avenue. The bus would then turn left onto Shaw Avenue, right on N Cedar Avenue and right on E Barstow Avenue, and pull into the existing stop on E Barstow Avenue, just before Campus Drive. Upon departing, the bus would turn left on E Barstow Avenue, then left on N Cedar Avenue and right on E Shaw Avenue before entering SR 41 North. The bus would travel on SR 41 North for about 1.5 miles then exit at E Herndon Avenue, take the first right onto N Fresno Street and left on E Fir Avenue to stop just in front of La Quinta Inn & Suites (the North Fresno Hotels stop). The bus would then turn right on N Howard Street, right on N Fresno Street, right on E Herndon Avenue, and enter SR 41 North.

Rural SR 41

The bus would travel on SR 41 North for about 28 miles and then turn right on Lucky Lane to access Chuckchansi Gold Resort & Casino. The bus would then re-enter SR 41 North and travel for about 11 miles before stopping in Oakhurst, along the side of the highway. The bus would then travel approximately 12 miles on SR 41 North to stop at Tenaya Lodge.

Yosemite National Park

About 8 miles north of Tenaya Lodge on SR 41 is the Wawona stop (first in-park stop). The bus would then continue on SR 41/Wawona Drive for another 22 miles, then merge onto Southside Drive and turn right on Curry Village Drive before reaching the Curry Village stop. The bus would then turn left on Curry Village Drive, continue on Northside Drive, turn right on Village Drive and right on Ahwahnee Drive to reach the Ahwahnee Hotel stop. The bus would then run westbound on Ahwahnee Drive, turn right on Village Drive and stop at the Yosemite Visitor Center. The bus would continue on Village Drive, make a slight right onto Northside Drive and turn left at Yosemite Lodge Drive to stop at Yosemite Lodge. The bus would then layover just behind Yosemite Lodge.

2.1.2 Yosemite to Fresno (Inbound) Route Description

The inbound run (Yosemite to Fresno) would mirror the outbound run in reverse with the following two exceptions. The first exception is that rather than mirroring the Yosemite Valley stop order, the bus would follow the same order as the outbound run: first Curry Village, then Ahwahnee Hotel, then Yosemite Visitor Center, then Yosemite Lodge. The bus would then take Northside Drive to SR 41 South to access Wawona. The second exception is that once the bus exits SR 41 at Tulare Street in Fresno, the bus would turn left at M Street, left at Inyo Street, and stop at the Convention Center before stopping at the Fresno Amtrak Station.

2.2 STOPS

The *Yosemite, Sequoia, and Kings Canyon National Park Transit Market Assessment & Feasibility Study* identified 14 stops for the route. Following a service plan kick-off meeting with key stakeholders in August 2013 (NPS Staff, YARTS, and Fresno COG) and in-person meetings with Fresno State, Chuckchansi Gold Resort Casino, and Tenaya Lodge, during field tests of the route, the final stop locations were confirmed. The order of stops shown

in **Table 2-1** is for the outbound route. The inbound route includes the same stops, but in a slightly different order for the reasons above.

2.3 LAYOVER NEEDS

For midday layover, buses would park on the road behind Yosemite Lodge (see final row in **Table 2-1**). YARTS currently parks layover vehicles here and there is space for additional vehicles. This is the required layover location for coach operations terminating in the park. It is convenient for operators due to its proximity to the end/start of route, restroom availability, as well as food, beverage, and lodging services.

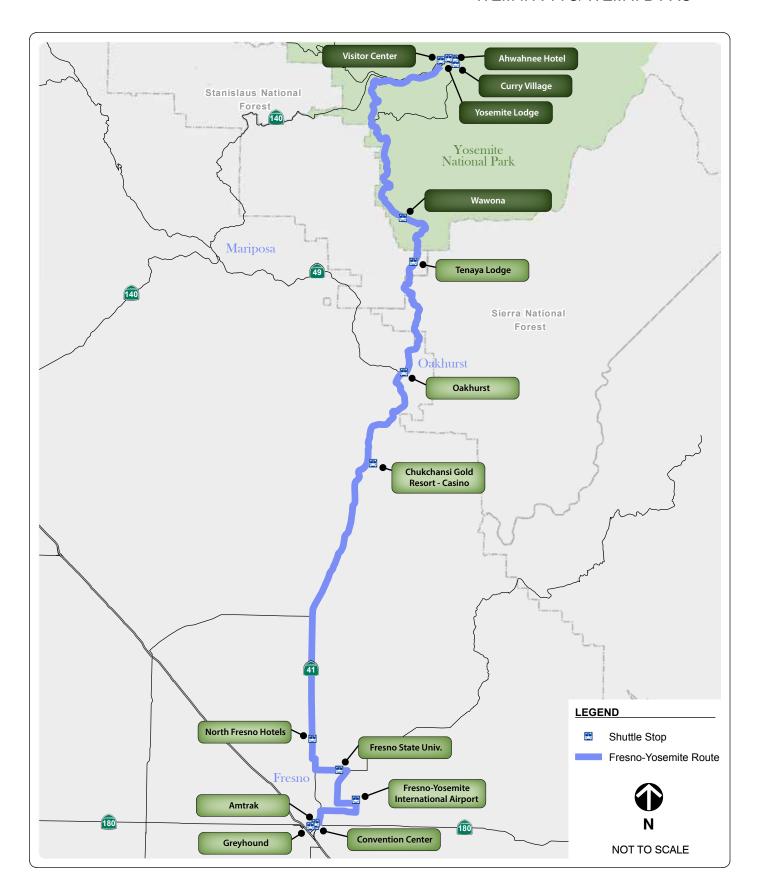


2.4 ADDITIONAL STOPS CONSIDERED

During discussions with stakeholders, the following additionalstop locations were identified. These stops could be added to the service in the future.

- Oakhurst As demand warrants, additional stop locations along SR 41 could be added to provide more convenient access to residents and visitors departing from/arriving in Oakhurst.
- South Entrance Parking Lot A parking lot and staging area is currently being constructed near the south entrance to the park in order to increase capacity for visitors to Mariposa Grove. This lot is expected to open in 2016. At that time, the route could be re-evaluated to determine adding a stop at this location, which is just south of Wawona (suggested by NPS Staff).
- Badger Pass During the winter, Badger Pass is a popular ski resort destination within the park. Providing service to this location during winter months could be considered (suggested by Tenaya Lodge). 45 foot coach accessibility on the road to Badger Pass would need to be confirmed prior to any further exploration of this potential route.







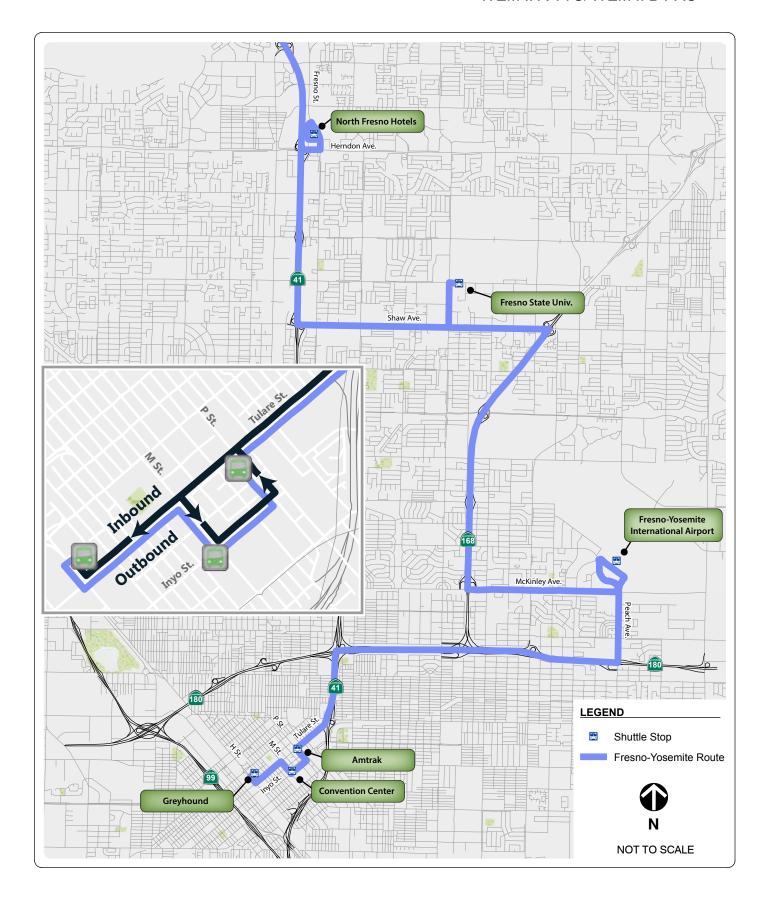




Table 2-1. Fresno-Yosemite Stops

Station

Fresno Greyhound 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. Greyhound was contacted during the planning process in both October 2012 and September 2013 but did not respond to requests.



Convention Center

This stop would serve convention center attendees and regional park-and-ride demand. The stop would be located on Inyo Street between O Street and N street adjacent to the convention center's primary parking structure (1,570 spaces), which is owned by the City but operated by ACE. The City also owns a 300 space surface parking lot which is operated by the Convention Center. Currently, no overnight parking is allowed at either location. Convention Center staff would be interested in allowing overnight parking as a way to promote the service to area residents and is open to discussing this option with the City. Since both the lot and the garage are owned by the City, the City could subsidize the price of overnight parking for those purchasing a shuttle ticket. Convention Center representatives did voice concerns that vandalism could be an issue in the area.



Fresno Amtrak Station

The Fresno Amtrak Station is one of three major access points for out-of-town passengers who will be visiting Yosemite without a car. Caltrans Department of Rail was contacted had a favorable reaction to the potential service, and requested the service be timed to meet trains. The schedule was designed to meet northbound/southbound trains.

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. An alternate location is the overflow parking area to the south of the station.

Fresno-Yosemite International Airport

This stop would serve airline passengers and hotel guests staying in the immediate area, as well as park-and-ride for area (east Fresno and south Clovis) residents (\$8/day). Approximately 40 flights per day serve the airport carrying 2,400 passengers. Airport staff was contacted and are supportive of the service.

The Fresno-Yosemite route would use the existing Fresno Area Express (FAX) stop in front of the departures area.



Fresno State

Two stop locations were considered on the Fresno State Campus. The preferred location (shown to the right) is an existing, but unused bus cut out on E Barstow Avenue just west of Campus Drive. The second location is the Maple Avenue turnaround from Shaw Avenue. While the Maple Avenue location is more centrally located, the facility is currently used for passenger loading/unloading. Therefore capacity at this location is limited unless Fresno State would be willing to paint a red "no stopping" zone and reserve a portion of the turnaround for the bus. Fresno State was contacted and is open to discussing potential stopping locations on campus.



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.



Chuckchansi Gold Resort Casino

This stop would serve casino visitors and employees from the Fresno area, and guests making a day-trip to Yosemite. The bus would stop in a designated bus turnaround zone located in the back of the resort, near an entrance. Chuckchansi is currently served by both public and private buses that stop at this location. A representative of the resort was contacted and confirmed that Chuckchansi would be willing to accommodate the Fresno-Yosemite service at this stop location.



Oakhurst

As a gateway to Yosemite, Oakhurst offers visitors many hotel options and is the ideal starting point for a day-trip into the park. This stop would also offer access to Yosemite destinations for Oakhurst residents and visitors. The wide shoulder on SR 41 would allow coaches to pick up passengers across the street from the Days Inn (northbound stop) and drop off passengers in front of the Days Inn (southbound stop). The Oakhurst Chamber of Commerce has not yet responded to requests to confirm the stop location.



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 stop would be in front of the lobby entrance, under the portico. Lodge guests, conference attendees from the Fresno area and employees would be served by this stop. A representative of Tenaya Lodge was contacted and confirmed that the lodge would be supportive of providing a stop at this location and that the portico can accommodate overthe-road coaches.



Wawona

The first stop in Yosemite is Wawona, just north of the Service Station and gift shop, and also within walking distance of the Wawona Hotel. The stop would be located just to the east of SR 41, within the parking lot, on the back side of a service island. The front side of the island is currently used as a stop for the Wawona-Mariposa intrapark shuttle route. The Fresno-Yosemite service would stop at a separate location on the other side of the island, providing customers with a transfer



opportunity to the Wawona-Mariposa shuttle.

Curry Village

The second stop in Yosemite is Curry Village; the service would use the existing YARTS stop located just off Curry Village Drive.



Ahwahnee Hotel

The third stop in Yosemite is the Ahwahnee Hotel; the service would use the existing YARTS stop located in front of the hotel, at the end of Ahwahnee Drive.



Center

Yosemite Visitors The fourth stop in Yosemite is the Visitors Center; the service would use the existing YARTS stop located just off Village Drive.



Yosemite Lodge

Valley The fifth stop in Yosemite is the Yosemite Valley Lodge; the service would use the existing YARTS stop located just off Yosemite Lodge Drive.



Layover

The layover location would be located on a service road behind the Yosemite Lodge. This layover provides vehicle servicing and operator facilities and services in close proximity. YARTS buses currently use this location as a layover facility and there is capacity for more vehicles. NPS staff has approved this layover location.



CHAPTER 3. CONCEPT SCHEDULES

Internal park shuttles operate year round, providing essential mobility to visitors who visit Yosemite car free. Due to the year round operation of these shuttles, the concept schedules developed for the Fresno-Yosemite service were designed to also operate seven days a week year round.

The concept schedules include 4, 6, and 8 daily round trip scenarios and are interchangeable. That is, the service could operate 6 daily round trips Friday through Sunday and 4 daily round trips Monday through Thursday, or 8 daily round trips during summer months and 4 daily round trips during winter months and should be based on expected and then actual demand. If for instance, a 6 daily round trip schedule is chosen to begin service, actual demand could be used to fine tune the number of daily round trips provided (upward or downward).

The operating & maintenance cost estimates developed for the service, shown in the following chapter, are based on the 365 day annual service span and also include the cost of vehicle lease.

3.1 CONCEPT SCHEDULE DEVELOPMENT

Multiple field tests (August 2013) of the 110 mile route (both inbound and outbound) were conducted to determine stop-to-stop and end-to-end run times. Dwell time (average 2 minutes) at each stop was accounted for in the schedule. The 4, 6, and 8 daily round trip scenario schedules are shown in **Table 3-2**, **Table 3-3**, and **Table 3-4**, respectively. The outbound run is scheduled for a 3 hour 55 minute trip from start to end, and the inbound run is scheduled for a 3 hour 36 minute trip. A layover of at least one hour was included for each round trip.

The schedule was designed to provide outbound mobility in the morning (Fresno to Yosemite) and inbound in the afternoon/evening (Yosemite to Fresno). The 8 daily round trip scenario includes one off-peak direction bus that would complete a morning run from Yosemite to Fresno and an afternoon run from Fresno to Yosemite. The schedules were optimized to meet Amtrak (inbound and outbound) trains. The trains met by each schedule scenario are shown in **Table 3-1**.

Table 3-1. Amtrak Trains met by Fresno-Yosemite Service

Schedule	SB Amtrak	NB Amtrak
4 Daily Round Trips	702, 704, 712, 716	701, 703, 711, 715, 717
6 Daily Round Trips	702, 704, 712, 714, 716, 718	701, 703, 711, 713, 715, 717
8 Daily Round Trips	702, 704, 712, 714, 716, 718	701, 703, 711, 713, 715, 717

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 exceptions to this rule are the final four Yosemite National Park stops (Curry Village, Ahwahnee Hotel, Yosemite Visitors Center and Yosemite Valley Lodge) for the outbound run and the five stops in Fresno (Fresno State, Fresno Yosemite International Airport, Convention Center, Amtrak Station,

and Greyhound Station) for the inbound run (unless specifically requested otherwise by a passenger). These end-of-run stops would be for passenger unloading only and early arrival with an early departure would not affect boarding passengers who rely on schedules.

End-to-end run times assume fair weather and typical traffic conditions. Inclement weather (snow), roadway construction, or other causes of congestion (such as an accident) would require additional run time. Further, during peak weekends in-park congestion near visitor areas and parking demand at or over capacity may require additional staffing to ensure smooth operation of the route. During peak periods congestion leading up to the South Entrance to Yosemite may delay the bus, causing it to arrive late to the Wawona stop and subsequent stops in Yosemite Valley. Up to 30 minutes of variation may be expected through this location.



Table 3-2. Concept Schedule for 4 Daily Round Trips

						SCHEDU	LE TORTRESI	40-103EIVII I	EROUTE					
	Outbound (To Yosemite National Park)													
	Fresno Greyhound	Convention Center	Fresno Amtrak	Fresno Airport	Fresno State	North Fresno Hotels	Chuckchansi	Oakhurst	Tenaya Lodge	Wawona	Curry Village	Ahwahnee Hotel	Yosemite Visitor Center	Yosemit Lodge
Mileage	0.0	0.7	1.0	6.8	14.0	18.7	48.7	61.0	73.5	80.9	107.9	109.9	110.9	111.6
Travel Time	0:00	0:05	0:08	0:22	0:39	0:51	1:29	1:49	2:10	2:46	3:40	3:45	3:50	3:55
Avg Speed		8	6	25	25	23	47	37	36	12	30	24	12	8
Run 1/5	6:15	6:20	6:23	6:37	6:54	7:06	7:44	8:04	8:25	9:01	9:55	10:00	10:05	10:10
Run 2/6	7:15	7:20	7:23	7:37	7:54	8:06	8:44	9:04	9:25	10:01	10:55	11:00	11:05	11:10
	10.15	10:20	10:23	10:37	10:54	11:06	11:44	12:04	12:25	13:01	13:55	14:00	14:05	14:10
Run 3/7	10:15	10:20	10:23	10.57	10.54	11.00	11.44	12.04	12.23	15.01	13.33	14.00	17.03	17.10
Run 3/7 Run 4/8	11:35	11:40	11:43	11:57	12:14	12:26	13:04	13:24	13:45	14:21	15:15	15:20	15:25	
	11:35		11:43	11:57					13:45					
	11:35	11:40	11:43	11:57			13:04							15:30
Run 4/8	11:35 Inbound (to	11:40 Fresno - Fre Ahwahnee	11:43 sno Greyhou Yosemite Visitor	11:57 und) Yosemite	12:14	12:26 Tenaya	13:04	13:24	North Fresno	14:21 Fresno	15:15 Fresno	15:20	15:25	15:30 Fresno
	11:35 Inbound (to Curry Village	11:40 Fresno - Fre Ahwahnee Hotel	11:43 sno Greyhou Yosemite Visitor Center	11:57 und) Yosemite Lodge	12:14 Wawona	12:26 Tenaya Lodge	13:04 Oakhurst	13:24 Chuckchansi	North Fresno Hotels	14:21 Fresno State	15:15 Fresno Airport	15:20 Convention Center	15:25 Fresno Amtrak	15:30 Fresno Greyhou 112.0 3:36
Run 4/8 Mileage Travel Time	Inbound (to	11:40 Fresno - Fre Ahwahnee Hotel 2.0	sno Greyhou Yosemite Visitor Center 3.0	11:57 vosemite Lodge 3.7	12:14 Wawona 30.7	Tenaya Lodge	0akhurst 50.6	13:24 Chuckchansi 62.9	North Fresno Hotels	Fresno State 97.6	Fresno Airport	Convention Center 110.9	Fresno Amtrak	Fresno Greyhou 112.0
Run 4/8 Mileage Travel Time Avg Speed	Inbound (to	Ahwahnee Hotel 2.0 0:05	sno Greyhou Yosemite Visitor Center 3.0 0:10	11:57 Yosemite Lodge 3.7 0:15	12:14 Wawona 30.7 1:09	12:26 Tenaya Lodge 38.1 1:25	0akhurst 50.6 1:46	13:24 Chuckchansi 62.9 2:06	North Fresno Hotels 92.9 2:44	14:21 Fresno State 97.6 2:56	Fresno Airport 104.8 3:13	Convention Center 110.9 3:28	15:25 Fresno Amtrak 111.2 3:31	Fresno Greyhou 112.0 3:36 10
Run 4/8 Mileage Travel Time Avg Speed Run 1/5	Inbound (to Curry Village 0.0 0:00	Ahwahnee Hotel 2.0 0:05 24	sno Greyhou Yosemite Visitor Center 3.0 0:10 12	11:57 Yosemite Lodge 3.7 0:15 8	12:14 Wawona 30.7 1:09 30	Tenaya Lodge 38.1 1:25 28	0akhurst 50.6 1:46 36	13:24 Chuckchansi 62.9 2:06 37	North Fresno Hotels 92.9 2:44 47	14:21 Fresno State 97.6 2:56 24	Fresno Airport 104.8 3:13 25	Convention Center 110.9 3:28 24	Fresno Amtrak 111.2 3:31 6	15:30 Fresno Greyhou 112.0 3:36 10 15:06
Run 4/8 Mileage	Inbound (to Curry Village 0.0 0:00	11:40 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 11:35	Yosemite Visitor Center 3.0 0:10 12 11:40	11:57 Yosemite Lodge 3.7 0:15 8 11:45	Wawona 30.7 1:09 30 12:39	12:26 Tenaya Lodge 38.1 1:25 28 12:55	0akhurst 50.6 1:46 36 13:16	13:24 Chuckchansi 62.9 2:06 37 13:36	North Fresno Hotels 92.9 2:44 47 14:14	14:21 Fresno State 97.6 2:56 24 14:26	15:15 Fresno Airport 104.8 3:13 25 14:43	Convention Center 110.9 3:28 24 14:58	15:25 Fresno Amtrak 111.2 3:31 6 15:01	Fresno Greyhou 112.0 3:36

Table 3-3. Concept Schedule for 6 Daily Round Trips

						SCHEDU	JLE FOR FRESI	NO-YOSEMITI	ROUTE					
	Outbound (Outbound (To Yosemite National Park)												
	Fresno Greyhound	Convention Center	Fresno Amtrak	Fresno Airport	Fresno State	North Fresno Hotels	Chuckchansi	Oakhurst	Tenaya Lodge	Wawona	Curry Village	Ahwahnee Hotel	Yosemite Visitor Center	Yosemite Lodge
Mileage	0.0	0.7	1.0	6.8	14.0	18.7	48.7	61.0	73.5	80.9	107.9	109.9	110.9	111.6
ravel Time	0:00	0:05	0:08	0:22	0:39	0:51	1:29	1:49	2:10	2:46	3:40	3:45	3:50	3:55
vg Speed		8	6	25	25	23	47	37	36	12	30	24	12	8
un 1/7	6:15	6:20	6:23	6:37	6:54	7:06	7:44	8:04	8:25	9:01	9:55	10:00	10:05	10:10
Run 2/8	7:15	7:20	7:23	7:37	7:54	8:06	8:44	9:04	9:25	10:01	10:55	11:00	11:05	11:10
un 3/9	10:15	10:20	10:23	10:37	10:54	11:06	11:44	12:04	12:25	13:01	13:55	14:00	14:05	14:10
un 4/10	11:35	11:40	11:43	11:57	12:14	12:26	13:04	13:24	13:45	14:21	15:15	15:20	15:25	15:30
		12:40	12:43	12:57	13:14	13:26	14:04	14:24	14:45	15:21	16:15	16:20	16:25	16:30
un 5/11	12:35	12:40	12.43	12.57	13.17	15.20	1.01							
Run 5/11 Run 6/12	12:35 14:25	14:30	14:33	14:47	15:04	15:16	15:54	16:14	16:35	17:11	18:05	18:10	18:15	18:20
	14:25		14:33	14:47				· ·	16:35			18:10	18:15	18:20
	14:25	14:30	14:33	14:47				· ·	North Fresno Hotels			18:10 Convention Center	18:15 Fresno Amtrak	18:20 Fresno Greyhour
un 6/12	14:25 Inbound (to	14:30 Fresno - Fre Ahwahnee	14:33 sno Greyhou Yosemite Visitor	14:47 und) Yosemite	15:04	15:16 Tenaya	15:54	16:14	North Fresno	17:11 Fresno	18:05	Convention	Fresno	Fresno
•	14:25 Inbound (to Curry Village	14:30 Fresno - Fre Ahwahnee Hotel	14:33 sno Greyhou Yosemite Visitor Center	14:47 und) Yosemite Lodge	15:04 Wawona	Tenaya Lodge	15:54 Oakhurst	16:14 Chuckchansi	North Fresno Hotels	17:11 Fresno State	18:05 Fresno Airport	Convention Center	Fresno Amtrak	Fresno Greyhou
un 6/12 Mileage ravel Time	14:25 Inbound (to Curry Village 0.0	14:30 Fresno - Fre Ahwahnee Hotel 2.0	sno Greyhou Yosemite Visitor Center 3.0	14:47 Vosemite Lodge 3.7	15:04 Wawona 30.7	Tenaya Lodge 38.1	15:54 Oakhurst 50.6	16:14 Chuckchansi 62.9	North Fresno Hotels	Fresno State 97.6	Fresno Airport	Convention Center	Fresno Amtrak	Fresno Greyhou 112.0
un 6/12	14:25 Inbound (to Curry Village 0.0	Ahwahnee Hotel 2.0 0:05	sno Greyhou Yosemite Visitor Center 3.0 0:10	14:47 Yosemite Lodge 3.7 0:15	Wawona 30.7 1:09	15:16 Tenaya Lodge 38.1 1:25	0akhurst 50.6 1:46	16:14 Chuckchansi 62.9 2:06	North Fresno Hotels 92.9 2:44	17:11 Fresno State 97.6 2:56	18:05 Fresno Airport 104.8 3:13	Convention Center 110.9 3:28	Fresno Amtrak 111.2 3:31	Fresno Greyhou 112.0 3:36
un 6/12 Tileage ravel Time vg Speed	Inbound (to Curry Village 0.0 0:00	Ahwahnee Hotel 2.0 0:05 24	sno Greyhou Yosemite Visitor Center 3.0 0:10 12	14:47 Yosemite Lodge 3.7 0:15 8	Wawona 30.7 1:09 30	Tenaya Lodge 38.1 1:25 28	0akhurst 50.6 1:46 36	16:14 Chuckchansi 62.9 2:06 37	North Fresno Hotels 92.9 2:44 47	17:11 Fresno State 97.6 2:56 24	18:05 Fresno Airport 104.8 3:13 25	Convention Center 110.9 3:28 24	Fresno Amtrak 111.2 3:31 6	Fresno Greyhou 112.0 3:36 10
un 6/12 dileage ravel Time vg Speed un 1/7 un 2/8	Inbound (to Curry Village 0.0 0:00	14:30 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 11:35	Yosemite Visitor Center 3.0 0:10 12 11:40	14:47 Yosemite Lodge 3.7 0:15 8 11:45	Wawona 30.7 1:09 30 12:39	15:16 Tenaya Lodge 38.1 1:25 28 12:55	0akhurst 50.6 1:46 36 13:16	16:14 Chuckchansi 62.9 2:06 37 13:36	North Fresno Hotels 92.9 2:44 47 14:14	17:11 Fresno State 97.6 2:56 24 14:26	18:05 Fresno Airport 104.8 3:13 25 14:43	Convention Center 110.9 3:28 24 14:58	Fresno Amtrak 111.2 3:31 6 15:01	Fresno Greyhou 112.0 3:36 10 15:06
tileage ravel Time vg Speed un 1/7	14:25 Inbound (to Curry Village 0.0 0:00 11:30 13:30	14:30 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 11:35 13:35	Yosemite Visitor Center 3.0 0:10 12 11:40 13:40	14:47 Yosemite Lodge 3.7 0:15 8 11:45 13:45	Wawona 30.7 1:09 30 12:39 14:39	15:16 Tenaya Lodge 38.1 1:25 28 12:55 14:55	Oakhurst 50.6 1:46 36 13:16 15:16	16:14 Chuckchansi 62.9 2:06 37 13:36 15:36	North Fresno Hotels 92.9 2:44 47 14:14 16:14	17:11 Fresno State 97.6 2:56 24 14:26 16:26	18:05 Fresno Airport 104.8 3:13 25 14:43 16:43	Convention Center 110.9 3:28 24 14:58 16:58	Fresno Amtrak 111.2 3:31 6 15:01 17:01	Fresno Greyhou 112.0 3:36 10 15:06 17:06
lileage ravel Time vg Speed un 1/7 un 2/8 un 3/9	14:25 Inbound (to Curry Village 0.0 0:00 11:30 13:30 15:10 16:30 17:50	14:30 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 11:35 13:35 15:15 16:35 17:55	14:33 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 11:40 13:40 15:20	14:47 Yosemite Lodge 3.7 0:15 8 11:45 13:45 15:25	Wawona 30.7 1:09 30 12:39 14:39 16:19 17:39 18:59	15:16 Tenaya Lodge 38.1 1:25 28 12:55 14:55 16:35	0akhurst 50.6 1:46 36 13:16 15:16 16:56	16:14 Chuckchansi 62.9 2:06 37 13:36 15:36 17:16	North Fresno Hotels 92.9 2:44 47 14:14 16:14 17:54	17:11 Fresno State 97.6 2:56 24 14:26 16:26 18:06	18:05 Fresno Airport 104.8 3:13 25 14:43 16:43 18:23	Convention Center 110.9 3:28 24 14:58 16:58 18:38	Fresno Amtrak 111.2 3:31 6 15:01 17:01 18:41	Fresno Greyhou 112.0 3:36 10 15:06 17:06 18:46 20:06 21:26
lileage ravel Time vg Speed un 1/7 un 2/8 un 3/9 un 4/10	14:25 Inbound (to Curry Village 0.0 0:00 11:30 13:30 15:10 16:30	14:30 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 11:35 13:35 15:15 16:35	14:33 Sno Greyhou Yosemite Visitor Center 3.0 0:10 12 11:40 13:40 15:20 16:40	14:47 Yosemite Lodge 3.7 0:15 8 11:45 13:45 15:25 16:45	Wawona 30.7 1:09 30 12:39 14:39 16:19 17:39	15:16 Tenaya Lodge 38.1 1:25 28 12:55 14:55 16:35 17:55	0akhurst 50.6 1:46 36 13:16 15:56 18:16	16:14 Chuckchansi 62.9 2:06 37 13:36 15:36 17:16 18:36	North Fresno Hotels 92.9 2:44 47 14:14 16:14 17:54 19:14	17:11 Fresno State 97.6 2:56 24 14:26 16:26 18:06 19:26	18:05 Fresno Airport 104.8 3:13 25 14:43 16:43 18:23 19:43	Convention Center 110.9 3:28 24 14:58 16:58 18:38 19:58	Fresno Amtrak 111.2 3:31 6 15:01 17:01 18:41 20:01	Freshic Greyhou 112.0 3:36 10 15:06 17:06 18:46 20:06

Table 3-4. Concept Schedule for 8 Daily Round Trips

						SCHEDU	JLE FOR FRESI	NO-YOSEMITI	EROUTE					
	Outbound (To Yosemite National Park)													
	Fresno Greyhound	Convention Center	Fresno Amtrak	Fresno Airport	Fresno State	North Fresno Hotels	Chuckchansi	Oakhurst	Tenaya Lodge	Wawona	Curry Village	Ahwahnee Hotel	Yosemite Visitor Center	Yosemit Lodge
Mileage	0.0	0.7	1.0	6.8	14.0	18.7	48.7	61.0	73.5	80.9	107.9	109.9	110.9	111.6
ravel Time	0:00	0:05	0:08	0:22	0:39	0:51	1:29	1:49	2:10	2:46	3:40	3:45	3:50	3:55
Nvg Speed		8	6	25	25	23	47	37	36	12	30	24	12	8
Run 1/10	6:15	6:20	6:23	6:37	6:54	7:06	7:44	8:04	8:25	9:01	9:55	10:00	10:05	10:10
Run 2/12	7:15	7:20	7:23	7:37	7:54	8:06	8:44	9:04	9:25	10:01	10:55	11:00	11:05	11:10
Run 3/13	9:00	9:05	9:08	9:22	9:39	9:51	10:29	10:49	11:10	11:46	12:40	12:45	12:50	12:55
Run 4/14	10:05	10:10	10:13	10:27	10:44	10:56	11:34	11:54	12:15	12:51	13:45	13:50	13:55	14:00
Run 5/15	11:55	12:00	12:03	12:17	12:34	12:46	13:24	13:44	14:05	14:41	15:35	15:40	15:45	15:50
Run 6/9	12:35	12:40	12:43	12:57	13:14	13:26	14:04	14:24	14:45	15:21	16:15	16:20	16:25	16:30
Kuii U/ J						15.16	15.54	10.14	16:35	17:11	18:05	18:10	18:15	18:20
	14:25	14:30	14:33	14:47	15:04	15:16	15:54	16:14	10.55	1/.11	10.03	10.10	10.13	10.20
Run 7/16 Run 8/11	17:35	17:40	17:43	17:57	15:04 18:14	18:26	19:04	19:24	19:45	20:21	21:15	21:20	21:25	
Run 7/16	17:35 Inbound (to	17:40 Fresno - Fre Ahwahnee	17:43 sno Greyhou Yosemite Visitor	17:57 und) Yosemite	18:14	18:26	19:04	19:24	19:45 North Fresno	20:21 Fresno	21:15 Fresno	21:20	21:25 Fresno	21:30
tun 7/16 tun 8/11	17:35 Inbound (to Curry Village	17:40 Fresno - Fre Ahwahnee Hotel	17:43 sno Greyhou Yosemite Visitor Center	17:57 und) Yosemite Lodge	18:14 Wawona	18:26 Tenaya Lodge	19:04 Oakhurst	19:24 Chuckchansi	North Fresno Hotels	20:21 Fresno State	21:15 Fresno Airport	21:20 Convention Center	21:25 Fresno Amtrak	21:30 Fresno Greyhou
tun 7/16 tun 8/11	17:35 Inbound (to Curry Village 0.0	17:40 Fresno - Fre Ahwahnee Hotel 2.0	sno Greyhou Yosemite Visitor Center 3.0	17:57 Yosemite Lodge 3.7	18:14 Wawona 30.7	Tenaya Lodge	19:04 Oakhurst 50.6	19:24 Chuckchansi 62.9	North Fresno Hotels	Fresno State 97.6	Fresno Airport	Convention Center 110.9	Fresno Amtrak	Fresno Greyhou 112.0
Run 7/16 Run 8/11 Mileage Travel Time	17:35 Inbound (to Curry Village	Ahwahnee Hotel 2.0 0:05	sno Greyhou Yosemite Visitor Center 3.0 0:10	17:57 Yosemite Lodge 3.7 0:15	Wawona 30.7 1:09	18:26 Tenaya Lodge 38.1 1:25	0akhurst 50.6 1:46	19:24 Chuckchansi 62.9 2:06	North Fresno Hotels 92.9 2:44	20:21 Fresno State 97.6 2:56	21:15 Fresno Airport 104.8 3:13	21:20 Convention Center 110.9 3:28	21:25 Fresno Amtrak 111.2 3:31	Fresno Greyhou 112.0 3:36
dun 7/16 dun 8/11 Mileage Travel Time	Inbound (to Curry Village 0.0 0:00	Ahwahnee Hotel 2.0 0:05 24	sno Greyhou Yosemite Visitor Center 3.0 0:10 12	17:57 Yosemite Lodge 3.7 0:15 8	Wawona 30.7 1:09 30	Tenaya Lodge 38.1 1:25 28	0akhurst 50.6 1:46 36	19:24 Chuckchansi 62.9 2:06 37	North Fresno Hotels 92.9 2:44 47	20:21 Fresno State 97.6 2:56 24	21:15 Fresno Airport 104.8 3:13 25	21:20 Convention Center 110.9 3:28 24	21:25 Fresno Amtrak 111.2 3:31 6	21:30 Fresno Greyhou 112.0 3:36 10
dun 7/16 dun 8/11 Mileage Travel Time dun 6/9	Inbound (to Curry Village 0.0 0:00	17:40 Presno - Fre Ahwahnee Hotel 2.0 0:05 24 8:05	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10	17:57 Yosemite Lodge 3.7 0:15 8 8:15	Wawona 30.7 1:09 30 9:09	Tenaya Lodge 38.1 1:25 28 9:25	0akhurst 50.6 1:46 36 9:46	19:24 Chuckchansi 62.9 2:06 37 10:06	North Fresno Hotels 92.9 2:44 47 10:44	20:21 Fresno State 97.6 2:56 24 10:56	21:15 Fresno Airport 104.8 3:13 25 11:13	21:20 Convention Center 110.9 3:28 24 11:28	21:25 Fresno Amtrak 111.2 3:31 6 11:31	21:30 Fresno Greyhou 112.0 3:36 10 11:36
dileage fravel Time lun 6/9	17:35 Inbound (to Curry Village 0.0 0:00 8:00 11:30	17:40 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 8:05 11:35	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10 11:40	17:57 Yosemite Lodge 3.7 0:15 8 8:15 11:45	Wawona 30.7 1:09 30 9:09 12:39	Tenaya Lodge 38.1 1:25 28 9:25 12:55	0akhurst 50.6 1:46 36 9:46 13:16	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36	19:45 North Fresno Hotels 92.9 2:44 47 10:44 14:14	20:21 Fresno State 97.6 2:56 24 10:56 14:26	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43	21:20 Convention Center 110.9 3:28 24 11:28 14:58	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01	Fresno Greyhou 112.0 3:36 10 11:36 15:06
un 7/16 un 8/11 fileage ravel Time vg Speed un 6/9 un 1/10 un 8/11	17:35 Inbound (to Curry Village 0.0 0:00 11:30 13:00	17:40 Fresno - Fre Ahwahnee Hotel 2.0 0:05 24 8:05 11:35 13:05	17:43 sno Greyhor Yosemite Visitor Center 3.0 0:10 12 8:10 11:40 13:10	17:57 Yosemite Lodge 3.7 0:15 8 8:15 11:45 13:15	Wawona 30.7 1:09 30 9:09 12:39 14:09	18:26 Tenaya Lodge 38.1 1:25 28 9:25 12:55 14:25	0akhurst 50.6 1:46 36 9:46 13:16 14:46	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36 15:06	19:45 North Fresno Hotels 92.9 2:44 47 10:44 14:14 15:44	20:21 Fresno State 97.6 2:56 24 10:56 14:26 15:56	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43 16:13	21:20 Convention Center 110.9 3:28 24 11:28 14:58 16:28	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01 16:31	Fresno Greyhou 112.0 3:36 10 11:36 15:06 16:36
fileage ravel Time vg Speed un 6/9 un 1/10 un 8/11 un 2/12	17:35 Inbound (to Curry Village 0.0 0:00 8:00 11:30 13:00 14:10	17:40 Ahwahnee Hotel 2.0 0:05 24 8:05 11:35 13:05 14:15	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10 11:40 13:10 14:20	17:57 Yosemite Lodge 3.7 0:15 8 8:15 11:45 13:15 14:25	Wawona 30.7 1:09 30 9:09 12:39 14:09 15:19	Tenaya Lodge 38.1 1:25 28 9:25 12:55 14:25 15:35	19:04 Oakhurst 50.6 1:46 36 9:46 13:16 14:46 15:56	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36 15:06 16:16	North Fresno Hotels 92.9 2:44 47 10:44 14:14 15:44 16:54	20:21 Fresno State 97.6 2:56 24 10:56 14:26 15:56 17:06	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43 16:13 17:23	21:20 Convention Center 110.9 3:28 24 11:28 14:58 16:28 17:38	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01 16:31 17:41	Fresno Greyhou 112.0 3:36 10 11:36 15:06 16:36 17:46
dileage ravel Time vg Speed un 6/9 un 1/10 un 8/11 un 2/12 un 3/13	17:35 Inbound (to Curry Village 0.0 0:00 8:00 11:30 13:00 14:10 15:00	17:40 Ahwahnee Hotel 2.0 0:05 24 8:05 11:35 13:05 14:15 15:05	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10 11:40 13:10 14:20 15:10	17:57 Vosemite Lodge 3.7 0:15 8 8:15 11:45 13:15 14:25 15:15	Wawona 30.7 1:09 30 9:09 12:39 14:09 15:19 16:09	Tenaya Lodge 38.1 1:25 28 9:25 12:55 14:25 15:35 16:25	19:04 Oakhurst 50.6 1:46 36 9:46 13:16 14:46 15:56 16:46	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36 15:06 16:16 17:06	North Fresno Hotels 92.9 2:44 47 10:44 14:14 15:44 16:54 17:44	20:21 Fresno State 97.6 2:56 24 10:56 14:26 15:56 17:06 17:56	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43 16:13 17:23 18:13	21:20 Convention Center 110.9 3:28 24 11:28 14:58 16:28 17:38 18:28	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01 16:31 17:41 18:31	21:30 Fresne Greyhou 112.0 3:36 10 11:36 15:06 16:36 17:46 18:36
tileage ravel Time vg Speed un 6/9 un 1/10 un 8/11 un 2/12 un 3/13 un 4/14	17:35 Inbound (to Curry Village 0.0 0:00 8:00 11:30 13:00 14:10 15:00 16:00	17:40 Ahwahnee Hotel 2.0 0:05 24 8:05 11:35 13:05 14:15 15:05 16:05	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10 11:40 13:10 14:20 15:10 16:10	17:57 Yosemite Lodge 3.7 0:15 8 8:15 11:45 13:15 14:25 15:15 16:15	18:14 Wawona 30.7 1:09 30 9:09 12:39 14:09 15:19 16:09 17:09	Tenaya Lodge 38.1 1:25 28 9:25 12:55 14:25 15:35 16:25 17:25	19:04 Oakhurst 50.6 1:46 36 9:46 13:16 14:46 15:56 16:46 17:46	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36 15:06 16:16 17:06 18:06	North Fresno Hotels 92.9 2:44 47 10:44 14:14 15:44 16:54 17:44 18:44	20:21 Fresno State 97.6 2:56 24 10:56 14:26 15:56 17:06 17:56 18:56	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43 16:13 17:23 18:13 19:13	21:20 Convention Center 110.9 3:28 24 11:28 14:58 16:28 17:38 18:28 19:28	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01 16:31 17:41 18:31 19:31	Fresni Greyhou 112.0 3:36 10 11:36 15:06 16:36 17:46 18:36
fileage ravel Time vg Speed un 6/9 un 1/10 un 8/11 un 2/12	17:35 Inbound (to Curry Village 0.0 0:00 8:00 11:30 13:00 14:10 15:00	17:40 Ahwahnee Hotel 2.0 0:05 24 8:05 11:35 13:05 14:15 15:05	17:43 sno Greyhou Yosemite Visitor Center 3.0 0:10 12 8:10 11:40 13:10 14:20 15:10	17:57 Vosemite Lodge 3.7 0:15 8 8:15 11:45 13:15 14:25 15:15	Wawona 30.7 1:09 30 9:09 12:39 14:09 15:19 16:09	Tenaya Lodge 38.1 1:25 28 9:25 12:55 14:25 15:35 16:25	19:04 Oakhurst 50.6 1:46 36 9:46 13:16 14:46 15:56 16:46	19:24 Chuckchansi 62.9 2:06 37 10:06 13:36 15:06 16:16 17:06	North Fresno Hotels 92.9 2:44 47 10:44 14:14 15:44 16:54 17:44	20:21 Fresno State 97.6 2:56 24 10:56 14:26 15:56 17:06 17:56	21:15 Fresno Airport 104.8 3:13 25 11:13 14:43 16:13 17:23 18:13	21:20 Convention Center 110.9 3:28 24 11:28 14:58 16:28 17:38 18:28	21:25 Fresno Amtrak 111.2 3:31 6 11:31 15:01 16:31 17:41 18:31	Fresno Greyhou 112.0 3:36 10 11:36 15:06 16:36 17:46

CHAPTER 4. OPERATING CHARACTERISTICS AND COSTS

The concept schedules (4, 6, and 8 daily round trips) were used to develop operating characteristics and operating & maintenance (O&M) cost estimates for the Fresno-Yosemite service, shown in **Table 4-1** (4 daily round trips), **Table 4-2** (6 daily round trips), and **Table 4-3** (8 daily round trips). O&M cost was based on a cost per vehicle revenue hour (cpvrh) of \$145, which is the current YARTS average cost using leased vehicles.

4.1 O&M COST ESTIMATES

O&M costs include operation, maintenance, fueling, storage, administration, and other related activities as well as vehicle lease, but not agency costs such as program administration or marketing. The operating cost estimates are provided to help the Council of Fresno County governments determine funding needs and service levels.

- A 4 daily round trip scenario would cost approximately \$1.6 Million per year
- A 6 daily round trip scenario would cost approximately \$2.4 Million per year
- A 8 daily round trip scenario would cost approximately \$3.2 Million per year



4.1.1 Hybrid Service Scenario

YARTS runs a peak schedule during the spring and summer months (beginning a week before Memorial Day through the end of September) and an off peak schedule during the fall and winter months (beginning in October through to May). A peak/off-peak scenario for the Fresno-Yosemite service was tested to estimate the expected annual cost for a YARTS style service. This scenario includes 4 daily round trips during the fall/winter (October – May) and 8 daily round trips during the spring/summer (May – September). A peak 8 trip/off-peak 4 trip scenario would cost approximately \$2.2 Million per year.

Table 4-1. Operating Characteristics and O&M Costs for 4 Daily Round Trips

	Оре	erating Char	acteristics Da	Operatin	stics Annual		
			CPVRH:	\$145	365	days/year	
	Layover	Vehicle Revenue Hours	Vehicle Revenue Miles	Daily O&M Cost	Annual Revenue Hours	Annual Revenue Miles	Annual O&M Cost
Run 1/5	1:20	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 2/6	2:20	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 3/7	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 4/8	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820
	Totals	30	894	\$4,360	10,974	326,456	\$1,591,000

Table 4-2. Operating Characteristics and O&M Costs for 6 Daily Round Trips

	O	perating Cha	aracteristics	Operating Characteristics Annual				
			CPVRH:	\$145	365	days/year		
	Layover	Vehicle Revenue Hours	Vehicle Revenue Miles	Daily O&M Cost	Annual Revenue Hours	Annual Revenue Miles	Annual O&M Cost	
Run 1/7	1:20	7.5	224	\$1,090	2,744	81,614	\$397,820	
Run 2/8	2:20	7.5	224	\$1,090	2,744	81,614	\$397,820	
Run 3/9	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820	
Run 4/10	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820	
Run 5/11	1:20	7.5	224	\$1,090	2,744	81,614	\$397,820	
Run 6/12	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820	
	Totals	45	1,342	\$6,540	16,464	489,684	\$2,387,000	

Table 4-3. Operating Characteristics and O&M Costs for 8 Daily Round Trips

	O	perating Cha	aracteristics	Operating Characteristics Annual			
			CPVRH:	\$145	365	days/year	
	Layover	Vehicle Revenue Hours	Vehicle Revenue Miles	Daily O&M Cost	Annual Revenue Hours	Annual Revenue Miles	Annual O&M Cost
Run 1/10	1:20	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 2/12	3:00	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 3/13	2:05	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 4/14	2:00	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 5/15	2:00	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 6/9	0:59	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 7/16	1:00	7.5	224	\$1,090	2,744	81,614	\$397,820
Run 8/11	0:59	7.5	224	\$1,090	2,744	81,614	\$397,820
	Totals	60	1,789	\$8,720	21,952	652,912	\$3,183,000

CHAPTER 5. CAPITAL NEEDS

This chapter details capital expenditures for the initial operation of the Fresno-Yosemite service.

5.1 SIGNAGE AND STOP AMENITIES

The Fresno-Yosemite route would require only minimal infrastructure for route launch. Signage identifying the service would be needed at each stop location. This service plan assumes that a basic in-ground pole with sign would be included at each stop location. Signage infrastructure exists at eight stops (Fresno Greyhound, Fresno-Yosemite International Airport, Chuckchansi, Wawona, Curry Village, Ahwahnee Hotel, Yosemite Visitors Center, and Yosemite Valley Lodge), however to provide a conservative estimate of signage costs, a basic in-ground pole with sign was assumed at all stop locations.

Each basic in-ground pole with sign would cost \$250, requiring a one-time capital expenditure of \$3,500.

For infrastructure improvements such as benches, shelters, and trash cans, priority should be given to stops that currently lack amenities:

- Fresno Convention Center
- Fresno Amtrak Station (if remote parking lot selected as stop)
- Fresno State
- City of Oakhurst
- Wawona

The following cost estimates are provided for stop amenities:

- \$1,200 for concrete bench w/back and concrete trash receptacle
- \$15,000 for 13' Flat Roof Non-Advertising Shelter with glass walls and corrugated roof

5.2 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 currently operated by YARTS, are recommended to maximize passenger experience on the three and a half hour trip. These buses typically seat 50 passengers (plus wheelchairs) and supply the passenger comforts and storage space needed for the line-haul service. The Setra TopClass S 417 and MCI D4505 are two examples of the type of coach that meets the requirements for this service. Buses operated by YARTS employ automatic snow chains which is a desired design feature of any bus operating the Fresno-Yosemite route.

For small operations of less than 50 buses no industry standard spare ratio exists. Two spares under a 4 or 6 daily round trip scenario and three spares under an 8 daily round trip scenario would provide sufficient contingency for uninterrupted operation of the route. With a contracted operation and vehicles leased from the contractor, spares would be covered under the service agreement. Spare buses and drivers would be on-call during operating hours.

CHAPTER 6. FARE RECOMMENDATION

The YARTS service (Merced-Yosemite) charges distance-based fares. For the YARTS service, round trip fares to Yosemite Valley run between \$6 and \$25. It is anticipated that YARTS will operate the Fresno-Yosemite service.

All fares for the Fresno-Yosemite route that include a destination in the park would also include admission. A distance-based fare structure, similar to the YARTS Merced-Yosemite service, is recommended for the Fresno-Yosemite route. The optimum fare structure for the Fresno-Yosemite route would maximize ridership and farebox revenue (to help defray operating costs) and be held to the same standards as existing YARTS service.



6.1 FARE STRUCTURE

Using the YARTS Merced-Yosemite fares as a model, the

following initial fare structure is recommended in **Table 6-1**, utilizing the following zone structure for general categories of distance based fares:

- Zone 1 Fresno stops (Greyhound Station, Convention Center, Amtrak Station, Fresno-Yosemite International Airport, Fresno State, North Fresno Hotels)
- Zone 2 Highway 41 stops (Chuckchansi Gold Resort Casino, City of Oakhurst)
- Zone 3 Outer Yosemite stops (Tenaya Lodge, Wawona)
- Zone 4 Yosemite Valley stops (Curry Village, Ahwahnee Hotel, Yosemite Visitors Center, Yosemite Valley Lodge)

6.2 FARE MEDIA

This route would serve many different trip types (i.e. visitors to Yosemite, employees that work in Yosemite, visitors of Chuckchansi, etc.) that results in it acting as an important public transit linkage along the SR 41 corridor. All potential ticketing options should be considered and offered if feasible. Because the service would be operated as public transit, not all seats could be reserved as "hop on hop off" capability is a key feature of public transit. However, since many of the route's destinations (Yosemite, Tenaya, Chuckchansi) cater to visitors and vacation plans are typically made well in advance, providing a reservation system provides necessary certainty for those customers. Cash and credit-card should be offered as payment options, consistent with existing YARTS service. Payment options that should be considered for this service include:

• Online ticket sales

- 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 ride passes

Due to the anticipated length of passenger trips, every customer should ideally have a seat in order to ride. For on-board ticket sales, customers should be clearly informed that this method of purchase would not guarantee seat availability on their preferred scheduled run.

Table 6-1. Recommended Fresno-Yosemite Fare Structure – Round Trip Fare

Origin/Destination	To Zone 1 (Fresno Stops)	To Zone 2 (Highway 41 Stops)	To Zone 3 (Outer Yosemite Stops)	To Zone 4 (Yosemite Valley Stops)
From Zone 1 (Fresno Stops)	\$6	\$12	\$18	\$25
From Zone 2 (Highway 41 Stops)	\$12	\$6	\$12	\$20
From Zone 3 (Outer Yosemite Stops)	\$18	\$12	\$6	\$12
From Zone 4 (Yosemite Valley Stops)	\$25	\$20	\$12	

CHAPTER 7. FUNDING SOURCES

The following provides a description of potential federal, state, regional/local and other funding sources that could be used to fund the Fresno Yosemite service.

7.1 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.

Federal Lands Access Program

This program was established under Section 1119 of the Moving Ahead for Progress in the 21st Century Act (MAP-21), Public Law 112-141; it effectively replaces FTA Section 5320. The goal of the program is to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. Funds from this program may be used for transportation planning, research, engineering, preventive maintenance, rehabilitation, restoration, construction, and reconstruction of Federal lands access transportation facilities, operation and maintenance of transit facilities, and any transportation project eligible for assistance under title 23 of the United States Code that is within or adjacent to, or that provides access to, Federal land.

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. This program provides up to an 80% Federal match.

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. It is designed to address the "intercity bus transportation needs of the entire state" by supporting projects that provide connectivity between non-urbanized and urbanized areas. Connections to intercity (e.g. Greyhound) bus routes must be made within two hours on either side of the rural transit provider's schedule to be eligible for funding. 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.

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. The program also allows for new vehicle purchases and, under specific conditions, fare subsidies.

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 NHPP)

The Surface Transportation Program (STP) and National Highway Performance Program (NHPP) 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. NHPP funds may be used for transit projects as part of a NHPP project subject to certain restrictions. Portions of State Route (SR) 41 and SR 180 are National Highway System (NHS) routes. Eligible transit projects under the NHPP 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.

7.2 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.

7.3 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 the regional public transit program.

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.

7.4 OTHER FUNDING SOURCES

Other funding comes 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. A relevant example is 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 surcharge, that would be dedicated to the National Park transit service, is a candidate for providing local matching funds along the Fresno-Yosemite route.

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. YARTS does not currently put any advertising on or inside its buses.