



**San Carlos Apache
Nnee Bich' o Nii Services**

Revised

Short-term Implementation Plan

August 31, 2011

Prepared for

**San Carlos Apache
Nnee Bich'o Nii
Services**



**Arizona Department
of Transportation**



Prepared by

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1. INTRODUCTION

BACKGROUND

In October 2009, the San Carlos Apache Tribe completed an update to their Long-Range Transportation Plan (LRTP). One of the recommendations from the LRTP was for the Tribe to conduct an extensive transit feasibility study to evaluate the existing services and identify improvement opportunities. In addition, the Tribe is seeking support in preparing the required documentation to assist in the development of Federal and State transit funding grants. The San Carlos Apache Transit Services (SCATS) applied for, and received funding from the ADOT Multimodal Planning Division to conduct the Transit Feasibility Study. This Five-year Implementation Plan represents the second phase of the Study. The Study Area is the extents of the San Carlos Apache Nation as shown in Figure 1-1.

In July 2011, A Tribal resolution was adopted officially changing the name of the transit system from San Carlos Apache Transit Services to “San Carlos Apache Nnee Bich'onii Services.” Nnee Bich'onii means “Helping Our Apache People” in the Apache Language. San Carlos Apache Nnee Bich'onii Services provides services to elderly and disabled Tribal members, Tribal recipients of Temporary Assistance to Needy Families (TANF), other Tribal members—many of whom are living at or below the poverty level—and employees of the Apache Gold Casino and Resort. Apache Transit receives funding through the Tribal Transportation Program (TTP), as well as the FTA 5316 Job Access and Reverse Commute (JARC) and FTA 5317 New Freedom programs.

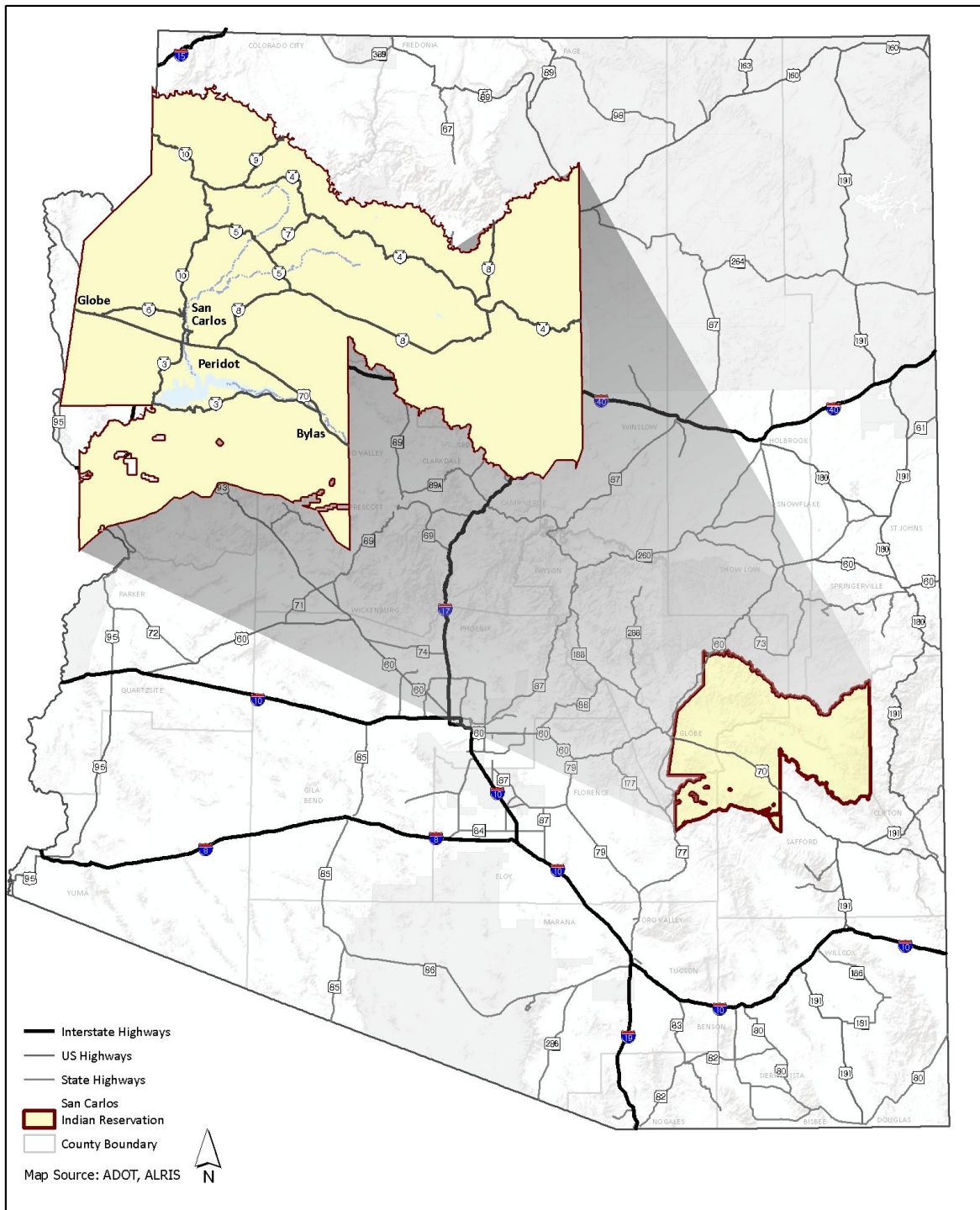
The San Carlos Apache Tribe operates its very own TANF department and has become the 64th federally-recognized tribe in the nation. The Department of Economic Security (DES) and the Family Assistance Administration (FAA), operating as subcontractors under San Carlos Apache Nnee Bich'onii Services, determine eligibility of applicants for receipt of cash assistance only. Once approved, TANF clients are referred to San Carlos Apache Nnee Bich'onii Services for employment, training, education, vocational training, and transportation services. The principal goal of San Carlos Apache Nnee Bich'onii Services is to end Tribal enrollee dependence on public assistance.

Lack of personal mobility has consistently been identified by Tribal and BIA transportation departments as a concern for individuals living within the San Carlos Apache Nation and other Tribal lands. This Feasibility study assessed the specific transit needs of San Carlos Apache tribal members and developed a plan for an expansion of services in order to more effectively serve San Carlos Apache tribal members with their current and future needs.

IMPLEMENTATION PLAN APPROACH

San Carlos Apache Nnee Bich'onii Services is in the process of expanding its operations to further enhance the mobility of all Tribal enrollees and other area residents. The first phase of the Transit Study included the development, analysis, and discussion of several transit service growth scenarios. During these discussions, San Carlos Apache Nnee Bich'onii Services conducted a comprehensive survey of Tribal residents to better understand the

FIGURE 1-1. STUDY AREA



Source: Jacobs Engineering Group

desires of the community with respect to proposed transit service improvements. A discussion of the findings of the survey and the recommended service improvements that were derived from those findings and from stakeholder input is included in the Final Report of the Feasibility phase of this study.

For the implementation phase, the consultant reexamined the recommended improvements and with additional stakeholder input and direction from the ADOT and Tribal Project Managers made use of these recommendations as the basis for the Implementation Plan presented here.

Previous Development of FTA Section 5311 Grant Application

At the time that the scope of this Study was refined, one of the tasks of the Implementation Phase was providing assistance to the Tribe in the development of an FTA Section 5311 grant application and providing documentation of the process. At the request of the ADOT and Tribal Project Managers, this portion of the scope was completed separately, in advance of the remainder of the Implementation Phase tasks, and is documented in a separate report. Subsequently, the Tribe was awarded some FTA Section 5311 funds for 2011 and will be purchasing vehicles with these funds to be delivered in the first quarter of 2012. These vehicles are included in the Budget discussion of the Implementation Plan presented in Chapter 3.

Recalculation of Estimated Transit Demand

During the first phase of the study, estimates of both current and future transit demand for the study area were prepared. The future demand estimate prepared for the first phase of the study contained short-, mid-, and long-term projections. For the purposes of this Short-term Implementation Plan, transit demand estimates were recalculated for a five-year period only. The results of these additional calculations are presented in Table 1-1. As was explained within the documentation of the previous phase of the study, the demand estimation procedure requires that “hypothetical” routes be designated so that a “vehicle miles per square mile” metric can be calculated for use in the procedure. In this instance, the recommended routes and frequencies were used. The listing, by year, of the routes to be operated and the “vehicle miles per square mile” metric derived from this is presented in Table 1-2.

As was further explained in the previous phase of the study, most of the San Carlos Apache Reservation is rural in character, and very sparsely populated. Even though San Carlos Apache Nnee Bich'onii Services provides demand response service throughout the area, the bulk of the population served lives within a corridor along US 70 and IRR 6 in or near the Tribal communities of San Carlos, Cutter, Peridot, and Bylas. A 10-mile wide corridor centered on these roadways (and on the route of the Arizona Eastern Railway) includes 2,694 out of the 2,782 total residential dwellings in the Nation as shown in Figure 1-3. Within the extents of the Tribal area, this 10-mile wide corridor equates to 499 square miles.

TABLE 1-1. SUMMARY OF TCRP FIVE-YEAR DEMAND ESTIMATION PROCESS

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Factor-Based Non-Program Ridership Estimates					
Estimated Study Area Population	14,972	15,315	15,658	15,903	16,149
Vehicle Miles per Square Mile	594	743	863	980.53	1,041
Persons aged 65 or over.	681	697	713	724	735
Service Factor	0.001969	0.002368	0.002690	0.003006	0.003167
TCRP Factor	1,200	1,200	1,200	1,200	1,200
Est. Over 65 Annual Demand	1,610	1,981	2,301	2,611	2,794
Persons aged 16 to 64 with mobility limitations	2,195	2,246	2,296	2,332	2,368
Service Factor	0.001942	0.002176	0.002365	0.002549	0.002644
TCRP Factor	1,200	1,200	1,200	1,200	1,200
Est. Mobility Limited Annual Demand	5,117	5,864	6,515	7,134	7,513
Persons aged 64 or under, residing in households with incomes below the poverty level.	7,504	7,676	7,848	7,971	8,094
Service Factor	0.001980	0.002345	0.002639	0.002927	0.003075
TCRP Factor	1200	1200	1200	1200	1200
Est. Low Income Annual Demand	17,828	21,598	24,856	28,000	29,864
Estimated Total Annual Demand	24,555	29,443	33,672	37,745	40,170
Graph-Based Non-Program Ridership Estimates					
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Estimated Study Area Population	14,972	15,315	15,658	15,903	16,149
Vehicle Miles per Square Mile	594	966	1,041	980.53	1,041
Persons aged 65 or over.	681	697	713	724	735
Annual Trips per Person from Graph	2.75	2.99	3.18	3.38	3.49
Annual Trips of Over 65 population	1,874	2,084	2,266	2,447	2,565
Persons aged 16 to 64 with mobility limitations	2,195	2,246	2,296	2,332	2,368
Annual Trips per Person from Graph	2.50	2.66	2.78	2.93	3.00
Annual Trips of Mobility Limited population	5,488	5,973	6,383	6,832	7,104
Persons aged 64 or under, residing in households with incomes below the poverty level.	7,504	7,676	7,848	7,971	8,094
Annual Trips per Person from Graph	2.11	2.28	2.43	2.58	2.66
Annual Trips of Low Income population	15,834	17,502	19,071	20,565	21,531
Estimated Annual Demand	23,196	25,559	27,720	29,844	31,200
Average of Both Estimates	23,876	27,501	30,696	33,794	35,685

Source: R. H. Bohannon & Associates, LLC

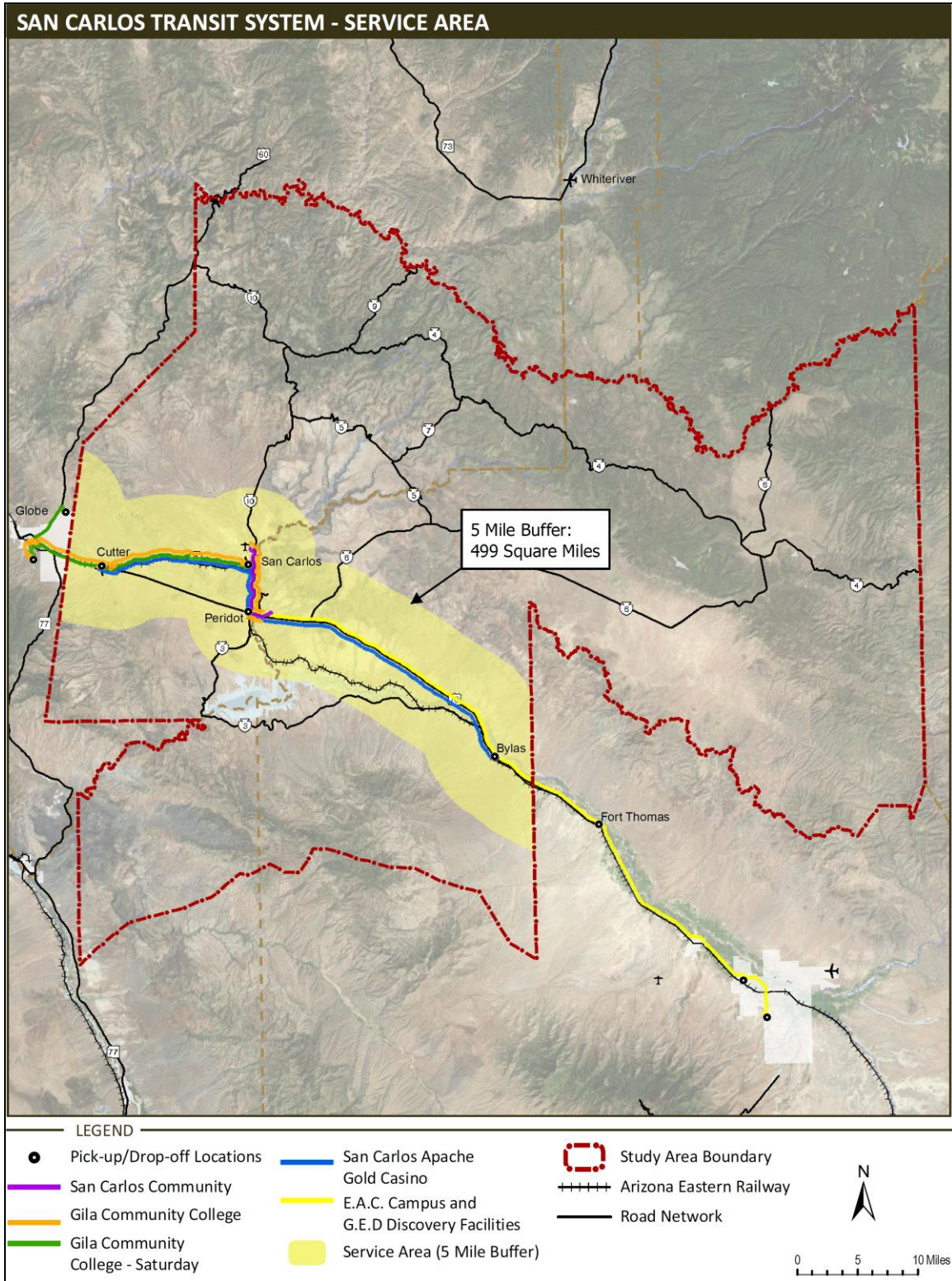
In order to proceed with the development of an Implementation plan, and particularly with the development of ridership and revenue estimates, recalculation of estimated demand for the five-year period covered by the implementation plan was essential.

Chapter 2 presents the system operating plan; Chapter 3 presents the budget; and Chapter 4 presents elements of the Marketing Plan.

**TABLE 1-2. VEHICLE MILES PER SQUARE MILE 2012-2017
BASED ON 499 SERVICE AREA SQUARE MILES**

2012-2013	Annual Miles
Apache Gold Casino/Resort Route	112,927.36
Globe Route - Monday through Saturday	75,797.28
Safford Route - Monday through Friday	107,577.60
Total Annual Miles	296,302.24
Vehicle Miles per Square Mile	593.79
2013-2014	Annual Miles
Apache Gold Casino/Resort Route	112,927.36
Globe Route - Monday through Saturday	75,797.28
Safford Route - Monday through Friday	107,577.60
Phoenix Route – Two Days per Week	74,318.40
Total Annual Miles	370,620.64
Vehicle Miles per Square Mile	742.73
2014-2015	Annual Miles
Apache Gold Casino/Resort Route	112,927.36
Globe Route - Monday through Saturday	75,797.28
Safford Route - Monday through Friday	107,577.60
Phoenix Route – Two Days per Week	74,318.40
Tucson Route – Two Days per Week	59,991.36
Total Annual Miles	430,612.00
Vehicle Miles per Square Mile	862.95
2015-2016	Annual Miles
Apache Gold Casino/Resort Route	112,927.36
Globe Route - Monday through Saturday	75,797.28
Safford Route - Monday through Friday	107,577.60
Phoenix Route - Three days per week	111,477.60
Tucson Route – Two Days per Week	59,991.36
Total Annual Miles	489,286.72
Vehicle Miles per Square Mile	980.53
2016-2017	Annual Miles
Apache Gold Casino/Resort Route	112,927.36
Globe Route - Monday through Saturday	75,797.28
Safford Route - Monday through Friday	107,577.60
Phoenix Route - Three days per week	111,477.60
Tucson Route - Three days per week	89,987.04
Total Annual Miles	519,282.40
Vehicle Miles per Square Mile	1,040.65

FIGURE 1-2. SAN CARLOS APACHE NNEE BICH'ONII SERVICES SERVICE AREA



Source: Jacobs Engineering Group, Inc.

2. SYSTEM OPERATING PLAN

This Chapter presents a transit improvement plan for San Carlos Apache Nnee Bich'oo Services. This plan is based on the Draft Transit Improvement Plan that was presented in the Final Report of the Feasibility Phase of the Study. The capital improvement program needed to provide the vehicles for the new services and additional financial data will be discussed in Chapter 3.

SCHEDULED SERVICE

Transit services to be implemented in the 2011-2012 through 2016-2017 time horizons are summarized in this section. Each horizon includes twelve months from October of one year through September of the following year. This convention is being followed as it is consistent with the calendar used in submitting applications for financial assistance to the Federal Transit Administration (FTA).

2011-2012

A 2011-2012 pro-forma was developed for a current application for FTA Section 5311 Rural Transit Funding assistance that was presented in a separate Technical Memorandum developed by the consultant for inclusion as an exhibit accompanying the San Carlos Apache Nnee Bich'onii Services application. During the 2011-2012 time frame, the following capital expenditures have been recommended:

- Two Ford chassis cutaway minibuses estimated to cost \$93,200 each
- Maintenance shop equipment estimated to cost a total of \$10,000
- Fifteen bus stop signs for the San Carlos and Globe area checkpoint stops, estimated to cost a total of \$1,500.00 assuming installation by Tribal personnel

The exterior and floor plan of the recommended cutaway minibuses are presented in Chapter 3.

2012-2013

During the 2012-2013 period, the ridership estimates and the financial pro-forma assume that San Carlos Apache Nnee Bich'onii Services will operate the following routes:

- Apache Gold Casino/Resort Route
- Globe Route - Monday through Saturday
- Safford Route - Monday through Friday

The Apache Gold Casino Resort Route, which San Carlos Apache Nnee Bich'onii Services has been operating on its current schedule since 2010, operates seven days a week, providing

commuter service for Tribal employees of the Casino. Returning after dark, employees are delivered to their homes. The schedule for this route is presented in Table 2-1 below.

TABLE 2-1. APACHE GOLD CASINO ROUTE SCHEDULE

Pick-up Location		Pick-Up Schedule			
		Extra Run*	1st RUN	2nd RUN	3rd RUN
Lv.	Bylas - Mt. Turnbull Market	7:00 AM		2:30 PM	10:30 PM
Lv.	Noline's Country Store		6:55 AM	2:55 PM	10:55 PM
Lv.	Bashas'		7:00 AM	3:00 PM	11:00 PM
Lv.	San Carlos Boys & Girls Club		7:10 AM	3:10 PM	11:10 PM
Lv.	American Indian Church		7:15 AM	3:15 PM	11:15 PM
Lv.	Tribal Administration		7:20 AM	3:20 PM	11:20 PM
Lv.	GCC Satellite Center		7:25 AM	3:25 PM	11:25 PM
Ar.	Apache Gold Casino	7:45 AM	7:45 AM	3:45 PM	11:45 PM
Departure/Drop-off Location		Departure/Drop-off Schedule			
		1st RUN	2nd RUN	3rd RUN	
Lv.	Apache Gold Casino	8:35 AM	4:35 PM	12:35 AM	
Lv.	GCC Satellite Center	8:55 AM	4:55 PM	12:55 AM	
Lv.	Tribal Administration	9:00 AM	5:00 PM	1:00 AM	
Lv.	American Indian Church	9:10 AM	5:10 PM	1:10 AM	
Lv.	San Carlos Boys & Girls Club	9:20 AM	5:20 PM	1:20 AM	
Lv.	Bashas'	9:30 AM	5:30 PM	1:30 AM	
Lv.	Noline's Country Store	9:35 AM	5:35 PM	1:35 AM	
Ar.	Bylas - Mt. Turnbull Market	10:00 AM	6:00 PM	2:00 AM	

Schedule times are subject to change.

*Extra Run is primarily for the purpose of positioning the vehicle to depart from the Casino at 8:35 am.

Source: San Carlos Apache Nnee Bich'oo Nii Services

During 2012-2013, the Globe Route, which was introduced on its current schedule in the fall of 2010 as a Monday through Friday service, is proposed to be extended to six-days-a-week. Tribal survey respondents requested more service, including Saturday and Sunday service. While for the purpose of the draft the additional day chosen was Saturday, San Carlos Apache Nnee Bich'onii Services may want to evaluate Sunday service in place of—or in addition to—Saturday service. Both shopping and church were mentioned frequently by survey participants desiring additional service.

Globe Schedule

The one-way mileage of the Globe route is 40.49, not including deviations to off-line destinations such as the Gila Community College campus in Globe. The schedule presented above could be operated by three drivers, operating in three shifts, five-days-per-week. The shifts would correspond to each of the round-trip schedules: The first shift would be from 6:00 am to 1:00 pm; the second shift would be from 3:00 pm to 10:00 pm; and the third shift

would be from 6:00 pm to 1:00 am. Each driver would work five 7-hour shifts each week. The three drivers assigned to this schedule would be drawn from the Tribal driver pool.

Cultural practices exist that also affect the selection of desirable schedule times and locations. For example, activities that might be conducted by mail, by phone, or on-line in metropolitan areas, such as paying bills or making appointments, are often done in person by Tribal enrollees, resulting in increased trips per person.

Many roadways on the reservation lack shoulders or street lighting, and can be hazardous to drive at night. Tribal elders and parents of high school and college students desire safe transportation to and from night classes at Gila Pueblo College in Globe—some of which end at 7:50 pm or later—as well as sports events and other evening, after school activities. Many adults without access to automobiles also take night courses at the college. The Globe schedule is shown in Table 2-2.

TABLE 2-2. GLOBE ROUTE SCHEDULE

WESTBOUND	1st RUN	2nd RUN	3rd Run
Peridot Nnee Bich’o Nii Office	6:10 AM	3:10 PM	6:10 PM
Tribal Administration Area	6:40 AM	3:40 PM	6:40 PM
Satellite Center	7:05 AM	4:05 PM	7:05 PM
Apache Gold Casino Main Entrance	7:25 AM	4:25 PM	7:25 PM
(Across) Globe Express Stop	7:45 AM	4:45 PM	7:45 PM
Downtown Globe/Arizona Eastern Depot	8:10 AM	5:10 PM	8:10 PM
Fry’s Shopping Center	8:35 AM	5:35 PM	8:20 PM
Walmart	8:45 AM	5:45 PM	8:30 PM
EASTBOUND			
Walmart	9:45 AM	6:45 PM	9:30 PM
Fry’s Shopping Center	9:55 AM	6:55 PM	9:40 PM
Downtown Globe/Arizona Eastern Depot	10:25 AM	7:25 PM	No Stop
(Across) Globe Express Stop	10:50 AM	7:50 PM	9:55 PM
Apache Gold Casino Main Entrance	11:10 AM	8:10 PM	10:15PM
Satellite Center	11:30 AM	8:30 PM	10:35PM*
Tribal Administration Area	11:55 AM	8:55 PM	11:00PM*
Peridot Nnee Bich’o Nii Office	12:25 PM	9:25 PM	11:30PM

Schedule times are subject to change.

Source: San Carlos Apache Nnee Bich’o Nii Services

The current pick-up points, drop-off points, and fare zones are discussed in Chapter 3.

Safford Schedule and Route Alignment

The one-way mileage of the Safford schedule is 68.96. As three round trips are made daily, the daily mileage total is 413.76 and the annual mileage total is 107,577 for Monday through

Friday service (260 days per year). The Safford schedule, shown in Table 2-3 below, is designed to be operated with a single vehicle, although three driver shifts would be required. Drivers could combine operating one of the Safford runs with demand response work in the San Carlos/Globe area to comprise an eight-hour work day. East of Peridot, the Safford route would operate over US 70 to the Safford area.

The Safford service already in place and operated by San Carlos Apache Nnee Bich'onii Services is the logical initial expansion for pro-forma purposes, even if survey participants requested Phoenix service more frequently. .

TABLE 2-3. SAFFORD ROUTE SCHEDULE

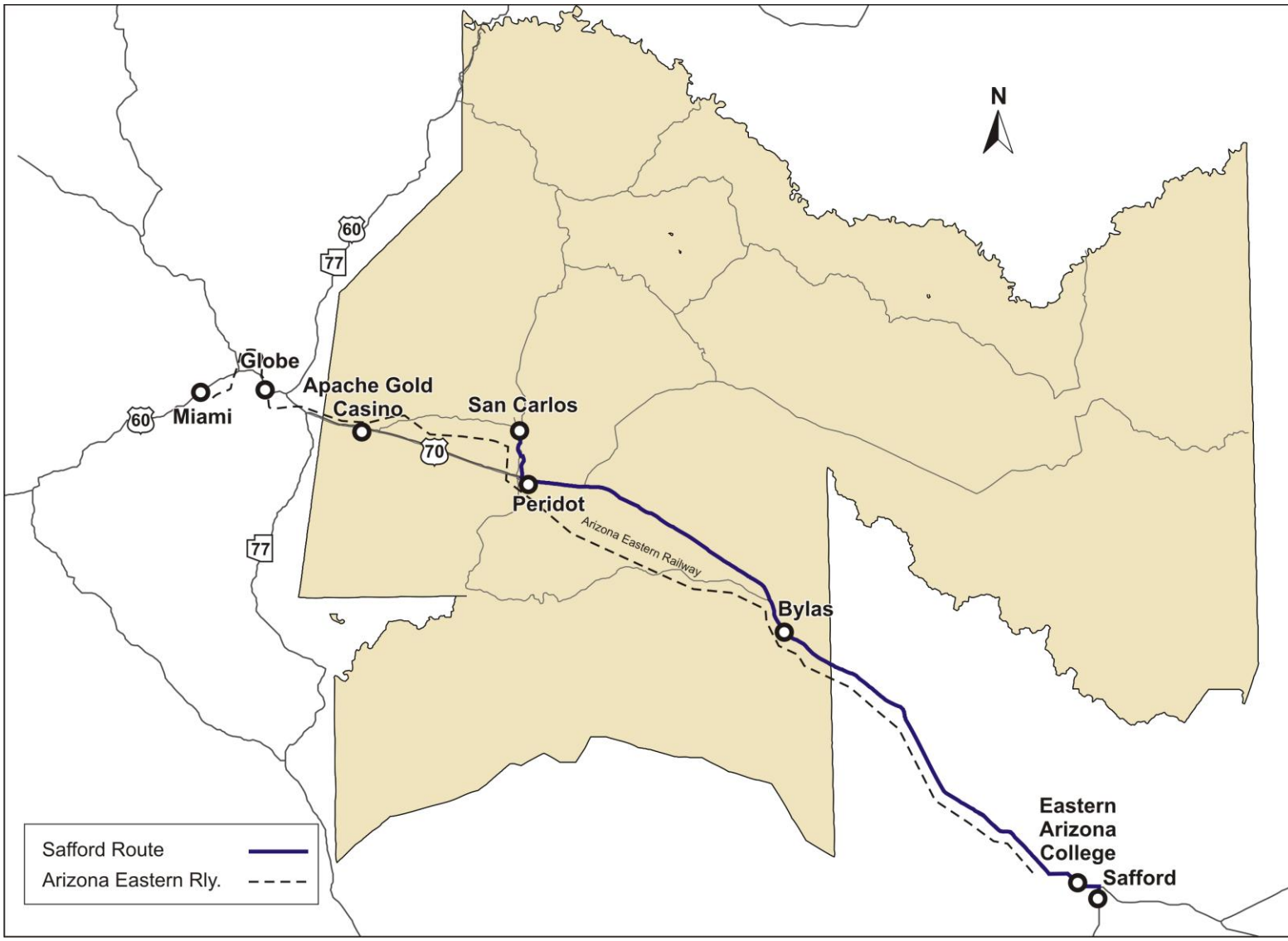
Eastbound	1st Run	2nd Run	3rd Run
Peridot Nnee Bich'o Nii Office	6:00 AM	11:00 AM	4:00 PM
San Carlos Satellite Center	6:15 AM	11:15 AM	4:15 PM
American Indian Church	6:25 AM	11:25 AM	4:25 PM
Tribal Administration Area	6:30 AM	11:30 AM	4:30 PM
San Carlos Boys & Girls Club	6:35 AM	11:35 AM	4:35 PM
Noline's Country Store	6:45 AM	11:45 AM	4:45 PM
Bylas Rest Area	7:15 AM	12:15 PM	5:15 PM
Eastern Arizona College Parking Lot	7:50 AM	12:50 PM	5:50 PM
Safford DES Area	8:00 AM	1:00 PM	6:00 PM
Safford Wal-Mart	8:05 AM	1:05 PM	6:05 PM
Discovery Park	No Stop	1:10 PM	6:10 PM
Westbound	1st Run	2nd Run	3rd Run
Safford Wal-Mart	8:30 AM	1:30 PM	6:30 PM
Safford DES Area	8:35 AM	1:35 PM	6:35 PM
Eastern Arizona College Parking Lot	8:45 AM	1:45 PM	6:45 PM
Bylas Rest Area	9:20 AM	2:20 PM	7:20 PM
Noline's Country Store	9:50 AM	2:50 PM	7:50 PM
San Carlos Boys & Girls Club	10:00 AM	3:00 PM	8:00 PM
Tribal Administration Area	10:05 AM	3:05 PM	8:05 PM
American Indian Church	10:10 AM	3:10 PM	8:10 PM
San Carlos Satellite Center	10:20 AM	3:20 PM	8:20 PM
Peridot Nnee Bich'o Nii Office	10:25 AM	3:25 PM	8:25 PM

Schedule times are subject to change.

Source: San Carlos Apache Nnee Bich'o Nii Services

In the San Carlos and Peridot areas, Tribal enrollees also use transit for shopping as well as commuting to work, or for medical purposes. When enrollees are hospitalized, medical transportation to the hospital is provided for the patient. However, after recovering from illness or surgery, the patient is often released from the hospital without being provided a return trip home. Medical transportation also does not provide service for family members who wish to accompany the patient to the hospital, or to visit the patient during his or her stay. The general public transportation service being proposed would also enable these trips. The route alignment of the Safford route is shown in Figure 2-1.

FIGURE 2-1. SAFFORD ROUTE



Source: R. H. Bohannon & Associates, LLC

2012-2013 Capital Expenditures

During the 2012-2013 period, recommended capital expenditures are as follows:

- One Ford E-350 replacement van, \$55,000
- Five bus stop signs for the Safford route checkpoints, \$500

2013-2014

In 2013-2014, a Phoenix Route is recommended to be introduced as a two-days-per-week operation. The schedule is shown in Table 2-4.

TABLE 2-4. PHOENIX ROUTE SCHEDULE

Westbound	1st Run	2nd Run	3rd Run
Peridot Nnee Bich'oo Nii Office	6:30 AM	2:30 PM	6:30 PM
Bashas'	6:35 AM	2:35 PM	6:35 PM
China Town (Old. B. Ball Court)	6:40 AM	2:40 PM	6:40 PM
Tribal Administration Area	6:45 AM	2:45 PM	6:45 PM
Satellite Center	6:50 AM	2:50 PM	6:50 PM
Apache Gold Casino	7:10 AM	3:10 PM	7:10 PM
Across Express Stop	7:25 AM	3:25 PM	7:25 PM
Downtown Globe/Arizona Eastern Depot	7:30 AM	3:30 PM	7:30 PM
Wal-Mart	7:40 AM	3:40 PM	7:40 PM
Miami Town Hall	7:45 AM	3:45 PM	7:45 PM
Superior	8:10 AM	4:10 PM	8:10 PM
Apache Junction	8:45 AM	4:45 PM	8:45 PM
Mesa METRO LRT Station	9:20 AM	5:20 PM	9:20 PM
Phoenix Indian Medical Center	9:45 AM	5:45 PM	9:45 PM
Eastbound	1st Run	2nd Run	3rd Run
Phoenix Indian Medical Center	10:30 AM	6:30 PM	10:00 PM
Mesa METRO LRT Station	10:55 AM	6:55 PM	10:25 PM
Apache Junction	11:30 AM	7:30 PM	11:00 PM
Superior	12:05 PM	8:05 PM	11:35 PM
Miami Town Hall	12:30 PM	8:30 PM	12:00 AM
Wal-Mart	12:40 PM	8:40 PM	12:10 AM
Downtown Globe/Arizona Eastern Depot	12:50 PM	8:50 PM	12:20 AM
Across Express Stop	12:55 PM	8:55 PM	12:25 AM
Apache Gold Casino	1:10 PM	9:10 PM	12:40 AM
Satellite Center	1:30 PM	9:30 PM	1:00 AM
Tribal Administration Area	1:35 PM	9:35 PM	1:05 AM
China Town (Old. B. Ball Court)	1:40 PM	9:40 PM	1:10 AM
Bashas'	1:45 PM	9:45 PM	1:15 AM
Peridot Nnee Bich'oo Nii Office	1:50 PM	9:50 PM	1:20 AM

Source: R. H. Bohannon & Associates, LLC

Phoenix Schedule and Route Alignment

The one-way mileage of the Phoenix schedule is 119.10; operating this schedule two days a week will result in the accumulation of 74,318.40 annual miles. The schedule will require two vehicles and three drivers on each day of operation. Ridership estimates suggest that minibuses might be needed for this route. If the route were operated on an advance reservations basis, vans could be assigned on light days. As gasoline prices climb, Tribal residents will want to depend more and more on public transportation for shopping, medical visits, and access to evening sports events concerts, and other urban area attractions. The late night return schedule enables these activities.

The Phoenix route alignment is shown in Figure 2-2. West of Miami, the Phoenix route would operate over US 60 through Superior to Apache Junction, thence west on US 60 to Mesa. US 60, Interstate 10, and SR 51 could be used in the Phoenix area. The proposed Phoenix schedule terminates at the Indian Health Service in Phoenix, a destination mentioned by a number of survey participants. It would also stop at the Mesa station of Phoenix's METRO light rail service, where connections to a number of Valley locations are available. METRO runs through both the Tempe and Downtown Phoenix campuses of Arizona State University, and also stops near Sky Harbor Airport, Chase Field, US Airways Center, the Heard Museum, and St. Joseph's Hospital.

METRO also serves Park Central and Spectrum (Christown) Malls, the Phoenix Art Museum, the Convention Center, and numerous downtown restaurants, theatres, museums, and other cultural and entertainment destinations.

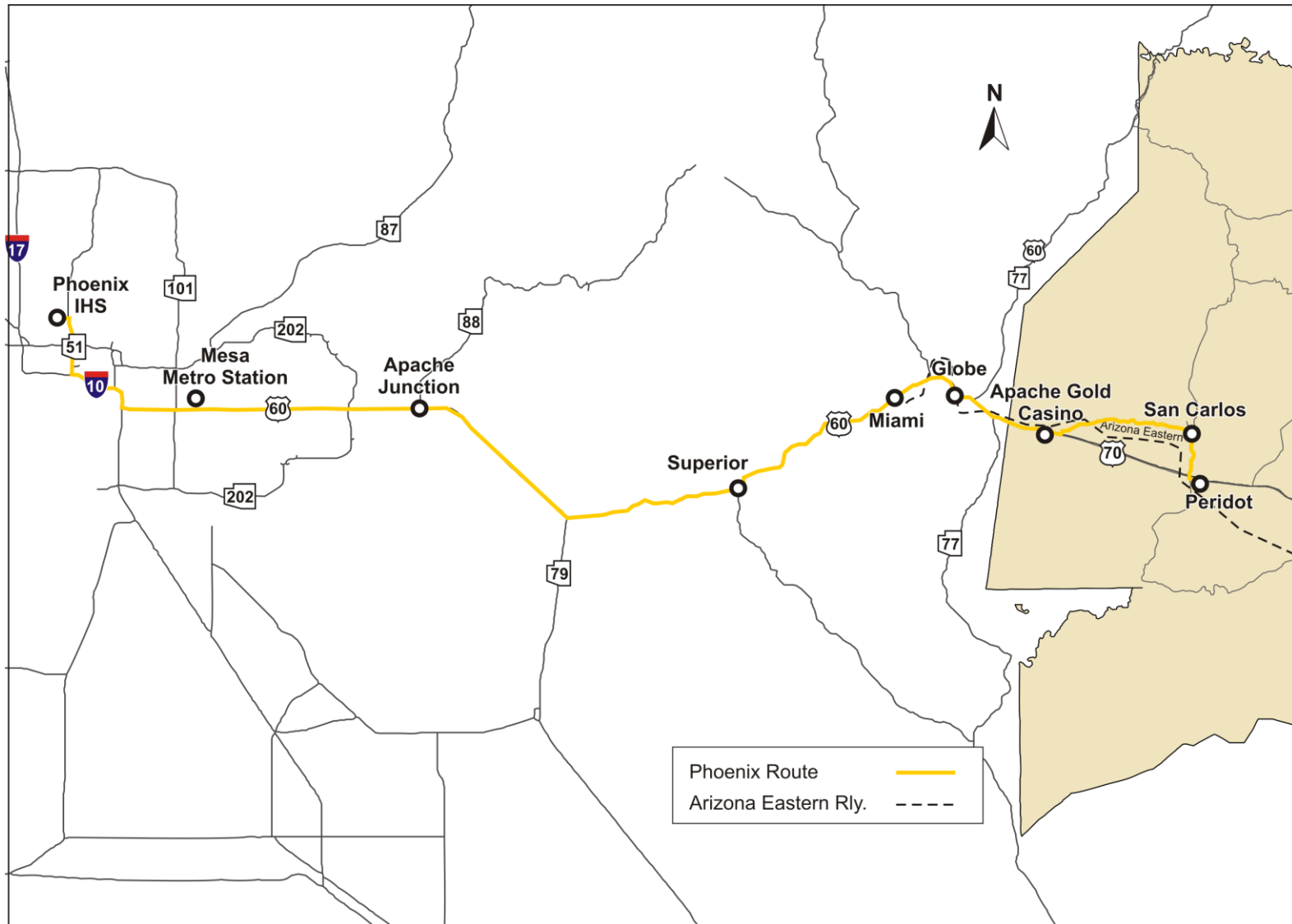
For both time and financial constraints, operation of this schedule as a fixed route within the Phoenix area would be desirable, relying on the light rail and frequent bus connections rather than making extensive detours in Valley traffic. Further study should be undertaken before the final route and stops are selected.

Joint Operation of Phoenix Services

For the purposes of this Short-term Implementation Plan, the proposed Phoenix schedule is presented as an operation implemented and managed by San Carlos Apache Nnee Bich'oo Nii Services on its own. However, regional interest exists in restoring intercity transit service along the US 60-US 70 corridor between Phoenix, Superior, Miami, Globe, and Safford. The Tribe will want to explore the option of partnering with Cobre Valley Community Transit, ADOT or other entities to operate the service. Funding assistance could be provided through a number of public agencies including ADOT, Gila, Graham, Maricopa, and Pinal Counties, the Cities of Globe, Phoenix, and Superior, the Town of Miami, and other sources.

Such a service might be implemented as part of a newly-implemented regional transit network that would include service along the SR 77 corridor to Winkleman, San Manual, Oro Valley, and Tucson.

FIGURE 2-2. PHOENIX ROUTE



Source: R. H. Bohannon & Associates, LLC

2013-2014 Capital Expenditures

Capital expenditures for the 2013-2014 period include

- Additional Ford chassis cutaway minibus, \$93,200
- Replacement Ford E-350 van, \$55,000
- Five more bus stop signs for the Phoenix route checkpoints.

2014-2015

In 2014-2015, two-days-per-week service to Tucson will be added. The proposed Tucson schedule is shown in Table 2-5.

TABLE 2-5. TUCSON ROUTE SCHEDULE

Southbound	1st Run	2nd Run
Peridot Nnee Bich'o Nii Office	7:00 AM	2:00 PM
Bashas'	7:05 AM	2:05 PM
China Town (Old. B. Ball Court)	7:10 AM	2:10 PM
Tribal Administration Area	7:15 AM	2:15 PM
Satellite Center	7:20 AM	2:20 PM
Apache Gold Casino	7:40 AM	2:40 PM
Winkelman	8:20 AM	3:20 PM
San Manuel	8:55 AM	3:55 PM
Tucson - Tohono Tadaí Transit Center	9:55 AM	4:55 PM
Tucson - Health Sciences/Streetcar	10:10 AM	5:10 PM
Tucson - VA Medical Center	10:25 AM	5:25 PM
Northbound	1st Run	2nd Run
Tucson - VA Medical Center	10:30 AM	5:30 PM
Tucson - Health Sciences/Streetcar	10:45 AM	5:45 PM
Tucson - Tohono Tadaí Transit Center	11:00 AM	6:00 PM
San Manuel	12:00 PM	7:00 PM
Winkelman	12:35 PM	7:35 PM
Apache Gold Casino	1:15 PM	8:15 PM
Satellite Center	1:35 PM	8:35 PM
Tribal Administration Area	1:40 PM	8:40 PM
China Town (Old. B. Ball Court)	1:45 PM	8:45 PM
Bashas'	1:50 PM	8:50 PM
Peridot Nnee Bich'o Nii Office	1:55 PM	8:55 PM

Source: R. H. Bohannon & Associates, LLC

Tucson Schedule and Route Alignment

The Tucson Route would follow the alignment of the Globe route between Peridot, San Carlos, and the Casino. Leaving the Casino, the route would follow US 70 to its junction with SR 77 and then operate over SR 77 to the Tucson Area. (See Figure 2-3) The proposed Tucson Route would be 144 miles in length, and would terminate at the VA Medical Center in Tucson, after making stops in San Manuel, at a transit center north of downtown, and in the vicinity of the University of Arizona. Two round trips are proposed for each day the route is operated. Operation of the Tucson route two days per week would add an additional 59,991.36 annual miles to the San Carlos Apache Nnee Bich'onii Services system. The route is designed to be operated with one vehicle, but would require two drivers.

The Tucson Route is designed to take advantage of existing and future transit services in Tucson, to facilitate distribution and collection of San Carlos Apache Nnee Bich'onii Services riders and minimize the amount of route deviation in Tucson traffic. As is the case with the Phoenix Route, the consultant recommends that San Carlos Apache Nnee Bich'onii Services plan to operate this service as a fixed route within the Tucson area to save the time and expense of deviating in urban traffic.

Stopping at the Tohono Tadaí Transit Center near Stone Avenue and River Road will give SCATS riders connections to Tucson's SunTran bus system. The Transit Center is also within walking distance of Tucson Mall, a major regional mall featuring major stores such as Dillard's, Penny's and Sears, as well as specialty shops. There are also a number of popular restaurants in the area.

Another Tucson stop would be near the University of Arizona Health Sciences Center, giving access to another highly respected and patronized health care facility as well as the terminal of the Tucson Modern Streetcar, which is expected to be operating by 2014. The Streetcar will connect to additional areas of the University of Arizona campus, the Tucson Amtrak Station, and the downtown Ronstadt Transit Center.

Joint Operation of Tucson Services

As was the case with the Phoenix schedule, the proposed Tucson schedule is presented as an operation implemented and managed by San Carlos Apache Nnee Bich'oonii Services on its own. However, regional interest exists in implementing intercity transit service along the SR 77 corridor between Globe, Winkleman, Oro Valley, and Tucson. The Tribe will want to explore the option of partnering with Cobre Valley Community Transit, ADOT or other entities to operate the service. Funding assistance could be provided through a number of public agencies including ADOT, Gila, and Pima Counties, the Cities of Globe and Tucson, and other sources.

FIGURE 2-3. TUCSON ROUTE



Source: Jacobs Engineering Group, Inc.

2014-2015 Capital Expenditures

Capital expenditures recommended for 2014-2015 are as follows:

- Ford Chassis Cutaway Bus, \$93,200
- Ford E-350 Van, \$55,000
- Upgrade GPS/GIS tracking and dispatch system, \$25,000
- New radio repeaters (2 @ \$25,000 each), \$50,000
- Five bus stop signs for the Tucson route, \$500

If the Phoenix and Tucson Routes, both of which would begin by operating two days per week, are operated on different days, the same vehicle could be used. However, a spare cutaway minibus, to be available for maintenance and to protect the Globe, Phoenix, and Tucson services, is recommended. Five more bus stop signs will also be needed.

During the 2014-2015 period, the consultant recommends upgrading the GPS/GIS tracking and dispatch system developed with the assistance of Jacobs during the conduct of the 2009 San Carlos Apache Tribe Transportation Study. After the tracking and dispatch system was placed in service, several “dead” spots were identified within the reservation where radio communication with the vehicles needed for the tracking system is not possible. Radio repeaters to be located on Pinal Peak, south of Globe, and on Hill Top, north of San Carlos, are recommended to achieve complete coverage.

2015-2016

During the 2015-2016 period, the Phoenix service would be increased to three days per week. Subject to adjustments identified through operating experience, the schedule would remain the same.

2015-2016 Capital Expenditures

Capital expenditures for the 2013-2014 period include

- Additional Ford chassis cutaway minibus, \$93,200
- Replacement Ford E-350 van, \$55,000

2016-2017

During the 2016-2017 period, the Tucson service would be increased to three days per week. Subject to adjustments identified through operating experience, the schedule would remain the same.

2016-2017 Capital Expenditures

Capital expenditures for the 2013-2014 period include

- Additional Ford chassis cutaway minibus, \$93,200
- Replacement Ford E-350 van, \$55,000

PARATRANSIT SERVICE

In addition to providing scheduled runs, San Carlos Apache Nnee Bich’o Nii Services functions as the primary paratransit service provider in its service area. Most of the paratransit needs of the San Carlos Apache community are addressed by means of scheduling vehicles to deviate from the fixed routes as needed to pick up or deliver riders with mobility limitations. In addition, San Carlos Apache Nnee Bich’o Nii Services schedules special trips for youth groups, Tribal elders, and others.

The GPS system that San Carlos Apache Nnee Bich’o Nii Services makes use of to track the locations of its vehicles also facilitates the efficient dispatching of vehicles needing to deviate from the established route to pick-up or deliver paratransit clients. The practice of operating a deviated fixed-route system legally absolves San Carlos Apache Nnee Bich’o Nii Services from operating an additional complementary paratransit service.

However, additional human services transportation is provided in the service area by the Tribal Emergency Medical Services, which provides medical transportation, and the Tribal Older Adults Center.

Complementary Paratransit Service Funded Through FTA Section 5310

ADOT administers over \$3.9 million annually in formula FTA and Surface Transportation Program (STP) funds for the FTA Section 5310 program. These funds are used for the purchase of vans and minibuses for the transportation of seniors and mobility-limited persons. Eligible program participants include private non-profit, public, and Tribal agencies that provide transportation to elderly and disabled persons, such as senior centers. Agencies that provide transportation for developmentally disabled and/or seriously mentally ill populations are also eligible to receive Section 5310 funds. Section 5310-funded vehicles are used for transportation to:

- Medical Appointments
- Adult Day Care Facilities
- Service Appointments such as Banking, Social Services, etc.
- Employment
- Nutrition Appointments
- Education and Training
- Shopping Trips

In Arizona, approximately 150 public and private agencies currently participate in the 5310 Program. Tribal communities have been particularly active in the Program (Arizona Department of Transportation, www.azdot.gov)

Councils of Governments such as CAAG assist ADOT in screening applicants for 5310 funds. ADOT then makes the final decision based on input received from CAAG, for example, and available budget. The Tribal Older Adult Center currently receives 5310 Program funds.

VANPOOLS

In portions of the San Carlos Apache Nnee Bich'oo Nii service area the public transportation demand might be characterized by a small group of riders who regularly travel to a specific destination that is not currently served by the scheduled services, such as a copper mine or other industry. Under such circumstances, facilitating the formation of a vanpool might be a more cost-effective way to provide transportation.

Types of Vanpool Programs

Four basic types of vanpool programs exist:

1. **Owner/operator Vanpools**, initiated by individuals who buy or lease a van with which to start a vanpool, exist primarily on the East and West Coasts—particularly in the Washington, DC and San Francisco Bay areas—where there is severe traffic congestion, together with extensive networks of high-occupancy vehicle lanes that encourage vanpooling and carpooling. A major challenge for owner/operators is finding liability insurance that is both adequate and affordable.

2. **Employer Vanpools** where companies buy or lease vans for use by their employees. Many of these vanpools were established in the 1970s during the first oil embargo and the first episode of rapidly rising gasoline prices. As gas prices dropped during the 80s and 90s, many of these vanpools were discontinued. Currently, with gas prices again on the rise, company-sponsored vanpools could be an appealing option,

For example, a San Carlos-based employer may commit to using vanpool vehicles for employees commuting from Mesa or Phoenix. Annual participation contracts with renewal clauses should be signed. The vanpool administrator/coordinator holds meetings with employees and signs up 14 users for each van. Two-or-more drivers for each vanpool agree to a three-hour driver-training course and they are certified to drive the vehicle.

In exchange for driving, fueling the vehicle, and arranging for scheduled maintenance, the primary driver may receive transportation free each month, or may have personal use of the vehicle for up to between 35 and 50 miles on the weekends/evenings. This is a valued incentive where the employer pays for most or all of each individual's commuter costs.

3. **Private Operators**—sometimes referred to as third-party vanpool providers—are either for-profit or non-profit companies who operate vanpool services for commuters, companies, and government agencies. One example of a private operator is the 1-800-Vanpool service managed by Enterprise Rent-a-car and discussed at length below.
4. **Public Transit Systems** also sponsor vanpools by providing an assortment of capital and operating subsidies to encourage participation in vanpooling as part of transportation demand management or to provide mobility for areas where the levels of demand do not justify the implementation of traditional transit services. The

agencies can establish their own vanpool networks or team with a private operator. Both Valley Metro in Phoenix and SunTran in Tucson have vanpool programs in which residents of those urban areas can participate.

A public agency such as Nnee Bich’o Nii or Gila County could purchase vehicles and administer a vanpool program. In certain instances, a private business owner can supply the capital for vehicle lease or purchase. Participants can share the cost of operating the vanpool; however, employers may fully or partially subsidize the costs. The calculation for deciding how to price this type of vanpool service is based on several factors:

- Vehicle depreciation cost spread over five years or 50,000 miles of operation
- Vehicle usage calculated on a monthly average of 21 days
- Fuel costs per mile, a conservative estimate, reflecting fluctuating fuel costs
- Mileage calculated on a round-trip basis
- Per-mile maintenance costs are determined
- Administrative responsibilities include marketing, training drivers, keeping vanpools viable and full, and creating incentive and promotional programs

Nnee Bich’o Nii could consider providing a “ride sharing” service for identifying potential participants in a carpool or vanpool. A database could be developed that would be accessible through the Nnee Bich’o Nii Web site. Visitors to the site interested in participating in the ride sharing program could enter their home and work addresses and the shift times that they work. The software would then “match” them with others living nearby, and working at the same location on the same shift.

A few issues arise with shared-use vehicles. If the driver of the vanpool is an employee who is also commuting to work, the type of insurance needed is different than if the driver is paid or if the vehicles are used for other service during the day. As with any formal bus service, vanpools need back-up vehicles or a plan for alternate service.

Other issues that can make or break a vanpool deal with passenger “rules.” Vanpool issues include:

- How long will the van wait for late passengers?
- Is there a central meeting place for commuters?
- Does the program require parking for commuters?
- Is the vehicle secure during the day or evening hours?
- Are eating and drinking allowed in the vehicle?
- What happens when a member of the vanpool drops out? Who is responsible for filling the empty space?
- How will conflicts among participants be resolved?
- How is gas money collected?
- How and when does maintenance on the vehicle occur?

Vehicle Replacement: Cost for vehicle replacement must be considered in funding vanpool programs. The operating agency must collect enough of a per-mile cost to accrue the purchase cost of the vehicle over five years or 50,000 miles.

The key to implementing a successful vanpool program is to develop partnering relationships with the businesses that will benefit. The partnership of the employer and employee is critical to maintaining stable and cost effective vanpools. From the acquisition of the vehicle to securing a full roster of riders, a positive mutual advantage must be present.

Enterprise Rent-A-Car

Enterprise Rent-A-Car is an example of a vanpool private operator that provides service in Arizona. According to Enterprise Rent-A-Car, their “1-800-Vanpool” service can be implemented anywhere within the state, including comparatively rural areas such as the San Carlos Apache Reservation. The 1-800-Vanpool service includes the following elements:

- Late-model Ford van specifically equipped for vanpooling including cloth upholstery, AM/FM stereo and CD player, power locks/windows, cruise control, and front and rear air-conditioning.
- Service and maintenance program
- 24-hour vanpool roadside assistance
- Insurance program
- Month-to-month flexibility to adapt to the changing rideshare needs of participants
- Optional guaranteed ride home program
- Administrative support

In rural areas, some of the features, such as the 24-hour roadside assistance, might be structured differently than in urban areas. The service and maintenance would likely be contracted out to a nearby Ford dealer, such as McSpadden Ford in Globe. The service provides either 8-passenger or 15-passenger vehicles. The monthly cost per vanpool participant for an 8-passenger van is \$155; the monthly cost per participant for a 15-passenger van is \$90.00. Note that the cost of gasoline is not included in these prices. Monthly prices may vary depending upon the daily mileage driven.

Luxury vans are available for a slightly higher cost per person and include the following additional features: high-backed reclining “captain’s chairs” with individual armrests, and interior overhead lights. Program details can be obtained by visiting the Web site at www.vanpool.com.

Using a third-party operator such as Enterprise Rent-A-Car might be a good way to test the concept without making the commitments needed to acquire the additional vans and insurance. However, once established, vanpools are one form of transit service that can actually make a profit; Nnee Bich’o Nii may ultimately want to establish their own operation.

DRAFT FLEET MAINTENANCE PLAN

The Federal Transit Administration (FTA) requires each recipient of federal funding to have a current written maintenance plan for its federally funded rolling stock, as provided for in FTA Circular 9030.1C. A draft document that fulfills these federal requirements is included as Appendix A. In addition to the explicit provisions of this Fleet Maintenance Plan, the San Carlos Apache Nnee Bich'onii Services may perform additional maintenance on its transit fleet pursuant to the recommendations of the equipment manufacturer and consistent with established San Carlos Apache Nnee Bich'onii Services vehicle maintenance procedures. The draft Fleet Maintenance Plan has been developed from the Fleet Maintenance Plan adopted by the Northern Arizona Intergovernmental Public Transit Agency (NAIPTA) and approved by the Federal Transit Administration (FTA).

DRAFT SAFETY PROGRAM

San Carlos Apache Nnee Bich'onii Services has a Safety Program in place. However, the consultant team was asked to draft a new Safety Program that San Carlos Apache Nnee Bich'onii Services management could review for comparison. A draft document was developed that covers nearly every conceivable safety issue that might arise in the office, in the maintenance shop, or on the road, and draws heavily from “boilerplate” language obtained through online research. Due to the length of the Safety Program document, it has been provided under separate cover for review.

The final Safety Program could contain elements from the existing San Carlos Apache Nnee Bich'onii Services Program as well as elements from the new draft. The Safety Program will be finalized with input from the ADOT Project Manager and San Carlos Apache Nnee Bich'onii Services management and staff.

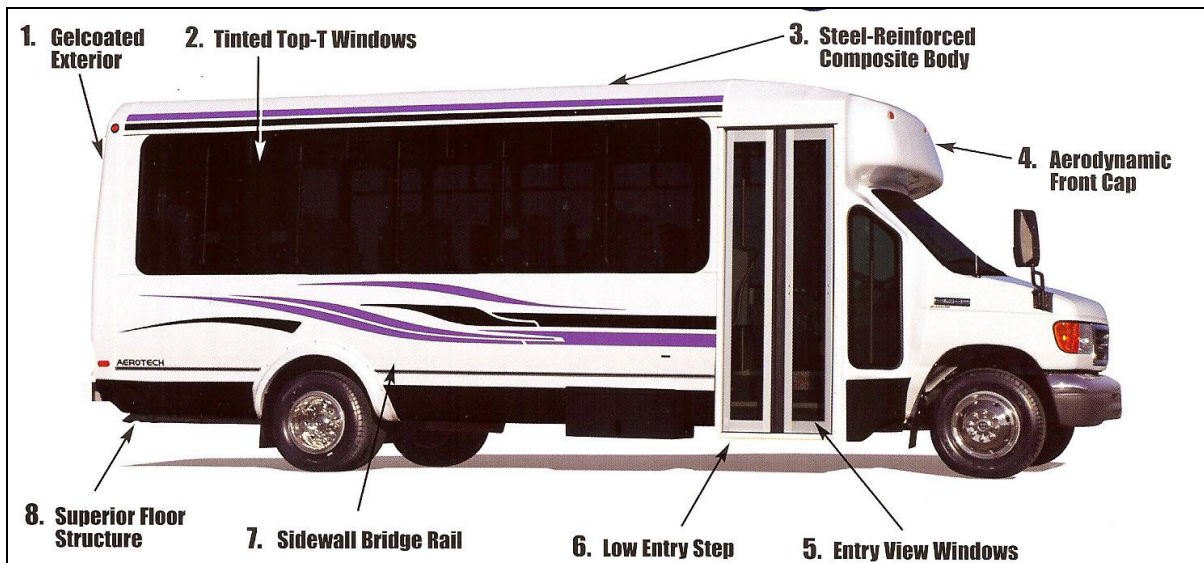
3. SYSTEM BUDGET

This chapter presents the system budget, including vehicle specifications and cost, operating and maintenance costs, and the proposed fare structure and estimated revenues. A concept for tracking and recording ridership and revenue is presented, along with a five-year transportation improvement plan and a five-year capital improvement plan.

VEHICLE SPECIFICATIONS AND COST OF ACQUISITION

Two general types of vehicles are proposed to be used. The first type are the Ford e-350 vans similar to those already being operated by San Carlos Apache Nnee Bich'oo Nii Services. The estimated cost per van to be acquired is \$55,000. The second type of vehicle is a Ford chassis "cutaway" minibus having a capacity of 16 passengers and positions for two wheelchairs. These vehicles are estimated to cost \$93,200 each, including a bus wrap, bicycle rack, seatbelts, wheelchair lift, and destination sign. These vehicles are typically manufactured with a white body, and a plastic "bus wrap" is applied to the vehicle that includes the system name and logo and other "paint scheme" design elements. An external view of an Eldorado Aerotech, which is a common version of this type of vehicle, is shown in Figure 3-1. Note that the example shown does not include a wheelchair lift or bike rack.

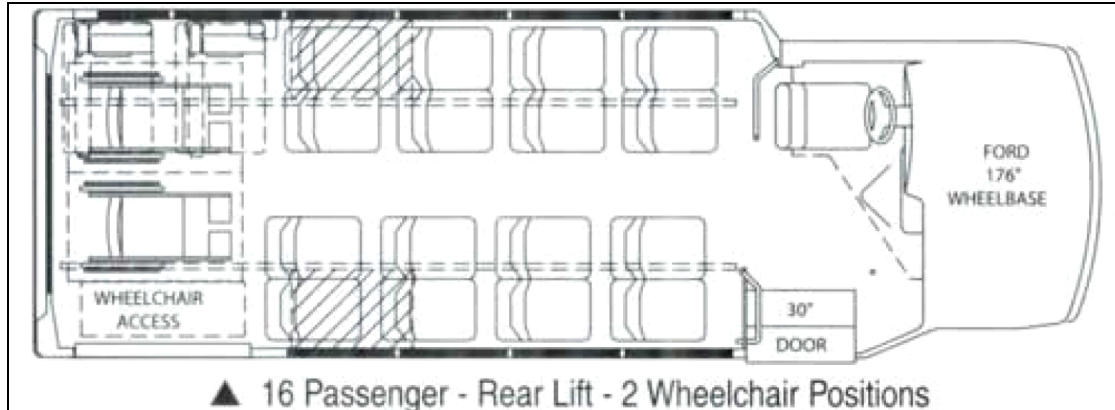
FIGURE 3-1. EXTERNAL VIEW OF CANDIDATE VEHICLE



Source: Thor Industries Commercial Bus Division

A typical floor plan for a cutaway minibus is shown in Figure 3-2.

FIGURE 3-2. EXAMPLE FORD CHASSIS CUTAWAY MINI-BUS PLAN



Source: Arizona Bus Sales

OPERATING AND MAINTENANCE COSTS

Estimated operating and maintenance costs for the 2012-2013 fiscal year are presented in Table 3-1. These costs were estimated based on San Carlos Apache Nnee Bich’o Nii Services experience as well as typical operating costs for similar operations and have been reviewed by ADOT transit program personnel. In subsequent fiscal years, appropriate cost increases were assumed. For example, fuel was assumed to increase by 25 cents per gallon per year, and driver salaries were assumed to increase by 25 cents an hour per year.

As was discussed in the Final Report of the feasibility phase of the study, San Carlos Apache Nnee Bich’o Nii Services vehicle care and maintenance practices are above average. McSpadden Ford in Globe, which has been handling much of the maintenance on the current vehicle fleet, is extremely complimentary regarding the condition of the vehicles. The maintenance cost per mile of the much of the existing fleet is unusually low, with many of the vans costing less than \$.03 to maintain. (source: McSpadden Ford) However as vehicles age and accumulate road miles, the cost of maintaining the vehicles increases—often dramatically.

The Federal Transit Administration has established vehicle age and odometer mileage thresholds with respect to vehicles that were acquired with any type of FTA funding. This data is presented in Table 3-2. The “light duty small bus/van” category, which includes all of the vehicles in San Carlos Apache Nnee Bich’o Nii Services’ existing fleet, has age and mileage thresholds of four years or 100,000 miles respectively. Some of the existing vehicles already exceed this minimum.

Transit systems operating in rural Arizona can expect to accumulate mileage more rapidly than systems operating in urban areas. Over-the-road mileage—particularly on paved highways—tends to result in less “wear and tear” per mile than city driving. However, analysis suggests that, even allowing for vehicles to reach 160,000 miles or more before being replaced, San Carlos Apache Nnee Bich’o Nii Services can expect to turnover virtually

**TABLE 3-1. ESTIMATED OPERATING AND MAINTENANCE COSTS
FOR 2012-2013 FISCAL YEAR**

Expenses	Annual \$	% Time	
Administrative Expenses 80% FTA/20% SCA Nnee Bich'o Nii Services			
Administrative Staff (four full time total)	172,923	20.00%	\$ 34,584.60
Fringe Benefits			12,110.91
Space Rental/Maintenance			
Program Audit			750.00
Utilities			840.00
Marketing/Advertising			1,200.00
Printing			600.00
Supplies			600.00
Telephone			525.00
Postage			250.00
Substance Abuse Program			3,200.00
Subtotal			54,678.51
Operating Expenses 58% FTA/42% SCA Nnee Bich'o Nii Services			
Supervisor/Dispatcher	\$29,993.00	90.00%	\$ 26,993.70
Shop Foreman			
Shop Assistant			
Custodian	\$18,720.00	50.00%	9,360.00
Driver Salaries			173,153.75
Fringe Benefits			73,327.61
Fuel and Oil			195,793.59
Maintenance and Parts (\$0.5 per mile)			37,062.06
Vehicle Licenses			2,000.00
Vehicle Insurance			2,500.00
Vehicle Cleaning and Supplies			2,400.00
Communications			1,500.00
Uniforms			695.00
Subtotal			\$ 524,785.71
TOTAL			\$ 579,464.22

its entire vehicle fleet within five years if the proposed service additions are implemented. (See Table 3-3) Note that the purchase dates and vehicle types listed in Table 3-3 correlate to those discussed in the system operating plan in the preceding chapter.

As the San Carlos Apache Nnee Bich'o Nii Services vehicles have been so well maintained, it may in some instances make sense to rebuild key components of a specific vehicle, such as the engine and transmission, rather than replacing the vehicle. However it is difficult to "capitalize" such repairs from a federal funding standpoint, which creates a disincentive for this approach.

TABLE 3-2. MINIMUM LIFE-CYCLE COST REPLACEMENT AGES AND MILEAGES BY SERVICE-LIFE CATEGORY

Vehicle Type / Category	Annual Vehicle	Minimum Cost	Minimum Cost
	Mileage	Age	Mileage
Heavy-Duty Large Bus: 12-Years / 500,000 Miles	25,000	17	425,000
	35,000	14	490,000
	45,000	12	540,000
Heavy-Duty Small Bus: 10-Years / 350,000 Miles	25,000	12	300,000
	35,000	11	385,000
	45,000	11	495,000
Medium-Duty Small Bus: 7-Years / 200,000 Miles	25,000	9	225,000
	35,000	8	280,000
	45,000	7	315,000
Light-Duty Midsize Bus/Van: 5-Years / 150,000 Miles	20,000	7	140,000
	30,000	6	180,000
	40,000	5	200,000
Light-Duty Small Bus/Van: 4-Years / 100,000 Miles	20,000	6	120,000
	30,000	5	150,000
	40,000	4	160,000

Note: Shaded cells indicate where minimum cost point exceeds FTA age or mileage minimums.

Source: Federal Transit Administration, *Useful Life of Transit Buses and Vans, Final Report*, April 2007.

FARE STRUCTURE AND ESTIMATED REVENUES

To estimate revenues for each fiscal year in the short-term plan, the forecasted demand for each year was used, together with an estimate of what the average fares would be and how the ridership would split among the schedules being operated within a particular fiscal year.

San Carlos Apache Nnee Bich’o Nii Services has created fare zones for the existing Casino, Globe, and Safford schedules as shown in Figure 3-3. These fares and zones were parsed into a table and fictitious zones for the Phoenix and Tucson routes were added, with logical increases in rates to match the longer distances. (See Table 3-4).

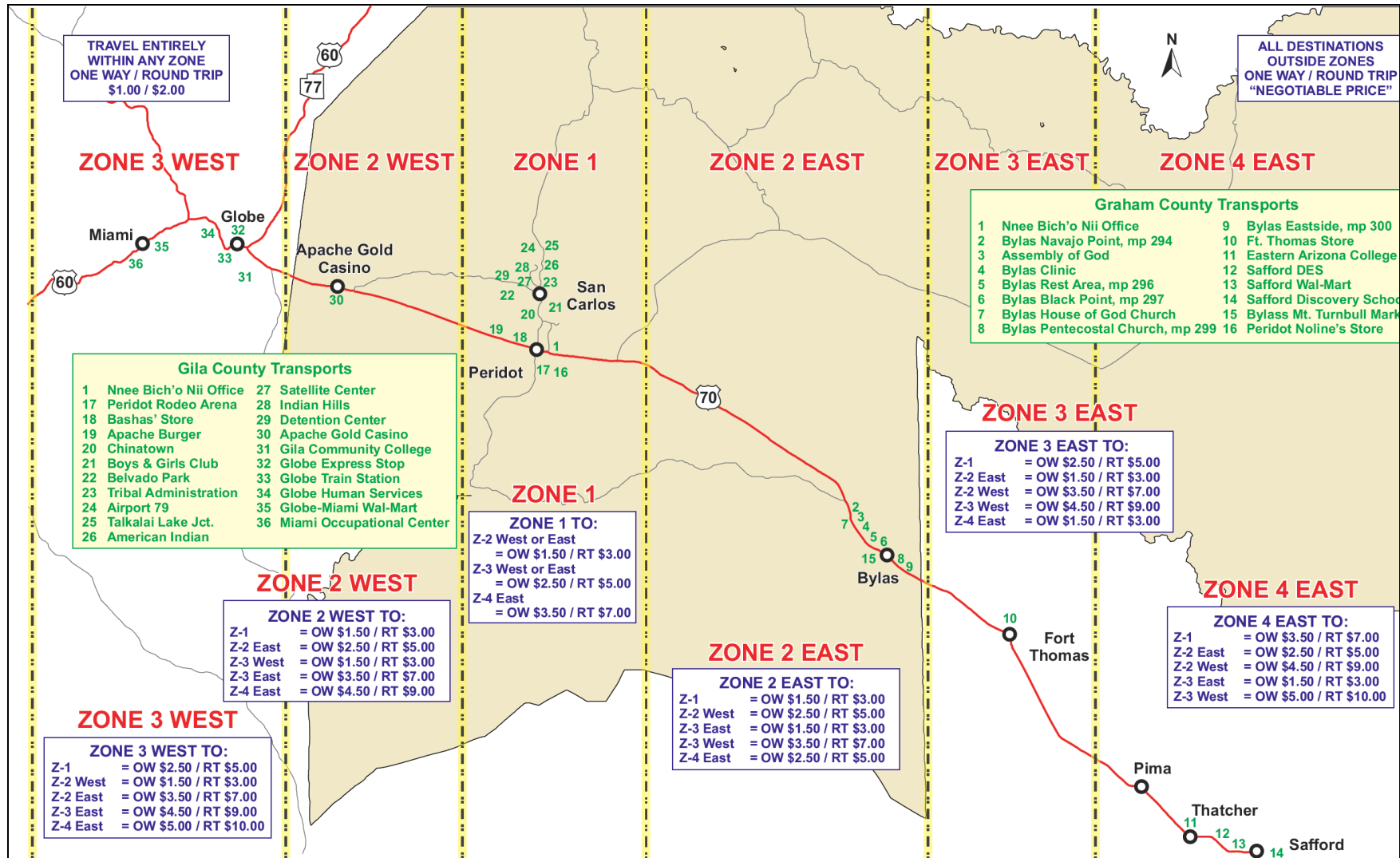
As a technical origin/destination analysis of potential riders was outside the scope of this study, the consultant chose to parse out the ridership for a given year based on the relative number of trips operated to each of the destinations. For each route, the fare from Zone 1 (San Carlos/Peridot) to the key destination was assumed to be the average fare collected. The projected revenues by year resulting from this procedure are presented in Table 3-5.

These revenue figures were used, along with the expenses explained above, to develop pro-forma statements of expense and revenue for each fiscal year.

TABLE 3-3. PROPOSED VEHICLE ACQUISITION AND RETIREMENT

Vehicle Description	Vehicle Number	Date Purchased	Prior Mileage	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017	
				Annual Miles per Vehicle	Accumulated Miles per Vehicle	Annual Miles per Vehicle	Accumulated Miles per Vehicle	Annual Miles per Vehicle	Accumulated Miles per Vehicle	Annual Miles per Vehicle	Accumulated Miles per Vehicle	Annual Miles per Vehicle	Accumulated Miles per Vehicle	Annual Miles per Vehicle	Accumulated Miles per Vehicle
Current Fleet															
08 Ford 350 Econo Van	#001	10/01/08	49,965	28,367	78,332	31,190	109,522	37,062	146,584	35,884	182,468	To be retired at end of 2015			
08 Ford 350 Econo Van	#002	10/01/08	47,047	28,367	75,414	31,190	106,604	37,062	143,666	35,884	179,550	To be retired at end of 2015			
08 Ford 350 Econo Van	#003	10/01/08	50,114	28,367	78,481	31,190	109,671	37,062	146,733	35,884	182,617	To be retired at end of 2015			
08 Ford Econo Van Lg	#004	02/01/08	121,594	28,367	149,961	31,190	181,151	To be retired at end of 2013							
04 Ford E-350 Van Sm.	#005	12/01/03	141,359	28,367	169,726	To be retired at end of 2012									
05 Ford Econo Van Lg.	#006	03/01/05	151,222	28,367	179,589	To be retired at end of 2012									
09 Ford Econoline Van	#007	09/01/09	53,134	28,367	81,501	31,190	112,691	37,062	149,753	35,884	185,637	To be retired at end of 2015			
09 Ford Econoline Van	#008	09/01/09	65,923	28,367	94,290	31,190	125,480	37,062	162,542	35,884	198,426	To be retired at end of 2015			
09 Ford Econoline Van	#009	10/01/09	837	28,367	29,204	31,190	60,394	37,062	97,456	35,884	133,340	54,365	187,705	To be retired at end of 2016	
Proposed Acquisitions															
Ford Chassis Cutaway Bus	#010	03/01/12		14,183	14,183	31,190	45,373	37,062	82,435	35,884	118,320	54,365	172,685	57,698	230,383
Ford Chassis Cutaway Bus	#011	03/01/12		14,183	14,183	31,190	45,373	37,062	82,435	35,884	118,320	54,365	172,685	57,698	230,383
Ford E-350 Van	#012	03/01/13				15,595	15,595	37,062	52,657	35,884	88,541	54,365	142,906	57,698	200,604
Ford Chassis Cutaway Bus	#013	03/01/14						18,531	18,531	35,884	54,415	54,365	108,780	57,698	166,478
Ford E-350 Van	#014	03/01/14						18,531	18,531	35,884	54,415	54,365	108,780	57,698	166,478
Ford Chassis Cutaway Bus	#015	03/01/15								17,942	54,365	72,307	57,698	130,005	
Ford E-350 Van	#016	03/01/15								17,942	54,365	72,307	57,698	130,005	
Ford Chassis Cutaway Bus	#017	03/01/16									27,183	27,183	57,698	84,881	
Ford E-350 Van	#018	03/01/16									27,183	27,183	57,698	84,881	
Total Annual Miles					283,669	296,302	370,621	430,612	489,286	519,282					

FIGURE 3-3. SAN CARLOS APACHE NNEE BICH'O NII SERVICES PICK-UP POINTS AND FARE ZONES



Source: R. H. Bohannon & Associates, LLC

TABLE 3-4. PROPOSED FARE STRUCTURE

From:	To:	Zone 2 East	Zone 3 East	Zone 4 East	Zone 2 West	Zone 3 West	Zone 4 West*	Zone 5 West*	Zone 2 South*	Zone 3 South*
Zone 1	OW	\$1.50	\$2.50	\$3.50	\$1.50	\$2.50	\$4.50	\$5.00	\$4.50	\$5.00
	RT	\$3.00	\$5.00	\$7.00	\$3.00	\$5.00	\$9.00	\$10.00	\$9.00	\$10.00
Zone 2 East	OW		\$1.50	\$2.50	\$2.50	\$3.50	\$5.00	\$5.50	\$5.00	\$5.50
	RT		\$3.00	\$5.00	\$5.00	\$7.00	\$10.00	\$11.00	\$10.00	\$11.00
Zone 3 East	OW			\$1.50	\$2.50	\$4.50	\$5.50	\$6.00	\$5.50	\$6.00
	RT			\$3.00	\$5.00	\$9.00	\$11.00	\$12.00	\$11.00	\$12.00
Zone 4 East	OW				\$4.50	\$5.00	\$6.00	\$6.50	\$6.00	\$6.50
	RT				\$9.00	\$10.00	\$12.00	\$13.00	\$12.00	\$13.00
Zone 2 West	OW					\$1.50	\$3.50	\$4.50	\$3.50	\$4.50
	RT					\$3.00	\$7.00	\$9.00	\$7.00	\$9.00
Zone 3 West	OW						\$2.50	\$3.50	\$5.50	\$6.00
	RT						\$5.00	\$7.00	\$11.00	\$12.00
Zone 4 West*	OW							\$3.50	\$6.00	\$6.50
	RT							\$7.00	\$12.00	\$13.00
Zone 5 West*	OW								\$6.50	\$7.00
	RT								\$13.00	\$14.00
Zone 2 South*	OW									\$4.50
	RT									\$9.00

Source: San Carlos Apache Bich' o Nii Services

*These rates represent future rates for zones to be served by Phoenix and Tucson Routes proposed by R. H. Bohannon & Associates, LLC

TABLE 3-5. ESTIMATED FIVE-YEAR RIDERSHIP AND REVENUES

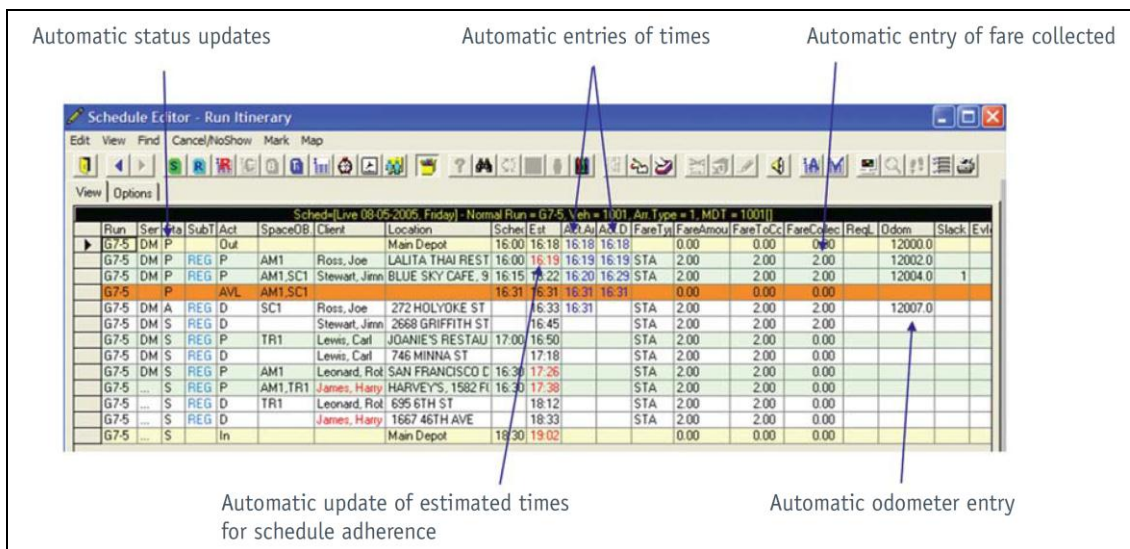
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Total Estimated Ridership	23,876	27,501	30,696	33,794	35,685
Total Estimated Revenue	\$55,745	\$71,134	\$83,789	\$95,510	\$102,994
Apache Gold Casino/Resort Route					
Weekly runs	49	49	49	49	49
Unlinked Passenger Trips	10,173	10,611	11,142	11,744	12,059
Estimated Average Route Fare	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
Estimated Route Annual Revenue	\$15,260	\$15,916	\$16,712	\$17,616	\$18,089
Globe Route - Monday through Saturday					
Weekly runs	36	36	36	36	36
Unlinked Passenger Trips	7,474	7,796	8,186	8,628	8,860
Estimated Average Route Fare	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50
Estimated Globe Annual Revenue	\$18,686	\$19,489	\$20,464	\$21,571	\$22,149
Safford Route - Monday through Friday					
Weekly runs	30	30	30	30	30
Unlinked Passenger Trips	6,229	6,496	6,821	7,190	7,383
Estimated Average Route Fare	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Estimated Route Annual Revenue	\$21,799.83	\$23,476.46	\$24,603.66	\$26,284.22	\$26,956.29
Phoenix Route – Two Days per Week					
Weekly runs		12	12		
Unlinked Passenger Trips		2,599	2,729		
Estimated Average Trip Fare		\$5.00	\$5.00		
Estimated Route Annual Revenue		\$12,993	\$13,643		
Phoenix Route - Three days per week					
Weekly runs				18	18
Unlinked Passenger Trips				4,314	4,430
Estimated Average Trip Fare				\$5.00	\$5.00
Estimated Trip Annual Revenue				\$21,571	\$22,149
Tucson Route – Two Days per Week					
Weekly runs			8	8	
Unlinked Passenger Trips			1,819	1,917	
Estimated Average Trip Fare			\$5.00	\$5.00	
Estimated Route Annual Revenue			\$9,095	\$9,587	
Tucson Route - Three days per week					
Weekly runs					12
Unlinked Passenger Trips					2,953
Estimated Average Trip Fare					\$5.00
Estimated Route Annual Revenue					\$14,766
Total Weekly Trips	115	123	131	135	139
Percentage of total					
Apache Gold Casino/Resort Route	42.61%	38.58%	36.30%	34.75%	33.79%
Globe Route - Monday through Saturday	31.30%	28.35%	26.67%	25.53%	24.83%
Safford Route - Monday through Friday	26.09%	23.62%	22.22%	21.28%	20.69%
Phoenix Route – Two Days per Week		9.45%	8.89%		
Phoenix Route - Three days per week				12.77%	12.41%
Tucson Route – Two Days per Week			6.11%	5.93%	
Tucson Route - Three days per week					8.28%
	100.00%	100.00%	100.00%	100.00%	100.00%

Source: R. H. Bohannon & Associates, LLC

TRACKING, RECORDING, AND REPORTING RIDERSHIP AND FARE COLLECTION DATA

As the operation becomes more complex, and the number of daily riders continues to grow, the importance of keeping accurate records of ridership and fare collection data increases commensurately. One way of keeping and maintaining these records is by means of software and hardware designed specifically for that purpose. Trapeze Group, which has an office in Scottsdale, is a prominent supplier of transit record keeping software. Figure 3-5 depicts an example schedule editor screen from the Trapeze Novus software that highlights some of the key features of their system.

FIGURE 3-5. TRAPEZE NOVUS SOFTWARE SCHEDULE EDITOR SCREEN



Source: Trapeze Group

By means of a hand-held device such as an iPad or a Blackberry, drivers could enter passenger origin, destination, and fare data during the trip and “text” the data to the office. When the driver checks in at the end of each trip, the driver and supervisor can cross-check the amount of cash and vouchers collected by the driver with the fares due. Over time, the origin and destination data gathered through this process would prove invaluable in future route and schedule restructuring.

The principal drawback to these systems is the cost. Trapeze estimates that a start-up installation for San Carlos Apache Nnee Bich’o Nii Services would be upwards of \$40,000 for the software package, with an annual license maintenance fee of approximately \$8,000.00. Such a cost would likely eclipse the amount of fare revenue lost, if any, through manual record keeping. However, it might be possible to emulate some of the features of a sophisticated set-up such as Trapeze with a simple spreadsheet or database-based system. At a future date, San Carlos Apache Nnee Bich’o Nii Services may want to consider the conduct of a follow-up study to develop such a system. Moreover, one or more “add-ons” to the

existing GPS system may be available that could be used to assist in tracking passenger origin and destination, and fare collection, as well as the “real time” location of each of the vehicles.

TRANSIT IMPROVEMENT PLAN

Table 3-6 presents a Transit Improvement Plan and provides an idea of how operating costs will rise as services are expanded and new services are added.

CAPITAL IMPROVEMENT PROGRAM SUMMARY

The Capital Improvement Program Summary (Table 3-7) presents all of the improvements in chronological order, along with the Tribal share of the capital expenditure estimated for each time period. Vehicles programmed to be purchased throughout the time periods will enable older, high vehicles to be retired, maintaining a manageable average age for the vehicle fleet.

TABLE 3-6. FIVE-YEAR TRANSPORTATION IMPROVEMENT PLAN

Year	Description	Total Expenses	Net Revenues	Net Expenses	Federal	Tribal/Other
2011-2012	Implement Globe Schedule, Monday through Friday. Pursue coordination with CVCT. Purchase two buses and shop equipment.	\$585,982	\$41,098	\$544,884	\$378,866	\$166,019
2012-2013	Add Saturday Globe Service, Implement Safford Route, Monday through Friday. Purchase replacement van.	\$524,024	\$55,745	\$468,279	\$295,676	\$172,603
2013-2014	Add Phoenix Service, two days a week. Purchase bus and van.	\$727,414	\$71,134	\$656,280	\$425,221	\$231,059
2014-2015	Add Tucson Service, two days a week. Purchase bus and van. Upgrade GPS tracking and communications system.	\$727,246	\$83,789	\$643,458	\$401,680	\$241,778
2015-2016	Increase Phoenix Service to three days a week. Purchase bus and van.	\$884,822	\$95,510	\$789,312	\$502,269	\$287,043
2016-2017	Increase Tucson Service to three days a week. Purchase bus and van.	\$931,242	\$102,994	\$828,248	\$524,852	\$303,396

Source: R. H. Bohannon & Associates, LLC

TABLE 3-7. CAPITAL IMPROVEMENT PROGRAM SUMMARY

Description	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Ford Chassis Cutaway Buses (2 @ \$93,200 ea.)	\$186,400					
Shop Equipment	10,000					
Bus stop signs (15)	1,500					
Ford E-350 Van		\$55,000				
Bus stop signs (5)		500				
Ford Chassis Cutaway Bus			\$93,200			
Ford E-350 Van			55,000			
Bus stop signs (5)			500			
Ford Chassis Cutaway Bus				\$93,200		
Ford E-350 Van				55,000		
Upgrade GPS/GIS tracking and dispatch system				25,000		
New radio repeaters (2 @ \$25,000 each)				50,000		
Bus stop signs (5)				500		
Ford Chassis Cutaway Bus					\$93,200	
Ford E-350 Van					55,000	
Ford Chassis Cutaway Bus						\$93,200
Ford E-350 Van						55,000
Total	\$197,900	\$55,500	\$148,700	\$223,700	\$148,200	\$148,200
San Carlos Apache Tribe Share	\$39,580	\$11,100	\$29,740	\$44,740	\$29,640	\$29,640

Source: R. H. Bohannon & Associates, LLC

4. MARKETING PLAN

This chapter presents elements of a proposed marketing plan for San Carlos Apache Nnee Bich’o Nii Services.

CONCEPTS FOR SYSTEM NAME, LOGO, AND COLOR SCHEME

In 2010, Otis Rustin, Jr., a Tribal artist designed an attractive and distinctive logo that is shown in Figure 4-1. In 2011, the name of San Carlos Apache Transit Services was changed to San Carlos Apache Nnee Bich’o Nii Services pursuant to a Tribal resolution.

FIGURE 4-1. SAN CARLOS APACHE NNEE BICH’O NII SERVICES LOGO



Source: Otis Rustin, Jr., Nnee Bich’onii

DRAFT COLLATERAL MATERIAL

The consultant team is currently drafting collateral material for consideration by San Carlos Apache Nnee Bich’o Nii Services for use in providing information to passengers as well as in marketing and promoting the service. Figure 4-2 is a draft tri-fold information brochure, for distribution at key locations within the service area and to persons boarding the vehicles.

This is proposed to be the first of a “family” of brochures and flyers. Other material in this group will include brochures containing schedules for each of the routes and a brochure explaining the fares and fare zones.

A PowerPoint presentation will be drafted for submittal to the Tribal Project Manager along with the Implementation Plan Final Report. Versions of this presentation could be adapted for presentation to seniors, students, and other groups of potential users of the service.

FIGURE 4-2. TRI-FOLD INFORMATION BROCHURE

San Carlos Apache Nnee Bich' o Nii Services

provides transportation services to the general public, all agencies, groups, and organizations in the San Carlos Apache Reservation and surrounding neighboring cities in Gila and Graham Counties.

Services are available on a fixed route schedule Monday through Friday and also on a call on demand basis subject to space available. Twenty-four (24) hours advance reservations are required.

The San Carlos Apache Nnee Bich' o Nii Services program is funded by the San Carlos Apache Tribe, the Federal Transit Administration, and the Arizona Department of Transportation.

Vehicle wheelchair accommodation is available and in compliance with the Americans with Disabilities Act. In accordance with the Civil Rights Act of 1964, San Carlos Apache Nnee Bich' o Nii Services does not discriminate on the basis of disability, race, color, national origin, or gender.

SAN CARLOS APACHE TRIBE **Nnee Bich' o Nii Services**

- On-Call Demand
6:34 am—7:00 pm
- Apache Gold Casino shuttle
- Globe Route—two trips daily
- Safford Route—three trips daily

Visit the SCATS office or ask your driver
for a current timetable and fares.
Schedules are subject to change.



For more information contact:

San Carlos Apache
Nnee Bich' o Nii Services
Moon Base Road at US Highway 70
Peridot, AZ 85542

Please call 24 hours in
advance for reservations:
(928) 475-5011 ext. 246 or 240

SAN CARLOS APACHE TRIBE **San Carlos Apache Nnee Bich' o Nii Services**



Driving to Excellence

Reserve-a-Ride Transportation Services

- ◆ Commuting to Work
- ◆ Medical Appointments
- ◆ Shopping
- ◆ Personal
- ◆ Recreation

Please call 24 hours in
advance for reservations:
(928) 475-5011 ext. 246 or 240

FIGURE 4-2. TRI-FOLD INFORMATION BROCHURE (Continued)

**San Carlos Apache
Nnee Bich'o Nii Services**

is committed to providing professional, safe, and efficient transportation for individuals, groups, organizations, and agencies at all times.

Mission Statement

It shall be the mission of San Carlos Apache Nnee Bich'o Nii Services to transport all customers in a safe, professional, and courteous manner.

We are dedicated to meeting the needs of the customers, schools, agencies, and the entire community by providing the most effective and efficient transportation within the means available.

**San Carlos Apache Tribe
Community Vision Statement**

It shall be the mission of the San Carlos Apache Tribe Community to provide experiences that facilitate the growth of each member so that he may lead a life, both now and in the future, that is personally satisfying and may contribute to and improve the society that sustains him.



Scheduling Your Ride

A dispatcher is available to schedule your trip Monday through Friday, between 8:00 am and 4:30 pm.

Reservations should be made 24 hours in advance. You may call one week ahead to arrange your schedule.

When you call to schedule your trip, please have the following information at hand:

- Home address and Phone Number
- Destination Address
- Date(s) of Travel
- Desired pick-up and drop-off times

If you plan to ride us periodically—daily, weekly, or certain days each month, for example—we can put you on a regular schedule. Call dispatcher for details.

If you Must Cancel

- Let us know as soon as possible, but no less than one hour before your scheduled pick-up time
- If you fail to cancel or simply do not show up for the scheduled trip, you will be required to pay a round trip fee before another reservation request from you will be accepted.

Wheelchair Accessible Trips

If you will need a wheelchair lift in order to board, please let the dispatcher know.

Helpful Hints

- Please be courteous to other passengers
- Rudeness and/or vulgarity are unacceptable and will result in removal from the vehicle
- Children 10 years of age or younger must be accompanied by an adult
- Service animals are allowed. Any other pets must be in closed carriers
- Any items carried on by rider, including baggage, must not interfere with other passengers' use of the service
- No consumption of alcoholic beverages is allowed on vehicle
- No smoking is allowed on vehicle
- No flammable liquid or open containers are allowed on vehicle

**San Carlos Apache
Nnee Bich'o Nii Services**

Moon Base Road at US Highway 70
Peridot, AZ 85542

Phone: 928-475-5911

Source: R. H. Bohannon & Associates, LLC

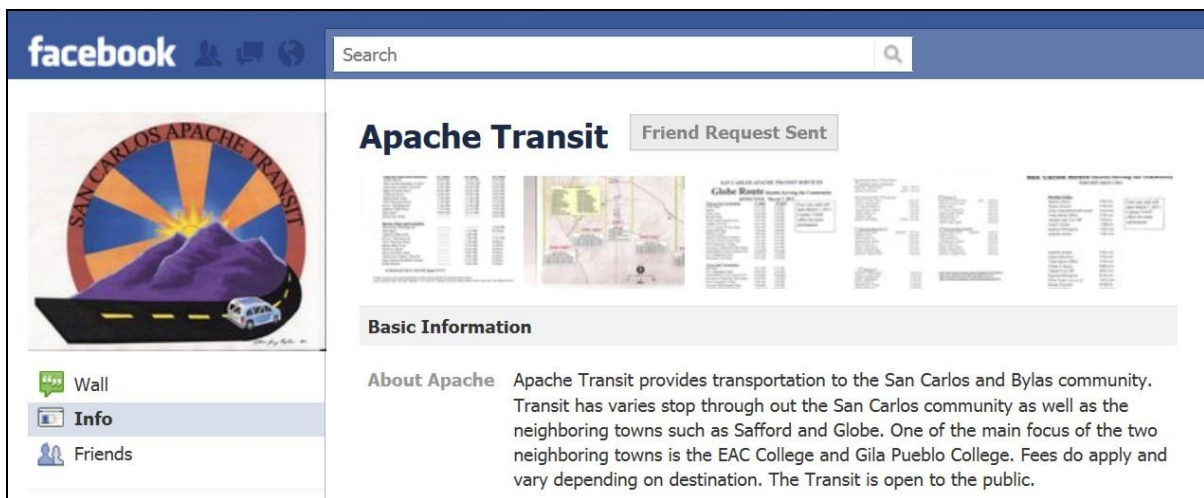
PUBLIC OUTREACH STRATEGIES

This section discusses outreach strategies that can be used by San Carlos Apache Nnee Bich’o Nii Services in promoting its transit service.

Facebook

San Carlos Apache Nnee Bich’o Nii Services currently maintains an “Apache Transit” Facebook page. A detail of this page is presented in Figure 4-3. Clever use has been made of Facebook’s “photos” feature to display current schedules and the fare zones map. A visitor to the page is able to copy and print the information.

FIGURE 4-3. APACHE TRANSIT FACEBOOK PAGE DETAIL



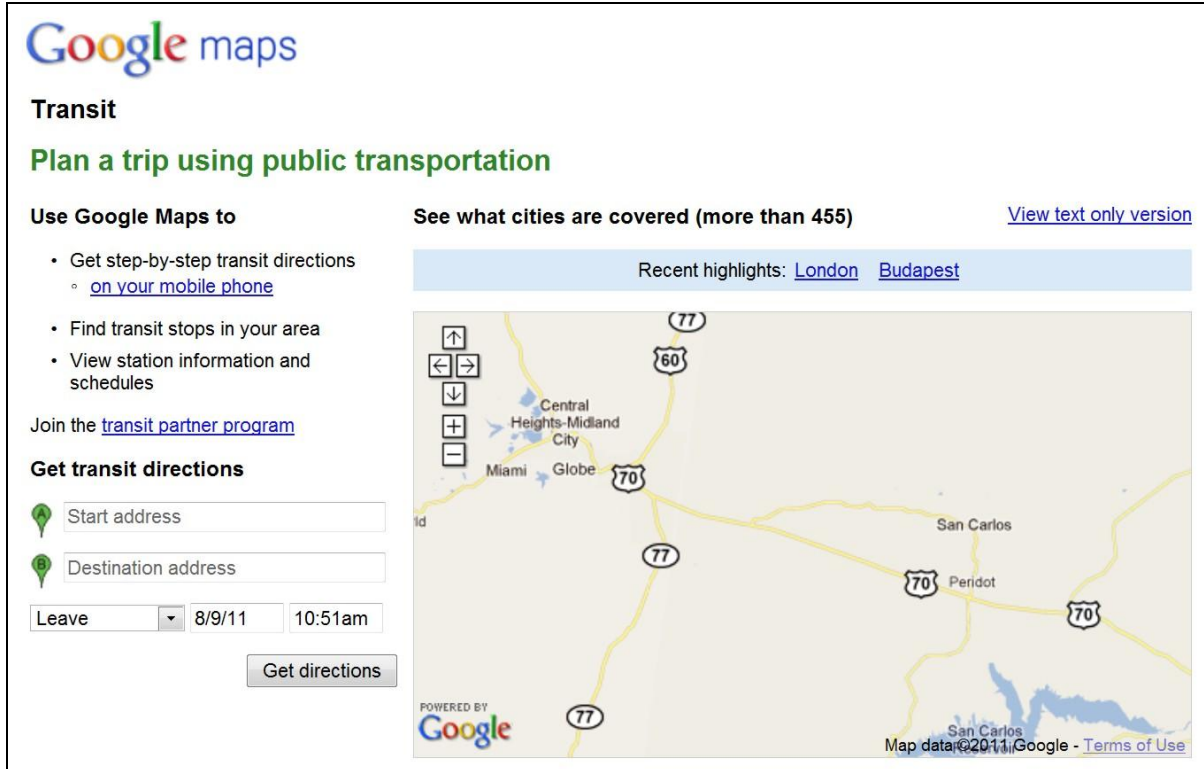
Source: www.facebook.com/profile.php?id=100002134632083

Adding Transit Data to Google Maps

A number of larger transit systems are now participating in the Google Transit program. According to Google, over 500 cities provide transit information that can be accessed in Google Maps. Google Transit’s Web site, www.google.com/transit, has the complete listing. All agencies, such as San Carlos Apache Nnee Bich’o Nii Services, which provide public transportation and operate with fixed schedules and routes are encouraged to participate in the Google Transit program at no charge.

Figure 4-4 depicts the screen that a potential passenger would use to obtain fare and schedule information for travel between any two points.

FIGURE 4-4. GOOGLE MAPS TRANSIT TRIP PLANNING ENTRY SCREEN



Source: www.google.com/transit

Note that a potential transit user can have step-by-step transit instructions sent to his or her cell phone. The Google system can generate instructions for travel over two connecting systems. For example, if San Carlos Apache Nnee Bich’o Nii Services operated a schedule to the Phoenix area that connected with the METRO light rail system, which is already participating in the Google Transit program, the traveler could obtain information for travel from downtown Phoenix to San Carlos, or other points served by San Carlos Apache Nnee Bich’o Nii Services. Google Transit can also provide information for local travel completely within the San Carlos Apache Nnee Bich’o Nii Services service area.

The following steps summarize the process of participating in the Google Transit program:

1. Prepare a data feed according to Google’s General Transit Feed Specification and Best Practices document, both of which can be downloaded from the Google Transit Web site.
2. Validate the data feed using the Feed Validator available on the site.
3. Inspect the data feed in Schedule Viewer.
4. Zip the files in the data feed. Name the zip file google_transit.zip.
5. Host the data feed on a web server for Google to fetch. Google supports both HTTP and HTTPS.
6. Contact the Google Transit team to sign-up for the partnership
7. Google would then setup a private preview and have San Carlos Apache Nnee Bich’o Nii Services complete an online agreement before launch.

8. San Carlos Apache Nnee Bich'oo Nii Services would test the data in the private preview until the result is satisfactory.
9. Implement participation in the program (Source: Google Transit)

Creating a data feed

San Carlos Apache Nnee Bich'oo Nii Services could create its own data feed using a spreadsheet, by means of an open source tool developed by Bob Heitzman from San Luis Obispo County. If, in the future, San Carlos Apache Nnee Bich'oo Nii Services chooses to make use of the Trapeze software discussed in Chapter 3, or similar scheduling software, the software provider may be able to provide an interface that would facilitate exporting the data in Google format. Alternatively, an information technology specialist could assist San Carlos Apache Nnee Bich'oo Nii Services in setting up a procedure for providing periodic fare and schedule updates to Google.

Once the data feed file has been transferred to Google, the data can be validated using tools provided by Google free of charge.

San Carlos Apache Nnee Bich'onii Services Web site

In addition to the Web presence on Facebook, San Carlos Apache Nnee Bich'oo Nii Services will want to develop its own Web site. Web sites can be programmed so that a search for any likely phrase by a potential user, e.g. "Nnee Bich'onii", "Apache Transit", or "San Carlos Transit" will bring up a link to the site in the Web browser.


The Web site can contain high-resolution PDF files of brochures, timetables, fare zone maps, and other collateral material that the visitor can download and print for reference. The site could include a password-protected "Staff Only" section that could function as a means of distributing updated information to San Carlos Apache Nnee Bich'oo Nii Services employees and other Tribal stakeholders.

Once a Web site is up and running, all other material including brochures, flyers, business cards, and even the Facebook page would promote the Web site address.


One drawback to Web sites is that periodic maintenance and updating of the site is essential, but also tedious and time-consuming. San Carlos Apache Nnee Bich'oo Nii Services may want to designate an information technology specialist in-house to assume the responsibility of Web site maintenance, or consider retaining the services of an IT contractor to perform the work.

A draft concept for a Web site Home Page is presented in Figure 4-5.

FIGURE 4-5. CONCEPT FOR WEB SITE HOME PAGE



San Carlos Apache Nnee Bich' o Nii Services



"Helping our Apache People"

Public Transportation to, from, and within the San Carlos Apache Community and surrounding areas

- Home
- Schedules
- Fare Zones
- Transit Service News
- TANF Program
- Links

Please call 24 hours in advance
for reservations:
(928) 475-5011 ext. 246 or 240

Welcome aboard!

San Carlos Apache Nnee Bich'o Nii Services provides transportation services to the general public, all agencies, groups, and organizations in the San Carlos Apache Reservation and surrounding neighboring cities in Gila and Graham Counties.

Services are available on a fixed route schedule Monday through Friday and also on a call on demand basis subject to space available. Twenty-four (24) hours advance reservations are required.

The San Carlos Apache Nnee Bich'o Nii Services program is funded by the San Carlos Apache Tribe, the Federal Transit Administration, and the Arizona Department of Transportation.

Vehicle wheelchair accommodation is available and in compliance with the Americans with Disabilities Act. In accordance with the Civil Rights Act of 1964, San Carlos Apache Nnee Bich'o Nii Services does not discriminate on the basis of disability, race, color, national origin, or gender.

San Carlos Apache Nnee Bich'o Nii Services
Moon Base Road at US Highway 70
Peridot, AZ 85542
www.nneebichonii.org

Source: R. H. Bohannon & Associates, LLC

Coordination with Cobre Valley Community Transit (CVCT)

One most important outreach activities, and one which San Carlos Apache Nnee Bich' o Nii Services is already pursuing, is coordination with transit services with service areas that abut the San Carlos Apache Nnee Bich' o Nii Services service area. Concurrent with the San Carlos Apache Nnee Bich' o Nii Services Transit Study, CVCT is evaluating a proposed expansion and restructuring of their service. It is essential for the ultimate success of both San Carlos Apache Nnee Bich' o Nii Services and CVCT that their services be coordinated and complement—not compete—with one another.

The establishment of one or more transfer points with CVCT in the Globe-Miami area is desirable. Where this point—or points—should be located will depend upon the specific route structures of both systems at the time that CVCT fixed route service is implemented.

One logical location would be the Arizona Eastern Railway depot in downtown Globe, especially if the future introduction of year round rural passenger service is anticipated. Different transfer points could be used for connections to different routes. For example, if San Carlos Apache Nnee Bich’o Nii Services establishes a San Carlos – Tucson route, establishment of a transfer point at the Apache Gold Casino would give Globe and Miami passengers access to the service without the schedule having to deviate west of the US 70/SR 77 junction that is the turn-off to Tucson.

While SCATS may need to traverse “CVCT Territory” to, for example, operate to and from Phoenix, the two agencies can work together to ensure that the operations of one do not adversely impact those of the other agency. Perhaps a system of honoring each other’s tickets and settling collected revenue could be developed that would also facilitate “seamless” travel from the passengers’ point of view.

PROMOTIONAL MARKETING CAMPAIGN

One of the key findings of the Tribal survey that was conducted by Nnee Bich’o Nii staff in the fall of 2010 was that many members of the community are unfamiliar with all of the public transportation services that Nnee Bich’o Nii provides. Two of the principal groups of users of the service are students and seniors, and an initial promotional campaign targeting these groups could prove effective. Moreover, seniors tend to pass word along to younger family members and neighbors about what they have learned, and students tell their parents and their peers.

The time that Nnee Bich’o Nii takes delivery of the new bus in the fall of 2011 or the spring of 2012 would be an ideal time to kick-off such a campaign. Nnee Bich’o Nii staff could demonstrate the vehicle at schools, senior centers, and other locations where members of the target audience are likely to be found. At the schools, features of the vehicle especially appealing to students, such as the bike rack, could be highlighted. Seniors could be shown the convenience of the wheelchair lift so that those with mobility limitations would be encouraged to try out the service.

Brochures describing the service could be distributed to senior centers and college campuses, as well as urban locations such as the Globe-Miami Chamber of Commerce and, if rail service is being offered, the Arizona Eastern depot.

The successful Tribal survey was conducted door-to-door. Consideration should be given to distributing transit information in the same fashion. Information could also be distributed at locations frequently visited by community members, such as the Department of Economic Security, medical centers or places where bills are paid. Retailers such as Wal-Mart are sometimes willing to post flyers for non-profit “events.” Wal-Mart would likely want to encourage the use of a service that is bringing customers to its door.

APPENDIX A – MAINTENANCE PLAN

San Carlos Apache Nnee Bich'o Nii Services



Fleet Maintenance Plan

August 2, 2011

Prepared for

**San Carlos Apache
Nnee Bich'o Nii
Services**



**Arizona Department
of Transportation**



Prepared by

JACOBS™



R. H. BOHANNAN & ASSOCIATES, LLC

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1. INTRODUCTION

The Federal Transit Administration (FTA) requires each recipient of federal funding to have a current written maintenance plan for its federally funded rolling stock, as provided for in FTA Circular 9030.1C. This document implements the federal requirements for a written maintenance plan and program. In addition to the explicit provisions of this Fleet Maintenance Plan, the San Carlos Apache Nnee Bich'o Nii Services may perform additional maintenance on its transit fleet pursuant to the recommendations of the equipment manufacturer and consistent with established San Carlos Apache Nnee Bich'o Nii Services vehicle maintenance procedures. This draft Fleet Maintenance Plan has been developed from the Fleet Maintenance Plan adopted by the Northern Arizona Intergovernmental Public Transit Agency (NAIPTA) and approved by the Federal Transit Administration (FTA).

2. MAINTENANCE PLAN AND PROGRAM

This Fleet Maintenance Plan and Program addresses the unique needs of the fleet of vehicles that to be acquired by San Carlos Apache Nnee Bich'o Nii Services and is tailored to the operating environment of the San Carlos Apache Tribal transit service area. In addition, the Plan and Program

- Identifies and defines goals and objectives and how they are achieved
- Outlines procedures for maintaining accessibility equipment
- Describes preventive maintenance procedures
- Adheres to manufacturer's requirements for vehicles under warranty

The Fleet Maintenance Plan will be updated as necessary to respond to industry changes or future acquisition of different or additional equipment.

3. VEHICLE INSPECTION AND SCHEDULED MAINTENANCE

3.1 Overall Requirements

San Carlos Apache Nnee Bich'o Nii Services, its officers, operators, agents, representatives, and all employees directly concerned with the inspection or maintenance of transit vehicles shall comply with Federal Motor Carrier Safety Regulations (FMSCR), Parts 396.3, 396.5, 396.7, and 396.9. San Carlos Apache Nnee Bich'o Nii Services must also comply with all state and local laws. More specifically, San Carlos Apache Nnee Bich'o Nii Services shall perform maintenance and repairs for each vehicle according to manufacturer's specifications and procedures.

Deferred maintenance is permitted provided that there is no degradation to safety, reliability, warranty provisions, or passenger comfort.

3.2 Operator Inspections

Operators will inspect vehicles and report maintenance defects and deficiencies per FMCSR, Parts 396.11 and 396.13. San Carlos Apache Nnee Bich'o Nii Services considers it sound maintenance policy for mechanics to clarify reported defects with operators, and to discuss vehicle maintenance procedures with the vehicle operators.

3.3 Preventive Maintenance (PM) Inspections

San Carlos Apache Nnee Bich'o Nii Services shall perform PM inspections on time. PM inspections will be scheduled based on the life miles of each vehicle. Maintenance actions shall be based on time intervals, mileage intervals, or a combination of mileage and time intervals. The fleet standard for on-time PM inspections is to be within 80 percent of the established target.

Scheduled inspections must be tailored to vehicle manufacturers' and component manufacturers' recommendations, as well as San Carlos Apache Nnee Bich'o Nii Services experiences with maintaining vehicles in local operating environments and duty cycles.

Each scheduled maintenance inspection must include the following items:

- 1) Mileage or other interval at which inspection is to be performed (e.g., 3,000, 6,000, 12,000, and 24,000 mile intervals); and
- 2) A checklist of actions that must be performed at each interval (e.g., a list of actions for the 3,000 mile inspection, for the 6,000 mile inspection, etc.).

3.4 Wheelchair Lifts and Other Accessibility Equipment

49 CFR Part 37, Section 163 requires that San Carlos Apache Nnee Bich'o Nii Services "establish a system of regular and frequent checks of lifts sufficient to determine if they are operative," and to ensure that vehicle operators report, "by the most immediate means available, any failure of a lift to operate in service." Maintenance of accessibility equipment may be incorporated into the regular Maintenance Plan or addressed separately with specific checklists. At a minimum, San Carlos Apache Nnee Bich'o Nii Services shall keep records that show accessibility features are checked regularly for proper operation and receive periodic maintenance.

49 CFR Part 37, Section 163 states that "when a lift is discovered to be inoperative, then the entity shall take the vehicle out of service before beginning the vehicle next service day and ensure that the lift is repaired before the vehicle returns to service." If no spare vehicle is available to take the place of the vehicle with an inoperable lift, and taking the vehicle out of service will reduce transportation service, the agency may keep the vehicle in service with an inoperative lift for no more than five days (since the San Carlos Apache Nnee Bich'o Nii Services system will serve an area of less than 50,000 population) from the day on which the lift is discovered to be inoperative.

4. MAINTENANCE DOCUMENTATION

The federal requirement for recording inspections, repairs, and maintenance is contained in Federal Motor Carrier Safety Regulations, Part 396.3, paragraphs (b) and (c), and 396.11 (c) (1).

San Carlos Apache Nnee Bich'o Nii Services shall document all repairs on work orders, and ensure manufacturers document and provide copies of any and all warranty work performed. Work orders shall reflect how they were generated; i.e., by PM inspection, road call or operator's defect report. Work orders should include the date, vehicle number and life miles, mechanic(s) assigned to the maintenance action, information pertaining to how the inspection or repair was resolved, time spent on completing the maintenance action, and a list of parts used for repair work.

The above information will allow technicians to determine whether (1) a defective part is covered under warranty, (2) the repair is a result of faulty workmanship done by the previous technician, (3) a trend is developing, or (4) to note other conditions that could become apparent through historical data.

5. WARRANTY RECOVERY PROGRAM

San Carlos Apache Nnee Bich'o Nii Services shall follow all manufacturers' required maintenance tasks, intervals, recommended lubricants, and fuels to ensure vehicle warranties remain valid. San Carlos Apache Nnee Bich'o Nii Services shall maintain a record of all warranty work, and annually produce a summary of warranty claims.

San Carlos Apache Nnee Bich'o Nii Services must determine if vehicle defects and deficiencies are covered under warranty. Since the cost of warranty is factored into the purchase price of each vehicle and component, San Carlos Apache Nnee Bich'o Nii Services shall pursue reimbursement for all warranty repairs in accordance with procedures outlined in contractual provisions.

6. MONITORING PERFORMANCE INDICATORS

6.1 Safety Record

Maintaining an exemplary transit safety record is a top priority goal for San Carlos Apache Nnee Bich'o Nii Services. Each operator involved in an accident or the supervisor on duty must fill out an accident report. San Carlos Apache Nnee Bich'o Nii Services requires a procedure to track the number of transit accidents on a monthly basis.

6.2 Safety Program

All San Carlos Apache Nnee Bich'o Nii Services involved in the maintenance and repair of system vehicles will comply fully with the rules and requirements of the Safety Program.

6.3 Service Performance

Service performance is an important indicator of an agency's overall effectiveness. Two categories will be used to monitor vehicles that encounter mechanical problems while operating in service:

- a) **Road Call** – occurs when any mechanical malfunction requires the dispatching of a service vehicle to repair or retrieve a troubled vehicle
- b) **Service Interruption** – occurs when any mechanical malfunction delays service but allows the vehicle to continue

At a minimum, road calls and service interruptions will be classified as follows:

- a) Drivetrain (engine, transmission, differential, etc.)
- b) Brakes
- c) Tires / Wheels
- d) Steering / Suspension
- e) Electrical
- f) Accidents
- g) Accessibility features
- h) Air conditioning

7. SERVICE DAY INSPECTIONS

Each vehicle to be operated will be inspected prior to the beginning of each service day. Such inspections typically include an examination of lights and mechanical defects that operators may not have identified. Service day inspections include the checking and replenishing of vital fluids including engine oil, coolant, automatic transmission fluid, windshield washer fluid and others. Fluid usage should be documented to track consumption.

Service day inspections will also include checking fire extinguishers, escape hatches/windows for proper operation, vehicle accessibility equipment, tires for proper inflation, signs of wear and visible damage. Odometer mileage will be recorded for keeping track of vehicle life miles.

8. MONITORING MAINTENANCE EFFECTIVENESS INDICATORS

To better gauge the effectiveness of overall maintenance programs, San Carlos Apache Nnee Bich'o Nii Services will monitor additional performance indicators.

- a) On-time performance
- b) Amount of fuel and fluid consumption
- c) Unscheduled maintenance
- d) Number of wheelchair lift failures
- e) Air Conditioning Failures

8.1 On-Time Performance

Meeting schedules and having the correct numbers of vehicles ready for service is essential to every transportation organization. San Carlos Apache Nnee Bich'o Nii Services will keep a daily log of vehicles that were not able to leave the Operations Center on time to make their first scheduled checkpoint.

8.2 Fuel and Fluid Consumption

The most costly item of a vehicle is its drivetrain. Monitoring the consumption of fuel and vital fluids such as engine oil, transmission fluid, and coolant is essential to assess the condition of each vehicle's drivetrain and to help make cost-effective repairs. Monitoring fuel and vital fluid consumption is helpful in two ways:

- a) Identifying vehicles that suddenly exhibit a high consumption of fuel or vital fluids. This sudden rise in consumption is often related to a minor repair (i.e., leaking hose or fitting) which can cause a major repair of not identified and corrected immediately; and
- b) Identifying vehicles where consumption increases at a noticeable rate (i.e., worn piston rings). This gradually deteriorating condition where consumption increases gradually over time provides an understanding of the internal condition of components. Monitoring these vital indicators allows corrective action to keep components at an optimal working level and to minimize unscheduled failures.

San Carlos Apache Nnee Bich'o Nii Services will use procedures recommended by vehicle manufacturers to identify potential engine and transmission failures. Fluid samples will be taken on a regular basis (e.g., at the 6,000 mile inspection) or when a specific problem is suspected.

8.3 Unscheduled Maintenance

Unscheduled maintenance activities provide another indication of overall maintenance performance. Unscheduled maintenance is defined as any maintenance or repair that occurs outside the regularly scheduled service intervals. Although it can never be fully eliminated, the frequency and duration of unscheduled maintenance allow managers to look for the underlying cause of the problem so the repair can become part of a regularly scheduled service. Moving maintenance into a scheduled event allows managers to have greater control

and structure over their operations, and to reduce the frequency of road calls and other unscheduled maintenance activities.

8.4 Wheelchair Lift and Accessibility Equipment Failures

The Americans with Disabilities Act (ADA) requires operators of federally funded transit vehicles to perform periodic inspections and maintenance of wheelchair lifts and other accessibility equipment to ensure proper operation. To ensure compliance with ADA requirements, San Carlos Apache Nnee Bich'o Nii Services will monitor lift and accessibility equipment failures and the amount of time vehicles operate with defective equipment.

8.5 Air Conditioning Failures

Providing a properly air-conditioned transit vehicle is essential to maintaining and attracting ridership during much of the year in the San Carlos Apache Tribal desert climate. San Carlos Apache Nnee Bich'o Nii Services will implement a scheduled preventive maintenance program for transit vehicle air conditioning systems. To gauge the effectiveness of that program, we will monitor and record air conditioning failures and the steps taken to rectify the problem. During maintenance inspections, staff will thoroughly test air conditioning units in each transit vehicle. Any vehicle that fails to meet air conditioning standards during hot weather shall be taken out of service until repaired.

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