

# CITY OF ARVIN



TRANSIT DEVELOPMENT PLAN

MAY 2008

1. EXECUTIVE SUMMARY	[01]
2. DEMAND ANALYSIS	[15]
3. PERFORMANCE MEASUREMENT	[31]

## TABLE OF CONTENTS

4. SERVICE EVALUATION	[39]
5. PEER REVIEW	[49]
6. SURVEY/OPERATIONS ANALYSIS	[61]
7. RECOMMENDATIONS	[85]

## TABLE OF EXHIBITS

Exhibit No.	Exhibit Title	Page
		No.
Exhibit 1-1	Key Indicator Comparison	08
Exhibit 1-2	Common Trip Origins for Demand-Response	10
Exhibit 1-3	Common Trip Destinations for Demand-Response	10
Exhibit 2-1	Arvin Transit's Fare Structure	18
Exhibit 2-2	City of Arvin Organizational Chart	19
Exhibit 2-3	City Population Growth	21
Exhibit 2-4	County Population Growth	21
Exhibit 2-5	Arvin, Lamont Population/Census Block	22
Exhibit 2-6	Youth Population	24
Exhibit 2-7	Senior Population	25
Exhibit 2-8	Population Living in Poverty	26
Exhibit 2-9	Persons with Disabilities	27
Exhibit 2-10	Households Lacking Personal Vehicle Access	28
Exhibit 2-11	Arvin Key Trip Generators	29
Exhibit 2-12	Lamont Key Trip Generators	30
Exhibit 3-1	Performance Measurement System	34
Exhibit 4-1	Fare Structure	41
Exhibit 4-2	Arvin Transit System Map	42
Exhibit 4-3	System-Wide Performance Indicators	43
Exhibit 4-4	Performance Indicators Segregated by Mode	44
Exhibit 4-5	Ridership	46
Exhibit 4-6	Operating Cost/VSH	46
Exhibit 4-7	Operating Cost/VSM	46
Exhibit 4-8	Operating Cost/Passenger	46
Exhibit 4-9	Passengers/VSH	46
Exhibit 4-10	Passengers/VSM	46
Exhibit 4-11	Farebox Recovery	47
Exhibit 4-12	Fare/Passenger	47
Exhibit 5-1	Peer Criteria	50

Exhibit 5-2	Key Indicator Comparison	53
Exhibit 5-3	Operating Cost/VSH	54
Exhibit 5-4	Operating Cost/VSM	55
Exhibit 5-5	Operating Cost/Passenger	56
Exhibit 5-6	Passengers/Vehicle Service Hour	57
Exhibit 5-7	Passengers/Vehicle Service Mile	58
Exhibit 5-8	Farebox Recovery Ratio	59
Exhibit 5-9	Average Fare/Passenger	60
Exhibit 6-1	Boarding and Alighting by Run	63
Exhibit 6-2	Arvin-Lamont Express Boardings	64
Exhibit 6-3	Arvin-Lamont Express Alightings	65
Exhibit 6-4	Arvin-Lamont Boardings	66
Exhibit 6-5	Arvin-Lamont Alightings	67
Exhibit 6-6	Westbound Boardings	68
Exhibit 6-7	Westbound Alightings	69
Exhibit 6-8	Eastbound Boardings	70
Exhibit 6-9	Eastbound Alightings	71
Exhibit 6-10	Common Trip Origins for Demand-Response	73
Exhibit 6-11	Common Trip Destinations for Demand-Response	74
Exhibit 6-12	Frequency by Day-Part	75
Exhibit 6-13	Cancellations and No-Shows by Day	76
Exhibit 6-14	Cancellations and No-Shows by Day-Part	76
Exhibit 6-15	Household Income	78
Exhibit 6-16	Ride-Dependency	78
Exhibit 6-17	Awareness by Age Group	80
Exhibit 6-18	Preferred Service Improvements	81
Exhibit 6-19	Frequency of Use (Per Week)	82
Exhibit 6-20	Most Frequency Destination/Trip Purpose	83
Exhibit 7-1	Extended Service Hours	88
Exhibit 7-2	Current Fare Structure	90
Exhibit 7-3	Proposed Fare Structure	90
Exhibit 7-4	Implementation of Fixed-Route and Fare Adjustment	91



# 1

## 1. EXECUTIVE SUMMARY

## CHAPTER 1 – EXECUTIVE SUMMARY

The Kern Council of Governments (Kern COG) published a Request for Proposals seeking professional assistance in the development of a Transit Development Plan for the City of Arvin’s public transit program. The cornerstone goal of this project was to identify short-term, sustainable improvements supporting increases in annual ridership as well as overall service productivity. Following project initiation, Kern COG staff requested the scope of the project be changed from a traditional Transit Development Plan to an operational and performance review given a low survey return rate and issues with data reporting and administrative oversight. This report evaluates the City’s program using both quantifiable and qualitative criteria, and presents a series of strategies for enhancing overall program effectiveness.

The evaluation revealed Arvin Transit’s recent performance fell short of the performance standards identified through the City’s prior TDP process (1996). The City’s most recent Triennial Performance Audit also revealed certain TDA compliance issues.

We believe, however that at least a portion of these concerns/issues lie beyond the reasonable control of the City of Arvin. These developments include the loss of two regular drivers to long-term leave and the temporary closure of the City’s CNG fueling station.

In FY 2007/08, the City was forced to operate the transit program without two of its regular, full-time drivers as they were on workers compensation leave. Given the loss of these drivers was only temporary, the City was not in a position to hire new full-time replacement drivers. Instead, the City’s Transit Supervisor picked up shifts whenever possible. This led to a lack of full coverage on routes operated by Arvin Transit as well as absence of full supervision given the Supervisor was often required to be in the field. Given a lack of sufficient driver staffing, the reliability of the service

suffered, ridership declined, and the program witnessed significant decreases in on-time performance.

Additionally, the City of Arvin's CNG-fueling facility was off-line during most of the period during which this study was conducted, forcing Arvin Transit to use only three of its seven vehicles in revenue service. This added significantly to the cost of operating the service as well as complicated running the program from the consultant's point of view.

Given these extraordinary events, we do not believe the assessment of Arvin Transit presented in this report reflects Arvin Transit under typical operating conditions. In general, the special circumstances outlined above indicate the program would likely perform more effectively and meet compliance requirements given more favorable operating conditions. This Plan presents several recommendations intended to significantly improve operations moving forward. Arvin Transit also received a significant allocation of funds from the State to support future program growth.

We believe another in-depth evaluation of the program's performance in three years would yield a drastically improved result given concerted efforts undertaken by the City to address shortfalls and improve mobility for the Arvin community.

### Demand-Analysis

The City of Arvin has a council-manager form of government, with a council composed of five members, one of whom functions as mayor and one as mayor pro tem. The City's Transit Supervisor is responsible for the general day-to-day administration of the program. Historically, this staffer has reported directly to the City Manager. Program staffing includes a full-time receptionist/dispatcher and four full-time drivers. The Transit Supervisor is responsible for driver recruitment/training, program reporting, fare reconciliation/reporting, and customer service. The Transit Supervisor is also responsible for coordinating vehicle repairs and maintenance.

### Economic Profile

Based on Census 2000, nearly 18 percent of the city's population was unemployed. Nearly 50 percent of Arvin's workforce drove alone, 42.8 percent carpool, four percent walk, and 0.3 percent utilize public transportation for their commutes. The median household income was \$23,674, below state and national averages (\$56,645 and \$48,451, respectively).

### Population

According to Census 2000, the city's population increased approximately 40 percent between 1990 and 2000. Between 2000 and 2005, the city experienced another 15 percent increase.

### Ride-Dependent Population

Arvin's ride-dependant populations, consisting of *youth, seniors, persons with disabilities, low income population, and lacking/limited personal vehicle access*, are distributed evenly throughout the community. Transit service needs to mirror population distribution and given no single portion of the city is

“overly represented”, transit service needs to be distributed evenly. The city’s size, population distribution, and grid layout lends itself to the introduction of a fixed-route service.

#### Performance Measurement System

Arvin Transit’s vision is communicated through clearly-defined goals, objectives, and standards. This section advances a Performance Measurement System for the City’s public transit program. The basis for this Performance Measurement System was the service evaluation process completed as part of the overall Transit Development Plan. It also supports the identification of growth opportunities as well as the identification of performance shortfalls.

#### Goals, Objectives, and Standards

A review of Arvin Transit’s performance revealed they have not met many standards established in the 1996 Transit Development Plan. We developed a new, more attainable set of Goals, Objectives, and Performance Standards which more accurately reflect the programs recent performance.

#### Service Evaluation

Moore & Associates completed a comprehensive operational assessment of all City of Arvin public transit services. This evaluation included an evaluation of Arvin Transit’s quantitative performance across a four-year period (historic trends), while also contrasting actual performance with adopted critical standards.

Currently the City offers demand-response service Monday through Friday, 7:00 a.m. to 3:30 p.m., except on designated holidays.

Arvin Transit also offers a weekday deviated fixed-route service linking Arvin, and neighboring Lamont, five times daily. The first run of the day

departs Arvin at 7:05 a.m., offering limited-stop service in Arvin and Lamont. This service consists of one vehicle/service day.

A new service, introduced in January 2006, provides evening service to Taft College, Monday through Thursday, during the school year.

#### Performance Indicators

Operating Cost for the City of Arvin increased by 15.3 percent in FY 2005/06, and nearly 10 percent in FY 2006/07. Fare revenue increased 6.7 percent in FY 2005/06, and nearly 30 percent in FY 2006/07. Vehicle Service Hours (VSH) increased 8.2 percent in FY 2005/06, and 18.2 percent in FY 2006/07. Vehicle Service Miles (VSM) increased 13.2 percent in FY 2005/06 before rising 20.4 percent in FY 2006/07. Ridership fluctuated dramatically between FY 2003/04 and FY 2006/07. The biggest decline occurred in FY 2004/05 when it dropped nearly 25 percent. The most notable increase occurred in the latest fiscal year when it rose more than 27 percent. The latest spike in ridership can be attributed to the introduction of service to Taft College.

The City of Arvin's Operating Cost/VSH indicator rose 6.5 percent in FY 2005/06 then dropped 7.0 percent in FY 2006/07. Operating Cost/VSM increased 1.9 percent in FY 2005/06 then dropped 8.7 percent in FY 2006/07. The City's Passenger/VSM indicator illustrates total rides provided across each revenue mile traveled. Passengers/VSM decreased in FY 2005/06 before increasing in FY 2006/07.

The City's farebox recovery ratio dropped 7.5 percent in FY 2005/06, and then rose 18.2 percent in FY 2006/07. The final performance indicator considered the ratio between total fare revenue and total ridership. Between FY 2004/05 and FY

2005/06, the indicator increased 1.2 percent. The following fiscal year, the indicator increased another 1.9 percent.

#### Peer Review

A peer review provides a quantitative methodology for assessing how efficiently and effectively the City of Arvin’s public transit program is providing service compared with peer providers. Our analysis examines the level of service each peer is providing relative to the size of its service area and the number of persons residing therein. Three municipally-owned transit operators were selected, based on fleet size, annual ridership, and service offerings.

Presented in the following table are comparisons of operating data for FY 2006/07 between Arvin Transit’s key indicators and those of the aforementioned peers.

Exhibit 1-1 Key Indicator Comparison

	City of Arvin	City of McFarland	City of Ridgecrest	City of Shafter	Average
<b>Performance Measure</b>					
Operating Cost	\$568,971	\$104,517	\$775,071	\$250,859	<b>\$424,855</b>
Fare Revenue	\$75,298	\$17,136	\$159,772	\$32,637	<b>\$71,211</b>
Vehicle Service Hours (VSH)	7,065	1,512	12,915	3,435	<b>6,232</b>
Vehicle Service Miles (VSM)	99,884	15,648	105,219	56,560	<b>69,328</b>
Passengers	104,742	10,015	40,374	38,524	<b>48,414</b>
<b>Performance Indicator</b>					
Operating Cost/VSH	\$80.54	\$69.13	\$60.01	\$73.03	<b>\$70.68</b>
Operating Cost/VSM	\$5.70	\$6.68	\$7.37	\$4.44	<b>\$6.04</b>
Operating Cost/Passenger	\$5.43	\$10.44	\$19.20	\$6.51	<b>\$10.39</b>
Passengers/VSH	14.83	6.62	3.13	11.22	<b>8.95</b>
Passengers/VSM	1.05	0.64	0.38	0.68	<b>0.69</b>
Farebox Recovery	13.2%	16.4%	20.6%	13.0%	<b>15.8%</b>
Average Fare/Passenger	\$0.72	\$1.71	\$3.96	\$0.85	<b>\$1.81</b>

Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

### Survey/Operations Analysis

Between February 21 and March 6, 2008, Moore & Associates conducted a ride check onboard Arvin Transit on both the Arvin-Lamont deviate fixed-route service as well as the Taft College service. The purpose of the ride check was to quantify ridership activity at the route and individual stop level. Finally, our project team distributed both customer and community surveys between February 18 and March 20, 2008.

### Deviated Fixed-Route Ride Check

The ride check revealed the third scheduled run of the day garnered the highest share of boardings (24.6 percent) and alightings (25.7 percent), followed closely by the fourth run garnering 23.2 percent of boardings and 25.7 percent of alightings.

Most alightings occurred at one of three stops located within Arvin for the days first run: Arvin Congressional Church, Mexican Market, and Arvin Transportation Department, the first two of which are located on Bear Mountain Boulevard.

Following the first express run, subsequent runs experienced significantly higher ridership at the individual stop level as well as more evenly distributed activity overall. Top boarding locations in Lamont include the County Fair Market and Dollar Tree, both located on Main Street. Common trip origins in Arvin include the Transportation Department and the Sierra Vista Clinic.

Most alightings in Lamont occurred at Dollar Tree and the County Fair Market, both located on Main Street. Both are located in close proximity to other popular trip generators, including the Kern County Public Health Department, Lamont Elementary School, and S&S Mart.

All boarding activity on the Arvin-Taft service occurred at three stops: Arvin High School, Apple Market in Lamont, and the intersection of Taft Highway and Wible Road, south of Bakersfield. Nearly all alighting activity on the Arvin-Taft trip occurred at two stops: Taft College and Taft Vocational School. All boarding activity on the Taft-Arvin return trip occurred at Taft College and Taft Vocational School. All alighting activity on the Arvin-Taft trip

occurred at three stops: Arvin High School, Apple Market in Lamont, and the intersection of Taft Highway and Wible Road, south of Bakersfield.

Frequent Trip Destinations

The following tables reveal “common” origins which were less spread out than destinations as driver trip-sheets reveal most riders originated at the Arvin Transportation Department.

Exhibit 1-2 Common Trip Origins for Demand-Response

Address	Landmark	Frequency
165 Plum Tree Dr.	Transit Center	235
1305 Bear Mountain Blvd.	Arvin Community Health Center	44
801 Schipper St.	Circle M Mobile Village	34
1001 Walnut Dr.	Residence	31
201 Bear Mountain Blvd.	La Mexicana Market	23
600 Bear Mountain Blvd.	Arvin Ranch Market	21
1301 Haven Dr.	Casa De La Palma Blanca Apartments	19
1410 Hood St.	Arvin Apartments	14
805 Jess St.	Residence	12
372 Laurel Ave.	Residence	12

Source: Demand-response driver trip sheets.

Exhibit 1-3 Common Trip Destinations for Demand-Response

Address	Landmark	Frequency
600 Bear Mountain Blvd.	Arvin Ranch Market	146
900 Varsity Rd.	Arvin High School	118
1305 Bear Mountain Blvd.	Arvin Community Health Center	106
201 Bear Mountain Blvd.	La Mexicana Market	54
500 Bear Mountain Blvd.	Bank of America	35
505 Bear Mountain Blvd.	Bear Mountain Drug	31
801 Schipper St.	Circle M Mobile Village	24
1301 Haven Dr.	Casa De La Palma Blanca Apartments	20
1111 Bush St.	Primeros Pasos Head Start	19
1501 Hood St.	Bear Mountain Elementary School	17

Source: Demand-response driver trip sheets.

### Community Survey

Most survey respondents were female (61.2 percent) age 23 to 34 (47.7 percent), and were employed full-time (36.3 percent). The city's gender split is 52.6 percent in favor of males.

Most respondents (30.8 percent) indicated an annual household income of \$10,000 to \$19,000. Only a small percentage (8.1 percent) cited a household income of more than \$50,000 annually.

Most respondents (60.9 percent) indicated having access to a personal vehicle. When asked if they were in possession of a valid driver license 51.4 percent answered affirmatively. More than 48 percent indicated having access to both a vehicle and a valid driver license. This indicates a moderate level of ride-dependency among respondents to the community survey.

The single-greatest trip motivator cited was *Doctor/Healthcare* (41.4 percent). This is consistent with the finding that many trip origins and destinations were at or near the Arvin Community Health Center.

Slightly more than 84 percent of those persons surveyed indicated an awareness of Arvin Transit and/or its services. This relatively high level of awareness is not surprising given the modest size of the Arvin Transit's service area. Respondents in the age 18 to 22 category exhibited the highest awareness (100 percent). Those respondents within the age 60 and older age category reflected the lowest level of awareness (27.3 percent). This lack of awareness among older residents is a serious point of concern given seniors are typically the core customer group for similar transit programs.

### Recommendations

In crafting the following recommendations, Moore & Associates drew upon community input, our service evaluation, peer review, site visits, ride checks, and discussions with City and Kern COG staff.

#### Operational Recommendations

We recommend implementing a fixed-route alignment traveling along the city's periphery running on a 30-minute headway. Should this service prove effective and popular, we would then recommend a bi-directional fixed-route running on 30-minute headway. Given Arvin's size, this alignment provides "walkable" access to all parts of the city.

Moore & Associates recommends extending both the service day and the service week on a three-month trial basis. We propose extending weekday service hours on the Lamont and demand-response services from 3:00 p.m. to 6:00 p.m.,

We recommend the City conduct a true cost-analysis of the Taft College service, specifically operating cost and college provided subsidy. We recommend replacing the service with a vanpool program. We feel Taft College would be better served by a vanpool, widely regarded as one of the most cost-effective means of transportation.

Based on our analysis of home-to-work travel patterns within the sub-region, we recommend implementing a vanpool between Arvin and Tejon Ranch. This will provide accurate home-to-work travel for those employed in and around this area.

### Policy/Administrative Recommendations

We propose a fare adjustment of twenty-five cents on the City's general public service to Lamont to raise the single-ride cash fare to \$1.50. We also recommend a fare adjustment on the demand-response service (raising single-ride fare to \$1.25) as well as instituting a fixed-route fare.

We propose limiting eligibility to qualified seniors (age 62 and older) and ADA-certified individuals. By restricting use to the aforementioned groups, the program would be able to tailor its service delivery to better suit these populations (i.e., seniors and persons with disabilities) truly unable to utilize a traditional fixed-route service for their daily mobility.

Based on current development patterns, Arvin residents need services currently found in Lamont. We recommend initiating a targeted marketing campaign to develop the deviated fixed-route service to Lamont into a program promoting sub-regional mobility. We also recommend exploring a subsidy for this service provided by Lamont, as they benefit as a result of the service.

We recommend altering the organizational structure so the Transit Supervisor reports to the City's Economic Development Department. Doing so would reduce the City Manager's workload and provide transit staff with additional professional development/mentoring opportunities.

We recommend enrolling the Transit Supervisor in the Transit & Paratransit Management Certificate Program at the University of the Pacific, which will enhance the level of transit-specific knowledge. We also recommend the City's Transit Supervisor assume a more active role in the quarterly Transit Advisory

Committee (TAC) meetings convened by the Kern Council of Governments.

We propose retaining four full-time drivers: one for demand-response, two for the bi-directional fixed-route service, one for the service to Lamont, as well as an additional relief driver, which could be served by the Transit Supervisor or dispatcher. This staffing arrangement will act as a fail-safe should any more unexpected circumstances arise.

# 2

## 2. DEMAND ANALYSIS

## CHAPTER 2 – DEMAND ANALYSIS

The Kern Council of Governments (Kern COG) published a Request for Proposals seeking professional assistance in the development of a Transit Development Plan for the City of Arvin’s public transit program. The cornerstone goal of this project was to identify short-term, sustainable improvements supporting increases in annual ridership as well as overall service productivity. This report evaluates the City’s program using both quantifiable and qualitative criteria, and presents a series of strategies for enhancing overall program effectiveness. It also outlines specific steps to ensure compliance with local, state, and federal requirements.

### Data Review

Among the documents reviewed in the preparation of the Transit Development Plan was the Triennial Performance Audit (2007), annual Transportation Development Act Article 8 Unmet Needs summaries, financial transactions for the past four fiscal years, as well as the prior Transit Development Plan (1996), which is outside the typical completion timeline of every five years.

### Overview of Study Area

The City of Arvin, founded in 1910, lies at the center of California’s Kern County. The city is located approximately 10 miles to the east of Highway 99, one of the San Joaquin Valley’s two primary north/south corridors. Arvin is approximately 15 miles southeast of Bakersfield and 104 miles northeast of Los Angeles.



Although Arvin is chiefly an agricultural community (as evidenced by historic land-use characteristics), it has experienced considerable population growth recently. The city includes an area of approximately five square miles.

Based on the 2006 American Community Survey, Arvin had a population of 14,930, an increase of more than 15 percent over 2000. Kern County's population has also been on the rise, increasing nearly 18 percent from 2000 (780,117 residents in 2006) according to the U.S. Census Bureau, 2006 Population Estimates.



Arvin has been plagued by some of the worst air pollution in California. Unfortunately, the main cause of this air pollution is Arvin's topography (i.e., downwind from most communities in the San Joaquin Valley). Efforts are being made, yet aggressive strategies are needed to fully mitigate the problem which has given rise to complaints of asthma and other respiratory problems.

Arvin is lacking many key services (shopping, medical, etc.) thereby forcing residents to travel in order to fulfill basic needs. This, in conjunction with modest household income, vehicle ownership, and a considerable ride-dependant population, underscores the importance of a reliable, affordable public transportation alternative.

Service Area Characteristics

State Route 223 (East Bear Mountain Boulevard) traverses the city from Lake Webb on the west to its intersection with State Route 58 on the east. North-south surface travel focuses on Comanche Drive which links Arvin with the unincorporated community of Edison to the north.



Arvin Transit’s service area includes all territory within city limits as well as the unincorporated neighboring communities of Weedpatch and Lamont. Arvin Transit also provides weekday service to Taft College located in the city of Taft to the west.

The City of Arvin offers a two-tier transit service (demand-response and deviated fixed-route) providing more than 104,000 unlinked trips during the last fiscal year. The deviated fixed-route service transports passengers to/from the neighboring community of Lamont. The service utilizes seven vehicles which run Monday through Friday beginning at 7:00 a.m., with demand-response ending at 3:30 p.m. and deviated fixed-route service ending at 2:30 p.m.

The following chart illustrates the current fare structure for Arvin Transit.

Exhibit 2-1 Arvin Transit’s Fare Structure

Arvin Transit		
	Deviated Fixed-Route	Demand-Response
General Public	\$1.25	\$1.00
Seniors	\$0.75	\$0.50
Disabled	\$0.75	\$0.50
Children	Free	Free

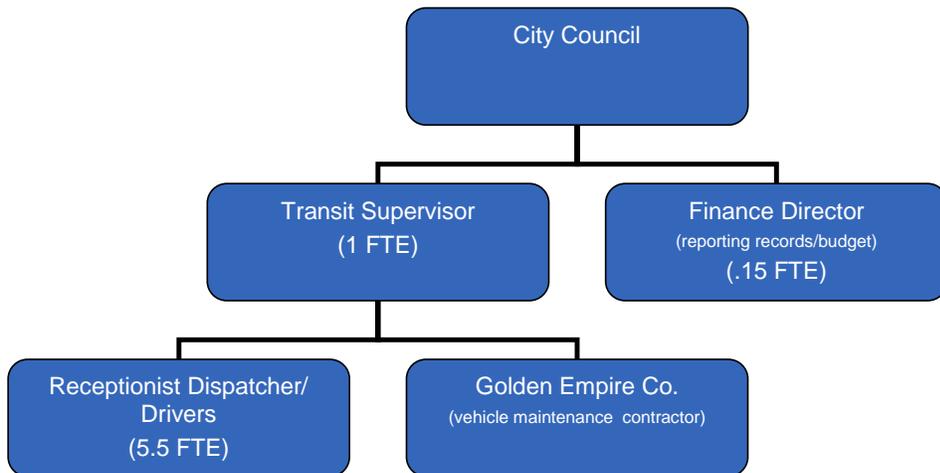
General Management and Organization

The City of Arvin, reflective of a council-manager form of government, has a City council composed of five members, one of whom functions as mayor and one as mayor pro tem. The City’s Transit Supervisor is responsible for the general day-to-day administration of the program. Historically, this staffer has reported



directly to the City Manager. Program staffing includes a full-time receptionist/dispatcher and four full-time drivers. The Transit Supervisor is responsible for driver recruitment/training, program reporting, fare reconciliation/reporting, and customer service. The Transit Supervisor is also responsible for coordinating vehicle repairs and maintenance. Service planning activities are typically addressed through project-specific engagements coordinated by the Kern Council of Governments.

Exhibit 2-2 City of Arvin Organizational Chart



### Social Profile

According to Census 2000, 87.5 percent of residents identified themselves as Hispanic or Latino with over 54 percent speaking English less than “very well.” According to Census 2000, 19 percent of Arvin’s population over 25 years of age had not graduated from high school, considerably higher than the national average (9.4 percent). The percentage of residents with a bachelor degree (1.4 percent) is well under the national average (17.1 percent). On the surface, this supports our finding of below average per capita income, higher than average unemployment, and a relatively high incidence of ride-dependency.

### Economic Profile

Based on Census 2000, nearly 18 percent of the city’s population was unemployed. This figure is considerably higher than the national figure (estimated at just over four percent) based on the same census data. This finding is important given the linkage between personal income, employment status, and reliance on public transit for personal mobility.

Among Arvin’s workforce of 3,084 (adults age 16 and older), nearly 50 percent drove alone, 42.8 percent carpool, four percent walk, and 0.3 percent utilize public transportation to get to and from their place of work.

The average household size in Arvin is 4.28 persons and the median household income was \$23,674, (Census 2000). This is below state and national averages (\$56,645 and \$48,451, respectively).

Population

According to Census 2000, the city’s population increased approximately 40 percent between 1990 and 2000. Between 2000 and 2005, the city noted another 15 percent increase. This growth contrasts with a 7.9 percent rise in state population and a 6.4 percent national increase during the same period showing significant growth potential in the near-term.

Exhibit 2-3 City Population Growth

	1990	2000	Increase	2006
Arvin	9,286	12,956	15.2%	14,930

Source: U.S. Census Bureau

Exhibit 2-4 County Population Growth

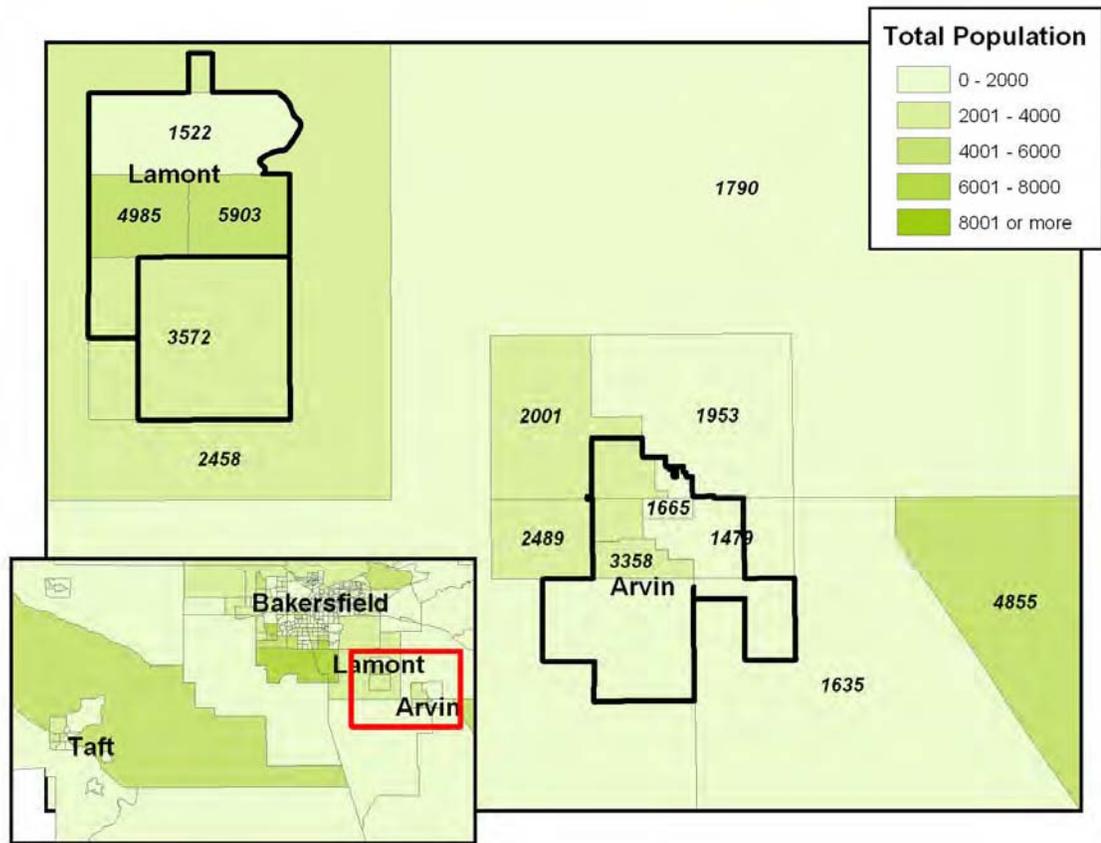
	1990	2000	Increase	2006
Kern County	543,477	661,645	17.9%	780,117

Source: U.S. Census Bureau

The following map illustrates population density within Kern County as well as the city of Arvin, segregated by Census Block Group.

Block Groups are subdivisions within a federal census tract, and are the smallest unit employed for demographic analysis. Population density determines the dimensions of a Block Group. The more dense the area, the smaller the Block Group parameters.

Exhibit 2-5 Arvin, Lamont Population/Census Block



Source: U.S. Census Bureau

### Ride-Dependent Population

In many communities throughout the country, the *ride-dependant* population is comprised of school-age youth, seniors, persons with disabilities, low-income individuals, and households lacking access (or having limited access) to a personal vehicle. Demand or “need” is typically assessed on both a temporal and spatial basis. Given the preceding demographic groups are more likely than the general population to rely on public transit for personal mobility, it is important changes within the respective demographic group be monitored to identify emerging needs.

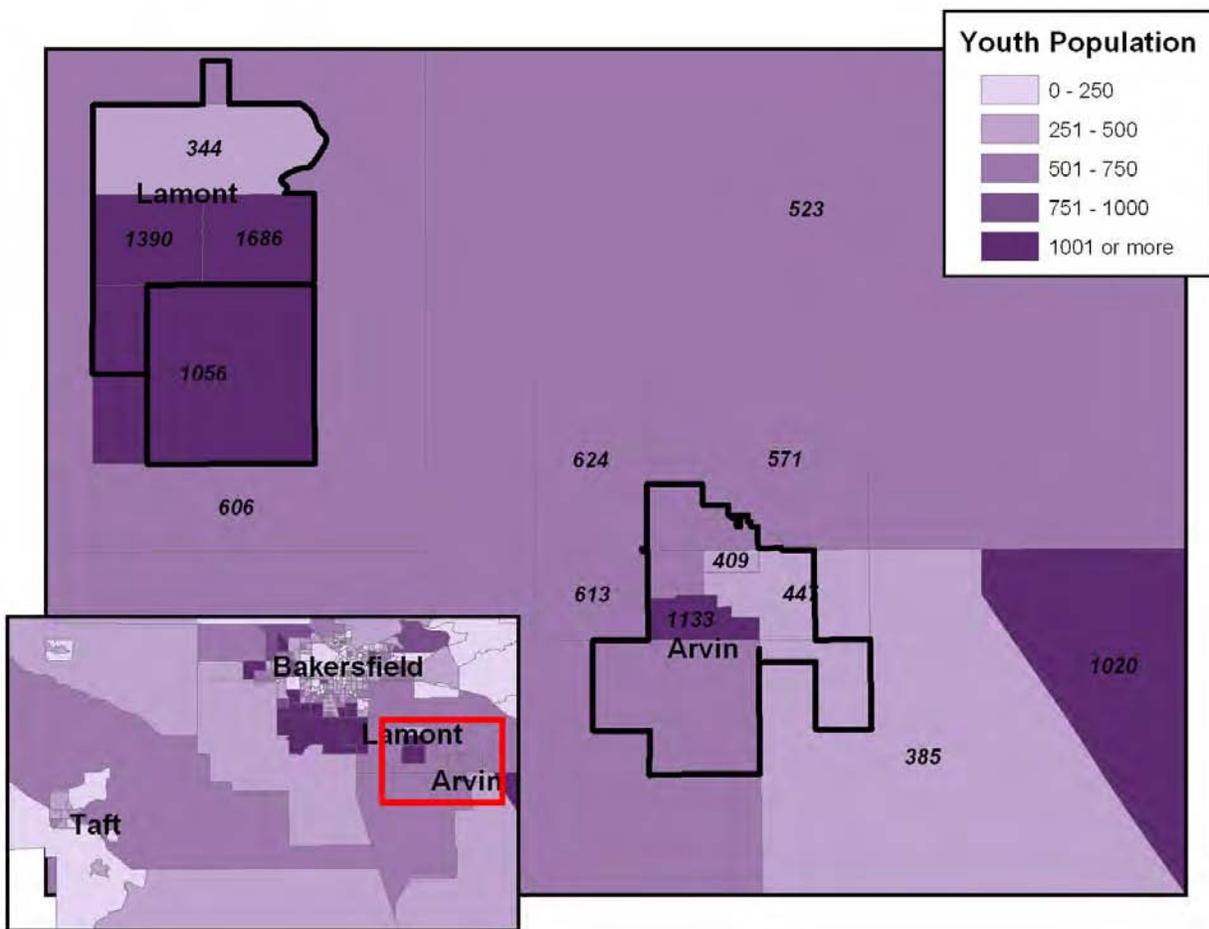
Utilizing ESRI ArcView 9.2 Geographic Information Systems (GIS) software, Moore & Associates created a series of maps reflecting data gathered through Census 2000. Despite Arvin’s population being on-the-whole ride-dependant, through analysis we were able to identify specific zones within Arvin Transit’s service area reflecting higher concentrations of ride-dependent populations.

As the following maps depict, Arvin’s ride-dependant populations are distributed evenly throughout the community. Transit service needs to mirror population distribution and because no single portion of the city is “overly represented”, transit service needs to be distributed evenly. The city’s size, population distribution, and grid layout lends itself to the introduction of a fixed-route service.

Youth Population

For the purposes of this study, *youth population* is defined as persons between the ages of 5 and 17. Approximately 20 percent of Arvin can be termed as *youth*. As the following map illustrates, the majority of Arvin’s youth is concentrated in the central portion of the city with notable clusters residing throughout the city. This is consistent with the evenly distributed youth-oriented services (i.e., schools, parks, etc.)

Exhibit 2-6 Youth Population

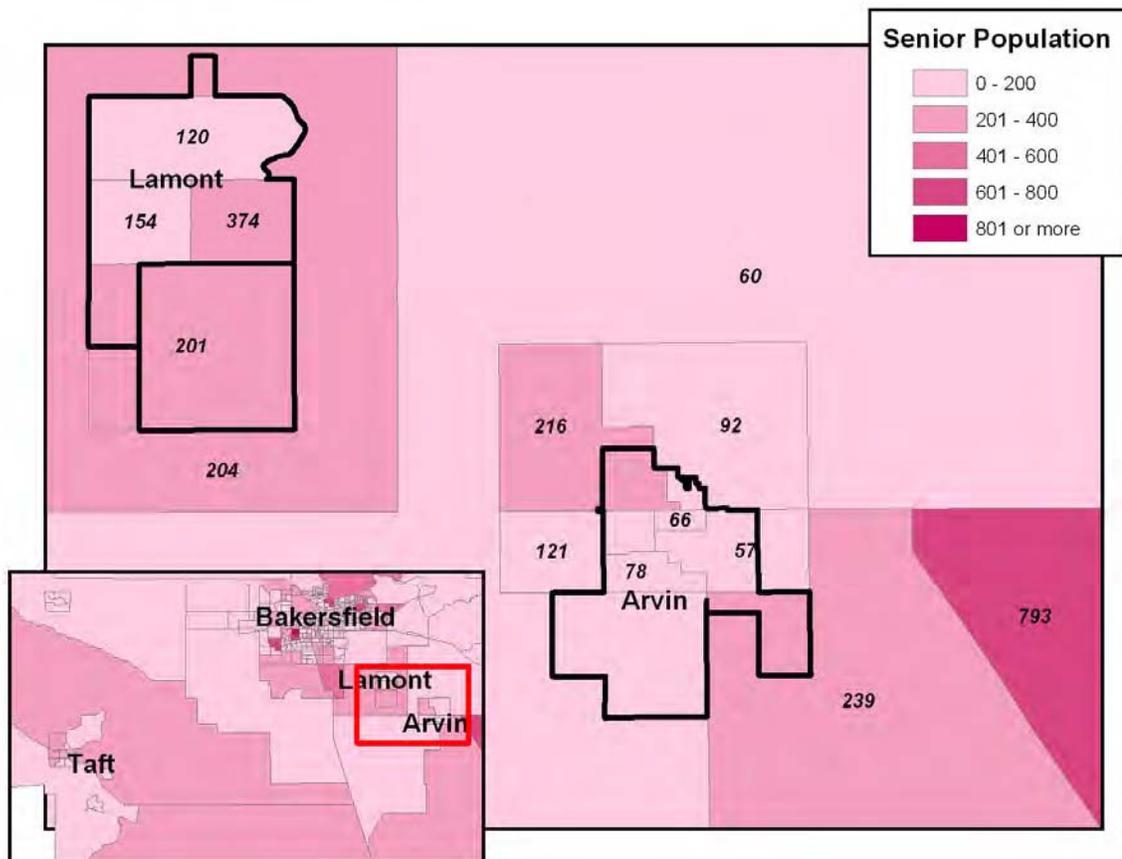


Source: U.S. Census Bureau

Senior Population

For the purposes of this study, seniors are defined as persons age 65 or over. Based on Census 2000, there were 753 seniors in Arvin. This translates to approximately six percent of the total population. Many seniors make housing choices based on the availability of healthcare and social services. Based on data presented in the following map, distribution of seniors appears relatively equal within city limits again mirroring the ride-dependant population as a whole. As seen in our Survey/Operations Analysis, healthcare facilities were the second most-frequently cited origin-destination pairing, with nearly six percent of demand-response trips beginning or ending at the Arvin Community Health Center.

Exhibit 2-7 Senior Population

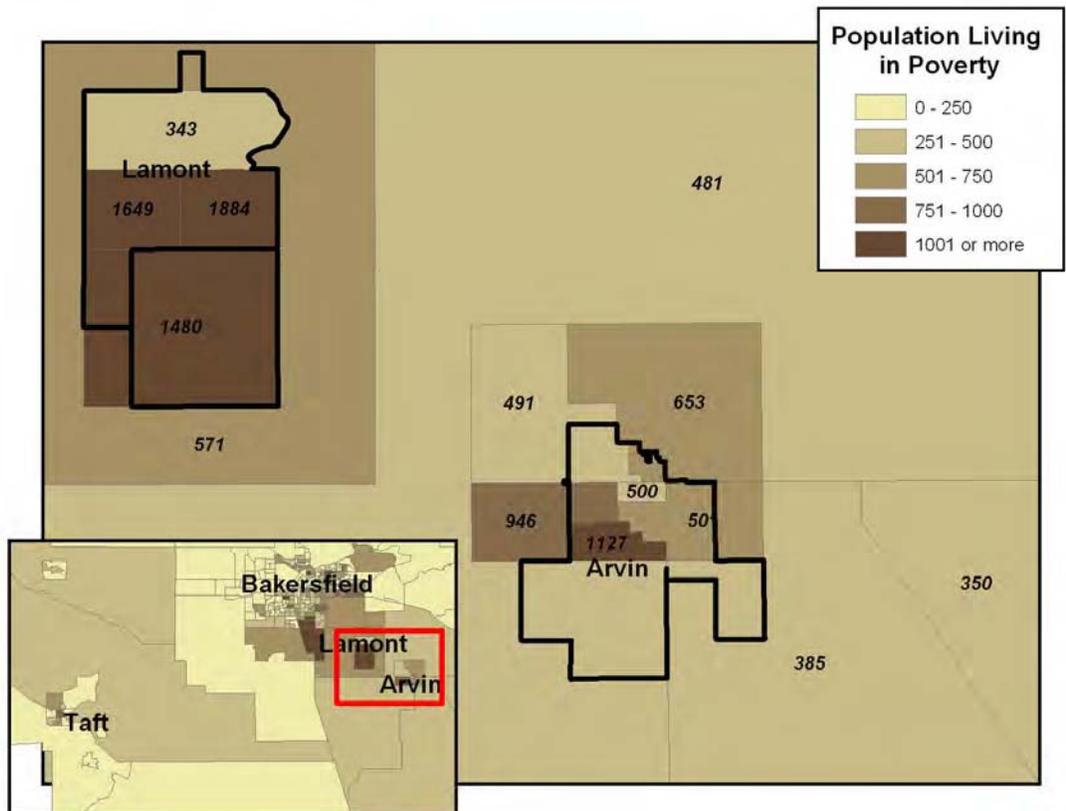


Source: U.S. Census Bureau

Low-Income Population

Low-income population is defined by federal criteria as a single, non-dependent person with an annual income no greater than \$8,350. This equates to 30.9 percent of the city’s total population, nearly two and a half times the national average (12.4 percent). It is likely the population within this category is not “unique” in that it could overlap other ride-dependant categories. Often times, low-income individuals choose to reside in proximity to social services, such as publicly-funded healthcare, vocational training, social services, but given the relative size of Arvin, distribution appears relatively even over block groups, again lending credence to the “need” for a more traditional fixed-route transit service.

Exhibit 2-8 Population Living in Poverty



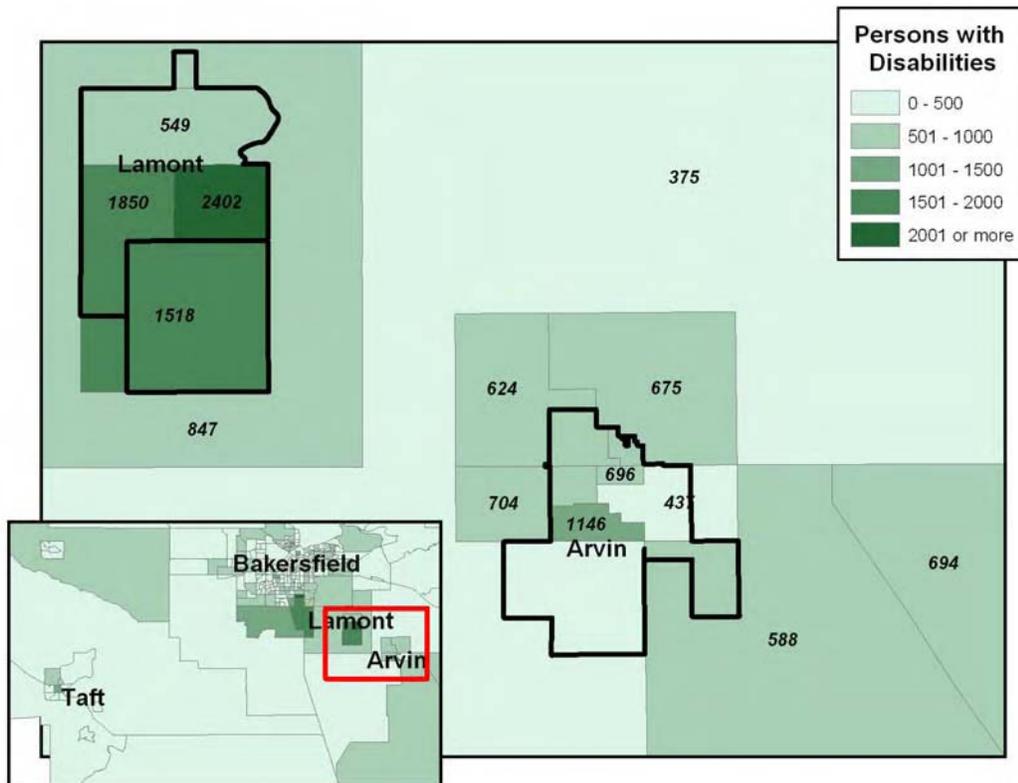
Source: U.S. Census Bureau

Persons with Disabilities

Based on the Americans with Disabilities Act of 1990, the term *disability* is defined as a physical or mental impairment that substantially limits one or more major life activities (29 U.S.C. 705(9)). The associated disability may be sensory, physical, or mental. Additional disability classifications include self-care, go-outside-home, and employment limitations.

Based on Census 2000, we estimate there are more than 3,000 persons with disabilities over the age of five residing within Arvin. This translates to 23 percent of the city’s total population. As evidenced by Exhibit 2-9, the distribution of this demographic mirrors the total population at large.

Exhibit 2-9 Persons with Disabilities

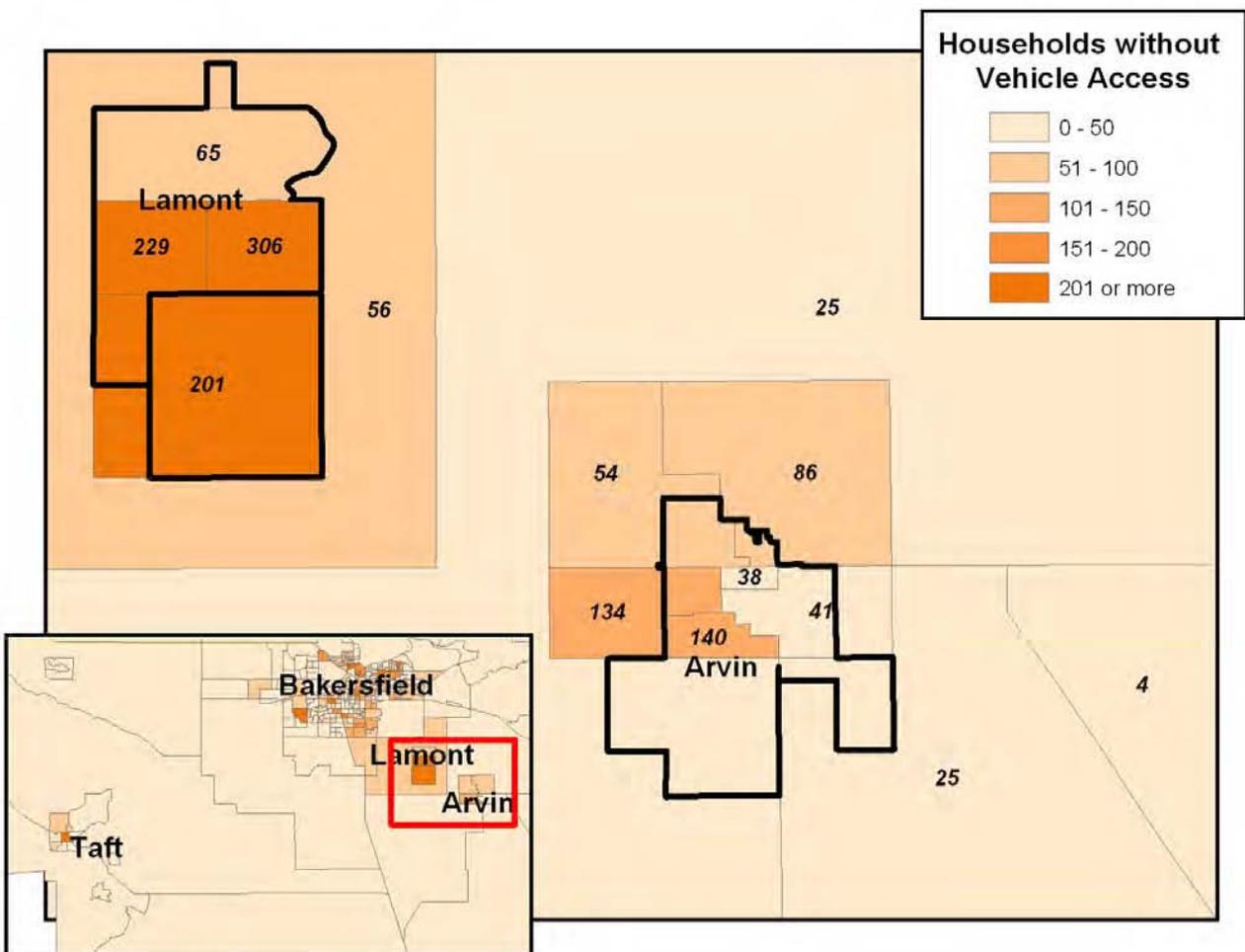


Source: U.S. Census Bureau

Households Lacking Vehicle Access

Based on Census 2000, the incidence of households in Arvin indicating lack of access to a personal vehicle was 16 percent. Not surprisingly, the location of households without access to a personal vehicle mirrors that of low-income households. Given no single area is over represented, this suggests a need and/or demand for public transit throughout the city of Arvin.

Exhibit 2-10 Households Lacking Personal Vehicle Access



Source: U.S. Census Bureau

Trip Generators

The following tables present trip generators segregated by type. This data was collected through boarding and alighting counts conducted in the ride check analysis as well as traditional trip generators. Analysis of the following trip generators reveals significant demand (existing and potential) for public transit service in Arvin as well as Lamont. Arvin’s trip generators are concentrated along Bear Mountain Boulevard and Campus Drive, whereas trip generators in Lamont are clustered along Main Street. This is not surprising given the size and layout of Arvin as well as the modest number of existing arterials.



Exhibit 2-11 Arvin Key Trip Generators

Name	Address	Type
Arvin Community Health Center	1305 Bear Mountain Blvd	Healthcare
Evergreen Arvin Healthcare Center	323 Campus Dr	Healthcare
Sycamore Healthcare	441 Sycamore Rd	Healthcare
Kern County Autism Center	14150 Sunset Blvd	Healthcare
Bear Mountain Recreation	685 SHill St	Recreation
Kern County Senior Nutrition	800 Walnut Dr	Senior
Arvin High School	900 Varsity Rd	School
Bear Mountain Elementary School	1501 Hood St	School
Serra Vista Elementary School	300 Franklin St	School
Haven Drive Middle School	341 Haven Dr	School
Arvin Union School District	737 Bear Mountain Blvd	School
Di Giorgio Elementary School	19405 Buena Vista Blvd	School
H & S Foodmart	300 Bear Mountain Blvd	Shopping
A & M Market	1201 Durham St	Shopping
J & M Market	1007 S Derby St	Shopping
Community Action Partnership of Kern: Primeros Pasos Head Start	1111 Bush St	Community
Arvin Community Services District	309 Campus Dr	Community
City of Arvin: Qty Hall	200 Campus Dr	Government
County of Kern: Library	201 Campus Dr	Government

Exhibit 2-12 Lamont Key Trip Generators

Name	Address	Type
Clinica Serra Vista Behavioral Health Services	8787 Hall Rd	Healthcare
Kern County Public Health Department	12014 Main St	Healthcare
First Nutrition	10501 Main St	Healthcare
Kern Regional Center For Disabled	7707 Panama Rd	Healthcare
Kern County Senior Nutrition Program	10300 San Diego St	Senior
Lamont Elementary School	10621 Main St	School
Lamont School District	7915 Burgundy Ave	School
Alicante Avenue Elementary School	7998 Alicante Ave	School
Nueva Continuation High School	8600 Palm Ave	School
Myrtle Avenue Elementary School	10421 Myrtle Ave	School
Lamont Preschool	9615 Weedpatch Hwy	School
Lamont Weedpatch Family Center	7839 Burgundy Ave	Community
Vista Migrant Head Start Center	8325 Buena Vista Blvd	Community
Lamont Center-Women	10420 Main St	Community
Lamont Public Library	8304 Segrue Rd	Government
S & S Mini Mart	10618 Main St	Shopping

# 3.

## PERFORMANCE MEASUREMENT SYSTEM

## CHAPTER 3 – PERFORMANCE MEASUREMENT SYSTEM

Arvin Transit’s vision is communicated through clearly-defined goals, objectives, and standards. This section advances a Performance Measurement System for the City’s public transit program. This framework, comparable to the one presented in the prior TDP (1996), will allow the City to assess progress toward meeting established goals. The basis for this Performance Measurement System was the service evaluation process completed as part of the overall Transit Development Plan. It also supports the identification of growth opportunities as well as the identification of performance shortfalls.

### Goals, Objectives, and Standards

An effective Performance Measurement System is composed of goals, objectives, and standards.

- *Goals* are statements that qualify the desired results. They are the end toward which efforts are directed. They are general and timeless, yet theoretically attainable.
- *Objectives* provide quantifiable measures of the goals. They are more precise and capable of both attainment and measurement.
- *Standards* set quantifiable targets for achieving the adopted goals.

The City of Arvin’s public transit mission statement provides the basic structure upon which the Goals, Objectives, and Performance Standards are based:

*“The overall purpose of Arvin’s transit program is to increase mobility opportunities for all citizens of the community and aid in improving air quality in the region and reducing congestion.*”

*“The focus of the transit program should be to provide a level of intracity service that meets the basic needs of transit dependant individuals in the community. Opportunities to improve intercity travel for these same individuals should be continually explored and implemented as appropriate to offer access to larger full service communities for basic medical and educational needs.”*

The City’s goals and objectives were defined with the purpose of attaining the following:

- Lowest reasonable operating cost,
- Safety, reliability, and quality,
- Fulfillment of community transportation needs, and
- Ongoing assessment of transit services,

The following tables link adopted goals to quantifiable measures, quantify actual recent performance, and recommend modification of adopted standards where deemed appropriate. Arvin’s program standards have remained static since preparation of the City’s 1996 Transit Development Plan. Although some of the FY 2001/02 standards have yet to be met (Operating Cost/VSH, Operating Cost/Passenger, and Farebox Recovery Ratio), we do not recommend any “downward” adjustment (as we believe the criteria remain relevant and viable).

Note: Cells marked with fixed-route refer to a proposed fixed-route service discussed in Chapter 7.

Note: A one-time “interest expense” of \$175,000 was deducted from the Operating Cost for FY 2006/07 to reflect a typical fiscal year.

Exhibit 3-1 Performance Measurement System

<b>Goal I. Operate an efficient and effective system that maximizes service and minimizes cost impacts.</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Minimize operating costs.	Operating Cost/VSH			
	Demand-Response	\$50.00	\$80.54	\$100.00
	Deviated fixed-route			\$85.00
	Fixed-Route	N/A	N/A	\$75.00
	Operating Cost/Passenger			
	Demand-Response	\$3.00	\$5.43	\$9.00
	Deviated fixed-route			\$7.00
	Fixed-Route	N/A	N/A	\$5.50
	Farebox recovery			
	Demand-Response	15 percent	13.23%	10 percent
	Deviated fixed-route			15 percent
	Fixed-Route	N/A	N/A	15 percent
Increase transit usage.	Annual growth in ridership	Exceeds annual population growth rate.	Ridership exceeds annual population growth by 19.7 percent.	Growth in annual ridership mirrors service area's population (7.3 percent growth in the City of Arvin from 2006 to 2007).
	Passengers/VSH			
	Demand-Response	12.0	14.8	11.0
	Deviated fixed-route			15.0
	Fixed-Route	N/A	N/A	22.0
	Passengers/VSM			
	Demand-Response	0.9	1.05	1.5
	Deviated fixed-route			3.5
	Fixed-Route	N/A	N/A	5.0
	<b>Goal II. Provide safe, reliable, and high quality transportation.</b>			
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Provide safe service.	Preventable accidents	More than 60,000 miles between preventable accidents.	0.6 accidents/60,000 miles.	No change.
Reliable transit service.	On-time performance			
	Demand-Response/Deviated fixed-route	90 percent of pickups within 30 minutes of scheduled time.	Could not calculate.	90 percent of all monthly trips operate on-time (defined as within 30 minutes of the scheduled pick-up time).
	Fixed-Route	N/A	N/A	95 percent of fixed-route departures on-time (0-5 minutes late).

<b>Goal II. Provide safe, reliable, and high quality transportation. (Continued)</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Provide safe service.	Spare ratio	Maximum 30 percent spare bus ratio.	12.5 Percent.	20 percent.
	Maintenance schedule	Buses have safety inspection every 45 days. The maintenance for buses is minimum 3,000 miles to maximum 5,000 miles.	Meets Standard.	No change.
	Road calls	Minimum of 10,000 miles between road calls.	0.7 road calls/10,000 miles.	No less than 10,000 miles between road calls. Defined as incidence where service is interrupted longer than five minutes due to a mechanical failure (except for flat tires).
	Trip denials	ADA complementary service hours and operation within ADA standards.	Unable to determine based on information provided.	No more than one percent of total monthly trip requests result in a denial due to capacity constraints, as defined by the Americans with Disabilities Act of 1990.

<b>Goal III. Serve the transportation needs of the community</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Maximize accessibility.	Geographic coverage	75 percent of the population will be within one (1) mile of transit services.	Meets Standard.	75 percent of the population will be within one (1) mile of transit services.
	Accessibility	100 percent of vehicles equipped with fully operational wheelchair lifts.	62.5 percent	100 percent of fleet handicap is accessible.
		All operators shall be trained in the proper use of the lift equipment.		
		100 percent of vehicles have bicycle racks.	37.5 percent	100 percent of vehicles have bicycle racks.
	All bus stops and vehicles are clearly marked.	No bus stops are marked. All buses are clearly marked.	All transit vehicles and stops are marked appropriately.	

<b>Goal IV. Evaluate, monitor and improve transit services on an on-going basis.</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Ongoing, mandatory enhancement.	Regularly programmed service evaluations.	N/A	Previous TDP published in 1996.	Independent evaluations at intervals of no greater than 5 years.

<b>Goal V. Undertake effective marketing, outreach, and public participation</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Development of Marketing Plan.	Actual expenditures.	N/A	No line item for marketing.	Not less than 3 percent of annual operating budget.
Encourage citizen participation.	Conduct TDA Article 8 process.	N/A	Unmet needs meeting completed February 26, 2008.	Conduct annual outreach prior to meetings to encourage public input on unmet needs.
	Provide various opportunities for customer feedback.	N/A	Patrons can submit comments in writing via mail, e-mail, telephone or in-person.	Increase position visibility strategically to encourage new users. Availability for customer comments.

<b>Goal VI. Coordinate transit system development with community planning and development efforts and land-use policy.</b>				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Encourage consideration of transit needs in land-use policies within all Arvin Transit's service area's development review and	Practice involvement in the planning/ approval process.	Specify service levels. Identify capital improvements to be included in new developments.	Meets Recommended Standard.	No change.
				Work with retailers and business community to increase accessibility to the public transit service network.

Goal VII. Encourage continued growth of Regional Pass Program				
Objective	Performance Measure	Adopted Standard	Actual Performance	Recommended Standard
Augment Marketing Plan.	Increase awareness of service.	N/A	Focused exclusively on printing/distribution of the service brochure.	City undertake a Strategic Marketing Plan.
	Actual expenditures.	N/A	N/A	Not less than 3 percent of annual operating budget.
Structured oversight of program.	Establish and enforce consistent program policies.	N/A	N/A	Offer customer service training to employees who interact with riders.
	Provide various opportunities for stakeholder feedback.	N/A	Patrons can submit comments in writing via mail, e-mail, telephone or in-person.	Establish and enforce day-to-day management control.
	Consistent reporting methods.	Minimum requirements of the data collection (i.e. fare sales, trip information).	N/A	Establish reporting templates that include key performance indicator fields.

Page Intentionally Blank

# 4

4. SERVICE EVALUATION

## CHAPTER 4 – SERVICE EVALUATION

As part of the Transit Development Plan process, Moore & Associates completed a comprehensive operational assessment of all City of Arvin public transit services. This evaluation included an assessment of Arvin Transit's quantitative performance across a four-year period (historic trends), while also contrasting actual performance with adopted critical standards.

The City of Arvin introduced its public transit program in 1979. Today the City offers demand-response service Monday through Friday from 7:00 a.m. to 3:30 p.m., except on designated holidays. Service level varies based on demand, but typically requires three vehicles/service day.

The City's fleet consists of seven vehicles, three of which are gasoline and four CNG. A CNG fueling station is located on-site.



Same-day reservations for the demand-response service are accepted, and most trips can be accommodated within 30 minutes of the time requested (as stated in the transit brochure). This is not surprising for a program operating in a chiefly rural area.

Arvin Transit also offers a weekday deviated fixed-route service linking Arvin and neighboring Lamont, five times daily. The first run of the day departs Arvin at 7:05 a.m. and functions as an express run, serving select stops in Arvin and Lamont. This service consists of one vehicle/service day.

A new service, introduced in January 2006, provides evening service to Taft College, Monday through Thursday, during the school year. The service departs Arvin at 4:40 p.m. and arrives at Taft College at 6:00 p.m.

The return trip departs Taft College between 9:00 and 9:30 p.m., arriving back in Arvin between 10:15 and 10:30 p.m. The service uses a 15-passenger, wheelchair non-accessible van. Taft College subsidizes the service at a rate of five dollars/student ride. This service is for Taft College students only, offering no service for the general public.

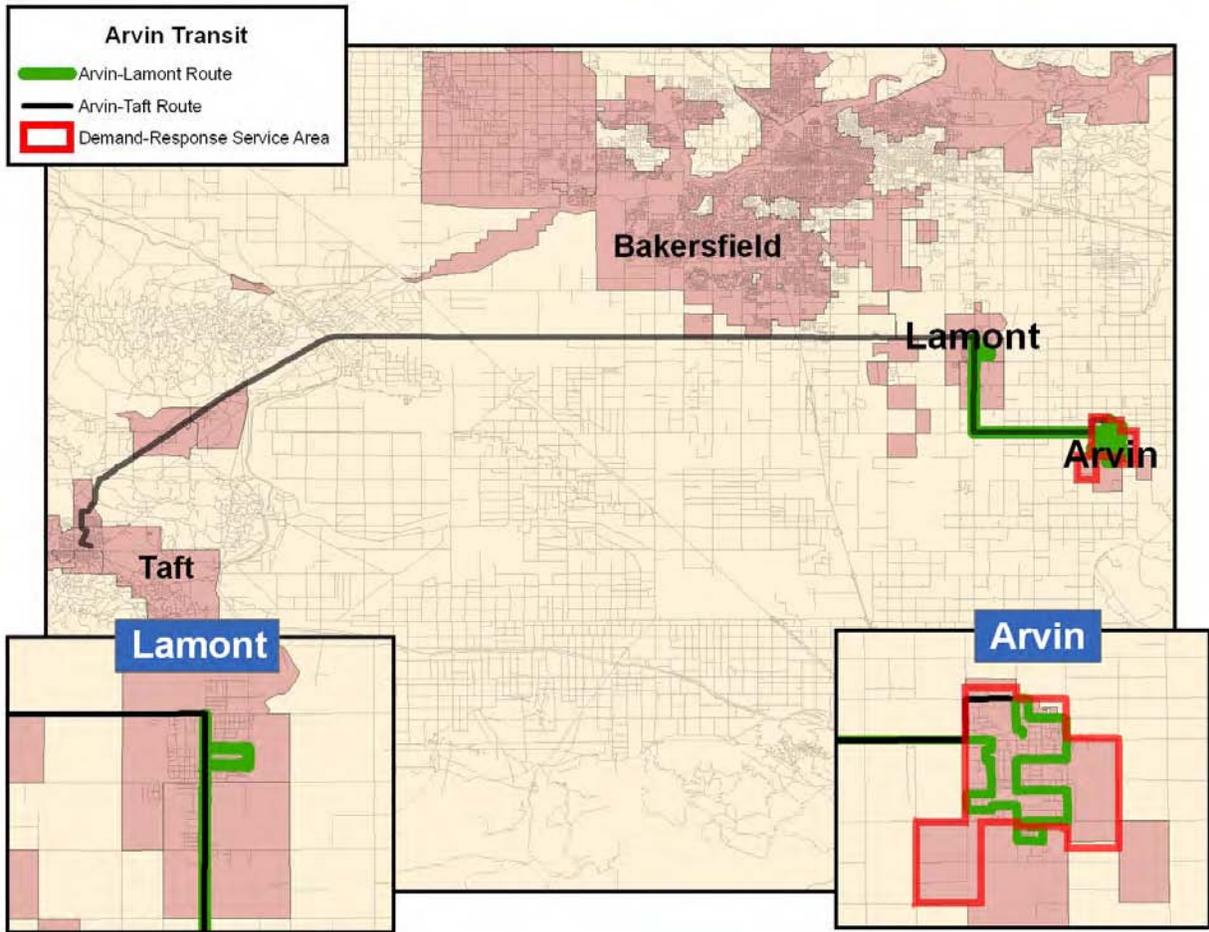
The deviated fixed-route base fare is \$1.25. Children three years and younger ride free when accompanied by a fare-paying adult. Demand-response fares are twenty-five cents less in each fare category. The following exhibit illustrates the City’s current transit fare structure.

Exhibit 4-1 Fare Structure

Fixed-Route Fares		Dial-A-Ride Fares	
General Public	\$1.25	General Public	\$1.00
Seniors (62 & Over)	\$0.75	Seniors (62 & Over)	\$0.50
Disabled	\$0.75	Disabled	\$0.50
Children(8 & Under)	\$0.75	Children (8 & Under)	\$0.50
Children Under 3 Years of Age with Paying Adult	Free	Children Under 3 Years of Age with Paying Adult	Free

Source: City of Arvin

Exhibit 4-2 Arvin Transit System Map



### Performance Indicators

Prior to FY 2006/07, the City collected performance data on a system-wide basis, thereby making it difficult to discern trends by mode. Subsequently, data has been collected by mode, and therefore will be presented separately. The following table presents performance data across the last four fiscal years. The table includes data updated by the City in its TDA compliance reporting.

Exhibit 4-3 System-Wide Performance Indicators

	FY 2003/04	FY 2004/05	FY 2005/06	FY 2006/07
<b>Performance Measure</b>				
Operating Cost	\$400,299	\$448,828	\$517,537	\$568,971
Variance		12.1%	15.3%	9.9%
Fare Revenue	\$74,874	\$54,340	\$57,956	\$75,298
Variance		-27.4%	6.7%	29.9%
Vehicle Service Hours (VSH)	6,527	5,520	5,975	7,065
Variance		-15.4%	8.2%	18.2%
Vehicle Service Miles (VSM)	84,054	73,301	82,969	99,884
Variance		-12.8%	13.2%	20.4%
Passengers	103,066	77,943	82,184	104,742
Variance		-24.4%	5.4%	27.4%
<b>Performance Indicators</b>				
Operating Cost/VSH	\$61.33	\$81.31	\$86.62	\$80.54
Variance		32.6%	6.5%	-7.0%
Operating Cost/VSM	\$4.76	\$6.12	\$6.24	\$5.70
Variance		28.6%	1.9%	-8.7%
Operating Cost/Passenger	\$3.88	\$5.76	\$6.30	\$5.43
Variance		48.3%	9.4%	-13.7%
Passengers/VSH	15.79	14.12	13.75	14.83
Variance		-10.6%	-2.6%	7.8%
Passengers/VSM	1.23	1.06	0.99	1.05
Variance		-13.3%	-6.8%	5.9%
Farebox Recovery	18.70%	12.11%	11.20%	13.23%
Variance		-35.3%	-7.5%	18.2%
Fare/Passenger	\$0.73	\$0.70	\$0.71	\$0.72
Variance		-4.0%	1.2%	1.9%

Source: City of Arvin

Exhibit 4-4 Performance Indicators Segregated by Mode

Fixed-Route		FY 2006/07	Demand-Response		FY 2006/07
Performance Measure			Performance Measure		
Operating Cost			Operating Cost		
Fare Revenue			Fare Revenue		
Vehicle Service Hours (VSH)		2,121	Vehicle Service Hours (VSH)		4,944
Vehicle Service Miles (VSM)		43,683	Vehicle Service Miles (VSM)		56,201
Passengers		23,899	Passengers		80,843
Performance Indicators			Performance Indicators		
Passengers/VSH		11.27	Passengers/VSH		16.35
Passengers/VSM		0.55	Passengers/VSM		1.44

Source: City of Arvin.

Operating Cost for the City of Arvin increased 15.3 percent in FY 2005/06, and nearly 44 percent in FY 2006/07 to reach \$743,971. After reviewing the Transit Operators Financial Transactions Report it appears this increase is due to a one-time spending line item for “interest expense”, \$175,000 for FY 2006/07. For the purpose of consistent analysis, this item has been deducted from the FY 2006/07 Operating Cost. This restructured figure (\$568,971) results in a nearly 10 percent increase from FY 2005/06.

Fare revenue increased 6.7 percent in FY 2005/06, and nearly 30 percent in FY 2006/07.

Vehicle Service Hours (VSH) increased 8.2 percent in FY 2005/06, and 18.2 percent in FY 2006/07. Vehicle Service Miles (VSM) increased 13.2 percent in FY 2005/06 before rising 20.4 percent in FY 2006/07.

Ridership fluctuated dramatically between FY 2003/04 and FY 2006/07. The biggest decline occurred in FY 2004/05 when it dropped nearly 25 percent. The most notable increase occurred in the latest fiscal year when it rose more than 27 percent. The latest spike in ridership can be attributed to the introduction of service to Taft College.

The City of Arvin's Operating Cost/VSH indicator rose 6.5 percent in FY 2005/06 then dropped 7.0 percent in FY 2006/07. Operating Cost/VSM increased 1.9 percent in FY 2005/06 then dropped 8.7 percent in FY 2006/07.

A commonly-used yardstick of public transit service effectiveness, Passengers/VSH, indicates how many rides are provided within a single revenue service hour. The City's Passenger/VSM indicator illustrates total rides provided across each revenue mile traveled. Passengers/VSM decreased in FY 2005/06 before increasing in FY 2006/07.

Based on State of California Transportation Development Act (TDA) regulations, funding claimants in non-urbanized areas must achieve a farebox recovery ratio of not less than 10 percent. The City's farebox recovery ratio dropped 7.5 percent in FY 2005/06, then rose 18.2 percent in FY 2006/07. This can be attributed to a modest increases in operating cost and dramatic increases in fare revenue. Arvin's farebox recovery, although above the mandated 10 percent, remains a point of concern as it has declined across two of the last three fiscal years. This can be addressed in two ways: reducing operating cost or increasing fares.

The final performance indicator considered the ratio between total fare revenue and total ridership. Between FY 2004/05 and FY 2005/06, the indicator increased 1.2 percent. The following fiscal year, the indicator increased another 1.9 percent.

Exhibit 4-5 Ridership

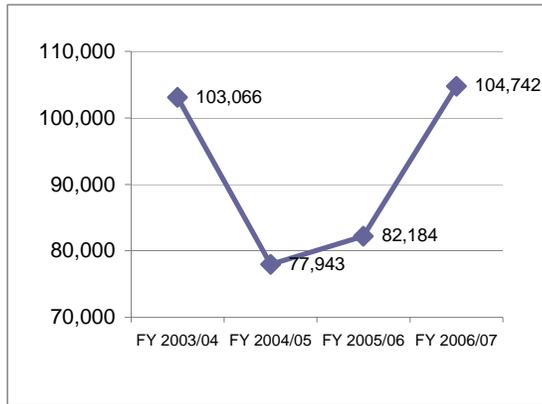


Exhibit 4-6 Operating Cost/VSH



Exhibit 4-7 Operating Cost/VSM

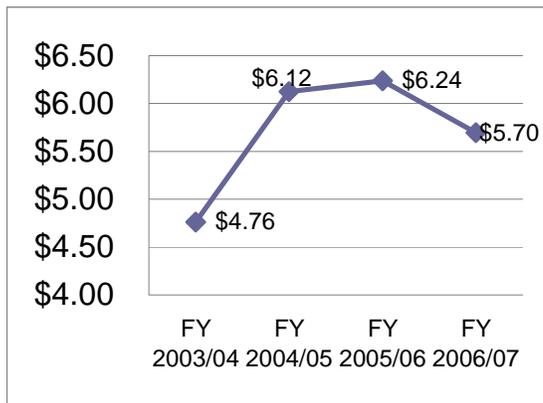


Exhibit 4-8 Operating Cost/Passenger

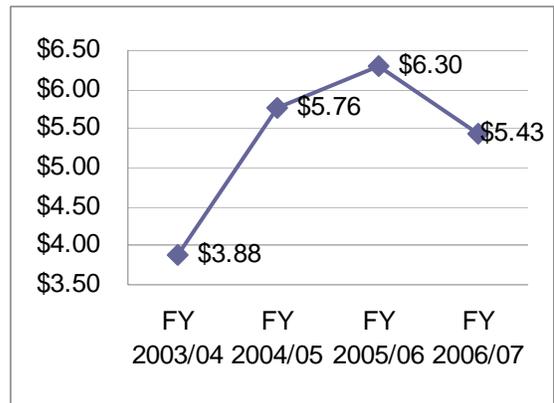


Exhibit 4-9 Passengers/VSH

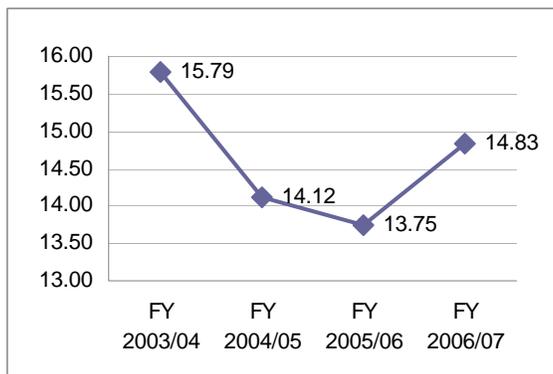


Exhibit 4-10 Passengers/VSM

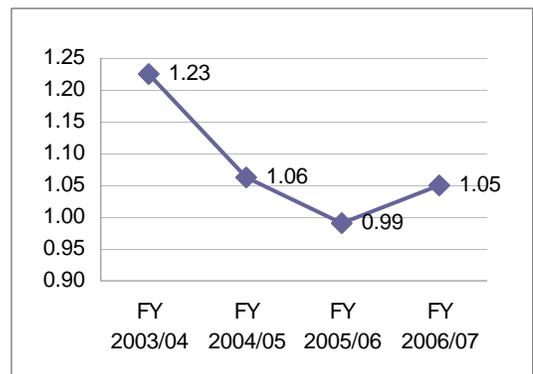


Exhibit 4-11 Farebox Recovery

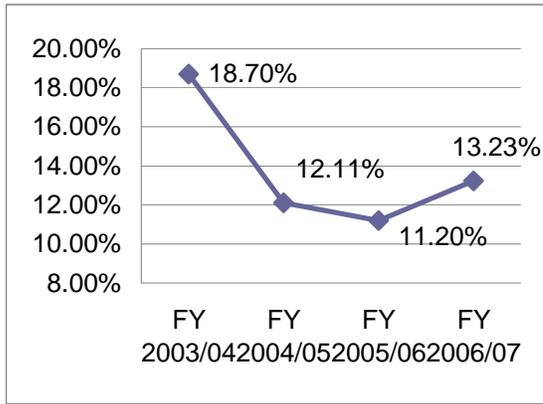
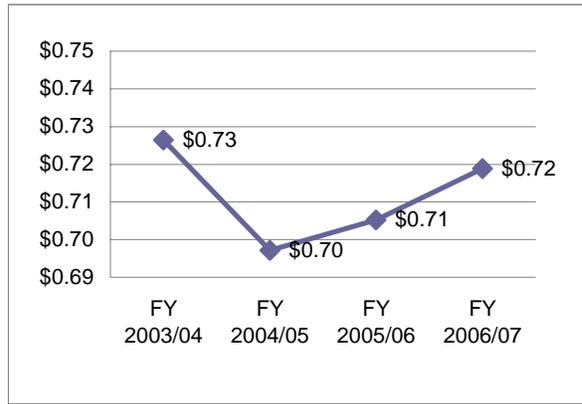


Exhibit 4-12 Fare/Passenger



Page Intentionally Blank

# 5

5.

## PEER REVIEW

## CHAPTER 5 – PEER REVIEW

A peer review provides a quantitative methodology for assessing how efficiently and effectively the City of Arvin’s public transit program is providing service compared with peer providers. *Effectiveness* is defined as the extent by which a service is achieving its intended goals. By contrast, *efficiency* is the amount of resources required to achieve the reported outcome.

Our analysis examines the level of service each peer is providing relative to the size of its service area and the number of persons residing therein. Three municipally-owned transit operators were selected, based on fleet size, annual ridership, and service offerings. All peer data reflects actual FY 2006/07 performance.

A peer review is not intended to identify a direct match, but rather a range of acceptable performance.

Exhibit 5-1 Peer Criteria

	Arvin	McFarland	Ridgecrest	Shafter
Service Area (sq. miles)	4.81	2.06	21.13	17.98
Population	14,930	12,093	26,170	14,887
Ridership	104,742	10,015	40,374	38,524
Fleet	7	2	4	6

Source: Census 2000 and agency-provided data.

### Shafter

The City of Shafter provides demand-response service (Shafter Transit System) which operates on a reservation-only basis, and offers transfers with other cities via Kern Regional Transit at Shafter City Hall. The City’s transit program is administered by the Finance Director. Bus operators are self-dispatched employees of the City, which has proven to be efficient and cost-effective. This weekday demand-response service operating within city

limits, open to the general public between the hours of 7:30 a.m. and 4:30 p.m. The adult base fare is one dollar; while seniors, persons with disabilities, and youth (age of twelve and younger) pay seventy-five cents and children under the age of four pay fifty cents.

#### McFarland

The City of McFarland initiated demand-response in 1979. The program is administered by the City's Public Works Director. In addition to administrative oversight of transit services, the position is responsible for the City's customer service for utilities, street maintenance and repairs, water and sewer services, and engineering and construction management. The City Manager and Public Works Director are responsible for service planning in McFarland. All scheduling and dispatching operations are conducted in-house by City staff. The City contracts out to local vendors for the maintenance of transit vehicles.

Two buses run within McFarland city limits, Monday through Friday from 8:00 a.m. to 4:00 p.m. Fares are one dollar for the general public; and fifty cents for seniors, persons with disabilities, or students. Twenty-ride passes are available for \$18.00 (general public) and \$9.00 (seniors, students, or persons with disabilities).

#### Ridgecrest

The City of Ridgecrest operates Ridgecrest Transit System, (RTS) which includes three Dial-A-Ride services within city limits as well as within Indian Wells Valley. The program is overseen by the City Manager and the Public Works Director. Responsibilities include management of dispatching, drivers, customer service, and vehicle maintenance. The Public Works Director, in conjunction with staff and administrative personnel, plans service changes for the Ridgecrest Transit System.

The operations run from 6:00 a.m. to 6:00 p.m., Monday through Friday; and 8:00 a.m. to 4:00 p.m. on Saturday. The fare for the general public

Dial-A-Ride service is \$2.00 for the general public and \$1.00 for seniors and persons with disabilities. The Randsburg/Johannesburg service charges \$6.00 for general public and \$4.00 for seniors and persons with disabilities. Children age five and under ride free.

Presented in the following table are comparisons of operating data for FY 2006/07 between Arvin Transit's key indicators and those of the aforementioned peers. The one-time \$175,000 "Interest Expense" has been deducted from the Operating Cost to provide an even basis for analysis.

Exhibit 5-2 Key Indicator Comparison

	City of Arvin	City of McFarland	City of Ridgecrest	City of Shafter	Average
<b>Performance Measure</b>					
Operating Cost	\$568,971	\$104,517	\$775,071	\$250,859	<b>\$424,855</b>
Fare Revenue	\$75,298	\$17,136	\$159,772	\$32,637	<b>\$71,211</b>
Vehicle Service Hours (VSH)	7,065	1,512	12,915	3,435	<b>6,232</b>
Vehicle Service Miles (VSM)	99,884	15,648	105,219	56,560	<b>69,328</b>
Passengers	104,742	10,015	40,374	38,524	<b>48,414</b>
<b>Performance Indicator</b>					
Operating Cost/VSH	\$80.54	\$69.13	\$60.01	\$73.03	<b>\$70.68</b>
Operating Cost/VSM	\$5.70	\$6.68	\$7.37	\$4.44	<b>\$6.04</b>
Operating Cost/Passenger	\$5.43	\$10.44	\$19.20	\$6.51	<b>\$10.39</b>
Passengers/VSH	14.83	6.62	3.13	11.22	<b>8.95</b>
Passengers/VSM	1.05	0.64	0.38	0.68	<b>0.69</b>
Farebox Recovery	13.2%	16.4%	20.6%	13.0%	<b>15.8%</b>
Average Fare/Passenger	\$0.72	\$1.71	\$3.96	\$0.85	<b>\$1.81</b>

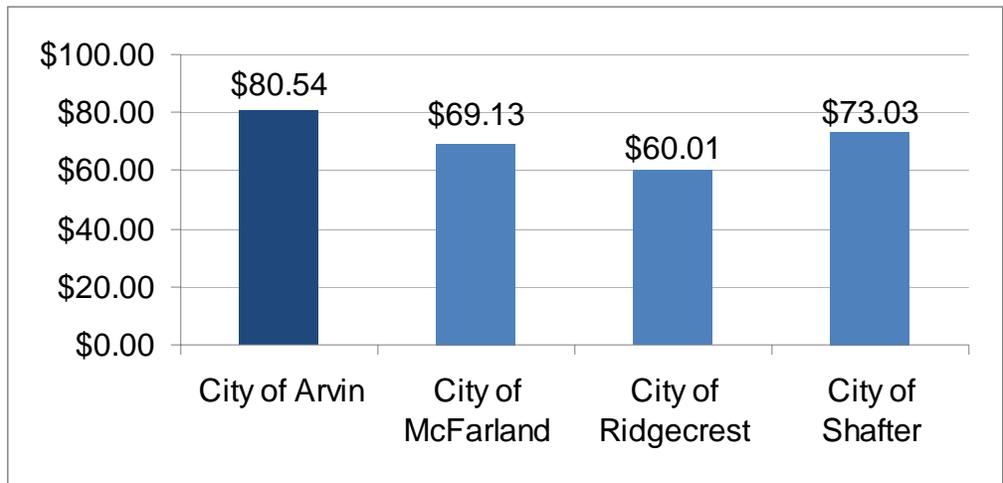
Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

Service Efficiency

Two performance indicators are employed to assess service efficiency: Operating Cost/Vehicle Service Hour (VSH) and Operating Cost/Vehicle Service Mile (VSM). Efficiency is defined as the resources required to achieve the reported outcome. For these indicators, lower dollar figures represent greater service efficiency.

Ridgecrest Transit System’s Operating Cost/VSH was the most efficient of the peer group (nearly 18 percent below the peer average of \$70.68). The City of Arvin reported the highest indicator at \$80.54. The peer group is only separated by \$20.53 but Arvin’s indicator is due to its above average Operating Cost and a slightly higher number of Vehicle Service Hours.

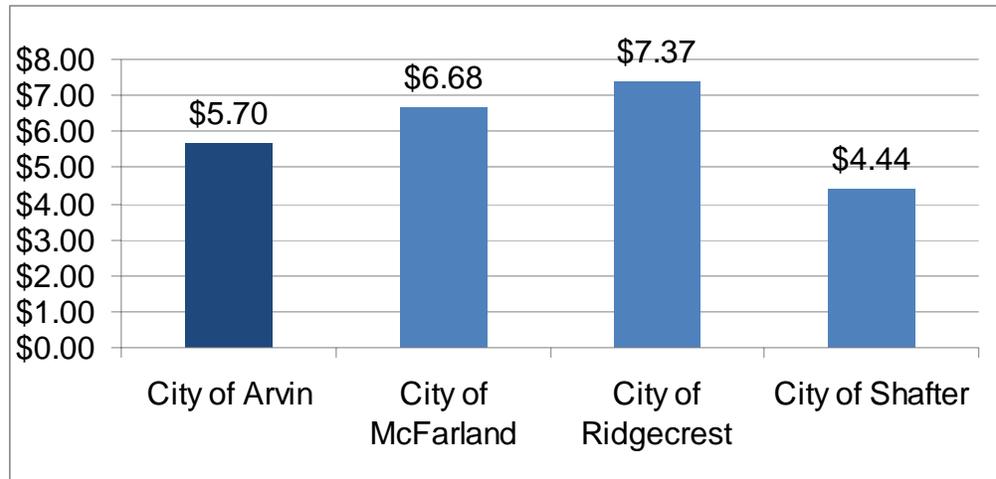
Exhibit 5-3 Operating Cost/VSH



Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

The City of Shafter posted the best rating among the peers (\$4.44) in terms of service efficiency as measured by Operating Cost/VSM. By contrast, the City of Ridgecrest had the highest Operating Cost/VSM at \$7.37 (22 percent above the peer average). Arvin’s indicator was in the middle of the peer group, only 6 percent below the peer average.

Exhibit 5-4 Operating Cost/VSM



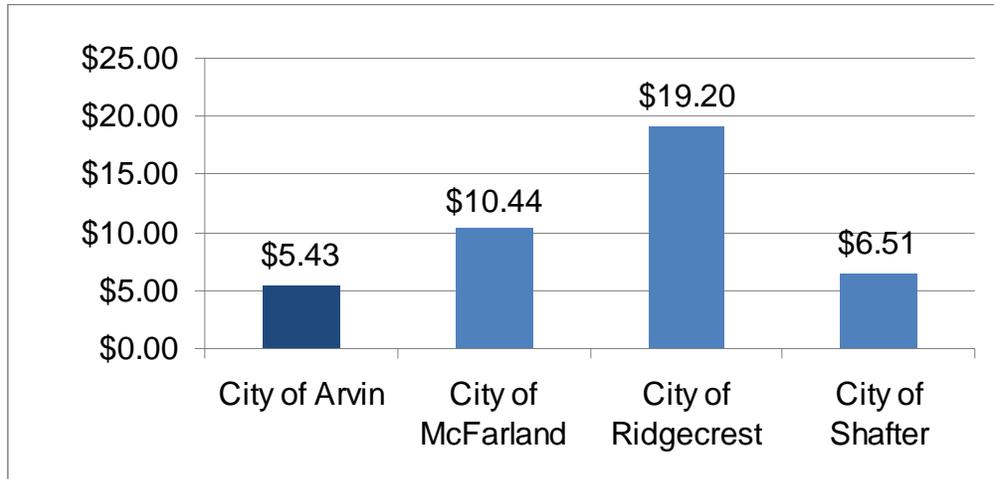
Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

Service Effectiveness

Operating Cost/Passenger is an indicator of service effectiveness. Effectiveness is defined as the extent to which a service is meeting its intended goals. As with the two previous indicators, lower dollar figures indicate better service effectiveness.

Arvin Transit had the lowest indicator within the peer group, 91 percent below the peer average. The City of Ridgecrest had the highest, 85 percent greater than the peer average. Arvin Transit’s prior Transit Development Plan set a benchmark of Operating Cost/Passenger at \$3.00 but we feel this figure is outdated. After segregating the system by mode we recommend a standard of \$9.00/Passenger for demand-response, \$7.00/Passenger for deviated fixed-route, and \$5.50 for the proposed fixed-route service.

Exhibit 5-5 Operating Cost/Passenger

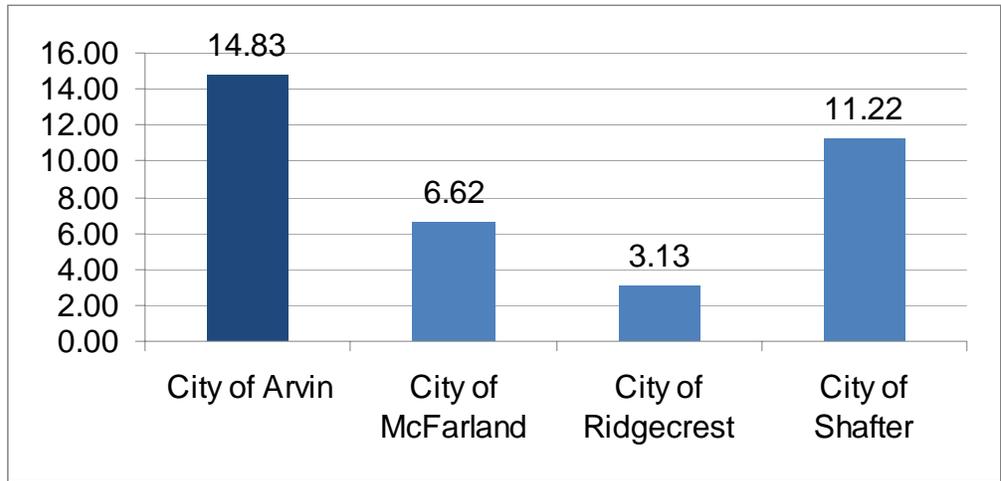


Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

Another measure of transit service effectiveness, Passengers/Vehicle Service Hour, indicates, on average, how many passengers are transported for each mile the vehicle is in service. At 14.83, Arvin Transit carried the most Passengers/Vehicle Service Hour reporting an indicator more than 68 percent above the peer average and the most effective of

the peer group. This can be attributed to Arvin’s low VSH (7,065) and high ridership (104,742). By contrast, the City of Ridgecrest’s transit program transported the least passengers per hour due to high VSH (12,915) and low ridership (40,374).

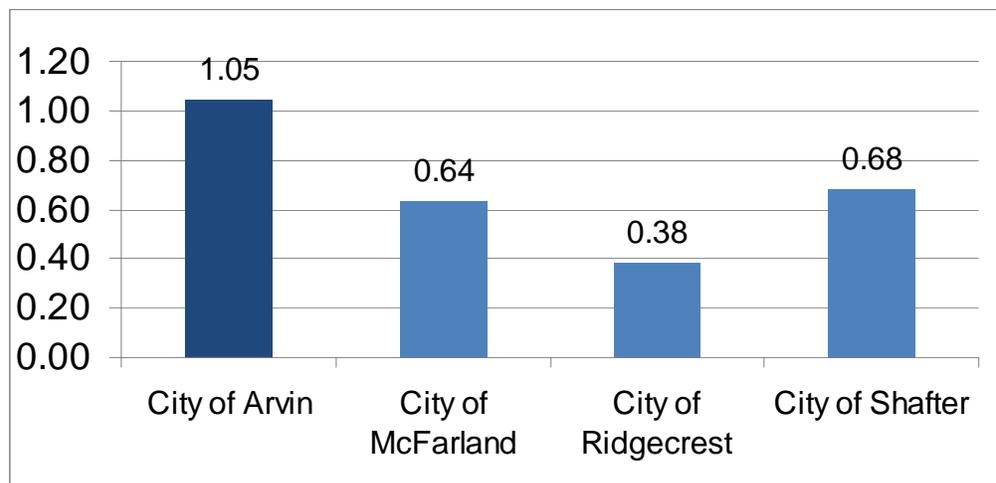
Exhibit 5-6 Passengers/Vehicle Service Hour



Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

At 1.05, Arvin Transit again reported the highest value for this indicator in another measurement of service effectiveness, Passengers/Vehicle Service Mile. The City’s prior Transit Development Plan set a standard of 0.9 Passengers/Vehicle Service Mile. Given the service exceeds the standard, we recommend the standard be raised to 1.15 Passengers/VSM. None of the peers were close to Arvin’s figure. The City of Ridgecrest reported the lowest value (0.38 Passengers/VSM).

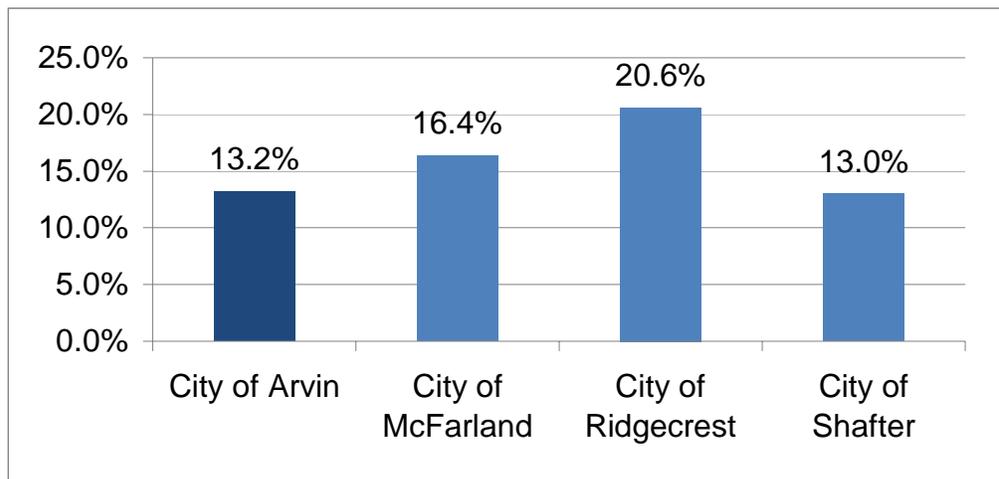
Exhibit 5-7 Passengers/Vehicle Service Mile



Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

A transit program’s farebox recovery ratio calculates the percentage of operating cost recovered through passenger fares. It is the most common measure of public subsidy of a transit service. Arvin Transit’s farebox recovery was 13.2 percent, 19 percent below the peer average of 15.8 percent. The City’s prior Transit Development Plan set a benchmark of 15 percent. As Arvin is below the adopted standard, meeting this standard needs to be a top priority for the City.

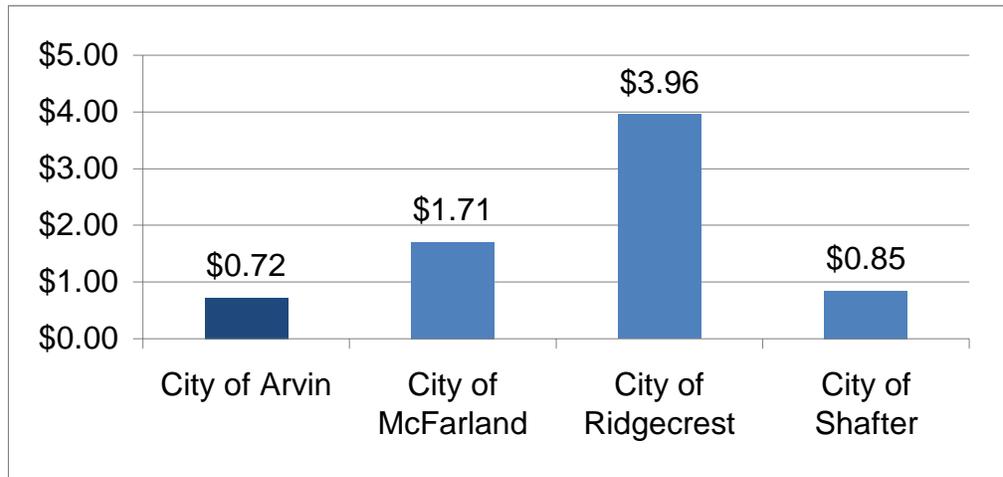
Exhibit 5-8 Farebox Recovery Ratio



Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

Average Fare/Passenger assesses the average fare received per ride once all discounted fare media and free rides have been factored in. Arvin Transit’s average fare is the lowest amongst the peers (66 percent below the peer average of \$0.72). The City of Ridgecrest’s relatively high performance can be attributed in part to its demand-response service, which has a base fare of \$2.00.

Exhibit 5-9 Average Fare/Passenger



Source: Cities of Arvin, McFarland, Ridgecrest, and Shafter.

# 6.

## SURVEY/OPERATIONS ANALYSIS

## CHAPTER 6 – SURVEY/OPERATIONS ANALYSIS

This chapter presents the findings associated with three separate efforts undertaken by Moore & Associates on behalf of the City of Arvin.

Between February 21 and March 6, 2008, Moore & Associates conducted a ride check onboard Arvin Transit on both the Arvin-Lamont deviated fixed-route service as well as the Taft College service. The purpose of the ride check was to quantify ridership activity at the route and individual stop level. We also analyzed demand-response trip sheets across the same period with the goal of identifying ridership patterns, while quantifying trip denials, no-shows, and cancellations. Finally, our project team distributed both customer and community surveys between February 18 and March 20, 2008.



### Deviated Fixed-Route Ride Check

Moore & Associates provided ride check sheets to the City's Transit Supervisor for completion by deviated fixed-route drivers. The survey covered a two-week period (February 21 to March 6, 2008), and was designed to address several core objectives:

- Identifying common boarding and alighting points,
- Peak runs,
- Assess productivity at the individual bus stop level, and
- Quantify no-shows and cancellations.

Drivers used the ride check sheets to record boarding and alighting activity at each designated bus stop as well as stops made during route deviations. The data was imported into Microsoft Excel, and total boardings and alightings were calculated and assigned according to route, stop, and run. These counts supported the creation of a clear picture of ridership patterns.

Critical to the evaluation process is the separation by individual run. This accurately segregates the route into distinguishable day-parts, showing where riders want to go and when they wish to travel.

The ride check revealed the third scheduled run of the day garnered the highest share of boardings (24.6 percent), followed closely by the fourth run (23.2 percent). Boarding activity follows a clear trend, with ridership on each run increasing from the first through third runs, before declining on the fourth and fifth runs.

The third run also garnered the highest share of total alightings on the Arvin-Lamont route during the survey period (25.7 percent). This was followed closely by the fourth run, which garnered nearly 24 percent of the daily alighting activity. The following table illustrates Arvin-Lamont route productivity by run.

Exhibit 6-1 Boarding and Alighting by Run

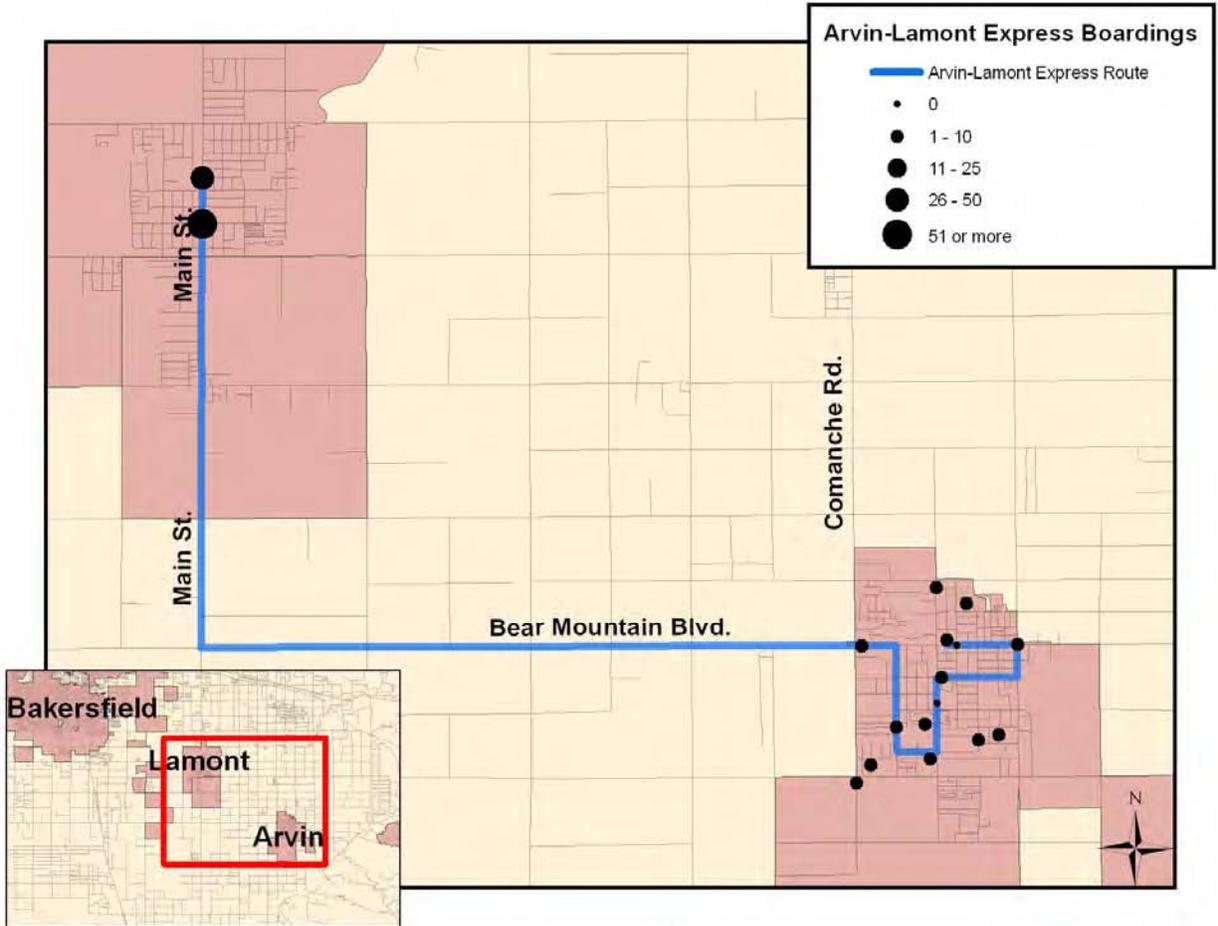
	Boarding	Alighting	Percent Boarding	Percent Alighting
1st Run	167	139	15.8%	12.8%
2nd Run	221	241	20.8%	22.2%
3rd Run	261	280	24.6%	25.7%
4th Run	246	258	23.2%	23.7%
5th Run	165	170	15.6%	15.6%
Total	1,060	1,088	100%	100%

Source: Deviated fixed-route ride check sheets.

The first run of the day on the Arvin-Lamont route is an express run, offering only limited-stop service between the two communities. All boarding activity in Lamont occurred at two stops (each with more than 21 boardings across the survey period) – the County Fair Market and Garcia’s Market – both located on Main Street. This pattern is due likely to the demand for home-to-work travel for those living in Lamont and working in

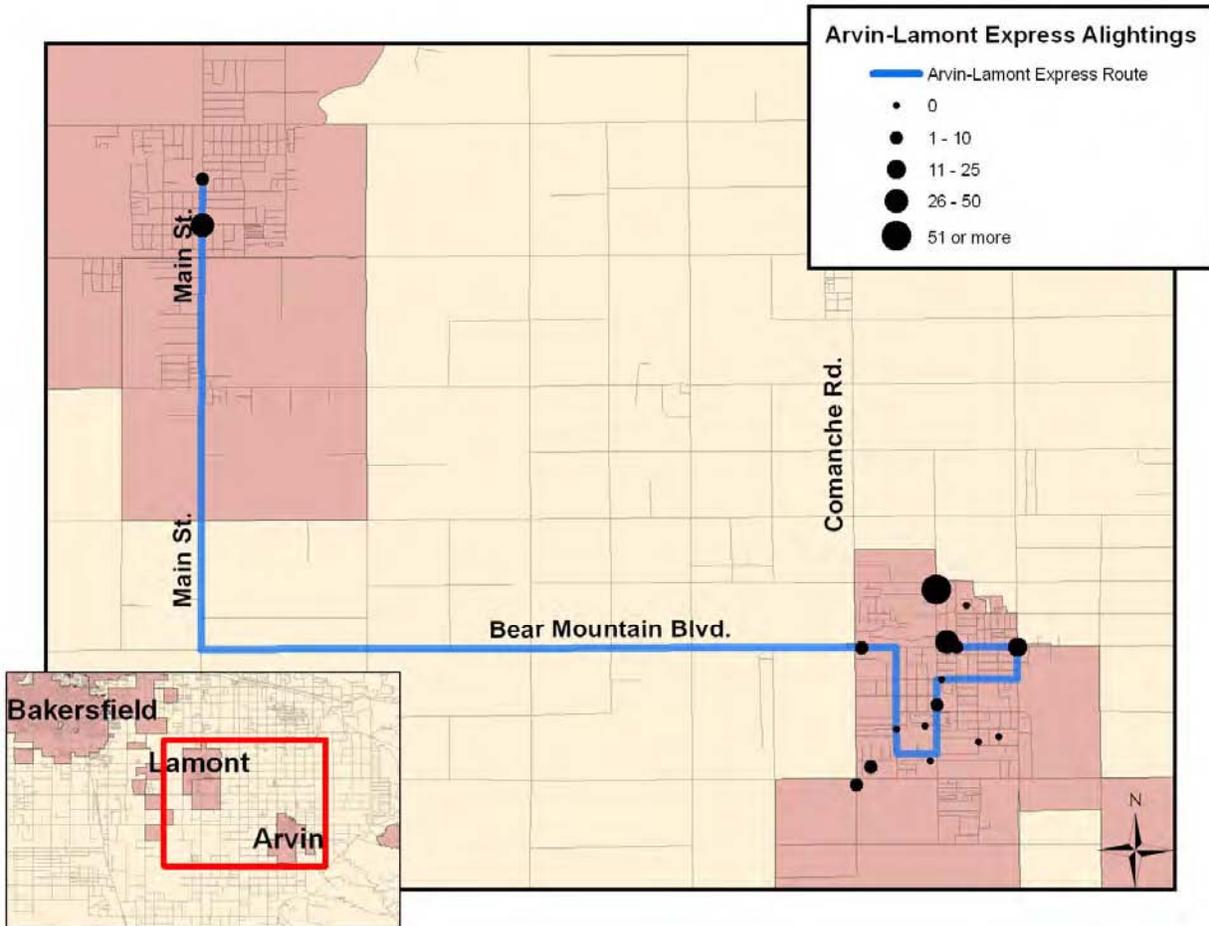
Arvin. A modest number of riders boarded the express run in Arvin (less than 10 per stop across the survey period), likely due to the time of day.

Exhibit 6-2 Arvin-Lamont Express Boardings



Most alightings occurred at one of three stops located within Arvin: Arvin Congressional Church, Mexican Market, and Arvin Transportation Department, the first two of which are located on Bear Mountain Boulevard. Given the central location of these stops within the city and the services time of operation, it is difficult to assume the purpose of the trips being made on this express run.

Exhibit 6-3 Arvin-Lamont Express Alightings

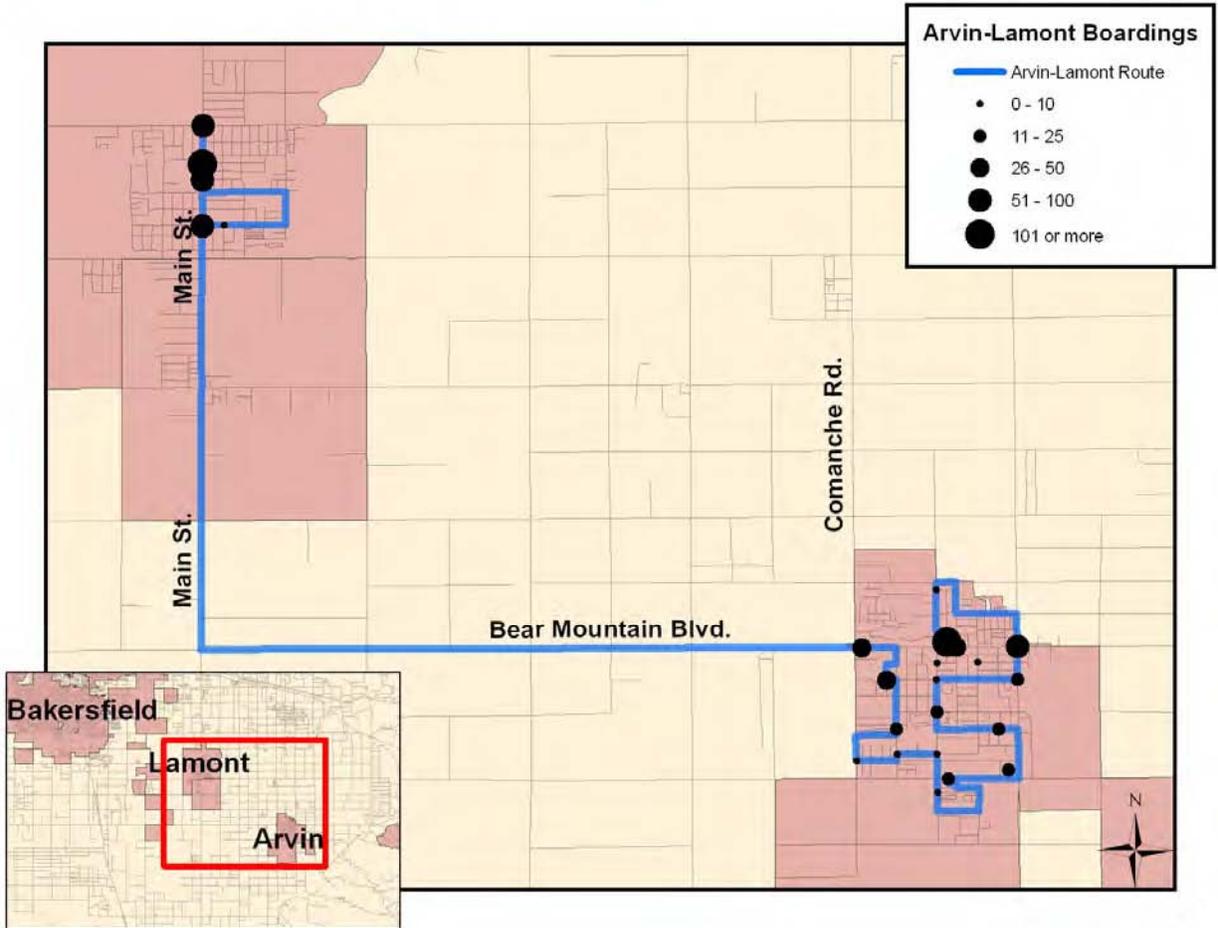


Following the first express run, the Arvin-Lamont service reverts from a limited-stop service to its normal operating structure. Subsequent runs experienced significantly higher ridership at the individual stop level as well as more evenly distributed activity overall. Unlike the limited stop service offered by the first run of the day, subsequent runs served more riders boarding at a greater number of stops in both Arvin and Lamont. Top boarding locations in Lamont include the County Fair Market and Dollar Tree, both located on Main Street. Common trip origins in Arvin include the Transportation Department and the Sierra Vista Clinic. These trips/runs appear to be used



primarily for local travel within the individual communities, as well as return trips between Arvin and Lamont in the afternoon.

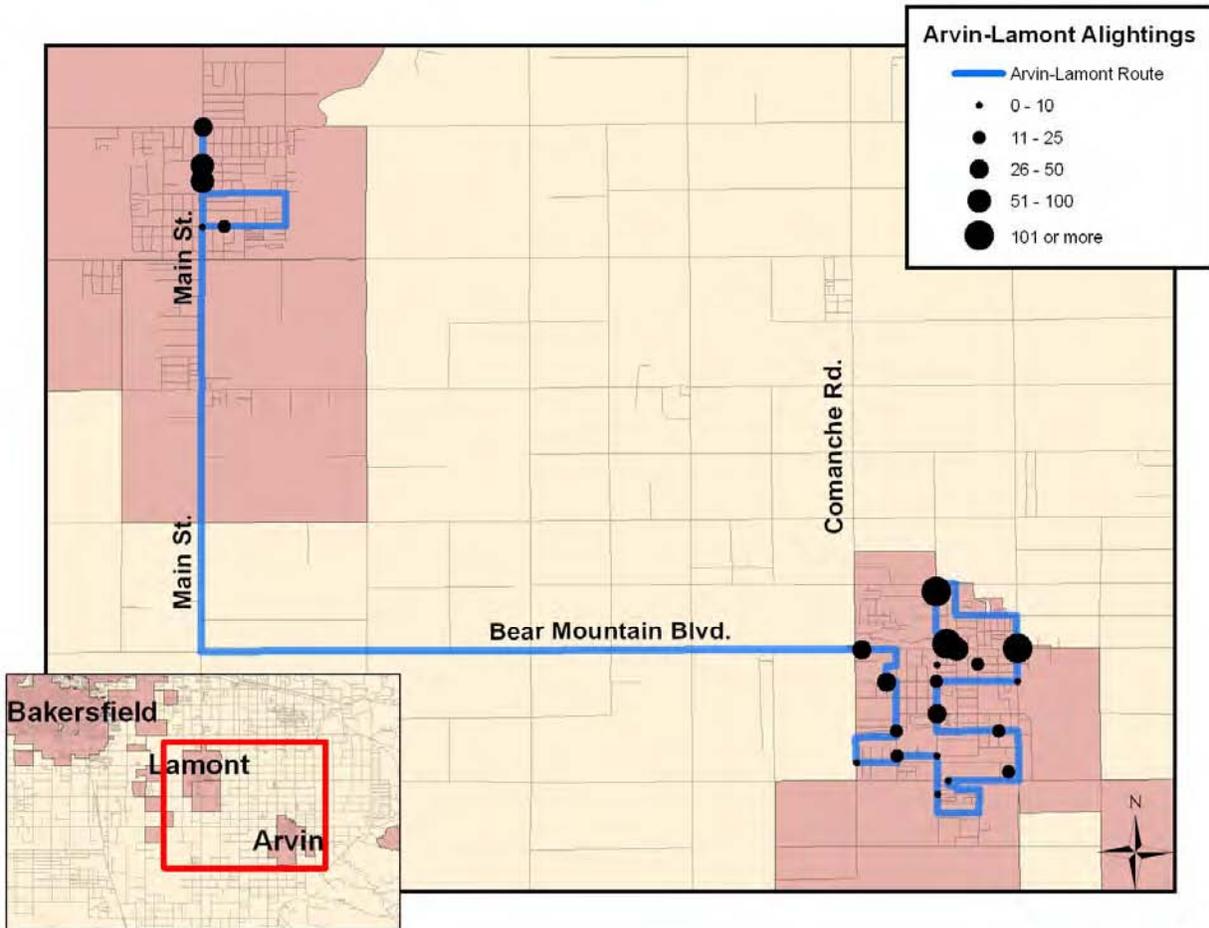
Exhibit 6-4 Arvin-Lamont Boardings



Most alightings in Lamont occurred at Dollar Tree and the County Fair Market, both located on Main Street. Both are located in close proximity to other popular trip generators, including the Kern County Public Health Department, Lamont Elementary School, and S&S Mart. The Arvin Congressional Church on Bear Mountain Boulevard was another location with significant alighting activity. Most alightings in Arvin was clustered in the central and northern portions of the city.



Exhibit 6-5 Arvin-Lamont Alightings



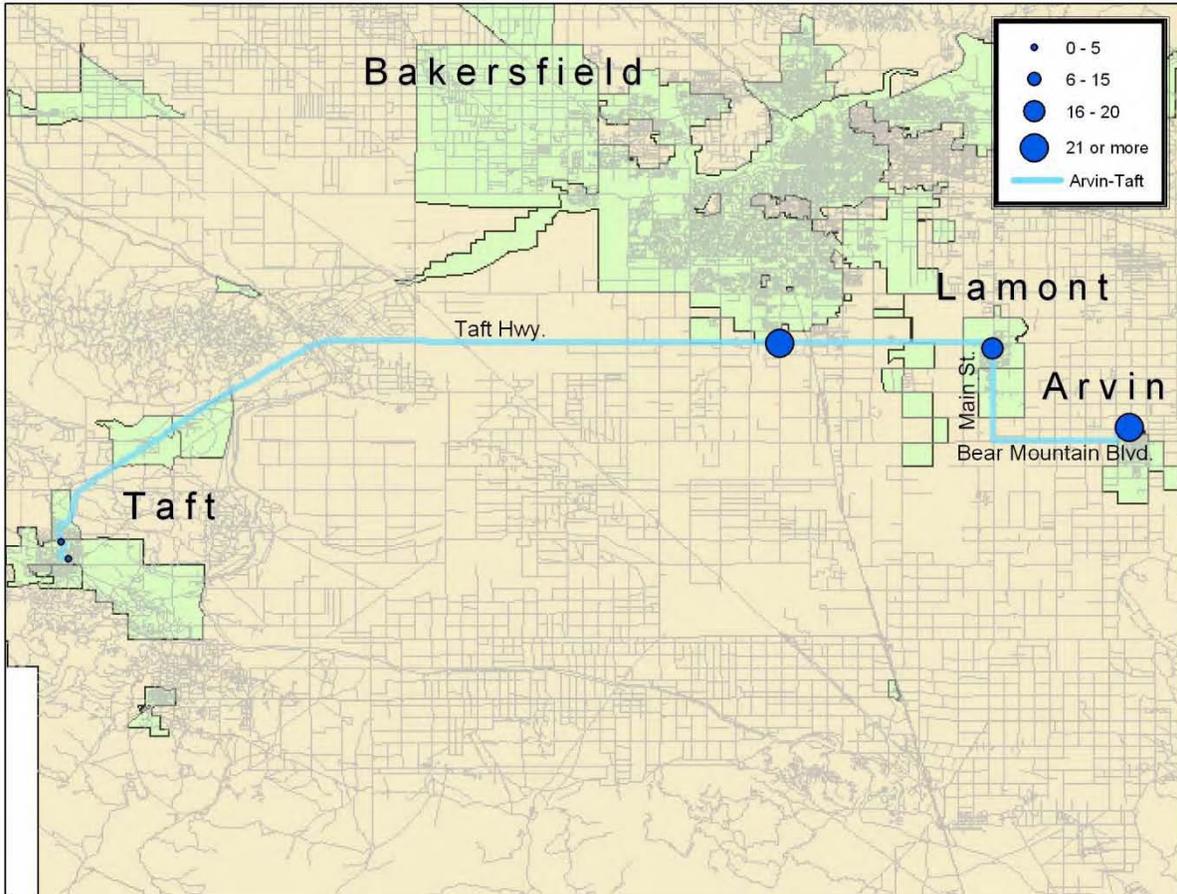
Arvin Transit features a route between Arvin, Lamont, and Taft College. This route operates on Monday through Thursday evenings during Taft College’s academic year (September to May). The service is offered to Taft College students



only. The route departs Arvin High School at 4:40 p.m., arriving at Taft College at 6:00 p.m. The return trip leaves Taft College between 9:00 and 9:30 p.m. and arrives back in Arvin between 10:15 and 10:30 p.m. The City uses a 15-passenger wheelchair non-accessible van for the service. Taft College subsidizes the service at a rate of five dollars/student rider.

All boarding activity on the Arvin-Taft trip occurred at three stops: Arvin High School, Apple Market in Lamont, and the intersection of Taft Highway and Wible Road, south of Bakersfield.

Exhibit 6-6 Westbound Boardings



Nearly all alighting activity on the Arvin-Taft trip occurred at two stops: Taft College and Taft Vocational School.

All boarding activity on the Taft-Arvin return trip occurred at Taft College and Taft Vocational School.

Exhibit 6-7 Westbound Alightings

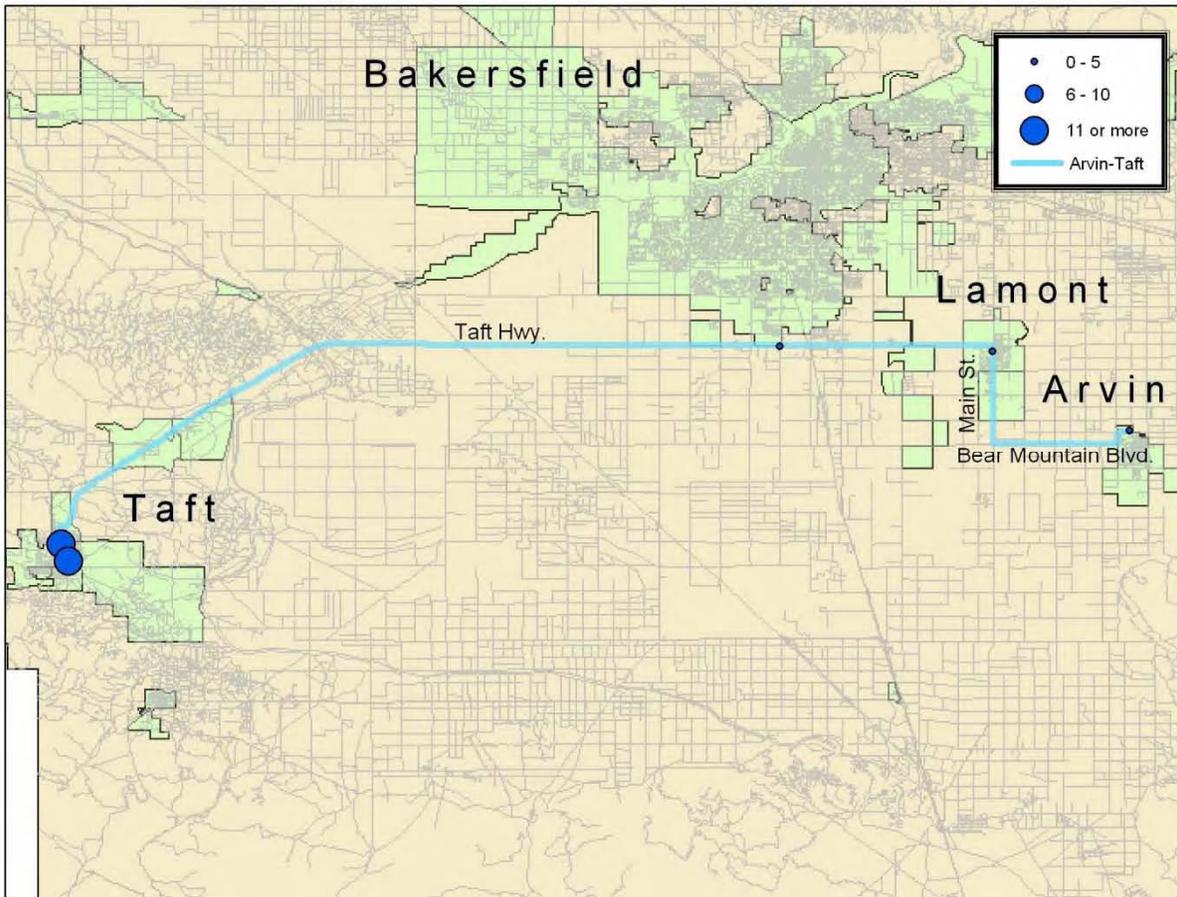
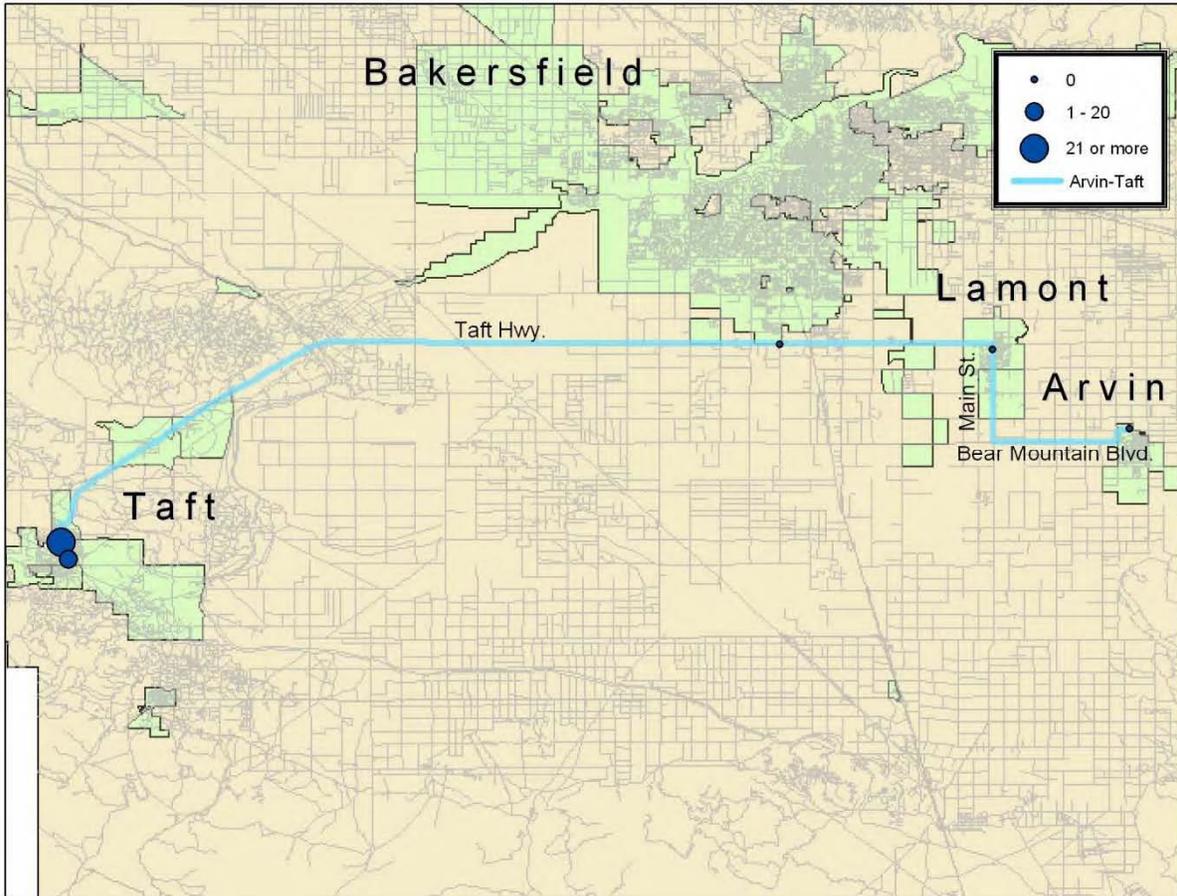
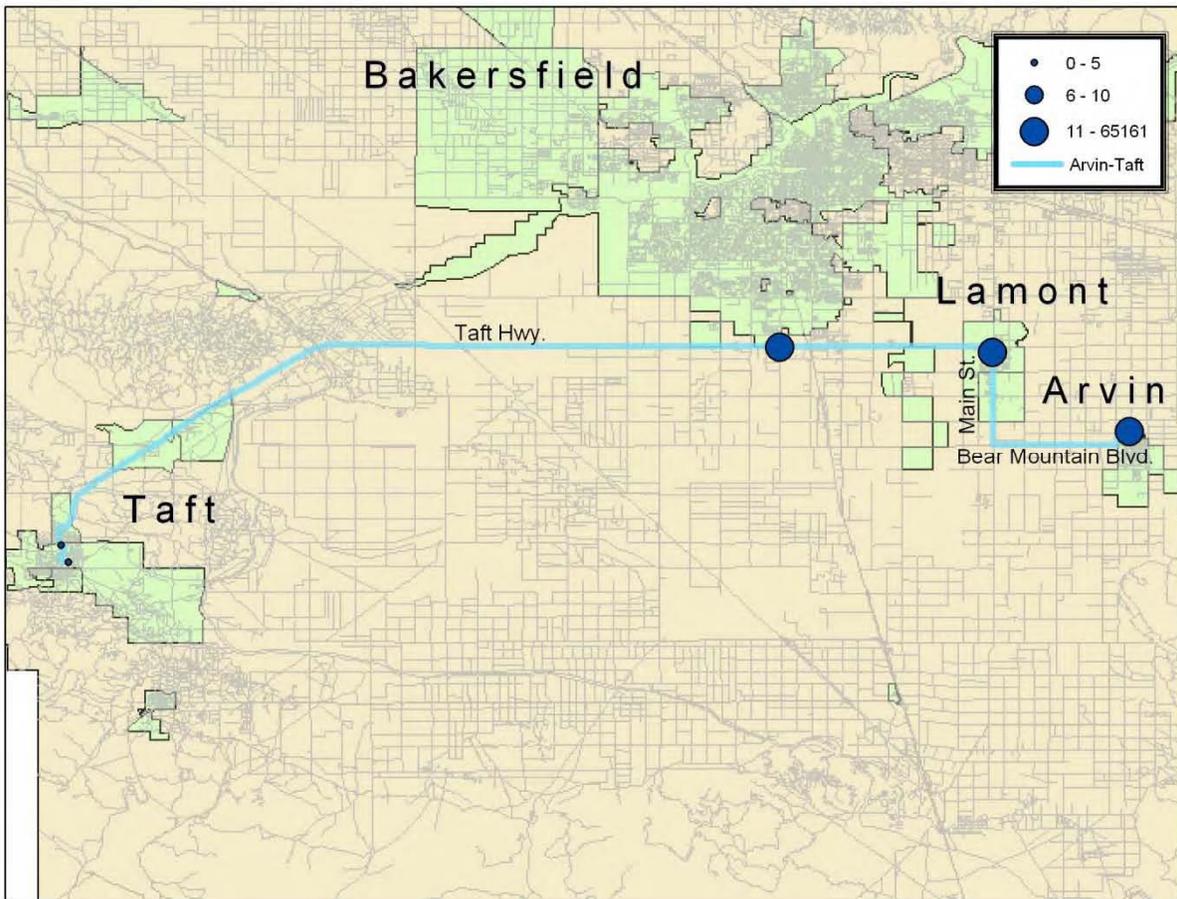


Exhibit 6-8 Eastbound Boardings



All alighting activity on the Arvin-Taft trip occurred at three stops: Arvin High School, Apple Market in Lamont, and the intersection of Taft Highway and Wible Road, south of Bakersfield.

Exhibit 6-9 Eastbound Alightings



### Demand-Response

Moore & Associates completed a review of the City of Arvin’s demand-response trip sheets between February 21 and March 6, 2008. This review reflects a 100-percent sampling of trips throughout the stipulated period. We entered information for both pick-ups and drop-offs (i.e., location); and recorded all cancellations, no-shows, and service/operating variances.

### Frequent Trip Destinations

Like many public transit services, many of Arvin’s origin and destination pairings are predictable. More than 1,400 one-way trips were made across the evaluation period, and Arvin Ranch Market was the top origin-destination pairing (other than the Arvin Transportation Department, which despite being listed as a common origin, was never listed as a destination) with 167 total trips. The Arvin Ranch Market is not a surprising origin-destination pairing given it is one of only a handful of markets located within Arvin city limits. Located along Bear Mountain Boulevard, roughly halfway between Comanche Drive and Derby Street, its popularity can be attributed to its central location. Given the relative size of Arvin, the Arvin Ranch Market offers easy access to other destinations along Bear Mountain Boulevard, Arvin’s chief thoroughfare.



Healthcare facilities were the second most-frequently cited origin-destination pairing with 5.6 percent of trips beginning or ending at the Arvin Community Health Center. This facility – also located on Bear Mountain Boulevard – is one of the first significant trip generators for travelers entering Arvin from the west.



La Mexicana Market was the third most-popular origin-destination pairing (2.7 percent). Located on the east end of Bear Mountain Boulevard, it is adjacent to popular trip generators including the H&S FoodMart, 98 Cent Penny Bargain Store, and New Life Church of God.

More than 16 percent of trips included destinations on Bear Mountain Boulevard, equating to 372 trips overall. Nearly all trips were spread across the length of the street, ranging from address number 201 to 1305.

The following tables reveal “common” origins which were less spread out than destinations as driver trip-sheets reveal most riders originated at the Arvin Transportation Department. Residence

Exhibit 6-10 Common Trip Origins for Demand-Response

Address	Landmark	Frequency
165 Plum Tree Dr.	Transit Center	235
1305 Bear Mountain Blvd.	Arvin Community Health Center	44
801 Schipper St.	Circle M Mobile Village	34
1001 Walnut Dr.	Residence	31
201 Bear Mountain Blvd.	La Mexicana Market	23
600 Bear Mountain Blvd.	Arvin Ranch Market	21
1301 Haven Dr.	Casa De La Palma Blanca Apartment	19
1410 Hood St.	Arvin Apartments	14
805 Jess St.	Residence	12
372 Laurel Ave.	Residence	12

Source: Demand-response driver trip sheets.

Exhibit 6-11 Common Trip Destinations for Demand-Response

Address	Landmark	Frequency
600 Bear Mountain Blvd.	Arvin Ranch Market	146
900 Varsity Rd.	Arvin High School	118
1305 Bear Mountain Blvd.	Arvin Community Health Center	106
201 Bear Mountain Blvd.	La Mexicana Market	54
500 Bear Mountain Blvd.	Bank of America	35
505 Bear Mountain Blvd.	Bear Mountain Drug	31
801 Schipper St.	Circle M Mobile Village	24
1301 Haven Dr.	Casa De La Palma Blanca Apartments	20
1111 Bush St.	Primeros Pasos Head Start	19
1501 Hood St.	Bear Mountain Elementary School	17

Source: Demand-response driver trip sheets.

To facilitate our analysis, demand-response ridership activity was segregated into five day-parts:

- 7:00 a.m. to 9:00 a.m. (early morning),
- 9:01 a.m. to 11:00 p.m. (late morning),
- 11:01 p.m. to 1:00 p.m. (early afternoon), and
- 1:01 p.m. to 3:30 p.m. (late afternoon).

Our analysis revealed ridership activity on the City’s demand-response service peaked between 11:01 a.m. and 1:00 p.m. This “early afternoon” day-part experienced on average 30 percent of all boardings and alightings. The next highest period, the “early morning” day-part, had 29.5 percent of all trips. Ridership activity during the “late afternoon” day-part decreased slightly. The least productive period was the “early morning” day-part, during which 17.8 percent of ridership occurred. The following exhibit illustrates the trips by day-part.

Exhibit 6-12 Frequency by Day-Part

	Frequency	Percentage
7:00 a.m. - 9:00 a.m.	255	17.8%
9:01 a.m. - 11:00 a.m.	422	29.5%
11:01 a.m. - 1:00 p.m.	429	30.0%
1:01 p.m. - 3:30 p.m.	324	22.7%
Total	1,430	100%

Source: Demand-response driver trip sheets.

### Trip Denials

The incidence of trip denials has not been an issue given modest ridership and ready vehicle availability. The only trip denials noted during the evaluation period were due to requests outside service hours or coverage area. The Performance Measurement System set a standard of no more than one percent of total monthly trip requests. But given lack of recorded data an exact number could not be calculated.

### Cancellations and No-Shows

Typically, trip cancellations are classified within two categories. A “standard” cancellation is assigned when at least two hours-notice is provided. By contrast, a “late” cancellation is assigned when a less than two hour-notice is provided. Any cancellation made two hours or less prior to the scheduled pick-up time is considered an “insufficient cancellation.” The City also tracks the incidence of patron “no-shows.” A “no-show” is assigned when a client is not at the designated pick up location, or is not present upon vehicle arrival. Trip cancellations made on-time do not negatively impact service performance. The incidence of “no-shows” during the two-week evaluation period equaled 7.7 percent of total trips, while cancellations amounted to 0.2 percent.

The greatest incidence of “no-shows” occurred on Wednesday, March 5, 2008 when 28 were recorded. We recommend the City initiate outreach with its demand-response customers to communicate the impact of both patron no-shows and trip cancellations. Resolution of the “no-show” issue

could prove to be the single-most important means of increasing demand-response service productivity.

Exhibit 6-13 Cancellations and No-Shows by Day

	Cancelled	No Show
2.21.2008	0	12
2.22.2008	0	13
2.25.2008	1	9
2.26.2008	0	5
2.27.2008	1	9
2.28.2008	1	7
3.03.2008	0	14
3.04.2008	0	13
3.05.2008	0	28
Total	3	110

Source: Demand-response driver trip sheets.

No-shows by day-part parallel overall ridership patterns, peaking in the “early afternoon” period and declining in the “late afternoon” day-part.

Exhibit 6-14 Cancellations and No-Shows by Day-Part

	Cancelled	No Show
7:00 a.m. - 9:00 a.m.	0	8
9:01 a.m. - 11:00 a.m.	1	28
11:01 a.m. - 1:00 p.m.	1	41
1:01 p.m. - 3:30 p.m.	1	28
Total	3	105

Source: Demand-response driver trip sheets.

\*Discrepancy in totals reflects incomplete data.

### Community Survey

As part of the TDP process, Moore & Associates developed a direct mail survey for Arvin Transit patrons. A community survey was also mailed to 1,850 households; distributed across five separate mailings starting February 18, 2008 and ending March 20, 2008. Four of the mailings were direct mail while one was distributed via the Dolores Huerta Foundation on March 26, 2008, of which none were returned. All surveys

were bilingual and included a response incentive, offering \$100, \$50, and \$25 gift certificates for the Arvin Ranch Market. The survey was split up into two parts: the first for those who had ridden Arvin Transit in the last 12 months and the second part for those who had not. A sample size of 206 community surveys and 160 rider surveys was obtained translating to an 11 percent return. This is typically viewed as a numerically small return. A primary reason could be a low literacy rate among residents living in Arvin.

Once the data collection stage was complete, the survey data was imported into our firm's Statistical Package for the Social Sciences (SPSS) software. The raw survey data was then cleaned and coded, facilitating reporting of simple frequencies as well as relationships (i.e., cross-tabulations) between individual data sets. Next, a series of conclusions and recommendations was developed.

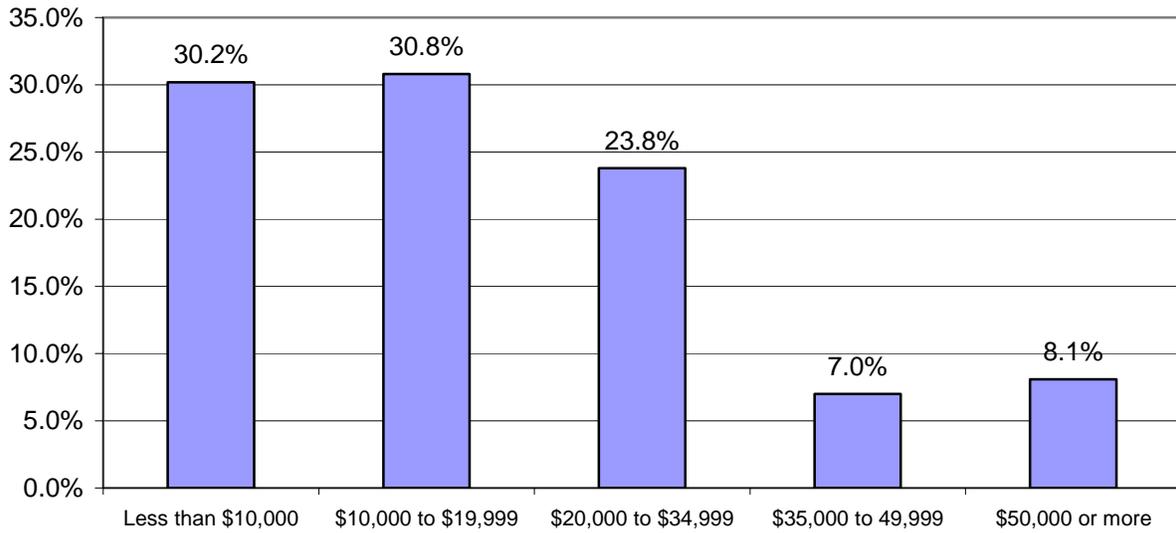
Despite receiving only 206 valid community surveys, certain conclusions can be drawn regarding community opinion about Arvin Transit and its services.

#### Demographic Information

Most survey respondents were female (61.2 percent) age 23 to 34 (47.7 percent), and were employed full-time (36.3 percent). The city's gender split is 52.6 percent in favor of males.

Most respondents (30.8 percent) indicated an annual household income of \$10,000 to \$19,000. Only a small percentage (8.1 percent) cited a household income of more than \$50,000 annually. This is consistent with 2000 Census data in which annual income of 52.6 percent of households is less than \$25,000.

Exhibit 6-15 Household Income



Source: Community survey data.

Most respondents (60.9 percent) indicated having access to a personal vehicle. When asked if they were in possession of a valid driver license 51.4 percent answered affirmatively. More than 48 percent indicated having access to both a vehicle and a valid driver license. This indicates a moderate level of ride-dependency among respondents to the community survey.

Exhibit 6-16 Ride-Dependency

Driver License	Vehicle Access	
	Yes	No
Yes	48.2%	4.5%
No	2.8%	5.7%

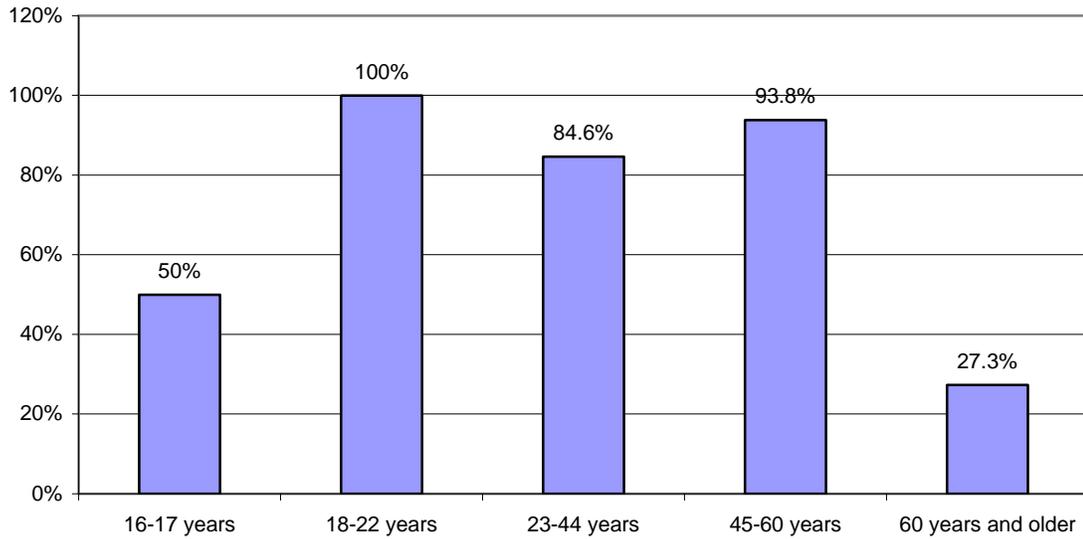
Source: Community survey data.

### General Awareness

In order for a person to select public transit as a travel alternative, he or she must first be aware of its availability. Slightly more than 84 percent of those persons surveyed indicated an awareness of Arvin Transit and/or its services. This relatively high level of awareness is not surprising given the modest size of the Arvin Transit's service area.

Exhibit 6-17 illustrates a cross-tabulation between awareness and respondent age. A diverse level of awareness regarding Arvin's public transit exists among the age categories. Respondents in the age 18 to 22 category exhibited the highest awareness (100 percent). Those respondents within the age 60 and older age category reflected the lowest level of awareness (27.3 percent). This lack of awareness among older residents is a serious point of concern. This demographic typically benefits the most from public transit as it translates into increased freedom and independence not normally available absent a personal vehicle.

Exhibit 6-17 Awareness by Age Group

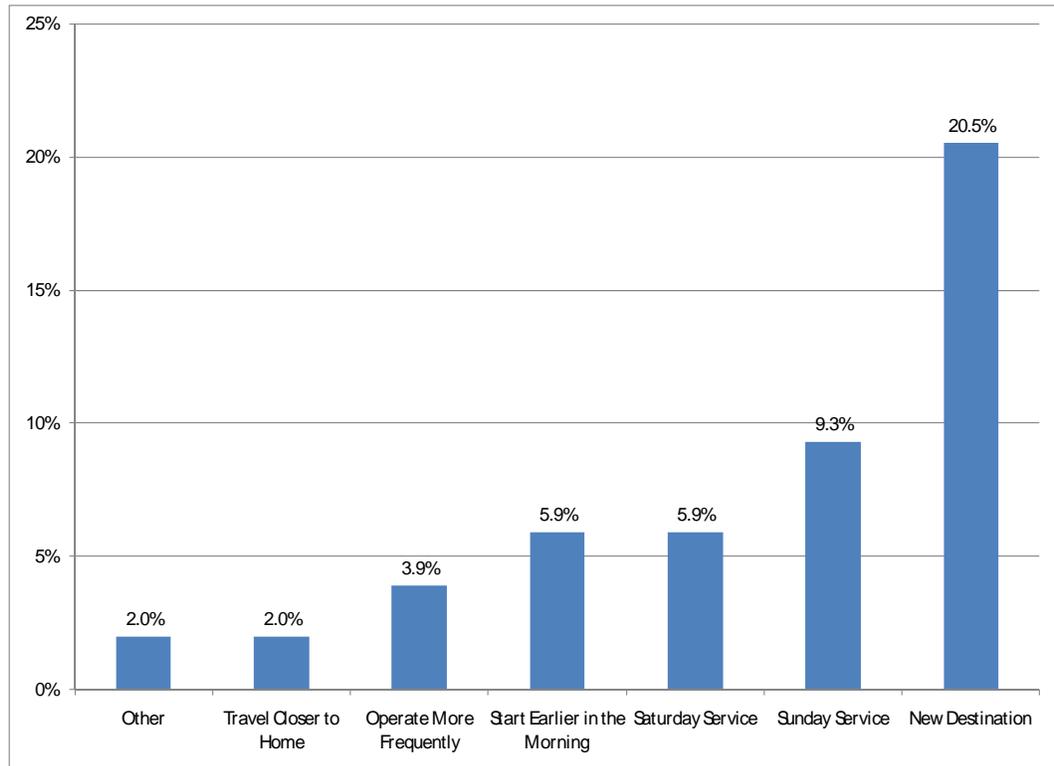


Source: Community survey data.

This finding also reveals an appreciable percentage (15.8 percent) of residents who remain unaware of the service, which a targeted marketing effort could address.

Of those residents not utilizing the service, 69 percent expressed a desire for improved service. The most popular service enhancement was “new destination” (20.5 percent) defined as one not currently served. “Sunday service” (9.3 percent) was second-ranked, followed by “Saturday service” (5.9 percent).

Exhibit 6-18 Preferred Service Improvements

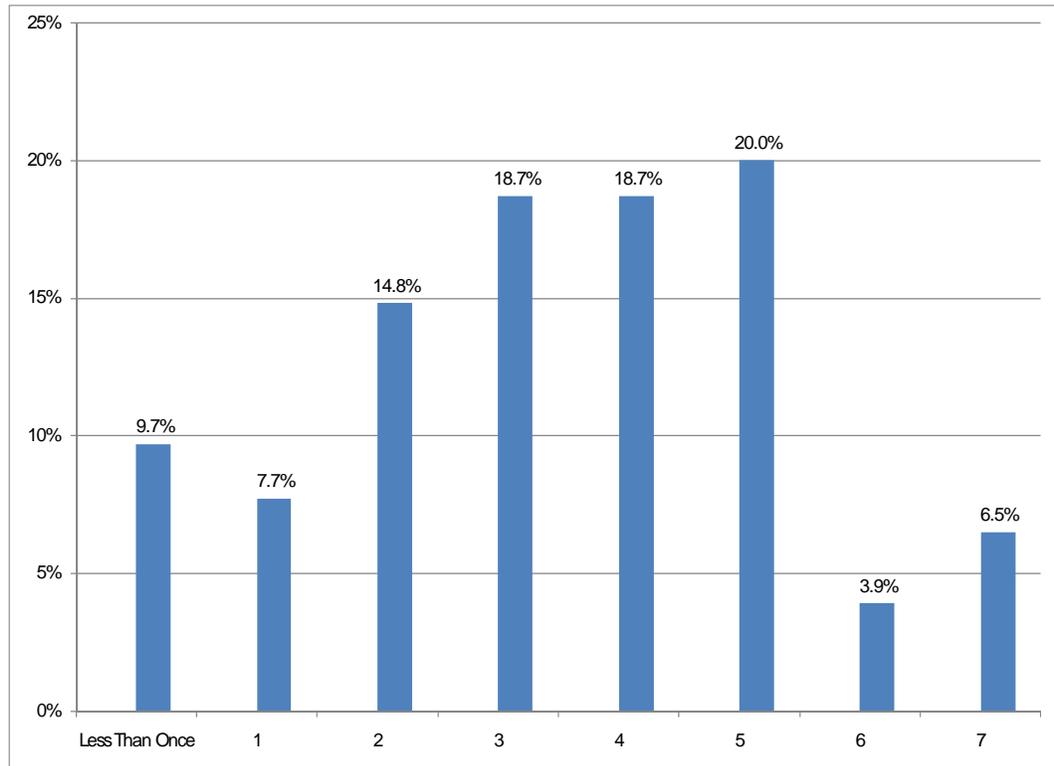


Source: Community survey data.

To assess rider perceptions, survey participants were first asked how they would rate the transit service on a scale of 1 to 5, wherein one represents *Excellent* and five represents *Poor*. Our analysis revealed a mean (average) score of 1.54 translating to *Good/Excellent*. This finding is positive but could be due to Arvin Transit’s ride-dependant.

Patrons were then asked how often they ride Arvin Transit in a typical week. The data reveals 67.8 percent of respondents ride three or more times each week.

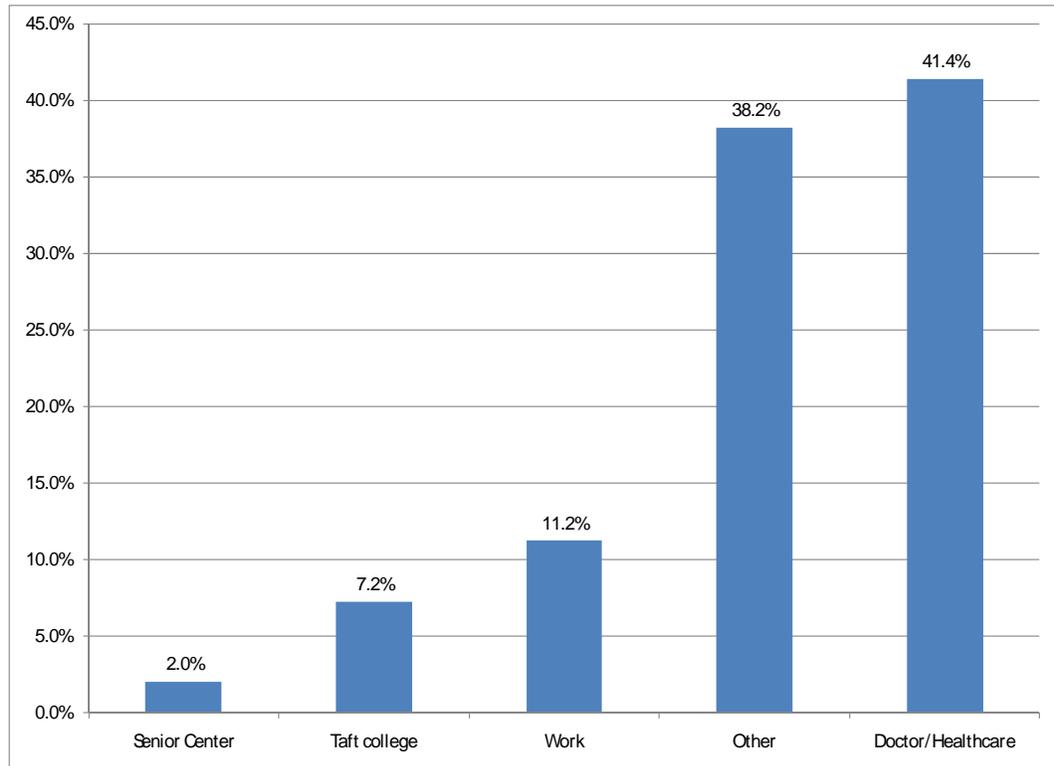
Exhibit 6-19 Frequency of Use (Per Week)



Source: Community survey data.

Riders were then asked to identify the reason they typically ride Arvin Transit. The single-greatest response was *Doctor/Healthcare* (41.4 percent) as primary trip motivator. This is consistent with the finding that many trip origins and destinations were at or near the Arvin Community Health Center (5.6 percent of origin-destination pairings). The small percentage (7.2) of persons citing Taft College mirrors the total ridership of the service compared to the deviated fixed-route and demand-response services.

Exhibit 6-20 Most Frequency Destination/Trip Purpose



Source: Community survey data.

Respondents expressing awareness of Arvin Transit but not presently riding compose a demographic key to ridership growth. Arvin Transit has failed to capture an appreciable share of the “choice rider” population within its service area. This market segment is vital to sustainable ridership and may be persuaded to mode-shift should Arvin’s services be improved and/or modified to better suit resident travel needs. As “choice riders” are more reluctant to mode-shift, services must be perceived as being on a par with competing modes in terms of reliability, flexibility, and cost. This group also positively impacts fare revenue as they tend to pay the full fare.

Page Intentionally Blank

# 7

7. RECOMMENDATIONS

## CHAPTER 7 – RECOMMENDATIONS

In crafting the following recommendations, Moore & Associates drew upon community input, our service evaluation, peer review, site visits, ride checks, and discussions with City and Kern COG staff.

No TDA Article 8 Unmet Needs were identified in 2006 and 2007. In summary, we sought to develop strategies for optimizing existing resources as well as present practical recommendations for sustainable service development.

### Operational Recommendations

#### Fixed-Route Service

The City Manager, Finance Director, and Transit Supervisor indicated interest in establishing a fixed-route service to complement the service to Lamont and reduce demand from the general public on the City's demand-response service. Based on data presented in previous chapters, we recommend implementing a fixed-route alignment traveling along the city's periphery running on a 30-minute headway. The weekday service would depart from the Transportation Department on Plum Tree Drive and travel north to Varsity Road. It would then travel west to Comanche Drive, turn south, then east on Sycamore Road. Finally, the bus would travel north on Derby Street, west on Fifth Avenue, and north on Hill Street before returning to Varsity Road. The service would operate between 7:00 a.m. and 5:30 p.m. We recommend implementing this in the first half of FY 2008/09.

Should this service prove effective and popular, we would then recommend a bi-directional fixed-route running on 30-minute headway. In addition to the first bus, a second bus would depart the Transportation Department and travel south on Derby Street,

tracing the first alignment in reverse. Given Arvin's size, this alignment provides "walkable" access to all parts of the city. Bi-directional service increases the service's attractiveness and reliability, and this would also fulfill non-riders requests for additional stops not being served by the deviated fixed-route.

#### Increase Service Hours

Based on findings from the ride check as well as the community and customer surveys, Moore & Associates recommends extending both the service day and the service week on a three-month trial basis. We propose extending weekday service hours on the Lamont and demand-response services from 3:00 p.m. to 6:00 p.m., giving travelers an opportunity to utilize Arvin Transit should their work day end after 3:00 p.m. We also recommend introducing Saturday service from 9:00 a.m. to 3:00 p.m. Our surveys suggest this will have a significant positive impact on ridership and therefore, farebox revenue. The City should use the trial period to assess success in order to quantify the service's true cost and benefit. Our surveys suggest this will not only benefit current riders, but will attract new riders who seek to use the service in the evening and on Saturday. Given recent fuel cost trends, targeted service enhancements could attract new riders looking for more cost-effective means of transportation than the personal automobile.

The following exhibit illustrates increased farebox recovery as a result of extending the service hours and adding Saturday service. The exhibit uses FY 2006/07 Operating Cost/VSH (\$105.31) to calculate the change in Operating Cost. It assumes the service adjustment will be implemented in the first half of FY 2008/09 and that FY 2007/08 operating budget and fare revenue reflect actual performance. The table also assumes the rate of inflation is forecast at no greater than three percent/annum and that after

implementation ridership would increase not less than seven percent/annum after implementation.

#### Exhibit 7-1 Extended Service Hours

	Operating Cost	Passengers	Fare Revenue	Farebox
2006/07	\$568,971	104,742	\$75,298	13.2%
2007/08	\$529,414	107,884	\$79,063	14.9%
2008/09	\$626,165	111,121	\$81,435	13.0%
2009/10	\$644,950	118,899	\$87,135	13.5%
2010/11	\$664,298	127,222	\$93,235	14.0%
2011/12	\$684,227	136,128	\$99,761	14.6%

#### Arvin-Taft College Cost/Benefit Analysis

Based on client meetings and analysis of data collected as part of the TDP process, we recommend the City conduct a true cost-analysis of the Taft College service, specifically operating cost and college provided subsidy. We believe the City is spending a disproportionate amount of its operating funds on this service. While providing an important link for Arvin residents enrolled at Taft College, the cost associated with the service is precluding the possible introduction of transit services which could benefit the Arvin community at-large. We recommend replacing the service with a vanpool program. Although this is an important mobility link, we feel Taft College would be better served by a vanpool, widely regarded as one of the most cost-effective means of transportation. We believe a vanpool would be especially well-suited as the ride check revealed the ridership activity only occurs at one location in Arvin, one in Lamont, one south of Bakersfield, and two in Taft. Vanpools have proved successful in California communities where/when trips are highly focused within locations. The service could be covered by the students who use the service and could increase the sense of ownership the students have towards it. The City may be able to obtain a grant for the capital purchase.

Moore & Associates, in discussions with City and COG staff, as well as former Bakersfield College President Dr. William Andrews also explored the possibility of taking student from Arvin and Lamont to the College or holding college classes at Arvin High School. We recommend the parties continue discussion on the matter as it could further educational opportunities as well as improve the service offerings of the City.

#### Tejon Ranch Vanpool

Based on our analysis of home-to-work travel patterns within the sub-region, we recommend implementing a vanpool between Arvin and Tejon Ranch. This will provide effective home-to-work travel for those employed in and around this area. We recommend the City work with Kern COG in developing such a program.

### Policy/Administrative Recommendations

#### Fare Adjustment

Based on historic operating data, the need for an improved farebox recovery standard is of the utmost importance. To meet the TDA-mandated farebox recovery ratio, we recommend the City of Arvin adjust the current fare structure. We propose a fare adjustment of twenty-five cents on the City's general public service to Lamont to raise the single-ride cash fare to \$1.50. We also recommend a fare adjustment on the demand-response service (raising single-ride fare to \$1.25) as well as instituting a fixed-route fare (Exhibit 7-3). This would discourage able-bodied riders from using the demand-response service unnecessarily and promote a mode-shift towards the fixed-route service for those trips where the fixed-route service is an option. Given fixed-route service is traditionally less expensive to operate on a per passenger basis, promoting increased use of proposed fixed-route service among able-bodied demand-response riders would reduce the demand-response operating cost.

Exhibit 7-2 Current Fare Structure

Fare Type	Lamont	Demand-Response
General Public	\$1.25	\$1.00
Seniors (62 or Older)	\$0.75	\$0.50
Disabled	\$0.75	\$0.50
Children (3 and Under)	Free	Free

Exhibit 7-3 Proposed Fare Structure

Fare Type	Lamont	Demand-Response	Fixed-Route
General Public	\$1.50	\$1.25*	\$1.00
Seniors (62 and Older)	\$0.75	\$0.50	\$0.60
Disabled	\$0.75	\$0.50	\$0.60
Children (3 and Younger)	Free	Free	Free

*\*Fare will only be available outside of fixed-route operating hours.*

### Demand-Response Eligibility Standards

As part of a transition towards a true fixed-route service, we recommend modifying the eligibility standards for the City’s demand-response program. We propose limiting eligibility to qualified seniors (age 62 and older) and ADA-certified individuals. By restricting use to the aforementioned groups, the program would be able to tailor its service delivery to better suit those populations (i.e., seniors and persons with disabilities) truly unable to utilize a traditional fixed-route service for their daily mobility. Such a move would also reduce demand-response program cost, allowing asset reallocation to the recommended fixed-route service changes. We recommend opening up the demand-response service to the general public outside of fixed-route hours (i.e., evenings, weekends).

The following table illustrates the result of introducing a single periphery fixed-route alignment changing the demand response eligibility, and adjusting the current fare structure to that presented

in Exhibit 7-3. This scenario presented in exhibit 7-4 is based on the following assumptions:

1. The FY 2007/08 operating budget and fare revenue is consistent with actual performance,
2. The rate of inflation is forecast at no greater than three percent/annum,
3. Hiring of two drivers will be made at a salary of \$30,000/driver,
4. Ridership will increase not less than 25 percent in the year of implementation and not less than nine percent/annum subsequently,
5. The cost of implementing a fixed-route service is based on the adopted standard for Operating Cost/VSH (\$50.00), and
6. All service adjustments will be implemented in the first half of FY 2008/09.

Exhibit 7-4 Implementation of Fixed-Route and Fare Adjustment

	Operating Cost	Passengers	Fare Revenue	Farebox
2006/07	\$568,971	104,742	\$75,298	13.2%
2007/08	\$529,414	107,884	\$79,063	14.9%
2008/09	\$726,421	152,791	\$98,829	13.6%
2009/10	\$748,214	166,543	\$107,723	14.4%
2010/11	\$770,660	181,531	\$117,418	15.2%
2011/12	\$793,780	197,869	\$127,986	16.1%

Arvin-Lamont Outreach

Despite the negative impression that goes along with Arvin residents leaving the city to shop elsewhere, Moore & Associates believes the service is beneficial to Arvin residents as well as those in Lamont. Based on current development patterns, Arvin residents need services currently found in Lamont. We recommend initiating a targeted marketing campaign to build the service to Lamont to one that promotes sub-regional mobility. We also recommend

exploring a subsidy for this service provided by Lamont, as they are experiencing a great number of benefits as a result of the service.

#### Management Structure

As documented in the Peer Review, the transit programs operated by the cities of McFarland and Ridgecrest are overseen by the Public Works Department. Arvin's Transit programs currently fall within the purview of the City Manager. This has benefits, such as a direct access to the top, but obvious disadvantages including additional demand on the City Manager, which often results in transit playing "second fiddle" to more pressing matters vital to the day-to-day operation of the City. We recommend altering the structure so the Transit Supervisor reports to the City's Economic Development Department. Doing so would reduce the City Manager's workload and provide transit staff with additional professional development/mentoring opportunities.

#### Transit Manager Training

As part of our site visits and data review, the need for Arvin's Transit Supervisor to receive transit-specific management training was revealed. We recommend enrollment in the Transit & Paratransit Management Certificate Program at the University of the Pacific, which will enhance the level of transit-specific knowledge. Subjects covered include successful management practices, leadership skills, regulations and funding, budgeting and financial management, marketing and customer service, service design and quality management, human resources, and risk management and safety. This will provide the City's Transit Supervisor with those skills necessary to administer daily transit operations as well as contribute to program development.

### Improved Regional Participation

We also recommend the City's Transit Supervisor assume a more active role in the quarterly Transit Advisory Committee (TAC) meetings convened by the Kern Council of Governments. This networking with other Transit Managers working in Kern County is an important professional and program development opportunity.

As a step toward regional cooperation, we recommend forming a joint driver recruitment/training program with other transit programs within Kern County. This could "raise the bar" in terms of the quality of drivers hired and the training they receive.

### Staffing

Throughout the timeline of the project, numerous irregularities were cited by City staff, including the absence of full-time drivers as two were out on workers' compensation and the CNG station being out of operation for over three months. Moore & Associates believes Arvin's Transit Department is understaffed, especially considering the recommended fixed-route service. We propose retaining four full-time drivers: one for demand-response, two for the bi-directional fixed-route service, one for the service to Lamont, as well as an additional relief driver, which could be served by the Transit Supervisor or dispatcher. This staffing arrangement will act as a fail-safe should any more unexpected circumstances arise.

The City of Arvin has received a one-time state Prop 1B allocation of \$73,000. This, combined with the \$40,000 from the Rural Development Fund, totals \$113,000. We recommend using this money for security cameras as well as the acquisition of bus stop amenities (benches, shelters, signage, etc.)