TRANSIT DEVELOPMENT PLAN

For The

YUMA REGIONAL AREA

FINAL REPORT

Yuma Metropolitan Planning Organization

"Local Governments and Citizens Working Together"

TRANSIT DEVELOPMENT PLAN

for the

YUMA REGIONAL AREA

FINAL REPORT

Prepared by the
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December 16, 1993

EXECUTIVE SUMMARY

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I. PREFACE

By initiating public transit in the Yuma area, a new mode of transportation would be provided. As indicated in this report, the potential benefits are apparent, yet -- particularly if federal aid funds are used -- regulations are ominous and costs can be ever-increasing. To minimize the challenges and maximize the potential, the transit industry must be understood. Recognition and continual monitoring of the following characteristics will assist that understanding.

Key Transit Characteristics

- Transit is capital and labor intensive.
- Transit is usually considered a public service and, in most cases, does not pay for itself.
- Transit in Yuma should not be considered as a means to significantly reduce traffic congestion.
- There are many valid reasons for bus operations. A few are:

  (1) Transit serves people without access to a private vehicle, which often includes youth, elderly, disabled, and low income;
  (2) An effective bus system that delivers employees to their place of work may allow an employer to provide less parking spaces; and
  (3) Transit operations are more energy efficient than a car.

- Transit is normally not competitive with the private automobile - in convenience or privacy.
- The transit industry is very regulated, particularly in the use of Federal Transit Administration (FTA) appropriations.
- Federal Transit Administration (FTA) appropriations are now available to the Yuma Urbanized Area in the amount of $1,334,397. To obtain those funds, a dedicated long-term local match must be assured to the FTA.

Steps Necessary to Initiate Public Transit in the Yuma Area
(Not necessarily in any order)

1. Make a commitment to provide public transit. Decide which agency will be the transit sponsor.
2. Decide whether Federal Transit Administration (FTA) appropriations are to be used. If the answer is affirmative, then the sponsor must identify a long-term assured source of local matching funds (for the life of capital equipment), and comply with all FTA regulations.
3. Decide how transit service will be provided. For instance, will the sponsor purchase or lease vehicles and operate and maintain them or, will the sponsor contract with a private firm for those services.
4. Identify funding for capital equipment, operations, storage and maintenance of rolling stock, administration, legal, and marketing.

5. Authorize preparation of Federal Transit Administration (FTA) grants.
6. Establish transit performance criteria for the bus system.
7. Make a decision to seek all possible sources of funding for transit.
8. Decide if transfers between routes will require facilities at a central location.
9. Decide where transit vehicles will be stored and maintained.
10. The transit sponsor must focus on the following to help assure that the system will serve the most people in the best manner possible:

    (a) Assure adequate and timely maintenance of vehicles and equipment;
    (b) Assure a clean operating system, including drivers, buses, and all facilities; make certain that buses are on time; and require that buses are dependable; i.e. they maintain the published bus schedules.
    (c) Recognize the inherent diverse nature of the transit workforce;
    (d) Management must take a sincere interest in workers and transit patrons; training will be necessary;
    (e) Transit is a specialized business; the sponsor must continually examine/search for the best ways to do business;
    (f) Public safety is critical;
    (g) Assure that all transit facilities are "user friendly" and meet the requirements of the Americans with Disabilities Act;
    (h) Market the transit system to all potential patrons, including those in upper income categories; and
    (i) Be aware that once fixed routes are implemented along a particular street, they tend to get "locked in" due to peoples' dependence on the buses.

II. INTRODUCTION

The purpose of this **TRANSIT DEVELOPMENT PLAN (TDP)** is to indicate how transit could be implemented in the Yuma area, if, and when, the local agencies decide to initiate public transit and utilize Federal Transit Administration (FTA) funds. The Plan demonstrates six alternative transit systems that have been suggested by citizens and/or various groups and organizations. Likely costs are illustrated, along with one funding alternative that uses federal and local monies.

The costs of providing transit service must be understood and considered. This is particularly true for an area such as Yuma that is possibly about to embark on initiating public transit service. The Federal Transit Administration report, "Introduction to Public Finance and Public Transit," November, 1992, highlights this issue with the following:

> ***"In response to decreasing federal subsidies for mass transit capital needs and ever increasing operating deficits, states, municipalities, and their agencies have stepped to the forefront in providing funding for both capital and operating cost."***

It is well known that transit service, as operated in the United States and many parts of the world, provides a public service to the people. It does not pay for itself. To help mitigate that inherent cost subsidy, the philosophy set forth in this TDP is that the Yuma area bus

system should be operated in the most efficient manner possible. It is recommended herein that the sponsor enlist the most experienced personnel available to operate the Yuma transit system. Furthermore, performance measures and standards should be established to permit evaluation of the transit system.

Performance measures should consider, at least, the following: (1) Condition of the transit system's capital equipment and (any) facilities; (2) Farebox recovery ratios for the service provided; (3) On-time performance standards for buses; (4) Efficiency of the operation, such as cost of labor used to provide a unit of service; and (5) Effectiveness of the system, defined as passengers carried per unit of cost. Data collection would be required to monitor such measures.

This report examines six (6) levels of transit service for Yuma County; the area served varies by alternative. Each alternative service would be available to the general public and meet accessibility criteria of the Americans with Disabilities Act (ADA). This means that all buses would be equipped with wheelchair lifts.

The cover illustrates two sizes of transit vehicles - one bus with approximate capacity of 25 to 30 passengers and a second (van) of ten (10) to 15 seats. These size vehicles are assumed in this report.

III. HISTORY

This chapter traces the federal public transit funding legislation that has allowed communities to revitalize, expand, and operate bus systems. Also included is a synopsis of three local studies and their conclusions. Based on federal law, ensuing regulations, and local studies, Chapter II concludes that:

> **The first decisions must be whether transit service will be provided in the Yuma area and, if so, which agency will be the sponsor. Equally important and necessary will be...if federal appropriations are to be used in the provision of transit service, a dedicated source of local funds will be needed as matching revenue.** Once these decisions are made, this **TRANSIT DEVELOPMENT PLAN** can be used to guide preparation of the necessary applications for federal transit grants.

IV. YMPO TRANSPORTATION POLICY FRAMEWORK

On December 18, 1986, the Yuma Metropolitan Planning Organization adopted a Policy Framework to guide updates of its Transportation Plan and Improvement Program. Policy IV.P.1 states:

> ***Put greater emphasis on planning to achieve a more efficient and convenient transportation system that is not (as currently) dependent upon the private automobile.***

The Goals and Policy included in the "Alternative Modes of Transportation" section indicate that in preparing a regional transportation plan, all modes should, and will be considered in developing an economical and efficient transportation plan. This **TRANSIT DEVELOPMENT PLAN** is a subcomponent of the overall Countywide Transportation Plan.

V. YUMA DEMOGRAPHIC CONDITIONS

A major need of this **TRANSIT DEVELOPMENT PLAN** is to determine how much demand for transit ridership there is in the Yuma area. Population growth 1980 to 1993; 1990 household income by census tract; likely transit demand for the Yuma area; and probable future bus operating expenses are examined. Tables of each are presented, and are summarized as follows:

1. Between 1980 and 1993, Yuma County's population grew by 39,313 persons, or by a 13 year average of 3.25% per year.

2. Table 2 indicates, and Figures 1 and 2 display by census tract, that in 1990

   - 26.5% of the households in the Yuma Urbanized Area had annual incomes less than $15,000; and

   - 29.7% of the households in Yuma County had annual incomes less than $15,000.

3. Transit demand is variable depending on many factors, eight of which are listed on page 10. The section states that:

   Assuming implementation of a fixed route transit system that serves a population of 88,000 [3] and, proper marketing of the system, it could be expected to serve:

   2.5 to 7.5 annual trips per person, or 220,000 to 660,000 annual transit trips, or 720 to 2150 daily transit trips.

4. To determine how much bus operations might cost in the Yuma area, 20 urban areas' transit systems were examined. Table 5 on page 14 summarizes, at the 95% confidence level, the number of transit trips per capita and the operating expenses for the similar sized (to Yuma area) urban areas.

[3,4] For footnotes see pages 12 and 14, respectively.

TABLE 5
SUMMARY OF TRANSIT TRIPS AND OPERATING EXPENSES [4]
FOR SOUTH AND WEST SMALL URBAN AREAS
IN THE U.S.

Annual Transit Trips per Capita	11.06
Fixed Route Transit	
Operating Expense per Revenue Bus Hour	$49.10
Operating Expense per Revenue Bus Mile	$ 3.24
Demand Response Transit	
Operating Expense per Revenue Bus Hour	$32.50
Operating Expense per Revenue Bus Mile	$ 3.86

VI. ALTERNATIVE YUMA AREA TRANSIT SYSTEMS

Six alternative transit systems for Yuma County are examined. Different service areas and levels of bus service are assumed for the various alternatives. Illustrated below are the capital, operating, and administrative needs; costs that could be expected; and one possible method of payment for that alternative.

Any one of the six transit alternatives examined in this report could be expanded to provide service to the nearby Indian reservations and/or to Winterhaven, California. The cost of such service would be estimated by determining the amount of service desired; any additional capital equipment, administrative costs, and marketing efforts required. The unit costs herein would then be applied to determine the total estimated cost. Agreements/contracts would be necessary with the transit sponsor.

Each alternative is summarized in the following pages:

Alternative 1 Service Components

A. Fixed Route Service in the Yuma Urbanized Area; and
B. Demand Response Service in the Yuma Urbanized Areas; and
C. Regional (limited) Service to Somerton, San Luis, Foothills, and Wellton.

See Table 7 for service characteristics.

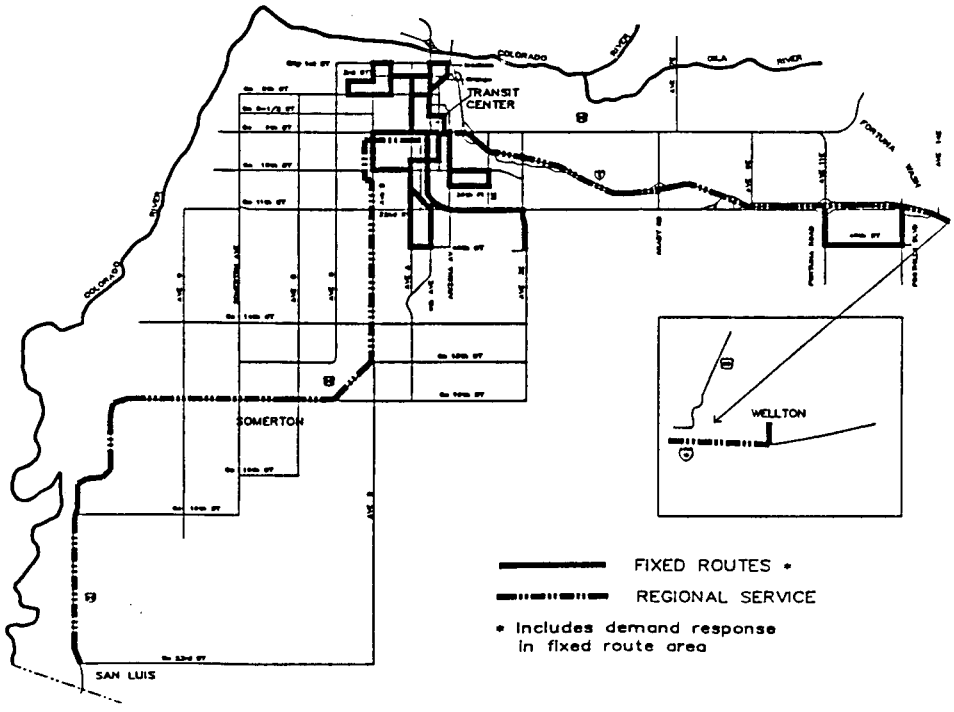
COST OF TRANSIT SERVICE ALTERNATIVE 1

	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$983,900	-----	$983,900
AMORTIZED CAPITAL	$140,700	-----	$1,124,600
ANNUALIZED OPERATING	-----	$826,050	$1,950,650
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$966,750	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$1,271,402	$596,643	$82,605	$1,950,650
2	476,022	391,602	99,126	966,750
3	463,631	379,211	123,098	966,750

FIGURE 3
ALTERNATIVE 1 TRANSIT ROUTES



Alternative 2 Service Components

A. Fixed Route Service in the Yuma Urbanized Area; and
B. Demand Response Service in the Yuma Urbanized Areas; and
C. Regional (limited) Service to Somerton, San Luis, Foothills, and Wellton; and
D. Bus Service to AWC/NAYuma; and
E. Bus Service to Yuma Proving Ground.

See Table 10 for service characteristics.

COST OF TRANSIT SERVICE ALTERNATIVE 2

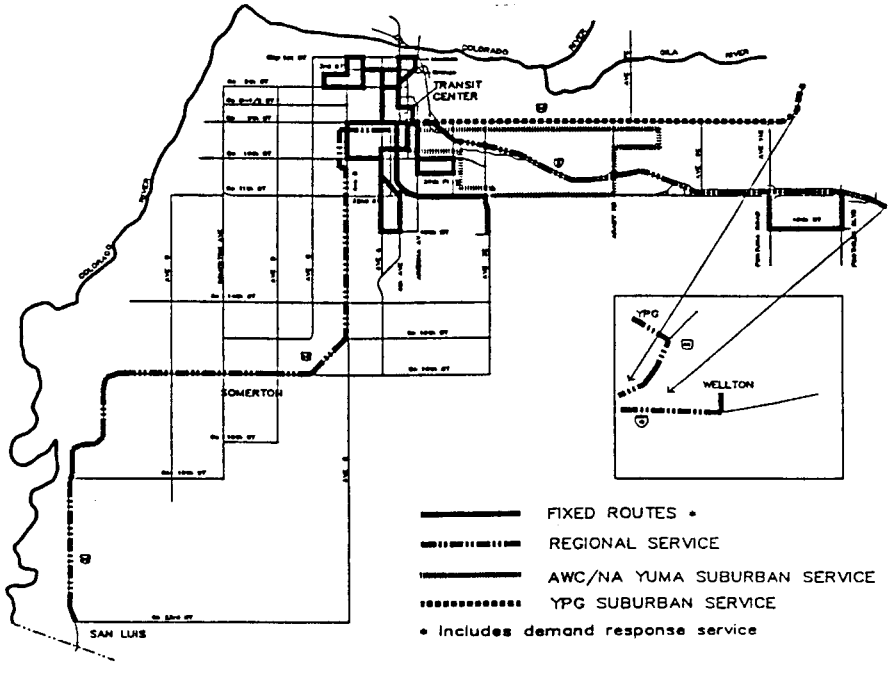
	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$1,357,350	-----	$1,357,350
AMORTIZED CAPITAL	$186,557	-----	$1,543,907
ANNUALIZED OPERATING	-----	$1,106,090	$2,649,997
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$1,292,647	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$1,334,395	$1,204,993	$110,609	$2,649,997
2	446,616	713,300	132,731	1,292,647
3	446,614	680,120	165,913	1,292,647

Alternative 2 would cost $699,347 more than Alternative 1 and is due to additional capital and operating costs for bus service to AWC/NAYuma ($382,680) and to Yuma Proving Ground ($316,667).

FIGURE 4
ALTERNATIVE 2 TRANSIT ROUTES



Alternative 3 Service Components

A. Fixed Route Service in the Yuma Urbanized Area; and
B. Demand Response Service in the Yuma Urbanized Areas; and
C. Fixed Route Service to Somerton, San Luis, Foothills, and Wellton; and
D. Demand Response Service in Somerton, San Luis, Foothills, and Wellton.

See Table 13 for service characteristics.

COST OF TRANSIT SERVICE ALTERNATIVE 3

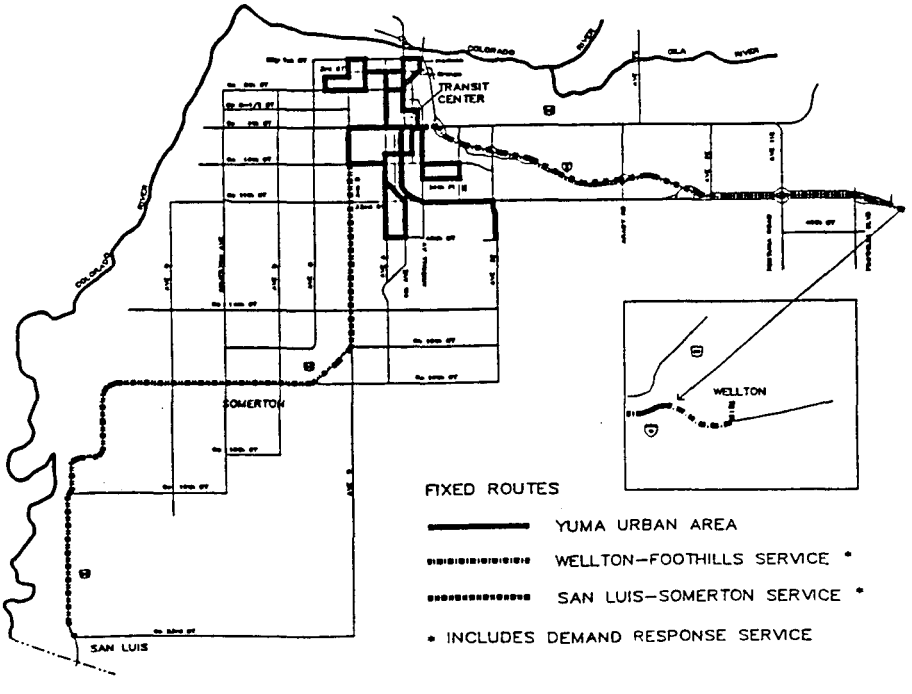
	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$1,473,399	-----	$1,473,399
AMORTIZED CAPITAL	$193,699	-----	$1,667,098
ANNUALIZED OPERATING	-----	$1,555,670	$3,222,768
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$1,349,369	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$1,334,397	$1,732,804	$155,567	$3,222,768
2	446,614	1,116,075	186,680	1,749,369
3	446,614	1,069,405	233,351	1,749,369

Alternative 3 would cost $1,272,118 more than Alternative 1, and is due to provision of fixed route and demand response service to the outlying communities of Somerton/San Luis ($636,059) and Foothills/Wellton ($636,059).

FIGURE 5
ALTERNATIVE 3 TRANSIT ROUTES



Alternative 4 Service Components

A. Fixed Route Service in the Yuma Urbanized Area; and
B. Demand Response Service in the Yuma Urbanized Areas; and
C. Bus Service to AWC/NAYuma; and
D. Bus Service to Yuma Proving Ground; and
E. Fixed Route Service to Somerton, San Luis, Foothills, and Wellton; and
F. Demand Response Service in Somerton, San Luis, Foothills, and Wellton.

See Table 16 for service characteristics.

COST OF TRANSIT SERVICE ALTERNATIVE 4

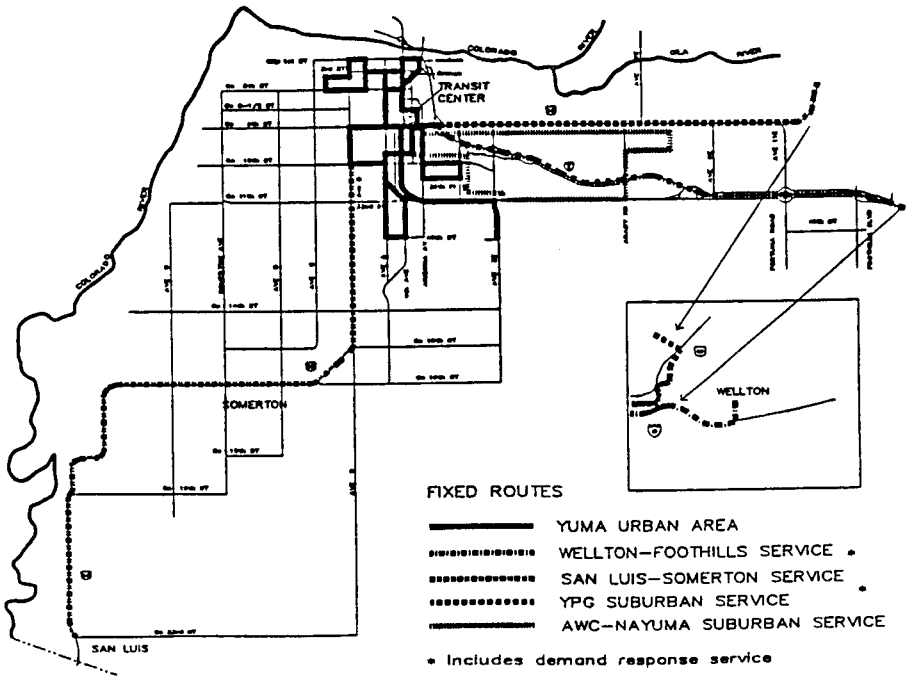
	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$1,653,150	-----	$1,653,150
AMORTIZED CAPITAL	$239,556	-----	$1,892,706
ANNUALIZED OPERATING	-----	$1,835,710	$3,728,416
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$2,075,266	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$1,334,397	$2,210,448	$183,571	$3,728,416
2	446,614	1,408,367	220,285	2,075,266
3	446,614	1,353,296	275,357	2,075,266

Alternative 4 is a combination of the first three alternatives. Its purpose is to illustrate the service and cost of a bus system for the Yuma metropolitan area and the outlying communities.

FIGURE 6
TRANSIT ALTERNATIVE 4 SERVICE ROUTES



The final two transit alternatives considered in this report are abbreviated versions of those examined above. They are both scaled-down from the Alternative No. 1. Alternative No. 5 examines implementation of fixed route transit with a demand-response operation in the Yuma Urbanized Area. There would be no regional transit service, i.e. bus service to the outlying communities. Alternative No. 6 reduces the service option further by eliminating the fixed route service; only demand-response transit service would be provided in the Yuma Urbanized Area.

Alternative 5 Service Components

A. Fixed Route Service in the Yuma Urbanized Area; and
B. Demand Response Service in the Yuma Urbanized Areas.

See Table 19 for service characteristics.

COST OF TRANSIT SERVICE ALTERNATIVE 5

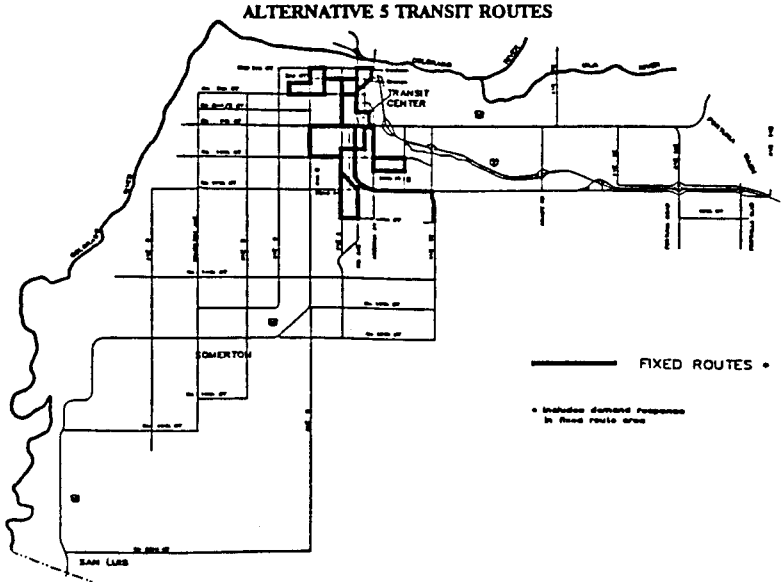
	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$803,900	-----	$803,900
AMORTIZED CAPITAL	$114,958	-----	$918,858
ANNUALIZED OPERATING	-----	$785,950	$1,704,808
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$900,908	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$1,088,763	$537,450	$78,595	$1,704,808
2	437,784	368,810	94,314	900,908
3	425,994	357,020	117,893	900,907

Alternative 5 illustrates a transit system consisting of fixed route service and demand response service (which would be required if federal Section 9 funds were used for the fixed route service) for the area approximating the City of Yuma.

FIGURE 7
ALTERNATIVE 5 TRANSIT ROUTES



Alternative 6 illustrates a two-van demand response bus service in the Yuma Urbanized area. It would be primarily for people that have no other means of transportation. Eligibility criteria and fares could be used; however, if federal Section 9 funds were used to finance any part of the system, service would have to be available to all people.

See Table 22 for service characteristics.

COST OF TRANSIT SERVICE ALTERNATIVE 6

	CAPITAL	OPERATING	CUMULATIVE FIRST YEAR TOTAL
INITIAL CAPITAL	$92,800	-----	$92,800
AMORTIZED CAPITAL	$26,354	-----	$119,154
ANNUALIZED OPERATING	-----	$57,625	$176,779
ANNUAL AMORTIZED CAPITAL + OPERATING	-----	$83,979	-----

POTENTIAL SOURCES OF REVENUE

YEAR	FEDERAL	LOCAL	FARES	TOTAL
1	$121,254	$49,763	$5,762	$176,779
2	46,438	30,626	6,915	83,979
3	45,573	29,762	8,644	83,979

This alternative uses only two vans for a small demand response transit operation. It could be expanded with additional vans, as needed, and funded.

Transit Development Plan

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TRANSIT DEVELOPMENT PLAN

I. TRANSIT SPONSOR DUTIES AND RESPONSIBILITIES

Sponsoring public transit in the Yuma area will be much like operating transit in most other areas of the country. The demographics, population makeup, and travel needs will vary, but the demands of the federal agencies re funding and regulation, and the cost of operating a system will be similar. The following characteristics must be recognized and monitored continually.

Key Transit Characteristics

- Transit is capital and labor intensive. A 10 to 15 passenger accessible van costs about $45,000 and has a service life of four years; a 25 to 30 passenger accessible bus is build to heavier standards, costs nearly $180,000 and has a service life of 10-12 years. The cost to operate those buses will vary depending on local conditions, but will likely be $35 to $50 per revenue bus hour.

- Transit is usually considered a public service and, in most cases, does not pay for itself. It is subsidized in some manner by federal, state, local, and/or private funds. To maintain control of costs, an efficient and effective operation should be standard procedure.

- Transit in Yuma should not be considered as a means to significantly reduce traffic congestion. The percent of total trips made by transit will be relatively small (i.e. less than 10%)..

- There are many valid reasons for bus operations. A few are:

  (1) Transit serves people without access to a private vehicle, which often includes youth, elderly, disabled, and low income;

  (2) An effective bus system that delivers employees to their place of work may allow an employer to provide less parking spaces; and

  (3) Transit operations are more energy efficient than a car.

- Transit is normally not competitive with the private automobile - in convenience or privacy. That means the sponsor must be innovative and clever in marketing transit to all potential patrons.

- The transit industry is very regulated, particularly in the use of Federal Transit Administration (FTA) appropriations. FTA funding is available, but to use those monies a sponsor must comply with numerous regulations and legal requirements.

- Federal Transit Administration (FTA) appropriations are now available to the Yuma Urbanized Area in the amount of $1,334,397. To obtain those funds, a dedicated long-term local match must be assured to the FTA.

To initiate transit service in Yuma County, or a portion thereof, using FTA Section 9 funds, several steps will need to be taken by the citizens and elected officials. Listed below are some of those items that should be considered in starting a transit system.

Steps Necessary to Initiate Public Transit in the Yuma Area
(Not necessarily in any order)

1. Make a committment to provide public transit of some type and for some area. Inherent to this decision will be which agency will be the transit sponsor of the transit system.

2. Decide whether Federal Transit Administration (FTA) appropriations are to be used. If the answer is affirmative, then the sponsor must identify a long-term assured source of local matching funds (for the life of capital equipment), and comply with all FTA regulations.

   Also, when FTA Section 9/9B funds are applied for, the U.S. Department of Labor begins working with the sponsoring agency to arrive at an agreeable 13c Labor Protection Agreement. (NOTE: Such an Agreement should be relatively easy in Yuma because there is no public transit system).

3. Decide how transit service will be provided. For instance, will the sponsor purchase or lease vehicles and operate and maintain them or, will the sponsor contract with a private firm for those services.

4. Identify funding for capital equipment, operations, storage and maintenance of rolling stock, administration, legal, and marketing.

5. Authorize preparation of Federal Transit Administration (FTA) grants for capital, operating, and planning needs in accordance with the Transit Development Plan.

6. Establish transit performance criteria for the bus system, including:

   (a) Condition of facilities and equipment;
   (b) Farebox recovery ratios for service provided. That is, what percent of operations will be expected to be paid by fares?
   (c) On-time performance standards for buses;
   (d) Efficiency of operations, i.e. cost per unit of service; and
   (e) Effectiveness of the operation, i.e. number of passengers carried per unit or cost of service.

7. Make a decision to seek all possible sources of funding for transit. For instance, the FTA report "Introduction to Public Finance and Public Transit", January, 1993, provides a comprehensive description of the elements of public funance re public transit and the sponsor should make every attempt to utilize all measures deemed appropriate to Yuma's situation.

8. Decide if transfers between routes will require facilities at a central location.

9. Decide where transit vehicles will be stored and maintained.

10. FTA Section 9/9B appropriations are made, in each state, to the Governor for distribution to the small Urbanized Areas in the state. Arizona is in a unique position of having only one small Urbanized Area (i.e. population 50,000-200,000); thus, at present, Yuma qualifies for all the Section 9 appropriation. (NOTE: When another urbanized area qualifies for FTA Section 9/9B funds, all urbanized areas in the country will be adjusted slightly downward. Thus, Yuma's appropriation will decrease only very little).

11. The transit sponsor must focus on the following to help assure that the system will serve the most people in the best manner possible:

   (a) Assure adequate and timely maintenance of vehicles and equipment;
   (b) Assure a clean operating system, including drivers, buses, and all facilities; make certain that buses are on time; and require that buses are dependable; i.e. they maintain the published bus schedules.
   (c) Recognize the inherent diverse nature of the transit workforce;
   (d) Management must take a sincere interest in workers and transit patrons; training will be necessary;
   (e) Transit is a specialized business; the sponsor must continually examine/search for the best ways to do business;
   (f) Public safety is critical;

(g) Assure that all transit facilities are "user friendly" and meet the requirements of the Americans with Disabilities Act;

(h) Market the transit system to all potential patrons, including those in upper income categories; and

(i) Be aware that once fixed routes are implemented along a particular street, they tend to get "locked in" due to peoples' dependence on the buses.

II. INTRODUCTION

The purpose of this **TRANSIT DEVELOPMENT PLAN (TDP)** is to indicate how transit could be implemented in the Yuma area, if, and when, the local agencies decide to initiate public transit and utilize Federal Transit Administration (FTA) funds. The Plan demonstrates six alternative transit systems that have been suggested by citizens and/or various groups and organizations. Likely costs are illustrated, along with one funding alternative that uses federal and local monies. The following broad details of each system alternative are covered herein:

1. Areas to be served by each alternative;
2. Type and frequency of service;
3. Number of routes;
4. Capital costs - initial and amortized - including bus rolling stock and other service vehicles;
5. Operating and Maintenance costs;
6. Administrative costs;
7. Marketing of the system; and
8. How the transit system could be funded.

The day-to-day details of operation are not included herein because those will be the prerogative of the system manager.

The costs of providing transit service must be understood and considered. This is particularly true for an area such as Yuma that is possibly about to embark on initiating public transit service. The Federal Transit Administration report, "Introduction to Public Finance and Public Transit," November, 1992, highlights this issue with the following:

> ***"In response to decreasing federal subsidies for mass transit capital needs and ever increasing operating deficits, states, municipalities, and their agencies have stepped to the forefront in providing funding for both capital and operating cost."***

The above named report provides a comprehensive description of the elements of public transit finance, and emphasizes that innovative financing techniques are being used to finance transit systems.

It is well known that transit service, as operated in the United States and many parts of the world, provides a public service to the people. It does not pay for itself. To help mitigate that inherent cost subsidy, the philosophy set forth in this TDP is that the Yuma area bus system should be operated in the most efficient manner possible. <u>It is recommended herein that the sponsor enlist the most experienced personnel available to operate the Yuma transit system. Furthermore, performance measures and standards should be established to permit evaluation of the transit system.</u>

Performance measures should consider, at least, the following: (1) Condition of the transit system's capital equipment and (any) facilities; (2) Farebox recovery ratios for the service provided; (3) On-time performance standards for buses; (4) Efficiency of the operation, such as cost of labor used to provide a unit of service; and (5) Effectiveness of the system, defined as passengers carried per unit of cost. Data collection would be required to provide such measures.

This report examines six (6) levels of transit service for Yuma County; the area served varies by alternative. Each alternative service would be available to the general public and meet accessibility criteria of the Americans with Disabilities Act (ADA). This means that all buses would be equipped with wheelchair lifts.

Any one of the six transit alternatives examined in this report vcould be expanded to provide service to the nearby Indian reservations and/or to Winterhaven, California. The cost of such service would be estimated by determining the amount of service desired; any additional capital equipment, administrative costs, and marketing efforts required. The unit costs herein would then be applied to determine the total estimated cost. Agreements/contracts would be necessary with the transit sponsor.

The cover illustrates two sizes of transit vehicles - one bus with approximate capacity of 25 to 30 passengers and a second (van) of ten (10) to 15 seats. These size vehicles are assumed in this report.

III. HISTORY

Transit service discussions are not new to the Yuma area. Early residents talk of riding the bus to work and to school. Yuma may have been like most other areas of the country. Transit usage declined following World War II with the widespread availability of the automobile. As overall quality of life improved, wages escalated, more people drove cars, transit ridership plummeted, and many private transit operators went out of business. However, the need for some type of mass transit was recognized - both nationally and locally.

In the late 1960s and early 1970s the federal government recognized the "public service" nature of transit. The Federal Urban Mass Transportation Act of 1964 made capital funds available; and the National Mass Transit Act of 1974 added bus operating subsidies. The U.S. Department of Transportation's Urban Mass Transportation Administration (now the Federal Transit Administration, or FTA) began helping communities purchase ailing systems and establishing new operations. Throughout the 1970s and 1980s, except for brief private operations, there was no public transit system in Yuma County. Yet, discussions continued, recognizing the high cost of providing transit service.

In about 1978-1980, the Yuma County Chamber of Commerce and the Western Arizona Council of Governments conducted a community needs assessment survey to determine interest in, and the need for transit. Apparently, only minor interest was expressed by the population at large. However, the need was recognized for certain groups of people, such as the elderly, handicapped, and those with low income.

Throughout the 1970s the federal government placed increased emphasis on transportation accessibility for all Americans. Transit was viewed as a more efficient means of moving people. The result was increased attention given to the transit mode.

The next formal examination of the need for transit in Yuma was the "Yuma Area Public Transit Feasibility Study." It was performed in 1982 by JHK and Associates for the Arizona Department of Transportation and the City of Yuma. Recommendations were as follows:

> ***"The study results found that the enhancement of existing private carrier service through provision of a subsidy program for the transportation disadvantaged appears to be the most promising alternative. Further study should be made of the coordination of social service agency transportation services."***

With formation of the Yuma Metropolitan Planning Organization (YMPO) in 1983 came the need to examine transportation from a multi-modal perspective. Transit could be a viable mode of travel. Thus, the "Identification and Analysis of Unmet Transportation Needs" report was prepared. Its primary objective was to determine if there was any unmet transportation demand in Yuma County and, if so, how much? The final report stated:

"The available socio-economic/demographic data and the results of the extensive interviews and surveys conducted in Yuma County for this study indicate that a need for transportation service exists. The greatest need for service appears to be among the elderly and handicapped segments of the population, with significant needs also identified among low income persons. On the basis of this finding, it is recommended that the highest priority for transportation service be given to meeting the needs of elderly and handicapped persons who, by reason of age or disability, experience substantially limited mobility. Generally this group includes the handicapped and the frail elderly, who have difficulty traveling."

Following receipt of the above recommendation, the YMPO Executive Board took action to identify the best way to satisfy that unmet need. The Board authorized the Transit Service Options report. It analyzed three specific transit alternatives - Consumer Choice, Demand Response, and Fixed Route - to determine which would be the most efficient for the Yuma area. Recommendations were as follows:

"Implement a fixed route transit service in both the Yuma urbanized area and the outlying portions of the county and, a regional transit service to Somerton, San Luis, and Wellton. In addition, operate a demand response door-to-door service in the fixed route area."

The report provided a "reasonable operations plan for service," which was used to determine approximate costs.

The first decisions must be whether transit service will be provided in the Yuma area and, if so, which agency will be the sponsor. Equally important and necessary will be...if federal appropriations are to be used in the provision of transit service, a dedicated source of local funds will be needed as matching revenue. Once these decisions are made, this **TRANSIT DEVELOPMENT PLAN** can be used to guide preparation of the necessary applications for federal transit grants.

In the early 1980s, the YMPO recognized the existence of federal transit appropriations available for transit capital and operating expenses. Use of those appropriations necessitated a policy direction on the region's Transportation Plan. The YMPO's adopted Transportation Policy Framework provided the necessary guidance.

IV. YMPO TRANSPORTATION POLICY FRAMEWORK

On December 18, 1986 the Yuma Metropolitan Planning Organization adopted a Policy Framework to guide updates of its Transportation Plan and Improvement Program. On December 29, 1992 that Policy was amended to reflect the need for the Air Quality Conformity Analyses. Included in the Policy are seven major issues, or areas of concern. Goals, Objectives, and Policies are set forth toward satisfying, or at least mitigating those issues of concern. Issue IV deals with modes of transportation apart from the automobile, stated as follows:

ISSUE IV: ALTERNATE MODES OF TRANSPORTATION:

Travel is difficult and, in some cases, may be impossible without access to a private motorized vehicle.

Discussion

This issue is of particular concern to the transportation disadvantaged population, i.e. low income, elderly, and disabled persons, and youth. Public transportation is only provided by private taxi and by social service agencies.

GOAL IV.A: A balanced and integrated transportation system which serves the existing and future transportation needs of the urban and urbanizing areas and the rural regions of Yuma County, thus providing mobility for work, agriculture interests, military operations and strategic defense, international trade, school, shopping, medical, personal business, and recreational purposes.

GOAL IV.B: An economical transportation system that will optimize the use of citizens' personal and tax money, reduce fuel consumption and protect the natural environment.

POLICY IV.P.1: Put greater emphasis on planning to achieve a more efficient and convenient transportation system that is not (as currently) dependent upon the private automobile.

The above Goals and Policy indicate that in preparing a regional transportation plan, all modes should, and will be considered in developing an economical and efficient transportation plan. This **TRANSIT DEVELOPMENT PLAN** is a subcomponent of the overall Countywide Transportation Plan.

V. YUMA DEMOGRAPHIC CONDITIONS

A major need of this **TRANSIT DEVELOPMENT PLAN** is to determine how much demand for transit ridership there is in the Yuma area. As discussed above, this issue has been a key factor in each of the previous reports. This Plan expands on that work by examining the 1990 Census data and the U.S. Department of Transportation's 1990 Transit Profiles report.

Population

Table 1 shows the population of Yuma County for 1980, 1985, 1990, and 2013 categorized by jurisdiction. Also listed is each jurisdiction's percent of the county total and, the change from 1980 to 1990. During the decade, Yuma County grew by 30,690 fulltime residents, or a ten year average of 3.4% per year. Table 1 also illustrates each jurisdiction's 1993 population. Using the population figures, Yuma can be compared to similar sized urbanized areas as shown in Table 3.

TABLE 1
POPULATION BY JURISDICTION
YUMA COUNTY
1980-1985-1990-1993

JURISDICTION	1980		1985		1990		CHANGE 1980-1990		1993	
	POP.	%	POP.	%	POP.	%	NO.	%	NO.	%
CITY OF YUMA	42,481	55.7	46,807	54.6	54,923	51.4	12,442	29.3	58,031	50.2
CITY OF SOMERTON	3,969	5.2	4,381	5.1	5,282	4.9	1,313	33.1	5,693	4.9
CITY OF SAN LUIS	1,946	2.6	2,809	3.3	4,212	3.9	2,266	116.4	6,575	5.7
TOWN OF WELLTON	911	1.2	940	1.1	1,066	1.0	155	17.0	1,093	1.0
UNINCORPORATED	26,898	35.3	30,735	35.9	41,412	38.7	14,514	53.9	44,126	38.2
TOTAL YUMA COUNTY	**76,205**	**100.0**	**85,672**	**100.0**	**106,895**	**100.0**	**30,690**	**40.3**	**115,518**	**100.0**

Household Income

Table 2 lists the 1990 population of Yuma County by census tract. Also depicted are the number of households according to the amount of income earned in 1990. The boundaries of the census tracts, along with a pictorial of the percent of households with less than $15,000 income per year, are displayed in Figures 1 and 2.

TABLE 2
1990 CENSUS DATA FOR YUMA COUNTY
POPULATION, HOUSEHOLDS, AND INCOME

CENSUS TRACT	POP. BY CENSUS TRACT	TOTAL OCCUPIED HOUSEHOLDS [1]	HOUSEHOLD ANNUAL INCOME					PERCENT HOUSEHOLDS <$15K
			<$15K	$15K-$24.9K	$25K-$34.9K	$35K-$49.9K	>$50K	
1	2,517	743	364	175	128	30	46	49.0
2	3,081	1,034	373	207	153	172	129	36.1
3	6,799	2,225	1,056	504	342	203	120	47.5
4	7,676	2,618	999	669	458	272	220	38.2
5	6,233	2,395	470	631	398	549	347	19.6
6	4,005	1,466	223	271	316	336	320	15.2
7	4,262	1,349	576	393	181	136	63	42.7
8	4,975	1,891	505	362	274	270	480	26.7
9	12,142	3,747	439	571	753	950	1,034	11.7
10	5,609	2,675	867	532	475	491	310	32.4
11	5,323	1,965	301	384	461	338	481	15.3
12	4,180	1,419	161	212	281	265	500	11.3
13	4,345	692	81	293	220	79	19	11.7
Subtotal	71,147	24,219	6,415	5,204	4,440	4,091	4,069	26.5
105	15	8	4	4	0	0	0	50.0
106	1,432	336	126	63	111	27	0	37.5
107	977	272	61	97	65	8	41	22.4
109	4,716	1,782	529	351	230	290	382	29.7
110	1,739	476	178	76	54	74	94	37.4
111	7,655	3,784	1,231	1,085	475	340	653	32.5
112	3,822	1,189	376	356	252	105	100	31.6
113	0	0	0	0	0	0	0	0.0
114	5,884	1,307	615	360	140	47	145	47.1
115	6,809	1,731	830	355	273	157	116	47.9
116	2,699	723	286	276	81	68	12	39.6
TOTAL	106,895	35,827	10,651	8,227	6,121	5,207	5,612	29.7

[1] 1990 Census Summary Tape 3A

FIGURE 1
PERCENT OF HOUSEHOLDS WITH INCOMES LESS THAN $15,000 PER YEAR
by
1990 Census Tracts
Yuma Urbanized Area

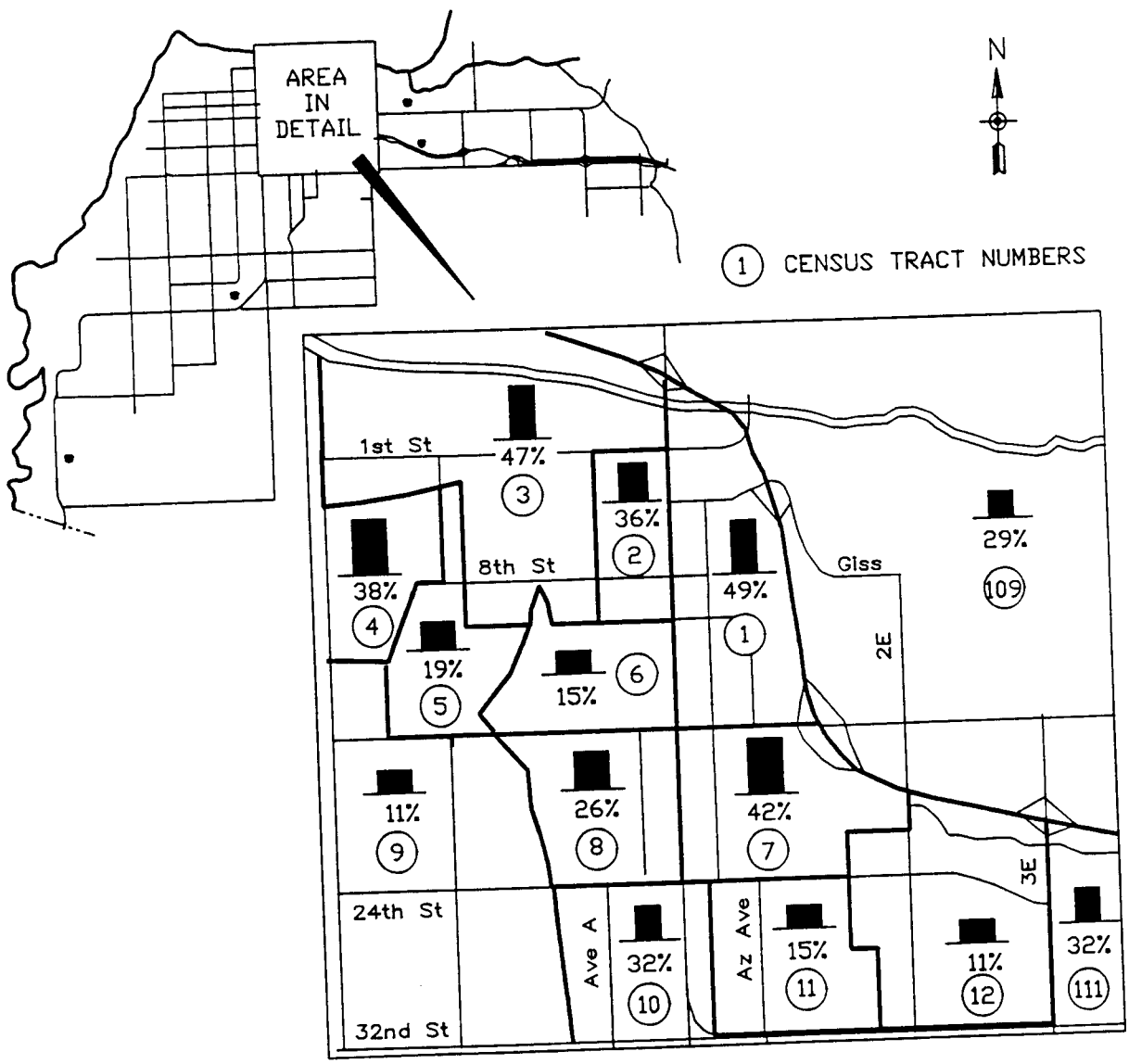


FIGURE 2
PERCENT OF HOUSEHOLDS WITH INCOMES LESS THAN $15,000 PER YEAR
by
1990 Census Tracts
Yuma Fringe Areas

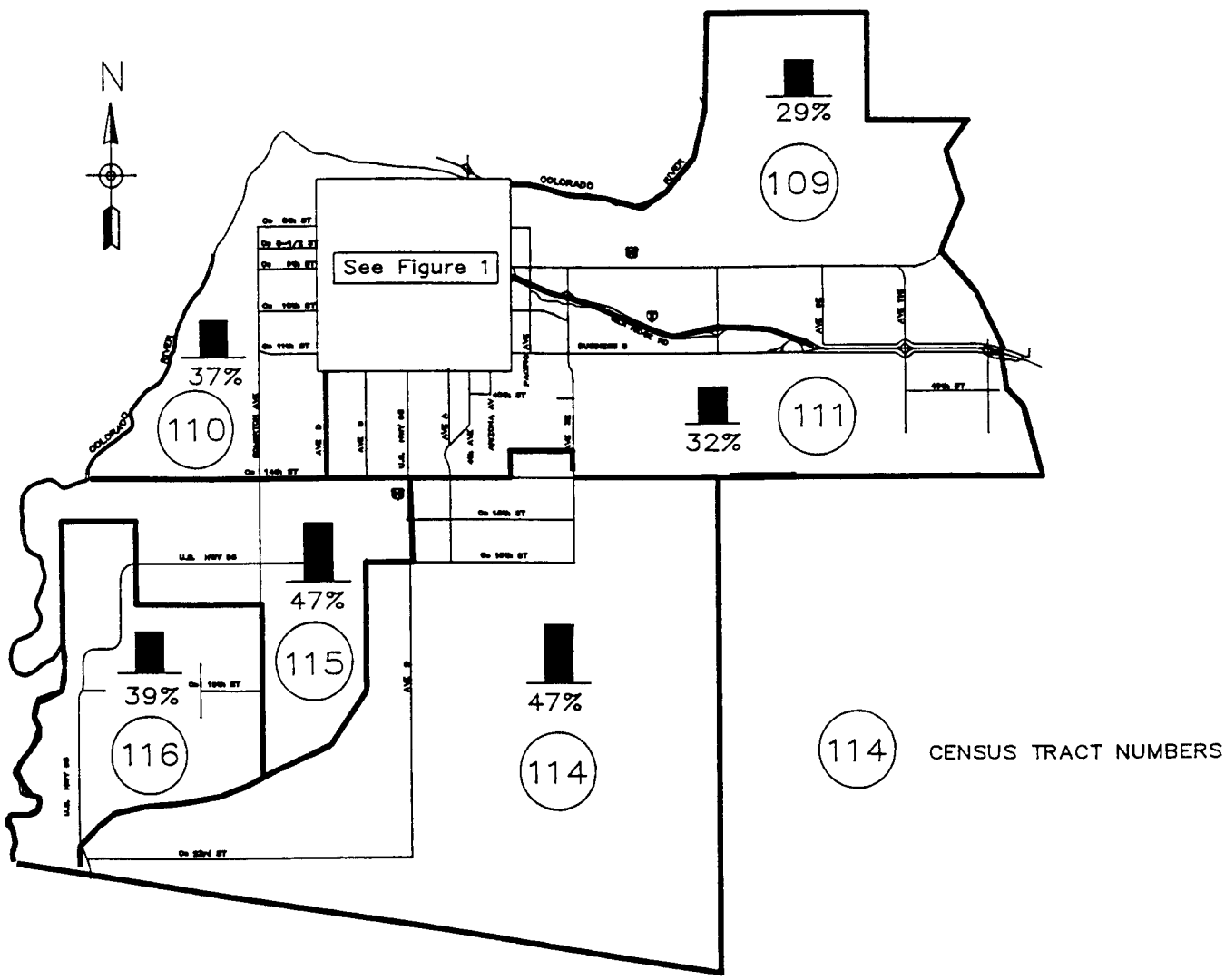


Table 2 shows that in 1990 the area approximating the City of Yuma boundaries (i.e. Census Tracts 1-13), 26.5% of the households had incomes of less than $15,000 per year. When considering the entire Yuma County, 29.7% of the households were in that category. Because transit ridership is highly correlated with lower incomes, one could expect the majority of transit trips to come from those census tracts.

Transit Demand

Transit demand is variable depending on many factors, including:

1. The area's general accessibility due to terrain and density of development;
2. Weather conditions;
3. Amount of transportation service provided by social service organizations, churches and private businesses;
4. Income levels and number of vehicles available;
5. Number of youth, elderly, and handicapped persons in the community;
6. Employment and its location relative to where people live;
7. Citizen acceptance of transit as a mode of travel; and
8. Safety of transit patrons.

These factors, to varying degrees in each community, effect the number of people that will use a transit system. To arrive at a reasonable value for ridership in the Yuma area, the Federal Transit Administration's 1990 Transit Profiles [2] report was examined to see how many transit trips were served in other cities of similar size to Yuma. Table 3 lists 20 cities in the south and western United States that have fixed route bus operations.

Even though the service area population of each of the cities listed in Table 3 is roughly equal, there is considerable variation in the number of annual transit trips per capita. Considering all 20 areas, the average is 10.88 annual transit trips per person. However, some of those cities have either well established transit systems or a special situation (e.g. a local university) that commands higher transit ridership. Considering only the 17 cities that have local bus systems in areas with typical socio-economic conditions (i.e. excluding Palm Springs, CA; Eugene, OR; and Yakima, WA), the average is 7.5 annual transit trips per capita. To provide a range of expected transit trips in the Yuma area, 7.5 can be used along with the "lower bound" estimate of 2.5 annual transit trips per capita from the Transit Options report.

[2] Transit Profiles, Agencies in Urbanized Areas with Population of Less than 200,000, December, 1991.

TABLE 3
ANNUAL TRANSIT TRIPS FOR
SOUTH AND WEST SMALL URBANIZED AREAS IN THE U.S.

URBANIZED AREA	SERVICE AREA POPULATION	ANNUAL TRANSIT TRIPS	ANNUAL TRIPS PER CAPITA
Pine Bluff, AR	50,280	222,475	4.42
Fairfield, CA	65,601	353,462	5.39
Antelope Valley, CA	93,923	660,867	7.04
Merced, CA	55,608	210,067	3.78
Palm Springs-SunLine	78,074	2,781,420	35.63
Redding, CA	78,364	529,353	6.76
Santa Maria, CA	87,200	257,169	2.95
Fort Collins, CO	89,285	943,927	10.51
Greeley, CO	66,413	453,958	6.84
Pueblo, CO	98,640	687,867	6.97
Boise, ID	143,502	715,934	4.99
Pocatello, ID	54,544	176,220	3.23
Billings, MT	80,310	867,760	10.81
Missoula, MT	60,930	531,820	8.73
La Cruces, NM	42,390	517,905	12.22
Eugene, OR	201,400	5,917,267	29.38
Medford, OR	109,449	1,350,912	12.34
Galveston, TX	65,411	987,207	15.09
Port Arthur, TX	62,360	337,780	5.42
Yakima, WA	50,160	1,256,261	25.05
AVERAGE *(w/o Palm Springs, CA, Eugene, OR, and Yakima, WA)*	76,718	576,746	7.50
AVERAGE + 1 STANDARD DEVIATION	101,990	900,628	11.06

Using the average demand of 7.5 annual transit trips per capita and an area population of 88,000 [3], the number of transit trips would be 660,000 annually, or 2150 trips per day.

The above two estimates of transit trips can be considered a range reasonable for the Yuma area to use for planning. **Assuming implementation of a fixed route transit system that serves a population of 88,000 [3] and, proper marketing of the system, it could be expected to serve:**

> ***2.5 to 7.5 annual trips per person, or 220,000 to 660,000 annual transit trips, or 720 to 2150 daily transit trips.***

This is a wide range. It suggests a conservative or limited approach in starting up a new system. If demands are, in fact, near the upper end of the range, then a larger system would be needed. Expansions could be made as necessary and as funded.

Bus Operating Expenses

To determine how much bus operations might cost in the Yuma area, the same 20 urbanized areas' transit systems were examined. Table 4 shows that costs range from $27.83 per bus hour in Pocatello, Idaho to $59.00 in Antelope Valley, California. The "spread" of operating costs is not as broad as that for ridership. Excluding the three non-typical cities only reduces the average by $1.42. Using the higher, or conservative value, the average operating expense would be $40.51 per revenue bus hour.

Operating expenses for a transit system are critical to funding; therefore, the "spread" of costs listed in Table 3 was examined further. A 95% confidence limit on the "spread" for those 20 systems would indicate an operating cost of less than $49.00 per bus revenue hour. (Note that of the 20 systems, four have operating expenses greater than $49.00 per bus hour. That means those systems have costs which are more than one standard deviation from the average; i.e. outside of the 95% confidence limit).

The cost of running a transit system must also be examined based on the dollars paid for each bus mile of operation. Examination of the 20 urbanized systems in Table 3 reveals that the per bus mile cost ranged between $1.52 in Pocatello, Idaho to $3.08 in Pueblo, Colorado. Using an upper confidence level and, assuming that Yuma's bus operation would be similar to other south and west systems in the U.S, one could expect with 95% confidence that the cost of operation would be equal to or less than $3.24 per bus mile.

The significance of the two operating expenses presented in Table 4 is that both must be considered when estimating costs for a system. If an alternative bus operation is in an

[3] *88,000 was used in the Transit Options report. It is used herein to permit comparison of figures.*

urbanized area (such as in the City of Yuma) with numerous stops resulting in slow travel speeds, then per bus hour costs will prevail and control costs. If, however, service is in a rural area where distances are long and travel is fast (such as to YPG), the per bus mile cost will control.

TABLE 4
TRANSIT OPERATING EXPENSES
FOR SOUTH AND WEST SMALL URBANIZED AREAS IN THE U.S.

URBANIZED AREA	SERVICE AREA POPULATION	NUMBER OF BUSES	OPERATING EXPENSE PER BUS HOUR	OPERATING EXPENSE PER BUS MILE
Pine Bluff, AR	50,280	12	$32.24	$2.64
Fairfield, CA	65,601	10	$39.53	$2.81
Antelope Valley, CA	93,923	17	$59.00	$2.99
Merced, CA	55,608	16	$55.49	$2.71
Palm Springs-SunLine	78,074	59	$50.48	$2.81
Redding, CA	78,364	27	$32.46	$1.98
Santa Maria, CA	87,200	11	$44.10	$2.97
Fort Collins, CO	89,285	36	$37.19	$2.42
Greeley, CO	66,413	18	$36.31	$2.62
Pueblo, CO	98,640	18	$47.18	$3.08
Boise, ID	143,502	28	$37.54	$2.68
Pocatello, ID	54,544	15	$27.83	$1.52
Billings, MT	80,310	33	$35.05	$2.22
Missoula, MT	60,930	24	$36.40	$2.41
La Cruces, NM	42,390	12	$32.53	$2.39
Eugene, OR	201,400	77	$43.10	$2.96
Medford, OR	109,449	23	$38.42	$2.10
Galveston, TX	65,411	27	$31.13	$2.46
Port Arthur, TX	62,360	16	$42.15	$2.94
Yakima, WA	50,160	43	$52.07	$4.48
AVERAGE	----	----	**$40.51**	**$2.66**
AVERAGE + 1 STANDARD DEVIATION	----	----	**$49.10**	**$3.24**

The above operating costs are used (below) in the analyses of the alternative transit systems. For each type of service, both the per mile and per hour costs were calculated. The higher was always used. Table 5 summarizes, at the 95% confidence level, the number of transit trips per capita and the operating expenses for the similar sized (to Yuma area) urbanized areas.

TABLE 5
SUMMARY OF TRANSIT TRIPS AND OPERATING EXPENSES [4]
FOR SOUTH AND WEST SMALL URBANIZED AREAS
IN THE U.S.

Annual Transit Trips per Capita	11.06
Fixed Route Transit	
Operating Expense per Revenue Bus Hour	$49.10
Operating Expense per Revenue Bus Mile	$ 3.24
Demand Response Transit	
Operating Expense per Revenue Bus Hour	$32.50
Operating Expense per Revenue Bus Mile	$ 3.86

[4] Trips and Operating Expenses based on 95% confidence level.

VI. ALTERNATIVE YUMA AREA TRANSIT SYSTEMS

This **TRANSIT DEVELOPMENT PLAN** examines six alternative transit systems for Yuma County. The focus is on the service provided, its cost, and revenues that could finance the system. Table 6 lists the components of service for each of the six transit alternatives:

TABLE 6
TRANSIT SERVICE ALTERNATIVES

ALTERNATIVE 1:	A.	Fixed Route Service in the Yuma Urbanized Area; and
	B.	Demand Response Service in the Yuma Urbanized Area; and
	C.	Regional (*limited*) Service to Somerton, San Luis, Foothills, and Wellton.
ALTERNATIVE 2:	A.	Same as ALTERNATIVE 1; and
	B.	Bus Service to AWC/NAYuma; and
	C.	Bus Service to Yuma Proving Ground.
ALTERNATIVE 3:	A.	Same as ALTERNATIVE 1 (*without Regional Service*); and
	B.	Fixed Route Service to Somerton, San Luis, Foothills, and Wellton; and
	C.	Demand Response Service in Somerton, San Luis, Foothills, and Wellton.
ALTERNATIVE 4:	A.	Same as ALTERNATIVE 1 (*without Regional Service*); and
	B.	Bus Service to AWC/NAYuma; and
	C.	Bus Service to Yuma Proving Ground; and
	D.	Fixed Route Service to Somerton, San Luis, Foothills, and Wellton; and
	E.	Demand Response Service in Somerton, San Luis, Foothills, and Wellton.
ALTERNATIVE 5:	A.	Fixed Route Service in the Yuma Urbanized Area; and
	B.	Demand Response Service in the Yuma Urbanized Area.
ALTERNATIVE 6:	A.	Demand Response Service in the Yuma Urbanized Area.

Transit Alternative 1

This transit alternative is very similar to the system defined and costed out in the Transit Options report prepared for the YMPO by Leigh, Scott, and Cleary. The costs have been modified to provide a current "picture" of what people in the Yuma area should expect if this transit alternative was implemented.

Table 6 describes the three components of service for this alternative. Figure 3 shows the bus routes for Alternative 1. The Demand Response component is not illustrated, but it must be provided (for people who cannot use the fixed route buses) where federal funds are used for fixed route service.

FIGURE 3
ALTERNATIVE 1 TRANSIT ROUTES

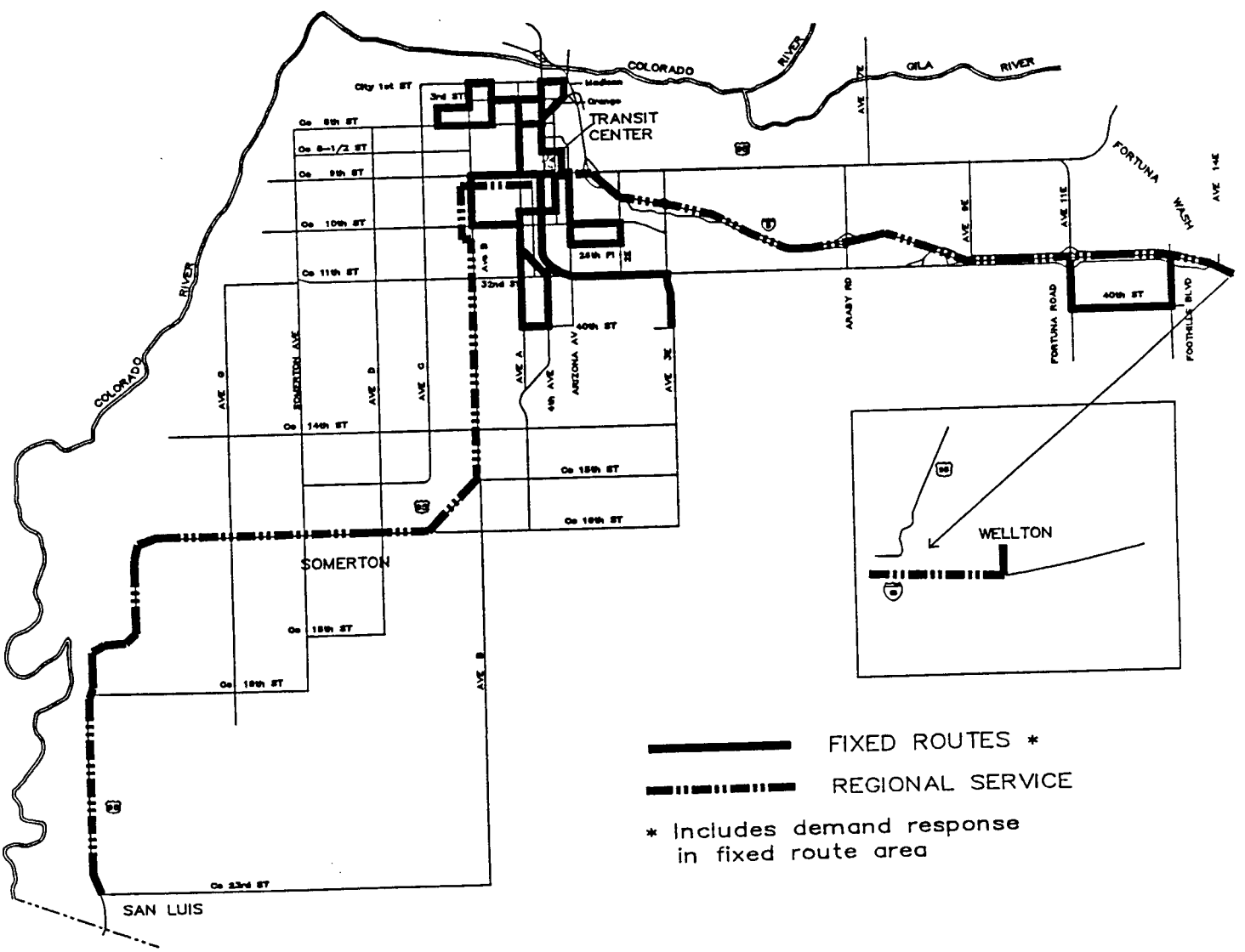


TABLE 7
TRANSIT ALTERNATIVE 1 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Fixed Route	6	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	1 hour	107,700	65%
Demand Response	n/a	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	Trips on Request	33,700	20%
Regional Service	2	Somerton San Luis Foothills Wellton	2 Round Trips per Day	Smtn: 3 dys/wk SL: 3 dys/wk Fthls: 2 dys/wk Wltn: 1 dy/wk	n/a	24,500	15%
				TOTAL		165,900	100%

Table 7 shows that for Alternative 1, 85% of the bus service would be in the Yuma Urbanized Area. This percent will decrease for all other alternatives that increase service to the outlying areas.

All buses would operate out of a Central Transit Station (called a "pulse point" in the Transit Options Report). This Central Station would allow patrons to transfer between routes. See Figure 3 for the suggested location of the station.

TABLE 8
COST OF TRANSIT SYSTEM ALTERNATIVE 1

				CAPITAL	OPERATING
1	CAPITAL				
	Revenue Vehicles	Fixed Route 3 Coaches	@ 180,000	$540,000	
		Regional Service 1 Coach	@ 180,000	180,000	
		Demand Response 1 Van	@ 45,000	45,000	
		Backup Vehicle (Used) 1 Coach	@ 100,000	100,000	
	Non-Revenue Vehicles	Administration Vehicle	@ 15,000	15,000	
		Service Vehicle	@ 15,000	15,000	
	Radio System		19,900	19,900	
	Bus Stop Signs		3,000	3,000	
	Photo I.D. Machine		2,000	2,000	
	Benches and Shelters		31,000	31,000	
	Maintenance Equip.		18,000	18,000	
	Office Equipment		5,000	5,000	
	Central Transit Station		10,000	10,000	
		SUBTOTAL INITIAL CAPITAL COST		**$983,900**	
		TOTAL ANNUALIZED CAPITAL COST		**$140,700**	
2	OPERATIONS				
	Fixed Routes				$494,810
	Demand Response				164,940
	Regional Service				40,100
		SUBTOTAL ANNUAL OPERATIONS COST			**$699,850**
3	ADMINISTRATION				
	Staff Director				$50,000
	Staff Secretary/AA				25,000
	Office Space				12,000
	Office Operations				10,000
	Staff Transportation				4,200
		SUBTOTAL ANNUAL ADMIN. COST			**$101,200**
4	MARKETING	**SUBTOTAL ANNUAL MARKETING COST**			**$25,000**
		INITIAL CAPITAL		**$983,900**	—
		AMORTIZED CAPITAL		**140,700**	—
		ANNUAL OPERATIONS		—	**$826,050**
		ANNUAL-AMORTIZED CAPITAL+OPERATING		—	**$966,750**

Transit systems can be funded in a variety of ways. First, the Federal Transit Administration will make available, at this time, $1,334,397 to the Yuma Urbanized area for a combination of capital and operation expenses. To receive those monies, the second source is required; a local financial match must be provided. If the federal money is used for capital purchases, the required local match is 20%. Any portion that is used for operational expenses must be matched 50%. Furthermore, only a portion - about 69% [5] - of the total federal money available can be used for transit operations.

A third source of revenue that will be realized is fares. Examination of the FTA's Section 15 Transit Profiles report shows that fares normally pay for less than 20% of the system's administrative and operational expenses. To be on the conservative side of estimating, the analyses below assumes that the new transit system's farebox will return 10% the first year, 12% the second year, and 15% the third year, of the operating and administrative costs.

Table 9 illustrates the funding for Alternative 1 when Federal Transit Administration Section 9 grant appropriations are used.

[5] Higher percent in some years. To be conservative, the lower value of 69% is used herein.

TABLE 9
SOURCES OF REVENUE FOR TRANSIT ALTERNATIVE 1

TRANSIT ALTERNATIVE 1	FTA [6] CAPITAL	FTA [6] OPERATION	LOCAL [6]	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$787,120	----	$196,780	----	$983,900
Capital Cost - Amortized Annual	112,560	----	28,140	----	140,700
Operating/Administration=$826,050 Farebox = 10%				$82,605	$82,605
Federal and Local		$371,722	$371,723	----	$743,445
FIRST YEAR COST	**$899,680**	**$371,722**	**$596,643**	**$82,605**	**$1,950,650**
Balance FTA Appropriation Available					$62,995
New Year Appropriation - Estimate					$446,614
Appropriation Available for Second Year					$509,609
SECOND YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$112,560	----	$28,140	----	$140,700
Operating/Administration=$826,050 Assume Fare Box = 12%	----	----	----	99,126	99,126
Federal and Local	----	363,462	363,462	----	726,924
SECOND YEAR COST	**$112,560**	**$363,462**	**$391,602**	**$99,126**	**$966,750**
Balance FTA Appropriation Available					$33,587
New Year Appropriation - Estimate					$446,614
Appropriation Available for Third Year					$480,201
THIRD YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$112,560	----	$28,140	----	$140,700
Operating/Administration=$826,050 Assume Farebox = 15%	----	----	----	$123,908	$123,908
Federal and Local	----	$351,071	351,071	----	702,142
THIRD YEAR COST	**$112,560**	**$351,071**	**$379,211**	**$123,908**	**$966,750**

[6] *Funding of this alternative should also consider application for FTA Section 18 rural funds for the Regional Service. Because Section 18 funds are competitive statewide, they are not listed herein as a definite source of transit funding.*

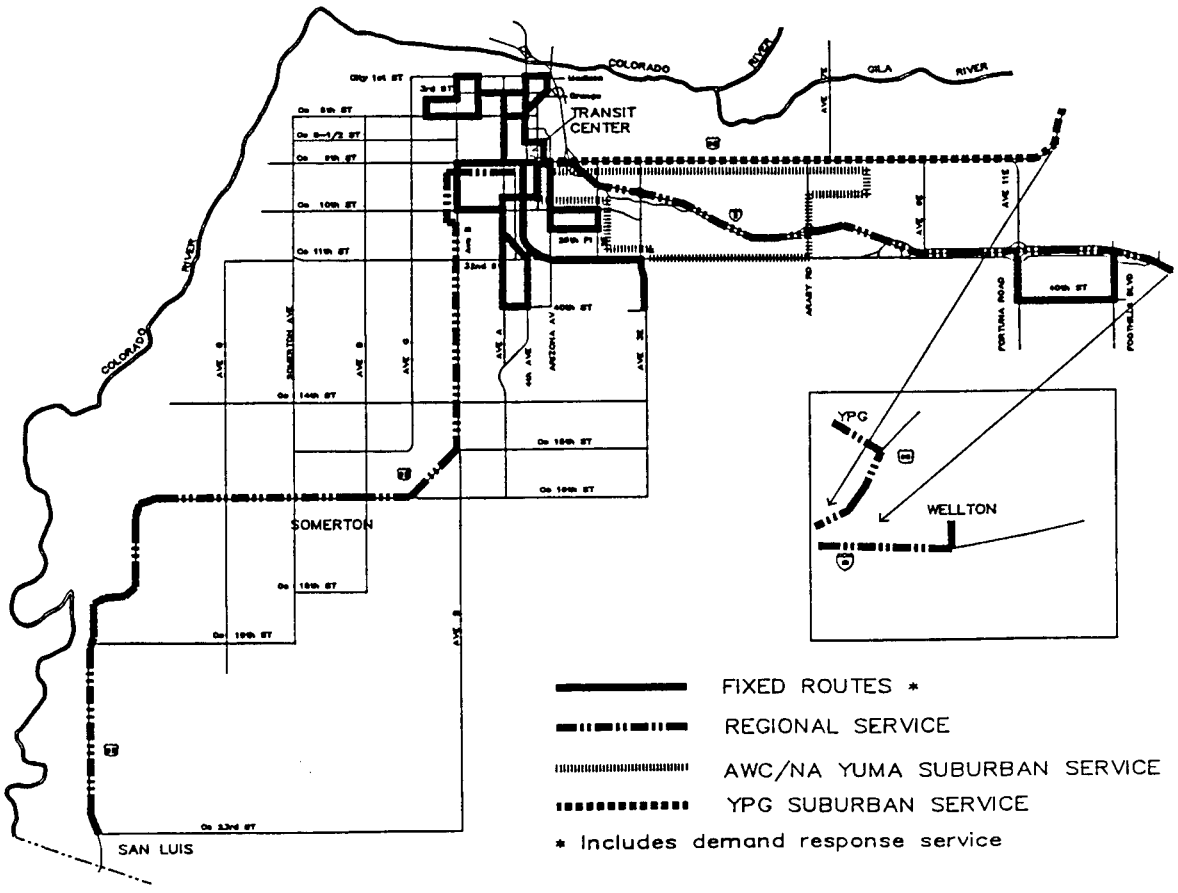
Funding for Alternative 1 was carried out three years to illustrate that federal funds are limited and, when the needs are greater than the FTA Section 9 appropriation, local sources must pay the balance.

A potential sponsor considering this alternative should notice that the assumption of increased share of operational costs (i.e. 10% to 12% to 15% is illustrative and not guaranteed). It must also be recognized that in some future year if/when another metropolitan area in Arizona qualifies as an urban area (i.e. over 50,000 population) the annual FTA Section 9 appropriation will be reduced slightly due to a sharing with a second urban area.

Transit Alternative 2

Figure 4 illustrates the transit service routes that would be provided in Alternative 2. As shown in Table 6, this alternative is the same as the Alternative 1, with two routes added - one to/from AWC/NAYuma and a second to/from the Yuma Proving Ground. Each would begin and end at the Transit Center.

FIGURE 4
ALTERNATIVE 2 TRANSIT ROUTES



The tables below show the additional capital equipment and funding that would be required.

TABLE 10
TRANSIT ALTERNATIVE 2 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Fixed Route	6	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	1 hour	107,700	43%
Demand Response	n/a	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	Trips on Request	33,700	13%
Regional Service	2	Somerton San Luis Foothills Wellton	2 Round Trips per Day	Smtn: 3 dys/wk SL: 3 dys/wk Fthls: 2 dys/wk Wltn: 1 dy/wk	n/a	24,500	10%
Suburban Service	1	AWC/NAYuma	8 am - 10 pm 14 Round Trips per Day	Per class schedules; 196 dys/school yr	1 hour	52,150	21%
Suburban Service	1	Yuma Proving Ground	2 Round Trips per Day	Per work schedules; 306 dys/yr	1 hour + 15 minutes	31,850	13%
				TOTAL		**249,900**	**100%**

Table 10 shows that the amount of transit service provided by Alternative 2 in the Yuma Urbanized Area is 56%. That is a reduction of 29% from the first alternative, due to addition of the two suburban routes.

The cost of the Alternative 2 Transit System is presented in the table below. Because this system adds to the first alternative, only the added capital equipment and operations are itemized. The additional costs for the AWC/NAYuma and the Yuma Proving Ground routes are identified separately.

TABLE 11
COST OF TRANSIT SYSTEM ALTERNATIVE 2

				CAPITAL	OPERATING
1	ALTERNATIVE 1 TRANSIT COST				
		Initial Capital Cost		$983,900	-----
		Annualized Capital Cost		140,700	-----
		Annual Operating, Administration, and Marketing Costs		-----	$826,050
		SUBTOTAL COST OF ALTERNATIVE 1		**$1,124,600**	**$826,050**
2	AWC/NAYUMA SERVICE				
	Capital Equipment	1 30-passenger coach	@ 180,000	180,000	
		1 Radio	@ 1,400	1,400	
		10 Bus Stop Signs	@ 30	300	
		3 Benches/1 Shelter	@ 1,700	5,100	
		Total Capital		186,800	
		Total Capital Annualized		22,950	
	Annual Operations			-----	$168,930
	Administration			-----	1,500
	Marketing			-----	**2,500**
		SUBTOTAL COST FOR SERVICE TO AWC/NAYUMA ***(Capital includes Initial & Amortized Annual)***		**$209,750**	**$172,930**
3	YUMA PROVING GROUND SERVICE				
	Capital Equipment	1 30-passenger coach	@ 180,000	$180,000	
		1 Radio	@ 1,400	1,400	
		5 Bus Stop Signs	@ 30	150	
		3 Benches/1 Shelter	@ 1,700	$5,100	
		Total Capital		$186,650	
		Total Annualized		$22,907	
	Annual Operations				$103,110
	Administrative				1,500
	Marketing				2,500
		SUBTOTAL COST FOR SERVICE TO YUMA PROVING GROUND ***(Capital includes Initial & Amortized Annual)***		**$209,557**	**$107,110**
	TOTAL COST FOR TRANSIT SERVICE - ALTERNATIVE 2				
		INITIAL CAPITAL		**$1,357,350**	**----**
		AMORTIZED CAPITAL		**$186,557**	**----**
		ANNUAL OPERATING		**----**	**$1,106,090**
		ANNUAL - AMORTIZED CAPITAL & OPERATING		**----**	**$1,292,647**

Table 11 shows the approximate initial and annual costs for provision of bus routes to AWC/NAYuma and the Yuma Proving Ground. Each would require a capital cost (initial + amortized annual) of nearly $210,000. The annual operating cost for the fourteen round trips for scheduled classes, between the Transit Center and AWC/NAYuma, would be $172,930; the annual operating costs for two round trips to/from Yuma Proving Ground would be $107,110.

(Please turn to page 29)

TABLE 12
SOURCES OF REVENUE FOR TRANSIT ALTERNATIVE 2

TRANSIT ALTERNATIVE 2	FTA [7] CAPITAL	FTA [7] OPERATION	LOCAL [7]	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$1,085,880	-----	$271,470	-----	$1,357,350
Capital Cost - Amortized Annual	149,246	-----	37,311	-----	186,557
Operating/Administration=$1,106,090 Farebox = 10%	-----	-----	-----	$110,609	$110,609
Federal and Local	-----	$99,269	$896,212	-----	$995,481
FIRST YEAR COST	**$1,235,126**	**$99,269**	**$1,204,993**	**$110,609**	**$2,649,997**
Balance FTA Appropriation Available					**$2**
New Year Appropriation - Estimate					**$446,614**
Appropriation Available for Second Year					**$446,616**
SECOND YEAR					
Capital Cost - Initial	-----	-----	-----	-----	-----
Capital Cost - Amortized Annual	**$149,246**	-----	**$37,311**	-----	**$186,557**
Operating/Administration=$1,106,090 Assume Faare Box = $12%	-----	-----	-----	**$132,731**	**$132,731**
Federal and Local	-----	**$297,370**	**$675,989**	-----	**$973,359**
SECOND YEAR COST	**$149,246**	**$297,370**	**$713,300**	**$132,731**	**$1,292,647**
Balance FTA Appropriation Available					**$0**
New Year Appropriation - Estimate					**$446,614**
Appropriation Available for Third Year					**$446,614**
THIRD YEAR					
Capital Cost - Initial	-----	-----	-----	-----	-----
Capital Cost - Amortized Annual	**$149,246**	-----	**$37,311**	-----	**$186,557**
Operating/Administration=$1,106,090 Assume Farebox = 15%	-----	-----	-----	**$165,913**	**$165,913**
Federal and Local	-----	**$297,368**	**$642,809**	-----	**$940,177**
THIRD YEAR COST	**$149,246**	**$297,368**	**$680,120**	**$165,913**	**$1,292,647**

[7] *Funding of this alternative should also consider application for FTA Section 18 rural funds and; specific funding by Arizona Western College/NAYuma and the Yuma Proving Ground.*

The Federal Transit Administration Section 9 appropriation available is $1,334,397. To fund this alternative with available federal funds, and assuming that fares would supply 10% of total operating funds, $1,204,993 local funds would be necessary.

A potential sponsor considering this alternative should notice that the assumption of increased share of operational costs (i.e. 10% to 12% to 15%) is illustrative and not guaranteed.

Transit Alternative 3

Alternative 3 is included to show what may be required in providing daily and hourly fixed route service to the outlying communities of Somerton, San Luis, Foothills, and Wellton. Naturally, service could be provided only to one or more of the communities, as desired. Equipment and operating costs would be reduced to meet the level of service desired.

Figure 5 illustrates the routes in Alternative 3. Fixed route service is shown for both the Yuma Urbanized Area and regular roundtrip service between the Transit Center and Somerton/San Luis and Foothills/Wellton. In each of these areas, demand-response service would be required to serve those patrons who could not use the fixed route service.

FIGURE 5
ALTERNATIVE 3 TRANSIT ROUTES

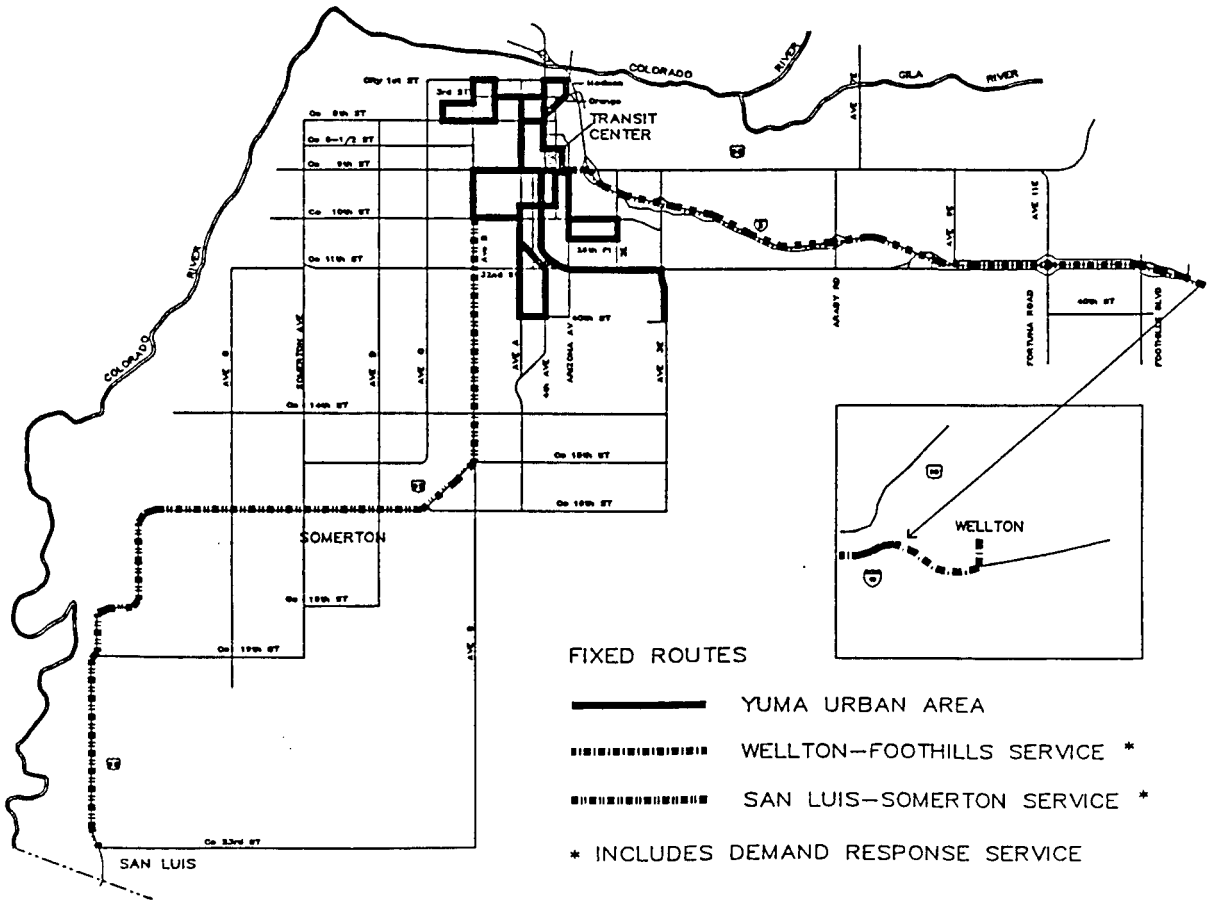


TABLE 13
TRANSIT ALTERNATIVE 3 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Fixed Route	6	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	1 hour	107,700	24%
Fixed Route	1	Somerton & San Luis	7 am - 6 pm	Mon.-Sat.	2 hours	79,560	17%
Fixed Route	1	Foothills & Wellton	7 am - 6 pm	Mon.-Sat.	2 hours	94,860	21%
Demand Response Service	n/a	Yuma Urbanized Area, Somerton, San Luis, Foothills, Wellton	7 am - 6 pm	Mon.-Sat.	Trips on Request	174,420	38%
				TOTAL		**456,540**	**100%**

Note that in this alternative the Demand Response Service becomes the highest share (38%) transit service provided.

The costs for the Alternative 3 transit system are shown in Table 14. Because this system builds on Alternative 1, only the added costs are presented. The costs directly attributable to fixed route and demand response service for the outlying communities are shown separately.

TABLE 14
COST OF TRANSIT SYSTEM ALTERNATIVE 3

				CAPITAL	OPERATING
1	ALTERNATIVE 1 TRANSIT COSTS				
	Initial Capital			$983,900	-----
	Annualized Capital			140,700	-----
	Annual Operating, Administrative, and Marketing Costs				826,050
	Less Regional Service [8] - Operating				(40,100)
	Less Regional Service - Capital *($180,000 Initial + $21,470 Annual)*			(201,470)	-----
		SUBTOTAL ALTERNATIVE 1 COSTS		**$923,130**	**$785,950**
2	FIXED ROUTE SERVICE TO/FROM SOMERTON AND SAN LUIS				
	Capital Equipment	1 30-passenger coach	$ 180,000		
		1 Radio	1,400		
		10 Bus Stop Signs	300		
		6 Benches/2 Shelters	9,800		
		Initial Capital		$191,500	
		Annualized Capital		24,058	
	Operations *(306 dys/yr)(12 hrs/dy)($49/hr)*				$179,930
	Administrative *(1/2 staff person)*				15,000
	Marketing				2,500
	Fixed Routes	**SUBTOTAL FIXED ROUTE SERVICE SOMERTON/SAN LUIS**		**$215,558**	**$197,430**
3	FIXED ROUTE SERVICE TO/FROM FOOTHILLS AND WELLTON				
	Capital Equipment	1 30 passenger coach	$180,000		
		1 Radio	1,400		
		10 Bus Stop Signs	300		
		6 Benches/2 Shelters	9,800		
		Initial Capital		$191,500	-----
		Annualized Capital		24,058	-----

TABLE 14 (continued)
COST OF TRANSIT SYSTEM ALTERNATIVE 3

			CAPITAL	OPERATING
Operations				$179,930
Administrative (1/2 Staff Person)				15,000
Marketing				2,500
	SUBTOTAL FIXED ROUTE SERVICE FOOTHILLS & WELLTON		**$215,558**	**$197,430**
4 DEMAND RESPONSE SERVICE TO OUTLYING COMMUNITIES				
Capital Equipment	2 Vans	$90,000		
	2 Radios	2,800		
	Initial Capital		**$92,800**	—
	Annualized Capital		**26,353**	—
Operations:				
San Luis/Somerton			-----	$179,930
Foothills/Wellton			—	$179,930
Administration			-----	10,000
Marketing			-----	5,000
	SUBTOTAL DEMAND RESPONSE SERVICE TO OUTLYING AREAS		$119,153	$374,860
TOTAL COST FOR TRANSIT SERVICE ALTERNATIVE 3				
	INITIAL CAPITAL		**$1,473,399**	—
	AMORTIZED CAPITAL		**193,699**	—
	ANNUAL OPERATIONS		—	**1,555,670**
	ANNUAL - AMORTIZED *CAPITAL + OPERATIONS*		—	**$1,349,369**

[8] *The limited Regional Service would not be required in this alternative because the more extensive fixed route service is provided.*

Table 14 shows estimated costs to provide fixed route service (and demand response service for those people unable to use the fixed route service) throughout metropolitan Yuma County. Approximately 76% of the county's population would have bus service available to them, either as fixed route or as demand response service.

Table 14 also demonstrates that to initiate this metro-wide service, $1,279,700 initial capital expenditure would be necessary. In addition, $193,699 annualized capital cost would be required, bringing the total capital cost to $1,473,399. Note that this is greater than the FTA Section 9 available appropriation. As stated in Table 15 below, FTA Section 18 funds and specific funding from the communities should be considered.

TABLE 15
SOURCES OF REVENUE FOR TRANSIT ALTERNATIVE 3

TRANSIT ALTERNATIVE 3	FTA [9] CAPITAL	FTA [9] OPERATION	LOCAL [9]	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$1,178,719	----	$294,680	----	$1,473,399
Capital Cost - Amortized Annual	154,959	----	38,740	----	193,699
Operating/Administration=$1,555,670 Farebox = 10%	----	----	----	$155,567	$155,567
Federal and Local	----	$719	$1,399,384	----	$1,400,103
FIRST YEAR COST	**$1,333,678**	**$719**	**$1,732,804**	**$155,567**	**$3,222,768**
Balance FTA Appropriation Available					$0
New Year Appropriation - Estimate					$446,614
Appropriation Available 2nd Year					$446,614
SECOND YEAR					
Capital Cost - Inidial	----	----	----	----	----
Capital Cost - Amortized Annual	$154,959	----	$38,740	----	$193,699
Operating/Administration=$1,555,670 Farebox = 12%	----	----	----	$186,680	$186,680
Federal and Local	----	$291,655	$1,077,335	----	$1,368,990
SECOND YEAR COST	**$154,959**	**$291,655**	**$1,116,075**	**$186,680**	**$1,749,369**
Balance FTA Appropriation Available					$0
New Year Appropriation - Estimate					$446,614
Appropriation Available 3rd Year					$446,614
THIRD YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$154,959	----	$38,740	----	$193,699
Operating/Administration= $1,555,670 Farebox = 15%	----	----	----	$233,351	$233,351
Federal and Local	----	$291,655	$1,030,665	----	$1,322,320
THIRD YEAR COST	**$154,959**	**$291,655**	**$1,069,405**	**$233,351**	**$1,749,369**

[9] *Funding of this alternative should also consider application for FTA Section 18 rural funds and; specific funding by jurisdictions representing those areas being served.*

The Federal Transit Administration Section 9 appropriation available is $1,334,397. This Alternative would consume most of the federal appropriation in capital costs, leaving $719 federal funds to be applied to the operating costs.

A potential sponsor considering this alternative should notice that the assumption of increased share of operational costs (i.e. 10% to 12% to 15% is illustrative and not guaranteed). It must also be recognized that in some future year if/when another metropolitan area in Arizona qualifies as an urbanized area (i.e. over 50,000 population) the annual FTA Section 9 appropriation may be reduced due to a sharing with a second urbanized area.

Transit Alternative 4

Alternative 4 is a combination of the first three Alternative Services. See TABLE 6. It includes bus service to all the areas examined in the first three alternatives. Figure 6 illustrates the services included.

FIGURE 6
TRANSIT ALTERNATIVE 4 SERVICE ROUTES

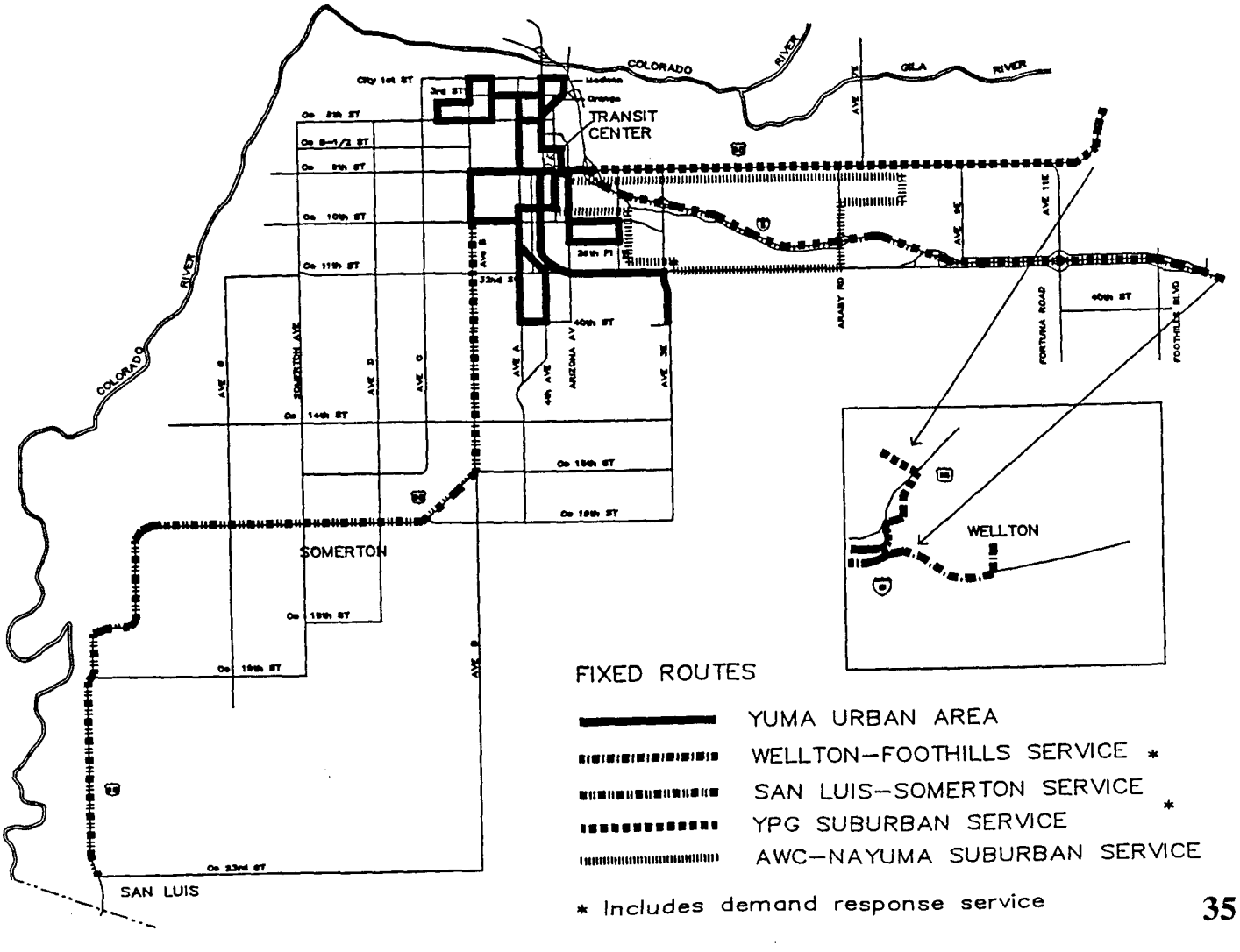


TABLE 16
TRANSIT SERVICE ALTERNATIVE 4 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Fixed Route	6	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	1 hour	107,700	20%
Fixed Route	1	Somerton & San Luis	7 am - 6 pm	Mon.-Sat.	2 hours	79,560	15%
Fixed Route	1	Foothills & Wellton	7 am - 6 pm	Mon.-Sat.	2 hours	94,860	18%
Demand Response Service	n/a	Yuma Urbanized Area, Somerton, San Luis, Foothills, Wellton	7 am - 6 pm	Mon.-Sat.	Trips on Request	174,420	32%
Suburban Service	1	AWC/NAYuma	8 am - 10 pm 14 Roundtrips per day	Per Class Schedules; 196 days per school year	1 hour	52,150	10%
Suburban Service	1	Yuma Proving Ground	2 Roundtrips per day	Per Work Schedules; 306 days per year	1 hour + 15 minutes	31,850	6%
				TOTAL		540,540	100%

The cost of this alternative is obtained by adding the modular components for the service desired. There may be some realized cost savings when operating the entire system. Hence, the cost summary shown in TABLE 17 can be considered as the "high end" of the expected cost.

TABLE 17
COST OF TRANSIT SYSTEM ALTERNATIVE 4

TYPE OF SERVICE	SERVICE AREA	INITIAL CAPITAL COST	ANNUAL CAPITAL COST	ANNUAL OPERATING COST	TOTAL
Fixed Route & Demand Response	Yuma Urbanized Area	$803,900	$119,230	$785,950	$1,709,080
Fixed Route	Somerton, San Luis, Foothills, and Wellton	383,000	48,116	394,860	825,976
Demand Response	Somerton, San Luis, Foothills, and Wellton	92,800	26,353	374,860	494,013
Suburban	AWC/NAYuma	186,800	22,950	172,930	382,680
Suburban	Yuma Proving Ground	186,650	22,907	107,110	316,667
TOTAL COST FOR TRANSIT SERVICE ALTERENATIVE 4					$3,728,416
	INITIAL CAPITAL	$1,653,150	—	—	
	AMORTIZED CAPITAL	—	$239,556	—	
	ANNUAL OPERATIONS	—	—	$1,835,710	
	ANNUAL AMORTIZED CAPITAL + OPERATIONS	—	—	$2,075,266	

Table 18 shows one possible funding option for Alternative 4. The Sources of Funding utilize only federal appropriations that are currently available ($1,334,397). The balance would have to be provided by local sources. In funding such an alternative, the sponsor should also consider application for FTA Section 3, 16, and 18 funds, direct funding from those group(s) receiving the service (e.g. the outlying communities, AWC/NAYuma, Yuma Proving Ground and Marine Corps Air Station), and private funding.

TABLE 18
SOURCES OF REVENUE FOR TRANSIT ALTERNATIVE 4

TRANSIT ALTERNATIVE 4	FTA [10] CAPITAL	FTA [10] OPERATION	LOCAL [10]	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$1,322,520	----	$330,630	----	$1,653,150
Capital Cost - Amortized Annual	11,877	----	227,679	----	239,556
Operating/Administration=$1,835,710 Farebox = 10%	----	----	----	$183,571	$183,571
Federal and Local	----	----	$1,652,139	----	$1,652,139
FIRST YEAR COST	$1,334,397	----	$2,210,448	$183,448	$3,728,416
Balance FTA Appropriation Available					$0
New Year Appropriation - Estimate					$446,614
Appropriation Available 2nd Year					$446,614
SECOND YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$191,645	----	$47,911	----	$239,556
Operating/Administration=$1,835,710 Farebox = 12%	----	----	----	$220,285	$220,285
Federal and Local	----	$254,969	$1,360,456	----	$1,615,425
SECOND YEAR COST	$191,645	$254,969	$1,408,367	$220,285	$2,075,266
Balance FTA Appropriation Available					$0
New Year Appropriation - Estimate					$446,614
Appropriation Available 3rd Year					$446,614
THIRD YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$191,645	----	$47,911	----	$239,556
Operating/Administration=$1,835,710 Farebox = 15%	----	----	----	$275,357	$275,357
Federal and Local	----	$254,969	$1,305,384	----	$1,560,354
THIRD YEAR COST	$191,645	$254,969	$1,353,296	$275,357	$2,075,266

[10] *Funding of this alternative should also consider application for FTA Section 18 rural funds and; specific funding by jurisdictions representing those areas being served.*

Alternative 4 would use all the federal Section 9 appropriation for capital purchases. As shown in Table 18, none of the existing FTA appropriation would be available for transit operations. $2,210,448 would be the responsibility of local providers.

A potential sponsor considering this alternative should notice that the assumption of incresed share of operational costs (i.e. 10% to 12% to 15% is illustrative and not guaranteed). It must also be recognized that in some future year if/when another metropolitan area in Arizona qualifies as an urban area (i.e. over 50,000 population) the annual FTA Section 9 appropriation may be reduced due to a sharing with a second urban area.

Alternative 5 and Alternative 6

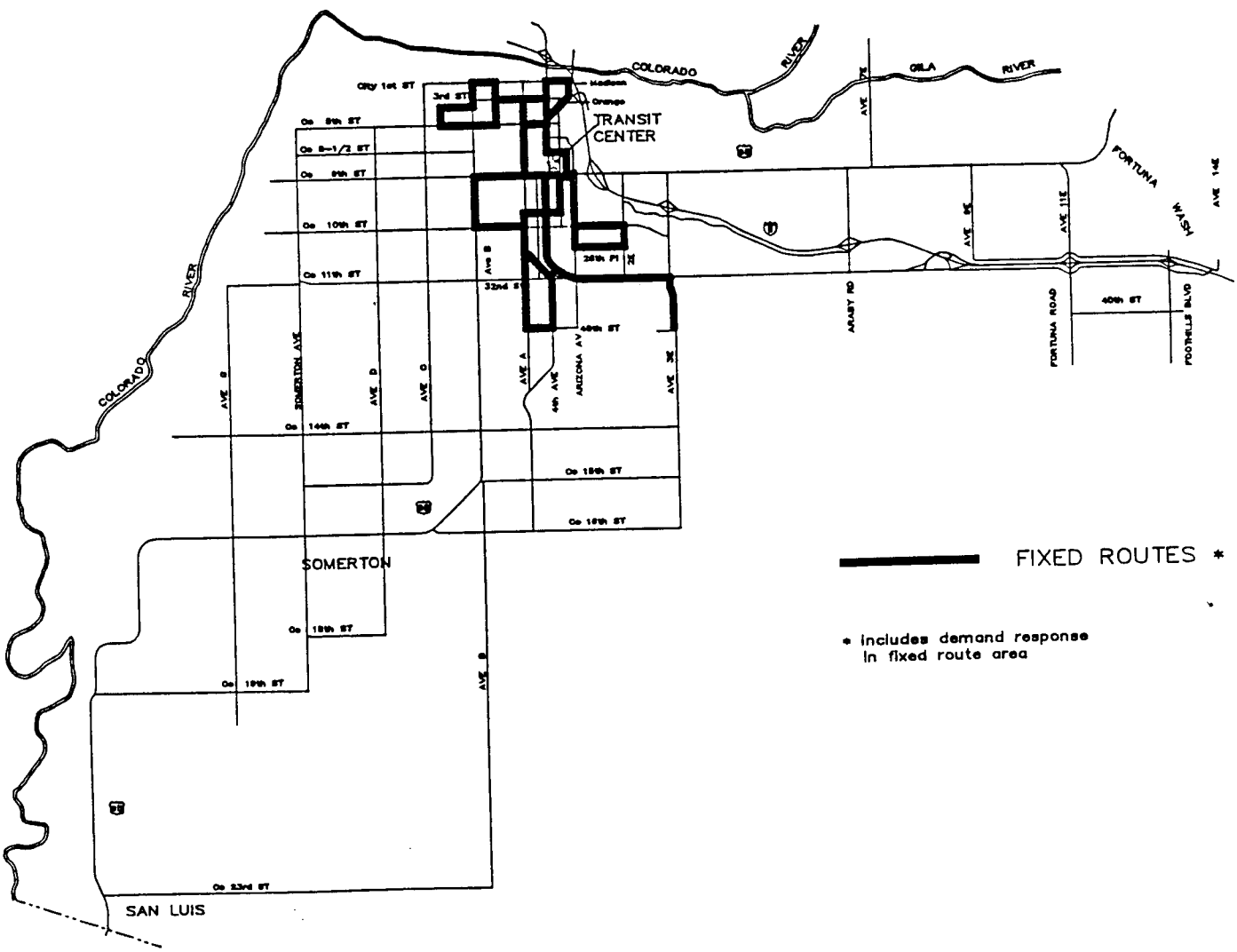
The final two transit alternatives considered in this report are abbreviated versions of those examined above. They are both scaled-down from the Alternative No. 1. Alternative No. 5 examines implementation of fixed route transit with a demand-response operation in the Yuma Urbanized Area. There would be no regional transit service, i.e. bus service to the outlying communities. Alternative No. 6 reduces the service option further by eliminating the fixed route service; only demand-response transit service would be provided in the Yuma Urbanized Area.

Following the analysis of Alternative No. 6 is a discussion of a two-van system that could be considered as a trial for demand-response transit.

Transit Alternative 5

Figure 7 illustrates a possible fixed route bus system in the Yuma Urbanized Area. It consists of three loop routes that operate through a central Transit Station. Each end of each route would serve a specific area of the Urbanized Area; thus, there would be a total of six (6) sub-routes operating out of the Transit Station.

FIGURE 7
ALTERNATIVE 5 TRANSIT ROUTES



Implementation of this alternative must examine carefully the street pattern chosen for the routes. The routes should serve as many people as possible. Also, the sponsor should realize that once a fixed route bus service is implemented on a particular street, it becomes difficult to change the routing. This is because people begin to locate on or near to bus routes and when modifications are made, it often places strain on their daily living and work patterns.

TABLE 19
TRANSIT ALTERNATIVE 5 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Fixed Route	6	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	1 hour	107,700	76%
Demand Response Service	n/a	Yuma Urbanized Area	7 am - 6 pm	Mon.-Sat.	Trips on Request	33,700	24%
				TOTAL		141,400	100%

The table above shows that 100% of the service provided would be in the Yuma Urbanized Area. This is consistent with the FTA Section 9 funds as they are allocated to an area based on the population of the Urbanized Area. Tables 20 and 21 illustrate, respectively, the likely cost and one potential source of revenue for Alternative 5.

TABLE 20
COST OF TRANSIT SYSTEM ALTERNATIVE 5

				CAPITAL	OPERATING
1	CAPITAL				
	Revenue Vehicles	Fixed Route 3 Coaches	@ 180,000	$540,000	
		Demand Response 1 Van	@ 45,000	45,000	
		Backup Vehicle (Used) 1 Coach	@ 100,000	100,000	
	Non-Revenue Vehicles	Administration Vehicle	@ 15,000	15,000	
		Service Vehicle	@ 15,000	15,000	
	Radio System		19,900	19,900	
	Bus Stop Signs		3,000	3,000	
	Photo I.D. Machine		2,000	2,000	
	Benches and Shelters		31,000	31,000	
	Maintenance Equip.		18,000	18,000	
	Office Equipment		5,000	5,000	
	Central Transit Station		10,000	10,000	
		SUBTOTAL INITIAL CAPITAL COST		**$803,900**	
		TOTAL ANNUALIZED CAPITAL COST		**$114,958**	
2	OPERATIONS				
	Fixed Routes				$494,810
	Demand Response				164,940
		SUBTOTAL ANNUAL OPERATIONS COST			**$659,750**
3	ADMINISTRATION				
	Staff Director				$50,000
	Staff Secretary/AA				25,000
	Office Space				12,000
	Office Operations				10,000
	Staff Transportation				4,200
		SUBTOTAL ANNUAL ADMIN. COST			**$101,200**
4	MARKETING	**SUBTOTAL ANNUAL MARKETING COST**			**$25,000**
	TOTAL COST FOR TRANSIT SERVICE ALTERNATIVE 5				
		INITIAL CAPITAL		**$803,900**	—
		AMORTIZED CAPITAL		**$114,958**	—
		ANNUAL OPERATIONS		—	**$785,950**
		ANNUAL AMORTIZED CAPITAL+OPERATIONS		—	**$900,908**

TABLE 21
SOURCES OF REVENUE FOR TRANSIT ALTERNATIVE 5

TRANSIT ALTERNATIVE 5	FTA CAPITAL	FTA OPERATION	LOCAL	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$643,120	----	$160,780	----	$803,900
Capital Cost - Amortized Annual	91,966	----	22,992	----	114,958
Operating/Administration=$785,950 Farebox = 10%				$78,595	$78,595
Federal and Local		$353,677	$353,678	----	$707,355
FIRST YEAR COST	**$735,086**	**$353,677**	**$537,450**	**$78,595**	**$1,704,808**
Balance FTA Appropriation Available					$245,634
New Year Appropriation - Estimate					$446,614
Appropriation Available 2nd Year					$692,248
SECOND YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$91,966	----	$22,992	----	$114,958
Operating/Administration=$785,950 Farebox = 12%	----	----	----	$94,314	$94,314
Federal and Local	----	$345,818	$345,818	----	$691,636
SECOND YEAR COST	**$91,966**	**$345,818**	**$368,810**	**$94,314**	**$900,908**
Balance FTA Appropriation Available					$254,464
New Year Appropriation - Estimate					$446,614
Appropriation Available 3rd Year					$701,078
THIRD YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$91,966	----	$22,992	----	$114,958
Operating/Administration=$785,950 Farebox = 15%	----	----	----	$117,893	$117,893
Federal and Local	----	$334,028	$334,028	----	$668,056
THIRD YEAR COST	**$91,966**	**$334,028**	**$337,450**	**$117,893**	**$900,907**

This alternative would be most appropriate if the City of Yuma decided to sponsor a fixed route bus system, primarily in the city and close-by areas and using federal transit funds.

Transit Alternative 6 - Demand Response Bus Service in the Yuma Urban Area

This alternative would provide demand-response bus service only in the Yuma Urbanized Area and, primarily for people that have no other means of transportation. Eligibility criteria and fares could be used; however, if federal Section 9 funds were used to finance any part of the system, service would have to be available to all people. Table 22 illustrates the characteristics of this alternative.

TABLE 22
TRANSIT ALTERNATIVE 6 CHARACTERISTICS

SERVICE TYPE	NO. OF ROUTES	SERVICE AREA	HRS. OF OPERATION	DAYS OF WEEK	HEADWAY	ANNUAL BUS MILES	PERCENT BY SERVICE TYPE
Demand Response Service	n/a	Yuma Urbanized Area	5 hrs/day	Mon.-Fri.	Trips on Request	12,765	100%
				TOTAL		12,765	100%

The YMPO report Analysis of Transit Service Options [11], conducted in 1991 by Leigh, Scott and Cleary, Inc., examined three types of bus service in considerable detail and concluded that "demand-response service would have the highest annual operating expense." Because such a service would focus on the elderly/disabled and serve very few of the general public, the number of people carried would be low, resulting in the "annualized local subsidy per trip being four times as much as for a fixed route option."

Notwithstanding the above, a limited demand-response service may have some advantages for initiating public transit service in the Yuma area. The YMPO report Identification and Analysis of Unmet Transportation Needs [12] stated "a need for transportation service exists..." and "The greatest need for service appears to be among the elderly and handicapped segments of the population, with significant needs also identified among low income persons." In addition, the Yuma social service agencies continually have difficulty financing capital and operating expenses for their operations.

A sponsoring agency could initiate a demand-response service, starting small to learn how much transit demand exists and what the service would cost. Such an operation could continue as small if needs and/or costs dictated, or it could be expanded to become part of a larger system, such as in Alternatives Nos. 1-5. A possible demand-response transit system is outlined in Table 23. It is assumed that in this sample bus system, the two accessible vans would serve patrons who could demonstrate they had no other means of transportation.

[11] Identification and Analysis of Unmet Transportation Needs, Basmaciyan-Darnell Inc., August,1988

[12] YMPO Area Analysis of Transit Service Options, Leigh, Scott & Cleary Inc. and SG Associates, January, 1991

TABLE 23
TRANSIT ALTERNATIVE 6
POSSIBLE DEMAND-RESPONSE SYSTEM FOR YUMA AREA

				CAPITAL	OPERATING
1	CAPITAL	2 accessible vans	@ $45,000	**$90,000**	
		2 radios	@ 1,400	$2,800	
		SUBTOTAL INITIAL CAPITAL COST		**$92,800**	
		SUBTOTAL ANNUALIZED CAPITAL COST		**$26,354**	
2	OPERATIONS & MAINTENANCE	5 hrs/day x 5 days/week x 50 weeks/year x $32.50/hour			$40,625
3	ADMINISTRATION	2 pers. x 3 hrs/day x 5 days/week x 50 weeks/year x $10/hour			$15,000
4	MARKETING				2,000
		SUBTOTAL ANNUAL OPERATIONS COST			**$57,625**

TOTAL COST FOR TRANSIT SERVICE ALTERNATIVE 6

INITIAL CAPITAL	**$92,800**	—
AMORTIZED CAPITAL	**26,354**	—
ANNUAL OPERATIONS	—	**$57,625**
ANNUAL-AMORTIZED CAPITAL+OPERATIONS	—	**$83,979**

TABLE 24
SOURCES OF REVENUE TRANSIT ALTERNATIVE 6

TRANSIT ALTERNATIVE 6	FTA CAPITAL	FTA OPERATING	LOCAL	FARES	TOTAL
FIRST YEAR					
Capital Cost - Initial	$74,240		$18,560	----	$92,800
Capital Cost - Amortized Annual	21,083		5,271	----	26,354
Operating/Administration = $57,625 Farebox = 10%	----		----	$5,762	$5,762
Federal and Local		$25,931	25,932	----	51,863
FIRST YEAR COST	**$95,323**	**$25,931**	**$49,763**	**$5,762**	**$176,779**
Balance FTA Appropriation Available					$1,213,143
New Year Appropriation - Estimate					$446,614
Appropriation Available 2nd Year					$1,659,757
SECOND YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$21,083	----	$5,271	----	$26,354
Operating/Administration = $57,625 Farebox = 12%	----	----	----	$6,915	$6,915
Federal and Local	----	$25,355	$25,355	----	$50,710
SECOND YEAR COST	**$21,083**	**$25,355**	**$30,626**	**$6,915**	**$83,979**
Balance FTA Appropriation Available					$1,613,319
New Year Appropriation - Estimate					$446,614
Appropriation Available 3rd Year					$2,059,933
THIRD YEAR					
Capital Cost - Initial	----	----	----	----	----
Capital Cost - Amortized Annual	$21,083	----	$5,271	----	$26,354
Operating/Administration = $57,625 Farebox = 15%	----	----	----	$8,644	$8,644
Federal and Local	----	$24,490	$24,491	----	$48,981
THIRD YEAR COST	**$21,083**	**$24,490**	**$29,762**	**$8,644**	**$83,979**

The above tables show that a two van demand-response system providing bus service to a select group of people (i.e. those meeting certain eligibility criteria) could be capitalized and operated for about $176,779 the first year. The second year, assuming no further capital purchases or increased operating expenses and, fares realized at 10% of operations, the system would cost about $31,203 ($5,271 + $25,932).

A few advantages of Alternative 6 are that it could be financed within the limits of FTA Section 9 appropriations, required local funds would be less than Alternatives Nos. 1-5, and it offers an opportunity to start small. Disadvantages are that such a system would not serve the general public, cost per passenger trip would be high, and only 9% of the available FTA appropriation would be used (with the balance going to other parts of Arizona for rural transit systems).

APPENDIX

PUBLIC INPUT

YUMA METROPOLITAN PLANNING ORGANIZATION

EXECUTIVE BOARD
PUBLIC MEETING AND HEARING
on the
TRANSIT DEVELOPMENT PLAN

November 4, 1993
Yuma Civic and Convention Center
5:00 p.m.

SUMMARY OF PROCEEDINGS

EXECUTIVE BOARD
MEMBERS PRESENT: Mayor Robert H. Tippett, Chairman
Mayor Marco A. Reyes, City of San Luis
Supervisor Clyde Cuming, Yuma County
Councilman Harriett Pinsker, City of Yuma
Councilman Art Everett, City of Yuma

OTHERS PRESENT: Robert Vaughan, YMPO
John Gross, YMPO
Sue Stallworth, YMPO
See attached Sign-In Sheet for additional attendees.

(NOTICE: Prior to this Public Meeting/Hearing on the Transit Development Plan, the YMPO convened its regular Executive Board meeting at 3:00 p.m. in the Yuma Civic and Convention Center. Minutes of that meeting are available at the YMPO office.)

I. CALL TO ORDER:

Chairman Tippett reconvened the regular session of the YMPO Executive Board at 5:00 p.m. for the purpose of conducting a Public Meeting/Hearing on the YMPO's draft Transit Development Plan.

II. PRESENTATION OF TRANSIT DEVELOPMENT PLAN (TDP):

Chairman Tippett introduced Robert Vaughan, Executive Director of the YMPO. He explained that Mr. Vaughan would make a presentation regarding the Transit Development Plan and then questions/comments/discussion would be heard from the Board members and then from the audience.

Robert Vaughan gave a 20 minute slide presentation on the TDP, highlighting the following:

* Role of the YMPO: Plan for mobility throughout the Yuma Countywide area. The YMPO is not the implementing agency as far as transit goes. The YMPO is the planning agency and the TDP and any comments from the public will be provided to the agency that sponsors and implements transit.

  Mr. Vaughan stated that if, at the city election on December 7, 1993, the voters pass both questions, including the one regarding transit, the City of Yuma will be the transit sponsor.

* Summary of Previous Transit Service Studies done in the Yuma area.

* Transit Development Plan required to make application for a federal aid grant to implement transit.

* TDP includes analysis of six (6) transit service alternatives to determine what each might cost to provide. Each alternative's Transit Service Routes was displayed and explained. Larger maps were available for review by the public. It was noted that each alternative was prepared in modular form so the reader could see what each component of service that was planned and its cost.

* Alternative 5: Fixed Route and Demand Response Service in the Yuma urbanized area. Mr. Vaughan stated that if the transit tax passes on December 7, the City would implement a transit system similar to Alternative 5 within the city limits. Transit Alternative 5 Service Routes were shown on a larger city map for public viewing. Mr. Vaughan stressed that the YMPO alternatives did not commit the local agencies to any particular service.

* In addition, Mr. Vaughan addressed the following questions that the YMPO has been asked regarding Transit Service:

  (1) What bus service is planned in Alternative 5?

  Fixed Route and Demand Response Service available to the general public. Demand-Response Service was explained as dial-a-ride, door-to-door service. A rider would have to qualify for the Demand Response Service by showing he/she was not able to use the Fixed Route System. The City of Yuma has stated that if the December 7 vote passes, transit service would be similar to Alternative 5, but limited to the City of Yuma.

(2) How many people would ride a bus system in the City of Yuma?

An estimate of 150,000 to 460,000 annual trips was presented. Many factors enter into determining how many people will use the system. YMPO examined 20 other transit operations in similar size areas in the south and western U.S. to determine how many people are using those systems. Only by putting a system into action with extensive marketing to the people will ridership be determined. It was stressed that the quality of the system and its operation will effect the number of patrons on the buses.

(3) How much will a transit system in the City of Yuma cost?

A Summary of Cost and Sources of Revenue for first three (3) years was presented. Significant drop in cost between year one and years two and three. Reason is that first year includes capital cost for obtaining equipment. Fare revenues were estimated at 10% of the operating cost of the first year of service. The second year that percentage was estimated at 12%; the third year 15%. The farebox increase was used because the YMPO assumed that the transit system would become better known, understood, and more popular.

(4) How much will it cost each rider?

A possible fare plan was displayed. A base fare of $1.00 per trip, with reduced fares for elderly/disabled, and youth ages 5-12 years. Half-fare is required if federal funds are used. Savings books/coupons might also be available. An average fare under this possible fare plan would be $0.55 per transit trip. Mr. Vaughan stated this was only a reasonable fare plan.

(5) How many transit riders will be needed to raise the amount of revenue anticipated by the fares?

Using the possible fare plan discussed above in (4), and assuming that 10% of operational costs are covered, the system will have to serve 142,900 riders the first year. It was pointed out that if this level of ridership is not attained, it would be the responsibility of the sponsor to pay the shortfall from additional local revenues. This demonstrates why there is sometimes a reluctance on the part of local agencies to initiate transit service.

(6) How much federal grant money is available?

Currently, appropriations of $1,334,397 are available to the Yuma area. Appropriations have accumulated over three years. An annual appropriation

is available for three years. The 1991 amount will lapse on September 30, 1994. The sponsoring agency must apply for these funds. Transit Development Plan is necessary to make application.

(7) What must occur for transit service to be started in the Yuma area?

(a) Obtain a dedicated long-term source of local funds to match the federal grants. That is the reason for the vote on December 7, 1993. A positive vote for the 1/2 cent sales tax with up to 15% dedicated to transit will mean that the local match money would be available.

(b) A local agency must accept the role as transit sponsor. If both questions are passed on December 7, 1993, the City of Yuma will become the transit sponsor.

(c) The sponsor must apply for the federal funds and agree to satisfy all federal transit regulations.

(d) The sponsor begins service, either directly or by contract. The city could buy/lease buses and provide the service itself. Or, the city could contract with a manager/operator to bring in equipment and provide the service.

(8) How long will it be before buses are on the streets?

After the vote passes, it is estimated between a year and 18 months. A Grant application must be filed with the Federal Transit Administration (FTA), bus procurements made or contracts signed with manager/operator, and staff hired/organized to oversee the operation. The YMPO will assist to expedite the process.

(9) Why should the Yuma area have bus service?

(a) A bus service provides mobility to people without access to a private vehicle. Includes youth, elderly, disabled, and low income.

(b) People may be able to get to work by bus. Also, helps the employer in that he/she would not have to provide as much parking.

(c) Transit operations are more energy efficient than a car.

Robert Vaughan concluded his presentation.

Chairman Tippett asked for discussion/questions from the Executive Board at this time. Chairman Tippett asked if the monthly fare pass would be an unlimited number of rides or a fixed number? Mr. Vaughan responded what was shown was an unlimited number of rides during the month.

Chairman Tippett opened the meeting to public discussion/questions/comments.

1. QUESTION: *Are state lottery funds eligible for use as a revenue source for transit service?*

   RESPONSE: Yes, they can be used for transit. It is up to the local agency to determine how the lottery transportation funds will be used. Currently, the City of Yuma uses the lottery funds for road repair/improvements. Mayor Reyes stated the City of San Luis uses its lottery funds for street lighting.

2. QUESTION: *The presentation included projection of cost for three years. After three years, what happens then? Does this area continue to receive federal funds and what percentage?*

   RESPONSE: The federal Intermodal Transportation Efficiency Act (ISTEA) is a six-year bill, passed December 18,1991. That bill provides the transit funding. This area gets an appropriation each year. Appropriations will be good for the life of that Bill. Although federal transit subsidies have decreased over recent years, and previous Administrations have requested a decrease in transit appropriations, the transit lobby is strong and also cities rely on transit subsidies, meaning that the liklihood of their continuation in some form is realistic.

3. QUESTION: *If transit service goes into operation immediately and there are four years left on the bill, in the fourth year, what percentage of the operating cost would be picked up by the federal government? Is that going to keep diminishing every year?*

   RESPONSE: That is an unknown. Presently, about 45% of the operating costs will be paid by the federal government. After four years, while there are no funds identified, it does not mean that Congress will not continue it in some other form. Historically, the trend has been to provide funding for transit service. (Also see Response to Question 2)

4. QUESTION: *How many years has this area been receiving the federal appropriations for transit service?*

RESPONSE: The first appropriation that YMPO is aware of is 1982.

5. QUESTION: *Is there any reason to believe this will stop?*

RESPONSE: No. Previous federal administrations have attempted to eliminate or reduce the transit subsidy, but they have continued. Capital subsidies began in the late 1960s and operating subsidies started with the National Mass Transit Act of 1974.

6. QUESTION: *Assuming that the voters pass both transportation questions on December 7, 1993, what alternative will the city adopt?*

RESPONSE: The city of Yuma has stated that if both questions pass, transit service will be implemented within the boundaries of the city of Yuma. It would be similar to Alternative No. 5. Other jurisdictions could negotiate with the city for expansion of the service on a contract basis.

7. QUESTION: *If the taxes pass and Alternative 5 is implemented and is successful, will the City consider adding additional routes in the city of Yuma?*

RESPONSE: The system will be re-evaluated annually to see if the service is being provided adequately. However, expansion likely will depend on need, cost, revenues available, and how well the system is used.

8. QUESTION: *How much revenue is expected from the city tax?*

RESPONSE: If the tax issues pass on December 7, 1993, it could be three-five months before the tax would go into effect, or before it is collected. The tax would be 1/2 cent sales tax on the dollar and would raise $3.5 million per year of which up to 15% would go to a transit system. The other 85% would go to road improvements. A list of the road improvements for the next five years is availalbe, along with a project listing for ten-year improvements. The ballot questions are worded in such a way that the 15% for transit could fail, while the tax could pass for road improvements. Both could fail or both could pass.

9. **COMMENT:** **Transit service will be good and is needed in Yuma.**

10. QUESTION: *Is the bus that comes from El Centro into Winterhaven privately owned?*

RESPONSE: Goodall Transit Service is a private system that provides that service. Goodall is subsized, in part, by Imperial County, California.

11. QUESTION: *Has that system been studied to determine their costs?*

RESPONSE: Yes, the YMPO has talked with Goodall officials and a transit planner from Imperial County.

12. QUESTION: *Is the city of San Luis bringing medical patients up to the city of Yuma for treatments?*

RESPONSE: Only on a demand basis, provided free by a non-profit organization. It is not designed to be a full transit system.

13. QUESTION: *Once the transit tax passes, will the planning begin immediately, or will the City wait the three-five months when the tax collection begins?*

RESPONSE: The planning will start, but the revenues will not be coming in immediately.

14. QUESTION: *Does the YMPO have any funds currently designated for transit?*

RESPONSE: Yes. There is $100,000 programmed to transit. In addition, the YMPO has about $650,000 in other programmed funds that could be considered for re-programming to transit, subject to approval by the YMPO Executive Board.

(Note: The YMPO also has an Operating Trust Fund, established by YMPO Executive Board action 5/31/90. As of 6/30/93, the Operating Trust Fund contained about $800,000. Part of those monies oculd be loaned to the City of Yuma to expedite transit operations, if the transit tax passes on December 7, 1993).

15. QUESTION: *Could those funds be used to start the system prior to the sales tax being collected?*

RESPONSE: Yes. That issue would have to be considered by the entire Executive Board. (Also see Question 14.)

16. QUESTION: *The federal appropriations are available for four more years?*

RESPONSE: Yes, the federal Intermodal Surface Transportation Efficiency Act (ISTEA) was signed into law in December, 1991, and it is a six-year bill.

17. QUESTION: *If the Yuma area has been receiving transit appropriations since the early 1980s, and each is only good for three years, why hasn't a transit system been implemented before this?*

RESPONSE: The area has not been able to identify a long-term local funding source. The federal appropriation alone is not enough money to operate a transit system. There must be a local funding source to match the federal grants. The need for transit has been talked about for many years and to date no jurisdiction has had a matching revenue source.

18. QUESTION: *Would demand-response transit service be house-to-house service?*

RESPONSE: Demand-Response transit service would be similar to a taxi service. It could be provided through a contract with a local taxi company. The demand-response service would be available in the fixed route transit area for those people who could not use the fixed route service.

19. **COMMENT:** **Councilman Pinsker stated there are many federal regulations that must be met, such as the Americans With Disabilities Act.**

20. QUESTION: *Is it correct to assume that the Federal Transit Administration is aware of the local efforts to pass the tax and implement transit service in the Yuma area?*

RESPONSE: Yes, they have received copies of all the YMPO's reports.

21. QUESTION: *Is there any reason to think that if the tax passes, the City would not be able to utilize the appropriations that are now available?*

RESPONSE: No. As long as the City meets all the federal regulations, the transit appropriation will be available to the city. The process would start immediately after the tax passes to obligate the oldest appropriation amount (1991), which expires on September 30, 1994.

22. QUESTION: *What happens if the federal government does not renew the current federal transportation bill? Would the contractual obligation to continue the service fall entirely upon the city of Yuma?*

RESPONSE: That could be handled in several ways: (1) Yuma County could get involved; (2) Perhaps the 1/2 cent tax will provide more funds than is estimated; (3) Raise the fares; (4) The transit system could be cut back or eliminated; (5) The city could identify another source of revenue; or (6) Some combination of the above.

23. **COMMENT: Mayor Reyes stated he envisions a Transit Authority being created at some point to deal with those types of issues.**

24. **COMMENT: Councilman Pinsker stated that with the emphasis on pollution reduction, politically, the federal government is not likely to reduce the funding appropriations for transit service.**

25. **COMMENT: Councilman Everett stated upon learning that the State of Arizona does not allow a Transit Authority to areas under 400,000 population, he encouraged, through the Yuma City Council, state legislation to allow rural communities under 400,000 to create a Transit Authority. A Transit Authority would allow a tax to be collected in an area corresponding to the transit service area, such as the city of Yuma and the defined outlying areas, such as Wellton. He encouraged the attendees to contact state legislators and ask them to support this proposed legislation, if they want this concept expanded outside the city limits.**

26. QUESTION: *If you (i.e. city of Yuma) want this tax to pass, what has the city done to advertise and sell the tax to the public?*

RESPONSE: It is unlawful to use public monies to sell a tax/bond issue. The city can educate people about the issue and that is underway. City staff members are calling on service clubs to provide information on the tax issue. It was pointed out that this tax issue is competing for attention with the mayoral and council elections, which will also be on December 7, 1993.

27. **COMMENT:** **Mayor Reyes said he encourages the taxpayers of the City of Yuma to support the tax issues on December 7 as they will be a good thing for the city of Yuma.**

28. QUESTION: *This area has needed a bus service for many years. I have been attending YMPO meetings for several years. It seems like nothing new is happening yet. What's wrong with finding out why the bus system in Imperial County, California is successful?*

RESPONSE: The YMPO has done considerable work to determine/document the need for bus service; examine/analyze the most reasonable and feasible kind of bus service for the Yuma area; and (now) preparation of the Transit Development Plan to identify costs and how the system could be funded.

Imperial County has a transit system that is subsidized by local tax dollars. The tax issue on December 7, 1993, if successful, will allow similar funding in the City of Yuma. If citizens are willing to pay the 1/2 cent sales tax and earmark up to 15% of the funds collected for transit, the city of Yuma is willing to start the bus system. Also, the City of Yuma is encouraging the Arizona State Legislature to adopt legislation that would allow creation of a broader area and funding mechanism, such as a Transit Authority.

29. QUESTION: *Could more than the 15% of the tax, if passed, be used for the transit service, if necessary?*

RESPONSE: Because that's the way it is worded on the ballot, it would have to be limited to 15% of the generated revenues. Originally, it was set at 10%, but because of the figures in the Transit Development Plan, it was raised to 15%.

30. QUESTION: *Could Yuma County implement a tax countywide?*

RESPONSE: That would be double-taxation. (Also see Question/Response 37.)

31. QUESTION: *Could Yuma County provide some existing funding to the transit system?*

RESPONSE: It was stated the county has more pressing issues than transit service. Supervisor Cuming said from his point of view Yuma County has a serious crime problem, specifically, juvenile delinquency. He would support putting additional funds to law enforcement.

32. **COMMENT:** **Supervisor Cuming stated that recognizing the small number of people at this public meeting, he wondered how many people in Yuma County really care about transportation. There is no doubt a lot of people need it, but as far as people getting out and calling their neighbors to get out and vote, that's what is needed here.**

33. **COMMENT:** **Mayor Tippett stated that if this tax does not pass, it is not likely that the city or the county will implement a transit system. The funds are not there.**

34. **COMMENT:** **Many people are not here because they do not have transportation to get here.**

35. QUESTION: *Everybody wants a public transit service. But, where is the money coming from to pay for it? City Council did an excellent thing by putting it on the ballot to provide a funding source. But, city and county have had financial problems. There are a lot of other services that the citizens would like to see implemented, such as parks, street improvements. If the city takes transit on, the taxpayers could be left holding the bag to pay for the federal portion of it (if it were to be decreased or eliminated). Would this city tax subsidize people who live outside the city limits to use this service? I feel a regional transit authority should exist, or the city should not get involved.*

RESPONSE: People outside the city limits buy commodities sold in the city, so all people spending money in the city will pay the sales tax. There is some subsidy going on, but for the most part county

residents buy in the city and pay city sales tax. However, if the tax questions are passed, the city will provide bus service in the City of Yuma.

Other city programs will not be cut to make up any funding shortfalls. Also, the 1/2 cent tax will not effect those programs that the city wants to do, such as hire additional police officers.

36. QUESTION: *Have the Marine Corps Air Station or Yuma Proving Ground indicated a desire to participate in the transit system and provide funding?*

RESPONSE: The Commander at Yuma Proving Ground indicated interest at one time. Mayor Reyes stated that the need for transit service is an urban issue. The need is primarily in the city of Yuma. If a need for service out of the city limits is identified, then those areas could contract for that service.

37. QUESTION: *Does state law now allow Yuma County to pass a sales tax that would support transit service?*

RESPONSE: Yes. Arizona Senate Bill 1182, signed into law in 1993, ammends Arizona Revised Statutes to allow Yuma County to pass a 1/2 cent sales tax countywide, a portion of which could be used for transit service, the other portion being used for road/street improvements.

Mayor Tippett stated he does not personally feel it would be appropriate to tax people countywide for a transit system that takes people mainly around the city of Yuma. The City has asked for legislation to allow the county to have the authority to form a Transit Authority within a given urban area, which could include Somerton, San Luis, and the Foothills and possibly Wellton, if they wanted to be included.

38. **COMMENT:** **Bus service should be provided to the airport.**

RESPONSE: Alternative No. 5 has a bus route that serves the airport and the Marine Corps Air Station.

39. **COMMENT:** **I have heard that Yuma Bus Company would be interested in providing bus service in the city of Yuma, but the owners do not know how to go about making those arrangements with the city.**

RESPONSE: Mayor Tippett stated that if they want to do this, have them contact the Mayor's office. Mayor Tippett also said that once federal funds are accepted, the transit service operator must meet all federal regulations.

40. COMMENT: Supervisor Cuming stated the Transit Development Plan forecasts 150,000 bus riders per year and the annual cost of $900,000. That averages approximately $6.00 per ride. In order to have reduced fares, through the use of federal grants and local tax revenues, people will have to pass the tax issues on December 7, 1993. He encouraged people to get out and vote and pass the tax.

Chairman Tippett thanked the citizens for their attendance and participation in the Public Meeting/Hearing.

V. ADOURN:

MOTION: Mayor Reyes made a motion to adjourn the meeting.
SECOND: Councilman Everett
ACTION: Motion carried by a unanimous vote.

Chairman Tippett adjourned the meeting at 6:20 p.m.

Prepared by:

Robert A. Vaughan, P.E.
Executive Director
Yuma Metropolitan Planning Org.

Approved by:

MAYOR ROBERT H. TIPPETT
Chairman, Executive Board
Yuma Metropolitan Planning Org.

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(Note: A tape recording of the entire meeting is available)

YUMA METROPOLITAN PLANNING ORGANIZATION
PUBLIC MEETING & HEARING
TRANSIT DEVELOPMENT PLAN
Thursday, November 4, 1993

NO.	NAME	ADDRESS	AGENCY *(If Applicable)*
1	Charlene Maloney	2155 S 14th ave #4, YUMA 85364	
2	Jackie Priest	2155 S. 14th ave #4, YUMA 85364	
3	EDWARD HEFFERNAN	1198 S 4th Ave YUMA, AZ 85364	
4	Barbara Polansky	S.A.I.L. 1700 1st #100	Catholic Comm Svcs
5	Susan Tennant	224 S 3rd Ave Yuma 85364	WACOG - AAA
6	John + Nancy Hunter	2400 Louise Yuma	
7	Karen E. Hambali	City of Yuma Housing Authority 1350 W. Colorado St.	City of Yuma H.A.
8	Tony Reyes	city of San Luis pbox 5	city of San Luis
9	Leroy Griffin	3000 CATALINA	
10	Joseph Mason	"	
11	Lucy Shipp	2275 Chico Lane	Yuma County Supervisor
12	M L Rose	2150 W 16th St	Yuma City Cab
13	Ken Arnold	P.O. Box 10509 Yuma 85364	AARP TRANSportation
14	Don Reinhart	1700 1st Ave #100 85364	CCS —
15	Bill Schiffer	100 W 25 St Sp 40	
16	M Buchelew	113 E 25 Pl	citizen
17	Merced Schultz	3380 S 4th ave	city
18	Virginia Lee Arnold	310 S. 4th Ave	County
19	Emilia Jolley	2797 W. 21st Ave	Yuma AZ

YUMA METROPOLITAN PLANNING ORGANIZATION
PUBLIC MEETING & HEARING
TRANSIT DEVELOPMENT PLAN
Thursday, November 4, 1993

NO.	NAME	ADDRESS	AGENCY *(If Applicable)*
19	Bob Kennedy	608 2nd Ave	Cocopah Tribe
20	Pat Gorrant	2450 S. 4th Ave. Suite 101, Yuma	Yuma Private Industry Council
21	Paul Johnson	P.O. Box 224 Yuma	Citizen
22	Sherry Johnson	" "	"
23	Jennifer Mitchell		KYMA
24	Michele Cohen		YDS
25	Cuckoo Gibbons	2450 S. 4th Ave #101, Yuma	Yuma Private Ind. Cncl. / JTPA
26	Jack R. Ferrell	550 E. Robin Ln. #80, Yuma	NAU-Yuma