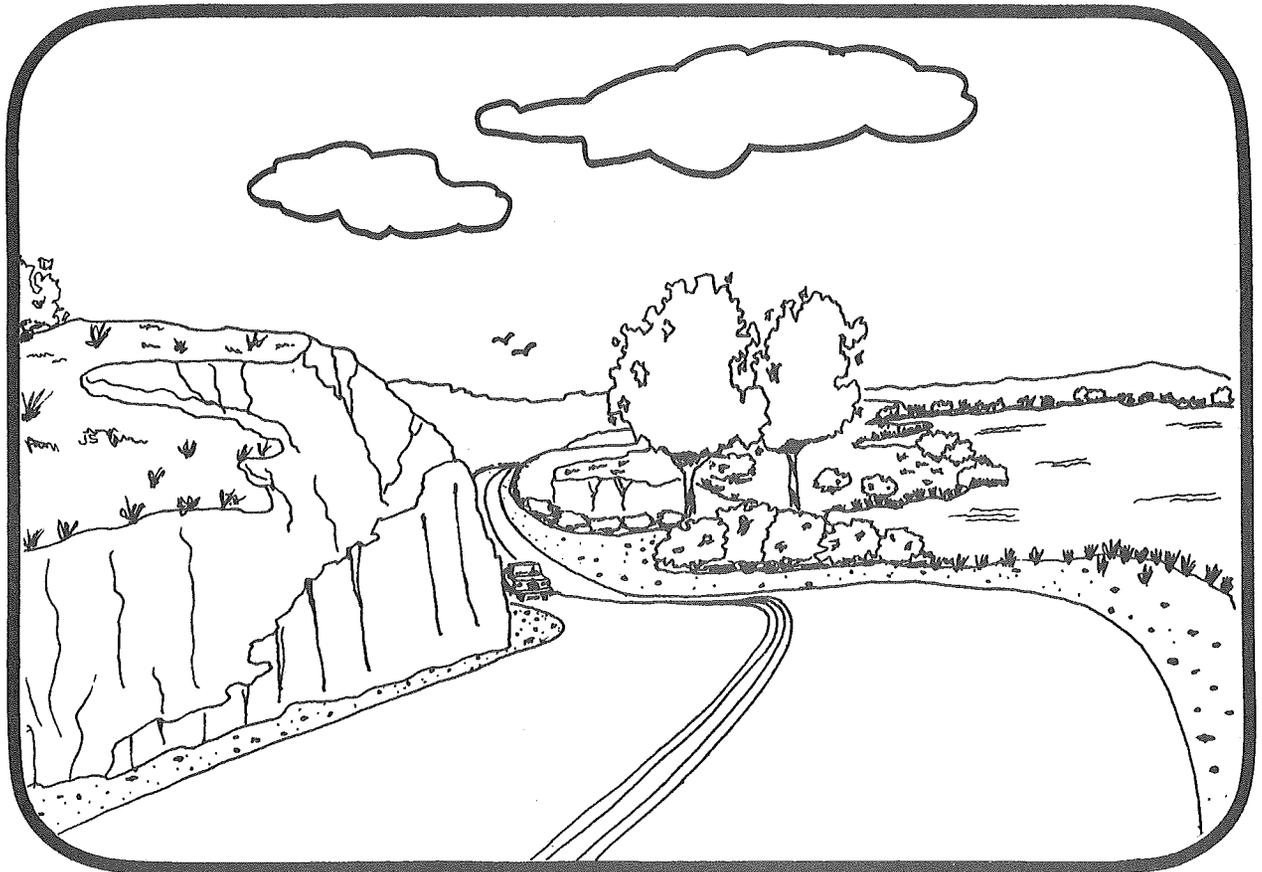
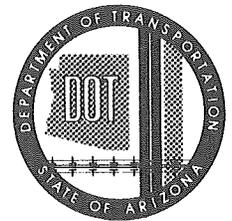


US-SR 95/72 CORRIDOR STUDY

Arizona Department of Transportation



22114A

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ACKNOWLEDGEMENTS

In the development of this Study, considerable support and assistance was provided by many agencies, citizens' groups and community leaders.

Arizona Department of Transportation

Highways Division
Transportation Planning Division

La Paz County

Engineering
Administration

Yuma County

Engineering
Administration

Lake Havasu City

Administration

Parker

Engineering
Administration

Citizens Along the Corridor

Western Arizona Council of Governments (WACOG)

FOREWARD

The Transportation Systems of Arizona have had major impacts on the economic growth, life-style, and land use development throughout the state. While transportation facilities serve all regions of the state, the predominant movement of people and goods are concentrated within a number of links or travel corridors. These corridors normally connect with the state's Interstate and Primary roadway systems and provide transportation service to activity and population centers.

The Highways and Transportation Planning Divisions of ADOT have undertaken the task of analyzing and documenting short and long-range transportation related characteristics and needs located within the corridors. On a general basis, the Corridor Studies address current and future traffic, modal mix, socioeconomic and land use impacts, and operational and traffic engineering features. Where applicable, recommendations for needed improvements are given, both in the short and long term. Short-range transportation needs are defined as those which should be met in three to five years, and long-range needs as those which should be met beyond five years.

The contents of this report are not designed to identify or rectify acute situations or emergency conditions which may otherwise merit immediate attention when ADOT is made aware of such conditions.

Appreciation is given to the necessary staff members and agencies who provided requested data relevant to the study.

SUMMARY OF RECOMMENDATIONS

The recommended improvements address land use suggestions that would have an important and direct impact on movement of people, goods and service within the corridor area. Recommendations with respect to the state highways themselves are listed as either short-term (more immediate) or long-term.

A. Land Use Recommendations:

1. Encourage the establishment of set back restrictions for future development fronting the State system should be coordinated with cities/counties to insure that future traffic is not adversely affected. Specific plans should be developed in conjunction with Yuma, La Paz and Mohave Counties, along with the incorporated communities of Parker and Lake Havasu City, to insure that future development has sufficient set-backs. (Photos 1, 2 and 3).
2. ADOT should insure that sufficient rights-of-way along SR 95/72 are preserved. Particular attention should be given to future growth expected southeast of Parker toward the SR 72 Junction, where a planned expansion of the Parker community is on the drawing board. (Exhibit 7).
3. Initiate and continue policy of ingress/egress permits between ADOT and the counties (Yuma, La Paz and Mohave) and the incorporated communities of Parker and Lake Havasu City onto the state highways 95 and 72.

B. Short-Range Highway Suggestions:

1. Encourage the development of the following Parker Strip area projects scheduled in ADOT's Fiscal Year 1985-1989 Five-Year Transportation Construction Program:
 - a. Osborne Wash, Unit I, MP 147.2, 4 miles of Grade & Drain and Structures. (Programmed FY 1986).
 - b. Osborne Wash, Unit II, MP 147.2, 2.3 miles of Grade & Drain and 6.3 miles of Asphaltic concrete pavement. (Programmed FY 1987).



1. PARKER STRIP - R/W RESTRICTIONS



2. PARKER STRIP - FLOOD PLAIN



3. PARKER STRIP - BLIND CURVE

- c. Osborne Wash, Unit III, MP 153.4, 1.5 miles of Grade & Drain and Asphaltic concrete pavement. (Programmed FY 1989).
2. Return control of a portion of SR 95 to La Paz County upon completion of new paralleling route (Osborn Wash projects MP 147.2 - 154.). However, funding should be provided to conform with recently adopted Transportation Board policy.
3. Support a locally organized campaign against drinking drivers, especially during peak months (October through March).

C. Long Range Highway Suggestions:

1. Coordinate and plan for necessary transportation facilities which will be required by Parker annexation and planned community surrounding the 95/72 junction.
2. A traffic analysis indicates that for the next twenty years the existing two-lane roadway on US, SR 95 and SR 72 are adequate and, overall, will be operating at a level of service of B to C.
3. Based on an evaluation of existing levels of service (B - C), the adequacy of roadway conditions on the US, SR 95/72 corridor and projected traffic twenty years hence, there appears to be no need to prioritize construction for the corridor segments. Other than routine maintenance activities, projects should be prioritized based on evaluations by the District Engineer as the needs arise.



4. PARKER STRIP - R/W INFRINGEMENT



5. PARKER STRIP - RESTRICTED SIGHT DISTANCE



6. PARKER STRIP - R/W RESTRICTION

INTRODUCTION

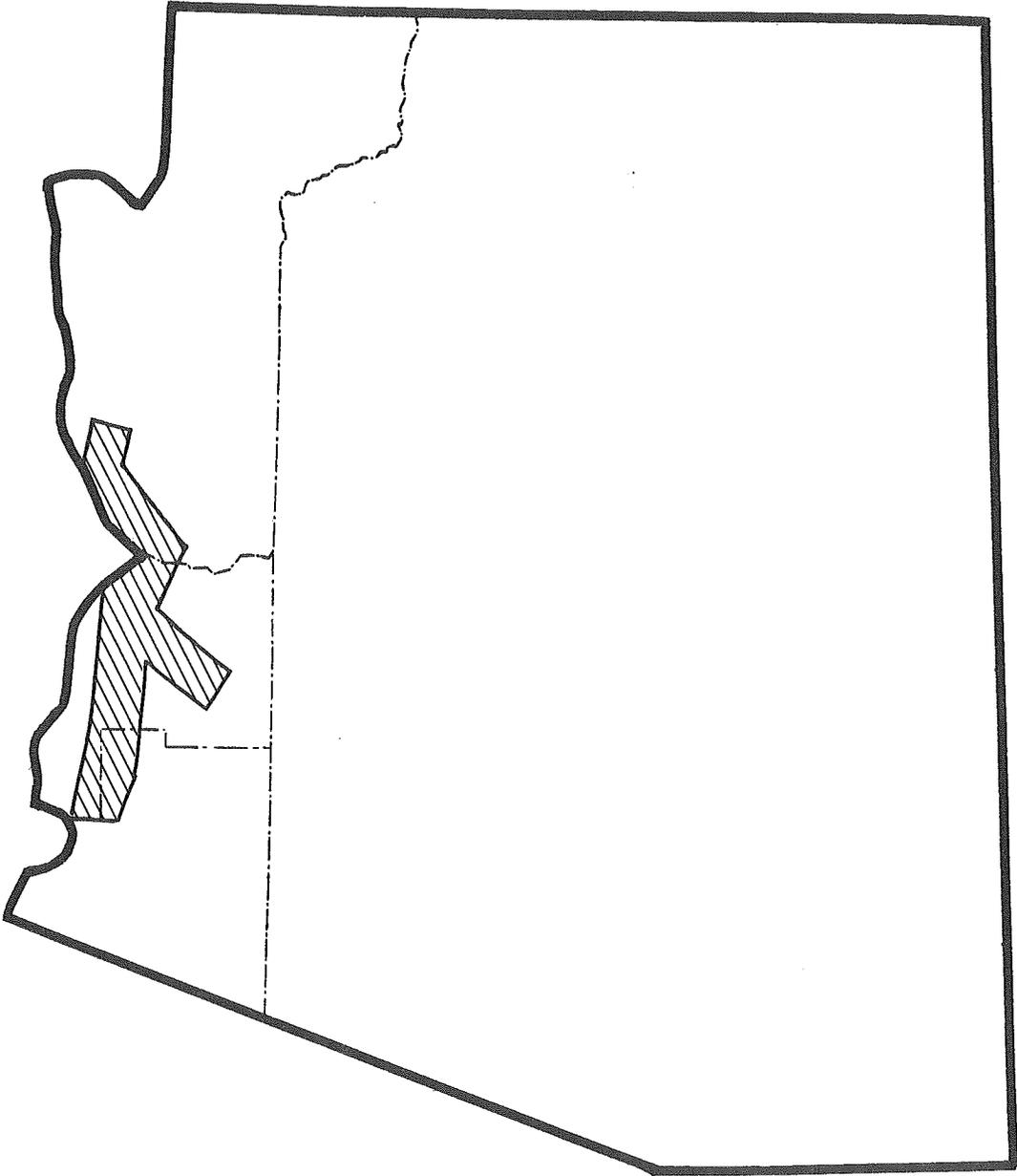
The U.S. 95, S.R. 95 portion of the corridor runs from the north boundary of Yuma County, through La Paz County, a small section of Yuma County, again through La Paz County and Mohave County to a junction with Interstate 40. State Route 72 section begins in La Paz County, at a junction with U.S. 60 in Hope and travels northwesterly to a junction with S.R. 95 south of Parker. The corridors traverse the two incorporated towns of Parker and Lake Havasu City. (See Exhibits 1, 2, and 3).

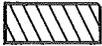
Highway U.S. 95 was established as a state highway in 1938, while S.R. 95 to Interstate 40 was taken onto the system between the years 1961 and 1970, and S.R. 72 established in 1932. It may be noted that in 1932 S.R. 72 went from the junction U.S. 60 in Hope to Parker. Highway 95 was originally on the Federal-Aid Secondary System and placed on the Federal-Aid Primary System in 1976. State Route 72 remains on the Federal-Aid Secondary System.

The 95/72 corridor is unique in that six distinct modes of personnel and commodity transportation are available: highway, rail, air, river, while liquified and gaseous commodities are transported through pipelines and communication and electrical power through transmission lines.

To date \$23,1002,230 has been spent on construction of the 95/72 corridor. In addition, \$17,545,000 is programmed and scheduled in the five-year construction program for additional improvements (See Exhibit 4).

GENERAL LOCATION MAP



 STUDY AREA

DETAILED STUDY CORRIDOR

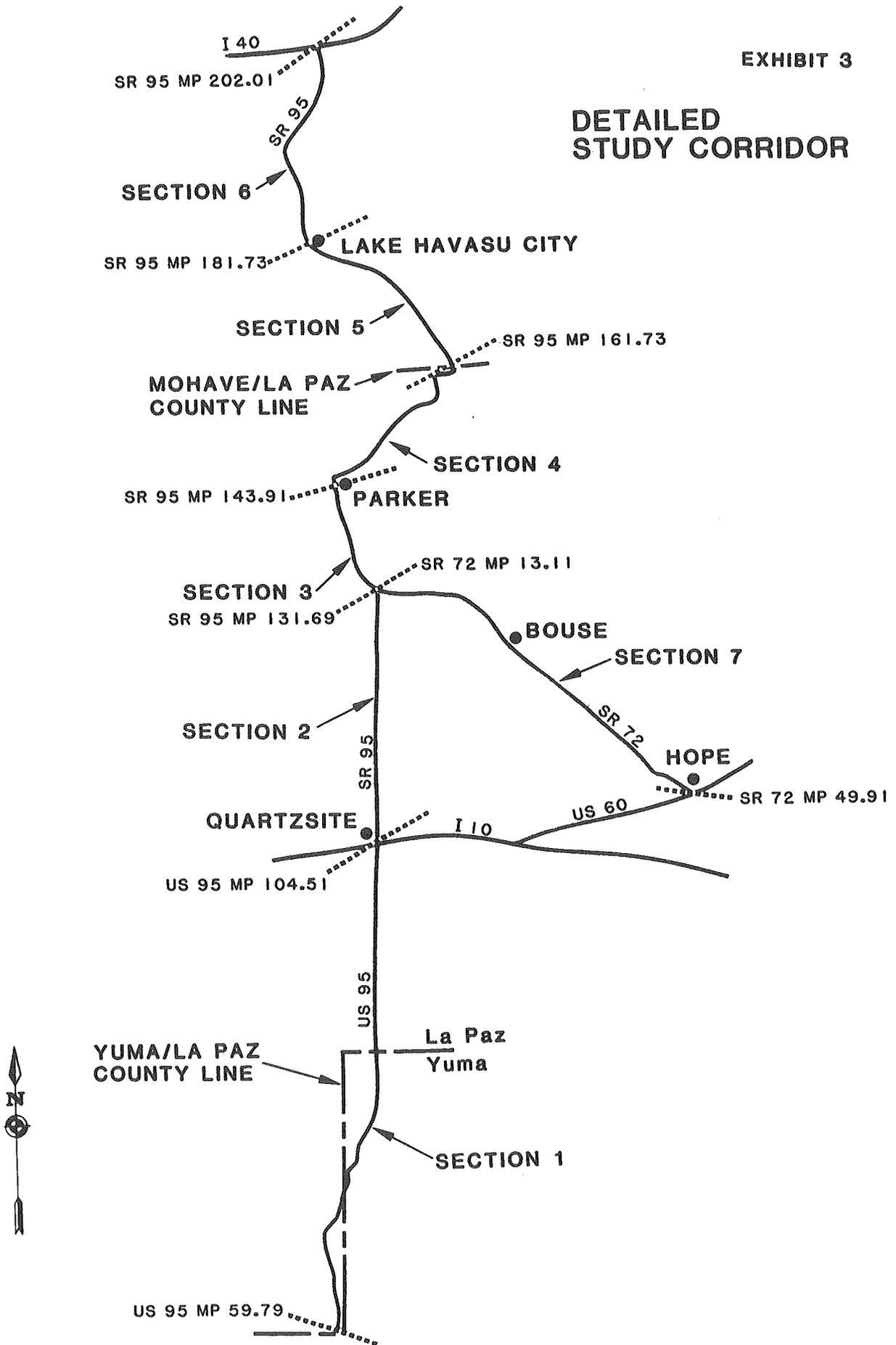


EXHIBIT 4

SUMMARY OF TOTAL CONSTRUCTION EXPENDITURE

SECTION NUMBER	ROUTE NUMBER	TOTAL EXPENDITURE	TOTAL MILES	INVESTMENT PER MILE
1	US 95	\$ 2,138,729	44.72	\$47,825
2	SR 95	802,111	22.59	35,507
3	SR 95	509,425	12.24	41,620
4	SR 95	3,862,111	17.76	217,461
5	SR 95	8,407,490	20.04	419,535
6	SR 95	6,876,717	19.98	344,180
7	SR 72	405,648	36.80	11,023
TOTALS:		\$23,002,230	174.13	132,098

The corridor is divided into seven study areas to facilitate reporting needs, recommendations, justification and responsibility. (See Exhibit 3).

SECTION ONE: U.S. Highway 95 from Yuma/La Paz County Line northerly to a junction with Interstate 10 in the unincorporated community of Quartzsite, a distance of 44.72 miles.

SECTION TWO: State Highway 95 from Interstate 10 in Quartzsite northerly to a junction with State Highway 72, a distance of 22.59 miles.

SECTION THREE: State Highway 95 from a junction with State Highway 72, northerly into the town of Parker to the junction of Spur 95, a distance of 12.22 miles.

SECTION FOUR: State Highway 95 from Parker, northerly through the Parker Strip area to the La Paz/Mohave County Line at Bill Williams River, a distance of 17.76 miles.

SECTION FIVE: State Highway 95 from the La Paz/Mohave County Line, northerly to Milepost 181.73 in Lake Havasu City, a distance of 20.04 miles.

SECTION SIX: State Highway 95 from Lake Havasu City northerly to a junction with Interstate 40, a distance of 19.98 miles.

SECTION SEVEN: State Highway 72 from a junction with U.S. 60 at the community of Hope, northwesterly to a junction with State Highway 95, a distance of 36.80 miles.

II. ANALYSIS OF CORRIDOR SECTIONS

CORRIDOR SECTION ONE:

Corridor Section One, U.S. Highway 95, is located in southwestern La Paz County. The route begins at the Yuma/La Paz county line (MP 59.79), extends northerly through La Paz County to MP 71.76 where it enters Yuma County, and continues northerly to re-enter La Paz County (MP 90.49), thence northerly, paralleling Tyson Wash to a junction with Interstate 10 in Quartzsite. (Exhibit 5). The terrain consists of flat and gently rolling Sonoran desert. Field inspection reveals numerous dips and flood plains in the road which show signs of floods, and a dozen "No Passing" zones due to vertical clearance sight restrictions at the more severe dips.

TRAFFIC ANALYSIS: Traffic from the La Paz/Yuma county line northerly to Interstate 10 has increased from 727 Average Daily Traffic (ADT) in 1973 to 1800 ADT in 1983. The present traffic mix is 6% commercial (trucks) and 32% out-of-state vehicles. (Exhibit 5).

- **Projected Traffic:** Based on past traffic information and expected growth and development, in this corridor section the year 2003 traffic is estimated to be 2700 ADT.

LAND USE: The first thirty-eight miles of Section One are desert wasteland, while the last six miles are part of the La Posa South Recreational Site along Tyson Wash. Some scattered housing appears when approaching within one mile of I-10 junction. This would be considered as part of the Quartzsite populace.

POPULATION: Quartzsite and the inclusive census enumeration district had a population of 1,618 in 1980. This compares to 1,555 in the 1970 census and a population projection of 1,970 for the year 2,005. The area has experienced population influxes of 5,000 to 10,000 in the winter months between October and March.

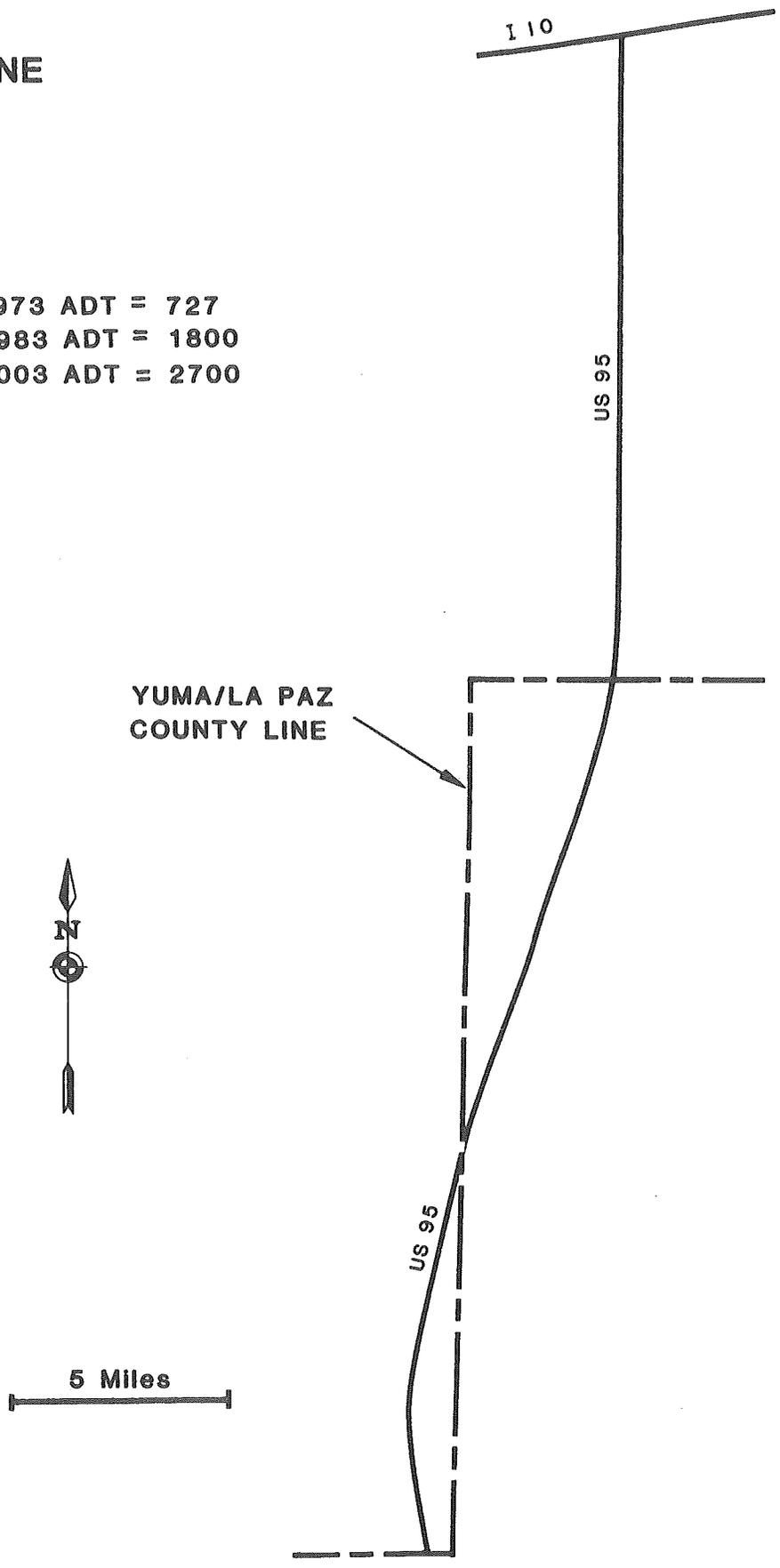
POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: A 69KV Arizona Public Service power transmission line parallels U.S. 95, 200 feet to the west and a U.S. Bureau of Reclamation 161 KV power line parallels 100 feet to the east of the highway centerline. (Photo 10). There are two smaller APS power lines crossing the highway at MP 90 and 98 (approximately). Two El Paso Natural Gas lines cross under the highway at MP 91 and 97 (approximately).

ECONOMIC DEVELOPMENT: Most of Section One is desert land devoted to wildlife and camping. Commercial trailer parks are within one mile of the section terminus at I-10. No other commercial ventures presently appear in the area. (Photo 11).

EXHIBIT 5

SECTION ONE

1973 ADT = 727
1983 ADT = 1800
PROJECTED 2003 ADT = 2700





10. SECTION 1, MP 100, POWER LINES



11. QUARTZSITE, JCT I-10 FRONTAGE ROAD

FLOOD PLAINS: From the Yuma County line northerly to I-10 there are numerous dips (approximately 50) and several flood plains which showed signs of severe run-off and damage to the roadway. This was especially evident on the shoulders of the roadway at the dips. Maintenance crews have had to pave an apron downstream on several dips to preserve the road way. (Photo 12).



12. PAVED APRON AT DIP, QUARTZSITE

RIGHT-OF-WAY: The dedicated right-of-way is 100 feet wide in Section One. Portions of the road are in Yuma County and La Paz County and pass through U.S. Bureau of Reclamation land. Right-of-way appears to be adequate for present and future needs.

CORRIDOR SECTION TWO

Corridor Section Two, State Highway 95, is located in the southwest quadrant of La Paz County. The route section extends from a junction with Interstate 10 in the community of Quartzsite, northerly to a junction with State Highway 72. (See Exhibit 6). There were 19 major drainage dips plus several flood plains noticed. These dips along with vertical and horizontal sight distance restrictions accounted for 29 "No Passing" zones northbound and 28 "No Passing" zones southbound. A particularly bothersome, mile-long "No Passing" zone appears between milepost 110.3 and 111.3.

Roadway conditions varied from rough pavement, with no shoulders, near Quartzsite to moderate pavement with soft shoulders in an area five miles north of Quartzsite. The majority of this section of roadway has pavement twenty-five years old.

TRAFFIC ANALYSIS: Traffic from Interstate 10 to State Highway 72 has increased from 454 ADT in 1973 to 2200 ADT in 1983. The present traffic mix is 4% trucks and 33% out-of-state vehicles. (See Exhibit 6).

- **Projected Traffic:** The year 2003 projected traffic is estimated to be 4100 ADT, based on historic data and expected development. Some changes may occur temporarily if the development of the new Parker townsite materializes; however, no significant changes should result. (Exhibits 7 and 8).

LAND USE: Section Two (I-10 to S.R. 72) is rolling Sonoran desert with little commercial representation. However, Parker has a planned community on the drawing board which extends approximately one mile south of the S.R./ 72 into study Section Two. This area will contain commercial, recreational and residential facilities. Future traffic, as it increases, creates congestion. (See Exhibit 7 for more detail).

POPULATION: There is presently very little population in this corridor section. Future population projections would be determined by the speed with which the planned community expansion could be developed. This Study Section would not be impacted as severely as the next section into Parker.

POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: A 161 KV Bureau of Reclamation power line and a 69 KV Arizona Public Service Power line parallel Highway 95, 100 to 200 feet east of the routes centerline the entire 22-1/2 miles of section length. No other facilities appear in the area.

SECTION TWO

1973 ADT = 454
1983 ADT = 2200
PROJECTED 2003 ADT = 4100

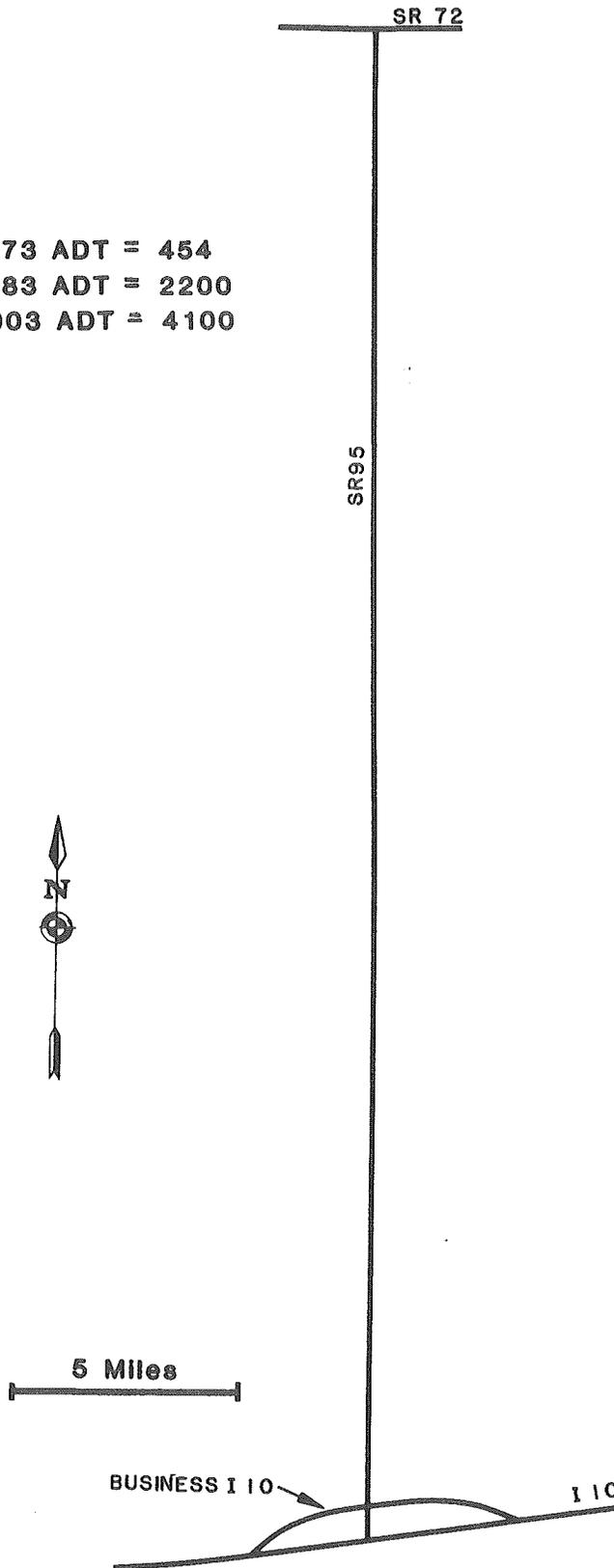


EXHIBIT 7

NEW PARKER TOWN SITE



SCALE: 1" = 100'
RANGE 8 NORTH
TOWNSHIP 19 WEST

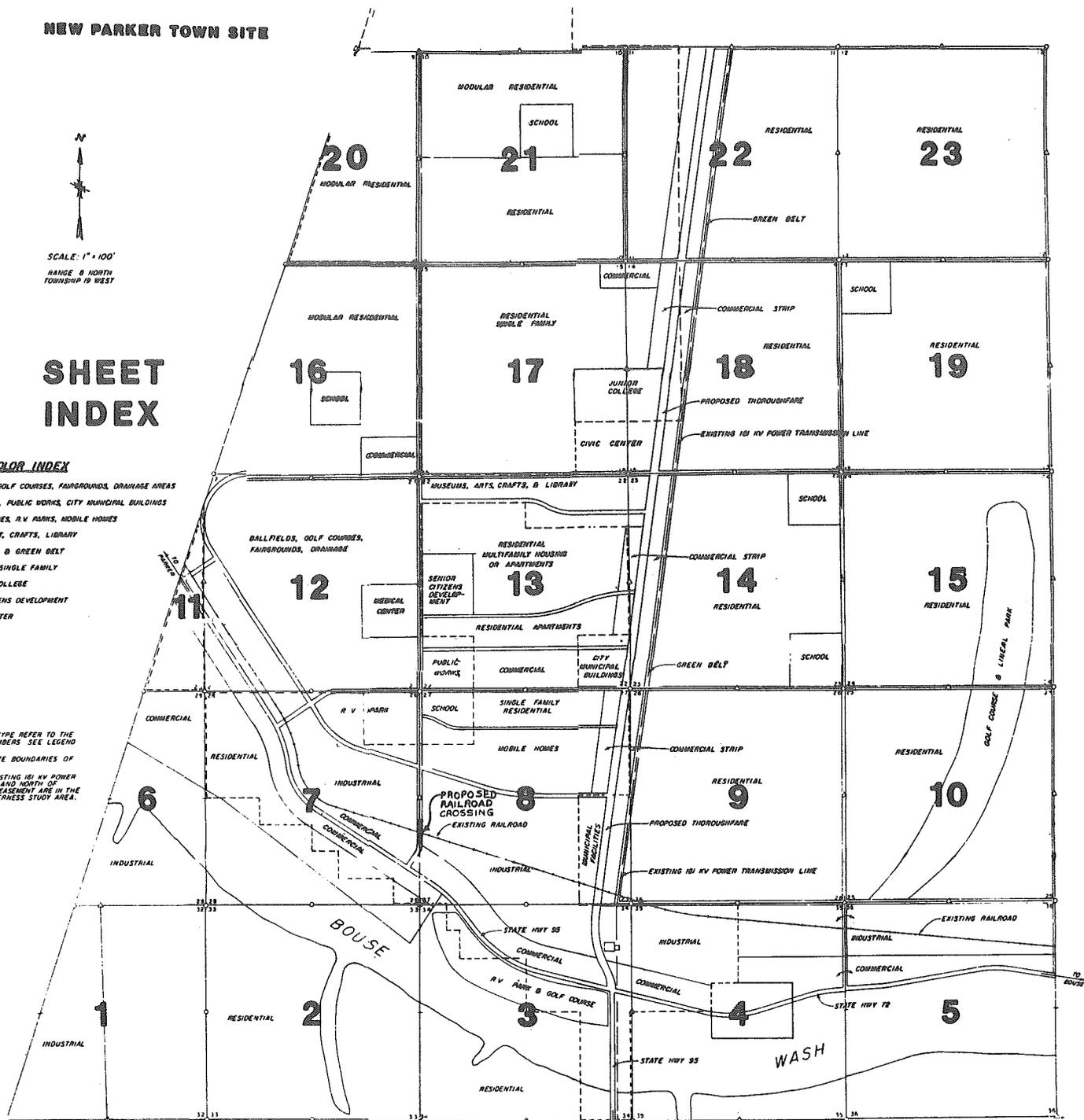
SHEET INDEX

COLOR INDEX

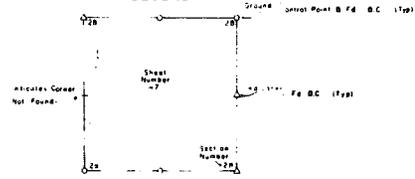
- BALLFIELDS, GOLF COURSES, FAIRGROUNDS, DRAINAGE AREAS
- CIVIC CENTER, PUBLIC WORKS, CITY MUNICIPAL BUILDINGS
- MODULAR HOMES, R.V. PARKS, MOBILE HOMES
- MUSEUMS, ART, CRAFTS, LIBRARY
- GOLF COURSE & GREEN BELT
- RESIDENTIAL SINGLE FAMILY
- SCHOOLS & COLLEGE
- SENIOR CITIZENS DEVELOPMENT
- MEDICAL CENTER
- APARTMENTS
- COMMERCIAL
- INDUSTRIAL

NOTES

1. NUMBERS IN BOLD TYPE REFER TO THE CONTOUR SHEET NUMBERS SEE LEGEND BELOW
2. DASH LINES INDICATE BOUNDARIES OF STATE LANDS
3. LANDS EAST OF EXISTING 161 KV POWER TRANSMISSION LINE AND NORTH OF EXISTING RAILROAD EASEMENT ARE IN THE CACTUS PLAIN WILDERNESS STUDY AREA.



LEGEND



ECONOMIC DEVELOPMENT: As stated in "Land Use", a large parcel of land has been annexed southeast of Parker and the town is developing a planned community. Although this development is at the northern terminus of Study Section Two, it will have some impact on development further down the section, enroute to Quartzsite.

FLOOD PLAINS: The section of Highway 95 between mileposts 120 and 130 is designated a flash flood area. Numerous dips before and after the designated area show signs of having been flooded during summer storms.

RIGHT-OF-WAY: State Highway 95 has a 100 foot right-of-way from a junction with I-10 in Quartzsite for one and one-half miles, and a 400 foot right-of-way the remainder of the section to a junction with State Highway 72.

CORRIDOR SECTION THREE:

Corridor Section Three, State Highway 95, is located in west-central La Paz County and extends from a junction with State Highway 72 northwesterly to a junction with Spur 95 to the Colorado River bridge in Parker. (See Exhibit 9). This section of roadway has numerous "No Passing" zones due to dips, vertical and horizontal sight distance restrictions. Soft shoulders add to the problem of distress stoppage in "No Passing" zones. Pavement in this section is ten to twelve years old in moderate condition. Ride quality would be improved with an overlay; however, extensive work would be required to improve sight distance. With the future proposal of a suggested Parker bypass route, the existing section would be considered adequate for present traffic, but would need upgrading if the future planned bypass is not completed.

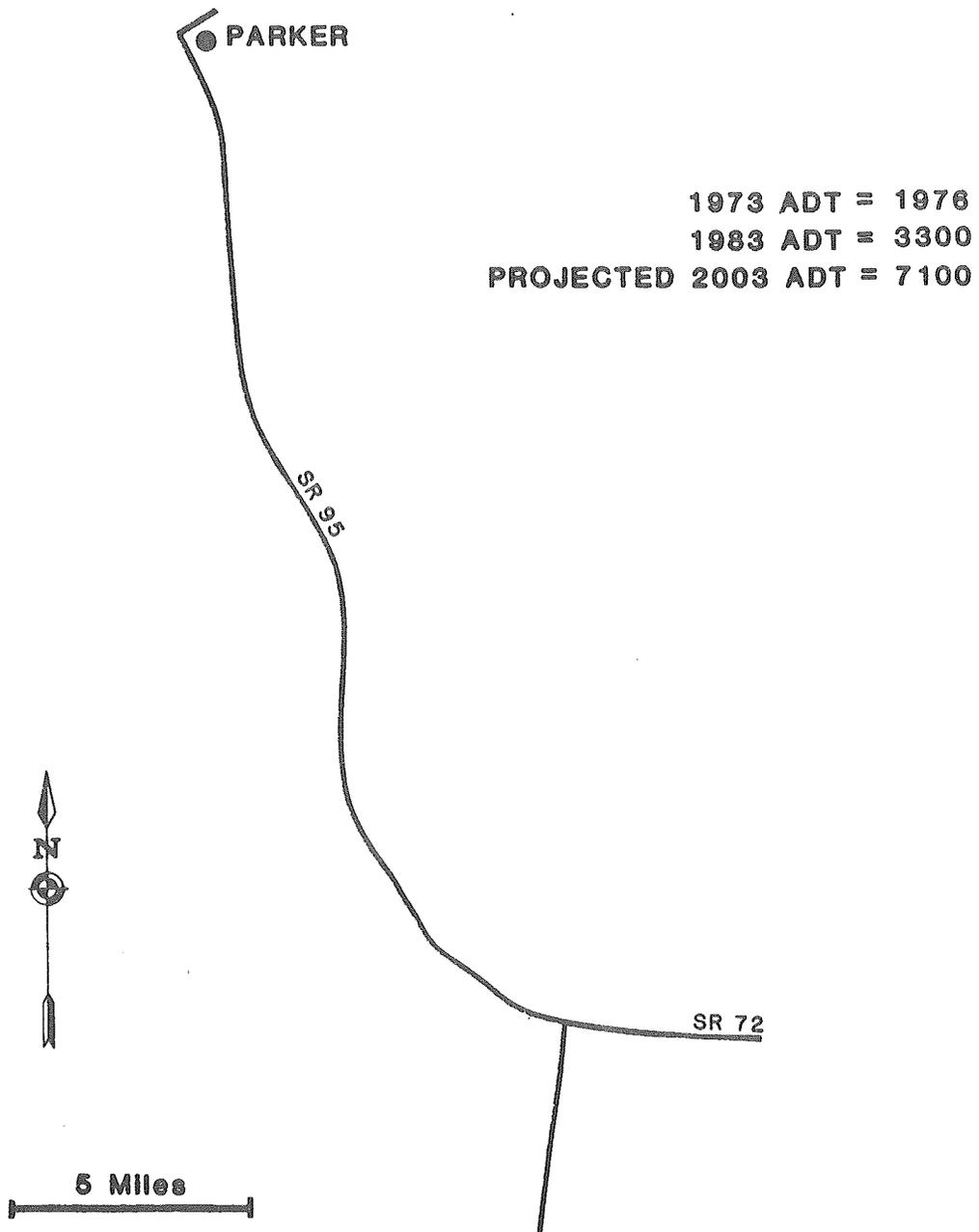
TRAFFIC ANALYSIS: Traffic between State Highway 72 and Parker city limits has increased from 1,976 ADT in 1973 to 3300 in 1983. The traffic mix is 4% trucks and 33% out-of-state vehicles. (See Exhibit 9). Summer recreation/tourist traffic cause congestion on the rural portion of this section; however, within the Parker city limits a four-lane highway with continuous turn-lanes would adequately handle the seasonal influx.

- **Projected traffic:** The year 2003 projected traffic is estimated to be 7100 ADT, based on historic data and planned development. When the new Parker townsite becomes a reality, slight, temporary changes may occur.

LAND USE: From the junction of S.R. 72, Milepost 131.69, to the Colorado River Indian Reservation, Milepost 134.62 on S.R. 95, Parker is developing a planned community containing commercial, residential and recreational facilities. Future traffic and congestion will be increased (See Exhibit 7 for more detail). The major access to the proposed development will be by a proposed Access Rd. alignment of S.R. 95 bypassing downtown Parker. Within the signed corporate limits of Parker, commercial activity appears on both sides of the roadway. The Southern Pacific Railroad parallels highway 95 to the east 250 feet from the highway centerline. Side friction from business establishment does not appear to be a problem since the businesses are well set back and the roadway is 68 feet wide, four lanes, having continuous left-turn lanes down the center and curbs on both sides.

The eight mile stretch between entry to the Indian reservation and Parker corporate limits is devoted to agriculture.

SECTION THREE



POPULATION: Parker has a year-round population of 2,542 according to the 1980 census. This increases to between 35,000 and 40,000 (est.) with the influx of recreational activity during the winter season (October--March). Projected year-round population in Parker for the year 2005 is 3,050. From all indications, the highway within Parker corporate limits can adequately handle the traffic, present, projected and seasonal.

POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINE: From the junction of S.R. 72 into Parker, a 69 KV Arizona Public Service Power transmission line parallels highway 95 - 100 feet to the west of the roadway centerline. In Parker smaller BIA power lines and various power and telephone lines parallel and cross the highway.

ECONOMIC DEVELOPMENT: As stated in "Land Use" a large parcel of land has been annexed southeast of the original Parker townsite, and the town is developing a planned community in the area. The town of Parker is recreation/tourism oriented with some agriculture contributing to the overall incomes. (Exhibit 7).

FLOOD PLAINS: Several dips and rolling terrain create problems during heavy rainfall between MP 132 and 135; however, once entering the Indian reservation the land is more flat and the flood potential lessens. Drainage within Parker appears adequate, except for two catch basins where SR 95 makes a right angle turn.

RIGHT-OF-WAY: There is a 400 foot right-of-way dedicated to Highway 95 between Highway 72 and the Colorado River Indian reservation boundary. At this point the right-of-way narrows to 200 feet to the Parker City limits. Within Parker, along California Avenue, the right-of-way is 112 feet. All rights-of-way appear adequate for present and future needs.

CORRIDOR SECTION FOUR:

Section Four of State Highway 95 is located in northeast La Paz County and extends from a junction of State Highway 95 spur in Parker, northerly through the 'Parker Strip' to the La Paz/Mohave County line at the Bill Williams River bridge. This is the portion of the 95/72 corridor which appears to have the most controversy, flooding problems and the highest accident rates. Numerous dips, tight curves (both horizontal and vertical) requiring 20 MPH advisory speed limits, flood plains and cliffs abutting the roadway are but a few of the problems besetting the area. Local administrators have indicated that a few cosmetic improvements could improve the flooding conditions; however, what appears the most important to them is the safety aspect of the road. This would require extensive construction work to remedy. (Photos 13 and 14). Business encroachment would have to be reduced to provide any sort of improvement.

Construction of the Osborn wash bypass would not eliminate flooding or safety problems in the area since local highway use would not diminish; however, through state highway traffic would avoid the area. The improvements necessary for local traffic would be local responsibility when the old alignment is transferred to La Paz County jurisdiction.

TRAFFIC ANALYSIS: Traffic on State Highway 95 from the junction of SR 95 spur to the north city limits of Parker has increased from 5,068 ADT in 1973 to 9,700 ADT in 1983. From Parker city limits to the La Paz/Mohave County line 1973 traffic was 3,675 ADT while in 1983 the traffic increased to 4,100 ADT. Present traffic mix is 4% trucks and 33% out-of-state vehicles. Peak traffic volumes in the strip area have reached 13125 ADT on Saturday, May 28, 1983. (See Exhibits 10, 11 and 12).

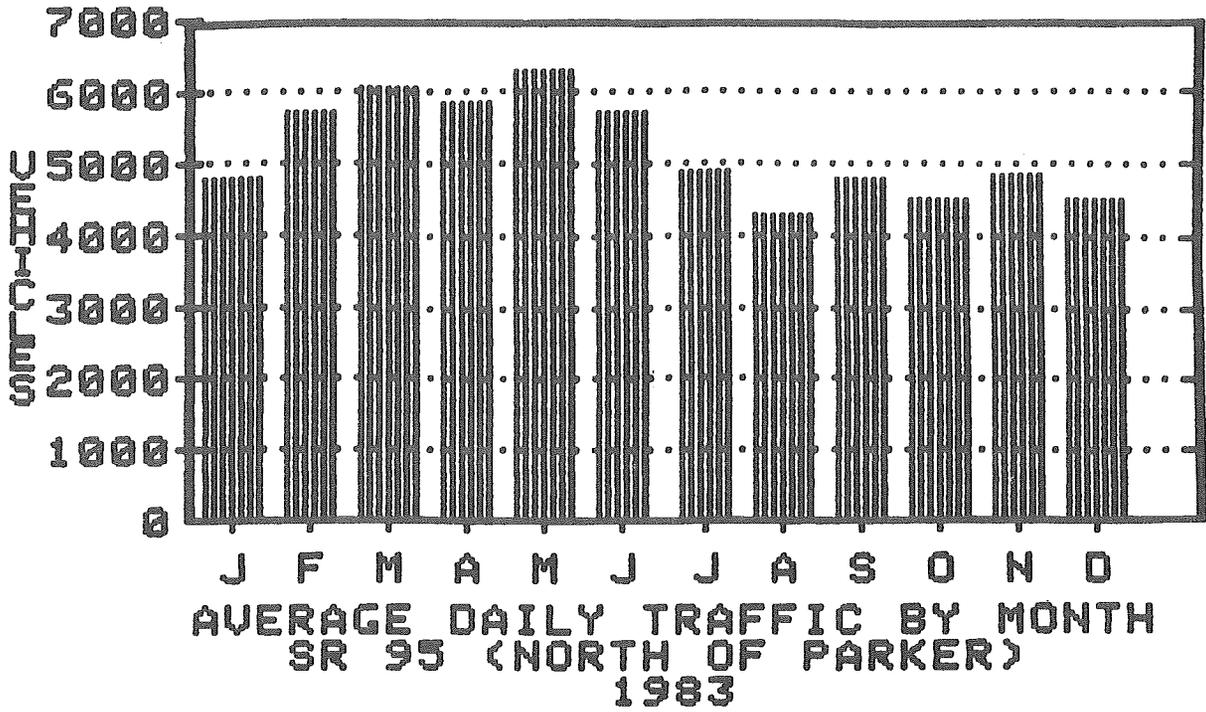
The road capacity is restricted by severe horizontal and vertical curves and the accompanying 20 MPH speed limits. (Photos 4 & 5).

As in many recreational areas alcohol use and abuse is prevalent. The majority of the accidents in the 'Parker Strip' area are drinking driver related. Sharp corners, blind driveways, crossroads and dips appear to be challenging obstacles to the drinking drivers.

- **Projected Traffic:** The year 2003 projected traffic is estimated to be 7500 ADT, based on historic data and planned development. When the new Parker townsite becomes a reality, slight, temporary changes may occur.

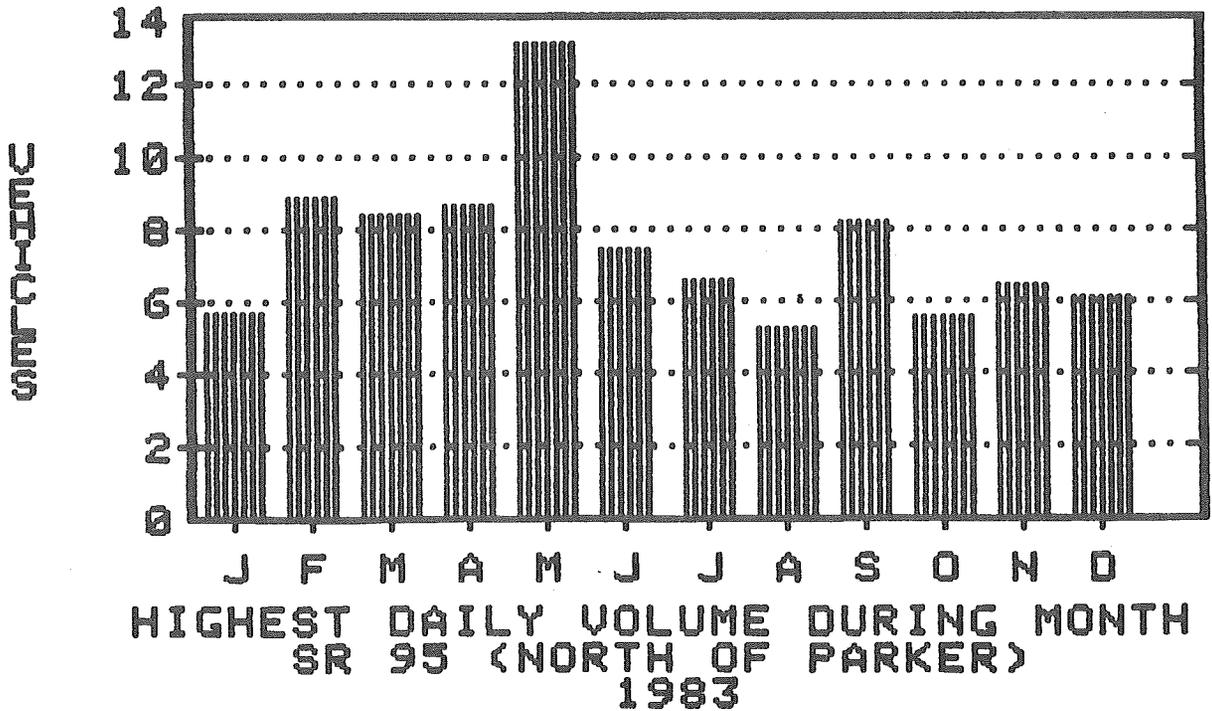
LAND USE: From the junction of Spur 95 in Parker with the Parker City Limits, commercial businesses line the highway. Wide roadway (68 to 80') and adequate building setbacks provide

EXHIBIT 10



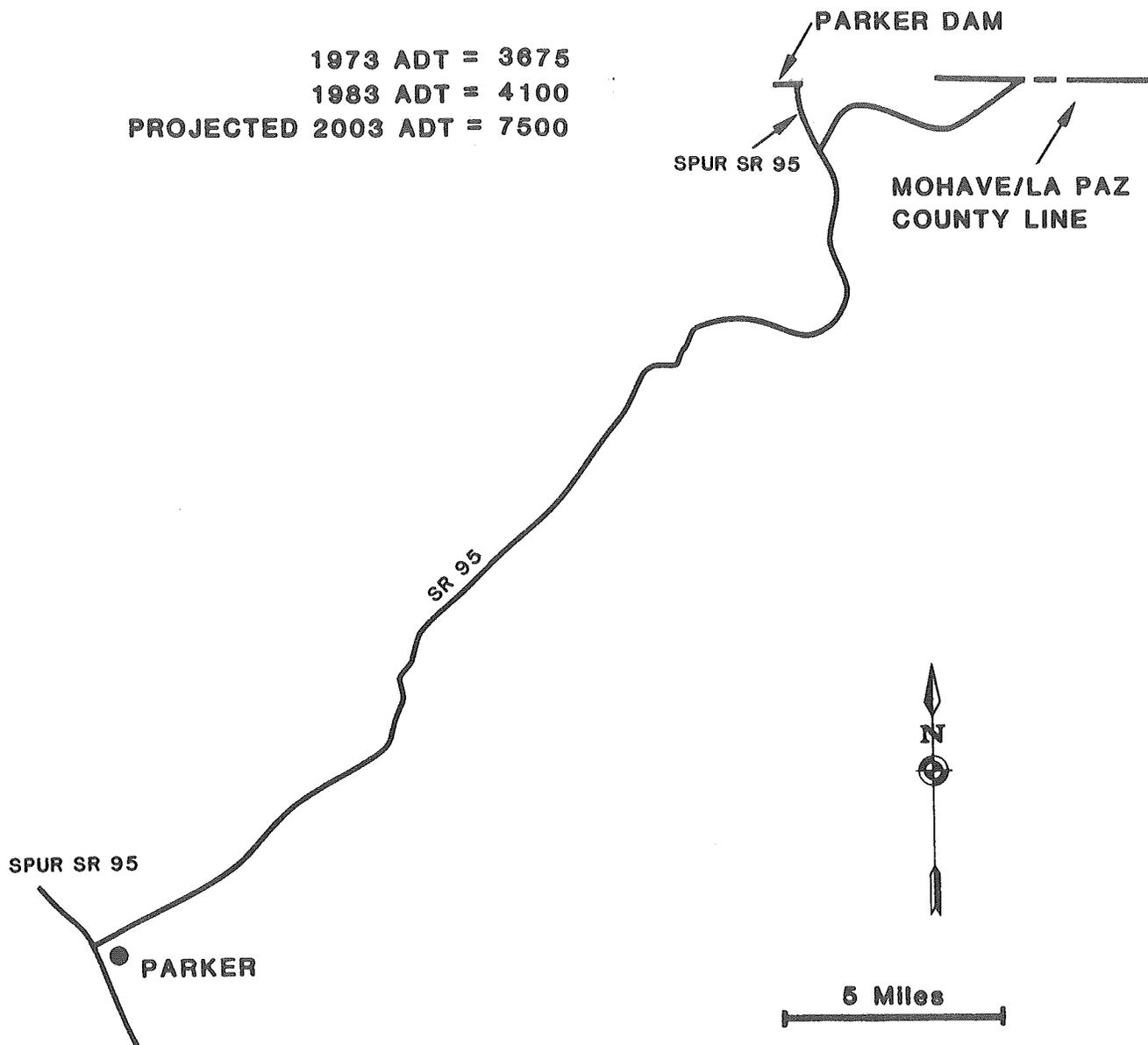
THOUSANDS

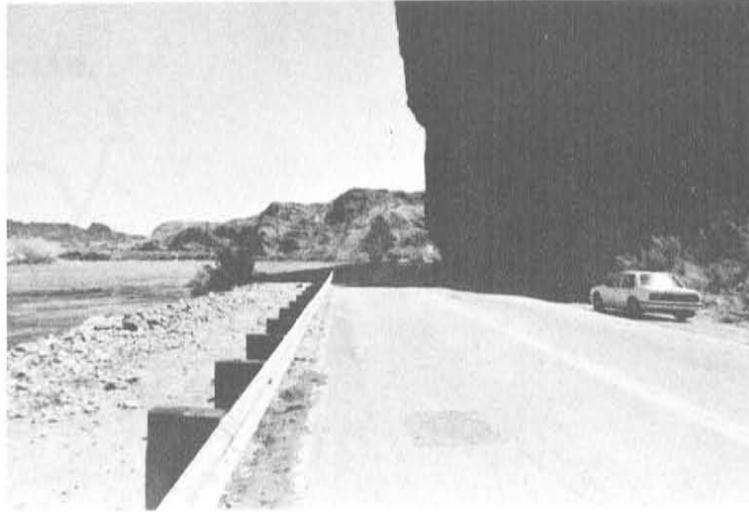
EXHIBIT 11



SECTION FOUR

1973 ADT = 3675
1983 ADT = 4100
PROJECTED 2003 ADT = 7500





13. PARKER STRIP - CLIFF OVERHAND - R/W RESTRICTIONS



14. PARKER STRIP - NARROW ROAD

relatively safe travel and access. (Photo 15.) The roadway narrows to 40' at Milepost 144.49 for the next 2-1/2 miles. Roadside businesses dwindle and rural characteristics prevail. At Milepost 147.34 the road narrows to a variable width of 22 to 28'. There is extensive residential, recreational, commercial and trailer park usage along the next 12 miles. Residential and recreational homes occupy 2,689 lots, while 2,123 mobile home sites are available along the 'Parker Strip.' (Photos 16 and 17).

Cross traffic, severe horizontal and vertical curves and shallow construction setback create an extreme hazard to traffic in the strip area between MP 147 and 159. (Photos 18 & 19).

POPULATION: "Parker Strip" can vary in population estimates from 5,000 full-time residents to over 10,000 residents during prime season (October to March). The town of Parker had a 2,542 population in 1980 and a projected year 2005 population of 3,050. Recreational population influx of between 35,000 and 40,000 (est.) is common.

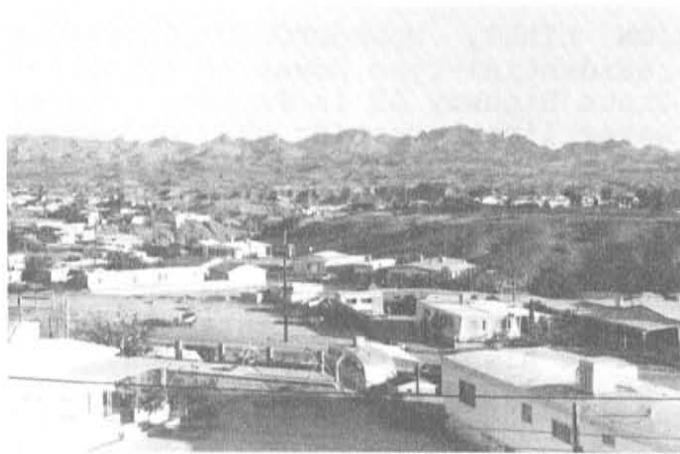
POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: There are ten residential-type power or telephone transmission lines crossing State Highway 95 in Parker, and eighteen underground sewer or water lines crossing the roadway. From the north city limits of Parker, northerly along the strip, a 161KV Bureau of Reclamation power line parallels Highway 95 to the east for about six miles, and crosses the highway at MP 154. Smaller Bureau of Indian Affairs and Arizona Public Service power lines parallel and cross the roadway enroute to the end of the section at the Mohave County line. Continental telephone lines also parallel and cross the highway numerous times. (Photo 19). APS runs underground power lines from River Island State Park to Bill Williams River.

ECONOMIC DEVELOPMENT: This section of roadway is devoted to recreation and related business. 'Parker Strip' is a narrow corridor limited in development by the river and steep terrain paralleling Highway 95. Proximity to the river and its recreational attributes have created a highly developed area where private land is available. Access to the river is limited along its entire length from Mexico to Utah with 'Parker Strip' having the longest contact point.

Water sports, boat races and off-road races are the three major activities. Due to high water releases in early 1984 and the resulting flooding, the major boat racing club left the area, taking seven major races with them. In February, the SCORE 400 Off-Road Race is held around Parker, attracting an estimated 25,000 who stay along the river.



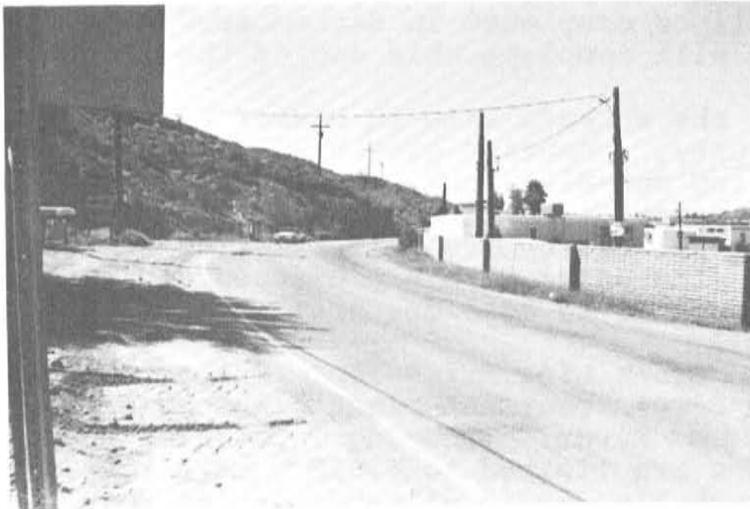
15. ROADWAY WITHIN PARKER



16. TRAILERS, MOBILE HOMES IN PARKER/PARKER STRIP



17. NARROW ROAD THROUGH FLOOD PLAIN - PARKER STRIP



18. BLIND CURVES - PARKER STRIP



19. BLIND CURVES - PARKER STRIP

Economic activity is centered around real estate sales and recreation and is composed of off-road shops, boat shops, boat storage, restaurants, bars, convenience stores, marinas, recreation sites and housing. Income is also generated by the large County Park. Future commercial growth can be accommodated within the commercial zones and is expected to grow at a steady pace.

One of the CAP construction projects is located one mile south of the Bill Williams River next to Highway 95. Seventy-five workers are employed in the construction of the pumping plant which will be completed in September, 1986. This is the last phase and will complete this end of the project.

Half of the workers live in Parker and the other half in Lake Havasu City. Housing growth will take place within the limited existing sub-divisions, concentrating in Moovalya Kays, Lakeside, Hillcrest Bay and Moovalya Estates. Given the present population projections, by 1992 all existing sub-divisions will be occupied by housing units with a projected service population of 8,600. Other factors to consider are:

1. Sewer Trunk Line Extension - The joint use Parker-Tribe sewer treatment plant plans to extend a trunk line up River. Housing lots using septic tank systems are limited to 6,000 square feet per unit. A trunk line would allow densities much higher per 6000 square foot lot (i.e. 4 to 6 units per lot).
2. Reservation Land Development - Increased residential development would take some of the load off the Strip. Presently there are no plans, but there are close to 300 lots unoccupied.
3. Transient Population - Many of the part-time residents are from California, staying on weekends and holidays. An estimated 60% of the population live somewhere else.

FLOOD PLAINS: From the corporate city limits of Parker to Buckskin Park the dips and washes are continuous. Portions of the strip area are isolated during seasonal storms. Construction of condos east of the highway (Sandpiper) have created a flooding situation to the roadway and buildings west of the roadway. Buildings within washes have re-directed flood waters through areas not equipped to handle the water. La Paz County engineering and hydraulic studies will be required to try to remedy the problem.

With the roadway restrictions mentioned earlier, very little expanded development can be handled adequately in the 'Strip'. In fact, present development is poorly handled during seasonal peaks. Restrictions must be made on setbacks for construction, prohibition of the development of businesses and residential

areas in flood plains or washes, and plans for direction of flood drainage waters with the construction of large condos or hotels near the highway.

RIGHT-OF-WAY: Right-of-way varies from 112' in Parker on California Avenue to 200' from the city limits to the Parker Strip, to 100' through the Parker Strip to 200' to the La Paz/Mohave County line. Several acquisitions of right-of-way will be required to eliminate tight curves and sight restrictions. (See Photo 18.)

CORRIDOR SECTION FIVE:

State Highway 95 is located in Southwest Mohave County. The section begins at the La Paz/Mohave County line (MP 161.73) extending northwesterly to MP 181.73 in Lake Havasu City. This is a very good, relatively new section of highway. Built in 1970 the road traverses rolling countryside with a few, unavoidable 'no-passing' zones due to alignment. The road is 34' wide built of asphaltic concrete. When entering Lake Havasu City, the roadway widens to 40' for three miles and to 50' for an additional 1-1/2 miles to section end. The majority of the road is rural in character with industry and housing beginning at Lake Havasu City corporate limits (MP 176.40).

The 40 foot rural roadway section (width, structures and safety) appears adequate and is an example of what is ideal for the balance of 95/72 Corridor.

TRAFFIC ANALYSIS: Traffic from the La Paz/Mohave County line northerly to the south city limits of Lake Havasu City has increased from 1,092 ADT in 1973 to 3,720 ADT in 1983. Vehicle mix is 4% trucks and 33% out-of-state vehicles. Traffic within Lake Havasu City went from 2,460 ADT in 1973 to 4,600 ADT in 1983. (See Exhibit 13).

- **Projected Traffic:** The year 2003 projected traffic is estimated to be 7,600 ADT, based on historic data and planned development.

LAND USE: Barren desert land constitutes the first fifteen miles of this section. (Photo 20). The well-planned community of Lake Havasu City has businesses, housing and recreation accessed by frontage roads and/or sizeable construction setbacks. Light industry, recreation and retirement activities and residential constitute the make-up of land use within the city.



20. SR 95 NORTH OF BILL WILLIAMS RIVER

SECTION FIVE

● LAKE HAVASU CITY

SR 95

WITHIN CITY

1973 ADT = 2460

1983 ADT = 4500

RURAL

1973 ADT = 1092

1983 ADT = 4600

PROJECTED 2003 ADT = 7600



MOHAVE/LA PAZ
COUNTY LINE

POPULATION: There are virtually no people living between the La Paz/Mohave County line and the south corporate limits of Lake Havasu City. The 1980 population of Lake Havasu City was 15,909 and the year 2005 projection is 24,110. In 1970 Lake Havasu City was not incorporated. Estimated census in 1975 of 9,235 and special census in 1976 of 10,275 lead to the towns incorporation in 1978.

POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: No power lines, cables or pipelines are within this segment of the corridor until the corporate limits of Lake Havasu City are reached. There are no utility easements for the underground water, sewer, gas, cable TV, telephone and power lines since the route was constructed as a State Route after the utilities were in. ADOT has plans to scale showing these locations. Additional pipes have been placed under Highway 95 to accommodate future utilities in the south section.

ECONOMIC DEVELOPMENT:

Lake Havasu City:

Being a pre-planned community with all streets and utilities in, housing is free to locate anywhere. Apart from the central concentration of housing and a few isolated areas that have filled in, housing locations are evenly scattered over the twenty-seven square mile area. All indications are that this scattered residential development will continue. Condominium units are located in the Highway 95, London Bridge area. Many of these are owned by out-of-state residents. One hundred units are planned immediately west of the London Bridge Village area along the canal. On Pittsburg Point Island, sixty units of a three-hundred unit condominium development are almost complete near the Nautical Inn. With the planned relocation of the airport, a few miles north of Lake Havasu (Sec. 6, 7, 18, 17 T14N, R20W), condominiums, hotels, recreation sites, etc. are already being considered on the island. Winsor Beach, north of London Bridge, is a condominium development being planned. With the number of condominium units increasing, there is need for building trade workers.

McCulloch Corporation is still producing chain-saw parts on a part-time basis using two hundred people. Only one shift is working compared to three in the past. The only other major manufacturer is Crofts which has been in Lake Havasu about one year. They manufacture aluminum screen doors and windows for recreation vehicles. Their building is almost finished and they plan to hire 350-400 in the first phase of a three-phase project.

Lake Havasu City hosts seven boat races and two golf tournaments in the Spring and Summer, attracting many from California and Arizona. North of the City is a residential area known as Crystal Beach and Desert Hills between Highway 95 and the Lake. Residential development is much denser than in the City. An estimated 1,500 people live in this area. The remainder of the route, north to I-40, is not occupied.

South of Lake Havasu City, Highway 95 provides access to a few public boating and RV park sites within the State Park boundary.

FLOOD PLAINS: Flooding does not appear to be a factor in this section. Good roadway alignment and sufficient structures assure this status.

RIGHT-OF-WAY: Widths of right-of-way vary from 200' at the Bill Williams bridge and 200' within corporate limits of Lake Havasu City to 400' the remainder of the section.

CORRIDOR SECTION SIX:

State Highway 95 is located in southwest Mohave County. (See Exhibit 14). The section begins at MP 181.73 in Lake Havasu City extending northerly to a junction with Interstate 40. This is an excellent, relatively new section of highway. Built in 1972, the road transverses rolling countryside with a few 'no passing' zones due to alignment. The road is 40' wide, built of asphaltic concrete. Between MP 181.73 and MP 183.98 the roadway has four lanes, a 52' wide surface with a 12' continuous left-turn median and no shoulders. The road narrows to a two-lane, 40' wide facility to MP 185.63 where it further narrows to 28'. This appears to be the only restrictive area of the section (0.35 miles). At MP 185.98 the roadway widens to 40' to the north corporate limits of Lake Havasu City and continues at 40' to its termination at the junction of Interstate 40. The terrain is flat to mildly rolling and has few sight restrictions due to horizontal or vertical curves. Right and left-turn bays are provided where necessary. Within the city there is extensive urban build up; however, traffic congestion does not appear to be a problem at the present time. Well-planned building setbacks have provided for excellent sight distance. A widening of the 28' section will be needed for future traffic handling.

TRAFFIC ANALYSIS: Highway 95 traffic within Lake Havasu City has increased from 3,965 ADT in 1975 to 5,440 ADT in 1983. Traffic mix in this area is 8% trucks and 25% out-of-state vehicles. Rural traffic from the city limits to I-40 has increased from 2,540 ADT in 1973 to 3,200 ADT in 1983. Traffic mix is 7% trucks and 25% out-of-state vehicles. (See Exhibit 14).

- **Projected Traffic:** The year 2003 projected traffic on the overall section is estimated to be 5,500 ADT, based on historic data and planned development.

LAND USE: Land use in the Lake Havasu City area is adequately described under Corridor Section Five. The rural section from the corporate limits to the junction of Interstate 40 is barren land with little to no commercial or agricultural use, with the exception of approximately two miles just north of town where there are mobile home sub-divisions and parks, as well as some commercial development. A future airport industrial park is planned for an area northwest of the corporate limits, south of the mobile homes described above.

POPULATION: Lake Havasu City population is related in Section Five. The rural section between the corporate limits and Interstate 40 is virtually unpopulated, with the exception of a mobile home development north of town. Zoning and land use documents indicate a two-mile strip of commercial development along Old Highway 95, with large areas of mobile home sub-divisions and mobile home parks. A new alignment of SR 95 skirts the area to the east, making only minimal contact. The development occupies portions of Sections 7, 17, 16 and 21 of Township T14N Range R20V.

EXHIBIT 14

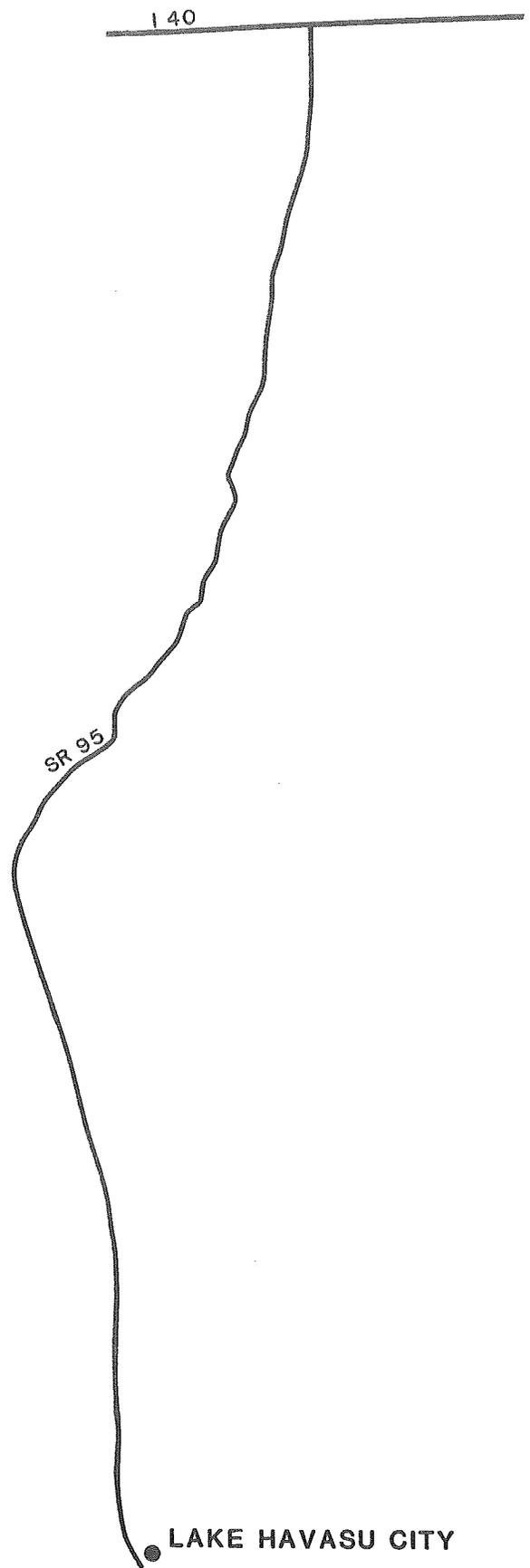
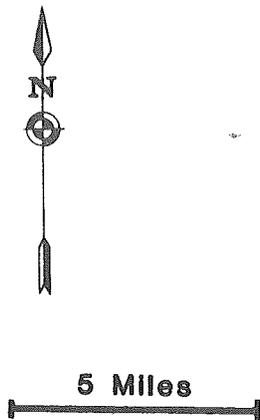
SECTION SIX

WITHIN CITY

1973 ADT = 3965
1983 ADT = 5440

RURAL

1973 ADT = 2540
1983 ADT = 3200
PROJECTED 2003 ADT = 5500



POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: Within the first six miles of this section there are two major power transmission lines paralleling the highway above ground and two telephone transmission lines paralleling underground. This six mile section is also crossed by five power lines, above ground, twelve power, telephone and TV cable lines underground. Fifteen water, sewer and gas pipelines cross under the highway. The remaining rural portion of the road is intersected above ground twice by Citizens Electrical Power lines, three times underground by Citizens Telephone lines, and has three El Paso Natural Gas lines crossing beneath it near I-40. The major power transmission lines found in other areas of the corridor are far outside the present alignment of State Highway 95.

ECONOMIC DEVELOPMENT: Economic development is adequately described under Corridor Section Five for Lake Havasu City. Development for about three miles north of the city is restricted to residential development. The remainder of the route, north to Interstate 40 is unoccupied.

FLOOD PLAINS: Flooding does not appear to be a factor in this section. Good roadway alignment and sufficient structures assure this status.

RIGHT-OF-WAY: Through Lake Havasu City, right-of-way is 200' while the remainder of the section to the junction of Interstate 40 has 400' of right-of-way, except for a mile long stretch of 200' R/W between MP 184.2 and MP 185.2. Right-of-way appears adequate for present and future requirements.

CORRIDOR SECTION SEVEN:

State Highway 72 is located in central La Paz County. The route begins at a junction with U.S. Highway 60 in the unincorporated (mostly abandoned) community of Hope and extends northwesterly to a junction with State Highway 95. The terrain consists of flat and gently rolling Sonoran desert, with many cross drainage washes. (Photo 21). The photograph discloses the terrain and shows the junction point with U.S. 60 and the 'Town' of Hope. More than sixty dips at washes were observed creating vertical sight restrictions and problems during severe storms. The size of dips can be demonstrated by the size of structure used by the Southern Pacific railroad to span the wash. (See Photo 22). These are not a real problem due to low traffic volumes on SR 72. Several horizontal sight restrictions were evident with the alignment designed to avoid topographic obstacles.

TRAFFIC ANALYSIS: Traffic on State Highway 72 has decreased over the past ten years due to the opening of Interstate 10 in 1974. The following table illustrates the traffic trend on Highway 72:

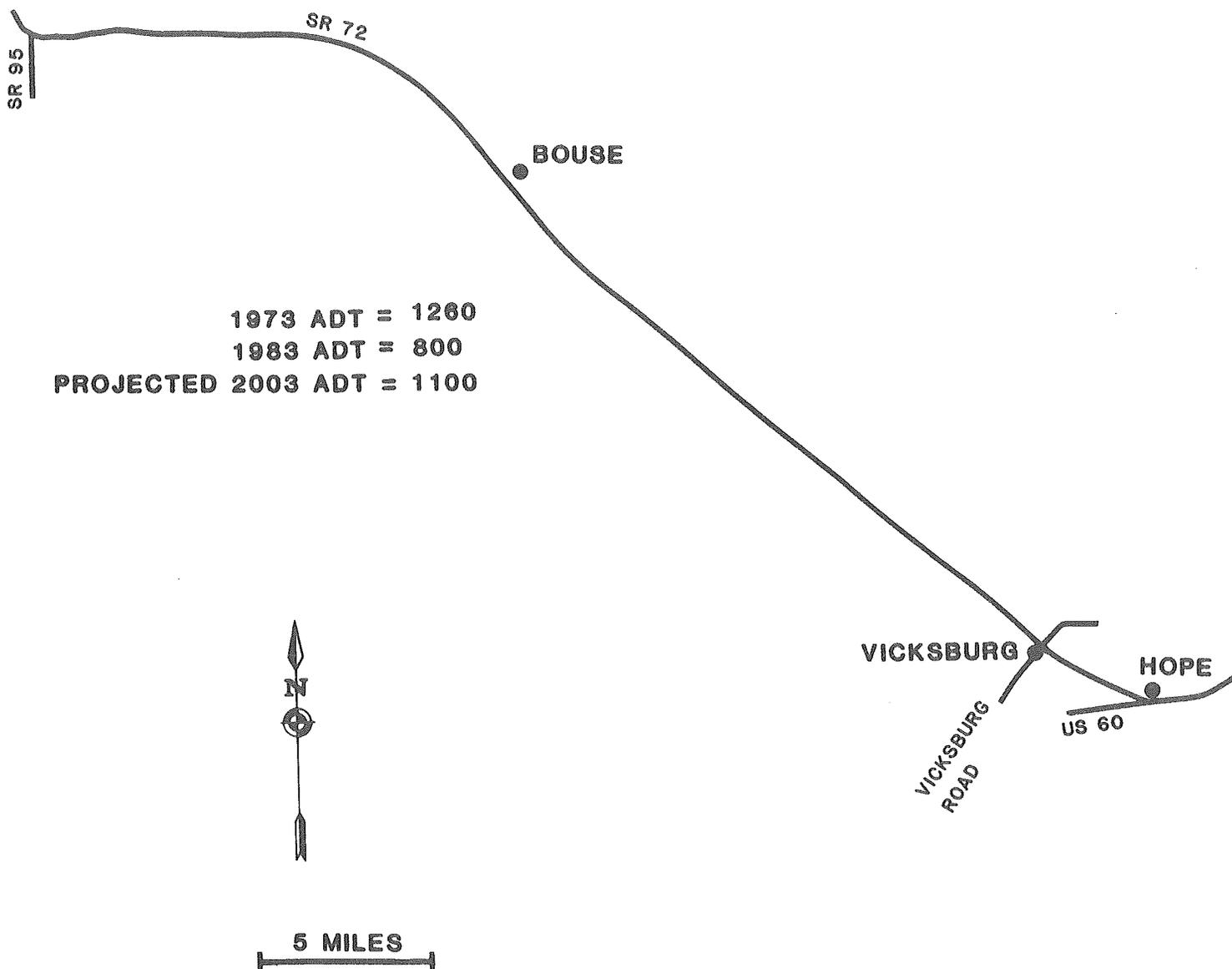
<u>YEAR</u>	<u>ADT</u>
1973	1260
1974	1200
1975	610
1976	700
1977	1000
1978	1000
1979	890
1980	780
1981	1032
1982	975
1983	800

(See Exhibit 15). Vehicle mix is 7% trucks and 25% out-of-state vehicles:

- Projected Traffic: The year 2003 projected traffic is estimated to be 1100 ADT, based on historic data and planned development. When the new Parker townsite becomes a reality, a light temporary change may occur.

LAND USE: Land to the north of Highway 72 is occupied by the Southern Pacific Railroad and its accompanying right-of-way eliminates the possibility of other land use. South of the roadway, rolling desert landscape connects the unincorporated communities of Hope, Vicksburg and Bouse. There are approximately 125 single-family dwellings, four commercial

SECTION SEVEN





21. JUNCTION OF US 60 AND SR 72 IN HOPE



22. SOUTHERN PACIFIC RAILROAD BRIDGE
OVER MAJOR WASH, SR 72

buildings, one power station and one school in Bouse. Hope is virtually deserted and Vicksburg contains approximately a dozen homes. Some agricultural development is evident at approximate MP 38. Farming in the area is not extensive and is not a major factor in traffic management.

POPULATION: The reported year-round population for Bouse was 100 in 1983. Future projection indicate a no growth pattern. It may be noted that while there is a 125 dwelling count in Bouse, some homes are unoccupied most of the year and the occupants were not considered in the 1980 census. No other population of significance within this corridor section.

POWER TRANSMISSION LINES, UNDERGROUND CABLES AND PIPELINES: A 69KV power line parallels Highway 72 to the north. In some locations power poles appear to be on the gravel shoulder of the road. (See Photo 23). Between MP 25 and 40 an additional 12.5 KV power line parallels the highway and eighteen feeder lines cross the highway. There appears to be no other utilities that could affect the corridor section.



23. SR 72 - POWER POLE ON ROADWAY SHOULDER

ECONOMIC DEVELOPMENT: Most of Highway 72, Corridor Section Seven, is lush desert land. A few commercial ventures presently appear in Bouse. No other economic development is apparent or planned for the area, with the exception of the new Parker townsite described in Corridor Section Three.

RIGHT-OF-WAY: State highway 72 has 200' of right-of-way from beginning to end. This appears to be adequate for present and future traffic needs.

IV. TRANSPORTATION MODES:

Transportation modes were analyzed to determine passenger and freight demands and whether they can be accommodated by the roadway facilities of the corridor. Transportation mix, in particular heavy trucks and larger recreational vehicles, significantly impact the level of service on several portions of the roadway by limiting speed and reducing safety.

A. Transportation modes within the environs of Parker include:

1. AIRPORTS

The Parker Municipal Airport is located one mile east of the Town of Parker. The airport is administered by the Town of Parker through a twenty-five year lease with the Colorado River Indian Tribes (C.R.I.T.). Lease expires February 28, 1991. Access to the airport is by way of Arizona Highway 95. The airport site is 255 acres in size and is classified as a Primary Airport.

CURRENT FACILITIES - OPERATIONS

The airport has a single paved runway, 4,800 feet long and 75 feet wide. There is one parallel asphalt taxiway 4,800 feet long and 40 feet wide with four perpendicular turnarounds and an asphalt apron area of 75,000 square feet with 85 tie-downs. There is aircraft repair, charter, instruction, fuel services, pilot waiting area and a fixed base operator available on site. There are 117 aircraft based at the airport and approximately 35,000 operations were recorded in the year 1982.

FUTURE FACILITIES - OPERATIONS

In 1980 R.B. Williams & Associates completed a master plan for the airport. According to their demand/capacity analysis annual operations should increase to almost 140,000 by the year 2000. A number of improvement needs were identified in the study. Some of these have recently been completed or are slated to be programmed in the next few years; for instance, enlarging tie-downs to 176 spaces by 1985; hangars to 9 spaces by 1985; auto parking to 145 spaces by 1990.

2. BUSES

Sun Valley Bus Lines provide twice daily service to the Parker area. The southerly and easterly route originates in Las Vegas, Nevada, departing

at 6:30 A.M. and 6:15 P.M. and arriving in Parker at 12:05 P.M. and 11:00 P.M., then through to Phoenix. The westerly and northerly route originates in Phoenix, departing at 11:00 A.M. and 9:45 P.M. and arriving at Parker at 2:25 P.M. and 1:35 A.M., then through to Las Vegas, Nevada. (Times were in effect as of publication.)

3. SCHOOL BUSES

There are two elementary school districts and two high school districts serving the corridor area.

La Paz County:

A. Parker

The unified school district transports approximately 990 students daily via 17 busses to elementary and high schools in the Parker area.

B. Bouse

The school district operates 2 regular busses daily transporting approximately 40 students to the elementary school. Approximately 20 high school students are bussed daily to Salome via one bus and one van provided by Salome High School.

4. TRUCK TRANSPORT

SR 95 is currently the transportation corridor for Milne, Bestway, Black Mountain, Western Gillette and United Parcel Service. ADOT's latest published traffic log indicates that in 1983 commercial vehicles, predominantly large tractor-trailers, accounted for approximately five per cent of the vehicle mix on the route.

5. RECREATIONAL VEHICLES

Tractor-trailer vehicles that impede traffic flow are joined by large motor homes and other recreational vehicles. Their size and weight create congestion on the two-lane sections of the corridor. This study found that on U.S. 95 south of I-10 it is as much as 24%, SR 95 north of I-10 it is as much as 18%, SR 95 south of I-40 it is as much as 14%, and on SR 72 east of the junction of SR 72/SR 95 it is as much as 14% of the vehicle mix during fall and winter seasons is comprised of recreational vehicles. No information is

available on vehicles pulling boats. However, the percentage is likely to be as high or higher than the recreational vehicle category.

6. TAXI

Currently there is no taxi service in the Town of Parker.

7. RAIL

Currently there is freight service with two trains daily, but there is no passenger service. Carrier is Atcheson, Topeka and Santa Fe Railroad Company.

8. SOCIAL SERVICE TRANSPORTATION

There is currently one Dial-A-Ride service for senior citizens operated by the Town of Parker.

B. Transportation modes within the environs of Lake Havasu City include:

1. AIRPORT

The Lake Havasu City Airport is located one mile west of the town on an island known as Pittsburgh Point. The airport is privately owned by McCulloch Properties. Airport access is provided by a two-lane asphalt road which connects the island to Lake Havasu City via the London Bridge. The airport site is 237 acres in size and is classified as a commuter airport.

CURRENT FACILITIES - OPERATIONS

The airport has two runways; the main runway 05/23 is paved, 6,434 feet long and 100 feet wide. The secondary runway 02/20 is gravel 5,504 feet long and 136 feet wide. There are no taxiways for either runway and aircraft must use the runways themselves to taxi. There is a 210,000 square foot asphalt apron area with 198 tie-downs. There is aircraft repair (part-time), air taxi, rental, fuel services, pilot waiting area and two fixed-base operators available on site. There are 57 aircraft based at the airport and approximately 40,000 operations were recorded in the year 1980.

FUTURE FACILITIES - OPERATIONS

In 1980 Johannessen & Girand, consulting engineers, completed a master plan for acquisition of the airport by the city to insure the airport's viability and to make available federal and state funds for future improvements. Their demand/capacity analysis shows population centers and is a significant stimulant to local tourism. The analysis also states that operations should increase to almost 75,000 by the year 1999.

2. BUSES

Sun Valley Bus Lines provides twice daily service to the Lake Havasu City area. The southerly and easterly route originates in Las Vegas, Nevada, departing at 6:30 A.M. and 6:15 P.M. and arriving at Lake Havasu City at 10:35 A.M. and 9:50 P.M., then through to Phoenix. The westerly and northerly route originate in Phoenix, departing at 11:00 A.M. and 9:45 P.M., and arriving at Lake Havasu City at 3:20 P.M. and 3:00 A. M., then through to Las Vegas, Nevada. (Times were in effect at the time of publication).

3. SCHOOL BUSES

There is one elementary school district and one high school district serving the corridor area.

Mohave County:

A. Lake Havasu City

There is limited school bus service provided in the Lake Havasu City area with one bus daily for approximately ten handicapped students and one bus daily to transport approximately sixty students from Topock.

4. TRUCK TRANSPORT

SR 95 is currently the transportation corridor for Milne, Bestway, Black Mountain, Western Gillette, and United Parcel Service. ADOT's latest published traffic log indicates that in 1983 commercial vehicles, predominantly large tractor-trailers, accounted for approximately five per cent of the vehicle mix on the route.

5. TAXI

There is currently one taxi service (Resort City Cab Company) located in Lake Havasu City.

6. RAIL

Currently there is no rail service (passenger or freight) in the Lake Havasu City area.

7. SOCIAL SERVICE TRANSPORTATION

There is currently one Dial-a-Ride service for senior citizens operated by the Senior Citizens' Association.

8. WATER TRANSPORTATION

Currently there is one privately owned (Chris Gram of English Village) ferry that departs Pittsburgh Point to Havasu Landing in California. The ferry is used for promotional purposes.

V. TRANSPORTATION OPERATIONS AND SAFETY

The corridors were reviewed from a traffic operation and safety aspect. Specific characteristics analyzed were maintenance activity, accident information and segment sufficiency ratings.

Review of the above characteristics involved the use of the Highway Optical Data System (HODS), the accident records contained in the ALISS data files, and the State Highway Systems Logs. An on-site inspection, discussions with local and county administrators and engineers, and information from the Highway Patrol, Traffic Operations, Engineering District 3 and Location Services were also utilized in the review process.

PAVEMENT SURFACE MAINTENANCE

The goal of ADOT's maintenance activities are the preservation and restoration of the state's roadways, structures, landscaped areas, and facilities in the most efficient and economical manner possible.

These activities are broken down into specific work responsibilities. In analyzing historical records, concerning US/SR 95 and SR 72, the information lends itself more to looking at specific segments of 95 rather than individual work items. The information is provided as a total yearly average cost rather than by individual items. (See Exhibit 16).

From Exhibit 16 we can see that five out of the seven corridor sections (115 out of 174 miles) have a five-year average cost-per-mile in the high range. In 1983 there were four out of seven sections (80 out of 174 miles) with a cost-per-mile in the high range. There are no sections within the low cost-per-mile range.

EXHIBIT 16

CORRIDOR MAINTENANCE COSTS

SECT. NO.	RTE. NO.	SECT. MLG.	5--YR MAINT. EXPEND.	COST . PER MI. 5 YR AVG.	1983 MAINT. EXPEND.	1983 COST PER MI.
1	US95	44.72	\$ 738,606	\$ 3303	\$ 83,004	1856
2	SR95	22.59	152,937	1354	47,528	2104
3	SR95	12.24	169,409	2768	20,999	1716
4	SR95	17.76	578,374	6513	113,786	*6407
5	SR95	20.04	275,452	2749	55,647	2777
6	SR95	19.98	234,118	2343	74,939	3750
7	SR72	36.80	216,920	1779	56,734	1542
TOTALS:		174.13	\$2,365,816	\$2717	\$452,637	\$2599

The following table has been developed to give a relative level of severity to the maintenance costs incurred on the corridor sections on a per mile basis.

MAINTENANCE COST PER MILE OF ROAD

Low	\$ 0 - \$ 999
Medium	\$ 1,000 - \$ 1,999
High	\$ 2,000 - Greater

* Unusual expenditure due to floods in 1983.

ACCIDENT DATA

There is one predominant type of roadway in all sections of the corridor--that is two-lane highway. Some sections of four-lane roadways with turn-lanes are scattered throughout. (See Exhibit 17). As can be seen from a review of Exhibits 17 and 18, US 95 south of Quartzsite is not perceived to have a problem, nor does SR 72. (.36 ACC/MVM and a .47 ACC/MVM respectively, versus 1.53 ACC/MVM state average). (ACC/MVM = accidents per million vehicle miles). Problems begin at the approach of Parker, MP 142.8, through Parker and the Parker Strip to the La Paz/Mohave County line. This area has accident rates of 5.55 ACC/MVM in Parker compared to 2.20 ACC/MVM state average in four-lane urban areas. Along the Parker Strip the rate is 2.16 ACC/MVM versus 1.25 ACC/MVM state average for a two-lane urban roadway. As the strip area becomes more rural in character, the rate improves somewhat to 1.74 ACC/MVM compared to state average of 1.53 ACC/MVM for a two-lane rural roadway. Lake Havasu City, MP 181.5 through 184.0, has a very high accident rate of 5.72 ACC/MVM, compared to 2.20 ACC/MVM state average for four-lane urban areas.

An analysis made of the accident reports indicates the following:

Within the Parker City limits drinking drivers appeared to cause the majority of accidents in 1980, 1981 and 1982. Some 51.7% of the accidents in Parker in 1981 were caused by drinking drivers. Though extensive patrolling and more strict law enforcement, this percent was lowered to 25% in 1983. The Parker Strip area, has somewhat improved since 1983, which had 64.8% of the accidents caused by drinking drivers. (1980 = 53.5%, 1981 = 64.8%, 1982 = 57.7%, 1983 = 35%, drinking related accidents).

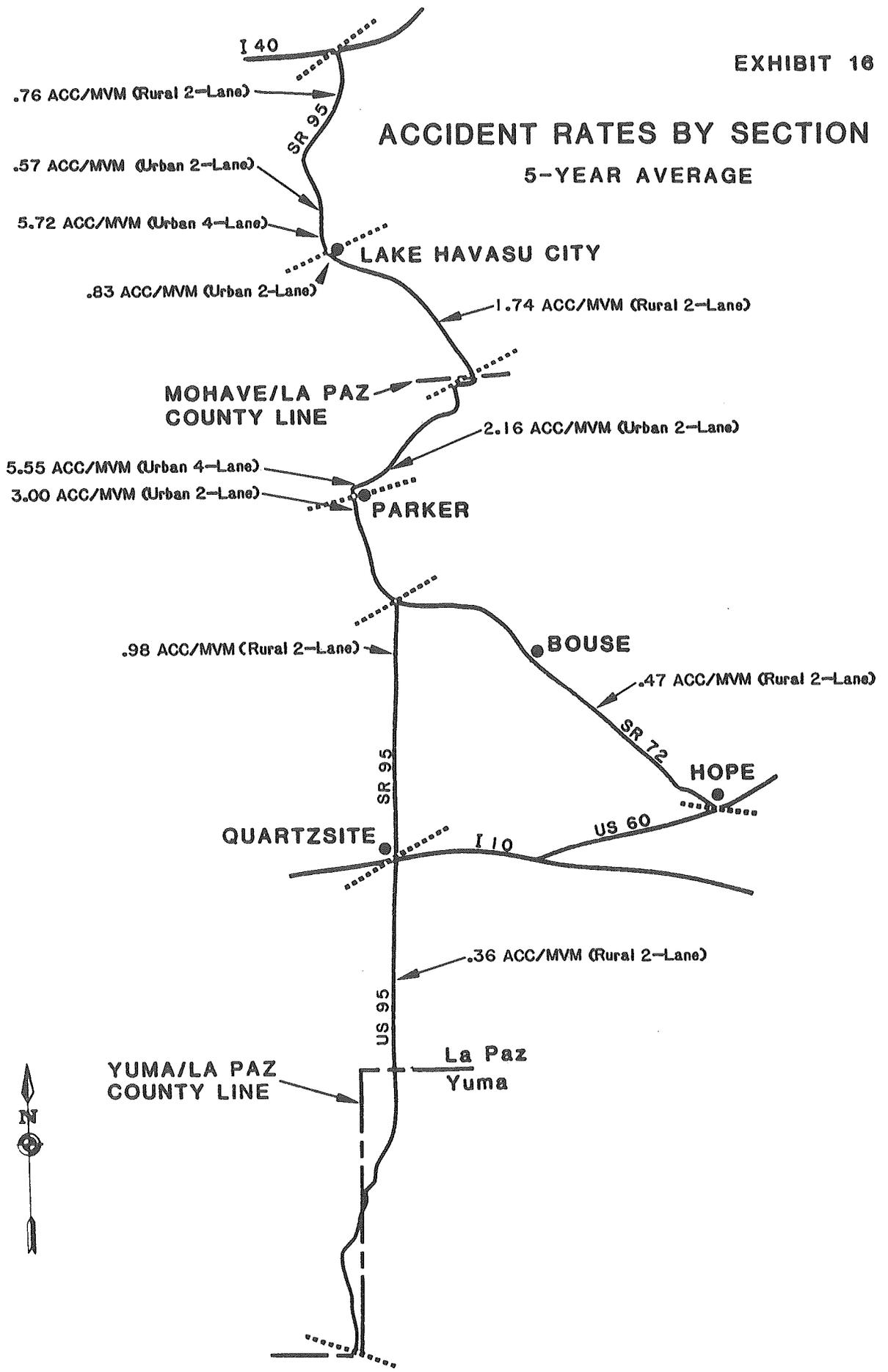
Within Lake Havasu City failing to yield the right-of-way appeared on most accident reports as accident cause. (1980 = 47.2%, 1981 = 43.7%, 1982 = 57.9%, 1983 = 60%, fail to yield R/W). Drinking drivers were not a contributing factor until 1983 when 40% of the accidents had drinking drivers. (1980 = 15.8%, 1981 = 18.7%, 1982 = 21.7%, 1983 = 40%, drinking related accidents).

From the statistics on contributing factors it may be concluded that the majority of accidents were caused by drinking drivers and failure to yield the right-of-way. Poor roadway alignment and sight distance restrictions along the Parker Strip coupled with drinking compounded the problem.

A continued effort to patrol and enforce the law will, undoubtedly, reduce the accident incidence.

An analysis was made of the injuries and deaths along the corridor. Areas of highest accident concentrations are listed in Exhibit 19. All sections show a marked improvement in 1983.

ACCIDENT RATES BY SECTION 5-YEAR AVERAGE



ACCIDENT REPORT SUMMARY

EXHIBIT 18

MILEPOST FROM	TO	ROUTE NO.						
54.84 - 104.51		U.S. 95	RURAL		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	16	17	12	14	6	65		
*ACC/MVM	.54	.53	.23	.19	.06		.36	1.53
104.51 - 142.8		SR. 95	RURAL		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	16	22	15	9	8	70		
*ACC/MVM	.73	1.23	.78	.36	1.05		.95	1.53
142.8 - 143.1		SR. 95	URBAN		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	1	1	0	0	0	2		
*ACC/MVM	5.68	7.12	0	0	0		3.00	1.25
143.1 - 144.7		SR. 95	URBAN		4 LANE		48' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	21	16	13	18	6	74		
*ACC/MVM	5.52	4.08	3.65	4.46	5.87		5.55	2.20
144.7 - 150.1		SR. 95	URBAN		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	34	27	31	26	4	122		
*ACC/MVM	2.65	2.04	2.31	1.91	.29		2.16	1.25
150.1 - 177.0		SR. 95	RURAL		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	97	68	89	45	15	314		
*ACC/MVM	2.09	1.43	1.84	.89	1.15		1.74	1.53
177.0 - 181.5		SR. 95	URBAN		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	5	5	5	9	0	24		
*ACC/MVM	.83	.73	.72	1.23	0		.83	1.53
181.5 - 184.0		SR. 95	URBAN		4 LANE		48' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	19	15	18	21	9	82		
*ACC/MVM	4.89	4.26	3.86	4.29	7.02		5.72	2.20
184.0 - 188.3		SR. 95	URBAN		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	2	8	2	2	1	15		
*ACC/MVM	.27	1.05	.26	.29	.55		.57	2.20
188.3 - 202.01		SR. 95	RURAL		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	7	4	5	8	3	27		1.53
*ACC/MVM	.68	.37	.46	.60	.33		.76	
3.11 - 49.91		SR. 72	RURAL		2 LANE		24' WIDE	
YEAR	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	TOTAL	AVERAGE	STATE AVERAGE
ACCIDENTS	8	18	9	12	1	48		
*ACC/MVM	.39	.64	.34	.57	.04		.47	1.53

*ACC/MVM = Accidents per million vehicle miles.

EXHIBIT 19

TABULATION OF INJURIES & FATALITIES

IN AREAS OF HIGH INCIDENCE

STATE HIGHWAY 95

MILEPOST	ROADWAY TYPE	1980		1981		1982		1983	
		INJ.	FATAL	INJ.	FATAL	INJ.	FATAL	INJ.	FATAL
143.1--144.7 (Parker)	4 Lane--U	13	1	14	1	8	0	14	0
144.7--150.1 (Between Parker & Strip)	2 Lane--U	29	2	13	0	23	1	11	0
150.1--177.0 (Parker Strip)	2 Lane--R	82	6	65	3	103	8	25	4
181.5--184.0 (Lake Havasu City)	4 Lane--U	22	1	15	1	24	0	13	0

CORRIDOR SECTION SUFFICIENCY RATINGS

ADOT's Materials Division annually through the Pavement Management System (PMS) reviews the existing condition of the state's roadways. From this PMS an automated sufficiency rating program is developed to include: condition, safety and service of the existing roadway. Each mile section is reviewed and assigned a sufficiency rating. Ratings on a scale of 0 (low rating) to 100 (high rating) are produced. Sufficiency ratings which fall into the 60 or below category indicate a need for evaluation and consideration for some type of rehabilitation or reconstruction.

The latest sufficiency ratings completed in 1982 indicate that five segments of SR 95 (See Exhibit 20) are below 60. This signifies that some improvement effort is required in the next few years. Seven other segments on SR 95 have ratings just above 60 which indicates that some sort of action will be required in the near future.

US 95, MP 59.79--MP 104.08, and SR 72, MP 13.11--49.91, have average sufficiency ratings of 79.57 and 78.40 respectively, indicating the pavement condition is not in immediate need of improvement. (See Exhibit 21).

EXHIBIT 20

SUFFICIENCY RATINGS*

BY ROUTE & MILEPOST

ROUTE	MILEPOST	RATINGS	ROUTE	MILEPOST	RATINGS	
US 95	59.79	73	SR 95	161.96	85	
	70.00	75		176.40	79	
	74.72	87		176.97	57	
	80.92	84		178.36	72	
	87.07	79		180.13	80	
	103.61	82		181.73	82	
	104.08	77		183.85	79	
SR 95	109.10	64		183.98	86	
	118.60	66		187.42	87	
	131.02	83		190.37	88	
	131.69	64		201.01	85	
	134.62	64		201.95	71	
	134.86	72		SR 72	13.11	76
	143.06	80			18.14	79
	143.93	77	20.34		80	
	144.49	75	27.07		77	
	147.17	76	43.05		80	
	147.34	63				
	148.02	51				
	150.60	57				
	153.69	45				
	154.88	58				
	157.18	67				
	158.67	64				
161.73	69					

*Sufficiency ratings are indicators of need for roadway improvement. Ratings which fall into the 60 point and below category signify a need for further evaluation and consideration for some type of rehabilitation or reconstruction.

EXHIBIT 21

CORRIDOR SECTION SUFFICIENCY RATINGS*

CORRIDOR SECTION NUMBER	ROUTE NUMBER OR NAME	CORRIDOR SECTION LOCATION	SECTION LENGTH (IN MILES)	AVERAGE SECTION RATING
1	US 95	MP 59.79--MP 104.08	44.72	79
2	SR 95	MP 109.10--MP 131.69	22.59	69
3	SR 95	MP 131.69--MP 143.93	12.22	73
4	SR 95	MP 143.93--MP 161.73	17.76	62
5	SR 95	MP 161.73--MP 181.73	20.04	76
6	SR 95	MP 181.73--MP 201.95	19.98	83
7	SR 72	MP 13.11--MP 43.05	36.80	78

*Sufficiency ratings are indicators of need for roadway improvement. Ratings which fall into the 60 points and below category signify a need for further evaluation and consideration for some type of rehabilitation or reconstruction.

CONSTRUCTION HISTORY

The 95/72 corridor was built in stages beginning in 1922 on SR 95 north of Quartzsite enroute Parker. First construction began on SR72 in 1937 and was complete and opened to traffic in 1940.

Upon reviewing Exhibit 22, it is interesting to note the older roads cost considerably less to build. Construction standards were much lower and construction costs were only a fraction of today's cost.

This information (Exhibit 22) is provided to illustrate the age of the various sections, and where major emphasis has been given to construction projects.

PROPOSED CONSTRUCTION

The following proposed construction will help relieve traffic congestion in the Parker Strip area created by through-traffic. However, it will not solve the ever increasing recreation traffic problem generated along the area.

The 1984-85 Five-Year Highway Construction Program has the following list of construction projects scheduled:

YEAR	RTE	LOCATION	LENGTH	TYPE CONST.	COST
1985/86	SR72	MP 27.1 - Bouse East	8.9	Seal Coat	\$ 180,000
1986/87	SR95	MP 147.2 - Osborne Wash (Unit 1)	4.0	G&D, Str.	5,670,000
1987/88	SR95	MP 147.2 - Osborne Wash (Unit 2)	2.3 6.3	G&D AC Pave	8,050,000
1989/90	SR95	MP 153.4 - Osborne Wash (Unit 3)	1.5	G&D, AC Pave	3,645,000
TOTAL:					\$17,545,000

EXHIBIT 22

CORRIDOR SECTION IMPROVEMENT HISTORY

Section One, US 95 - MP 59.798 to 104.51,

Yuma/La Paz Co. Line--Quartzsite

MILEPOST	YEAR	EXPENDITURE	TYPE OF IMPROVEMENT
59.79--73.98	1943	\$ 15,802	Grade & Drain
73.98--104.51	1943	25,893	Grade & Drain
73.98--104.51	1948	72,681	BST Natural Soil
59.79--73.98	1949	228,053	BST
100.26--102.26	1955	21,936	Reconstruct Dips
95.51--97.01	1962	54,737	Culverts
73.24--79.44	1967	806,973	Asph. Conc.
79.44--85.59	1968	776,627	Asph. Conc.
103.51--104.01	1969	136,027	Mix Bit
TOTAL:		\$2,138,729	

Section Two, SR 95 - MP 109.10 to 131.69:

104.51--131.69	1924	\$ 25,955	Grade & Drain
104.51--114.01	1956	98,031	BST
114.01--131.69	1957	194,447	BST
104.51--131.69	1957	72,751	Install CMP
130.99--131.69	1970	410,926	Bridge & Asph. Conc.
TOTAL:		\$ 802,110	

Section Three, SR 95 - MP 131.69 to 143.91:

132.18--144.71	1922	\$ 37,611	Grade & Drain
131.69--134.84	1937	22,980	BST
142.84--143.93	1938	4,760	BST
134.84--142.84	1938	56,033	BST
131.69--134.84	1941	7,888	Mix Bit
142.84--143.93	1957	126,026	Mix Bit
135.69--140.69	1959	72,524	Mix Bit
134.62--143.06	1972	181,603	Asph. Conc.
TOTAL:		\$ 509,425	

Section Four, SR 95 - MP 143.91 to 161.73:

MILEPOST	YEAR	EXPENDITURE	TYPE OF IMPROVEMENT
144.34--144.71	1937	\$ 128,008	Bridge & BST
143.93--144.34	1937	3,323	BST
143.93--144.34	1957	149,041	Mix Bit
152.54--153.73	1960	211,765	Mix Bit
153.73--156.04	1961	243,530	Mix Bit
156.04--158.39	1963	361,928	Mix Bit
158.39--161.73	1966	858,100	Grade & Drain
158.39--161.71	1967	264,178	Asph. Conc.
147.22--149.70	1970	27,966	AC Fin. Course
147.43--147.60	1971	412,449	Bit Plant Mix
144.43--147.78	1975	1,201,823	Asph. Conc.
TOTAL:		\$3,862,111	

Section Five, SR 95 - MP 161.73 to 181.73

161.73--162.24	1967	\$1,098,686	Bridge (Bill Williams)
161.73--163.11	1967	548,499	Grade, Drain
163.11--166.00	1968	548,155	Grade, Drain
170.61--175.45	1969	830,714	Grade, Drain
166.00--170.61	1970	829,046	Grade, Drain
161.73--176.97	1971	1,134,708	Asph. Conc.
178.32--181.62	1977	1,765,863	G&D, BST, Curbs
181.62--181.87	1977	75,451	G&D, BST, Curbs
176.97--178.40	1982	1,576,368	Asph. Conc.
TOTAL:		\$8,407,490	

Section Six, SR 95 - MP 181.73 to 202.01:

190.37--200.98	1977	\$2,967,753	G&D, BST, Drain
181.87--183.85	1977	1,059,518	G&D, BST, Curbs
183.85--190.06	1978	2,849,446	G&D, Bst, Bridge
TOTAL:		\$6,876,717	

Section Seven, SR 72 - MP 13.11 to 49.91:

MILEPOST	YEAR	EXPENDITURE	TYPE OF IMPROVEMENT
13.11--18.13	1937	\$36,557	BST
18.13--27.07	1937	64,226	BST
43.05--49.91	1939	52,181	Mix Bit
27.07--43.05	1940	88,851	Mix Bit
13.11--18.13	1941	11,547	Mix Bit
18.13--24.86	1945	12,467	Mix Bit
31.91--49.91	1954	5,511	R/W Fence/Gates
32.41--33.72	1961	51,754	Bridge
13.11--18.14	1970	61,717	AC Finish Course
		\$405,648	
GRAND TOTAL:		\$23,0002,230	

TRANSPORTATION ANALYSIS

An important and continuing objective for Arizona's Highway System is providing an acceptable level of transportation service at an affordable cost. Traffic projections, growth projections and operational details reviewed place the needs of US 95, SR 95 and SR 72 in perspective relative to the state's limited resources for highway improvement.

TRAFFIC GROWTH:

Capacity of a roadway is measured by its ability to accommodate traffic. Capacity is a function of (1) physical characteristics of the roadway, and (2) operational features of the traffic.

Traffic operations on a two-lane, two-way rural roadway such as US 95, SR 95 and SR 72 are a problem because lane-changing and passing are possible in the face of oncoming traffic. As the traffic volume increases, the oncoming traffic offers less opportunities to pass .

Ideally, such routes would not have restrictive geometrics or traffic and environmental conditions impeding the flow of traffic. Also, the roadway should ideally have a level vertical grade and horizontal alignment accommodating a designated speed of 60 mph or more. Furthermore, the ideal route would have no passing restrictions, adequate shoulders for disabled vehicles (6 feet or more), no impediments would be present for through-traffic and the traffic stream would be all passenger cars.

Unfortunately, conditions are far from ideal on most sections of the corridor. For Sections One (US95); Sections Two, Three and Four (SR95); and Section Seven (SR72), all of the impeding factors are present. The Parker Strip area (Section 4) has the most severe conditions with substandard surface conditions and insufficient sight distance, both horizontal and vertical. These factors greatly restrict its carrying capacity. On top of this, traffic volumes seasonally vary 32% during the year, and even more (60%) during an average week. (See Exhibits 10 and 11).

Traffic projections on SR 72 are difficult to make because of the wide variance in volumes throughout the past ten years. This is partially due to the opening of I-10 in 1974.

YEAR	ADT	COMMENT
1973	1250	
1974	1200	Completion of I-10
1975	610	
1976	700	
1977	1000	
1978	1000	
1979	890	
1980	780	
1981	1032	
1982	975	Traffic reduction for unknown reasons
1983	800	Traffic reduction for unknown reasons

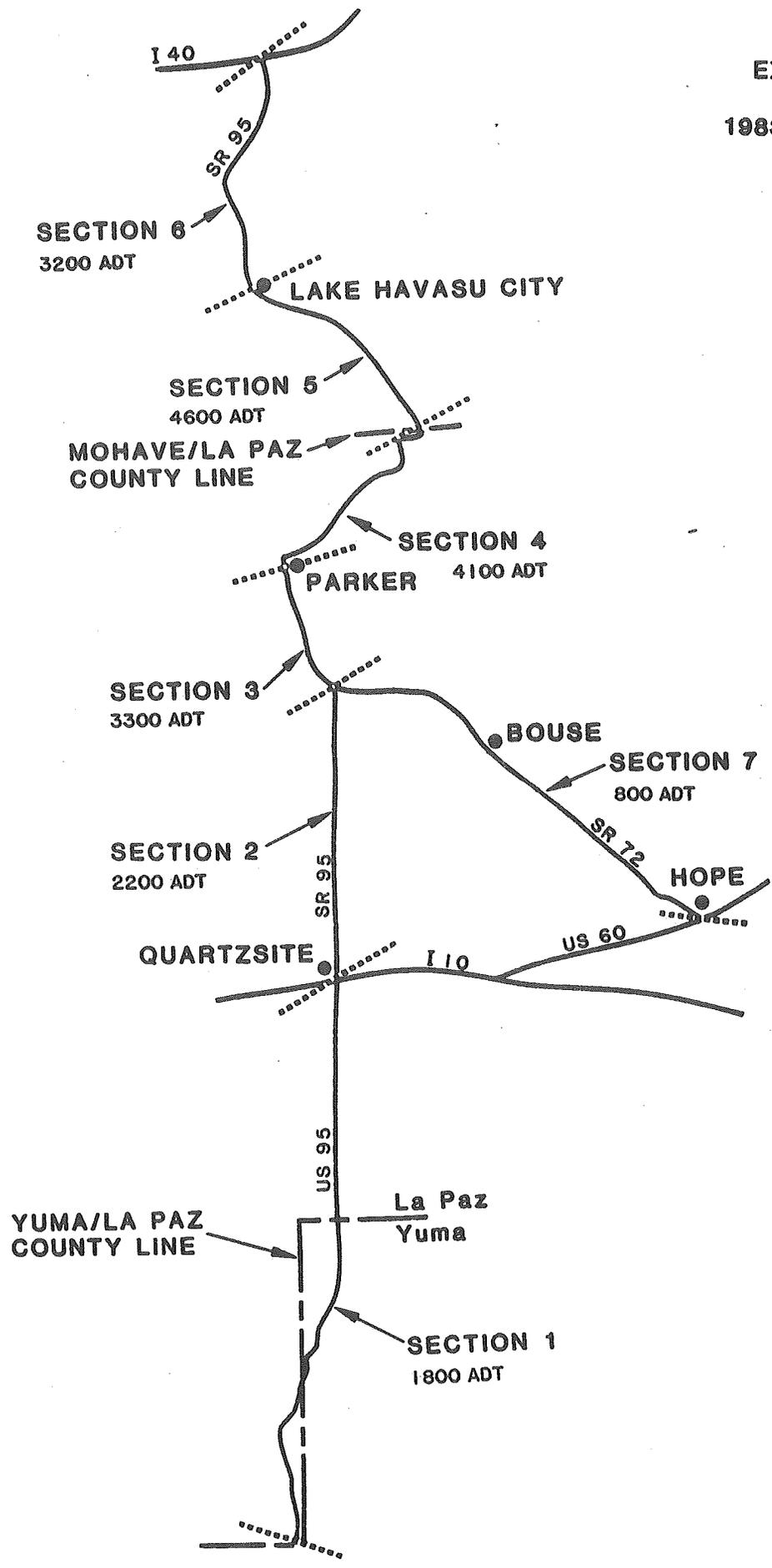
Although traffic shows a 25% drop on SR 72 between 1981 and 1983, there is reason to believe it will begin to rise again to the past level in year 2003.

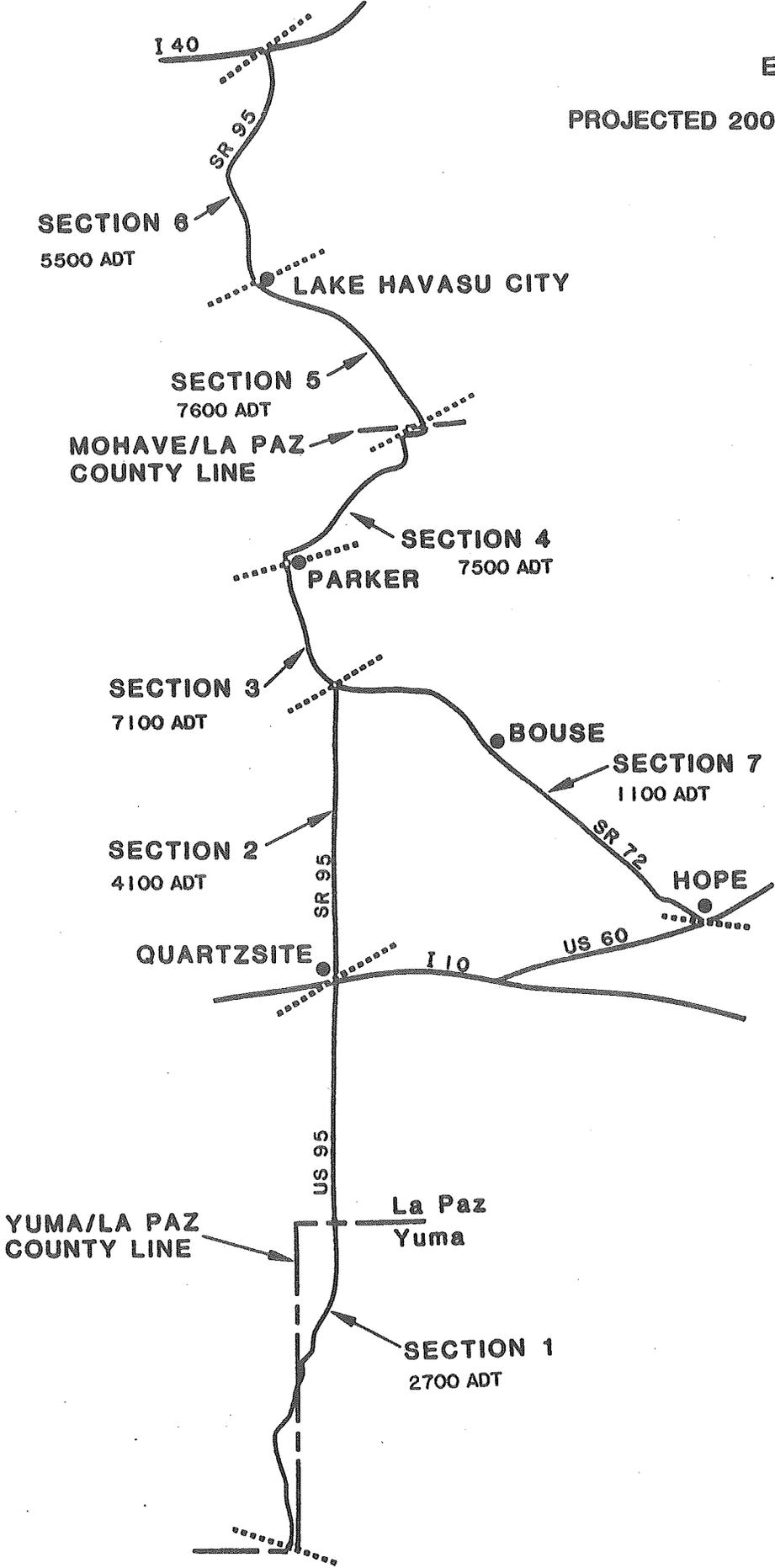
All of the restrictive conditions were taken into account when the Existing and Projected Average Daily Traffic Volumes, Volume/Capacity and Levels of Service, as listed in Exhibits 23 and 24, were developed for corridor sections. The horizon year for the projected volume was 2003. Some temporary traffic changes may occur in the vicinity of the proposed new Parker Townsite; however, no significant changes should result. (Composite 1983 and 2003 traffic maps, Exhibits 23 and 24).

IMPROVEMENT COSTS:

Based on the corridor traffic projections and the resulting level of service analysis, no major construction other than that which is currently in the five-year construction program is needed in the foreseeable future.

Construction needs, other than routine maintenance, may arise, which should be prioritized based on evaluations by the District Engineer.





PROPOSED NEW TOWNSITE CONNECTION ACCESS ROAD COST:

A thirteen mile connecting road over rolling terrain between the SR 95/SR 72 junction and SR 95 near Osborne Wash, M.P. 149, is being proposed by Parker--the southern four miles designed to be of urban arterial standards, while the northern nine miles are to be of rural minor arterial standards.

Factors used to determine costs:

Projected future population 2,000 to 10,000

40' Width construction with storm drains, undivided

Less than 5% trucks

Rural estimated projected 2003 traffic--3200-7000 ADT

Urban cost per mile = \$1,038,000 (1984 manual of highway

Rural cost per mile = \$ 618,000 improvements and main-
tenance costs)

$$4 \times \$1,038,000 = \$4,152,000$$

$$9 \times 618,000 = 5,562,000$$

Total Cost Less R/W : \$9,714,000

Since this is a Parker enterprise, the required engineering construction and finance must be the responsibility of the local governments, either City or County.

OTHER CONCERNS:

The only other area of immediate concern is the Parker Strip area. With completion of the Osborne Wash I, II and III, most through passenger and truck traffic will bypass the congestion, and will leave the old alignment to handle local and recreational traffic. Since the old strip highway will no longer be a state responsibility, improvements may be made by La Paz County at a much lower standard, which would be less expensive to build or re-build. Cost per mile for county road, 3200--7000 ADT, less than 5% trucks, minor collector type 40' road in rolling terrain, would be \$319,000. This same section under state highway standards for a 7000--13,000 ADT (assuming Osborne Wash were not built) less than 5% trucks, minor arterial type, 76' divided roadway in rolling terrain, would be \$1,129,000 per mile, and would not include extensive right-of-way acquisitions required.