Table of Contents

File 1988-0031 Project Name: Municipal Annexation Plan

Present	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the in some instances, not all entries designated to be scanned by the department are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been provided. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	**Table of Contents**
		Review Sheet Summary
		Application form
		Review Sheets
		Receipts for fees paid for anything
		***Submittal checklist**
		***General project report**
		Reduced copy of final plans or drawings
		Reduction of assessor's map.
		Evidence of title, deeds, easements
		***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
		Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
		Other bound or non-bound reports
		Traffic studies
		***Petitioner's response to comments**
		***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**
		***Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)**

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Annexation Plan			
X	X	List Containing properties owned by Public Service			
X	X	Extension of Services Plan			
X		Memo from David Varley, Acting Finance Director to Mark Achen re: Annexation Strategy – 2/12//86			
x		Memo from Mark Achen to Karl Metzner re: approval of draft with comments – 9/14/88			
X		Appendix 1 – outdated and current			
X	X	Resolution No. 33-89 - **			
X	X	Letter from Martin O'Boyle, Chairman, Planning Commission to Mark Achen re: concerns about land uses shown in the annexable area – 7/10/89			
X	X	Municipal Annexation Plan of 1989			

CITY OF
GRAND JUNCTION

MUNICIPAL
ANNEXATION PLAN

1988

CITY OF GRAND JUNCTION
MUNICIPAL ANNEXATION PLAN
1988

CONTENTS

CHAPTER ONE	PURPOSE AND INTENT
CHAPTER TWO	PUBLIC FACILITIES AND SERVICES
CHAPTER THREE	TRANSPORTATION
CHAPTER FOUR	PARKS, RECREATION AND OPEN SPACES
CHAPTER FIVE	LAND USE
APPENDIX	

CHAPTER ONE

PURPOSE AND INTENT

CHAPTER ONE
PURPOSE AND INTENT

A. The City of Grand Junction Municipal Annexation Plan has been developed with the intent of complying with the provisions of 31-12-101 et seq. CRS 1973, as amended, by providing a plan for areas surrounding the corporate limits of the City of Grand Junction. This plan shall be reviewed and updated yearly as required by law.

B. The City of Grand Junction hereby declares that it has no intent to annex any areas outside of the boundaries defined in Appendix I., Annexable Area. In accordance with that limitation, the scope of this plan shall be restricted to the defined annexable area. Any amendments of this plan that may expand the defined annexable area shall also amend other applicable chapters of this plan to include the expanded area.

C. It is hereby intended that all areas shown in the Walker Field Airport Master Plan shall be included in, and be part of, the defined annexable area as shown in Appendix I. The Walker Field Airport Master Plan is hereby, by reference, made part of this plan.

CHAPTER TWO
PUBLIC SERVICES AND FACILITIES

A. WATER
B. WASTEWATER
C. SANITATION
D. POLICE
E. FIRE

CHAPTER TWO
PUBLIC SERVICES AND FACILITIES

A. WATER

Treated water service within the annexation study area is provided by the City of Grand Junction, the Clifton Water District, and the Ute Water Conservancy District. The area served by the City generally encompasses the central core of the City as it existed in the mid-1950s. Specifically, it includes an area bounded by 29 Road on the east, 25 1/2 Road on the west, Patterson Road on the north, and the Colorado River on the south. The City also serves additional areas within its corporate limits through purchases of water from the Ute Water Conservancy District. These areas are within the boundaries of the Ute District; however, past court decisions and legal entanglements allow the City to serve and bill for water service, but with water purchased from the Ute District. These areas include Orchard Mesa and North 12th Street in the Lakeside area. The City also serves areas that are outside of its corporate boundaries, inside of the Ute District, but not served by the Ute District. These areas are west of 1st Street and north of Patterson Road in the F 1/2 and Galley Road area.

The Clifton Water District's service area is east of 30 Road and serves an area bounded by 30 Road on the west, 33 1/2 Road on the east, G Road on the north, and the Colorado River on the south. Additional area annexed into the Clifton District includes the Whitewater area south of the City of Grand Junction.

The Ute Water Conservancy District provides water service to the balance of the annexation study area surrounding the areas served by the City and Clifton. There are the exceptions as previously noted and some neighborhoods on the Redlands which are served by private water company wells. Though not served by Ute distribution lines, they nevertheless pay the Ute mill levy for debt retirement.

City water supply would not automatically be extended into newly annexed areas except in cases where the City is presently serving outside the city limits. Policy and legal decisions would have to be reached concerning the City's right to extend its service into newly annexed areas through the purchase of existing infrastructure owned by other water entities. Such decisions would be moot if current deliberations concerning a unified water system are successful.

Due to the presence of three water providers in the urban and urbanizing areas of the Grand Valley, and the number of overlapping service areas previously described, there are current discussions taking place by representatives of the three providers. These discussions are considering the feasibility of combining the three water entities, removing duplication of supply and treatment facilities, unifying policy and administrative functions, and eliminating costly infrastructure improvements required if the entities remain separate.1

Water service would be from an enlarged treatment plant on Rapid Creek. Water supply would come to the treatment plant from two flowlines from Kannah Creek and Plateau Creek. Distribution service would be enhanced by the construction of additional transmission lines. Operation and maintenance, utility billing, customer service, and long-range planning would be combined. Policy direction would be from a combined board of directors. Water service would be provided through existing distribution mains. New construction that services and benefits only limited aras would be financed by new development within those areas. Water supply and planning for future development could serve a maximum peak day demand of 60 million gallons per day--twice the current maximum peak day demand, or about 250,000 persons.

Water service, as a result of annexation, would not be affected under a combined water system.

B. WASTEWATER SERVICES

In 1980 the City of Grand Junction and Mesa County entered into a cooperative agreement to jointly construct, own, and operate wastewater treatment and collection facilities.2 In preparation of receipt of federal grant funds for construction of a new treatment plant, the so-called "201 planning studies" were initiated. The planning boundary extended from 18 Road on the west to 33 1/2 Road on the east, H 1/2 Road on the north to A Road on the south. This area defined demands that could be met by the construction of a wastewater treatment plant.3 At present, the construction of residential, commercial, and industrial enterprises within the 201 areas can be served by the existing treatment plant.

---

1 A Unified Central Grand Valley Water System, Black and Veatch Engineers/Architects, January 1987.

2 Joint Sewerage Service Agreement, City of Grand Junction/Mesa County, May 1980.

3 201 Planning Study, City of Grand Junction.

Collection systems within the 201 area exist in some areas and not in others. Demand for service in areas not served by collection systems have to be met through the construction of lines financed by those requiring service. In August of 1987 the sewer fund undertook a feasibility study of areas within the 201 boundary area that are now developed, but presently not served by sewage collection facilities. This was completed to determine the existing need for collection systems extensions.4

Amendments to the 201 planning area study are made in cooperation with the City and Mesa County Planning Departments. There are seven sewer districts that contract with the joint sewer system for treatment and treatment/maintenance services. Capacity of the treatment plant is 12 mgd with current utilization at 6.5 mgd.

Annexation by the City would not affect sewer service because annexation would occur into areas presently served by the joint sewer system and managed by the City of Grand Junction or within existing sewer districts. Future arrangements with existing sewer districts are the prerogative of the districts themselves concerning dissolution of the districts. Rights of way for future sewer lines would be in the name of the City of Grand Junction. Planning and zoning decisions would be under the authority of the City, allowing for more control of where development occurs and how infrastructure is utilized.

C. SANITATION

Trash collection services are provided by the City for residential and commercial customers. Residential customers within the city limits have no choice as to who their hauler is. When annexation occurs, the City would take over residential collection services from private haulers. Commercial hauling within the city limits is on a competitive basis with the City competing with other haulers for the commercial business. Annexation would not affect this arrangement.

---

4 Report on Preliminary Study: Sanitary Sewer Line Extensions Within the 201 Service Area, Banner Associates, Inc., August 1987.

Should the City of Grand Junction annex additional areas, the Police Department would have to assess the potential impact on a case-by-case basis. Criteria to be considered would include the geographical dimensions of the annexed area and its population. Other factors would include the amount of resident population versus business population, actual calls for service and road miles. The Department could then ascertain whether the area could receive police service delivery utilizing current resources. If expected service overwhelms current resources, then additional personnel and equipment would be requested.

GRAND JUNCTION FIRE DEPARTMENT

The City Fire Department provides fire protection for the Grand Junction community. It also provides services to the Grand Junction Rural Fire District through a contract. The two fire districts agree to pay their own capital costs. Other charges to the rural district, such as manpower, are based on a percentage of the total number of calls received in relation to the total operating budget. This total service area includes approximately 97 1/2 square miles.

The Grand Junction Fire Department has a mutual aid agreement with the fire fighting units in Clifton, Fruita, Central Orchard Mesa, East Orchard Mesa, Palisade and Glade Park. This mutual aid agreement states that the fire fighting units will assist each other in cases of emergency.

Within the operational area of the Department, there have been some problems identified. Of primary concern is inadequately-sized water mains and a lack of sufficient fire hydrants. The problem of street access and adequate crossings for fire fighting equipment is also a concern. Each of these concerns is compounded if the City of Grand Junction annexes areas which have these particular problems.

The standards concerning fire department location and operation are set forth by a rating bureau, the Insurance Service Office (ISO). This standard is a five minute response time from the fire station to a high value district (commercial, industrial, multi-family) and to a residential urban area. The bureau takes into consideration the location of fire hydrants, water main sizes and response time, and rates fire districts on a scale of 1 to 10, with 1 being the optimal rating. The City of Grand Junction is rated a 5, while the adjacent rural area is rated from 8 to 9.

Through application of the running area standards of the Insurance Service Office, there are three areas that lack sufficient fire protection: 1) airport area, 2) Redlands area, and 3) the Whitewater area.

It is recommended that the Fire Protection Program and the on-going improvements to water mains be continued. This would result in greater protection and potentially lower insurance rates.

CHAPTER THREE

TRANSPORTATION

CHAPTER 3 - TRANSPORTATION

INTRODUCTION

Transportation is a vital factor in the development of the area. The transportation system can be viewed as a type of utility line which carries people and goods to their destination. Akin to other types of utility lines, the transportation system has finite capacities. Demands greater than capacity decrease the performance.

Another common characteristic is the tremendous investment in the transportation system. The high costs of mistakes require the City of Grand Junction to consider carefully how this investment is used.

This chapter will review how the present transportation system was formed, what kind of demands have now been placed on the system and propose policies for developing a future system. A system which will service growth at the most effective cost to the City and its residents.

FACTORS IN THE TRANSPORTATION SYSTEM

PHYSICAL CONSTRAINTS

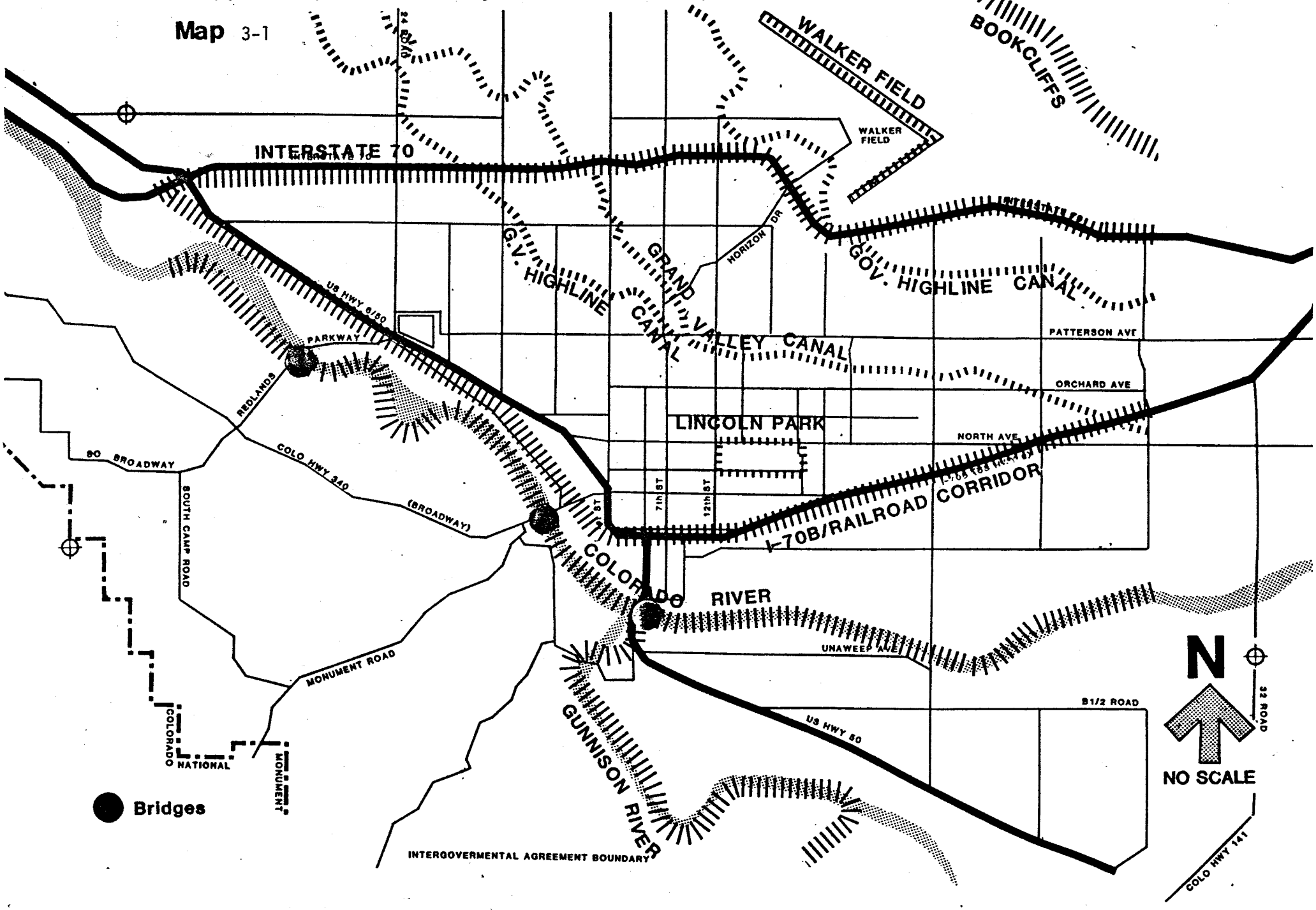
The transportation system in the Grand Junction area has been primarily defined by the natural physical features of the Grand Valley. As is shown in Map 3-1, the Valley is defined by the Bookcliffs to the north, rugged terrain to the southeast and the canyon walls of the Colorado National Monument barricading the southwest. The relative narrowness of the Valley has resulted in a strong east-west orientation to settlements and travel. The Colorado and Gunnison Rivers, important as water resources, also act as travel barriers. Crossings of the Colorado River are currently limited to four locations in the urban area.

These factors determined the locations of the principal transportation systems: I-70, the railroad, I-70B, and U.S. 50. In turn, the interstate and the corridors formed by U.S. 50, I-70 Business Loop, and the Denver and Rio Grande Western Railroad (D&RGW) are major barriers to north-south travel.

Bridges or grade-separated crossings (traffic crosses over or under the street or rail facility) are extremely expensive, and yet are the only practical, safe means for moving large volumes of traffic across the above corridors. For pedestrians and bicyclists these barriers are even more formidable as these travelers are unable to detour long distances. Even the crossings themselves may become barriers when no provision is made for separated paths.

PHYSICAL CONSTRAINTS TO TRAVEL

Map 3-1



Canals such as the Grand Valley and Government Highline Canals are lesser, but still inconvenient obstacles. Although many crossings exist in the area, the locations of these crossings may not be favorable to pedestrian and bicycle travel.

Finally, there are large-site developments such as Walker Airport and Lincoln Park. These create localized travel detours which are of primary concern to the immediate neighborhoods and non-motorized traffic.

TRAVEL DEMAND

One element of a successful transportation system is the assessment of "travel demand." Travel demand refers to the number of trips people make and the origins and destinations of those trips. It is the result of many factors, including:

- The type and intensity of land use
- The overall population
- The density or compactness of the community
- The location of employment
- Household size and income
- The type of transportation available

Analysis of these factors from past trends and forecasts of how they might change in the future can help Grand Junction determine its priorities for transportation system investments. More importantly, good analyses of the interaction of land use and transportation will help Grand Junction determine the proper right of way (ROW) for streets and the degree of impacts caused by any particular development, aiding management of those impacts. Through such management, Grand Junction can get out of the "catch-up" cycle in which growth outpaces needed improvements. Provision can also be made for other forms of transportation, such as bicycles.

POPULATION FACTORS

The most basic change is population size. The following table indicates the increase in the City and the County over the past decade.

YEAR	CITY	COUNTY
1970	20,170	54,374
1977	25,398	66,848
1980	28,144	81,530
1983(est.)	30,000	88,600
1986(est.)	28,500	81,500

Sources: The population figures for 1970-1980 are from the U.S. Census. City population for 1983 is from the Population and Demographic Chapter of the Comprehensive Plan. County population for 1986 is from the Data Book, 1986 updates. Source of 1983 County Pop.? & 1986 City Pop.?

The location of the population is also important. Map 3-2 illustrates the changes in population by census tracts from 1970 to 1980. The major growth has occurred in Tracts 14 (Redlands), 10 and 11 (between 25 and 31 Roads and Patterson and I-70), and 17 (Clifton and Palisade). The numbers for the Map are detailed in the Appendix.

Tracts 10, 11 and 17 accounted for 14,140 persons of the total County increase of 27,156. This was 52% of the growth. Other strong growth areas were Orchard Mesa (Tract 13) and the Fruita area (Tract 15). Conversely, the central areas of the City (roughly Tracts 1, 2, 3, 4, 5, 6 and 7) had grown only by 1,855 persons, or 6.8% of the total County growth. The central area is basically built out, with little vacant land available for development.

The sprawl of development changes not just the origins and destinations of the trips, but the length of the trips as well. The number of vehicle miles traveled (VMT) in the "urbanized area" shown in Map 3-3 has increased from 680,718 in 1977 to 1,115,968 in 1983--a 63.9% increase. From 1977 to 1983 the population of Mesa County was estimated to have increased by only 31.6% to 88,623. Although the numbers are not exactly comparable, the VMT has increased approximately twice as fast as the population. Simply put, more people are driving longer distances.

In the "Grand Valley Transportation Study: Phase 1 Report" (1977) travel demand was shown as a number of desire lines which are depicted in Map 3-4. The study showed that the major flows of travel were between Districts 8, 9, 1, 4 and 6. District 8, although small in population, contains the entire downtown and includes numerous public and private employers and a sizable retail area. The 1977 study did not include Mesa Mall, the Coronado shopping area in Clifton, major new hotels and offices

along Horizon Drive and other significant economic and demographic changes. For example, the downtown area, which accounted for 26.14% of the sales tax collected by the City in 1977, brought in only 15.8% in 1983. In contrast, the Mesa Mall area accounted for 20.0% of the sales tax collected in 1983.

The location of "activity centers" such as Mesa Mall are critical in the analysis of travel demand. Residences are assumed to produce trips, trips which are then attracted to the activity centers containing jobs, shopping, services or social activities. Estimates of current total demand are difficult to make, but certainly travel has increased to and from Districts 2 and 3 and the Clifton area relative to 1977. Travel between "bedroom" communities, such as the Redlands and Orchard Mesa, would not have increased significantly. Each area, although experiencing large residential growth, did not grow as employment or regional shopping areas.

One indicator is the actual amount of vehicles counted on the street network. The Colorado Department of Highways counted traffic in the urbanized area in 1977 and 1983. The results are shown on Map 3-5, which shows the 1983 counts at a number of key locations around the City. Some trends are apparent:

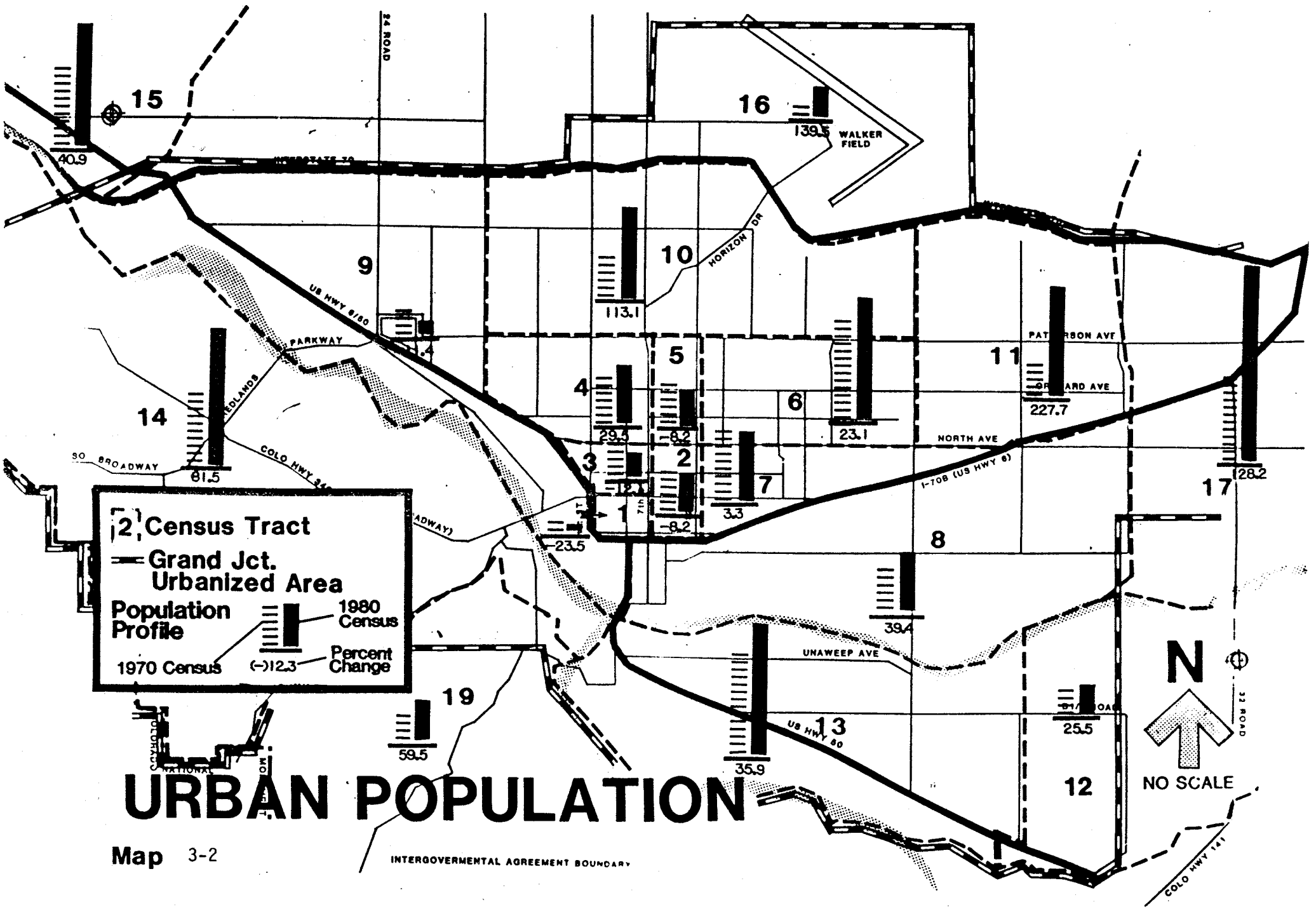
- North Avenue was at or above free-flow traffic capacity in 1977. Traffic has not increased significantly since that time as travelers use other corridors rather than fight the traffic.

- Traffic within downtown has not generally increased, but traffic on peripheral through streets, especially the I-70 Business Loop (First Street, Ute and Pitkin) has increased by 50% or more. At one point on First Street north of Ute, traffic increased from 13,800 to 20,843.

- Traffic on the Fifth Street Bridge (U.S. 50) has increased 20% from 20,100 to 24,010. The capacity of the bridge limits any major increases in traffic between Orchard Mesa and the rest of the area.

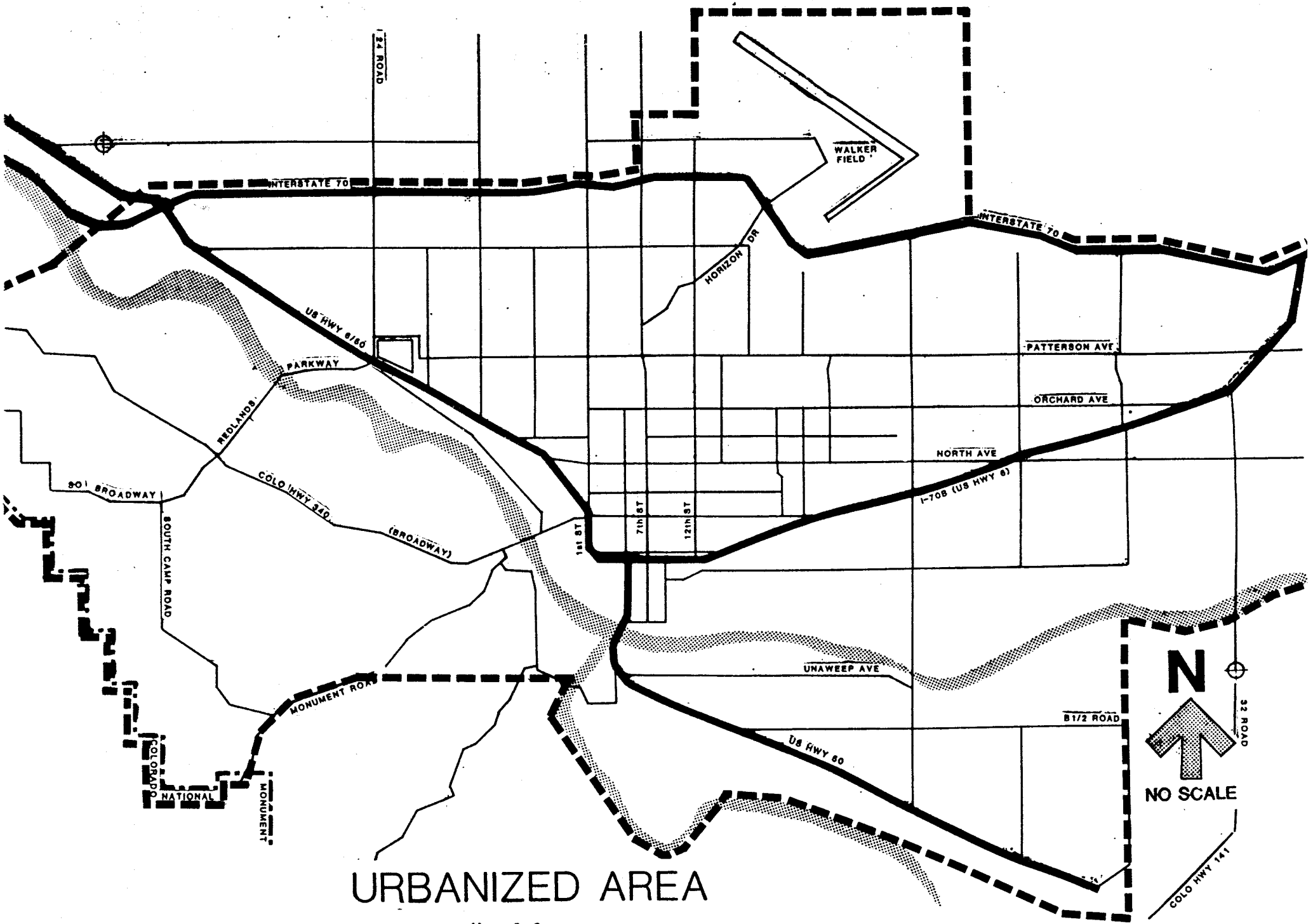
- Similar restraints face Redlands travelers on the Broadway Bridge (S.H. 340) over the Colorado River. (The completion of) the Redlands Parkway should divert some traffic, but early counts have been inconclusive as to the full effect.

- The Horizon Drive area has posted some of the most sizable increases. Horizon Drive north of I-70 increased from 3,350 trips per day to 12,470 trips, a 250% increase. Horizon Drive southwest of 12th Street increased from 3,400 to 11,416, a 235% increase. This last count may have been slightly skewed by then ongoing construction at the intersection of 12th Street and Patterson.



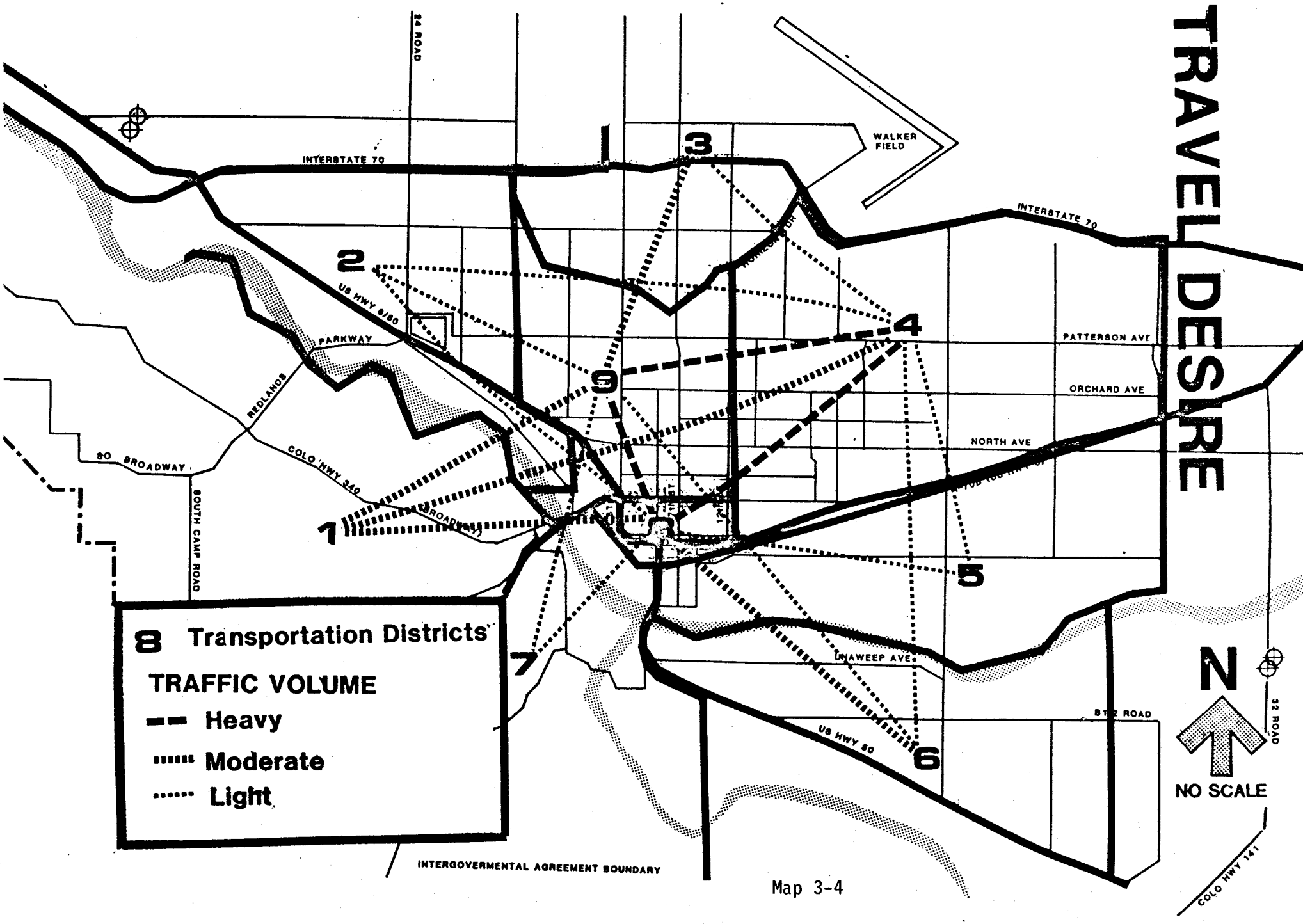
URBAN POPULATION

Map 3-2



URBANIZED AREA

Map 3-3


TRAVEL DESIRE
24 ROAD
INTERSTATE 70
WALKER FIELD
INTERSTATE 70
US HWY 6/50
PARKWAY
REDLANDS
PATTERSON AVE
ORCHARD AVE
NORTH AVE
50 BROADWAY
COLO HWY 340
BROADWAY
SOUTH CAMP ROAD
1
2
3
4
5
6
7
8 Transportation Districts
TRAFFIC VOLUME
Heavy
Moderate
Light
GUNNISON
MAYWEEP AVE
B 1/2 ROAD
US HWY 50
32 ROAD
COLO HWY 141
N
NO SCALE
INTERGOVERMENTAL AGREEMENT BOUNDARY

Map 3-4

A clear means of regarding travel demand changes is through the use of "screenlines", which can be considered as sections through the travel corridors. Map 3-5 illustrates several such screenlines. Traffic counts for 1977 and 1983 were summed up for selected collector and arterial streets passing through the screenline. The results are tabulated in Table 11-1.

TABLE 3-1

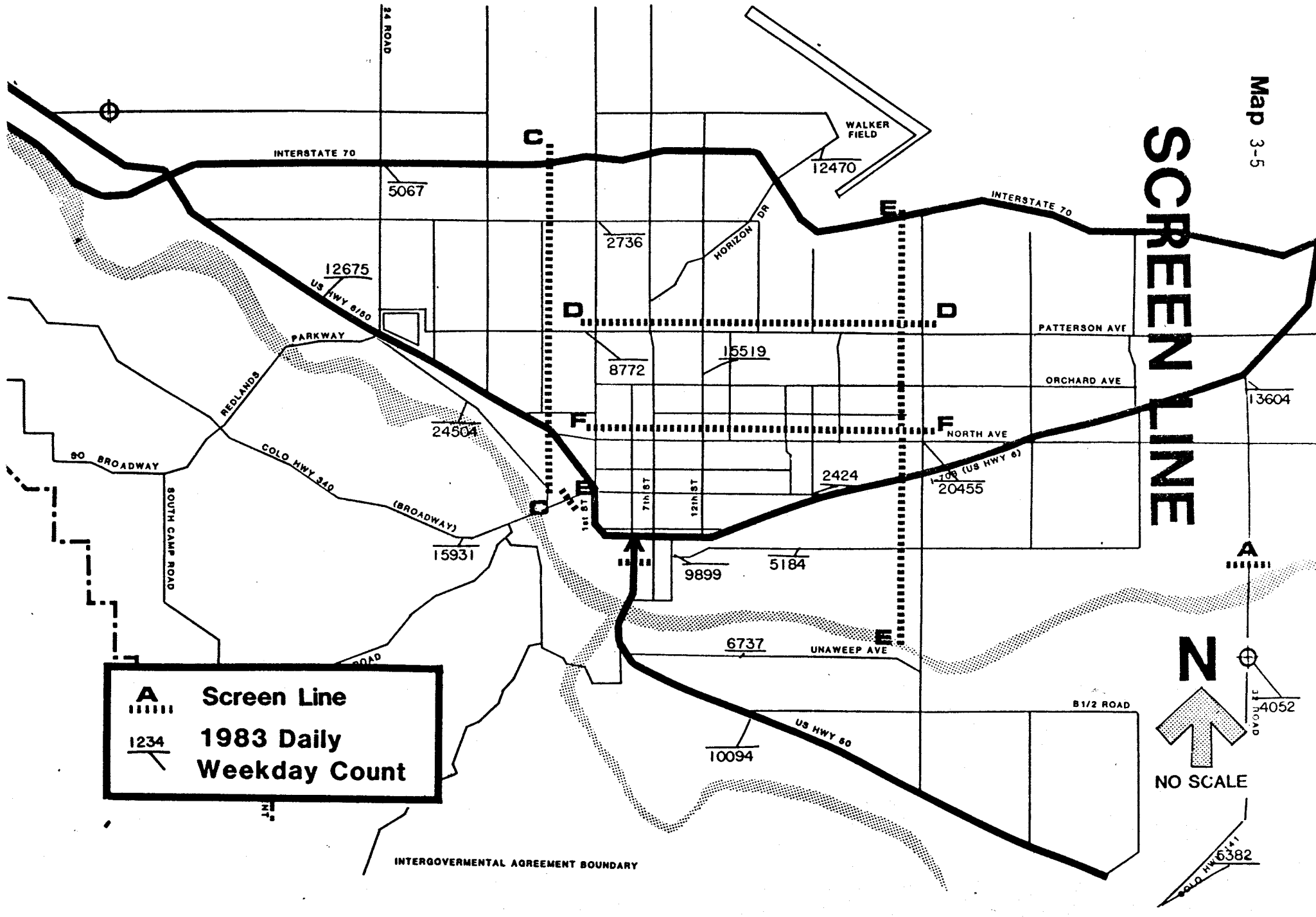
SCREENLINE	1977	1983	%CHANGE
AA. Orchard Mesa	25,150	32,996	+31.2
BB. Broadway	18,800	20,951	+11.4
CC. Mesa Mall	25,060	44,726	+78.5
DD. North Area	19,690	27,357	+38.9
EE. East Area	39,570	61,928	+56.5
FF. Central	41,600	48,586	+16.8

The major growth has occurred in the east-west movements in the Mesa Mall area and the eastern area with 78.5% and 56.5%, respectively. The volume of traffic through screenline FF, the central area, increased only 16.8% and lost the "lead" as the busiest traffic area.

FUTURE TRENDS

The past decade has seen a tremendous change in travel demand in the area. Development around the City has resulted in a disproportionately high increase in the number of vehicle miles traveled; roughly half again the percentage increase in population. This travel growth has impacted most heavily the streets away from downtown and reflects the changing land uses. The downtown, the traditional core of shopping and employment, has decreased in importance relative to the total urban area.

Future residential and economic development, if it should continue to occur in the outlying areas, will further decrease the radial travel patterns seen in Map 3-4. Major growth of employment in the downtown area would put additional demand on the radial system, especially the bridges and I-70B.


Map 3-5
SCREEN LINE
24 ROAD
INTERSTATE 70
5067
WALKER FIELD
12470
INTERSTATE 70
2736
HORIZON DR
12675
US HWY 6/50
PARKWAY
REDLANDS
8772
15519
PATTERSON AVE
ORCHARD AVE
13604
24504
NORTH AVE
2424
I-70B (US HWY 6)
20455
60 BROADWAY
COLO HWY 340
(BROADWAY)
SOUTH CAMP ROAD
15931
1st ST
7th ST
12th ST
9899
5184
6737
UNAWEEP AVE
B1/2 ROAD
US HWY 50
10094
4052
N
NO SCALE
6382
A Screen Line
1234 1983 Daily Weekday Count
INTERGOVERMENTAL AGREEMENT BOUNDARY

There is no means of accurately projecting what changes may occur over the next twenty years. This "...does not mean we can't have useful policies and objectives for development at that range and beyond. What it does mean is that our objectives should be general enough to allow room for errors in foresight." (Frederick Bair)

ISSUES

- Land use and transportation demand are dynamic in nature. There are no static, unchanging relationships which endure over the years.

  Reliable data such as current population and employment by County, by City, by census tract and by "traffic zones" are not readily available. Information needs to be updated constantly, and the parameters between the variables must be reevaluated. Transportation improvement decisions based on five or ten year old data may not be valid.

- Where travel demand through a corridor exceeds the capacity of the street such as along North Avenue, travelers will bypass the congestion if alternate routes are available. Where routes are not available, as in the case of U.S. 50 via the Fifth Street Bridge, congestion will increase, unchecked, until some ultimate capacity is reached. A bridge or a rail crossing may do more to help or hinder the efficiency of the transportation system than any other single element.

THE STREET SYSTEM

The dominant mode of travel in Grand Junction is the automobile. The number of vehicle miles traveled (VMT) in the urbanized area was 1,115,968 miles per day in 1983. The efficient movement of these vehicles, and the people and goods which are the reason for the vehicles, depends on the street system. Efficiency could mean, in this case, decreasing the vehicle operating time. People would spend less time getting to their destination with less energy used and less pollution emitted by the vehicles.

In an efficient transportation system streets are designed to serve different functions. These different functions are grouped into classes known as the "functional classification" system and are based upon U.S. Department of Transportation standards. There are four generally accepted classes:

- Principal arterials
- Minor arterials
- Collectors
- Locals

PRINCIPAL ARTERIALS

This system should serve the major activity centers, the highest traffic volumes, and the longest trip desires. As this type of street is intended to service through travel, direct access to individual lots is generally discouraged. North Avenue, 12th Street, and I-70 B are examples of principal arterial streets.

A principal arterial should have the following characteristics:

- Posted speed limit of 35-45 mph.
- Four lane pavement width plus turn lanes.
- Traffic volumes in excess of 12,000 vehicles per day when area is fully developed.
- Limited access to adjacent parcels.
- Continuity of several miles.
- No "stubs" or arterial sections which do not tie into other arterials.
- Traffic signals are used to control right of way at major intersections.

MINOR ARTERIALS

The minor arterial system should augment the principal arterial system. Generally, a minor arterial is shorter in length than a principal and is intended to carry fewer trips. Between 7,000 and 12,000 vehicles a day may use a minor arterial in fully developed areas. Design speeds are somewhat lower than a principal arterial. First Street and 25 Road are examples of minor arterials.

COLLECTORS

Collectors act as feeders to the arterial system, "collecting" traffic entering or exiting the arterials. Collectors should be shorter in length than arterials and carry smaller volumes of traffic (under 7,000 vehicles per day at lower speeds). In more recently developed areas, from the 1950s onward, collectors were discontinuous by design and circulated only within one area. (See Figure 3-2)

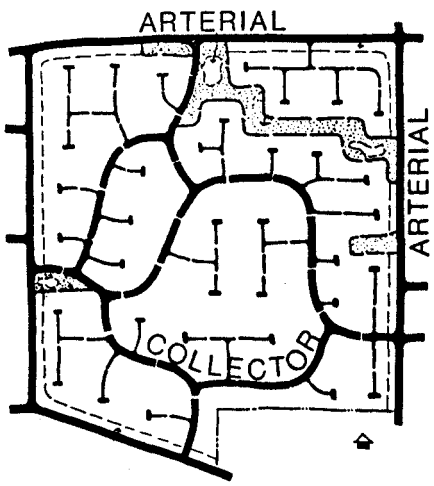


Figure 3-2

In older areas, collectors have been "broken up" by frequent stop signs or barricades to prevent heavy through traffic.

A properly designed collector should have the following characteristics:

- Posted speed limit of 30-35 mph.
- Traffic volumes between 2,500 and 7,000 vehicles per day.
- Not continuous for more than two miles.
- Limited access to individual residential parcels.
- Acts as a feeder between local streets and arterials.
- Greater emphasis on traffic control devices such as stop signs.

LOCALS

The local street system comprises all facilities not on the higher systems. It serves primarily to direct access to abutting land uses and higher classified streets. Through traffic is discouraged, usually by very limited continuity. The modern subdivision layout shown in Figure 3-3 illustrates how through traffic is minimized through the use of cul-de-sacs, courts, and other short streets.

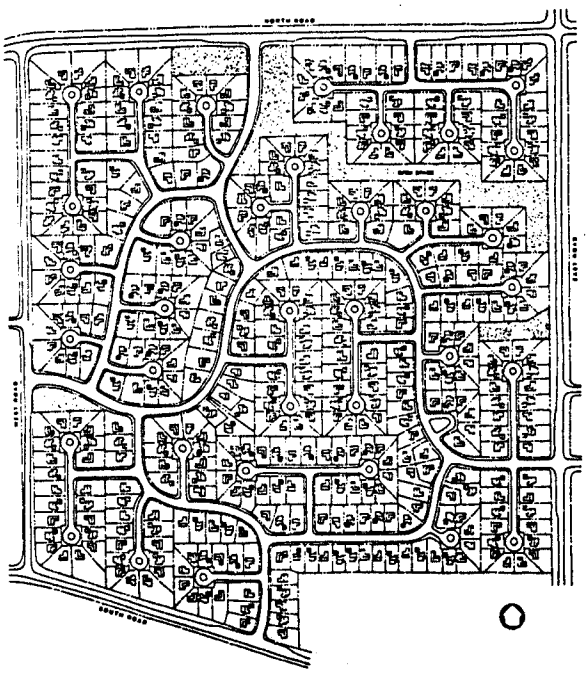
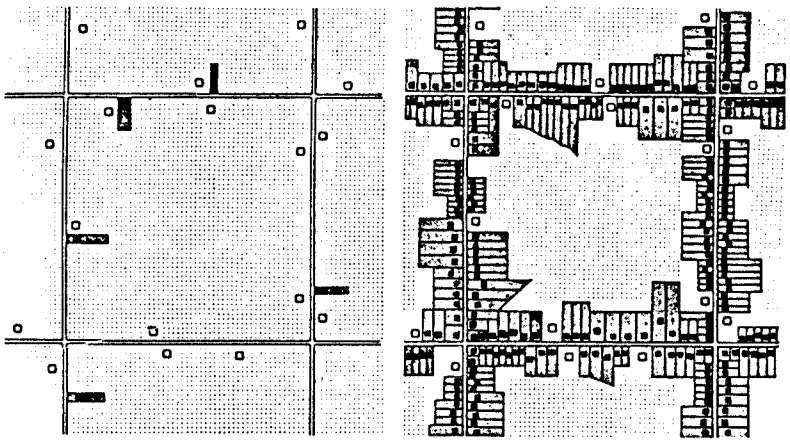


Figure 3-3

A common development pattern in the Grand Valley is shown in Figure 3-4. Agricultural land on the urban fringe is "split" along the major roads into residential parcels, each with its own driveway. These linear splits save the landowner/developer the cost of putting in street improvements. Short-run savings result in long-run costs as street capacity is reduced by numerous curb cuts. In addition, the interior land is more difficult to develop as the options for quality lot and circulation design are decreased.

Figure 3-4



Stages of small-scale development in a rural area: *left*, original condition, open land—scattered farms; farmers begin to sell individual house sites along the roads; *right*, final problem stage, road frontage completely built up, open land in the interior of little use, road capacity sharply reduced. Example from the Lansing Tri-county Regional Planning Commission.

Local streets should carry low volumes of traffic at low speeds and have the following characteristics:

- Posted speed limit between 20-30 mph.
- Traffic volumes of less than 2,500 vehicles per day.
- Limited continuity.
- Design for safe use by pedestrians and bicyclists.
- Easy, safe access to adjacent parcels.

The functional hierarchy is shown by Figure 3-5.

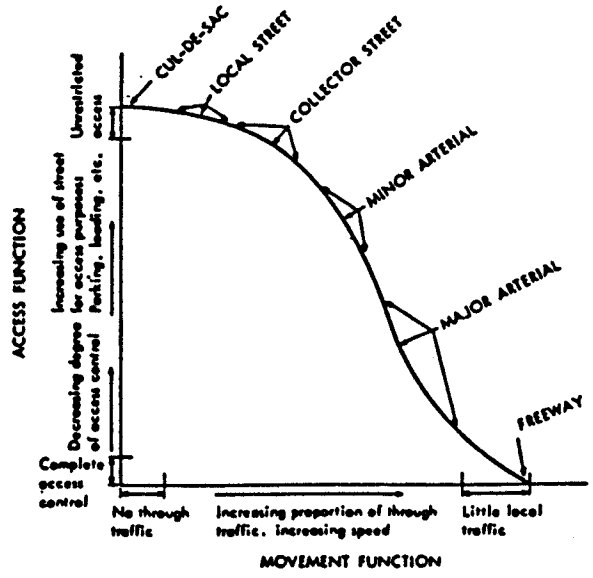


Figure 3-5

A freeway typifies a completely controlled access facility, while a cul-de-sac represents unrestricted access. Between these two extremes lie the collectors and arterials which carry the majority of vehicle miles traveled in Grand Junction.

EXISTING PLUS COMMITTED NETWORK

The existing plus committed street network consists of streets now "on-the-ground" at their present functional classification. For example, today North Avenue is a four lane major arterial carrying over 20,000 vehicles per day. 29 Road may be planned as such an arterial, but no money has been budgeted for the construction and its present status is a two lane street with collector traffic volumes. Map 3-6 illustrates the existing plus committed network.

The map highlights two patterns of street development:

- The first is the "grid" pattern of streets which is based on the survey lines delineating the townships and sections of the western United States. The pattern is rectangular and sets up the framework for section line roads such as 29 Road, which constitute a large portion of arterial streets in the area.

- The second pattern is the radial "spokes" of I-70 Business Loop, U.S. 50, and S.H. 340. These roads followed terrain and/or the railroad tracks into the center of Grand Junction. The downtown area served as the hub, not only of commerce, culture, and government, but also the traffic movement of the Grand Valley.

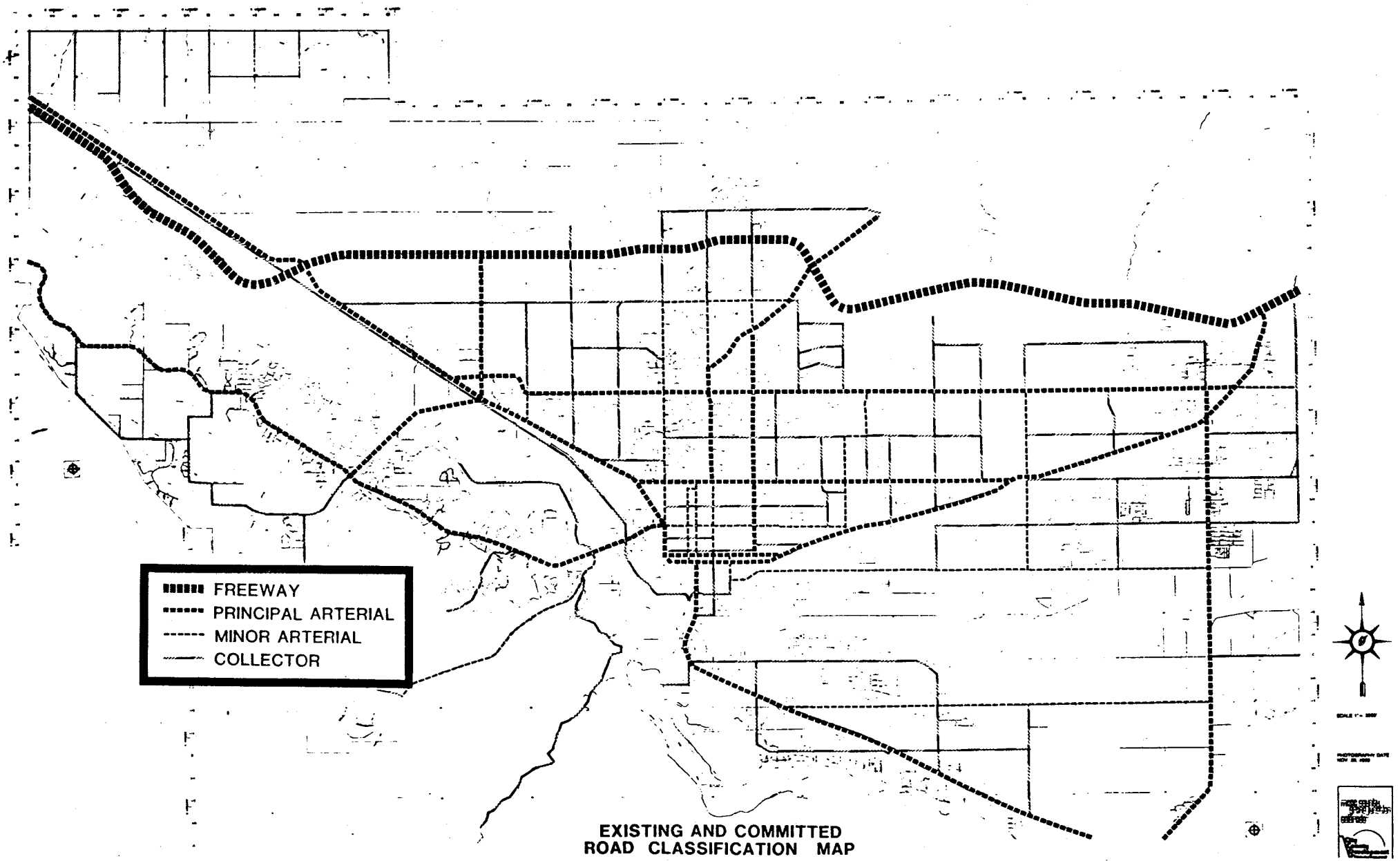
The existing plus committed network is the base by which the City must measure its future transportation needs. The mileages for this base network are described below:

- Principal Arterials, including State Highways (50 miles)
- Minor Arterials (24.5 miles)
- Collectors (66.5 miles)

These totals are for the IGA area, shown on Map 3-7.

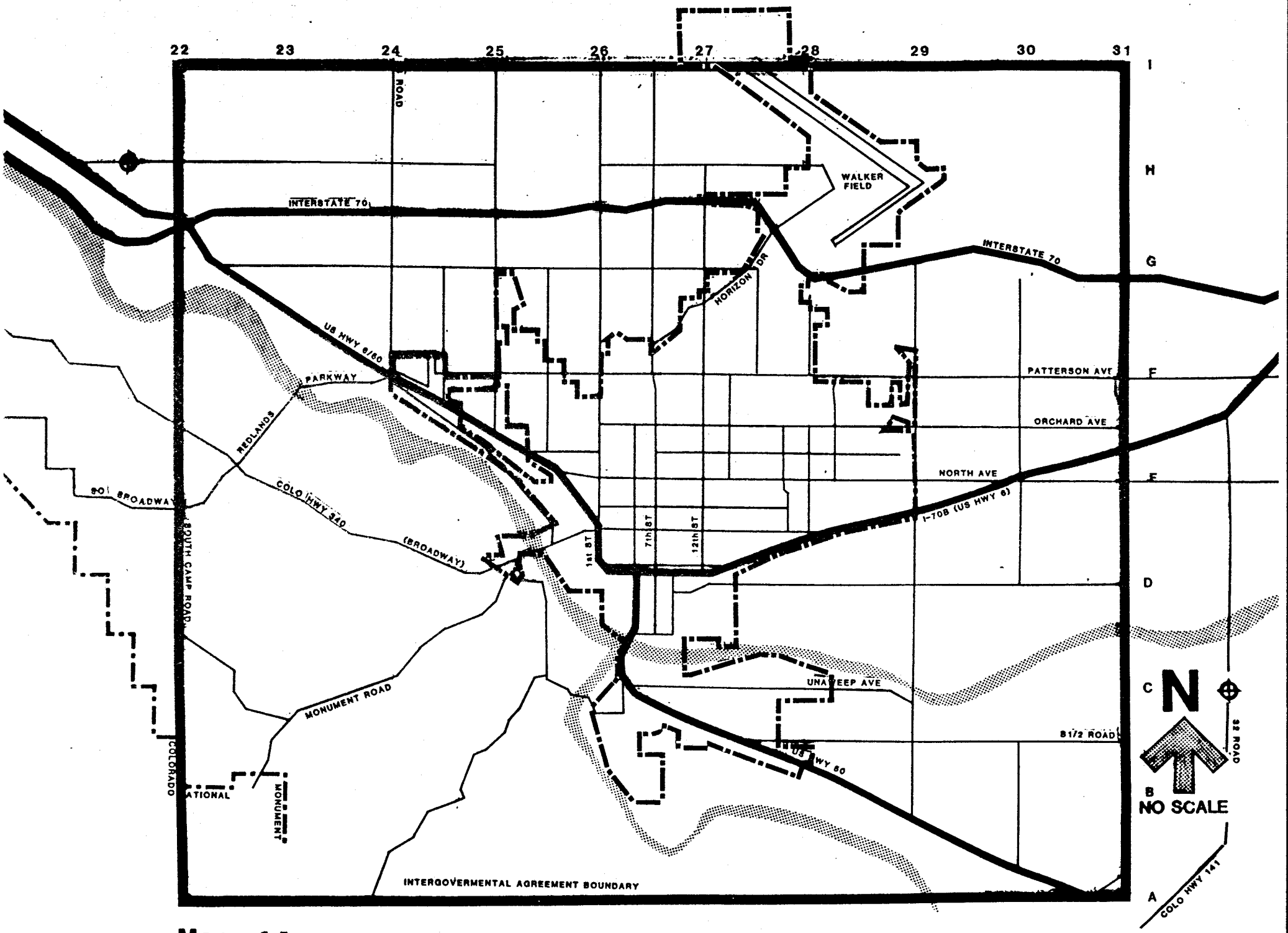
ARTERIALS

Only arterials will be discussed, as collectors and locals depend more on localized conditions than on regional development patterns.



EXISTING AND COMMITTED ROAD CLASSIFICATION MAP

Map 3-6


22
23
24
25
26
27
28
29
30
31
I
H
G
F
E
D
C
B
A
ROAD
INTERSTATE 70
WALKER FIELD
INTERSTATE 70
HORIZON DR
US HWY 6/50
PARKWAY
REDLANDS
PATTERSON AVE
ORCHARD AVE
NORTH AVE
I-70B (US HWY 6)
801 BROADWAY
COLO HWY 340
(BROADWAY)
SOUTH CAMP ROAD
1st ST
7th ST
12th ST
UNAWEEP AVE
MONUMENT ROAD
B1/2 ROAD
US HWY 50
COLORADO
ATIONAL
MONUMENT
32 ROAD
N
NO SCALE
COLO HWY 141
INTERGOVERMENTAL AGREEMENT BOUNDARY

Map 3-7

INTERSTATE 70

This is the only freeway arterial in the area. It is a four lane, fully controlled access facility which services east-west travel. There are interchanges at 22 Road (with U.S. 50), 24 Road, Horizon Drive, and in Clifton (servicing most of the eastern area). A freeway lane has an ultimate capacity of 2,000 vehicles per hour, although at this level, speeds would be very low. Based on a ten hour demand day, I-70 has a capacity to serve 80,000 vehicles per day. At 24 Road, 1983 counts showed 5,067 average weekday trips (AWT) and 8,716 AWT east of the Clifton interchange.

PATTERSON/F ROAD

This facility has recently been widened to four lanes with a continuous left turn lane from 7th Street east to I-70 B, and from 25.5 Road west to 25 Road. Plans to four-lane the remaining section are in the City's capital improvements program with the 25 to 24 Road and 1st to 7th Street sections scheduled for 1988. A count east of 27.5 Road in 1983 showed 11,835 trips per day on Patterson. Counts by Mesa County Engineering in early 1984 put the average weekday trips at over 16,000. Patterson services east-west travel, especially demand generated by Mesa Mall, Coronado Shopping Center area, Horizon Drive, and the extensive residential development which has occurred since 1975 in the northern and eastern section of the area.

NORTH AVENUE

This four lane street is a (State) Highway (U.S. 6) and the principal commercial strip in Grand Junction. North Avenue serves east-west through travel demand and local business traffic. Travel demand on the western part of North Avenue has not significantly increased since 1977. East of 12th Street the 1977 count was 23,600 vehicles per day and the 1983 count was 23,280. Towards the junction of North Avenue with I-70B, travel has increased from 14,200 vehicles per day to 20,450.

Right of way and access limitations hamper any major improvements to this facility. Although new development must meet the "State Highway Access Code" requirements and deed additional right of way toward principal arterial standards of 100', the built-up areas preclude significant widening within the near future.

I-70 BUSINESS LOOP

From its junction with the Ute-Pitkin one way pairs, I-70B is a controlled access arterial. Frontage roads have been used to limit access from new developments. An expressway can have a capacity similar to a freeway and I-70B could handle up to 80,000 vehicles per day, if most existing driveway and local street access points were closed. Additionally, adequate chan-

nelization would have to be provided for turning vehicles. Counts done on I-70B east of 30 Road showed 11,500 vehicles per day in 1977 and 18,400 in 1983.

UTE/PITKIN

This pair of one-way arterials channel the east-west traffic through the central area of the City. Where three lanes exist, the one way capacity of these streets would be 20,250 vehicles per day. The high count location for this corridor was on Ute east of Fifth Street with 11,500 vehicles per day in 1977 and 14,300 in 1983. Two lane capacity would be only 13,500--less if parking were allowed on the street.

U.S. 50 South

This facility is the major arterial serving travel demand from the south, including Orchard Mesa. U.S. 50 is two lane per direction through the Intergovernmental Agreement (IGA) area and, given proper channelization and access control, would have a daily capacity of 80,000 vehicles. Within much of the city limits, direct access from commercial properties decreases the capacity of the street. Traffic volumes on U.S. 50 south of Unaweep Avenue were 14,500 vehicles per day in 1977 and 18,100 in 1983.

Major elements in this corridor are the bridges spanning the Colorado River and the Denver and Rio Grande Western (D&RGW) railroad tracks. Traffic just north of the 5th Street viaduct has increased from 20,100 in 1977 to 24,000 in 1983. No other crossing of the Colorado River exists until the 32 Road (S.H. 146) Bridge is reached 5.5 miles east. The "Grand Valley Transportation Study: Phase 1 Report" (April, 1977) estimated the bridge to have a capacity of 15,700 vehicles per day at service level "C". This is the level at which traffic moves easily at design level speed limits.

S.H. 340

This highway, also known as Broadway, serves to connect the Redlands to the City. Until the completion of the Redlands Parkway from South Broadway to 24 Road in December, 1983, Broadway served as the only connection from the Redlands to Grand Junction. Of the 4.5 miles of S.H. 340 in the IGA area, only 1.8 miles are four laned. A study conducted by the Department of Highways to widen the 2.7 miles of two lane road has been terminated by the Department due to inadequate funding. S.H. 340 is no longer eligible for Federal Aid to Secondary Highways (FAS) funding as the Redlands area has been urbanized.

At principal arterial levels, S.H. 340 has a capacity of 13,500 vehicles per day in both directions in the two lane sections. Traffic counts taken on S.H. 340 east of the Redlands Parkway were 9,150 vehicle per day in 1977 and 10,500 in 1983. The 1983 count was taken prior to the opening of the Parkway.

U.S. 50 (INCLUDING 1ST STREET) # 6 # 50

This facility is similar in character to I-70 B. U.S. 50 is a four lane highway from the intersection of First Street and Ute/Pitkin past the U.S. 50/I-70 interchange. Access control through the use of frontage roads and channelization of intersections has occurred in more recent development. U.S. 50 serves east-west travel and is one of the primary routes (with Patterson and the Redlands Parkway) to the Mesa Mall area.

Ultimate capacity under total access control for this four lane expressway would be 80,000 vehicles per day. As in the case of I-70 B and U.S. 50 South, numerous access points and inadequate channelization decrease capacity drastically.

Counts taken west of the U.S. 50/North Avenue interchange showed 15,300 vehicles per day in 1977 and 24,500 in 1983. West of 24 Road the counts were 9,650 and 12,700, in 1977 and 1983, respectively.

24 ROAD

This two lane road is in a strategic position as the connecting link between the Redlands Parkway, U.S. 50, the Mesa Mall area, and I-70. The 24 Road interchange with I-70 is one of only four in the urbanized area. Traffic volumes are still low on this street. In 1977 there were 1,100 vehicles per day south of G Road. By 1983 that number had increased to only 2,050.

7TH STREET

This street serves north-south travel between Horizon Drive and Ute/Pitkin. The 1977 count showed a location north of North Avenue with 11,200 vehicles per day. By 1983 this had risen to 14,100. The 1983 counts showed that demand dropped to 3,700 vehicles per weekday north of Horizon Drive.

Seventh is currently four-laned from Ute/Pitkin to Horizon Drive. On-street parking is allowed between North Avenue and Orchard.

12TH STREET

Twelfth Street carries north-south travel and is a principal arterial between Horizon Drive and Ute/Pitkin. As on 7th Street, traffic is heaviest between Patterson and North Avenues. Peak demand is just north of Orchard Avenue with 16,600 trips per day

in 1983. This is up from 13,200 in 1977. North of Horizon Drive traffic dropped to 2,780 trips per day in 1983. This last point had only increased 300 trips per day since 1977.

12th is 4 lane south of Patterson.

On-street parking is allowed on 12th Street along the west side near Mesa College. Channelization is limited south of North Avenue.

1ST STREET

First Street is a north-south arterial serving the downtown area. Traffic in 1983 peaked south of North Avenue at 13,300 trips per day; an increase of 300 trips over 1977. Generally, travel is heaviest between Orchard and Grand Avenues. South of Grand, First Street becomes part of the I-70 Business Loop. North of F Road, traffic drops to 3,900 trips per day. First Street decreases to two lanes of traffic north of Orchard. Existing development hinders widening to four lanes. Channelization could assist better traffic flow.

4TH AND 5TH STREETS

These are paired one-way streets which are arterials for only one mile. Volumes in 1983 ranged from 2,400 to 6,800 trips per day. Traffic along this corridor has generally decreased from 1977 levels, possibly due to the decrease in retail activity downtown. As each street has two to three lanes of travel, no capacity problems exist at present.

GRAND AVENUE

Grand Avenue is currently a two mile long minor arterial. Traffic along Grand varies from 6,000 to 12,670 trips per day west of 12th Street. The major demand is between 1st and 12th Streets. Grand is a four lane street between 1st and 7th Streets and drops to two lanes without channelization east of 7th. On-street parking is also allowed on Grand Avenue east of 8th Street.

28/28.25 STREETS

These streets are handled as one due to improvements at 28th and Orchard. The streets service north-south traffic between Patterson and I-70B. Traffic on 28th ranges between 4,100 and 6,750 trips per day, with the peak travel between North and I-70B. Although no 1983 counts exist for 28.25 north of Orchard, traffic south of Orchard was 3,300 trips per day. Somewhat higher volumes would be expected north of Orchard. Both 28 and 28.25 streets are four laned and more than adequate capacity exists.

D ROAD

D Road services east-west travel for the area between I-70B and the Colorado River. It is the only access to industrial activity south of the Denver and Rio Grande Railroad and to the Colorado State Home and Training School. For 3.25 miles between 9th Street and 30 Road, no crossing of the railroad tracks exists. Traffic counts in 1983 ranged between 4,100 and 7,600 trips per day. The peak number of trips was located at the intersection of D Road and 9th Street. In 1977 traffic at this intersection was 4,850. A crossing of the tracks at 29 Road could decrease demand on D Road. A Colorado River bridge with no rail crossing on 29 Road would probably increase travel on D Road. D Road is a four lane to the City limits near 15th Street. From 15th to 32 Road, D Road is two lanes with generally a 22-foot wide pavement.

B.5 ROAD

B.5 Road services east-west travel in Orchard Mesa. Its length is 5.75 miles from U.S. 50 to 32 Road. Traffic ranges from 2,350 to 3,760 trips per day, with the peak at the intersection of B.5 and U.S. 50. The County has improved B.5 from 28.5 to 29 Roads, and design work has been done on the remainder of B.5. A 29 Road river crossing, especially if combined with a rail crossing, would probably increase travel on B.5.

FUTURE STREET NETWORK

FUNCTIONAL CLASSIFICATION

The future street classification is shown in Map 3-8. This network has been reviewed in coordination with the Mesa County Engineering Department and was approved as part of the design standards for the Mesa County Land Use Development Code . Rights of way from future developments will be determined from this map in accordance with the "Street Development Standards: Grand Junction, Colorado" (1988). This system is proposed as a base network and should not be interpreted as precluding the addition of collectors to the system as determined during the development approval process.

This future network includes the following mileages in the IGA area by functional classification:

	Future Network	Existing+ Committed Network	Change in Miles
Principal Arterial	57.9 Miles	50.0 Miles	7.9
Minor Arterial	33.8 Miles	24.5 Miles	9.3
Collector	78.5 Miles	66.5 Miles	12.0

The "Change in Miles" column indicates the amount of additional streets which would have to be constructed to attain the future network.

The phasing of construction depends primarily on the pace of regional growth and the location of new developments in the area.

The growth cycles of Grand Junction have been those of boom and slow growth. Obviously, the pace of growth affects the demand for additional streets and other transportation facilities. Less apparent is the effect of growth on the financial resources of the area. Rapid growth demands up-front improvements, but the fiscal base may not increase proportionally. The costs for improvements vary with the projects, but one national study ("Characteristics of Urban Transportation Systems, May, 1982) arrived at the following average costs for areas with populations of 50,000-100,000.

FACILITY COSTS OF LAND AND CONSTRUCTION
(COST IN THOUSANDS OF DOLLARS PER LANE MILE - 1981 DOLLARS)

	Location	Expressway/Freeway		Arterial	
		Land	Construction	Land	Construction
NEW ROAD*	CBD	940	2,710	890	860
	FRINGE	940	1,850	810	760
	RESIDENTIAL	840	1,610	470	680
RECONSTRUCTION**	CBD	940	2,930	300	860
	FRINGE	250	1,610	260	780
	RESIDENTIAL	420	1,330	190	740
MAJOR WIDENING**	CBD	740	2,810	450	860
	FRINGE	360	2,030	450	820
	RESIDENTIAL	100	1,610	260	820

* ASSUMES NO R.O.W. OWNED BEFOREHAND
** ASSUMES MOST R.O.W. OWNED BEFOREHAND

The study cautions that these numbers underestimate expected costs. Land values in boom areas inflate in value much faster than national averages.
The costs of asphalt, a petroleum based product, and concrete have increased dramatically over the past decade. These are shown in Figure 3-6.

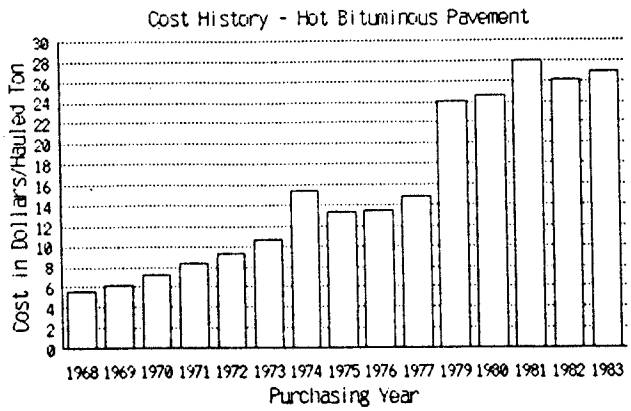


Figure 3-6 (A)

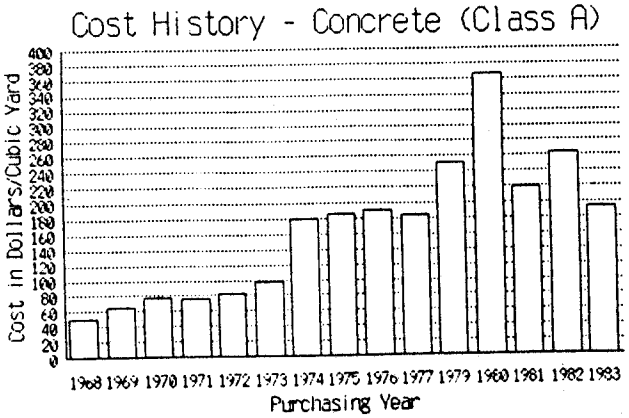
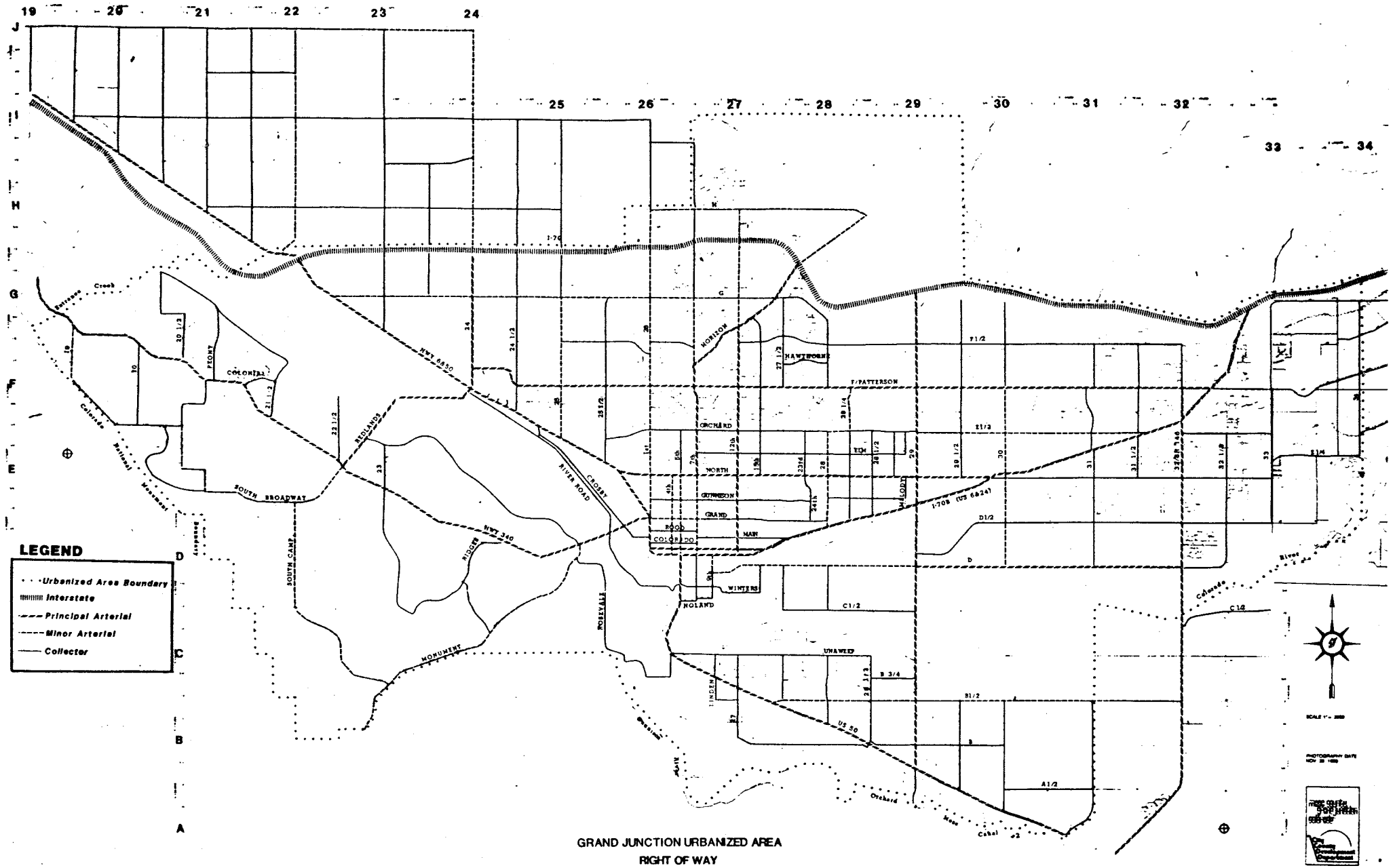


Figure 3-6 (B)



GRAND JUNCTION URBANIZED AREA

RIGHT OF WAY

FUNCTIONAL CLASSIFICATION

Map 3-8

An example of the scale of transportation investments on the local level is the projected cost, less R.O.W. acquisition, of the 29 Road Corridor from U.S. 50 to I-70. (Source: Armstrong Engineers & Associates. 1979)

PHASE	COST (1979 DOLLARS)
Near Term	
D&R.G.W. Overpass	$ 2,188,700
I-70 B Overpass	1,161,300
Road Costs	627,580
Near Term Total	$ 4,871,580
Long Term	
River Crossing	$ 3,832,200
Widening	1,894,130
I-70 Overpass	850,000
Incidental	250,000
Signalization	110,000
Other	1,475,000
Long Term Total	$ 8,411,330
29 Road Total	$14,757,910

ENVIRONMENT

One means of evaluating the transportation system is through its impact on the surroundings. Two of the more important criteria are noise and air pollution.

NOISE

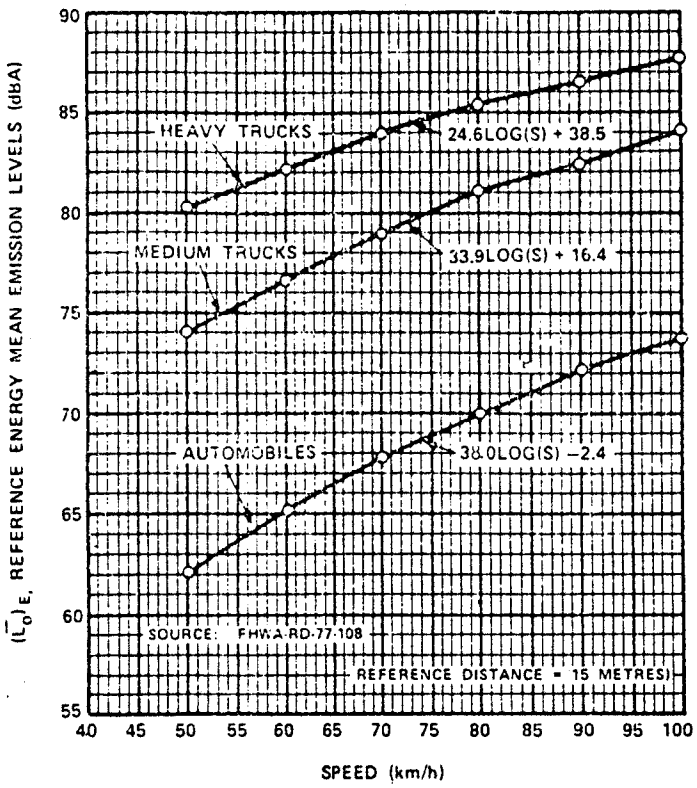
Traffic generates noise. This seemingly obvious conclusion is not particularly important unless development occurs so close to the streets and highways that physiological or psychological harm results. A national study by the U.S. Bureau of the Census in 1975 identified street noise as the most annoying problem in neighborhoods resulting from transportation.

The level of noise emitted from a street is a result of many factors including:

- Overall traffic volume
- Traffic speed
- Grades, or the steepness of the road
- Percentage of truck mix

Heavy trucks, those with three or more axles, can account for a major portion of street noise, especially on steep upgrades or downgrades.

Figure 3-7



LEGEND:

1. AUTOMOBILES: ALL VEHICLES WITH TWO AXLES AND FOUR WHEELS.
2. MEDIUM TRUCKS: ALL VEHICLES WITH TWO AXLES AND SIX WHEELS.
3. HEAVY TRUCKS: ALL VEHICLES WITH THREE OR MORE AXLES.

The Federal Highway Administration has grouped traffic noise control measures into three categories:

- Source emission control (reduce at the vehicle end)
- Project mitigation through street design
- Land use control

Source emission reduction is the most difficult to regulate locally. Federal regulations have mandated quieter vehicles, but on high speed streets, tire noise is the major contributor to noise levels. Local efforts may be limited to regulation of excessively noisy vehicles. This is the case in Grand Junction.

Project mitigation is most effective on new roads. Techniques include depressed roadways, major buffer strips of earth berms, or high fences which deflect the noise upward. Most of these measures are not only difficult and expensive to implement, but the measures lose efficiency on streets with many intersections. Intersections become "windows" for the noise.

Land use controls represent the best method of noise mitigation according to the Federal Highway Administration. These controls were grouped into two categories:

- Administrative techniques
- Physical methods

Administrative techniques include zoning, subdivision standards, building codes, health codes, special permits, and environmental impact statements. In addition, purchase of land and easements was recommended. Voluntary methods included education and advisory services which provide information to the public and developers on noise hazards and proper building techniques.

Physical methods to reduce noise included:

- Acoustical site planning to place open space or less noise sensitive uses between the noise source and the sensitive uses.

- Acoustical architectural design to provide the proper building height and room arrangement needed to lessen the impacts.

- Acoustical construction techniques which include insulation and noise deadening material.

- Noise barriers such as fences, landscaping and earth berms.

Proper use of these techniques require an understanding of the relationship between noise levels and land use. The Colorado Department of Highways and the Federal Highway Administration use the criteria in Table 3-2 for evaluating transportation noise impacts.

TABLE 3-2
DESIGN NOISE LEVEL/LAND USE RELATIONSHIPS
(Table from Highway Department Redlands Study)

These noise levels are based on a decibel (dB) scale which corresponds closely to the sensitivity of the human ear. This scale is logarithmic--two 70 dBA noise sources do not add up to 140 dBA but to 73dBA. Below are some dBA levels for comparison:

150	Jet takeoff at close range
120	Thunderclap
107	Power mower
94	Jackhammer
50-60	Normal conversation
50	Quiet street
40	Quiet room
0	Threshhold of audibility

TABLE II
Design Noise Level/Land Use Relationships

Land Use Category	Design Noise Level-L10	Description of Land Use Category
A	60 dBA (Exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	----	For requirements and undeveloped lands see paragraphs 11 a. and c. of FHPM 7-7-3.
E*	55 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

* See paragraphs 8 c., d., and e. of FHPM 7-7-3 for method of application.

L10 on the above criteria means that the sound level is exceeded ten percent of the time. For a residential area, then, the noise level of the exterior of the house should not exceed 55 dBA more than 10 percent of the time.

Air Quality

The only area of non-attainment for Grand Junction was particulates. Six control measures were approved for the Grand Valley by the Air Pollution Control Division and the Governor of Colorado. Four of these involved transportation:

- Paving and stabilizing of unpaved roads and alleys
- Improved street cleaning program
- Carpooling program
- Bikeway plan

The first is most critical in the control of particulates from transportation sources. In 1983, of 148.39 miles of open and used street miles in the City, 11.2 miles were not paved. In Mesa County 1,061.38 miles were unpaved out of 1,643.83 miles of open and used roads. The majority of unpaved roads are outside the IGA area.

STREET NETWORK ISSUES

- The past transportation plans for the area have been in the traditional style of "long-range" plans stressing capital improvement projects and prioritization. The analysis proceeded in the following fashion: estimate the current population and employment patterns, assess historic trends and develop a ten to twenty year projection of growth and sub area allocation, analyze current transportation problems and use the growth projections to hypothesize the future transportation problems. Finally, the plan would propose a ten- or twenty-year street improvement program.

  A rigid proposal of capital improvement needs does not reflect the dynamic relationship between land use and the transportation system. Furthermore, a plan philosophy such as "We forsee this level of growth and this transportation system. Build on this schedule!" is unresponsive to actual growth as compared to projected growth. What should Grand Junction do if the growth is half, or double, the projections? How does the City implement the plan, and what will it cost to build and maintain the system called for?

  The issue or problem statement should not be "What should the future street network be," but "How do we want the City to develop, and how can the transportation system support the needs of the City?" These questions involve the type of growth and land uses desired by the City, its residents and its leaders. How much of a part is played by automobile transportation is a major policy decision.

- Transportation and land use interact. Improvements in the transportation system may stimulate growth which, in turn, mandates additional transportation system improvements. The automobile which made low density development patterns more possible has made itself a necessity by those same sprawl developments.

- The environment of Grand Junction is affected in several ways by the automobile and the street network:

  Air pollution. While air pollution is currently a problem only in particulates, as traffic levels increase in the Grand Valley, levels of carbon monoxide and nitrogen oxide may increase significantly. These pollutants are related to overall vehicle miles traveled and to the total vehicle operating times. If VMT and congestion were to increase, pollutants emitted could increase disproportionally.

  Noise pollution. Noise is based on several factors in the transportation system: total vehicles, traffic speed, the mix of heavy trucks, the grades or slopes of the streets, and the distance from the lane of travel.

  Increased runoff. Runoff relates to the amount of impervious surface, such as asphalt paving, which prevents absorption of precipitation by the soil. Given that streets and parking lots occupy a large part of the urban area, it is obvious that this manmade feature can result in serious drainage and flooding problems. The runoff may also be affected by the salts and other pollutants resulting from the streets and automobile usage.

  Consumption of land for streets and parking. Again, the issue is the amount of land required for streets and parking.

- A decline in financial resources available for transportation facility construction has been compounded by a steady increase in construction costs and ROW costs. Sprawl development may cause disproportionate increases in travel demand, congestion of existing roads, and impacts on environmental quality. With relatively less public money for new construction, it will become increasingly important to avoid conflicts between traffic and land use.

- The downtown area, once the hub of a radial transportation system, has been surrounded by newer high capacity streets in a grid pattern. Patterson Road and I-70 will connect the new developments north of the central city with Clifton, Mesa Mall, the airport and Horizon Drive. Bypass facilities such as the Redlands Parkway and the future 29 Road arterial and river crossing will alleviate downtown congestion but could isolate the downtown unless provision is made to upgrade the downtown access and internal circu-

lation system. Traffic volumes increased more in the outlying areas of the City than in the downtown. Traffic on North Avenue has essentially stabilized.

- The street network is the responsibility of three principal governments: the City of Grand Junction, Mesa County, and the State of Colorado. Poor coordination in the planning, programming, construction and management of the streets under the control of each separate government could hamper the efficiency of the overall transportation system.

  The State Highway Department maintains jurisdiction over U.S. 50, the I-70 Business Loop, Interstate 70, North Avenue (U.S. 6), Broadway, and U.S. 6&50. With the exception of the Interstate, all of these rank among the highest traffic volume streets in the area.

  The City has improved Horizon Drive to four lanes between G Road and the Airport, reconstructed the 28 Street/Grand Avenue intersections with I-70B, constructed 28.25 Street between Orchard and Patterson, and four-laned Patterson Road from 28.25 Road to 7th Street as well as from 25 Road to 25.5 Road.

- Overbuilding streets can waste construction dollars and results in long term maintenance costs. The boom and bust cycle discussed in the Population and Demographics chapter illustrates the danger of committing funds to major construction based on arbitrary projections of demand. However, underdesigned streets may need to be rebuilt at greater costs than new construction. If both conditions are to be avoided, planning, design and capital improvement programming must be done on a basis of accurate travel forecasts coordinated with City and County land use policies.

- Street design practice over the past two decades has increasingly stressed the concept of a functional hierarchy of streets. Arterials are supposed to handle through trips with minimal local land access, collectors should "collect" traffic from arterials and distribute it to locals, and local streets should emphasize access to abutting land with little or no through traffic.

  Much of Grand Junction, however, was built out before such design principles were widely accepted. An arterial such as North Avenue is intersected all too frequently with local streets and driveways accessing individual lots. This not only causes increased congestion and accidents on North Avenue, but results in local streets being used as short cuts. Dangerous conditions result from mixing high speed through traffic with the pedestrian, bicycle and slow local traffic on the local streets.

- The streets and parking lots of Grand Junction are more than merely a means to move people. Streets permeate every area of the City, occupy more than 7 percent of the City's land area, and form the framework around which the City is built. The character of our streets defines more than any other single means, the character of the City. The principal routes into the City are I-70 Business Loop from Clifton, Horizon Drive, U.S. 6&50 from Fruita, and U.S. 50 through Orchard Mesa. With the exception of Horizon Drive, these routes developed in a strip pattern with each business treated separately in terms of access and appearance.

- Significant congestion in Grand Junction is limited to bottlenecks created by few grade-separated crossings of rivers, ~~and~~ railroad tracks and intersections.

  Given proper control of access and on-street parking, most existing streets have more than adequate capacity for existing demand and a moderate amount of growth.

- Broadway and Fifth Street Bridges, both under State Highway Department jurisdiction, are at capacity for level "C" or free-flow standards. The Redlands Parkway (is expected to) should relieve additional demand on the Broadway Bridge. The Fifth Street Bridges, crossing the Colorada River and the D&RGW tracks, are adequate for existing demand but will not be sufficient should Orchard Mesa continue to develop and external origin trips, those starting from outside the area, continue to increase. The next available crossing is 32 Road (S.H. 146) and is too far for most Orchard Mesa residents to use for travel to the City. External origin trips may elect to use 32 Road, particularly now that it is improved to four lane north of the Colorado River with an overpass across the D&RGW tracks.

- North Avenue has reached "C" level of capacity. As no ROW is available for major widening in the near future, improvements to capacity on North Avenue are limited to transportation system management measures.

- Broadway (S.H. 340) is also at level "C" in terms of capacity. The Highway Department had been studying alternative widening projects on Broadway since the early 1970s. This highway, which is considered a secondary, has been in the urbanized area since 1976 and is not eligible for Federal Aid to Secondary Highways. In the Fall of 1983, the Department of Highways dropped S.H. 340 from the active project development stage in view of the fact that no funding was forseen through 1988. Financing of this road will be a major task facing the area, although such financing might not be a direct responsibility of Grand Junction.

- Downtown Access. Although downtown Grand Junction is no longer the retail center for the Valley, future development as an office/employment center would require improvements to access streets. Traffic from the west is limited to Broadway and U.S. 6&50. Currently, both are carrying over 20,000 average weekday trips. Furthermore, these streets intersect at First and Grand, a congested five-legged intersection. In 1983 this intersection was the location of 34 accidents. This figure is up five from 1975. The primary entrance from the south is the Fifth Street Bridge which carried 21,000 average weekday trips in 1983. Ninth Street serves as the access for much of the industrial areas along D Road and is hampered as described below. I-70 Business Loop and the Ute/Pitkin one-way pairs are the principal access streets from the east and have excess capacity.

- Northern access is provided by First, Seventh and Twelfth Streets. First Street is restricted by the First and Grand intersection described above. Seventh lacks left turn bays between North and Grand Avenues, limiting the capacity of this section. Both Seventh and Twelfth have on-street parking north of North Avenue. This parking restricts free traffic flow, especially during peak demand hours.

- Ninth Street between Pitkin and D Road has become increasingly congested with the growth ~~out~~ in the Pear Park area. D Road is also an alternative route to 32 Road and the bridge connecting with Orchard Mesa. The at-grade crossing of the D&RGW tracks, combined with the short stacking distances between Pitkin, the tracks , and D Road have led to congestion in this area. The proposed construction of 29 Road would alleviate most, if not all, of this problem. That construction, however, could be many years in the future depending on the economic growth in the area. Capital improvements done by Mesa County within the last two years have been done with sales tax funds, either directly or through the general revenue bonds issued in conjunction with the sales tax.

RAIL FACILITIES

Rail facilities in the Grand Junction area belong to the Denver and Rio Grande Western Railroad. The main trackage extends in an east-west direction north of the Colorado River generally parallels ~~to~~ I-70B and U.S. 6&50. Another line extends south from the yard west of the Fifth Street Bridge along the Gunnison River to provide service to the Delta/Montrose area.

The yard facilities are split into two areas. The east yard is the major facility and extends from 12th Street east to 29 1/2 Road. The majority of freight switching is handled at this yard. The west yard extends from just south of the Broadway Bridge to a point west of the Fifth Street Bridge. Some switching occurs at this yard, most importantly the "piggyback" facility which handles containerized trailers. Piggybacks allow a shipper to take advantage of the energy efficiency of rail freight while retaining the flexibility of trucks. If such shipments increase, the piggyback facilities will be improved in the west yard.

Also in the west yard is the passenger station, located at the intersection of First Street and Pitkin, which services AMTRAK. In July, 1983 AMTRAK began servicing Grand Junction with one eastbound (Denver and points east) and one westbound (Salt Lake and the West Coast) trip per day. In the first three months of service, 5,854 persons boarded or got off the train in Grand Junction. This number placed the station 164th in number of boardings when compared to over 500 stations on the AMTRAK system. The final three months of 1983 saw 8,150 passengers board or detrain in Grand Junction.

Existing daily train movements are shown in Table 3-5. The number of movements shown is the number of trains entering and leaving Grand Junction from the indicated direction. (One-way) movements are the number of movements shown divided by two. The majority of rail movements are east-west.

round trip?

Table 3-5
RAIL TRAFFIC

Number of Daily Movements From or To

Type of Service	South		West		East	
	Existing	1990 Est.	Existing	1990 Est.	Existing	1990 Est.
Passenger	-	-	2	2	2	2
Freight	6	6	16	16	20	20
Coal	6	8	6	8	2	2
Total	12	14	24	26	24	24

Source: Denver and Rio Grande Western Railroad - June 1983.

The future rail traffic is difficult to estimate due to economic changes and the availability and cost of fuel. Increased activity in manufacturing, greater demands for coal and raw material, and an increase in the cost of diesel fuel could cause more rail traffic through the City. At present, the existing rail facilities are of sufficient capacity to accommodate current and projected traffic. No additional main trackage is forseen. No plans have been made for a rail bypass or for moving the yards from their present location.

Improvements are being made to the "hump" yard between 12th Street and 29 1/2 Road. The hump refers to the slight grade of the yard which allows cars to be rolled without an engine for switching purposes. Inert retarders were installed in 1983 to decrease the possibility of derailments. In addition, a "Y" will be constructed near the State Home for easier freight switching. This will slightly decrease mainline traffic between the west and east yards.

If container shipments increase, the piggyback facilities will be improved in the west yard. Finally, D&RGW will continue replacing old rails with welded rails.

RAIL ISSUES

Two major problems now exist concerning rail traffic and facilities. The first is the location of the yards, and the second is the barrier to north-south travel created by the main tracks.

- The yards create barrier and noise problems at their present location. Due to the extremely high cost, no plans have been made for relocation, and it is probable that other measures must be considered to deal with the problems of development around the yards and main tracks.

- The barrier problem is more severe to the east of Grand Junction as the main track angles northeast away from the river, bisecting the developable land in the Valley.

  Trains traveling through the area are restricted to a 25 miles per hour speed limit through the City of Grand Junction. Trains travel 50 miles per hour outside the City. Slower traveling speeds result in longer intersection blockage times while higher speeds, though they reduce blockage times, present safety problems. (Blockage times at any given intersection are shown in the Appendix for various traveling speeds.)

  Coal and freight trains traveling east of Grand Junction total 22 movements per day. At 25 m.p.h. in the City, trains will block any given intersection for at least a total of 28.6 minutes per day. Outside the City, trains will block any given intersection for at least 14.3 minutes

during the day. Although this appears an acceptable amount of time to delay vehicular traffic, severe congestion does result if train movements coincide with peak hour traffic. Not only will trains block traffic on streets crossing the tracks, but this traffic would block movement on intersecting streets. In addition, further development south of the tracks will mean increased vehicular traffic. Train speeds may need to be reduced for safety reasons, which would further increase blockage times.

The track crossings are currently grade-separated at four locations; 24 Road via the Redlands Parkway Bridge, Broadway Bridge, 32 Road Bridge, and the 5th Street viaduct. A fifth grade-separated crossing is planned at 29 Road. The cost of crossings is high, however.

AIR TRANSPORTATION

INTRODUCTION

The base for air transportation services in Grand Junction is provided by Walker Field, located about 4 miles northeast of downtown. Walker Field may be considered a regional airport since it is the only airport in Western Colorado capable of serving large jet aircraft. Its service area is approximately a one hundred mile radius around Grand Junction.

Montrose now can serve 727's

Flight operations at Walker Field have reflected the economic activity which has occurred in the region. The total number of operations increased from 61,868 in 1970 to 101,890 in 1980 but then dropped to 93,248 in 1982. The general aviation aircraft based at Walker Field increased from 71 in 1974 to 170 in 1982. This represents a growth that far exceeds that of the State or the United States overall.

In combination with highway and rail systems, Walker Field has helped establish Grand Junction's status as a regional transportation and service center.

EXISTING FACILITIES

The new airport terminal and runway 11/29 improvement, completed in 1983, have been major steps in providing adequate facilities at Walker Field. The main runway, 11/29, is 10,500 feet long, 150 ft. wide, and handles all of the large commercial jet operations occurring at the airport. The only other runway is 4/22, a crosswind runway, which is used only for small aircraft operations. It is 5,381 feet long and 150 feet wide.

The new terminal building should be adequate through the 1980s and has been designed to allow for future expansion. The old terminal building is proposed for removal. Other facilities at the airport are in good to excellent condition and are adequate for present needs.

AVIATION ACTIVITY

The growth of air transportation at Walker Field is expected to continue, although at a more moderate level than previously predicted in the 1981 update. The present projections are considered moderate to conservative and are lower than those shown in the preliminary update to the Colorado Airport System Plan. Table 3-7 documents total operations from 1970 to 1982 while Table 3-8 contains a summary of forecasts of aviation activity from 1983 to 2002.

TABLE 3-7

Total Number of Operations*

Year	Number
1970	61,868
1971	71,189
1972	60,677
1973	55,157
1974	61,229
1975	60,147
1976	73,050
1977	81,169
1978	81,441
1979	88,622
1980	101,890

Source: Walker Field

AVIATION DEMAND FORECASTS SUMMARY

WALKER FIELD

Activity	1982 (Actual)	1987	1992	1997	2002
AIR CARRIER ACTIVITY					
Departures	2,640	3,740	4,340	4,940	5,540
Enplaned Passengers	132,045	187,000	217,000	247,000	277,000
Air Cargo (tons)	321.5	541.4	761.4	981.3	1,201.2
BASED AIRCRAFT	170	210	260	310	360
AIRCRAFT OPERATIONS					
ITINERANT					
Air Carrier	5,280	7,480	8,680	9,880	11,080
Air Taxi	4,762	6,380	7,380	8,390	9,390
General Aviation	57,680	87,200	110,210	134,370	159,570
Military	345	462	516	570	624
LOCAL					
General Aviation	25,053	39,200	45,490	50,730	54,930
Military	164	115	129	142	156
TOTAL OPERATIONS	93,284	140,837	172,405	204,082	235,750
INSTRUMENT OPERATIONS	15,892	21,540	26,430	31,310	36,200

Table 3-8

The overall activity at Walker Field is expected to increase at 8% per year over the 20 year period of the Master Plan. The forecasts were based on the following assumptions:

- The population projections made for Grand Junction and Mesa County are a reasonable basis for predicting air transportation needs.

- The area economy, though having experienced a regression in growth, ~~would~~ will recover and ~~would~~ result in increased aviation demand.

- Current air carriers and air taxi operators ~~would~~ will remain at Walker Field and regularly scheduled air commuter service could possibly be implemented within the planning period.

- Aircraft ownership and operation ~~would~~ will not be constrained by the supply or cost of fuel.

- Reduced aviation activity trends in recent years are temporary.

- The improvements proposed in this Master Plan update ~~would~~ will be constructed commensurate with aviation demand.

Historically, general aviation has accounted for over three-quarters of the total operations at Walker Field. Generally, the greatest increase in based aircraft will be in jet, turboprop, and twin engine piston aircraft.

AIRPORT LAYOUT PLAN (ALP)

The ALP contained in the previous master plan has been proposed for revision in the preliminary Update Report. The primary changes in the ALP are:

- The proposed long-term extension of Runway 4/22 to the south has been reduced to 500 feet and the extension to the north has been increased to 1,500 feet to attain an ultimate length of 7,500 feet.

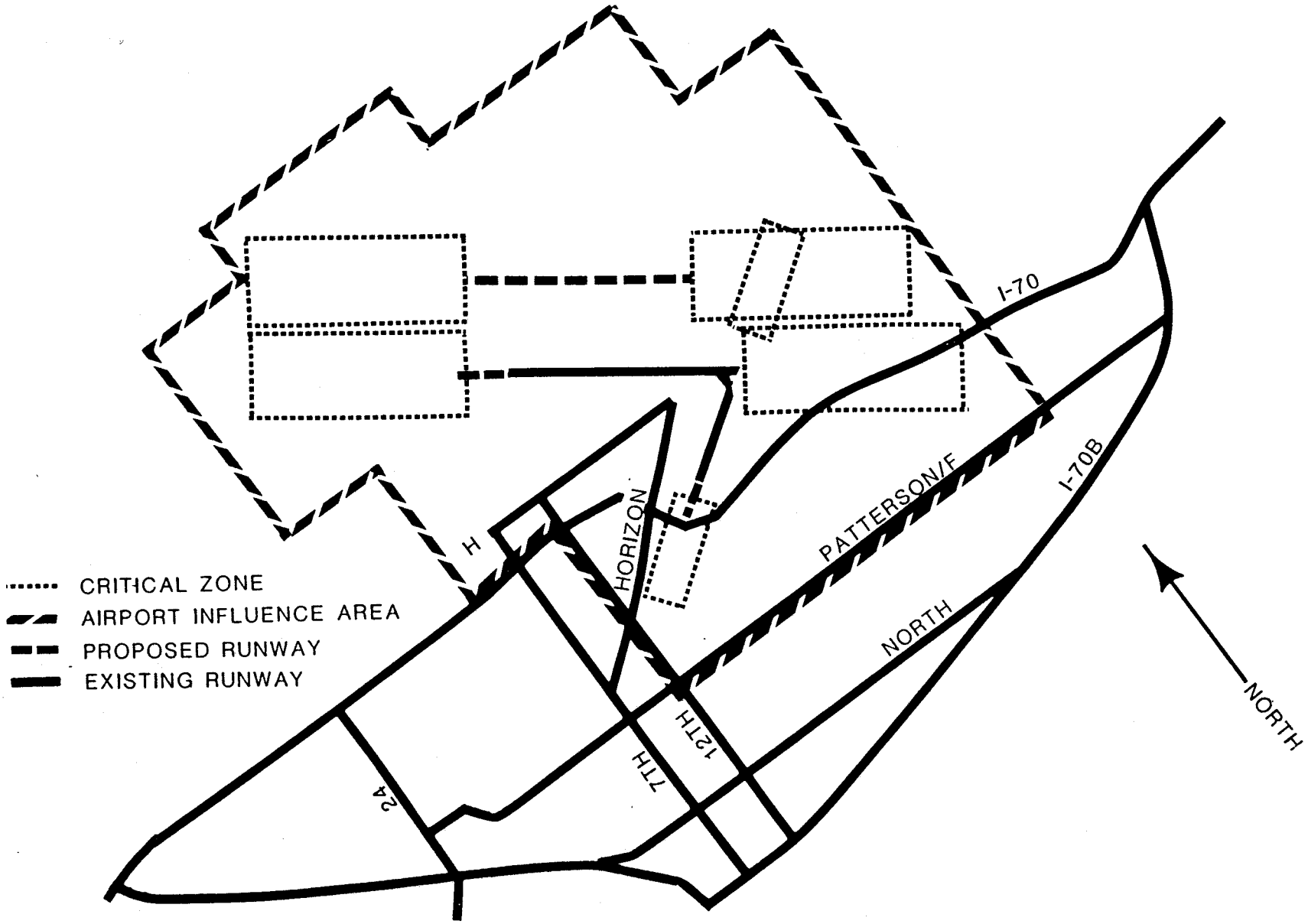
- The 1,800 (') extension to Runway 11/29 is now proposed to the west rather than the east.

- A parallel runway has been proposed for construction to the north of Runway 11/29 on land to be acquired from the Bureau of Land Management (BLM).

These changes should provide capacity through the life of the master plan and reduce the extent of overflights above residential areas to the southeast and south. Map 3-13 shows the proposed ALP.

AIRPORT LAYOUT PLAN

Map 3-13



LAND USE COMPATABILITY

Operations at airports often conflict with surrounding land uses. These conflicts include noise, pollution, encroachments in areas where flight operations are performed, and construction of obstructions to avigational safety. At Walker Field these conflicts were minimal for many years due to the airport's location away from major developed areas. However, increased growth during the 1970s and early 1980s has resulted in expanded development near the airport, and this trend can be expected to continue.

The City has enacted zoning controls governing development around the airport. Section 5-11 of the Grand Junction Zoning & Development Code establishes three primary airport zones. These zones are:

CLEAR ZONE: A triangular-shaped zone directly off the end of a runway primary surface, beginning 200 feet from the end of the pavement, which is clear of all aboveground obstruction or construction. The width is the same as the primary surface. The length is determined by the use of the runway.

CRITICAL ZONE: A rectangular-shaped zone directly off the end of a runway primary surface, beginning 200 feet from the end of the pavement, which is critical to aircraft operations (i.e. more apt to have accidents within it) because of the takeoff and landing mode of aircraft in that particular area.

AREA OF INFLUENCE: An area surrounding the airport which is impacted or influenced by proximity to the airport, either by aircraft overflight, noise, ~~and/or~~ vibrations or by vehicular traffic associated with the airport operations.

The code also lists specific uses which may be allowed within each of these zones.

CHAPTER FOUR

PARKS AND RECREATION

CHAPTER FOUR
PARKS AND RECREATION

Parks facilities and recreation programs within the City are provided and managed by the Grand Junction Parks and Recreation Deparment. As well as providing services to the approximately 28,500 citizens of Grand Junction, programs and facilities are also available to residents of surrounding Mesa County. Program fees are slightly higher to non-city residents. Annexation will have little effect on parks and recreation operations since these services are currently available and used by annexable populations.

A. Park Facilities (see Appendix II for full parks inventory)

The City of Grand Junction currently has 122.85 acres of developed park land (including two golf courses), one indoor and one outdoor swimming pool, the Lincoln Park Auditorium, and the Two Rivers Plaza Convention Center. The Lincoln Park Stocker Stadium features a lighted football field, all-weather track, and baseball field, plus full team, press box, and fan facilities. The Lincoln Park Golf Course is a 9-hole facility located within the city limits, while Tiara Rado is an 18-hole championship course located adjacent to the Colorado National Monument.

B. Recreation Programs

The Recreation Department sponsors many individual recreation programs such as volleyball, softball, tennis, fitness programs, learn to swim classes, tournament and open golf, gymnastics, arts and crafts, basketball, and wrestling. The softball program is the largest on the Western Slope with over 125 teams participating in 18 leagues. A total of 15 tournaments are hosted each season with over 375 teams involved.

Four School District 51 athletic varsity teams as well as the N.A.I.A. Mesa State College Mavericks utilize Stocker Stadium. This facility has also been host to the National Junior College World Series since 1959.

C. Colorado Riverfront Project

The Colorado Riverfront Project concept is a linear greenway along the Colorado River consisting of various activity nodes connected by the Colorado River Trail. The project will ultimately extend the entire length of the river in Mesa County with the primary focus on the urban areas. Concepts include maintaining or restoring native riparian habitat with special considerations given to environmentally sensitive areas. Activity nodes will include facilities for fishing, picnicking, interpretive trails, boating access, and potential state park facilities.

The Grand Junction/Mesa County Riverfront Commission has been appointed by resolution of the Grand Junction City Council and the Mesa County Board of Commissioners. Concept plans for portions of this project have been developed and are included in Appendix II.

D. Future Needs

The City of Grand Junction is not excessive in any park classification (see N.R.P.A. Classifications, fig. 4-1). Emphasis needs to be placed on adding larger parks (15-25+ acres) to the existing system. Several areas have been identified for potential future development. In addition to various properties associated with the Riverfront Project, there are: Berry Park (78 acres at 24 and H Roads), Burkey Park (10 acres at 30 and F Roads), and Burkey O.M. Park (10 acres at 28 1/2 and Hwy 50). The Burkey O.M. Park has been identified as the site of a botanical garden for which fundraising is currently underway.

Due in part to the community's emphasis on attracting retirees, the demand for additional senior facilities is increasing. Future parks and recreation planning must consider the needs generated by a larger senior citizen population.

FIG. 4-1

N.R.P.A. PARK CLASSIFICATIONS

Park Type	Desirable Size	Acres/1,000 pop.
Mini-Park 1/4 mile radius	1 acre or less	1/4 - 1/2 acre
Neighborhood 1/4 - 1/2 mi. radius serves neighborhood pop. up to 5,000	15+ acres	1 - 2 acres
Community Several neighborhoods 1 to 2 mile radius	25+ acres	5 - 8 acres
Regional/Metro Several communities up to 1 hr. driving time	200+ acres	5 - 10 acres

E. Park Service Areas

The purpose of identifying park service areas is to provide a cataloging system to identify revenue and expenses, park utilization, and facility demand. Each park service area is identified by name (see Appendix II). The service areas boundaries generally follow easily identifiable roads and highways, rivers, or political boundaries. Additionally, the boundaries follow census tract lines, thereby allowing use of data on numbers and ages of persons as tabulated during the census. Large areas are identified in the more densely populated areas of the County because a larger number of smaller areas will tend to skew demand statistics. Several smaller areas would have to be aggregated in order to demonstrate the need for certain facilities. Larger areas in more densely populated areas have the numbers of people to demonstrate demand.

The idea of park service areas provides a simple tool for keeping tract of park land dedication or park improvement fees. The base concept is that as growth occurs so does the need for parks and recreation facilities, and so does the revenue grow. Any revenue thus collected could be earmarked for parks to serve the residents within that particular park service area.

The park service areas identified in Appendix II represent those areas where densities actually exceed one dwelling unit per acre or are "between" concentrations of households exceeding one unit per acre. It is much easier to include those close-in, less densely populated areas now.

F. Functional Park Areas

Functional park areas identify the physical area ideally served by a park or recreation facility. The area reaches out from a park site a recommended maximum distance (mentioned earlier) which a resident should have to travel to a neighborhood or district park. Some regard is given to natural and manmade barriers which could affect visitation, such as rivers, major highways, and railroads. An area's population density (on the ground) and zoning (potential but not on the ground) were considered, but in a cursory manner. Appendix II shows an alternative for distribution for neighborhood parks and district parks based on the functional park area.

First, existing sites were identified and functional areas defined. Average population densities were used to figure radii of functional areas based upon size of the park in acres and the ratio of 2.5 acres per 1,000 population. Park deficient areas were defined. Park sites were identified in those deficient areas; hence, the parks plan.

Optimum implementation of this plan would result in a park site near the center of each of the functional park areas identified in Appendix II. Obviously, a site within an area, but near the present edge, will require the area to be shifted with the new site as the center.

G. Definition of Terms

Regional Parks - The setting of Mesa County makes it a recreational wonderland supporting a diversity of natural areas. These areas put recreation within the grasp of most area residents. The Colorado and Gunnison Rivers offer areas for fishing, picnicking, hiking and sightseeing within a few minutes' time. The Colorado National Monument offers spectacular scenery and camping and picnic areas. It is also within easy reach of area residents. The Grand Mesa National Forest offers over 200 lakes for fishing, boating and camping. Fine ski slopes under the rim of the Grand Mesa make this another nearby recreational haven. Parks serve two functions--recreation and aesthetics. These regional areas serve both functions.

Working Definition - A large area of 400 acres or more in size, serving all the residents of a metropolitan area and located within 30 to 60 minutes driving time of the population served. Following is a list of regional recreational areas available to area residents:

Colorado National Monument
Grand Mesa National Forest
Uncompaghre National Forest
Colorado River
Gunnison River
Powderhorn Ski Area
Vega Reservoir
Highline Lake State Recreation Area

District Parks - Aside from an abundance of regional parks and recreation areas, a need has been established for parks on a local basis which will serve populated areas containing more than one dwelling unit per acre; these are district parks. District parks contain special use facilities such as sports centers, golf courses, and swimming pools. They are designed to serve the entire community and are planned for all age groups. A good example of this type of park is Lincoln Park in Grand Junction.

Working Definition - This area is of sufficient size to contain play fields and special use facilities not found in the smaller neighborhood parks. It will provide, as needed, for softball, baseball, football, swimming,

archery, tennis, large group picnic areas, and recreation center buildings. Depending upon needs of size and population group, the area will be 20 to 100 acres. A ratio of 2.5 acres per 1,000 people is optimum.

Neighborhood Parks - A neighborhood park or play area is differentiated from a district park, as it should be designed close enough to the people for ready use. School play areas serve to supplement neighborhood parks in that they perform a similar function. A ratio of 2.5 acres per 1,000 people is optimum.

Working Definition - An area varying in size ~~from 5~~ to 30 acres, which provides for family and small group activities with play apparatus, shelter, ~~restrooms~~, paved area, picnic facilities, lawn games and landscaping.

Vest Pocket Park and Playlots - These small open or play areas serve as areas of relief to nearby residents and travelers. Sub-neighborhoods are served by these parks. No acreage standards are applicable.

Special Use Areas and Facilities - No acreage standards are applicable to these areas which include parkways, plazas, downtown malls, bikeways and mini-parks. The amount and intensity of use may vary. The proposed Riverfront Project/ Colorado River Trail is a good example of a special use area designed to serve multiple functions.

CHAPTER FIVE

LAND USE

CHAPTER 5
LAND USE

Planning and development in the Grand Valley has been typical of rural areas in the west which have experienced sudden large scale growth. Development of any kind and in any location was viewed as being good for the area with little or no consideration for the future public costs of uncontrolled development.

Although municipalities are typically the most efficient unit of government for the provision of urban services, the majority of the recent urban growth has taken place in unincorporated areas. As a result of this sprawl development pattern, municipalities have essentially been pre-empted as efficient service providers while the County, special service entities, and the community at large are facing a rapidly increasing economic burden.

Uncontrolled and scattered growth in the unincorporated areas surrounding Grand Junction has also impacted City services and facilities while providing only minimal funding to mitigate these impacts. It is critical to the future well being of the City that it play a stronger role in development activity occurring in the surrounding area.

Efforts to annex business, commercial, industrial, and high quality residential developments must be increased. Annexation is the key to continued growth of the City, but not all annexations are economically beneficial. The past practice of annexing any and all available areas must be revised with an awareness of cost effectiveness.

Infill development is also important in establishing efficiency in service delivery. Efforts to encourage infill development in the City have, in the past, been hampered by the subsidization of sprawl development in scattered rural areas. Recognition of the negative effects of this pattern may assist future infill potential within the present urban area.

Future Trends

The near future outlook for growth in the Grand Valley appears to be at low to moderate levels ranging from 1 to 3% annually. This is a very managable growth level that should allow the area to recover from the effects of the latest oil shale boom-bust cycle and allow time for proper planning to avoid similar occurrences in the future.

A Future Land Use Plan, though flexible to meet changing needs, must also be specific enough to accomplish the desired results of a balanced and cost effective development pattern.

The following are summaries of projected future land use for the area. The more specific land use plan for the defined annexable area is shown in Appendix I. In developing this plan the City has accepted the following adopted Mesa County land use plans:

- Northwest Vicinity Plan
- Northeast Vicinity Plan
- Pear Park/Chatfield Vicinity Plan
- Redlands Land Use Plan

Some minor generalizations and adjustments have been made to these plans to allow for consistent ranges of density and use. In areas not covered by the above plans, the land use shown has been developed by generalizations of existing zoning. It is the intent of this plan that future updates will refine and more thoroughly study the future land use of these areas.

1. Infill Development

The first priority for a new development should be in undeveloped or underdeveloped areas within the city limits. This should not, however, preclude new annexation. Areas within the city limits generally have the full range of urban services and facilities available. Infill development would allow more efficient use of these services on a cost-benefit basis while also adding to the overall tax base.

The infill development must, however, respect the uses and integrity of existing neighborhoods and the desire to attract infill uses should not overrule the basic concepts of planning and land use relationships. The Future Land Use Plan for the existing city limits should basically be an expansion and enhancement of most of the present major use areas. The following specific items are of concern:

A. The revitalization of the downtown area and the North Avenue area. This can be accomplished only with public/private cooperation and a carefully planned and coordinated long term improvement program.

B. Renovation and upgrading of the industrial area adjacent to the Fifth Street Bridge is badly needed and long overdue. This area should be redeveloped into a quality industrial park and riverfront activity area. All services and facilities are in place but underutilized by present uses.

2. Northwest Area

The northwest area is expected to be the primary new growth area for the next 10 to 20 years. The area has good accessibility, is close to presently developed areas, and has large parcels of land available for development. Mesa Mall and adjacent uses already provide the area with a commercial focus, while surrounding zoning is available for high density development in a planned context.

Annexation in the northwest area is proceeding slowly but steadily. However, the great majority of this annexation is happening after projects have been designed and approved by Mesa County. This is a concern since projects may not meet City standards when annexed.

The City must continue to push for high quality development in the northwest area and actively pursue annexation prior to development design and approval.

3. Redlands Area

With the opening of the Redlands Parkway and the upgrading of sewer and water facilities, development in the Redlands can be expected to continue at a slow but steady pace. Pressures for business development will increase with the population base, but average residential densities will likely continue in the low to medium range (4-8 units/acre).

Annexation in the Redlands area should be reviewed very carefully on a cost/benefit basis. Many of the services and facilities in this area are substandard and will require upgrading in the future. Costs of this upgrading should be considered with any annexation proposal.

4. Northeast Area

The northeast area received the majority of the growth in the Grand Junction area during the oil shale boom (~~and bust~~). Development is typical of the sprawl pattern in the valley with most of the development being single family detached housing at less than 4 units/acre.

The infrastructure, while not completely to City standards, is better than in some other areas and is relatively new. Annexation should be vigorously pursued since the area is mostly urban in character, and provision of services and facilities should be relatively cost effective.

The north area is essentially surrounded on three sides by the City. Squaring the corporate limits in this area would avoid City servies having to cross an unincorporated enclave.

Other Land Concerns

- Despite the example of the 1983 and 1984 flooding, development in the floodplain of the Colorado River is still continuing.

  A stronger stance needs to be taken on developing in the floodplain to avoid future costs of flood control and recovery projects. Once development occurs, the property owners will expect the City or the County to protect them in high water situations.

  The loss of a portion of Matthews subdivision in 1983 indicates that compliance with current floodplain regulations is not necessarily a protection.

- The type and numbers of industry which is attracted to a certain area depends on what the area has to offer economically, socially, and environmentally. In order for Grand Junction to be able to compete in the industry "market," it has to offer good urban services, reasonable utility rates, social and recreational benefits, and project an image that it "has its act together."

  Most urban services are good and City utility rates are reasonable when compared to other cities. However, the location of large new industries is most likely to be in the Ute Water District where rates do not favorably compare with other suppliers. Recreational opportunities abound in surrounding areas but are somewhat lacking within the immediate urbanizing area. The Colorado River Park concept could be an improvement in this area.

  New industries should be ones which can coexist with the conditions in our area. They should be non water-intensive, non-polluting, and not subject to the radical boom/bust cycles normally encountered with energy related industries.

APPENDIX II

AREAS UNDER JURISDICTION OF GRAND JUNCTION PARKS AND RECREATION DEPARTMENT

DEVELOPED PARKS

Name	Address	Acreage	Facilities
Lincoln Park	No.Avenue-Gunnison-No.12th	42.6	Playground Equipment Restrooms Swimming Pools Concession Tennis Courts Multipurpose Building Picnic Tables Parks and Rec Office Stadium-Baseball, Track Football Parks Maintenance Shops Horseshoe PIts
Sherwood Park	E-W Sherwood Drive	18.0	Playground Equipment Sheltered Picnic Tables Restrooms Exercise Course
Pomona Park	500 Block 25½ Road	16.97	Playground Area Restrooms Park/School Complex Softball Fields, lighted
Columbine Park	Orchard & 28¼ Road	11.95	Softball Fields, Lighted Playground Equipment Picnic Tables Restrooms
Duck Pond	Unaweep & Hwy 50 (OM)	4.21	Open Space Restrooms Picnic Tables
Hawthorne Park	5th & Gunnison Avenue	3.52	Wheelchair Exercise Court Shuffleboard Court Restrooms Picnic Tables, Shelter Playground Equipment
Spring Valley I	1920 Patterson Road	3.08	Open Space
Emerson Park	9th & Ute Avenue	3.08	Open Space Playground Equipment Restrooms Picnic Tables

Name	Address	Acreage	Facilities
Foresight Village	2556 Dewey Place	3.0	Open Space Two Youth Soccer Fields
Spring Valley II	Beechwood-Barberry	2.72	Open Space Playground Area Basketball Goals Asphalt Pad
Whitman	5th & Pitkin	2.7	Open Space Picnic Tables Restrooms
Melrose	26th & Orchard	2.63	Open Space Volleyball Poles Playground Equipment Restrooms Shelter Picnic Tables
Dixson	287 27 Road	2.0	Open Space Adult Soccer Field Two Backstops
St. Mary's	6th & Bookcliff	1.9	Play Area Picnic Tables Open Space
Lilac	1st & North Avenue	1.7	Open Space
Riverside	West & W. Colo. Avenue	1.5	Open Space Playground Equipment Picnic Tables Restrooms
Cottonwood Meadows	2858 Texas Avenue	.95	Open Space Two Basketball Goals Asphalt Pad Picnic Table
Hillcrest Manor	Hillcrest Manor	.34	Open Space Basketball Goal Volleyball Poles

ISLANDS AND BOULEVARDS

Name	Address	Acreage	Facilities
North Ave Islands	North Avenue	1.5	
Colo.West Park	1st & Grand Avenue	1.0	
So. 5th Street (River Bridge)		1.0	
Desert Vista	14th & Hwy 6 East	.42	
Gunnison Ave Islands	Gunnison Avenue	.3	
7th Street Islands	7th Street	.3	
5th & Ute Avenue Island			

PUBLIC BUILDINGS, SHOPPING AREAS AND PARKING LOTS

Name	Address	Acreage	Facilities
Main Street Shopping Park & Arcades	Downtown - 3rd to 7th	2.6	
City Hall	5th & Rood Avenue	1.2	
Older American Ctr	550 Ouray Avenue	.28	
Two Rivers Plaza	2nd & Main Street	.25	
400 Block Colorado Ave Parking Lot			
600 Block Rood Ave Parking Lot			

AREAS UNDER JURISDICTION OF GRAND JUNCTION PARKS AND RECREATION DEPARTMENT

OTHER PARK PROPERTIES

DEVELOPED

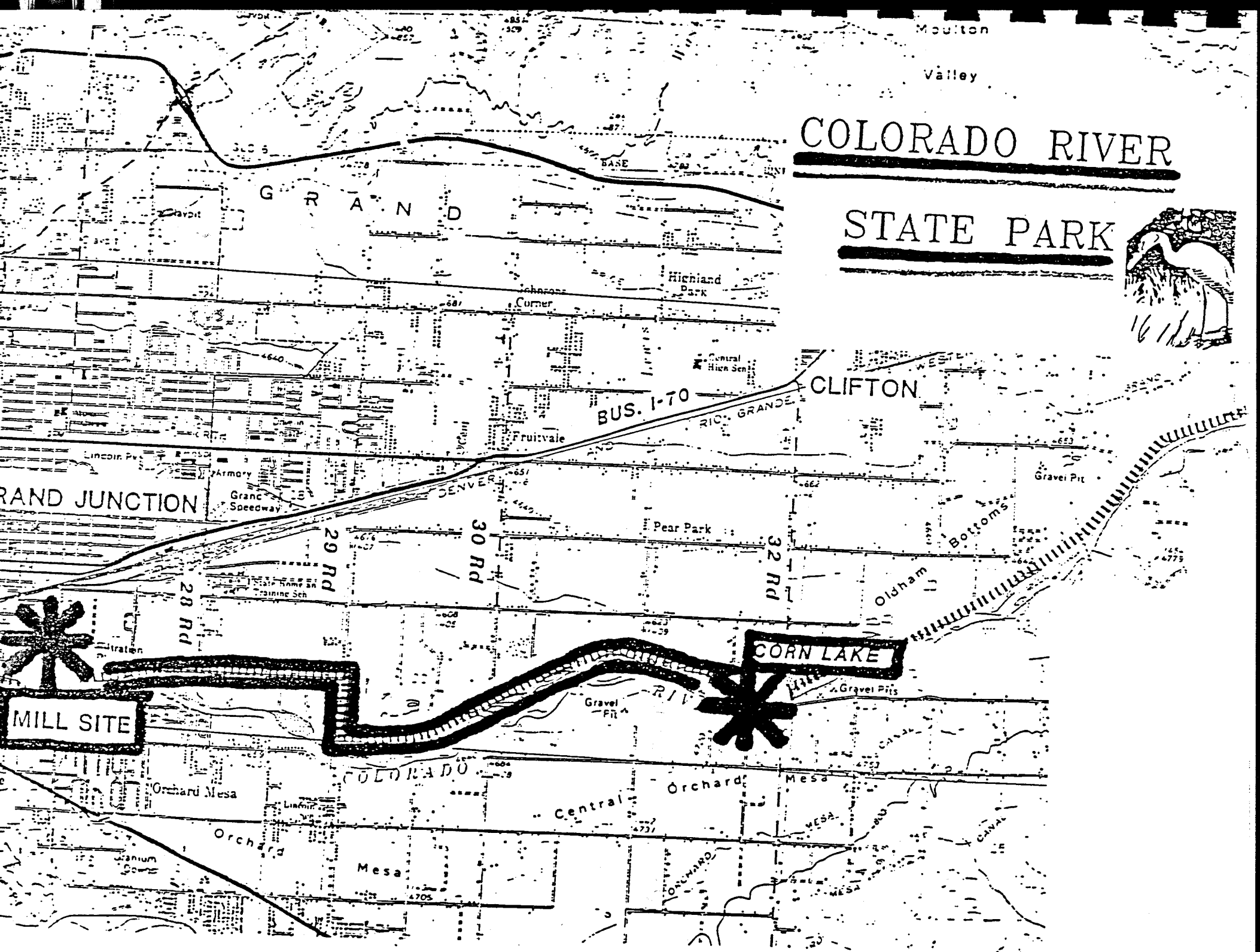
Name	Address	Acreage	Facilities
Tiara Rado Golf Course	2063 South Broadway *	96.0	18 hole golf course
Lincoln Park Golf Course		60.0	9 hole golf course
Municipal Cemeteries-OM	26¼ Rd, Orchard Mesa	75.0	
Veterans Crown Point Cemetery	23½ & I¼ Road *		(undeveloped, yet active)

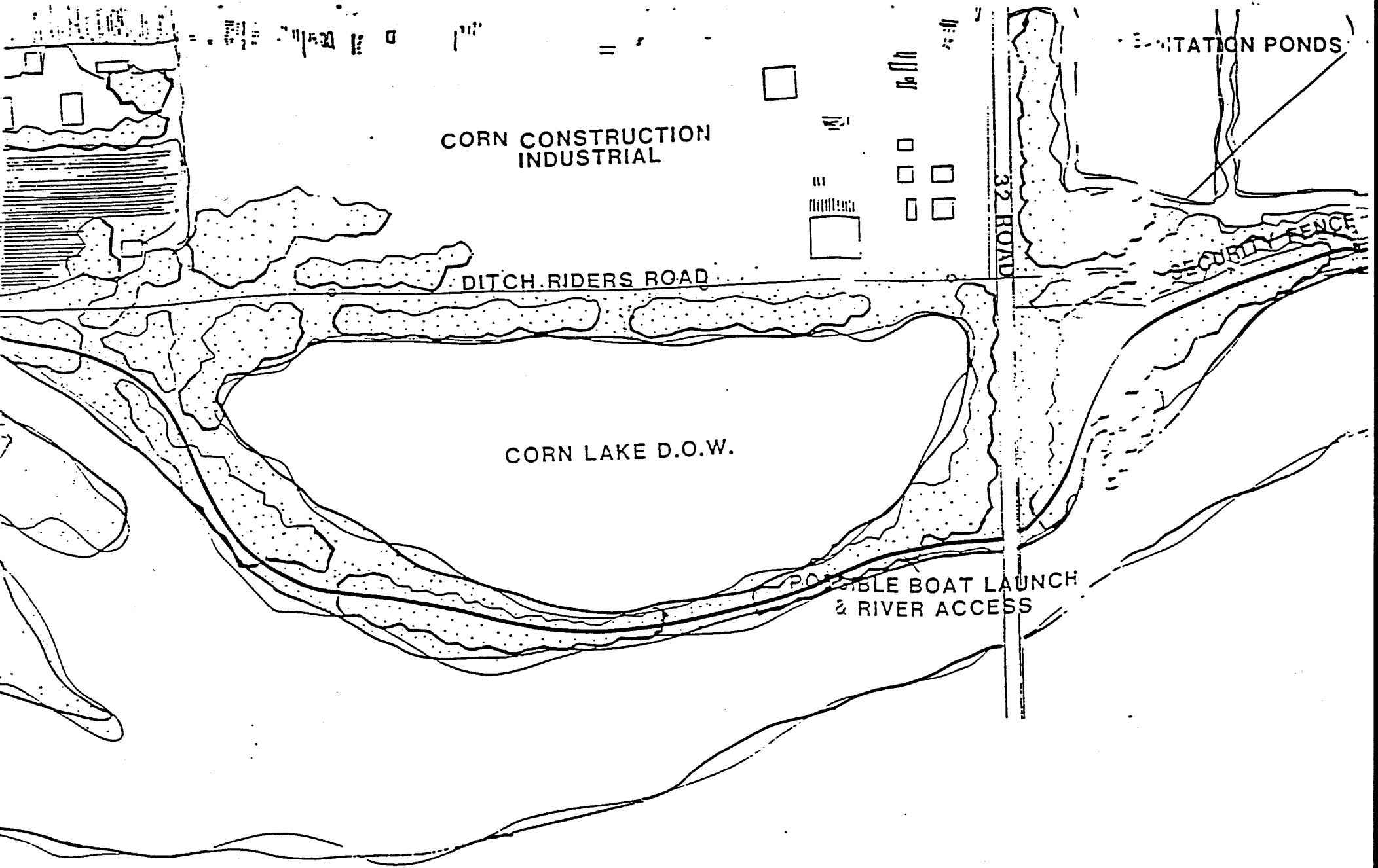
UNDEVELOPED

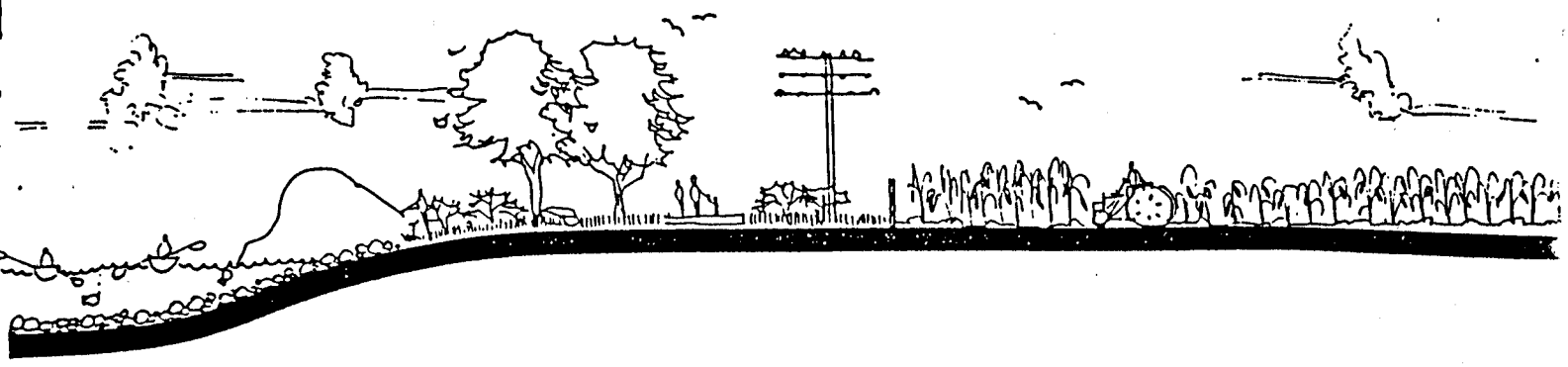
Cemetery Land	Orchard Mesa	75.0	

* Areas outside of the city limits as of June 1, 1988

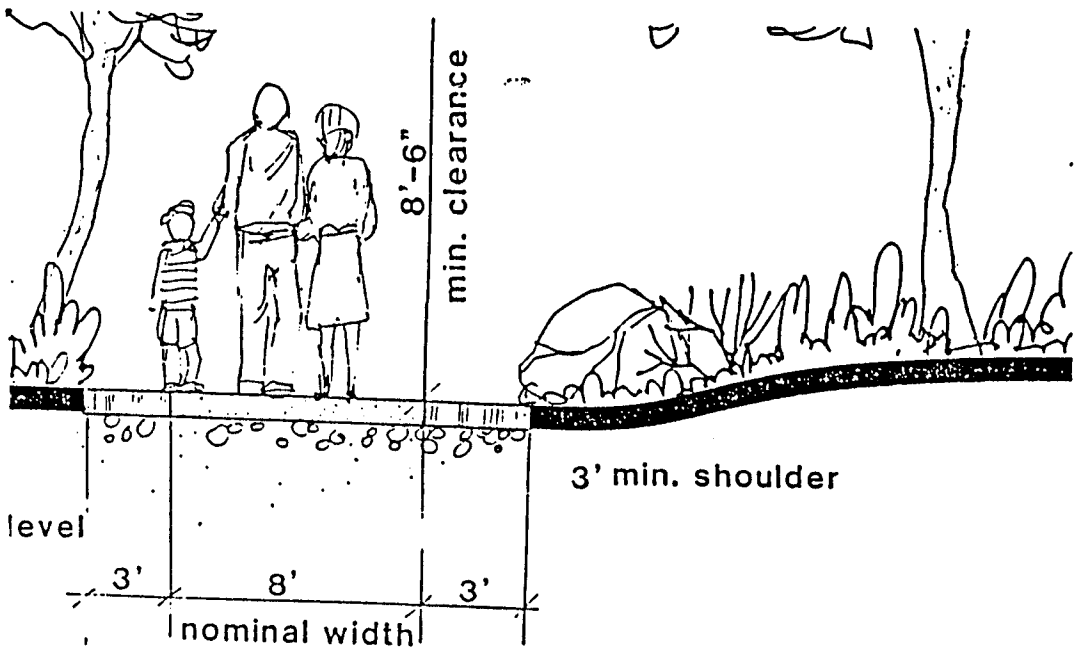
3/18/86


COLORADO RIVER
STATE PARK
MILL SITE
CORN LAKE
CLIFTON
BUS. I-70
GRAND JUNCTION
GRAND
Fruitvale
Pear Park
Orchard Mesa
Central Orchard Mesa
Highland Park
Johnson Corner
Gravel Pit
Gravel Pits
Oldham Bottoms
Granc Speedway
Armory
28 Rd
29 Rd
30 Rd
32 Rd
COLORADO
RIO GRANDE
DENVER
WESTERN
CANAL
MESA
ORCHARD
Moulton
Valley


CORN CONSTRUCTION
INDUSTRIAL
DITCH RIDERS ROAD
32 ROAD
CURLY FENCE
CORN LAKE D.O.W.
& RIVER ACCESS
COLORADO RIVER
STATE PARK



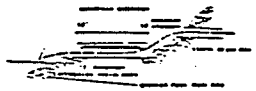
Colorado River pathway transmission line security fence agriculture



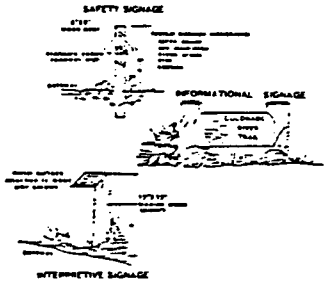
COLORADO RIVER

STATE PARK

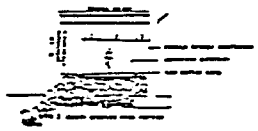
D PATH UNDERDRAIN



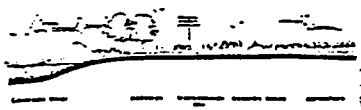
E SIGNAGE SYSTEM



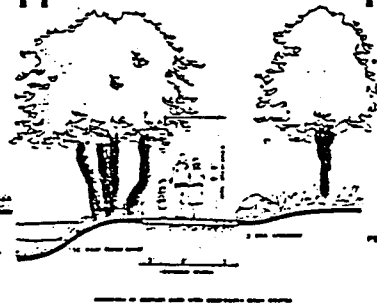
F BRIDGE UNDERPASS



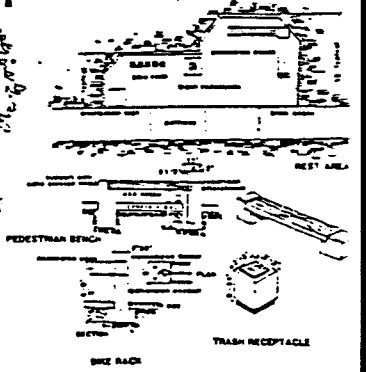
G SECTION A-A'

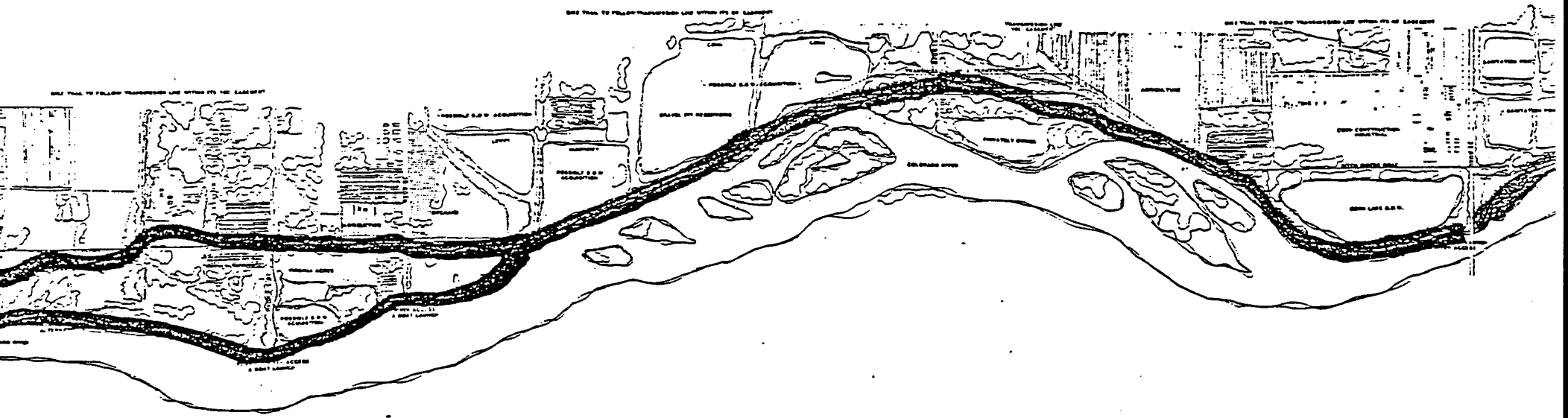


H TRAIL SECTION



I REST AREA, FURNITURE





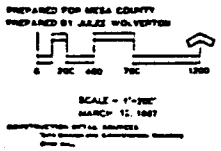
COLORADO RIVER

STATE PARK

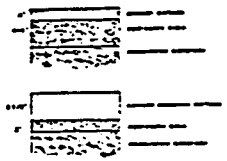
colorado river trail

CONCEPT PLAN

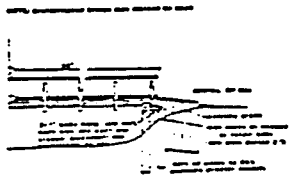
GRAND JUNCTION TO CLIFTON



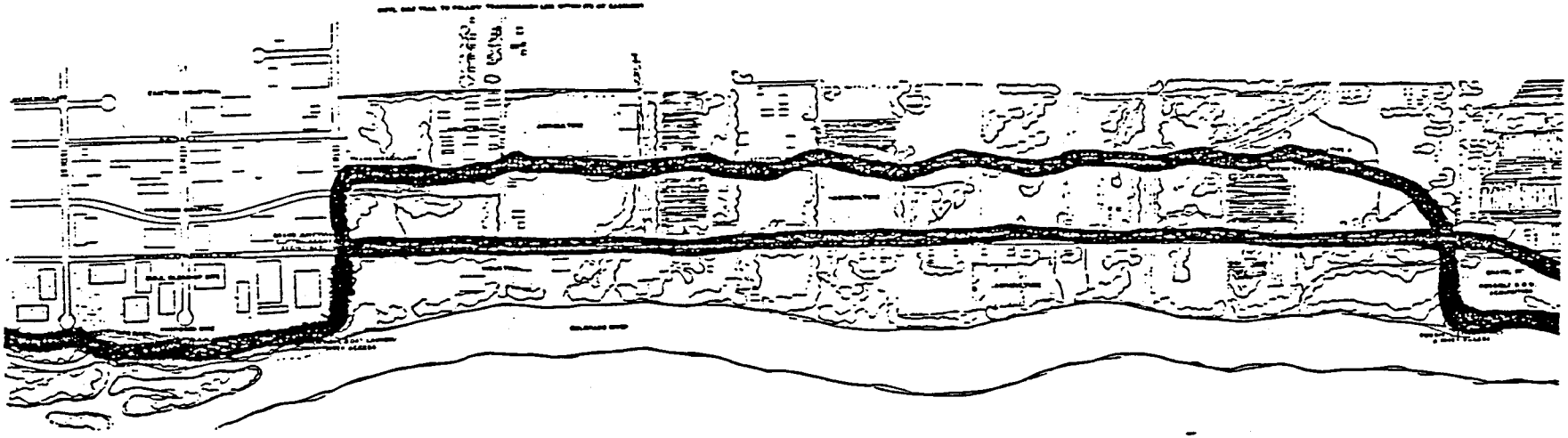
A PATH CONSTRUCTION



B BRIDGE DETAIL

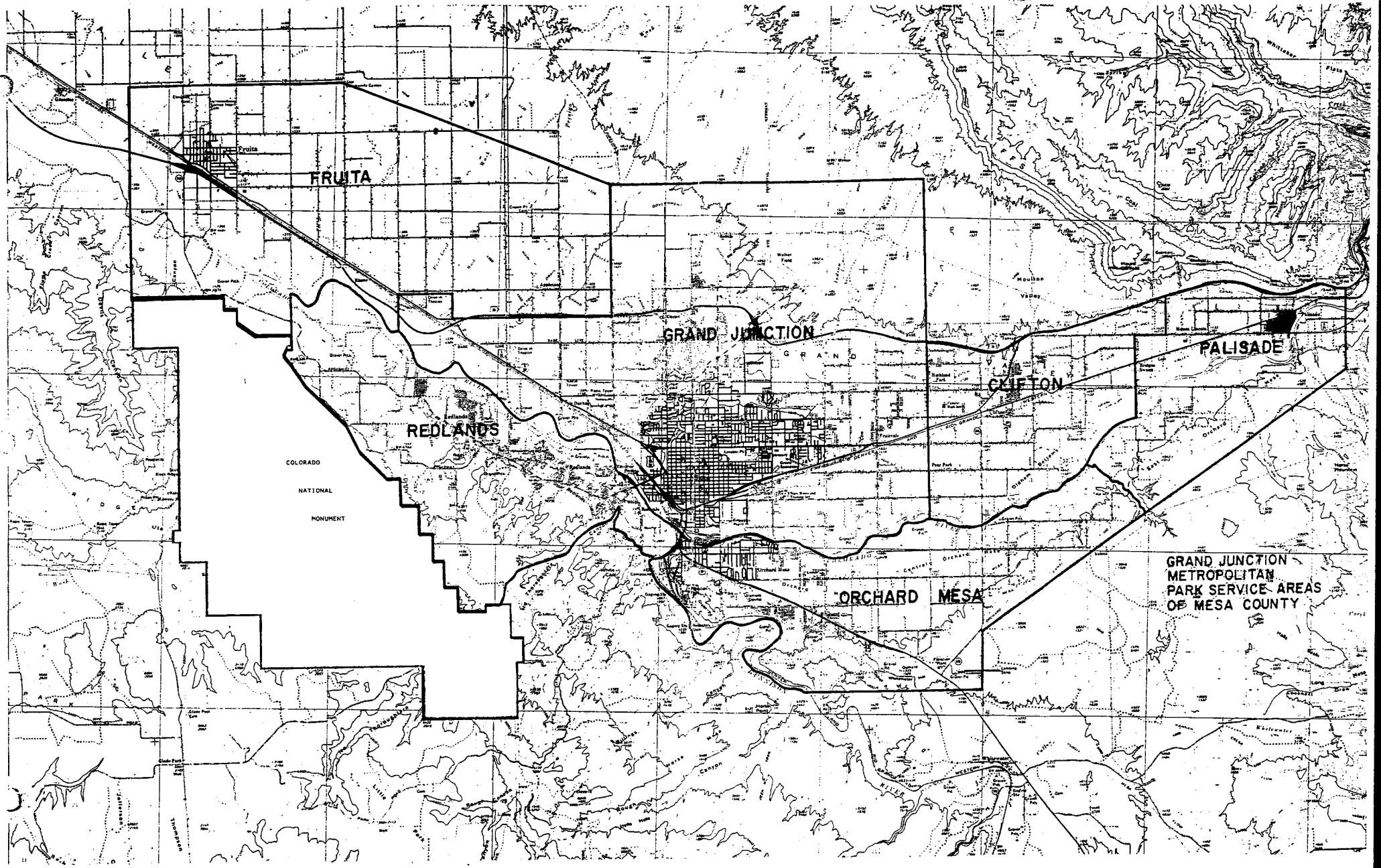


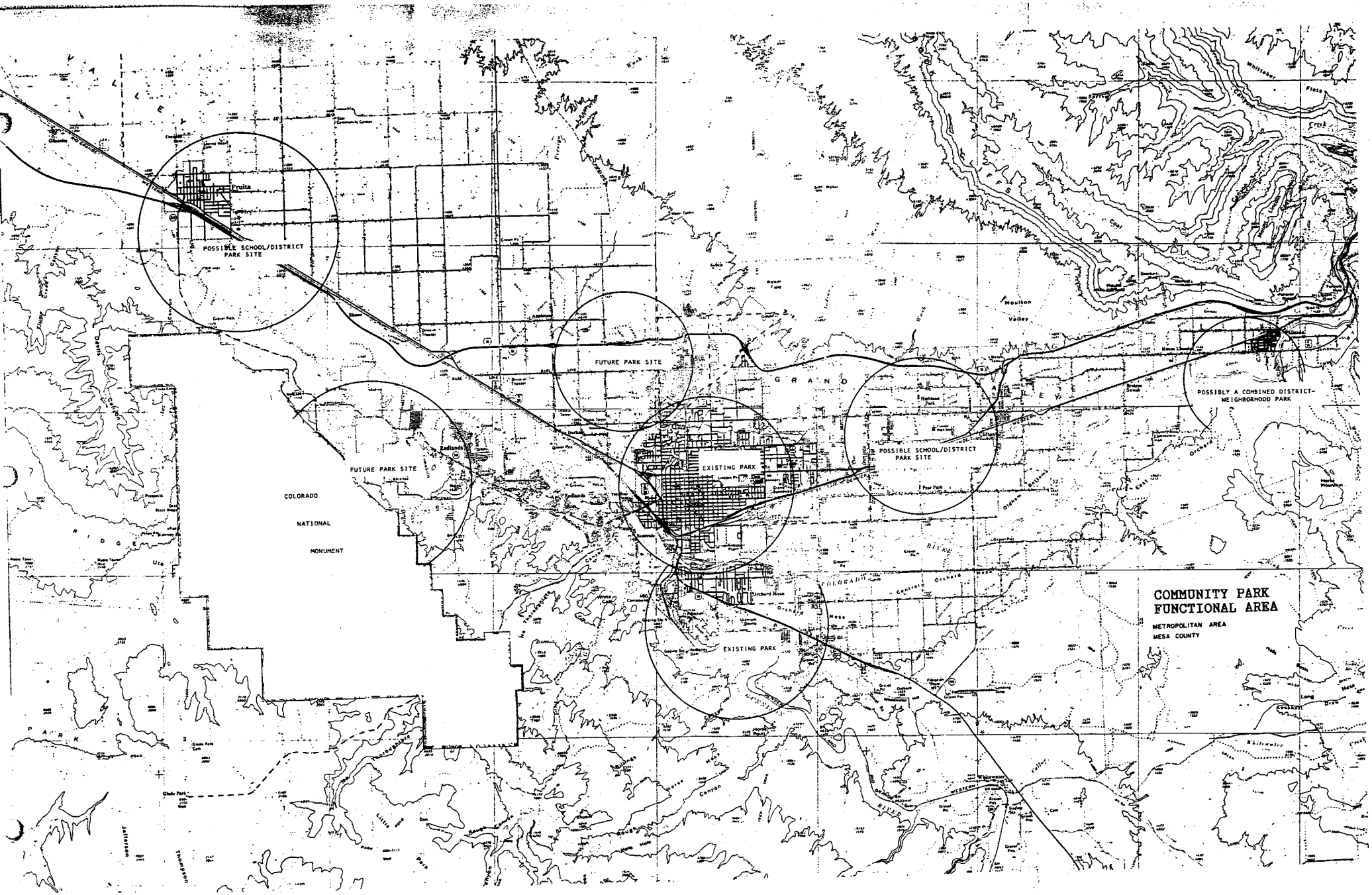
C SECURITY FENCE

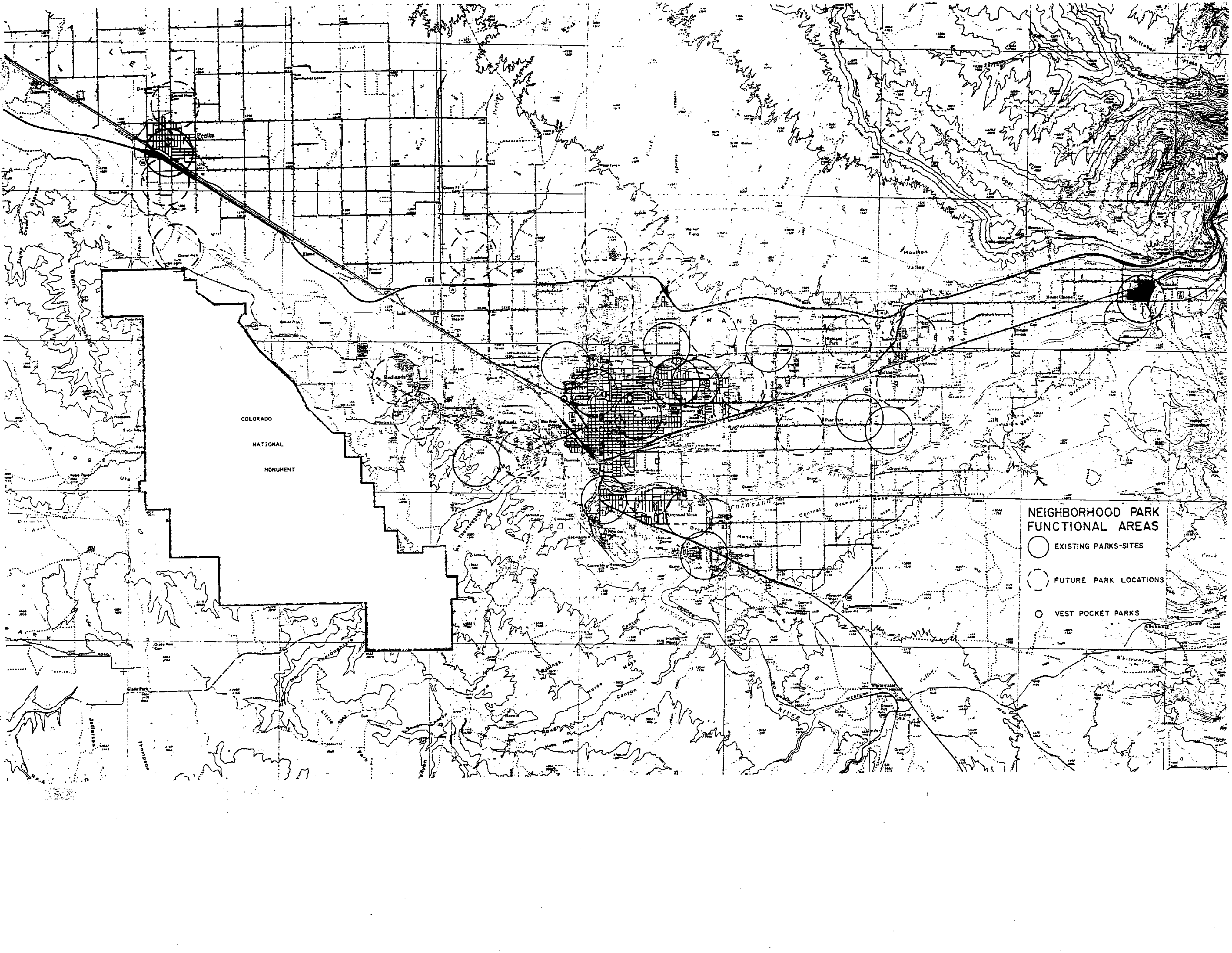


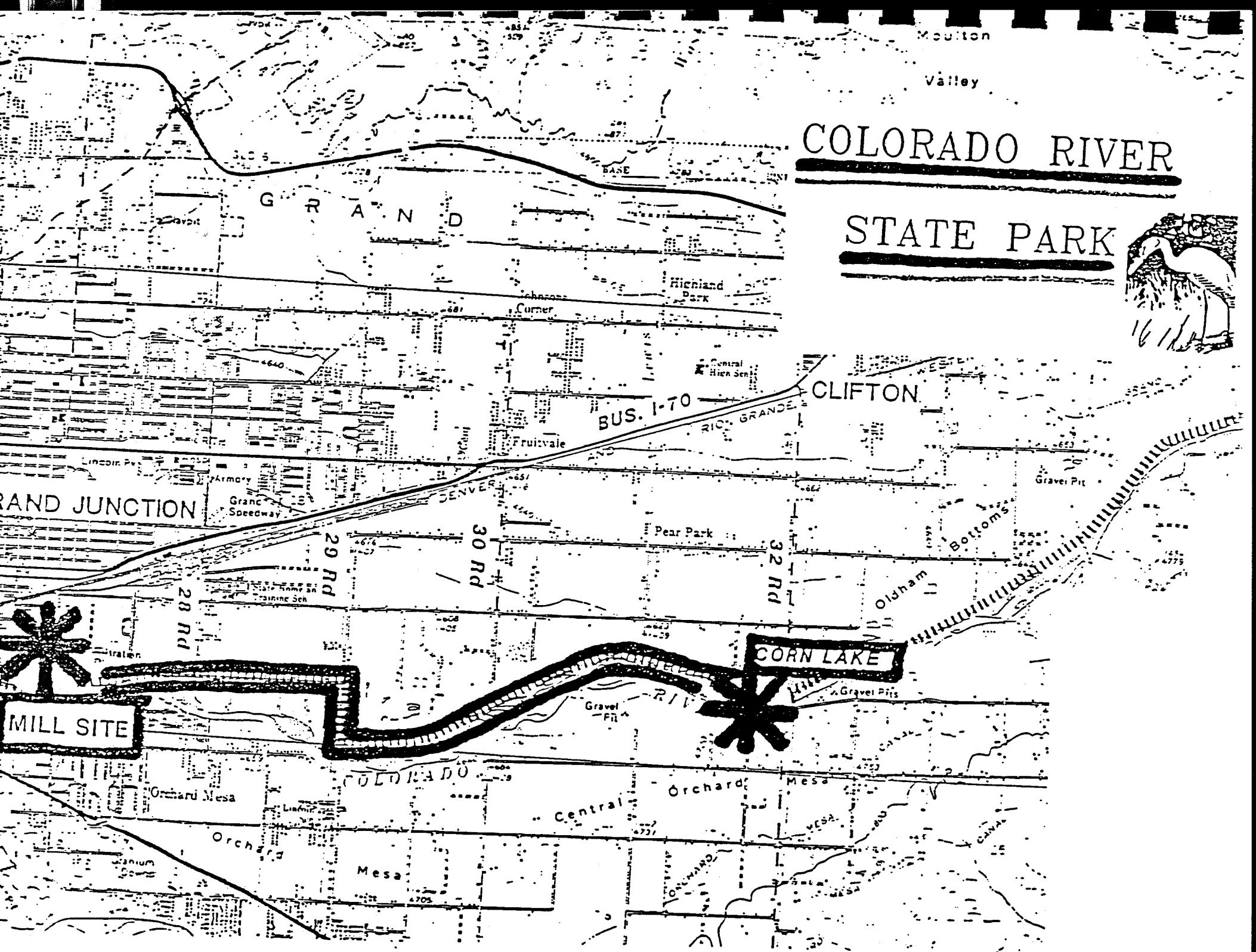
COLORADO RIVER

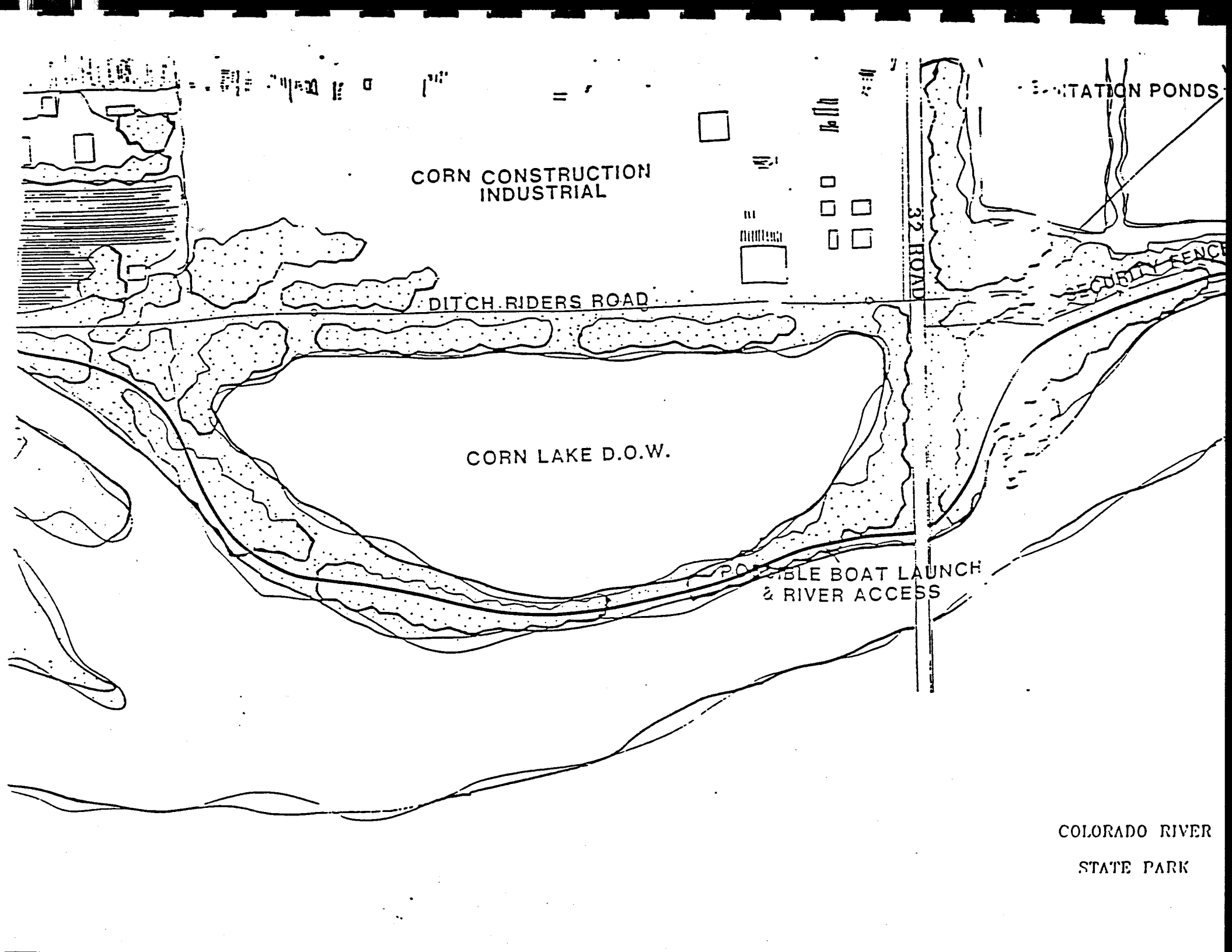
STATE PARK


FRUITA
GRAND JUNCTION
REDLANDS
CLIFTON
PALISADE
ORCHARD MESA
COLORADO
NATIONAL
MONUMENT
GRAND JUNCTION
METROPOLITAN
PARK SERVICE AREAS
OF MESA COUNTY


POSSIBLE SCHOOL/DISTRICT PARK SITE
Fruita
FUTURE PARK SITE
EXISTING PARK
POSSIBLE SCHOOL/DISTRICT PARK SITE
POSSIBLY A COMBINED DISTRICT-NEIGHBORHOOD PARK
FUTURE PARK SITE
COLORADO NATIONAL MONUMENT
EXISTING PARK
Redlands
Grand Valley
Mesa
COMMUNITY PARK FUNCTIONAL AREA
METROPOLITAN AREA
MESA COUNTY


NEIGHBORHOOD PARK
FUNCTIONAL AREAS
EXISTING PARKS-SITES
FUTURE PARK LOCATIONS
VEST POCKET PARKS
COLORADO
NATIONAL
MONUMENT
Fruita
GRAND
RIVER
COLORADO


COLORADO RIVER
STATE PARK
GRAND JUNCTION
CLIFTON
BUS. I-70
MILL SITE
CORN LAKE
Fruitvale
Pear Park
Orchard Mesa
Central Orchard Mesa
Gravel Pit
Gravel Pits
Oldham Bottoms
Johnson Corner
Richland Park
Grand Speedway
Armory
28 Rd
29 Rd
30 Rd
32 Rd
DENVER
RIO GRANDE
COLORADO

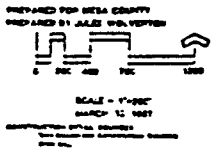

CORN CONSTRUCTION
INDUSTRIAL
32 ROAD
DITCH RIDERS ROAD
CORN LAKE D.O.W.
& RIVER ACCESS
COLORADO RIVER
STATE PARK

colorado river trail

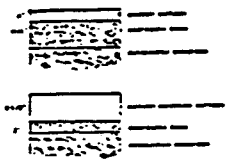
CONCEPT PLAN

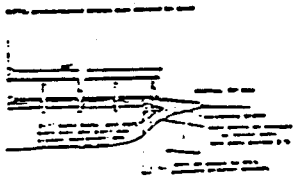
GRAND JUNCTION TO CLIFTON

A PATH CONSTRUCTION

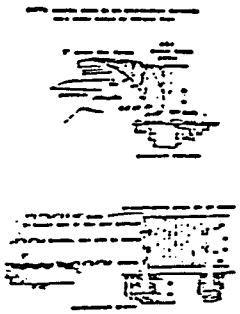


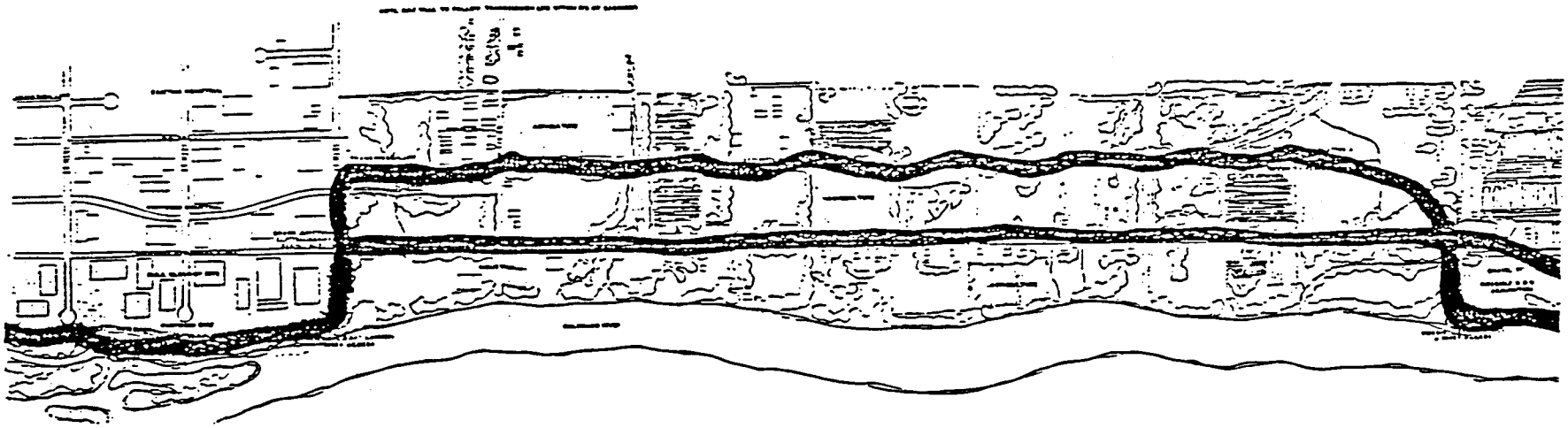
B BRIDGE DETAIL





C SECURITY FENCE

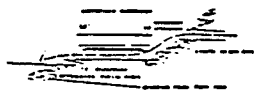




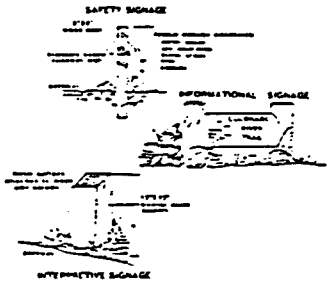
COLORADO RIVE

STATE PARK

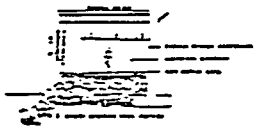
D PATH UNDERDRAIN



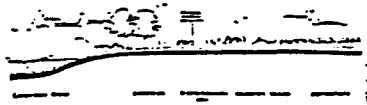
E SIGNAGE SYSTEM



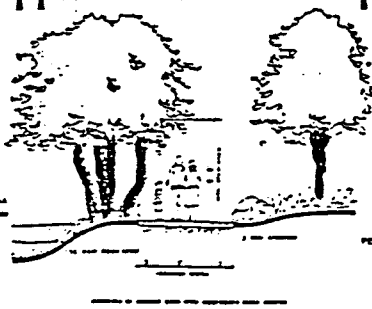
F BRIDGE UNDERPASS



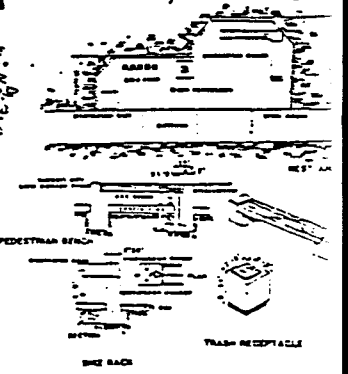
G SECTION A-A'

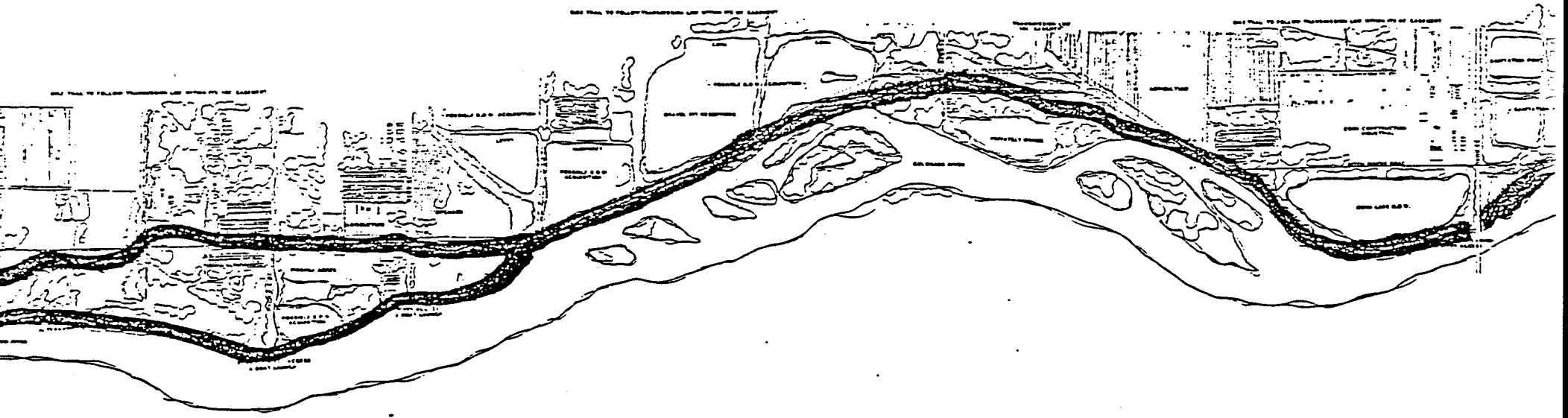


H TRAIL SECTION



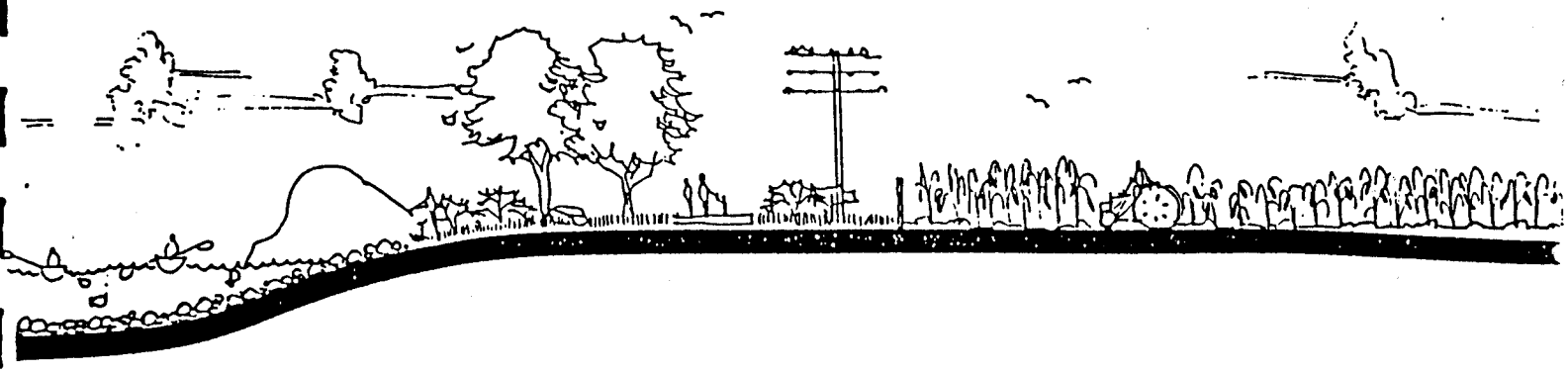
I REST AREA, FURNITUR



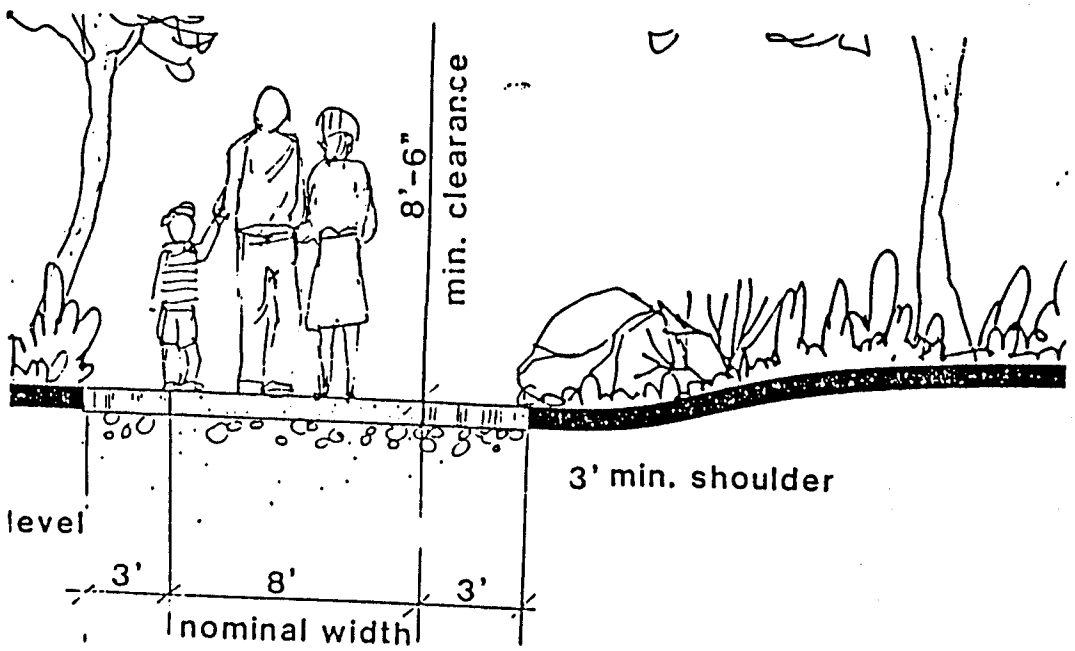


COLORADO RIVER

STATE PARK

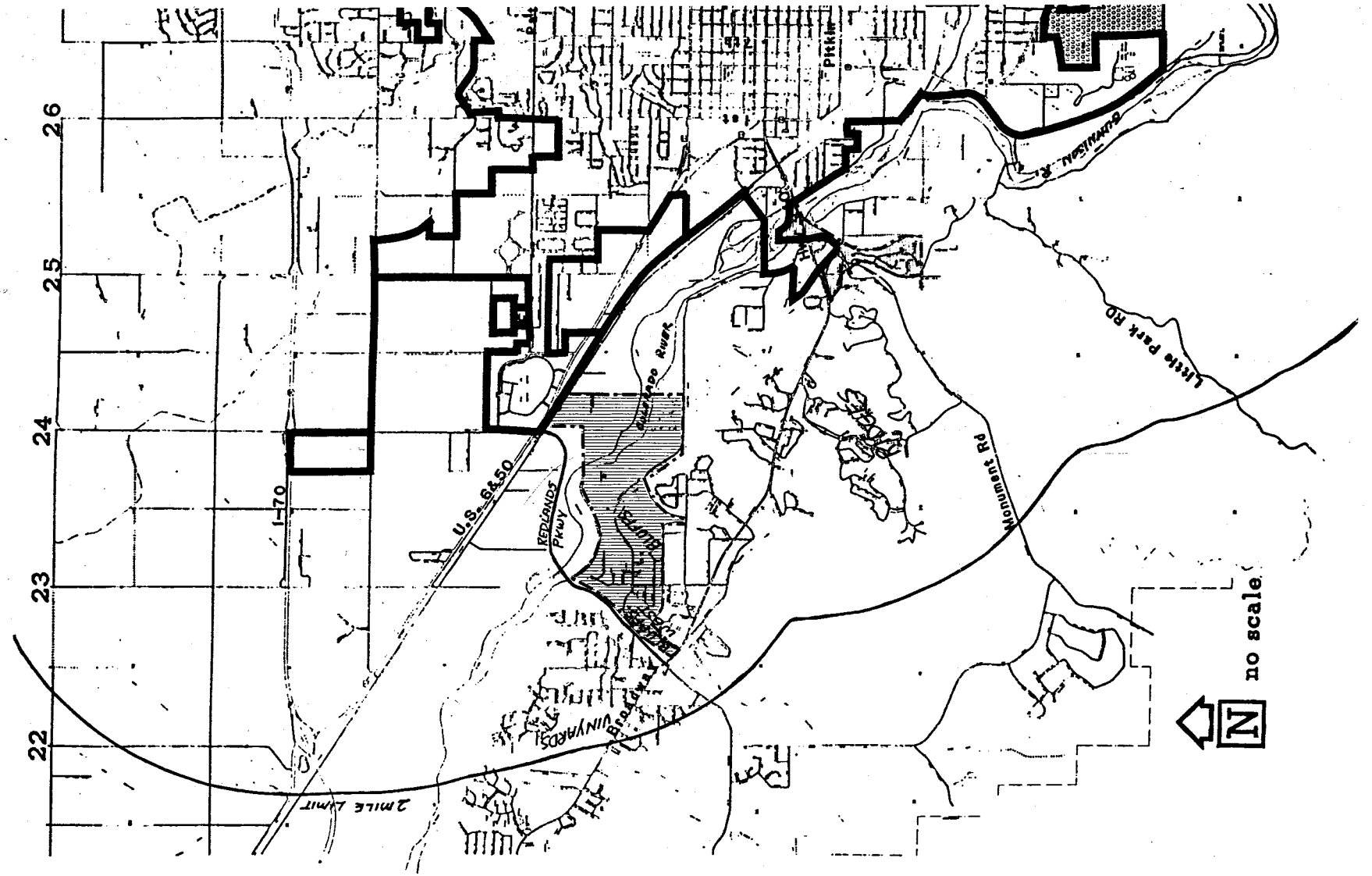


Colorado River | pathway | transmission line | security fence | agriculture



COLORADO RIVER

STATE PARK



PART SEVEN

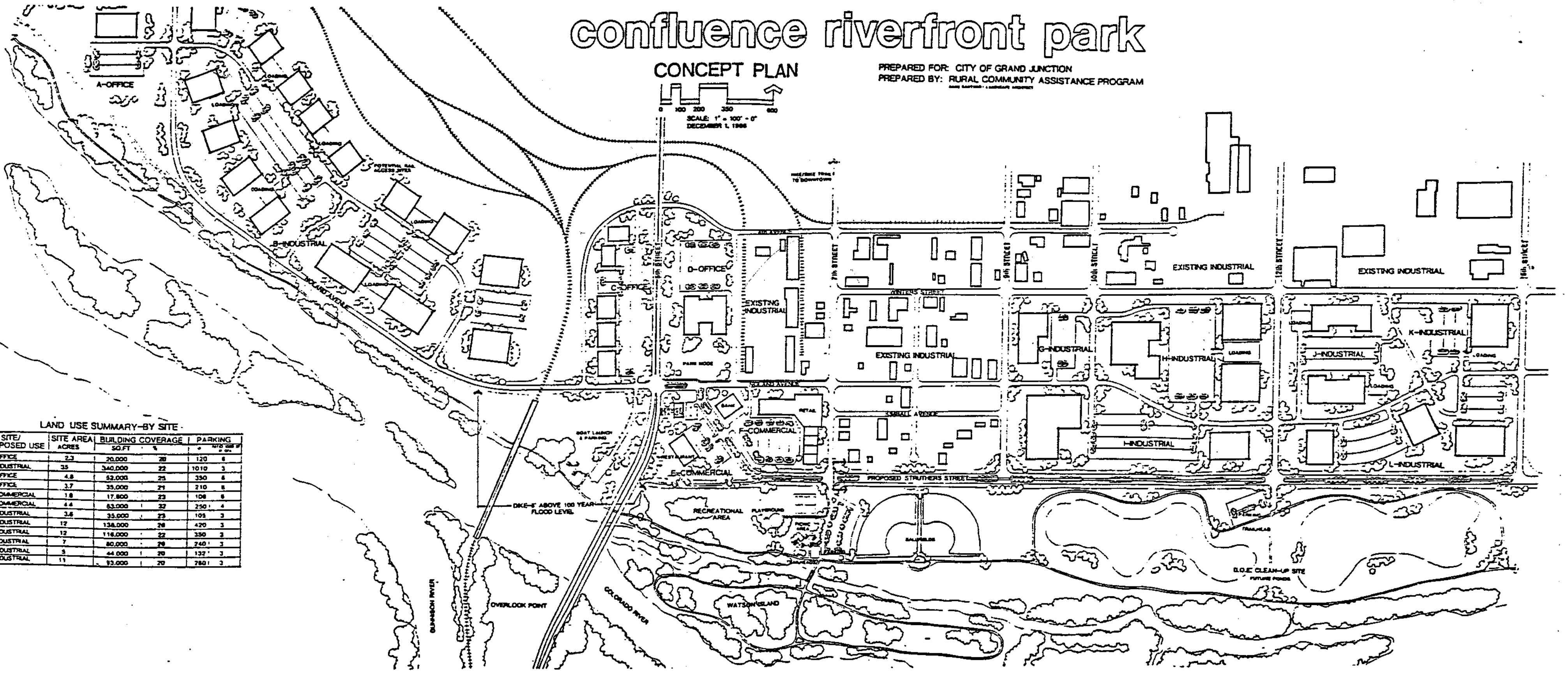
AREA PROPOSED FOR ANNEXATION

confluence riverfront park

CONCEPT PLAN

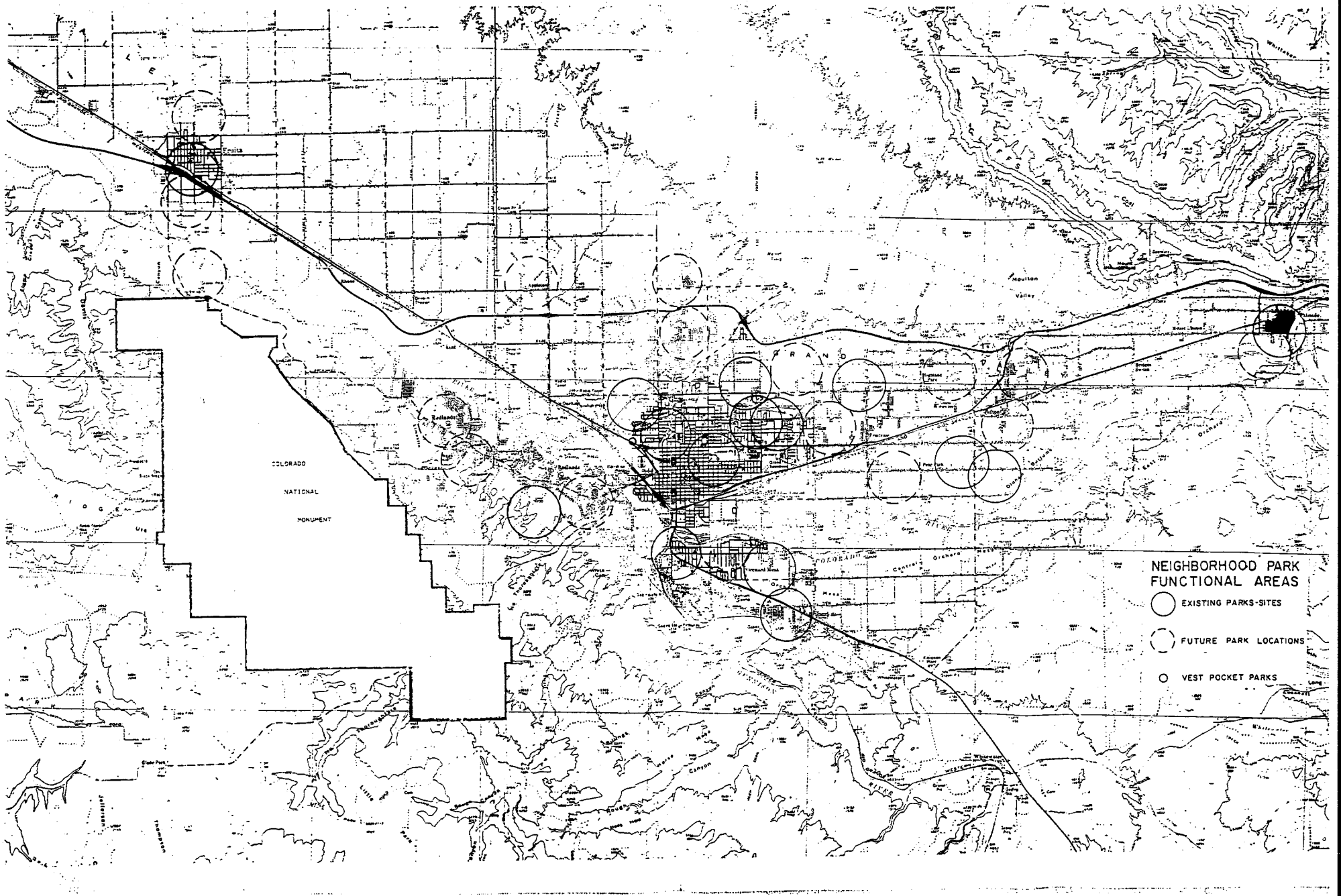
SCALE: 1" = 100' - 0"
DECEMBER 1, 1986

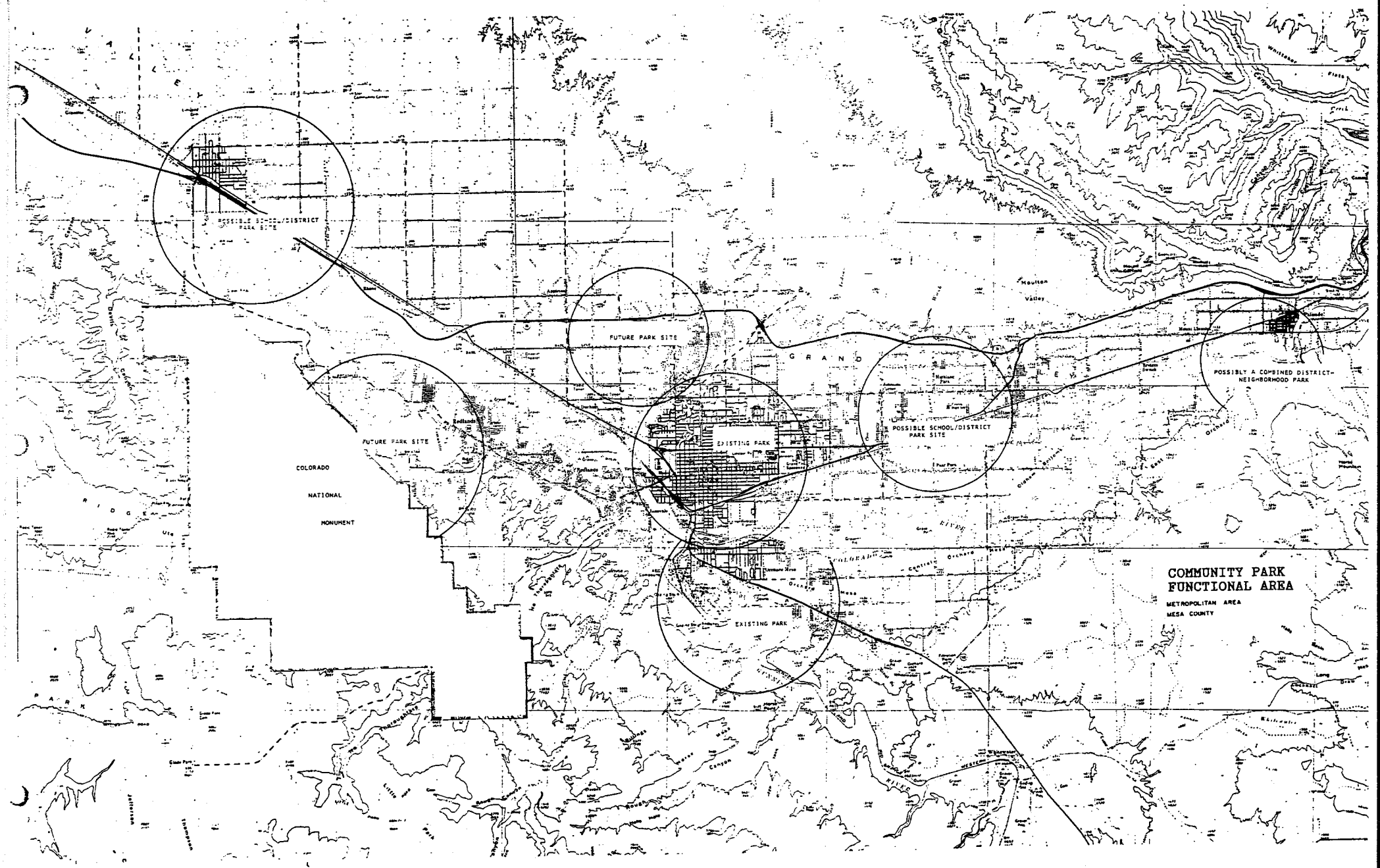
PREPARED FOR: CITY OF GRAND JUNCTION
PREPARED BY: RURAL COMMUNITY ASSISTANCE PROGRAM

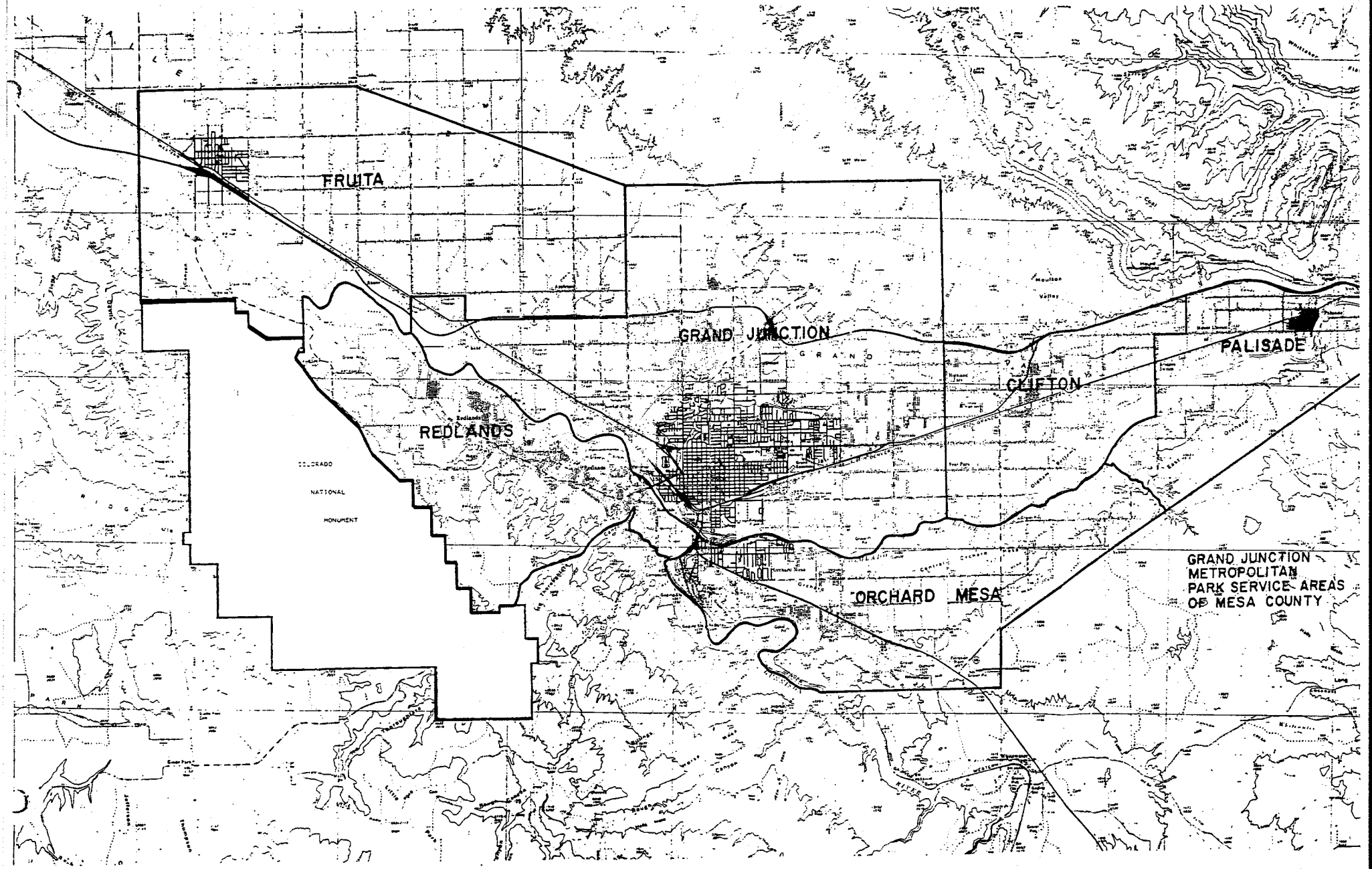


LAND USE SUMMARY—BY SITE

SITE/ PROPOSED USE	SITE AREA ACRES	BUILDING COVERAGE SQ.FT	BUILDING COVERAGE %	PARKING #	PARKING
A-OFFICE	2.3	20,000	20	120	6
B-INDUSTRIAL	35	340,000	22	1010	3
C-OFFICE	4.8	52,000	25	330	6
D-OFFICE	3.7	35,000	21	210	6
E-COMMERCIAL	1.8	17,800	23	106	6
F-COMMERCIAL	4.4	63,000	32	250	4
G-INDUSTRIAL	3.6	35,000	23	105	3
H-INDUSTRIAL	12	138,000	26	420	3
I-INDUSTRIAL	12	116,000	22	350	3
J-INDUSTRIAL	7	80,000	26	240	3
K-INDUSTRIAL	5	44,000	20	132	3
L-INDUSTRIAL	11	93,000	20	280	3


COLORADO
NATIONAL
MONUMENT
NEIGHBORHOOD PARK
FUNCTIONAL AREAS
EXISTING PARKS-SITES
FUTURE PARK LOCATIONS
VEST POCKET PARKS


POSSIBLE SCHOOL/DISTRICT PARK SITE
FUTURE PARK SITE
FUTURE PARK SITE
EXISTING PARK
EXISTING PARK
POSSIBLE SCHOOL/DISTRICT PARK SITE
POSSIBLY A COMBINED DISTRICT-NEIGHBORHOOD PARK
COLORADO NATIONAL MONUMENT
Redlands
Monument
Valley
COMMUNITY PARK FUNCTIONAL AREA
METROPOLITAN AREA
MESA COUNTY


FRUITA
GRAND JUNCTION
PALISADE
CLIFTON
REDLANDS
COLORADO
NATIONAL
MONUMENT
ORCHARD MESA
GRAND JUNCTION
METROPOLITAN
PARK SERVICE AREAS
OF MESA COUNTY

EXTENSION OF
SERVICES PLAN

A REPORT ON THE PLANS AND AVAILABILITY OF MUNICIPAL SERVICES FOR AN AREA UNDER CONSIDERATION FOR ANNEXATION OF AREA TO BE ANNEXED BETWEEN SOUTH OF LOGAN AVENUE AND WEST OF AT&SF RAILROAD.

Beginning at a point on the North line of Section 23, Township 19 South, Range 11 East of the 6th Principal Meridian, Lyon County, Kansas, said point being on the West line of the A.T. & S.F. Railroad, thence South along said West line of Railroad a distance of 434.76 feet, thence West 252.01 feet thence North a distance of 434.76 feet to the North line of Section 23, the same being the South line of Section 14, thence North 30 feet, thence East on a line 30 feet North of and parallel to the South line of Section 14 a distance of 252.01 feet, thence South 30 feet to the South line of Section 14, being the point of beginning, and containing 2.689 Acres.

The Board of City Commissioners of the City of Emporia has expressed interest in the annexation of the area as generally defined above. Kansas law requires that prior to the annexation of land, a report be prepared and placed on file with the City Clerk which sets out the plans of the municipality for providing major municipal services. A timetable for the provision of these services and an indication as to the methods of financing is also required.

The following information has been compiled by the office of the City Manager. A series of maps attached hereto is an integral part of this report. The maps, numbered Exhibits One through Four, indicate the proposed City boundary extension, the existing zoning, the existing water lines and the existing sanitary sewer lines.

EXISTING DEVELOPMENT

The area is, at this time, generally undeveloped. There exists residential dwelling(s) within the area proposed for annexation. Upon the successful completion of annexation procedures, this area will be zoned for Agricultural purposes (A-L) until an application for rezoning is submitted and approved.

EXTENSION OF MAJOR CITY SERVICES AND FINANCING

FIRE PROTECTION

Fire protection will be extended to the area by the City of Emporia Fire Department immediately upon the effective date of annexation. The services will be provided by the existing 43 person full-time department.

Presently, the area in question is served by Rural Fire District Number Four, primarily dispatched from City of Emporia Fire Station No.

1, located at 522 Mechanic, Emporia, Kansas. Based upon contractual arrangement with the fire district, the City can respond to a fire with two pumpers, a water tank truck and two firefighters.

Extending the Fire Department's coverage will not significantly increase the department's cost and can be handled with existing personnel and equipment. Therefore, no additional city expenditures are anticipated for fire protection.

Emporia residents and businesses obtain fire insurance based upon a Class Four rating. Presently, those dwellings located within Rural Fire District Four are subjected to a Class Ten fire rating.

POLICE PROTECTION

Police protection will be extended to the area by the City of Emporia Police Department immediately upon the effective date of annexation. The services will be provided by the existing 39 commissioned officer department.

Extending the Police Department's coverage to the area will not significantly increase the City's expenditures and can be adequately handled with existing officers and equipment.

WATER & SANITARY SEWER SERVICE

The area proposed for annexation is presently not served by municipal water or sewer service. When required, the area could be served by an 8-inch water service located along Logan Avenue.

Upon compliance with subdivision regulations, water service will be extended to the annexed area by the City of Emporia Water Department. The developer or user shall pay for the installation of all water lines six inches or less in size and all necessary valves. The City-at-large will finance fire hydrants on public lands and will finance a portion of water line construction in excess of six inches. The City will maintain service lines as outlined in the City of Emporia Policy Manual, adopted by the Emporia City Commission.

Upon compliance with subdivision regulations, sanitary sewer service will be extended to the annexed area by the City of Emporia Wastewater Department. The developer or user shall pay for the installation of all sanitary sewer lines eight inches or less in size. The City-at-large will finance a portion of sanitary sewer line construction in excess of eight inches.

An 8-inch sanitary sewer line is available on the southwest corner of the area proposed for annexation as is an 8-inch on Logan Avenue. A 21-inch main is located along the east property line and a 24-inch sanitary sewer is presently in operation and is located through the Southeast corner of this property.

licensing services. These services are supported by fees, permits and general City revenues.

TIMETABLE FOR SERVICES

The timetable for the provision of each major municipal service is provided on Chart A. The timing and delivery or extending certain services will be affected by actual or potential court litigation. If the annexation is challenged by legal action, the timetable should be extended by the potential length of time of such litigation.

TAXATION

The taxation of newly annexed territory is controlled by State statutes. If this area is annexed after the date of this report, but prior to April 1, 1985, then City ad valorem property taxes would be due from the affected property owners for the first time in November, 1985.

SUMMARY OF PLAN FOR SERVICES

Service	Existing in City	Proposed for Area	Timing	Financing
Sewer Mains	Yes	Yes	When laterals are petitioned	100% Special Assessment
Sewer Laterals	Yes	Yes	When installed	100% Property Owner
Water Mains	Yes	Yes	When petitioned by owners	100% City for excess of 6" line
Water Laterals	Yes	Yes	When installed	100% Property Owners
Fire Hydrants	Yes	Yes	With water lines	City-at-Large
Streets	Yes	Yes	When petitioned	100% Special Assessment for Local Streets
Police Protection	Yes	Yes	Immediate	City-at-Large
Fire Protection	Yes	Yes	Immediate	City-at-Large
Street Lights	Yes	Yes	When warranted by density	City-at-Large
Park	Yes	No	(Soden's Park and Zoo nearby)	
Licensing	Yes	Available upon Application	Immediate	City-at-Large Fee Supported
Code Enforcement	Yes	Yes	Immediate	City-at-Large Fee Supported
Animal Control	Yes	Yes	Immediate	City-at-Large
Refuse Collection	Yes	Yes	Immediate	Fee Supported

Karl,

This list contains all properties owned by Public Service. Dan said you could use this for your annexation strategies.

Tim W.

#8000

ASSESSED BY STATE TAX COMMISSION

2445-272-16-001	Mtn. States Tele. & Tel.	Lot 19 Blk. F DeRush Add.
2445-293-00-172	Northwest Pipeline	
2661-143-00-145	Northern Natural Gas	
2667-352-12-001	Mtn. States Tele. & Tele.	
2667-354-00-218	Rocky Mtn. Natural Gas	
2683-222-00-217	Colo. Ute Electric Assoc., Inc.	
2683-272-00-218	Colo. Ute Electric Assoc., Inc.	
2683-272-00-227	Colo. Ute Electric Assoc., Inc.	
2683-273-00-151	Colo. Ute Electric Assoc., Inc.	
2683-273-00-229	Colo. Ute Electric Assoc., Inc.	
2683-281-00-096	Colo. Ute Electric Assoc., Inc.	
2683-281-00-127	Colo. Ute Electric Assoc., Inc.	
2683-281-00-225	Colo. Ute Electric Assoc., Inc.	
2683-282-00-108	Colo. Ute Electric Assoc., Inc.	
2683-284-00-013	Northwest Pipeline	
2683-284-00-105	Colo. Ute Electric Assoc., Inc.	
2683-284-00-107	Colo. Ute Electric Assoc., Inc.	
2683-331-00-114	Colo. Ute Electric Assoc., Inc.	
2683-331-00-115	Colo. Ute Electric Assoc., Inc.	
2683-331-00-142	Colo. Ute Electric Assoc., Inc.	
2683-332-00-141	Colo. Ute Electric Assoc., Inc.	
2683-333-00-118	Colo. Ute Electric Assoc., Inc.	
2683-334-00-119	Colo. Ute Electric Assoc., Inc.	
2683-334-00-219	Colo. Ute Electric Assoc., Inc.	
2683-342-00-221	Colo. Ute Electric Assoc., Inc.	
2683-342-00-230	Colo. Ute Electric Assoc., Inc.	
2683-343-00-174	Colo. Ute Electric Assoc., Inc.	
2683-343-00-213	Colo. Ute Electric Assoc., Inc.	
2691-124-00-005	Western Slope Gas Co.	
2693-022-00-015	Wesco Pipeline Co.	
2693-111-00-104	Wesco Pipeline Co.	
2693-122-00-180	Public Serv. Comp. of Colo.	
2693-131-02-023	Public Serv. Comp. of Colo.	

#8000

ASSESSED BY STATE TAX COMMISSION (CONT'D)

2697-033-00-016	Colo. Ute Electric Assoc., Inc.
2697-104-00-133	Grand Valley Rural Power Lines
2697-161-00-072	Grand Valley Rural Power Lines
2697-172-00-012	Mtn. Bell
2697-203-00-047	Public Serv. Comp. of Colo.
2697-253-00-028	Pacific Northwest Pipeline
2701-153-00-483	Western Slope Gas Supply Co.
2701-252-00-257	Grand Valley Rural Power Co.
2709-341-00-047	Public Serv. Comp. of Colo.
2709-342-00-037	Public Serv. Comp. of Colo.
2709-342-00-044	Public Serv. Comp. of Colo.
2709-342-00-045	Public Serv. Comp. of Colo.
2709-342-00-046	Public Serv. Comp. of Colo.
2709-342-00-055	Public Serv. Comp. of Colo.
2713-124-00-219	Colo. Ute Electric Assoc., Inc.
2713-203-00-070	
2713-213-00-430	Northern Natural Gas
2935-153-00-061	Western Slope Gas Co.
2937-052-00-045	Public Serv. Comp. of Colo.
2937-061-00-019	Public Serv. Comp. of Colo.
2939-121-00-042	Public Serv. Comp. of Colo.
2941-081-00-071	Western Slope Gas Co.
2941-193-00-098	Colo. Ute Electric Assoc., Inc.
2941-302-00-071	Colo. Ute Electric Assoc., Inc.
2943-024-00-068	Mtn. States Tele. & Tele.
2943-024-26-014	Western Slope Gas Co.
2943-032-00-007	Grand Valley Rural Power Lines
2943-044-14-008	Palisade Irrigation
2943-071-00-001	Western Slope Gas Co.
2943-081-00-042	Western Slope Gas Co.
2943-101-00-127	Mtn. Bell
2943-111-00-101	Public Serv. Comp. of Colo.
2943-123-00-164	Public Serv. Comp. of Colo.
2943-123-00-167	Public Serv. Comp. of Colo.
2943-183-00-034	Grand Valley Rural Power

#8000

ASSESSED BY STATE TAX COMMISSION (CONT'D)

2943-183-00-035	Grand Valley Rural Power
2943-202-00-058	Public Serv. Comp. of Colo.
2943-222-07-003	Public Serv. Comp. of Colo.
2943-222-07-004	Public Serv. Comp. of Colo.
2943-222-07-005	Public Serv. Comp. of Colo.
2943-222-07-006	Public Serv. Comp. of Colo.
2943-222-07-007	Public Serv. Comp. of Colo.
2943-222-07-008	Public Serv. Comp. of Colo.
2943-222-07-009	Public Serv. Comp. of Colo.
2943-222-07-010	Public Serv. Comp. of Colo.
2943-222-07-011	Public Serv. Comp. of Colo.
2943-222-07-012	Public Serv. Comp. of Colo.
2945-032-00-107	Western Slope Gas Co.
2945-033-00-158	Public Serv. Comp. of Colo.
2945-104-00-021	Western Slope Gas Co.
2945-121-00-022	Western Slope Gas Co.
2945-124-19-002	Public Serv. Comp. of Colo.
2945-143-43-001	Public Serv. Comp. of Colo.
2945-144-16-019	Mtn. States Tele. & Tele.
2945-144-21-012	Mtn. States Tele. & Tele.
2945-144-21-013	Mtn. States Tele. & Tele.
2945-144-21-014	Mtn. States Tele. & Tele.
2945-144-35-012	Public Serv. Comp. of Colo.
2945-144-37-001	Public Serv. Comp. of Colo.
2945-144-48-001	Public Serv. Comp. of Colo.
2945-164-00-211	Public Serv. Comp. of Colo.
2945-231-01-019	Public Serv. Comp. of Colo.
3477-154-00-062	Nucla-Naturita Tele. Co.

Mesa County
Planning
Department

750 Main Street
P.O. Box 20,000-5022
Grand Junction, Colorado
81502-5022

(303) 244-1636

July 10, 1989

Mr. R.T. Mantlo, President of the Council
Mr. Mark Achen, City Manager
Grand Junction City Hall
250 North 5th Street
Grand Junction, Co 81501

Re: Grand Junction Municipal Annexation Plan

Dear Sirs:

The Mesa County Planning Commission recently reviewed the Grand Junction Annexation Plan dated February 1989. We did not receive a copy of the plan until after the City Council had adopted the plan. We would, however, like to submit our comments to you for your consideration.

Our primary concerns regard the land uses shown in the "annexable area." We concur with the planned low density designation in the Paradise Hills/Walker Airport and the Open Space/Parks along the Colorado River.

Where we are in disagreement with the plan is the region from Highway 6 & 50 to 25 Road. The plan is based on existing zoning and the Northwest Vicinity Plan, a plan which is not officially recognized by Mesa County. We believe the current zoning in this area needs revision to reflect current development trends.

Recently, several parcels in this area have been rezoned from Commercial to Light Industrial at the request of the MCEDC and private landowners. It is not clear from the annexation plan whether light industrial uses would continue to be permitted. Since there currently is an excess of commercially zoned land and few light industrial tracts in this area we believe light industry should be encouraged.

Another recent trend has been to down zone the high density residential area between 24 and 25 Roads. Several large lot subdivisions have been approved or proposed in the past year in this location.

Due to these concerns, the Mesa County Planning Commission does not at this time endorse the Grand Junction Municipal Annexation Plan. We will not use the plan, in it's present form, as a basis for land use

recommendations in the Northwest area.

We understand annual updates to the plan are required and specific impact reports will address detailed land uses as areas are annexed. Please notify the Mesa County Planning Commission of future proposed updates to the plan. We also ask that we be given the opportunity for direct involvement with the City's Planning Commission to review future annexations. I believe the intent of the attached Intergovernmental Agreement between the City of Grand Junction and Mesa County was to coordinate the respective jurisdictions' review of plans and proposals.

Thank you for your time and consideration. We look forward to continued dialogue and cooperation with the City of Grand Junction.

Sincerely,

Martin O'Boyle
Chairman, Mesa County
Planning Commission

xc: Steve Love, Chairman, Grand Junction Planning Commission
Dan Wilson, Grand Junction City Attorney
Karl Metzner, Grand Junction City Planning Director
Dick Pond, Chairman, Mesa County Board of Commissioners

CITY OF
GRAND JUNCTION

MUNICIPAL
ANNEXATION PLAN

1989

CITY OF GRAND JUNCTION
MUNICIPAL ANNEXATION PLAN
(February 1989)

CONTENTS

CHAPTER ONE	PURPOSE AND INTENT
CHAPTER TWO	PUBLIC FACILITIES AND SERVICES
CHAPTER THREE	TRANSPORTATION
CHAPTER FOUR	PARKS, RECREATION AND OPEN SPACES
CHAPTER FIVE	LAND USE
APPENDIX	

CHAPTER ONE
PURPOSE AND INTENT

CHAPTER ONE
PURPOSE AND INTENT

A. As urban center, Grand Junction cannot allow itself to stagnate. Many examples may be found across the country where suburbanization has constricted the urban core and sapped its economic and social health. The City believes that it is appropriate for urbanized and urbanizing areas to be within the corporate limits of a municipality. County governments are not designed to adequately deal with urban service demands and problems. Numerous higher density County subdivisions are experiencing severe problems with street maintenance, drainage, fire protection, water supply, and other urban services and facilities. Many subdivisions have streets that were never accepted for maintenance, while others have streets inadequate to allow the passage of fire apparatus.

The County Sheriff's office is inadequately staffed to provide rural law enforcement services. It does not provide services, such as traffic enforcement, that are customarily required in highly developed residential or commercial areas. The City's Police Department provides a full, urban law enforcement service.

Mesa County has eliminated its Parks and Recreation Department. County park areas remain partially developed and receive minimal maintenance. The only public swimming facilities and golf courses are located in the urban area. There are a variety of neighborhood and community parks within the corporate limits, which are substantially developed and maintained at an above average level. In addition to open park areas within the City, there are other facilities such as a convention center, an auditorium, two softball complexes, an indoor year-round swimming pool, an outdoor swimming pool complex, and a stadium complex which provides for a variety of community events.

B. Emphasis should also be placed on the annexation of undeveloped areas where urban development can be expected to occur. This will allow better planning for the provision of urban services, avoid inconsistent development standards, and reduce new layers of costly special service boundaries. By ensuring that new development addresses urban problems at the development approval stage, the costs to the taxpayers of remedying these problems later can be avoided.

C. This plan contemplates annexations within boundaries defined in Appendix I. Any amendments of this plan that may, over time, expand the defined annexable area shall also amend other applicable chapters of this plan to include the expanded area.

D. It is hereby intended that all areas shown in the Walker Field Airport Master Plan shall be included in, and be part of, the defined annexable area as shown in Appendix I. The Walker Field Airport Master Plan is hereby, by reference, made part of this plan.

E. In accordance with CRS 31-12-101, et seq. the City will prepare an impact statement on all proposed annexations over ten acres. Such impact statement will address the provision of city services to the annexed area including the type of services provided, the timing of those services, and the cost/ benefit to the City in annexing the area.

CHAPTER TWO

A. WATER
B. WASTEWATER
C. SANITATION
D. POLICE
E. FIRE

CHAPTER TWO
PUBLIC SERVICES AND FACILITIES

A. WATER

Treated water service within the annexation study area is provided by the City of Grand Junction, the Clifton Water District, and the Ute Water Conservancy District. The area served by the City generally encompasses the central core of the City as it existed in the mid-1950s. Specifically, it includes an area bounded by 29 Road on the east, 25 1/2 Road on the west, Patterson Road on the north, and the Colorado River on the south. The City also serves additional areas within its corporate limits through purchases of water from the Ute Water Conservancy District. For historical and legal reasons, presently in some areas of the City, the City serves and bills for water service, but with water purchased from the Ute District. These areas include Orchard Mesa and North 12th Street in the Lakeside area. The City also serves areas that are outside of its corporate boundaries, inside of the Ute District, but not served by the Ute District. These areas are west of 1st Street and north of Patterson Road in the F 1/2 and Galley Road area.

The Clifton Water District's service area is bounded by 30 Road on the west, 33 1/2 Road on the east, G Road on the north, and the Colorado River on the south. Additional area annexed into the Clifton District includes the Whitewater area south of the City of Grand Junction.

The Ute Water Conservancy District currently provides water service to the balance of the annexation study area surrounding the areas served by the City and Clifton. There are the exceptions as previously noted and some neighborhoods on the Redlands which are served by private water company wells. Though such areas are not served by Ute distribution lines, they nevertheless pay the Ute mill levy for debt retirement. Urban water service will be available to all annexed areas.

B. WASTEWATER SERVICES

In 1984 the Persigo Wastewater Treatment Plant was put into service. Owned, in part, and operated entirely by the City of Grand Junction, the Persigo Plant has an average capacity of twelve and a half (12.5) million gallons per day. Peak operations of short duration could handle up to twenty (20) million gallons per day. The plant currently operates with a load of six (6) million gallons per day. Plant sizing was determined from the "201 planning studies" which established the plant size based on projected development of the 201 area.

The 201 planning area extends from 19 1/4 Road on the west to 33 Road on the east, and from the Interstate on the north to A 1/2 Road on the south. It also includes the airport which is north of the Interstate.

C. SANITATION

Trash collection services are provided by the City for residential and commercial customers. Residential customers within the city limits are provided this service automatically. Commercial hauling within the city limits is on a competitive basis with the City competing with other haulers for the commercial business. Annexation would not affect this arrangement.

D. POLICE SERVICES

The Grand Junction Police Department is a full-service agency which is under the direction of the Chief of Police. The Department is responsible for the enforcement of all state and municipal laws and ordinances within the incorporated city limits of Grand Junction.

The Police Department is staffed with 95 employees and is divided into two divisions. The Operations Division is commanded by a Captain and is responsible for the daily operations of the Uniform Patrol Section and Investigations Section. The Services Division is also headed by a Captain and is responsible for the support elements within the Department such as crime prevention, records, community relations, the School Resource Program, crime lab, court liaison, training and budgetary positions.

The Police Department has a cooperative working relationship with other Mesa County agencies within the criminal justice system. There are programs of combined City/County personnel which are in effect and which endeavor to maximize the resources of the City in combatting crime.

Should the City of Grand Junction annex additional areas, the Police Department would have to assess the potential impact on a case-by-case basis. Criteria to be applied would include the geographical dimensions of the annexed area and its population. Other factors would include the amount of resident population versus business population, actual calls for service, and road miles. The Department could then ascertain whether the area could receive police service delivery utilizing current resources. If expected service exceeds current resources, then additional personnel and equipment would be requested. Proposed annexations will be reviewed for their expected levels of activity and a schedule will be

developed for providing full law enforcement services to the annexed area. Full services would be provided to any annexed area within a three year period.

E. FIRE PROTECTION

The City Fire Department provides fire protection for the Grand Junction community. It also provides services to the Grand Junction Rural Fire District through a contract. Each entity pays its own capital costs. Other charges to the rural district, such as manpower, are based on a percentage of the total number of calls received in relation to the total operating budget. This total service area includes approximately 97 1/2 square miles.

The Grand Junction Fire Department has a mutual aid agreement with the fire fighting units in Clifton, Fruita, Central Orchard Mesa, East Orchard Mesa, Palisade and Glade Park. This mutual aid agreement provides for each fire fighting unit to assist the other in cases of emergency.

Within the operational area of the Department, there have been some problems identified. Of primary concern are inadequately-sized water mains and a lack of sufficient fire hydrants within areas served by the Ute Water District. Residents of areas with inadequate water supplies are encouraged to form improvement districts to upgrade the area's fire fighting capabilities.

CHAPTER THREE
TRANSPORTATION

CHAPTER THREE
TRANSPORTATION

Air Transportation - Air transportation into and out of the central Grand Valley is through the Walker Field Airport. This facility is controlled and operated by the Walker Field Airport Authority. Annexations have no effect upon air transportation services.

Rail Transportation - Rail transport is provided by the Denver and Rio Grande Western Railroad, the main line of which runs the length of the Grand Valley. Annexation would have no effect on rail transport.

Other Mass Transit - Various bus and taxi companies are operating under PUC licenses in both incorporated and unincorporated areas. A service area is established for each company which is unaffected by annexation. Mesa County, through the federal Urban Mass Transit Program, provides elderly and handicapped transportation to both City and County residents. This program is also unaffected by annexation

MPO - The Metropolitan Planning Organization is responsible for road, street, and highway planning within the designated urban area. The MPO is responsible for a five year transportation Improvement Program (updated yearly) as well as an annual Unified Planning Work Program. Through efforts such as accident reporting, traffic counting, demographic updates, area studies, and others, recommendations are made for improvements or modifications to the transportation system. These recommendations are adopted by both the City Council and County Commissioners as part of the Transportation Improvement Program. Since this is a joint City/County effort, it would not be affected by annexation.

In addition to the MPO process the City also has its own capital improvements programming process for upgrades and preventative maintenance of the street system. A comprehensive pavement management system allows the City to test its streets and efficiently determine the type and timing of maintenance efforts. The annexation impact report will examine road and street needs in newly annexed areas.

There are currently no changes proposed for the state and federal highways within the urban area.

The yearly MPO Transportation Improvement Program and Unified Work Program are hereby, by reference, made part of this plan.

CHAPTER FOUR
PARKS AND RECREATION

CHAPTER FOUR
PARKS AND RECREATION

Parks facilities and recreation programs within the City are provided and managed by the Grand Junction Parks and Recreation Department. As well as providing services to the approximately 28,500 citizens of Grand Junction, programs and facilities are also available to residents of surrounding Mesa County. Since Mesa County abolished its Parks Department, the City is, and has been, the primary parks and recreation provider in the urban area. Program fees are slightly higher to non-city residents. Each area to be annexed will be evaluated for the availability of park and recreation facilities.

A. Park Facilities

The City of Grand Junction currently has 122.85 acres of developed park land (excluding two golf courses), one indoor and outdoor swimming pool, the Lincoln Park Auditorium, and the Two Rivers Plaza convention center. The Lincoln Park Stocker Stadium features a lighted football field, all-weather track, and baseball field, plus full team, press box, and fan facilities. The Lincoln Park Golf Course is a 9-hole facility located within the city limits, while Tiara Rado is an 18-hole course located adjacent to the Colorado National Monument. The City also manages two softball complexes featuring four lighted softball fields.

B. Recreation Programs

The Recreation Department sponsors many individual recreation programs such as volleyball, softball, tennis, fitness programs, learn-to-swim classes, tournament and open golf, gymnastics, arts and crafts, basketball, wrestling, and Senior Citizen Center activities. The softball program is the largest on the Western Slope with over 125 teams participating in 18 leagues. A total of 15 tournaments are hosted each season with over 375 teams involved.

Four School District #51 athletic varsity teams as well as the N.A.I.A. Mesa College Mavericks utilize Stocker Stadium. This facility has also been host to the National Junior College World Series since 1959.

C. Colorado Riverfront Project

The Colorado Riverfront Project concept is a linear greenway along the Colorado River consisting of various activity nodes connected by the Colorado River Trail. The project will ultimately extend the entire length of the river in Mesa county with the primary focus on the urban areas. Concepts

include maintaining or restoring native riparian habitat with special considerations given to environmentally sensitive areas. Activity nodes will include facilities for fishing, picnicking, interpretive trails, boating access, and potential state park facilities.

D. Future Needs

Emphasis needs to be placed on adding larger parks (+15-25 acres) to the existing system as well as a regional facility of 200+ acres. Several areas have been identified for potential future development. In addition to various properties associated with the Riverfront Project, there are: Berry Park (78 acres at 24 and H Roads), Burkey Park (10 acres at 30 and F Roads), and Burkey O.M. Park (10 acres at 28 1/2 Road and Hwy 50). The Burkey O.M. Park has been identified as the site of a botanical garden for which fundraising is currently underway. An additional 18-hole golfcourse may be needed, pending increased golf demand. The City will examine county properties dedicated for parks and open space to determine their suitability for these purposes. When suitable properties are annexed, the City will request a transfer of ownership to put their management under City supervision.

CHAPTER FIVE
LAND USE

CHAPTER FIVE
LAND USE

Planning and Development in the Grand Valley has been typical of rural areas in the west which have experienced sudden large scale growth. Development of any kind and in any location was viewed as being good for the area with little or no consideration for the future public costs of uncontrolled development.

Although municipalities are typically the most efficient unit of government for the provision of urban services, the majority of the recent urban growth has taken place in unincorporated areas. As a result of this sprawl development pattern, municipalities have essentially been pre-empted as efficient service providers while the County government, special service entities, and the community at large are facing a rapidly increasing economic burden.

Uncontrolled and scattered growth in the unincorporated areas surrounding Grand Junction has also impacted City services and facilities while providing only minimal funding to mitigate these impacts. It is critical to the future well being of the City and the urban area that the City play a stronger role in development activity occurring in the surrounding area.

Infill development is also important in establishing efficiency in service delivery. Efforts to encourage infill development in the City have, in the past, been hampered by the subsidization of sprawl development in scattered rural areas. Recognition of the negative effects of this pattern may assist future infill potential within the present urban area.

Future Trends

The near future outlook for growth in the Grand Valley appears to be at low to moderate levels ranging from 1% to 3% annually. This is a very manageable growth level that should allow the area to recover from the effects of the latest oil shale boom/bust cycle and allow time for proper planning to avoid similar occurrences in the future.

A Future Land Use Plan, though flexible to meet changing needs, must also be specific enough to accomplish the desired results of a balanced and cost effective development pattern.

The following are summaries of projected future land use for the area. The more specific land use plan for the defined annexable area is shown in Appendix I. In developing this plan the City has used the following adopted Mesa County land use plans:

- Northwest Vicinity Plan
- Northeast Vicinity Plan
- Pear Park/Chatfield Vicinity Plan
- Redlands Land Use Plan

Some minor adjustments have been made to these plans to allow for consistent ranges of density and use. In areas not covered by the above plans, the land use shown has been developed by generalizations of existing zoning. It is the intent that future updates of this plan will refine and more thoroughly study the future land use of these areas.

1. Infill Development

   The first criterion to be applied to new development is whether it should be in undeveloped or underdeveloped areas within the city limits. This should not, however, preclude new annexation. Areas within the city limits generally have the full range of urban services and facilities available. Infill development would allow more efficient use of these services on a cost-benefit basis while also adding to the overall tax base.

   The infill development must, however, respect the uses and integrity of existing neighborhoods and the desire to attract infill uses should not overrule the basic concepts of planning and land use relationships. The Future Land Use Plan for the existing city limits should basically be an expansion and enhancement of most of the present major use areas.

2. Northwest Area

   The northwest area is expected to be the valley's primary growth area for the next 10 to 20 years. The area has good accessibility, is close to presently developed areas, and has large parcels of land available for development. Mesa Mall and adjacent uses already provide the area with a commercial focus, while surrounding zoning is available for high density residential development in a planned context.

   The floodplain of the Colorado River is included in part of the Northwest Area. A strong stance needs to be continued against developing in the floodplain to avoid future costs of flood control and recovery because once development occurs, the property owners will expect the City or County to protect them in high water situations.

The City must continue to push for high quality development in the northwest area and actively pursue annexation prior to development design and approval.

3. Redlands Area

With the opening of the Redlands Parkway and the upgrading of sewer and water facilities, residential development in the Redlands can be expected to continue at a slow but steady pace. Pressures for business development will increase with the population base, but average residential densities will likely continue in the low to medium range (4-8 units/acre or less). No significant change in the character of land use is expected for a number of years. Due to the low densities and sprawl development, it has been difficult, if not impossible, to provide adequate facilities and services to the area.

4. Northeast Area

The northeast area received the majority of the growth in the Grand Junction area during the oil shale boom and bust. Development is typical of the sprawl pattern in the valley with much of the development being single family detached housing at 4 units/acre. A commercial strip exists along I-70 Business Loop and North Avenue with a retail/commercial node at 30 Road and I-70B. Some high density apartment complexes exist east of 29 Road between Patterson Road and North Avenue.

5. Orchard Mesa

Development on Orchard Mesa has proceeded very slowly, even through the oil shale boom, compared with other areas around Grand Junction. Although many services and facilities are available, the area has not generally experienced much development. The Highway 50 corridor is a mixed retail/commercial strip that is currently underutilized. The area is also characterized by many non-conforming commercial uses intruding into residential zones. Residential development is a mix of lower density single family units and higher density apartment or townhouse units. The higher density uses are generally the newer structures built during the oil shale boom of the early 1980s.

6. Southeast (Pear Park/Chatfield)

Although some development has occurred in the Pear Park area, it is scattered and diverse. The area from the present city limits (15th Street) to 28 Road has developed with small industrial uses, while areas further to the east have developed with various densities of single family

detached, mobile homes and some multi-family housing. Numerous parcels also remain in agricultural uses. Existing zoning and uses point to a potential for increased industrial in the 28 Road area.

7. North Area

The area north of Grand Junction has developed as a low density residential/small agricultural area with generally large, expensive homes. Horizon Drive from G Road to the airport has developed primarily with highway/tourist oriented businesses such as motels and restaurants. Professional office complexes are dominant along intersecting streets north of I-70.

COMPUTER FILES INDEXING
INFORMATION SHEET

1. File Number 31-88
2. Type of Application Text Amm.
3. Name of Project Municipal Annexation Plan
4. Address of Project —
5. Name of Applicant City Planning Dept
6. Co-Applicant City of Grand Jct
7. Census Tract — Traffic Zone —
8. Land Use Type —
9. Action Date _____ By _____
10. Action Taken _____
11. Suspense Date(s) _____ _____

CiC - 6/7/89 Approved as submitted

CiC 8/16/89 Approved amendment to appendix A.