

Current Master Plan

Per Ken M.

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OK

Cave Creek

Recreational Area

CAVE CREEK RECREATION AREA
CONCEPTUAL MASTER PLAN

prepared for:

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Recreation Department
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1.0 INTRODUCTION

1.1 Purpose of the Study

The primary purpose of the Cave Creek Recreation Area study was to develop a conceptual master plan for the park to solidify long range development objectives and to guide facility siting and layout within the property. A plan was needed which would preserve and enhance the biological, physical, scenic, and cultural resources of the site and which would provide for public use of the area while respecting the sensitivity of the natural environment.

Adjacent properties which could accommodate the long-range goals and objectives of the Parks and Recreation Department and presented ecological zones, geological and topographical units, or activity areas not encompassed by the present boundaries were also studied, at the county's request, for possible acquisition.

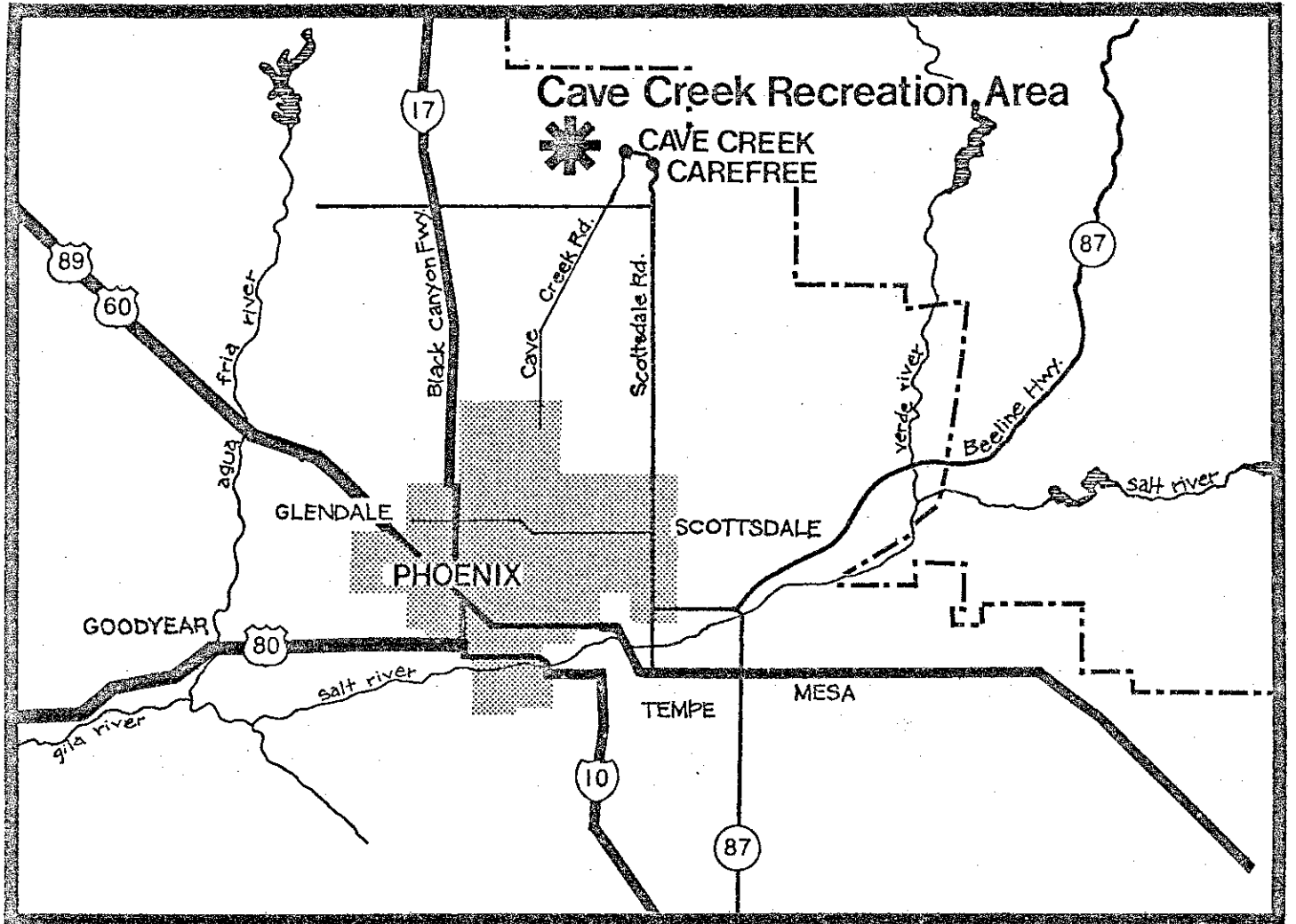
2.0 DESCRIPTION OF PROPERTY

2.1 Existing Maricopa County Property

The Cave Creek Recreation Area is located north of New River Road and Cave Creek, approximately 24 miles north-northeast of Phoenix and one mile west of the town of Cave Creek, see Figure 1. The 2752 acre site presently held by the county consists of T6N, R3E Section 25 T6N, R4E, Sections 30 and 31, the northern quarter of T5N, R4E Section 6, the south half of T6N, R3E Section 24, and the south half of T6N, R4E Section 19.

2.2 Adjacent Landowners

The Cave Creek Recreation Area is bounded by private and governmental holdings as shown on Figure 2.



Location Map

Figure 1

North of the recreation area the W 1/2, NW 1/2 Section 24 T6N, R3E is privately held with numerous small owners while the E 1/2, N 1/2 Section 24 T6N, R3E is owned by Stephen B. and Sandra S. Williams. Just south of the William's property on the recreation area's east side are state owned SW 1/4 Section 29 and NW 1/4 Section 32, T6N, R4E. The land bounding the southeastern Portion of the site is owned by Benham, Blair, Ditzlar and Saylor, Inc. This group has expressed interest in selling property to the county for recreational purposes. South of the recreation area the SE 1/4, NE 1/4, Section 6 T5N, R4E is owned by John Stewart; while the SW 1/4 NE 1/4 Section 6 and the S 1/2, NW 1/4, Section 6 T5N, R4E is under BLM jurisdiction. Private ownership accounts for E 1/2, NE 1/4; E 1/2, SE 1/4; SW 1/4, SE 1/4 and S 1/2, SW 1/4 Section 36 T6N, R3E. Included in that private land are three BLM parcels of approximately 10 acres each. The remaining portion of Section 36 is state land. The western boundary of the site adjoins BLM land in the NE 1/4, Section 35 T6N, R3E and state land in the E 1/2 Section 26 T6N, R3E and SE 1/4 Section 23 T6N, R3E.

2.3 Acquisition Recommendations

The various parcels of land that could be acquired by Maricopa County to augment the existing recreation area property include three categories of ownership; private, state and federal. In order to access the site, two parcels are suggested for immediate acquisition, including federal lands in the NE 1/4 of Section 35 T6N, R3E and 25 acres of state land in the NW 1/4, NW 1/4 Section 36 T6N, R3E. The acquisition from the BLM of the NE 1/4 of Section 35 could probably be accomplished by

lease agreement for a nominal fee. The NE 1/4 of Section 35 is connected to New River Road by a narrow band of BLM land. This strip would provide the entryway into the park. Arizona state land must be purchased at the current fair market value. The purchase of approximately 25 acres in the NW 1/4, NW 1/4 Section 36 is necessary to allow access into the county recreation area.

Three additional pieces of property should be considered by Maricopa County for long-range development of the Cave Creek Recreation Area. State owned lands in the SW 1/4, Section 29 and NW 1/4 Section 32 T6N, R4E, obtainable by the county at the fair market value, are highly recommended for acquisition. Purchase of this area will provide vehicular access into the northeastern portion of the park, allowing additional facility development at Jim Adams Well. This acquisition would also include a section of Cave Creek, within the park which could provide park visitors the opportunity to experience the diversity of plants and wildlife along the stream.

The SW 1/4, Section 32 T6N, R4E owned by Beham, Blair, Ditzler and Saylar, Inc., is another parcel recommended for acquisition. Negotiations for the purchase of this land have been initiated between the owners and the Maricopa County Parks and Recreation Department.

The 10 acres in the NW 1/4, NW 1/4 Section 5 T5N, R4E are of interest to the county for an easement along an existing jeep road, which would provide a trail access into the southern portion of the property.

2.4 Property Access Alternative

An alternative to accessing the recreation area through BLM

lands in Section 35 and the NW portion of Section 36 would be to acquire the state owned lands in Section 36 and a 10 acre easement across two private holdings. Although highly desirable from a development standpoint, it appears this alternative may not prove feasible economically, since the county would have to purchase the property at fair market value. This alternative is illustrated by Figure 8.

3.0 SITE INVENTORY

3.1 Inventory Process

The inventory of Cave Creek Recreation Area's natural resources was accomplished primarily through on-site observation and through the use of all existing information available from Maricopa County. Ecological (vegetation and wildlife) and geotechnical (geology, soils, hydrology) consultation was provided by E. Linwood Smith and Associates, ecological consultants, and Fugro, consulting engineers and geologists, respectively. The project team spent June 24-26, 1980 at the recreation area. Inventoried data was initially mapped in the field on topographic maps at a scale of 1"=400' with 5' contour intervals.

3.2 Vegetation

The predominant vegetation occurring in the Cave Creek Recreation Area, typical of the Sonoran Desert, is the association of paloverde and cactus. The paloverde and saguaro found on the rocky uplands exhibit the maximum development of this vegetation type. The more level areas such as the valley which extends into the heart of the site, are dominated by paloverde and various cacti species.

Along dry washes, including Cave Creek and its tributaries or arroyos, occurs the only significant variation from the mixed paloverde-

cactus association. Such species as mesquite, ironwood, and foothill paloverde, which require more water, are characteristic of wash vegetation, see Table 1 - Vegetation Types. The paloverdes, ironwood, mesquite, and all cacti are under protection of the Arizona Native Plant Law. Cacti on the federally endangered species list are not likely to occur at Cave Creek Recreation Area, and none were observed. ✓

The use of the park as an educational resource should be encouraged since opportunities to interpret the natural environment are great. Displays depicting the adaptive evolution undergone by desert plants and their slow maturation process, the existing plant communities, and the role played by desert plants in the lives of prehistoric man will help visitors develop a greater respect for the fragile desert vegetation. This can reverse the existing pattern of the careless destruction of cacti and the unthinking use of park trees like the mesquite and ironwood for campfires.

3.3 Wildlife

Wildlife species occur in abundance in the Cave Creek Recreation Area. Both migratory and permanent species inhabit the park over the course of the year. Invertebrates commonly associated with the Sonoran Desert such as tarantulas, wind scorpions, centipedes and giant millipedes are found in the Cave Creek Recreation Area. Typical birds of this desert are the roadrunner, screech owl, elf owl, and harris hawk. Desert tortoises, gila monsters and several rattlesnake species, as well as other lizard and snake species occur on the site. Desert tortoises utilize the caves along Cave Creek for shelter.

TABLE I

A PARTIAL LISTING OF PLANT SPECIES FOUND
WITHIN THE CAVE CREEK RECREATION AREA

Life Form Key: T = Tree S = Shrub G = Grass C = Cactus
V = Vine M = Moss F = Fern H = Herb

<u>Scientific Name</u>	<u>Common Name</u>	<u>Life Form</u>	<u>HABITAT</u>	
			<u>Wash</u>	<u>Upland</u>
<u>Acacia greggii</u>	Catclaw	S	+	-
<u>Acourtia cf wrightii</u>	Brownfoot	H	+	-
<u>Aloysia wrightii</u>	Wright Lippia	S	+	+
<u>Ambrosia ambrosioides</u>	Canyon Ragweed	H	+	-
<u>Ambrosia deltoidea</u>	Burrobush	S	+	+
<u>Argythamnia lanceolata</u>	Lance-leaved Ditaxis	S	+	+
<u>Aristida cf parishii</u>	Three-awn	G	+	-
<u>Asclepias cf albicans</u>	White-stemmed Milkweed	H	-	+
<u>Bebbia juncea</u>	Chuckwalla's Delight	S	+	-
<u>Brickellia sp.</u>	Brickellia	S	+	-
<u>Calliandra eriophylla</u>	Fairy Duster	S	+	-
<u>Canotia holacantha</u>	Canotia	S-T	-	+
<u>Cassia covesii</u>	Desert Senna	S	+	+
<u>Celtis pallida</u>	Desert Hackberry	S	+	-
<u>Cercidium floridum</u>	Blue Paloverde	T	+	-
<u>Cercidium microphyllum</u>	Foothill Paloverde	T	+	+
<u>Cereus giganteus</u>	Saguaro	C	-	+
<u>Cirsium sp.</u>	Thistle	H	+	-
<u>Condalia cf eridoides</u>	Javelina Brush	S	+	-
<u>Cucurbita digitaria</u>	Finger-leaved Gourd	V	+	+
<u>Dyssodia porophylloides</u>	San Felipe Dyssodia	S	+	+
<u>Echinocereus engelmannii</u>	Hedgehog Cactus	C	-	+
<u>Encelia farinosa</u>	Brittle Bush	S	-	+
<u>Encelia frutescens</u>	Rayless Encelia	S	+	-
<u>Ephedra cf fasciculata</u>	Joint Fir	S	+	+
<u>Erigeron sp.</u>	Fleabane	H	+	-
<u>Eriogonum fasciculatum</u>	California Buckwheat	S	+	+
<u>Eriogonum sp.</u>	Wild Buckwheat	H	+	+
<u>Ferocactus wislizenii</u>	Barrel Cactus	C	+	+
<u>Fouquieria splendens</u>	Ocotillo	S	-	+
<u>Galium stellatum</u>	Desert Bedstraw	S	+	+
<u>Gutierrezia sarothrae</u>	Broom Snakeweed	H	+	+

TABLE I - Concluded

A PARTIAL LISTING OF PLANT SPECIES FOUND
WITHIN THE CAVE CREEK RECREATION AREA

<u>Scientific Name</u>	<u>Common Name</u>	<u>Life Form</u>	<u>HABITAT</u>	
			<u>Wash</u>	<u>Upland</u>
<u>Haplopappus tenuisectus</u>	Burroweed	S	-	+
<u>Haplopappus sp.</u>	Haplopappus	S-H	+	+
<u>Hilaria rigida</u>	Big Galleta	G	+	+
<u>Hyptis emoryi</u>	Desert Lavender	S	+	-
<u>Janusia gracilis</u>	Janusia	S	+	-
<u>Krameria grayi</u>	White Ratany	S	+	+
<u>Krameria parvifolia</u>	Little-leaved Ratany	S	-	+
<u>Larrea tridentata</u>	Creosotebush	S	+	+
<u>Lycium cf andersoni</u>	Anderson Thornbush	S	+	-
<u>Mammillaria sp.</u>	Pincushion Cactus	C	-	+
<u>Menodora scabra</u>	Menodora	S	+	+
<u>Mirabilis cf bigelovii</u>	Wishbone Bush	H	+	-
<u>Notholaena sp.</u>	Cloak Fern	F	-	+
<u>Oleaya tesota</u>	Ironwood	T	+	-
<u>Opuntia acanthocarpa</u>	Buckhorn Cholla	C	+	+
<u>Opuntia bigelovii</u>	Teddy Bear Cactus	C	-	+
<u>Opuntia leptocaulis</u>	Christmas Cactus	C	+	+
<u>Opuntia fulgida</u>	Jumping Cholla	C	-	+
<u>Opuntia phaeacantha</u>	Prickly Pear	C	+	+
<u>Polypogon monspeliensis</u>	Rabbitfoot Grass	G	+	-
<u>Porophyllum gracile</u>	Odora	H	+	+
<u>Prosopis glandulosa</u>	Honey Mesquite	T	+	-
<u>Psilostrophe cooperi</u>	Paper Flower	S	+	+
<u>Salazaria mexicana</u>	Paper Bag Bush	S	+	+
<u>Selaginella cf eremophila</u>	Deser Selaginella	M	-	+
<u>Senecio cf lemmoni</u>	Groundsel	H	+	+
<u>Simmondsia chinensis</u>	Jojoba	S	+	+
<u>Stephanomeria pauciflora</u>	Wire Lettuce	H	+	-
<u>Trixis californica</u>	Trixis	S	+	-
<u>Viguiera deltoidea</u>	Golden Eye	S	+	-

Study by E. Linwood Smith & Associates, Ecological Consultants,
October 1980. Unpublished.

Scientific and common names follow those of Lehr, 1978.

The mammal group found in the Cave Creek Recreation Area includes deer, fox, coyotes, bobcats, and a great variety of rodents. The desert tortoise and the gila monster are both on the list of threatened and unique wildlife of Arizona. The spotted bat and zone-tailed hawk utilize the Cave Creek Recreation Area during their annual migrations and are also on the State's list of threatened wildlife. A great diversity of wildlife species can be observed in or near stream channels and springs.

The conceptual master plan for the Cave Creek Recreation Area recognizes areas of special interest such as raptor nesting sites and important wildlife habitats. Much of the site will be accessible only by foot or by horseback, thereby minimizing the impact on wildlife and vegetation. Vulnerable areas can be protected by limiting use to the trails provided. The concentration of roads and the use of existing jeep roads, where feasible, will minimize the impact of construction and vehicular traffic on the fragile desert flora and fauna.

Displays depicting the close relationship between plants and animals in the desert and the delicate balance of nature which is maintained can be used to educate park visitors. By providing visitors with a greater knowledge of the natural environment, the problem of the removal and disturbance of wildlife might diminish. The removal of desert tortoises, the harrassment of gila monsters and killing rattlesnakes in the Cave Creek Recreation Area are problems presently.

3.4 Soils

The soils within the proposed recreation area are categorized into five types of soil groups with common profile characteristics, see

figure 3. Profile characteristics include color, internal structure, texture, slope position and depth. —

The Gachado-Cherioni-Gran Rock Outcrop Association predominates the soils in the study area. The series form on volcanic, metamorphic and granitic bedrock developing very shallow to shallow soil profiles that are well drained and moderately to slowly permeable.

The Gachado series is brown to red-brown, gravelly and cobbly clay and sandy loam. Soil thickness is very shallow (less than 2 feet) and develops on 0 to 45% slopes. The Cherioni series is light brown to brown, very gravelly, fine sandy loam with a hardpan developed near the bedrock/soil contact. The very shallow soils (generally less than one foot) develop on slopes 0 to 70%. The Gran series forms on highly weathered decomposed granite as a light red to intense red gravelly, silty sand grading to a coarse gravelly sandy clay near the weathered bedrock surface. The transition from soil to bedrock is gradational at depths from 12 to 36 inches below ground surface. Throughout this association, volcanics, metamorphics and granitic rock outcrops are exposed at the surface.

The Ebon gravelly clay loam series includes deep, well-drained, slowly permeable soils formed on the nearly level or moderately steep alluvial fans radiating from the mountains at slopes ranging from 0 to 20 percent. The deep soils (greater than 5 feet) consist of brown to red-brown sandy clay, gravelly sand and clay and gravelly clays.

The Carefree Cobbly Clay Loam located at the south extremity of the study area, consists of deep, well drained, slowly permeable soils developed on old alluvial fans and stream terraces having nearly level slopes. The soils are typically light brown to light red-brown cobbly, silty clay, clay and silty clay.

The Brios-Carrizo complex is in and adjacent to the channel of Cave Creek which marks the eastern periphery of the study area. The soils are excessively drained and rapidly permeable forming nearly level or hummocky surfaces within the channels and adjacent terraces. The Brios series is typically brown silty sand and coarse sand near the surface with gravelly strata at depth and moderately stratified. The Carrizo series is typically an unconsolidated, uncemented, more gravelly sand, and silty sand.

Torripsements and torrifluents are the frequently flooded equivalent of the Brios-Carrizo complex in the active channels of Cave Creek and other washes throughout the site. The soils are predominately boulder and cobble gravel with sand deposited by periodic extreme runoff. Slopes are very shallow and irregular varying from 0 to 3%.

Excavations needed for the construction of roads and major structures will be easist in the Brios-Carrizo complex along Cave Creek, and the Carefree Cobbly Clay Loam soils in the southern portion of the site. Areas consisting of Ebon Gravelly Clay Loam in the south and southwest regions of the park may have moderate excavation problems resulting from localized, gravelly, cemented hardpan.

Shallow excavations for small structures, trails, and utilities are most feasible in the Carefree Cobbly Clay Loam in the southern portion of the site. The Ebon soils present moderate excavation problems due to the localized hardpan and gravel-cobble concentrations. The

majority of the study area is classified as having severe limitations for excavation because of the bedrock at or near the surface.

Material for road construction and good compaction capabilities can be derived from the Brios complex, Carefree Clay Loam and Ebon Clay Loam. Road and trail construction is very difficult in bedrock areas and the more gravelly section of the Ebon Gravelly Clay Loam soils.

3.5 Geology

The surficial geology of the Cave Creek Recreation Area consists of rocks varying from Precambrian (4.5 billion years) to Quaternary (10,000 years) in age and includes metamorphic, sedimentary, intrusive, and volcanic rocks. The Precambrian age bedrock is overlain by Cretaceous (135 million years) volcanic rock. At higher elevations, the weathered schists and altered volcanics are jointed and fractured, forming steep slopes and cliffs. Alluvial fans along the flanks of the hills are formed of Quaternary-Tertiary material, a mixture of granite, metamorphic and volcanic rock generally found cemented with caliche creating a hardpan surface.

Terrace deposits and stream channels of unconsolidated materials occur in the floodplain of Cave Creek and its tributaries. The material varies from boulders and cobbles to sand and silt, the coarsest material being found within the active stream channel

3.6 Hydrology

Surface water within the Cave Creek Recreation Area is channeled in intermittent streambeds or washes which have an excessive flow after storms but which are normally dry for most of the year. Some streams are supplied by springs that maintain a small flow of water in the streambed well into the summer months.

Because of the presence of relatively impermeable bedrock at or near the surface, the percolation of surface water into the ground is minimal. As a result, localized flash flooding occurs in normally dry streambeds during storms. No construction should occur within the stream channels because of the flash flooding dangers.

The main water-bearing units of ground water are found within Cave Creek, on the east side of the site, Apache Creek on the west, and Paradise Valley on the south. These water-bearing units consist of unconsolidated silts, sands and gravels in the stream channels and the semi-consolidated material of the alluvial fans found within the main drainage basins.

Recharge of the water-bearing units is the result of surface run-off from the surrounding mountains. Very little water reaches the aquifers because of the limited excavation of surface water. No producing wells exist within the Cave Creek Recreation Area, however, wells along Cave Creek and Apache Wash produce water for domestic purposes. Static water levels ranged from 18-24' below ground surface in Cave Creek and from 110-668' below the surface in Apache Wash.

Drilled well yields vary considerably depending on the saturated thickness of the water-bearing units. The unconsolidated silt, sand and gravel units along Cave Creek and its major tributaries yield less than 50 gpm. The quality of the groundwater in Cave Creek wash is generally good.

According to local sources of information, there is a year round spring in the northwest quarter of Section 25 which supplies water suitable for livestock use. This spring was not observed by the study team.

3.7 Topography

Topography, or the physical lay of the land, is one of the primary determinants affecting land use. Where the land is relatively flat or gently rolling, all facility construction is greatly simplified. The recreation areas' topography is illustrated by Figure 4.

The topography of the study area has been mapped in four slope gradient categories, selected for their developmental implications. Slopes ranging from 0-7% generally offer opportunities for recreation facility development and are conducive to siting of campgrounds, park buildings, picnic areas and vehicular access facilities. Slopes of 8-15% are suitable for trails and dispersed recreational uses, but are marginal for major facility uses. Slopes of 16-25% can be used for trails and dispersed recreation, however sensitivity in siting facilities on these slopes and protective management practices are necessary to preclude environmental degradation. Slopes of 26% and greater are generally unsuitable for use.

3.8 Climate¹

The climate of the study area is warm and arid. The mean daily minimum and maximum temperatures were recorded as 37.6/64.3 degrees Fahrenheit for January and 74.6/102.2 degrees Fahrenheit for the month of July. The mean annual rainfall at Cave Creek is 11.11 inches, occurring primarily during July/August and December/January. This climate dictates a recreation season spanning fall, winter and spring when daily high temperatures are comfortable.

¹ Climatological Data - Sellers and Hill, 1974:143

3.9 Scenic/Visual Resources

The rough, rocky mountains of the Sonoran Desert typified by those found in the Cave Creek Recreation Area provide great visual interest. Wide alluvial despoits filling the valleys, creating gently sloping valley floors contrast with the surrounding hills and provide expansive interior vistas. The visual resources map, Figure 5, shows the steeply sloping hill topography as highly visible, accordingly.

The hills are capped with several prominent ridge lines, including 23 peaks with an elevation of 2300' or greater. These vantage points provide sweeping views to the east, south and west and direct the viewers attention away from the foreground detail of the recreation area.

A high degree of visual interest is created by the variety of vegetation texture and color. The Saguaro form very strong vertical elements while the Palo Verde trace their delicate branching patterns against the sky. Strong contrasts are formed by the vegetation in washes and stream channels where the plants are the lushest and most bountiful creating linear vegetation patterns across the landscape.

3.10 Cultural Resources

Historical and archaeological resources in the Cave Creek Recreation Area were mapped utilizing existing documentation previously prepared for the county by Archaeological Research Services. This study utilized a thorough investigation of three parcels defined by Maricopa County, and a survey of 20 percent of the remaining park area, approximately 430 acres, which represented the various topographical types of the park and a wide geographical distribution. The areas surveyed and the findings are mapped on Figure 6.

Prehistoric utilization and occupation of the Cave Creek Recreation Area and surrounding area occurred during three periods of the Hohokam culture (ca AD 1400-700). The Hohokams were the primary occupants during this period but the Sinagua also occupied the area.

Eight sites, 4 historic and 4 prehistoric, were recorded on the Cave Creek Recreation Area during the survey. Six of these sites AZ U:11 - U:1:6, are potentially eligible for nomination to the National Register of Historic Places. The four prehistoric sites are located within close proximity of each other along the south portion of the park. It is believed that they are a part of a large prehistoric occupation which extended for some distance to the south. The sites include caves which show evidence of habitation, an area where petroglyphs have been found, and evidence of prehistoric agricultural activity. More intensive surveys may locate a few minor prehistoric sites, but no additional major sites would be discovered.

The four historic sites represent mining, agricultural activity and ranching. Mining activities occurred from the late 1870's through 1910 or later. A portion of the Cave Creek Recreation Area was used for grazing as late as the 1950's. Physical evidence of these activities include a canal and flume, concrete stock watering tanks and scattered timbers from a miner's cabin. Additional evidence of mining and mining-related activities is provided by numerous mine shafts and adits.

It is recommended that these archaeological and historical resources be protected either by incorporation into the park development plans as public resources or by documentation of each site and recovery of data.

In conceptual master plan A, the historic sites including the Linville Ditch flume and canal, cabin remains, and Jim Adam's well are accessible by foot. Alternative B provides vehicular access to Jim Adam's well in the north and to a picnic area a very short distance from the Linville Ditch. These resources lend themselves to on-site interpretation. The prehistoric sites are not directly accessible by either vehicle or foot to retain the remains intact, for further study. It is suggested that protection be provided for these resources to preclude vandalism. The site could be dug and the resultant artifacts housed for public display in the history interpretation center shown on conceptual master plan, scheme B, figure 9.

3.11 Development Opportunities/Constraints

The development opportunities map, figure 7, is a composite of the opportunities and constraints for park facility development. As a public park, the construction of roads and structures, the placement of utility lines, and the designation of activity areas and tracts must be accomplished while avoiding environmental damage. The development opportunities composite map is a tool to guide facility siting to minimize environmental conflicts.

Using Soil Conservation Service criteria, the study area soil types were rated for recreational uses. The engineering capabilities of Brios-Carrizo soils, Carefree Loam, and Ebon Gravelly Clay Loam, see figure 3, make these the most suitable for facility development. The shallow sloped valley floors formed of Ebon soils are advantageous for siting structures, roads, and camping areas, see figure 4.

No development should occur within the washes dissecting the valley. There is a significant danger of flash flooding and the potential increase of stream bank erosion as well as the detrimental effect construction would

have on the wash vegetation which supports a major portion of the desert wildlife population.

Additional areas suitable for development are located in the more level portions of the site, identified on the slope map, figure 4. Both steep slopes and exposed bedrock preclude the development of facilities. The eastern portion of the valley which bissects the park is suitable for construction, although the depth to bedrock is shallower than in areas of the Ebon soils. Other pockets of deeper soils developed over the Gachado Cherioni Gran Association are utilized for trail locations.

Site specific soil and geological testing should be conducted as planning efforts for design of park facilities proceed.

4.0 Conceptual Master Plan

The conceptual master plans, which are described in detail in the following sections, were developed to define long range park development objectives, including access, facilities to be provided, and level of service or design carrying capacity. The master plans also serve as a guide for facility siting and overall park layout to preserve site resources while providing for public use and to provide ease in management and maintenance.

Two long range conceptual master plans have been developed at Maricopa County's request to show how the park might be developed under two land acquisition scenarios. Alternative A deals with development with minimal land acquisition required to access property presently owned by the county. Two possible avenues of approach exist, however access across federal lands in section 35 is preferred due to substantial cost savings. This route and associated entry facilities are shown in solid black while the possible route through section 36 is dashed, signifying its lower preference.

Alternative B illustrates how the park could be expanded if the recommended acquisitions are secured to the east. Section 2.3 discusses these acquisition possibilities in detail.

4.1 Alternative A - Minimum Acquisition

Conceptual master plan A, see Figure 8, assumes the management authority of the BLM land in the NE $\frac{1}{4}$ of Section 35 and the \pm 10 acres of land connecting that parcel with New River Road would be transferred to Maricopa County. The 25 acres of state land in the northwest corner of Section 36 is also incorporated into this plan to access the present park property.

The proposed park facility components, established through the inventory of the park's natural and cultural resources, professional and public input, and county planning objectives, will allow the best use of the area's resources while preserving the sensitive natural environment. Among the components are the main introduction center and rodeo/show arena, a maintenance retiree village, a group picnic area, an interpretation/education center, camper and tent camping sites, picnic areas, and trails.

4.1.1 Park Entrance Area

A sign located on New River Road announces the recreation area's entrance. Concentrated near the entrance is an area of high-intensity use including a group picnic area, the introduction center, and the rodeo arena, reducing the impact of these activities on hikers, campers, and wildlife throughout the less intensively managed remaining parkland.

The introduction center is located just within the park. It controls access into the park and entrance fees could be collected. Permits for camping and maps describing trails and trail heads would be available here and displays of park activities and comfort stations are located within the introduction center. Parking would be available for these uses.

The rodeo/horse show arena area is virtually self-contained. One hundred parking spaces for visitors and rodeo participants and 3.5 to 4 acres for horse trailers and stock vans are provided to access the NRA arena. The provision of 35 trailer or camper pads adjacent to the arena will accommodate participants at a two to three day event with access to comfort stations and water provided. From the arena, a trail connects into the park trail system, making park access convenient for equestrian groups.

The need for a large group picnic area dictated its incorporation into the high intensity use area. Parking for 200 cars is suggested to enable either several groups or one very large group to utilize the area. Tables, grills and comfort stations would be provided.

In addition to a residence for the full time park ranger, a maintenance shed and shop building would be constructed. A 26' x 40' structure is sufficient for machinery and tool storage.

A secluded area is designated a retiree village. Ten to fifteen trailer, RV, or camper pads, supplied with electrical, water and sewer hook-ups provide bases for temporary residents. In return for the opportunity to live in the park and in payment for the camper pad, the retired person works a specified number of hours per week for the park, manning ticket booths, acting as guides and interpreters, or performing maintenance.

This concentration of intensively used activity areas and structures is sited to minimize the constraints of soils and topography. Excavation work for the construction of facilities can be accomplished without major problems and the open valley floor where the structures are to be sited is at a very moderate grade, making it suitable for heavy use.

4.1.2 Circulation

Circulation within the park is provided by a primary road for vehicular use and trails designed for equestrian and foot traffic. A 24' wide, asphalt road would provide vehicular access into the park. Short spurs provide access to campgrounds, picnic sites, and points of interest.

Each picnic area, campground and interpretive center is the terminus of a trail thus linking all facilities by roads and trails. The approximate 16-20 miles of trail system make the park accessible for hikers and horseback riding. Some existing 4-wheel drive roads were used in this network and provide excellent opportunities for horseback riding, particularly for larger groups, while minimizing new construction scars. Other trails are 1½' - 3' marked paths which have been cleared of debris, but which wind their way around rocks and vegetation, remaining sensitive to topography and visual orientation.

Consideration for wear on vegetation and the potential for greater erosion resulting from horse traffic on the trails might preclude the use of horses on trails leading to mountain summits or along particularly steep embankments and slopes. Unrestricted use of all jeep roads encountered in the park is to be avoided. Easy access into important wildlife habitats, including falcon roosts in the uplands, desert tortoise caves and prime deer habitats could have a very detrimental effect on the park's ecological balance. Trails will provide the means to visit historical sites, vantage points, and interesting physical features without the impact of vehicles on wildlife and terrain. Trail heads would be clearly marked to facilitate the use of the trails. With limited horse unloading points available and therefore fewer starting points for trail rides, the use of paths paralleling the road will allow equestrian access to the east end of the recreation area

without relegating them to internal trails originating from picnic and camping areas.

4.1.3 Education/Interpretation Center

An expressed need by several of the parties interested in the Cave Creek Recreation Area and the site's natural interpretive opportunities lead to the proposal for an interpretation center as an educational element in the park program. An excellent opportunity to educate people on the cultural and historical assets of the park, the sensitivity of desert ecosystems, and the evolutionary process of desert vegetation to enhance their appreciation and respect for the environment exists at the park. The structure perceived for use as an interpretive center could be approximately 1000 square feet and house displays of the flora and fauna of the Sonoran Desert, descriptions of the adaptive capabilities of such desert plants as the saquarō and the palo-verde, and lecture and discussion space for groups. Guides able to discuss aspects of the region's cultural history and naturalistic resources with park visitors would be stationed here and could lead tours from the center. School and nature groups could be accommodated here for day-long programs. Restroom facilities, potable water, and parking, and the opportunity to learn about the park make this an important trail stop for park visitors.

4.1.4 Campgrounds

Campgrounds in the recreation area are provided for both camper/RV and tent use. Each camper/trailer area contains a comfort station and a water supply which serves tent camping areas and day visitors as well. Trailer areas are situated on short spur-roads off the primary road, while tent camping is located up to ½ mile from the road. Adjacent to the rodeo arena, 30-35 camping sites are available for use by those attending activities held there. These facilities are discussed in Section 4.1.1.

Campground A is planned for 27 camper/trailer sites with a comfort station and water supply provided for their use. This area serves as a trail head for the northwestern portion of the park, although these trails do connect into the other areas.

Twenty camper/trailer sites are provided for campground B. A comfort station and a water supply are planned for the 20 RV sites. The 10 dispersed tent sites found in walk-in campground E would be served by a comfort station but would obtain water approximately $\frac{1}{4}$ mile away at campground B. A small trail head parking area for 20 cars would be utilized by walk-in campers and those day visitors wishing to hike into the more remote portions of the park.

A similar arrangement of camper/trailer and tenting sites occurs in campground C and walk-in campground D, located at the terminus of the primary park road. Thirty-eight camper/trailer sites are situated here on gentle slopes. Walk-in campground D, a very small area containing five tent sites, has access to the comfort station and water supply in campground C. The 10-car parking area, or trail head, serves the walk-in campers while the remaining spaces can be used by hikers. Campground C is a trail head for two trails leading into the northeast and southeast corners of the park. Within a one-mile radius of this starting point are several areas of great interest to park visitors. Mining cabin remains, the Linville Ditch flume and irrigation canal, and Jim Adam's well are three historic sites accessible by trails from campground C. An understanding of the area's geology can be gained by experiencing the vistas encountered along the trails leading to these areas.

4.1.5 Picnic Areas

Four picnic areas are provided for use by individuals and family groups. All the picnic areas are adjacent to the park road to avoid unnecessary construction of additional roads to lessen the impact on park resources.

Adjoining the Nature Interpretation Center is a picnic area planned for 25 picnic sites. The central parking for 40 cars is utilized by visitors to the Interpretation Center, hikers, and picnickers.

Along either side of the park road between the Interpretation Center and Campground A are two picnic areas. Trails originating here provide access to the Interpretation Center and to Campground A where water is found. Both areas would be served by restrooms. Thirty-five parking spaces are provided for the 30 picnic sites; the remaining ones are available to hikers.

A fourth picnic site, again adjacent to the park road, is sited approximately a quarter of a mile beyond Campground B. The 30 parking spaces are needed to serve the 20 picnic sites in addition to providing parking for hiking. This picnic/parking site provides an excellent point of departure on trails which directly reach the southern portion of the park as well as the points of interest in the northern most sections.

A buffer strip between the road and picnic sites could be designed into the picnic area layout to maximize separation of vehicular traffic and picnickers.

4.2 Alternative B - Recommended Acquisition

Alternative B illustrates how park development should proceed following the acquisition of the SW $\frac{1}{4}$ of Sec 29 and the W $\frac{1}{2}$ of Sec 32. With the acquisition of these desirable parcels, the road could extend to Cave Creek where it would branch south and north. The extension of the road would require only improvement and widening of an existing jeep trail from Campground C to Jim Adam's well. This will greatly reduce impacts associated with the road construction.

4.2.1 Jim Adam's Well

The terminus of the north fork of the park road is at Jim Adam's Well, an area of historical interest. A large picnic area of 25 sites with parking for 40 cars is located here. In addition, a horse van drop-off area and a small corral are provided which will enable riders to explore the park via trails through the northern and eastern portions of the park. Comfort stations are provided in the picnic area, and will also serve the trailhead. Potable water is not planned for the site, however it may be possible to develop a water supply for riding stock utilizing springs near Jim Adam's Well. The well itself is currently not productive.

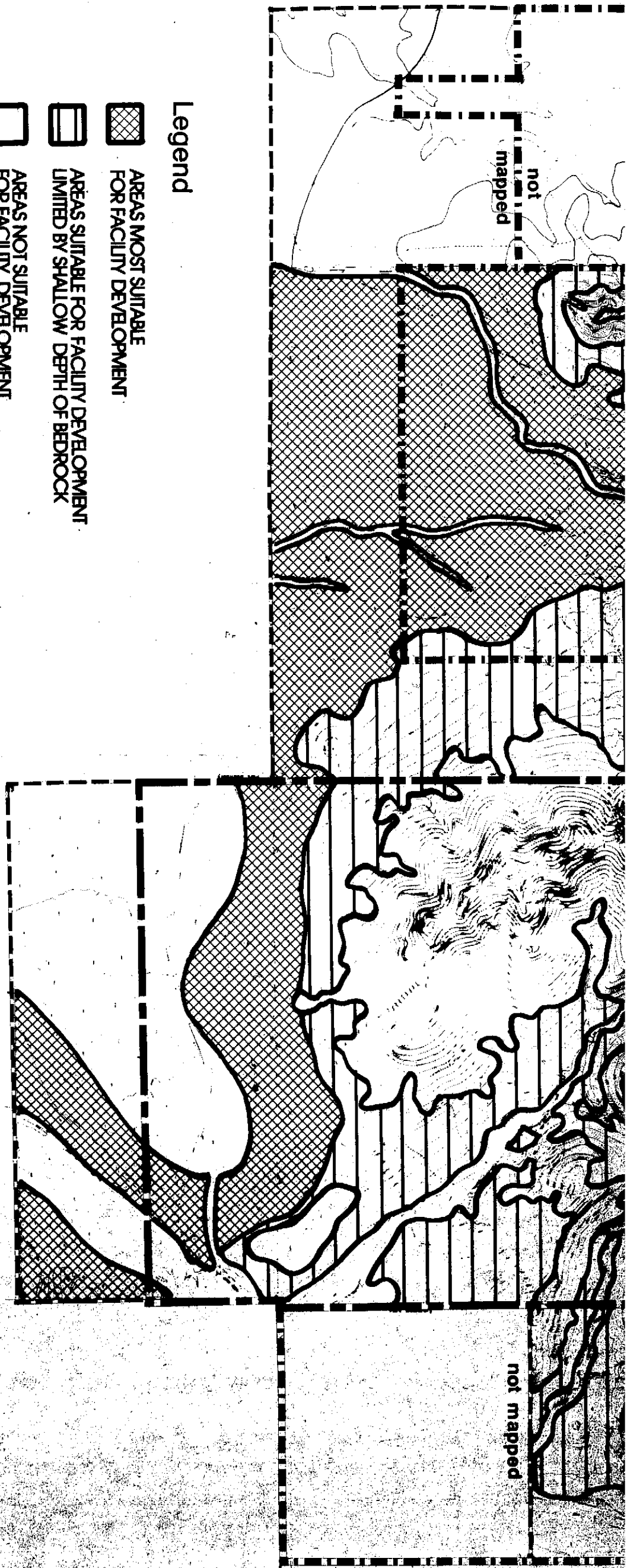
4.2.2 Cave Creek Area

The road also extends to the southern border of Sec 32 where 30 parking spaces serve a trailhead and the 20 picnic sites. This area provides an easy point of access to historical sites, points of interest and to Cave Creek. A trail paralleling the park road enables visitors to easily reach the History Interpretation Center on foot.






4.2.3 History Interpretation Center

The Interpretation Center, housing displays of pre-historic, historic and cultural activities of the Cave Creek Recreation Area and related

regions, is situated at the point where the park road branches off toward the Cave Creek picnic area. This 1000 square foot building accommodates school or other interest groups for discussions and slide shows, provides information on the historic background of the Cave Creek region, and serves as the starting point for guided tours through the park's historic features. Artifacts from the sensitive pre-historic sites could also be displayed and interpreted here. The restroom facilities and water supply in the Interpretation Center are provided for those utilizing the 20 picnic sites adjacent to the building and for hikers and equestrians. A small corral and horse van drop-off area, located near the education center, make this an ideal location for guided, educational tours of the park for equestrian groups.



Legend

-  AREAS MOST SUITABLE FOR FACILITY DEVELOPMENT
-  AREAS SUITABLE FOR FACILITY DEVELOPMENT LIMITED BY SHALLOW DEPTH OF BEDROCK
-  AREAS NOT SUITABLE FOR FACILITY DEVELOPMENT
-  CURRENT PARK PROPERTY
-  ADDITIONAL PROPOSED ACQUISITION

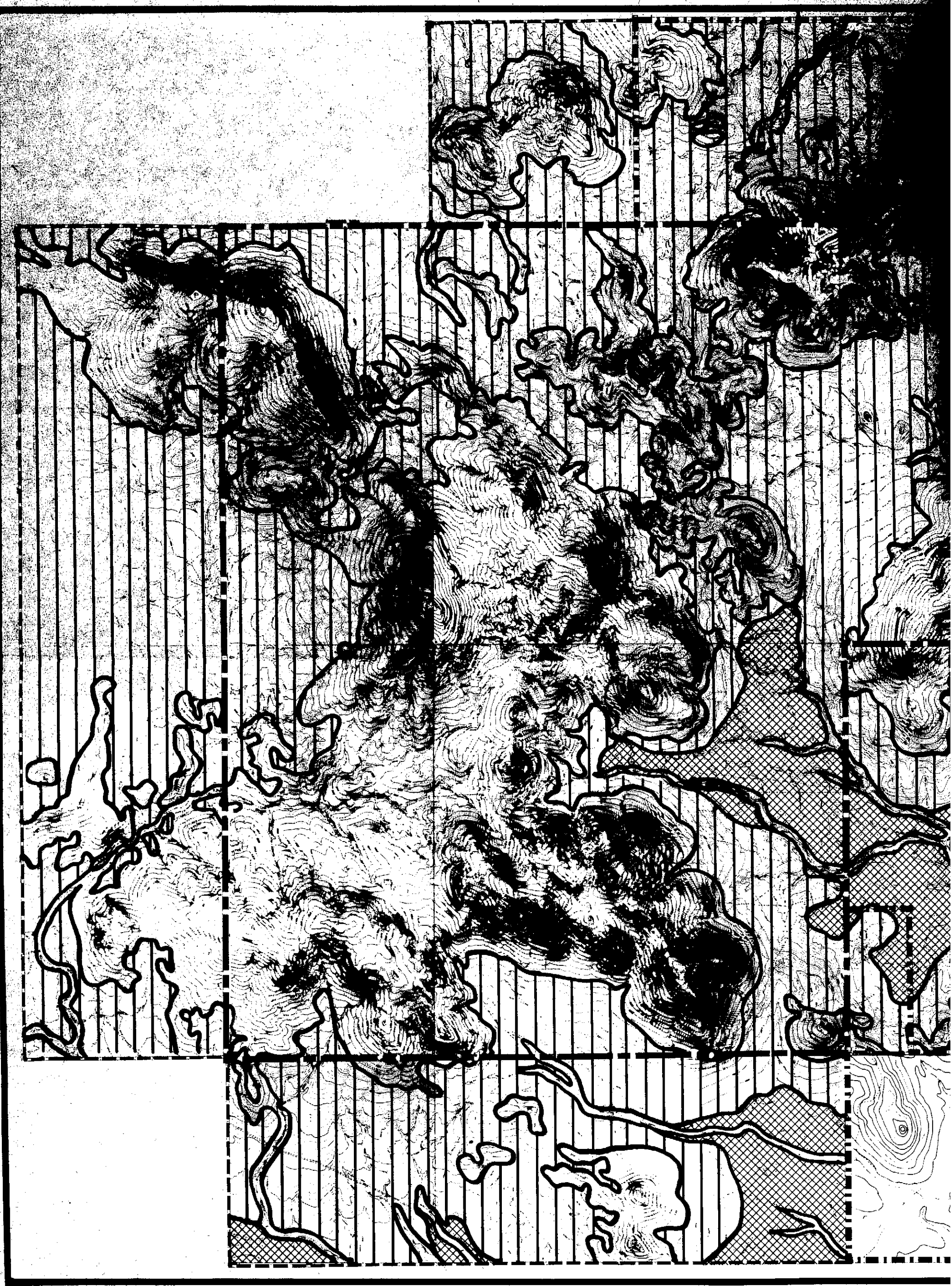
Development Opportunities Cave Creek Recreation Area

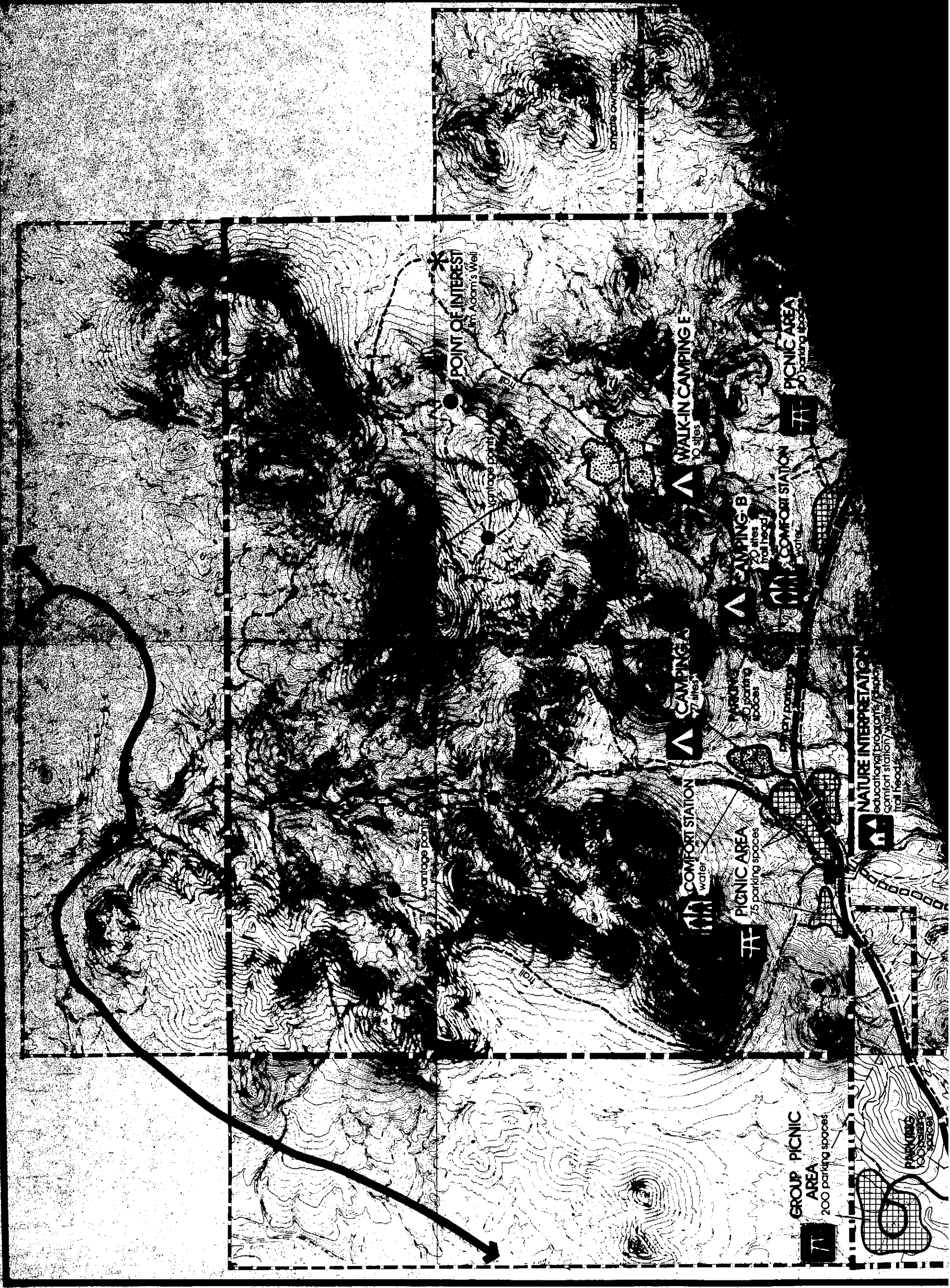
prepared by:
Maricopa County Parks and Recreation Department Phoenix, Arizona

prepared by:
Wirth Associates, Inc. Phoenix, Arizona • Billings, Montana



10-77





POINT OF INTEREST
Mt. Adams's Well

Vantage Point

Vantage Point

WALK-IN CAMPING E
70 sites

CAMPING B
8 sites
trail head

CAMPING C
77 sites

PARKING
25 parking spaces

COMFORT STATION
water

PICNIC AREA
75 parking spaces

COMFORT STATION
water

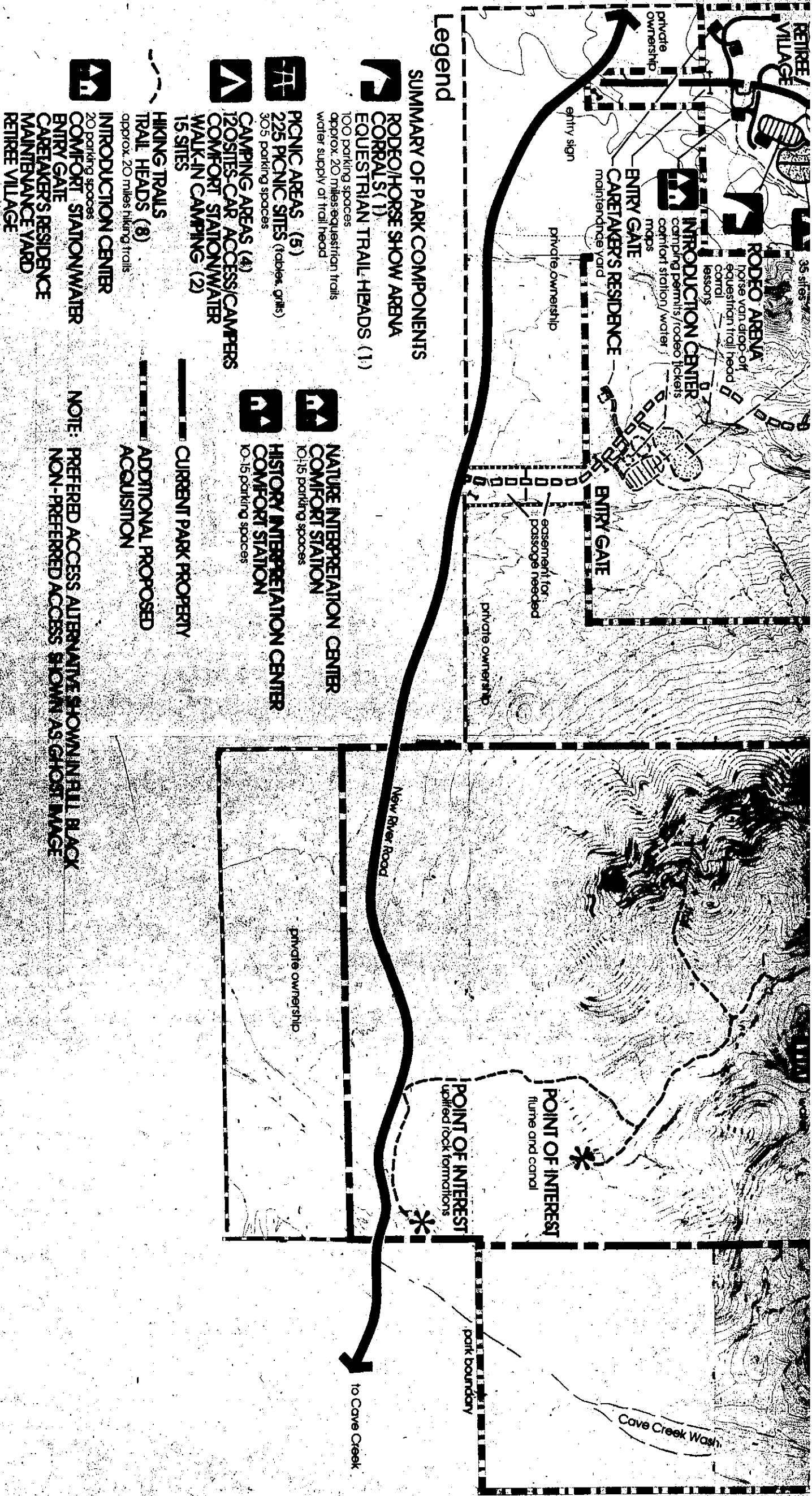
PICNIC AREA
70 parking spaces

NATURE INTERPRETATION
educational programs, exhibits
comfort station, water
trail head

GROUP PICNIC AREA
200 parking spaces

PARKING
100 parking spaces

Private Campsite



Conceptual Master Plan & Cave Creek Recreation Area

prepared for
Maricopa County Parks and Recreation Department



Figure 8