CESWL-CO-ON (CESWL-CO-RV/10 Oct 97) (1130) 1st End Johnson/tm/5675
SUBJECT: City of Ozark's Revised Trail Development Plan and Land Use Policies

24 OCT 1997

District Engineer

THRU Chief, Construction-Operations Division

FOR Chief, Real Estate Division

Supplement No. 4, Design Memorandum No. 6-3, Ozark Lake Master Plan, designating 49 acres of project lands "recreation-intensive use" is approved with the conditions and recommendations provided by the Operations Project Manager. This new land use designation makes possible the expansion of the existing city park lease (DACW03-1-76-307) as is indicated by the hatched areas on the enclosed map.

SIGNED

Encl

P. S. MORRIS
Colonel, Corps of Engineers
District Engineer

Copy Furnished:
CECW-ON (w/encl)
CESWD-ETO-R (w/encl)
Oper Proj Mgr, Russellville PO (w/encl) (5 cys)
Chief, General Engineering Section (w/encl)
Chief, Hydrology & Hydraulics Branch (w/encl)
Chief, Environmental Analysis Branch (w/encl)
Chief, Geotechnical Branch (w/encl)
Ozark Lake Master Plan (w/encl)
Log Book (w/encl)

CESWL-CO-RV

10 October 1997
Epperson/wkj/5137

MEMORANDUM FOR Chief, ~~Con-Ops~~ R 10/15

SUBJECT: City of Ozark's Revised Trail Development Plan and Land Use Policies

1. References:

a. A letter to Colonel P. S. Morris dated 18 September 1997, from Mayor Vernon McDaniel, City of Ozark, concerning the revised trail development plan.

b. E-mail to Park Manager P. Gregory Miller, Ozark Field Office, dated 30 September 1997, from Mr. Jack Johnson, Natural Resources Management Section, subject: Expansion of Ozark City Park Lease, requesting field office comments.

2. I have no objection to the City's plan. I would also recommend adding tract numbers 245, 257, 258, and 260. These tracts may have been inadvertently left out, but should be added to give the City of Ozark contiguous use for their trail system.

3. I recommend approval as submitted with the additional tracts included as noted above.

Robert J. Moix

ROBERT J. MOIX
Resident Engineer

CESWL-OP-L

02 April 2001
Kimery/tjl/5768

MEMORANDUM THRU for Chf, Ops Div 4/9

FOR Chf, Real Estate Div

SUBJECT: 2001 Annual Management Plan, East Side City Park, City of Ozark, Arkansas, Lease No. DACW03-1-01-4099 (Old Lease No. DACW03-1-76-307), Ozark Lake

1. Reference Lease No. DACW03-1-76-307, East Side City Park, City of Ozark, Ozark Lake.

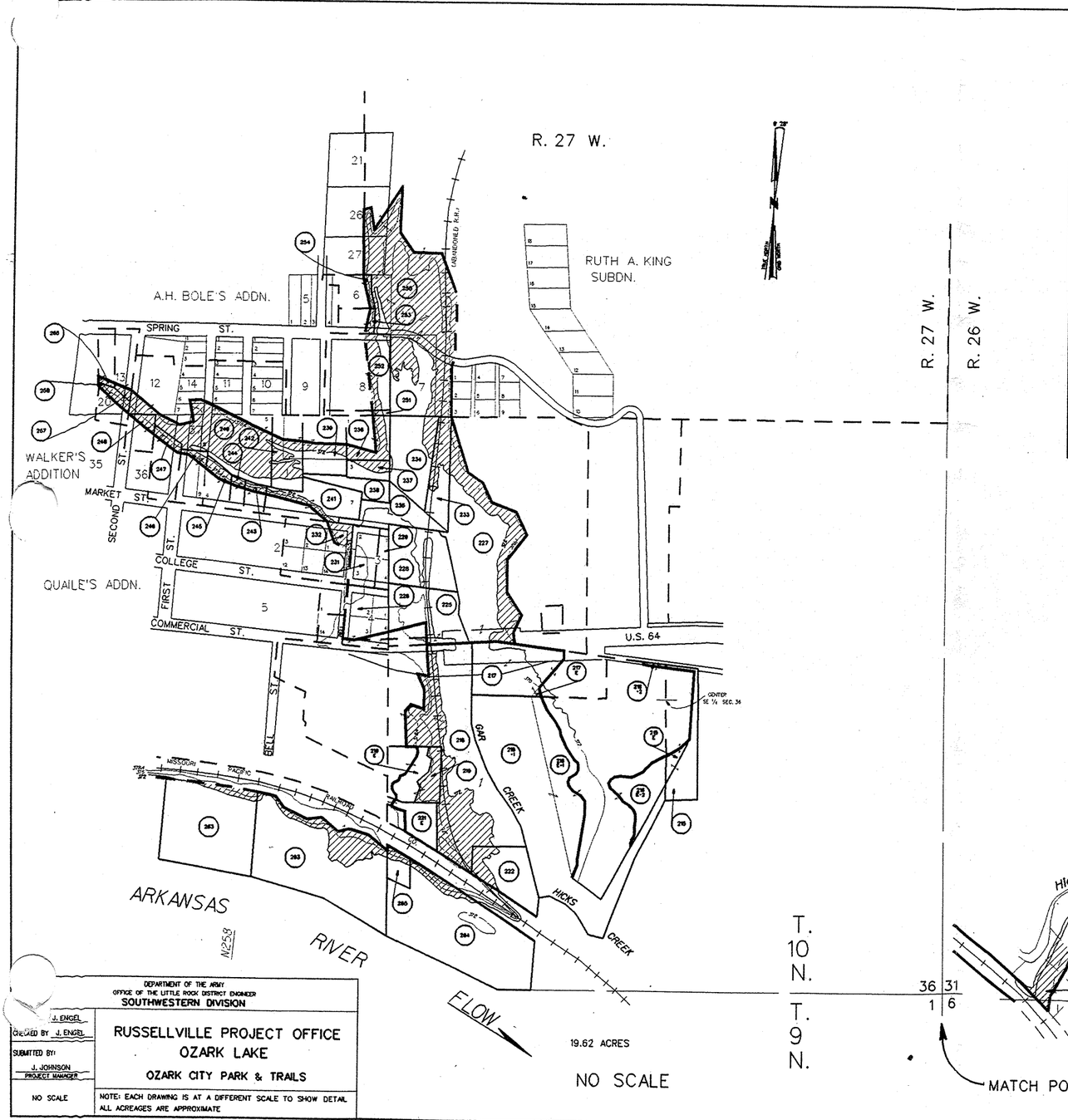
2. I have reviewed the enclosed copy of a letter dated February 28, 2001, from Mayor Todd Timmerman, which describes the City of Ozark's annual management plan for East Side City Park, Ozark Lake. I recommend approval of the management plan as submitted.

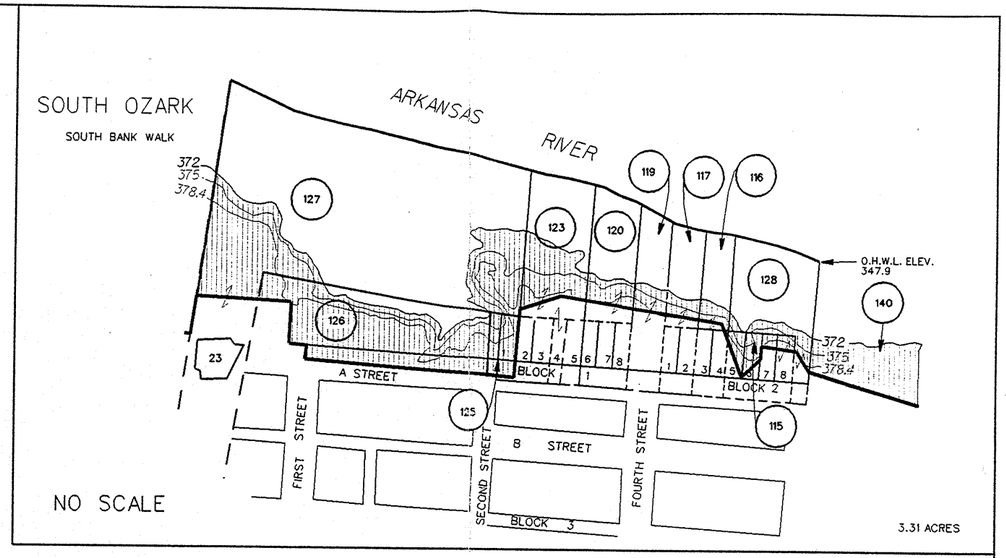
3. I also recommend action be taken through proper authority and channels to officially change the park name to Jordan Yates Park as requested by Mayor Todd Timmerman.

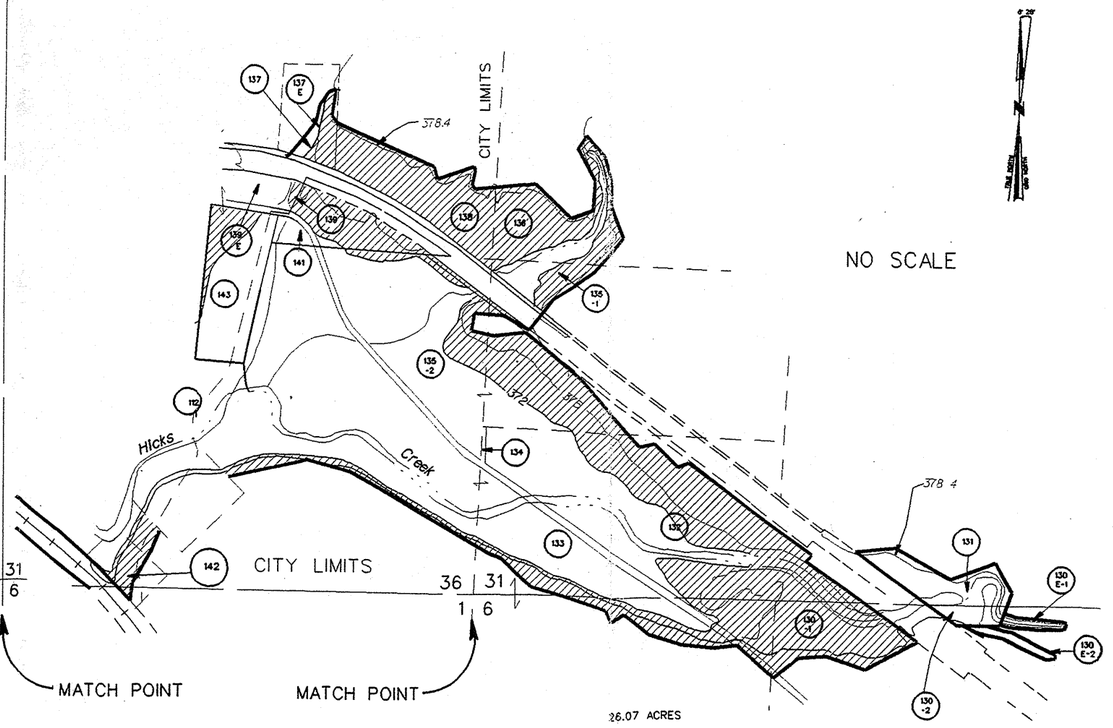
Michael G. Hendricks

1 Encl

Michael G. Hendricks, P.E.
Operations Manager







DEPARTMENT OF THE ARMY
OFFICE OF THE LITTLE ROCK DISTRICT ENGINEER
SOUTHWESTERN DIVISION

DESIGNED BY J. ENGEL
DRAWN BY J. ENGEL
SUBMITTED BY: J. JOHNSON, PROJECT MANAGER
NO SCALE

RUSSELLVILLE PROJECT OFFICE
OZARK LAKE
OZARK CITY PARK & TRAILS

NOTE: EACH DRAWING IS AT A DIFFERENT SCALE TO SHOW DETAIL
ALL ACREAGES ARE APPROXIMATE

CESWL-CO-ON (CESWL-CO-RV/10 Oct 97) (1130) 1st End Johnson/tm/5675
SUBJECT: City of Ozark's Revised Trail Development Plan and Land Use Policies

24 OCT 1997

District Engineer

THRU Chief, Construction-Operations Division

FOR Chief, Real Estate Division

Supplement No. 4, Design Memorandum No. 6-3, Ozark Lake Master Plan, designating 49 acres of project lands "recreation-intensive use" is approved with the conditions and recommendations provided by the Operations Project Manager. This new land use designation makes possible the expansion of the existing city park lease (DACW03-1-76-307) as is indicated by the hatched areas on the enclosed map.

SIGNED

Encl

P. S. MORRIS
Colonel, Corps of Engineers
District Engineer

Copy Furnished:
CECW-ON (w/encl)
CESWD-ETO-R (w/encl)
Oper Proj Mgr, Russellville PO (w/encl) (5 cys)
Chief, General Engineering Section (w/encl)
Chief, Hydrology & Hydraulics Branch (w/encl)
Chief, Environmental Analysis Branch (w/encl)
Chief, Geotechnical Branch (w/encl)
Ozark Lake Master Plan (w/encl)
Log Book (w/encl)

CESWL-CO-RV

10 October 1997
Epperson/wkj/5137

MEMORANDUM FOR Chief, ~~Con-Ops~~ R 10/15

SUBJECT: City of Ozark's Revised Trail Development Plan and Land Use Policies

1. References:

a. A letter to Colonel P. S. Morris dated 18 September 1997, from Mayor Vernon McDaniel, City of Ozark, concerning the revised trail development plan.

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2. I have no objection to the City's plan. I would also recommend adding tract numbers 245, 257, 258, and 260. These tracts may have been inadvertently left out, but should be added to give the City of Ozark contiguous use for their trail system.

3. I recommend approval as submitted with the additional tracts included as noted above.

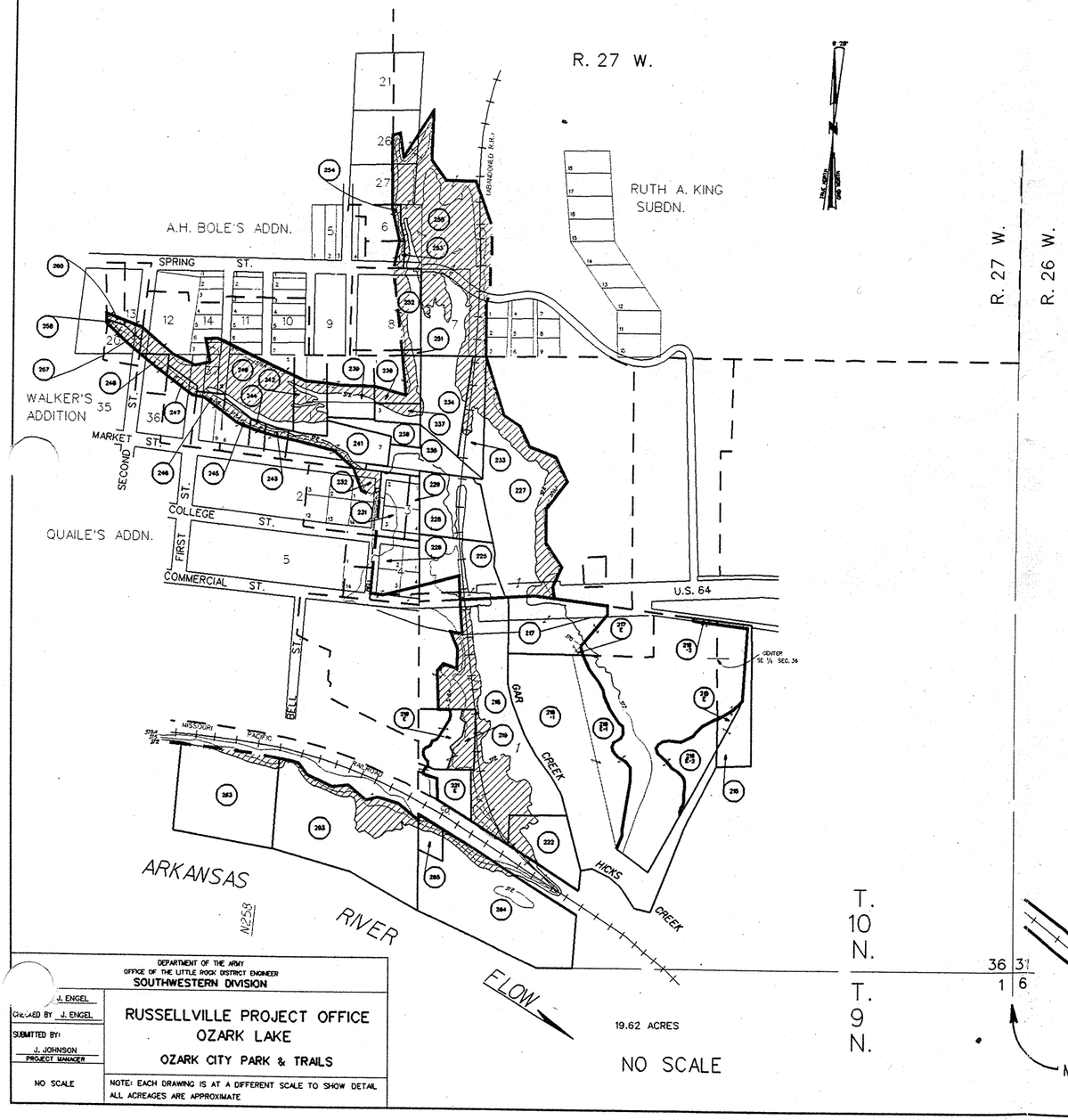
Robert J. Moix

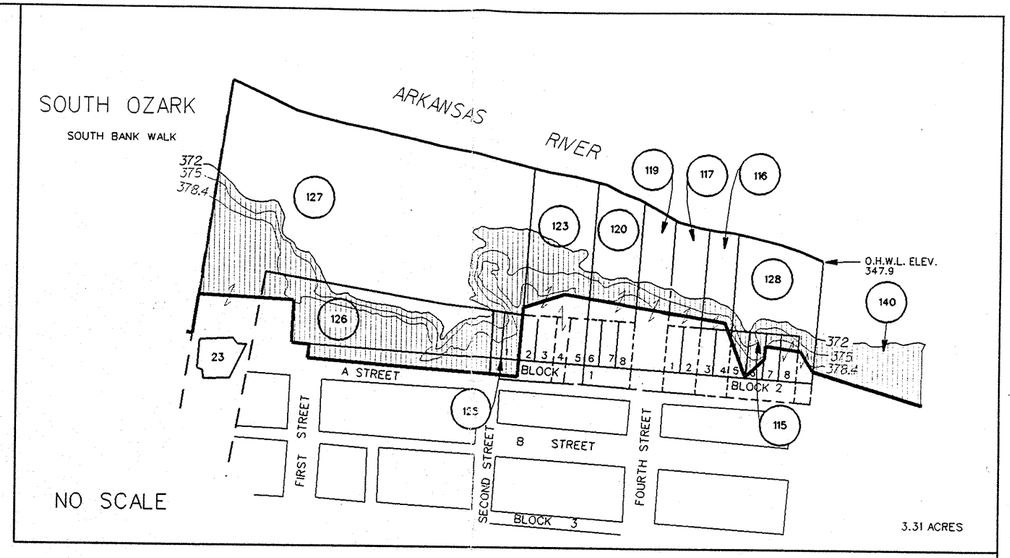
ROBERT J. MOIX
Resident Engineer

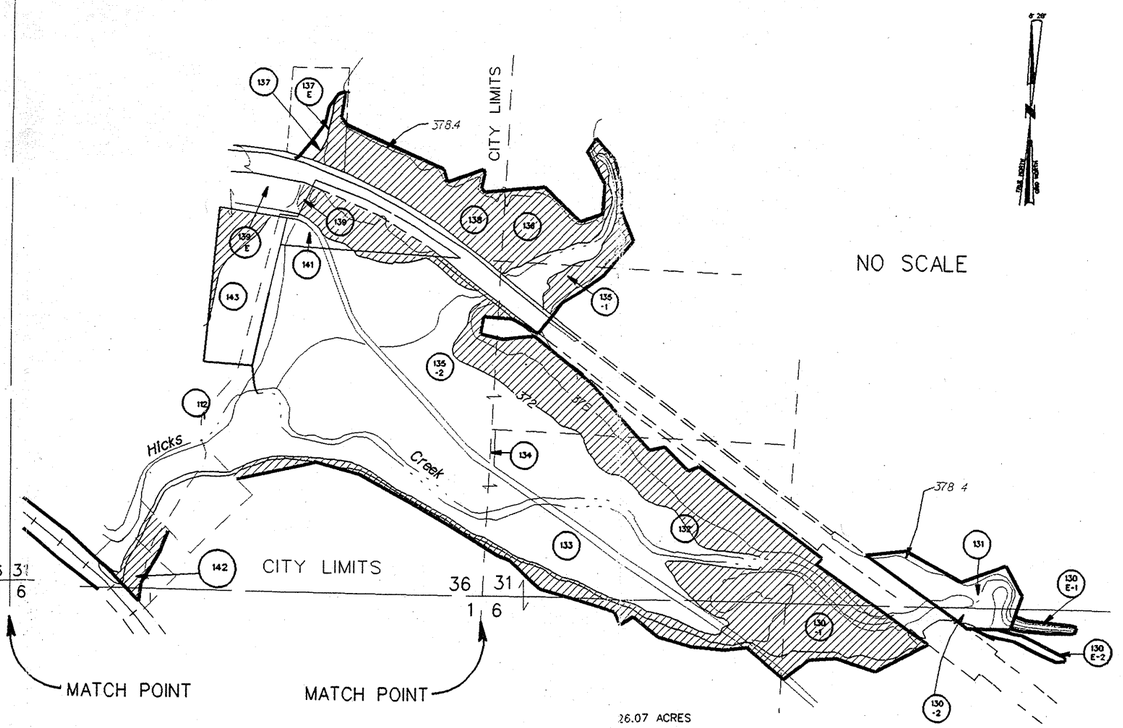
[illegible]

OCT 14 1997

[illegible]







DEPARTMENT OF THE ARMY
OFFICE OF THE LITTLE ROCK DISTRICT ENGINEER
SOUTHWESTERN DIVISION

J. ENGEL	RUSSELLVILLE PROJECT OFFICE OZARK LAKE OZARK CITY PARK & TRAILS
CHECKED BY J. ENGEL	
SUBMITTED BY: J. JOHNSON PROJECT MANAGER	
NO SCALE	NOTE: EACH DRAWING IS AT A DIFFERENT SCALE TO SHOW DETAIL ALL ACREAGES ARE APPROXIMATE

Dist. 9-26-86
D. GLANTON

SWDCO-RP (SWLCO-L/3 Sept) 1st End
SUBJECT: Supplement No. 3, Updated Master Plan Design Memorandum No. 6-3, Ozark Lake

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 19 SEP 1986

TO: Commander, Little Rock District, ATTN: SWLCO-L

Approved.

FOR THE COMMANDER:

A. P. HUTCHISON
Chief, Construction-
Operations Division

5 Encls
wd all encls

CF (w/basic & encls)
DAEN-CWO-R (5 cys)

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

REPLY TO
ATTENTION OF

SWLCO-L

3 September 1986

SUBJECT: Supplement No. 3, Updated Master Plan Design Memorandum No. 6-3, Ozark Lake

Commander, Southwestern Division
ATTN: SWDCO-R

1. The purpose of this supplement is to update the enclosed site plans to indicate existing recreational development. The site plans were last revised in January 1977 when the master plan was completely updated.

2. Approval of this supplement is recommended.

5 Encls (9 cys)

ROBERT W. WHITEHEAD
Colonel, Corps of Engineers
Commanding

ECONOMIC ANALYSIS

CAPITAL INVESTMENT

1.	Remove facilities from River Ridge Park	$1,700
2.	Install facilities in Aux Arc Park	29,840
3.	Convert restroom to waterborne with showers	50,500
4.	Move group picnic shelter	7,800
5.	Install electrical service at 17 campsites	13,430
6.	Develop play area	7,500
7.	Connect hydrant to water system	1,000
		$111,770

ANNUAL COSTS RESULTING FROM CONSOLIDATION

1.	Amortized cost of capital investment for 30 years at 8 3/8% (First cost X .09199)	$10,282
2.	Increased O&M of added facilities	4,150
	Subtotal	14,432
3.	Minus O&M savings from River Ridge Park	3,600
	Total Annual Cost	$10,832

ADDED ANNUAL REVENUES ANTICIPATED
(30-year average)

1.	Income from added electrical outlets	$4,500
2.	Income from higher use fees and increased visitation	19,190
3.	Group shelter reservation fees	500
	Total	$24,190

Net Annual benefits = $24,190 - $10,832 = $13,358

EXPENDITURE SCHEDULE

	FY 85	FY 86	FY 87	TOTAL
SRUF Funds	$30,000	$20,000	$25,000	$75,000
O&M Funds	$1,000	$8,000	$28,000	$37,000

Encl 3

SWDCO-RP (SWLCO-L 20 Dec 84) 1st End
SUBJECT: Supplement No. 2, Updated Master Plan Design Memorandum No. 6-3, Ozark Lake

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 25 JANUARY 1985

TO: Commander, Little Rock District, ATTN: SWLCO-L

Approved.

FOR THE COMMANDER:

wd all encls

A. P. HUTCHISON
Chief, Construction-
Operations Division

CF: w/encl
DAEN-CWO-R (5 cys)

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

REPLY TO
ATTENTION OF

SWLCO-L

20 December 1984

SUBJECT: Supplement No. 2, Updated Master Plan Design Memorandum No. 6-3, Ozark Lake

Commander, Southwestern Division
ATTN: SWDCO-RR

1. The purpose of this supplement is to show proposed development/ consolidation of Aux Arc Park and River Ridge Park which would reduce operation and maintenance costs and increase user fees. The work consists of converting a restroom from vault to waterborne with a shower, moving a group picnic shelter, and relocating 17 camp/picnic sites from River Ridge Park to Aux Arc Park. Upon completion of the work, Aux Arc Park will be upgraded to a Class A fee park. SRUF funds will be used to construct the shower, convert the restroom from vault to waterborne, add electrical service to the relocated campsites, and develop the play area. Operation and maintenance funds will be used to relocate the campsites and group picnic shelter. The inclosed plates 9 and 14 show the proposed changes.

2. River Ridge Park has 18 campsites and 6 picnic sites, a vault restroom, and a boat launching ramp. The annual visitation for 1981 through 1984 varied between 15,000 and 20,000, while the number of campers per year varied between 750 and 1,000. The park is free and is used mainly by sightseers and fishermen. The removal of 17 camp/picnic sites will not affect the visitation or use of the park. The annual occupancy rate for the remaining campsites would average about 15 percent. Annual operation and maintenance costs are estimated to be $10,000. Removal of the 17 camp/picnic sites would cost an estimated $1,700. Consolidation would reduce the annual operation and maintenance costs at River Ridge Park approximately $3,600 by reducing contract costs for mowing and cleanup and by reducing hired labor costs for ranger patrol and maintenance.

3. Aux Arc Park has 29 campsites, a vault restroom, a waterborne restroom, three group picnic shelters, and a boat launching ramp. The annual visitation for 1981 through 1984 varied between 136,000 and 142,000, while the number of campers per year varied between 4,500 and 5,000. The park is located 6 miles south of Interstate 40, about 2 miles from Ozark, Arkansas, and about 40 miles from Fort Smith, Arkansas. Fee collections have increased from $755 in FY 81 to $7,000 in FY 84. The relocation of the 17 camp/picnic sites from

SWLCO-L

20 December 1984

SUBJECT: Supplement No. 2, Updated Master Plan Design Memorandum No. 6-3, Ozark Lake

River Ridge Park and the conversion of the vault restroom to waterborne with showers could double fee collections during future years. The cost of the restroom conversion with the shower addition is estimated to be $50,000, and the estimated cost to relocate the campsites is $30,000. The inclosed economic analysis demonstrates that this proposal is cost effective.

4. Approval of this supplement is recommended.

Robert W. Whitehead

ROBERT W. WHITEHEAD
Colonel, Corps of Engineers
Commanding

3 Incl (9 cys)
as

CORPS OF ENGINEERS

U S ARMY

DAM SITE NORTH

Ozark Lake Project Office Compound

PROJECT BOUNDARY

Existing Playground Equipment

18'

Project Office

Septic Tank and Sand Filter

River Bluff Nature Trail

Overlook

PROJECT BOUNDARY

REVETMENT

REVETMENT

ARKANSAS

NAV. MILE 257

OZARK - JETA TAYLOR LOCK AND DAM

RIVER

Power Transmission Lines

DARDANELLE LAKE
Pool El. 336.0

PICNIC AREA
Proposed units-10

Septic Tank and Disposal Field

Open Play Area

Powerhouse

Proposed Fishing Walk

Steps

Convert To WB/S With Septic Tank And Disposal Field.

Open Play Area

CAMPING AREA
Existing units-10 W/Electrical Outlets
Proposed units-8 W/Electrical Outlets

Switchyard

Storage Bldg.

Attendant Quarters

Sanitary Trailer Station

Entrance Complex

TC

OZARK LAKE

POOL ELEV. 370 - 372

CAMPING AREA
Existing units- 15 W/Electrical Outlets
Proposed units-9 W/Electrical Outlets

PLAY AREA

Septic Tank and Disposal Field

Courtesy Pier

Proposed Boat Dock Area

Proposed Lease Area

CAMPING AREA
Existing units-4

Gate

SOUTH OZARK

DAM SITE SOUTH

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
TO BE REMOVED		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

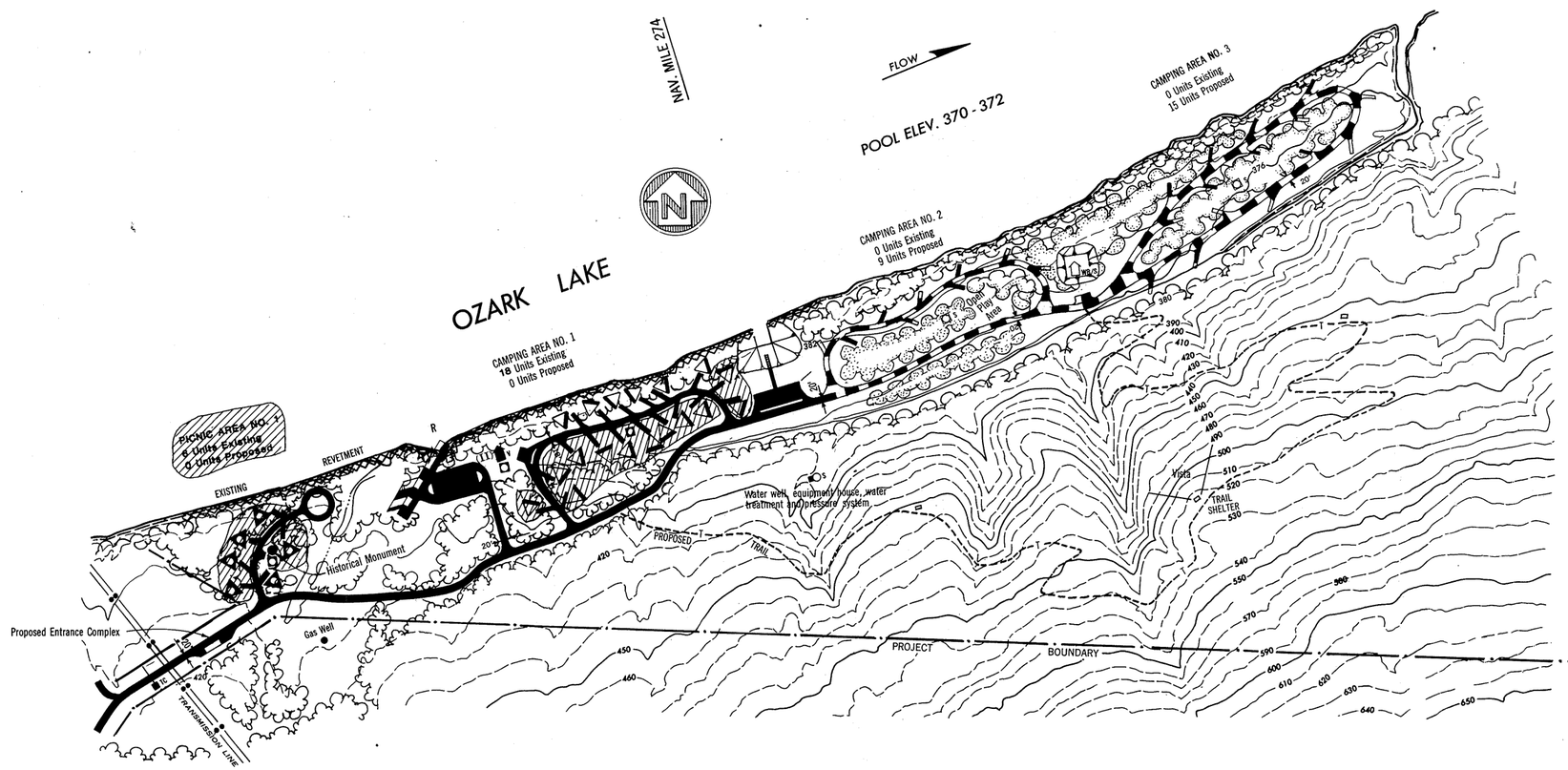
OZARK LAKE,

DAM SITE NORTH AND SOUTH PARKS

SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977
REVISED AUGUST 1986



NOTE: THIS AREA IS LOCATED IN SECTIONS 21 AND 22,
T. 9 N., R. 29 W., SEBASTIAN AND FRANKLIN CO. ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
TO BE REMOVED		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

RIVER RIDGE PARK

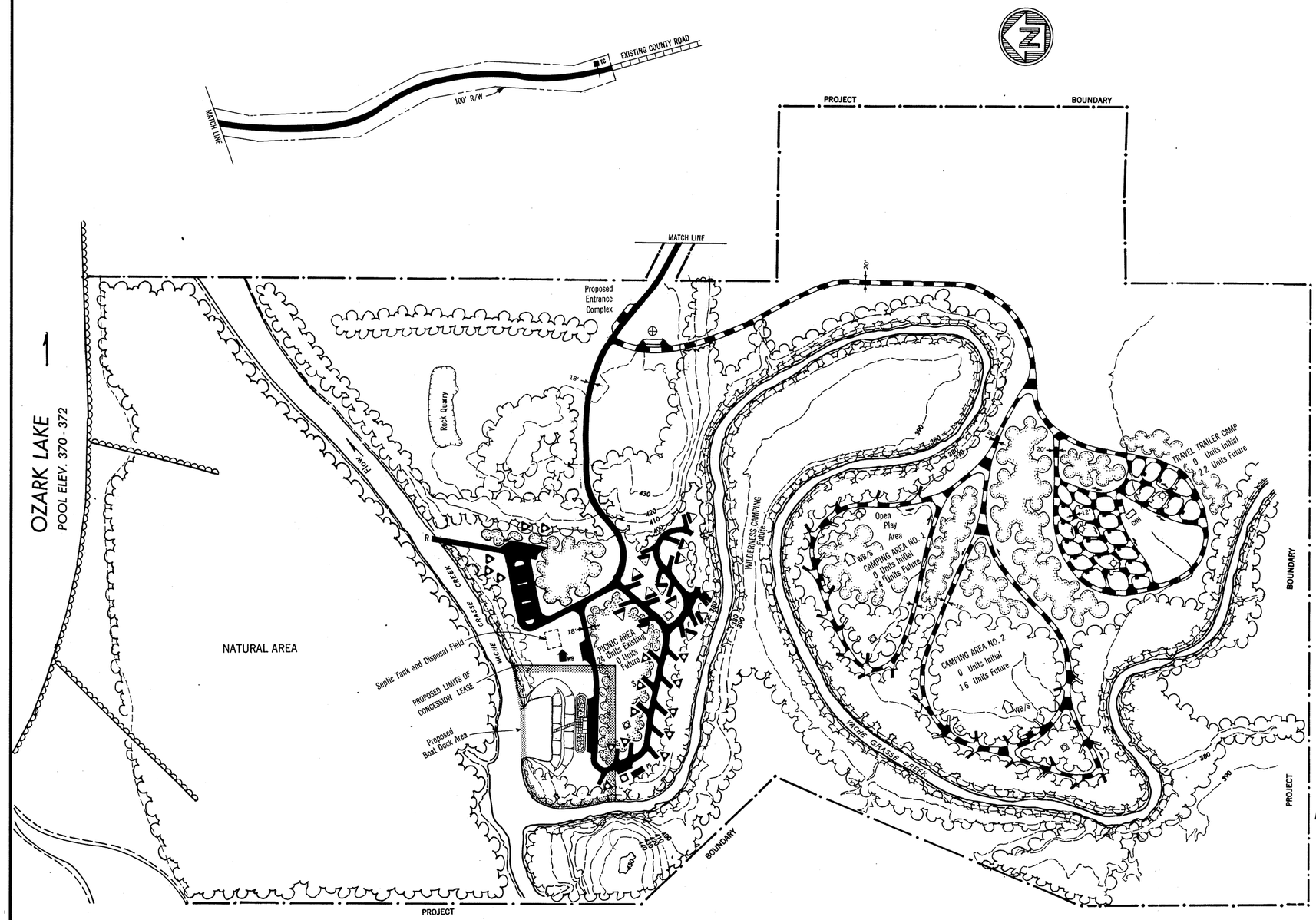
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977
REVISED AUGUST 1986

CORPS OF ENGINEERS

U. S. ARMY



NOTE: THIS AREA IS LOCATED IN SECTION 30, T. 8 N., R. 30 W., SEBASTIAN CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

VACHE GRASSE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

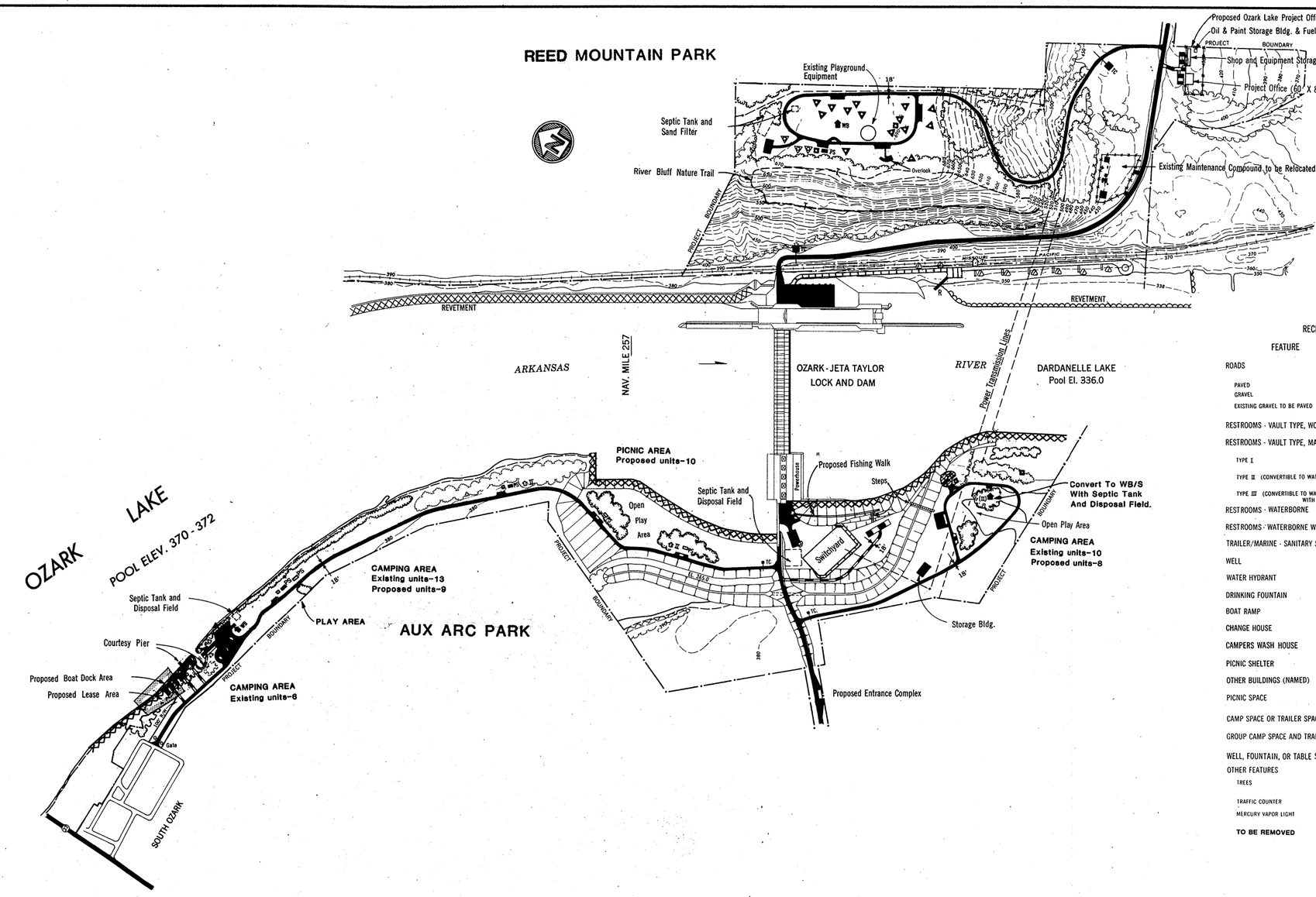
LITTLE ROCK, ARKANSAS, JANUARY 1977

REVISED AUGUST 1986

CORPS OF ENGINEERS

U. S. ARMY

REED MOUNTAIN PARK



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
TO BE REMOVED		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE,

REED MOUNTAIN AND AUX ARC PARKS

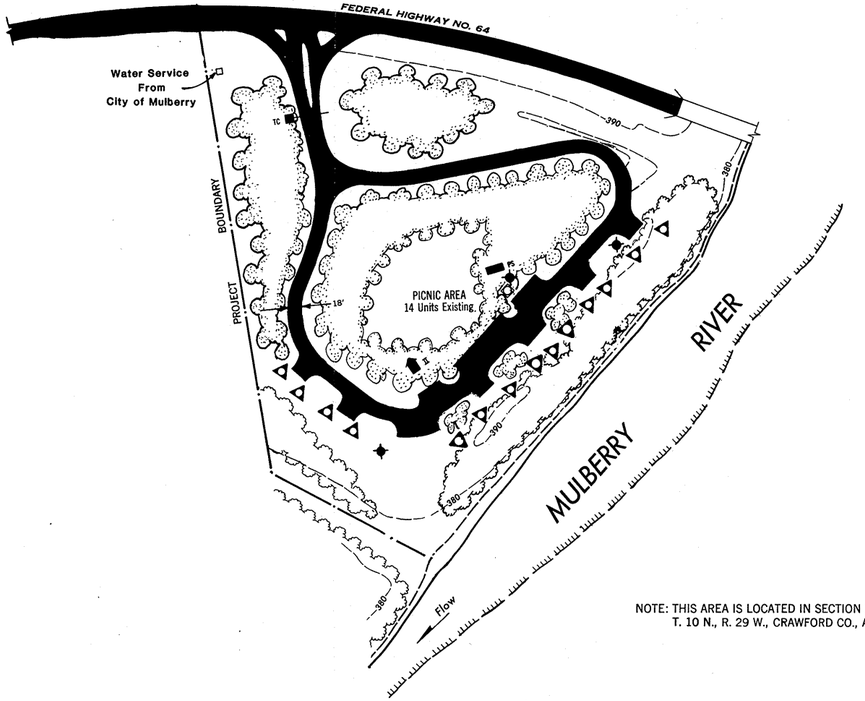
SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

REVISED DECEMBER 1984



NOTE: THIS AREA IS LOCATED IN SECTION 36, T. 10 N., R. 29 W., CRAWFORD CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

BLUFF HOLE

PARK

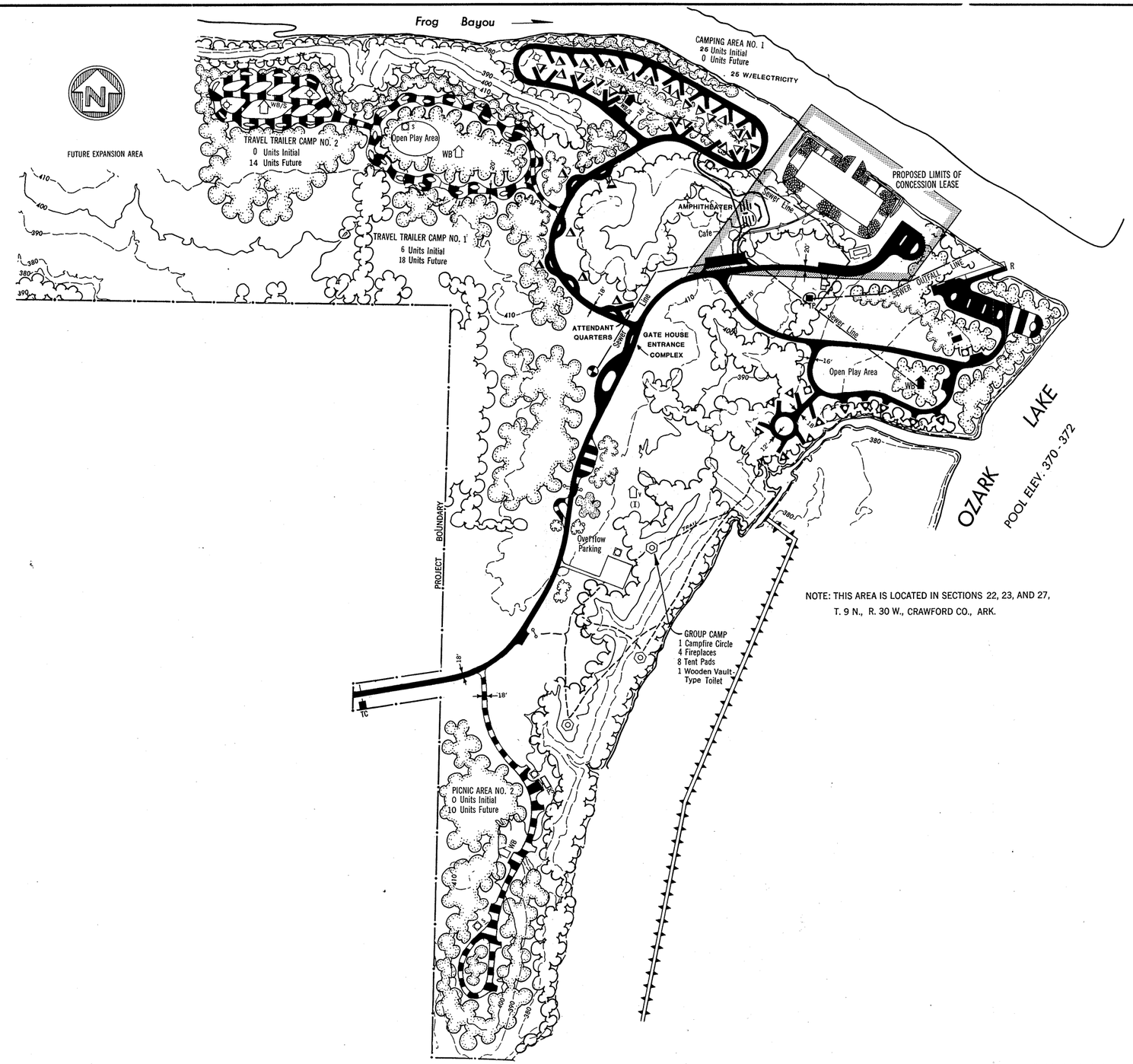
SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

REVISED AUGUST 1986



NOTE: THIS AREA IS LOCATED IN SECTIONS 22, 23, AND 27, T. 9 N., R. 30 W., CRAWFORD CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

CLEAR CREEK PARK

SCALE OF FEET

200 0 200 400

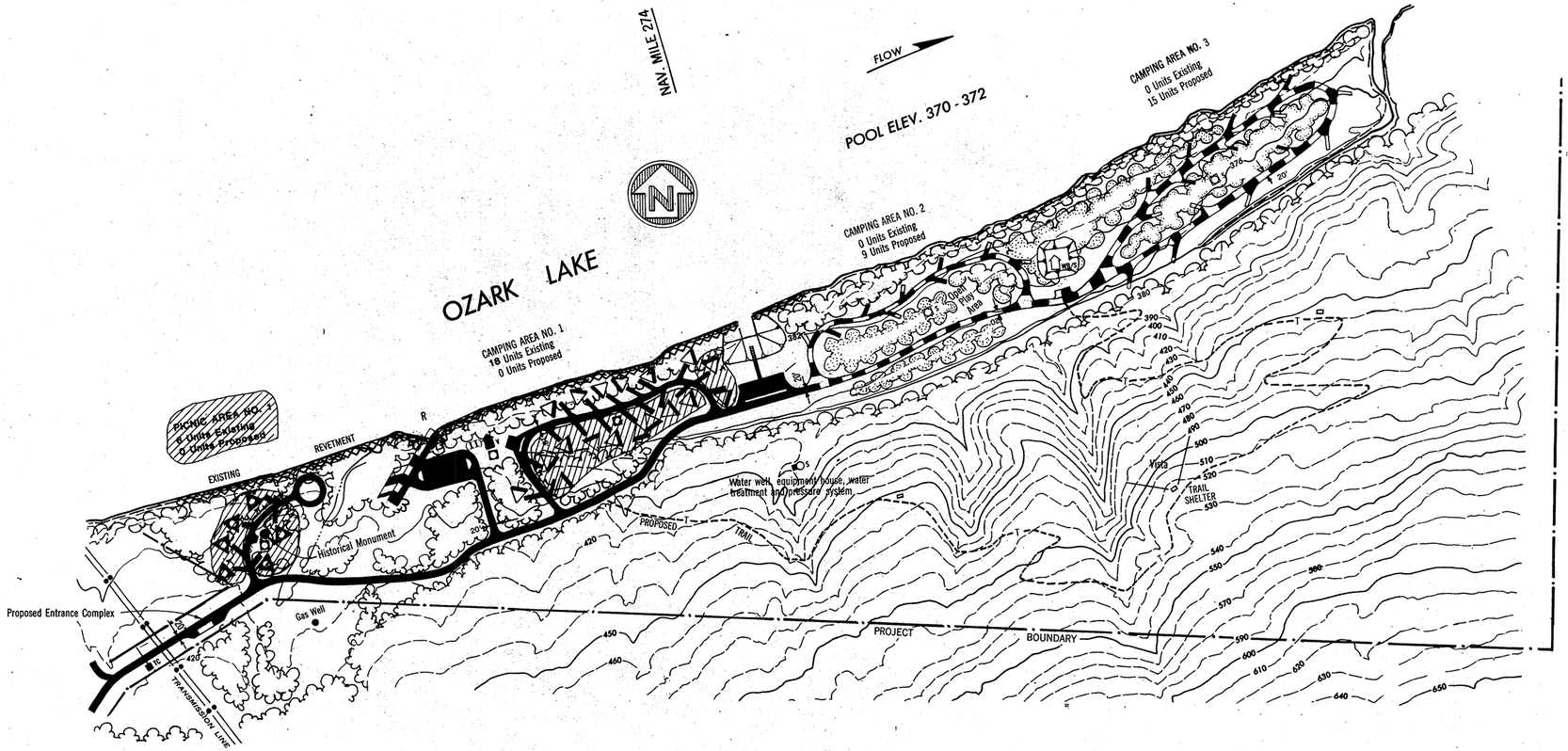
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

REVISED AUGUST 1986

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
TO BE REMOVED		

NOTE: THIS AREA IS LOCATED IN SECTIONS 21 AND 22, T. 9 N., R. 29 W., SEBASTIAN AND FRANKLIN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

RIVER RIDGE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

REVISED DECEMBER 1984

EXHIBIT TO SUPPLEMENT NO. 2 PLATE 14

SWDPL-R (SWLED-PV 1 Jun 77) 1st Ind
SUBJECT: Arkansas River, Arkansas, Ozark-Jeta Taylor Lock and Dam, Design Memorandum No. 6-3, Updated Master Plan for Development and Management of Ozark Lake, Supplement No. 1

DA, Southwestern Division, Corps of Engineers, Main Tower Building, 1200 Main Street, Dallas, TX 75202 7 JUL 77

TO: District Engineer, Little Rock

Subject supplement is approved.

FOR THE DIVISION ENGINEER:

JOEL F. WILSON
Acting Chief, Planning Division

1 Incl (quint)
Dupe cy incl wd

CF:
HQDA (DAEN-CWO-R) (trip)

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203

REPLY TO
ATTENTION OF

SWLED-PV

SUBJECT: Arkansas River, Arkansas, Ozark-Jeta Taylor Lock and Dam, Design Memorandum No. 6-3, Updated Master Plan for Development and Management of Ozark Lake, Supplement No. 1

Division Engineer, Southwestern

1. The purpose of this supplement is the reallocation of a 4.5 acre tract containing 900 linear feet of shoreline from Project Operation: Recreation Low Density Use to Project Operations: Industrial Use. A buffer strip will be provided landward along the Government boundary for perpetual public access across this area. Land involved in this reallocation is in Section 12, Range 30 west, Township 9 north, Crawford County, Arkansas at about navigation mile 277.5 on the left bank. The site is shown on the inclosure to this supplement. A lease request and permit application have been received for construction of a sand and gravel stockpile operation.

2. Sand and gravel are presently being produced at Van Buren and Fort Smith about 20 miles west of the proposed dock, and at Ozark about 25 miles east of the proposed dock. A producer at this location would enjoy a competitive edge of about 50 miles haul distance from these two operations in serving the local market, and the Fayetteville-Springdale market to the north. General public benefit would accrue from the increased competition resulting from more economical sources of supply due to relative location to points of demand. The fact that a producer is attempting to enter a market indicates that current demand and prices are sufficient to allow a profitable operation. Upon approval of this supplement a lease will be publicly advertised for dock purposes. Subsequently, a public notice will be issued advising of the intended land use and our consideration to issue a construction permit for the port facility.

3. Adverse impacts are expected to result from:

a. The barge traffic into and out of the loading site affecting the high quality fish spawning area of the backwater in this area of Ozark Lake. However this impact is expected to be only of minor significance.

SWLED-PV

SUBJECT: Arkansas River, Arkansas, Ozark-Jeta Taylor Lock and Dam, Design Memorandum No. 6-3, Updated Master Plan for Development and Management of Ozark Lake, Supplement No. 1

b. Truck traffic into and out of the site along the county roads.

c. Shoreline alteration required to accommodate the dock facility.

d. Stockpiling on land having some wildlife habitat value.

4. Land use as outlined above is considered to be the highest use of the 4.5 acre tract and will serve to promote industrialization of Ozark Lake, therefore, approval is recommended.

1 Incl (7 cys)
as

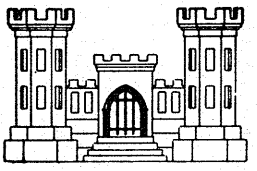
C. E. EDGAR III
Colonel, Corps of Engineers
District Engineer

ARKANSAS RIVER, ARKANSAS
McCLELLAN - KERR ARKANSAS RIVER
NAVIGATION SYSTEM

OZARK - JETA TAYLOR LOCK AND DAM

DESIGN MEMORANDUM NO. 6-3

UPDATED MASTER PLAN FOR DEVELOPMENT AND MANAGEMENT OF OZARK LAKE



U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS

APRIL 1977

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203

REPLY TO
ATTENTION OF

SWLED-PV

20 April 1977

SUBJECT: Arkansas River, Arkansas, Ozark-Jeta Taylor Lock and Dam, Design Memorandum No. 6-3, Updated Master Plan for Development and Management of Ozark Lake

Division Engineer, Southwestern

Design Memorandum No. 6-3, Updated Master Plan for Development and Management of Ozark Lake is submitted for approval.

1 Incl (5 cys)
as

for C. E. EDGAR III
Colonel, Corps of Engineers
District Engineer

OZARK-JETA TAYLOR LOCK AND DAM

PREVIOUSLY ISSUED AND CURRENTLY SCHEDULED DESIGN MEMORANDUMS

Memo No.	Subject	Date submitted or scheduled	Date approved
1	Site Selection	23 Nov 62	20 Feb 63
2	Hydroelectric Power	23 Apr 63	2 Mar 65
	Supplement No. 1	30 Jun 64	2 Mar 65
3	Access and Service Facilities	28 Jun 63	29 Aug 63
4	General	9 Aug 63	13 Jan 64
	Supplement No. 1, Criteria for Land Acquisition and Relocation	17 Aug 64	23 Nov 64
	Supplement No. 2, Levee Protection of Ozark Plant Facilities	25 Jun 65	29 Jul 65
	Supplement No. 3, Revised Criteria for Land Acquisition	19 Jul 68	
	Supplement No. 4, Ozark Water Supply Wells	15 Sep 67	15 Dec 67
5	Geology and Soils	1 Oct 64	30 Dec 64
6-1	Preliminary Master Plan	7 Jan 64	23 Jun 64
6-2	Master Plan for Ozark Lock and Dam	31 Jan 66	2 Sep 70
	Supplement No. 1	11 Sep 72	6 Oct 72
	Supplement No. 2	11 Sep 72	-
	Supplement No. 3	22 May 73	18 Jun 73
	Supplement No. 4	15 Oct 73	30 Nov 73
	Supplement No. 5	6 Mar 74	Disapproved 8 Apr 74
	Supplement No. 6	18 Dec 75	30 Dec 75
6-3	Updated Master Plan for Ozark-Jeta Taylor Lock and Dam	Apr 77	
	Real Estate		
7-1	Damsite, Work Area, and Access Roads	10 Dec 63	19 Mar 64
	Supplement No. 1	4 Nov 64	19 Nov 64
	Supplement No. 2	6 Jan 65	5 Mar 65
7-2	Reservoir	19 Feb 65	25 May 65
	Supplement No. 1, Additional Land for Reservoir	19 Jul 68	10 Jul 69

OZARK-JETA TAYLOR LOCK AND DAM

Memo No.	Subject	Date submitted or scheduled	Date approved
7-3	Dredging	31 Mar 67	30 Jun 67
8	Concrete Materials	5 Jun 64	17 Aug 64
	Supplement No. 1	9 Feb 65	24 Mar 65
9	Navigation Lock	10 Jan 64	24 Apr 64
10	Dam	29 Sep 64	7 Jan 65
11	Ozark Reservoir - Reservoir Clearing	3 Jun 66	9 Aug 66
12	Channels and Canals - Dredging and Snagging, Snagging, Dardanelle & Ozark Reservoirs	27 Feb 67	5 May 76
	Relocations		
13-1	Missouri Pacific Railroad and Western Union Telegraph Line	6 Jun 66	20 Oct 66
13-2	Arkansas State Highway 23 Bridge Over Arkansas River	5 Apr 65	18 Jun 65
	Supplement No. 1, Ozark United Telephone Company	6 Oct 66	17 Oct 66
13-3A	Franklin County Roads	4 Mar 66	23 May 66
	Supplement No. 1, Revised Plan of Relocation	17 Nov 67	6 Dec 67
13-3B	Crawford County Roads and Bridges	4 Dec 68	29 Feb 69
13-3C	U.S. Highway 64 Bridge	4 Aug 66	21 Oct 66
13-4A	Oklahoma Gas and Electric Company	10 Feb 67	9 Mar 67
13-4B1	Arkansas-Louisana Gas Company, Protection of Gas Pipeline	24 Feb 65	19 Mar 65
13-4B2	Arkansas-Louisiana Gas Company Pipeline	23 Jun 65	14 Jul 65
	Supplement No. 1	5 Oct 66	7 Dec 66
13-4B3	Arkansas-Louisiana Gas Company Pipeline	26 Aug 66	14 Sep 66
13-4C	Arkansas Western Gas Company	21 Sep 65	15 Oct 65

OZARK-JETA TAYLOR LOCK AND DAM

Memo No.	Subject	Date submitted or scheduled	Date approved
13-4E	Arklahoma Corporation Powerline	21 Sep 65	15 Oct 65
13-5B	Southwestern Bell Telephone Company	13 Dec 66	12 Jan 67
13-6A	Fort Smith Gas Corporation Pipeline Supplement No. 1 (Ark-Okla Gas, formerly Fort Smith Gas)	6 Oct 66 17 Apr 68	26 Oct 66 5 Jul 68
13-6B	Arkansas Valley Electric Cooperative Corporation	1 Jul 66	15 Jul 66
13-7	Cemeteries, Assembly No. 1	2 Aug 66	19 Sep 66
13-8	Mulberry Water Supply	10 May 68	13 Dec 68
13-9	City of Ozark - Streets, Waterlines, and Sewage Facilities	10 Feb 67	18 May 67
14	Sediment Ranges	23 Apr 68	8 Jul 68
15	Enhancement of Public Areas of the Powerhouse	31 Mar 69	15 Jul 69

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12A	Bluff Hole Photomap
13	Vine Prairie
13A	Vine Prairie Photomap
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14A	River Ridge Photomap
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Appendix B - Forest Management Plan	Jun 77	
Appendix C - Fire Protection Plan	Jul 77	
Appendix D - Fish and Wildlife Management Plan		Feb 77
Appendix E - Project Safety Plan	Dec 72	Jun 73
Appendix F - Lakeshore Management Plan	May 75	Jun 75

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ARKANSAS RIVER, ARKANSAS
McCLELLAN-KERR ARKANSAS RIVER
NAVIGATION SYSTEM

OZARK-JETA TAYLOR LOCK AND DAM

DESIGN MEMORANDUM NO. 6-3

UPDATED MASTER PLAN FOR DEVELOPMENT
AND MANAGEMENT OF OZARK LAKE

SECTION I

INTRODUCTION

1.01. Project authorization. The Ozark Lock and Dam and Lake was authorized by the River and Harbor Act of 24 July 1946, for navigation and for the production of hydroelectric power. This act approved the multiple-purpose plan recommended in the report of the Chief of Engineers, dated 20 September 1945, and letter of the Chief of Engineers dated 19 March 1946, which are contained in House Document No. 758, 79th Congress, 2d Session. Recreational development of Ozark Lake was included under "other purposes" in the multiple-purpose plan recommended in the report of the Chief of Engineers dated 20 September 1945, approved by the River and Harbor Act of 24 July 1946. Recreation and fish and wildlife have since been included as project purposes as directed by the 7th indorsement dated 16 July 1964, to letter SWLGW-5 dated 9 August 1963, subject: Design Memorandum No. 4, General, Ozark Lock and Dam, Arkansas River and Tributaries, Arkansas and Oklahoma. Senate Bill S.3063 of the 94th Congress, 2d Session, signed by President Ford on 18 October 1976, changed the name of Ozark Lock and Dam to "Ozark-Jeta Taylor Lock and Dam."

1.02. Project purposes. Ozark is a major unit in the multiple-purpose plan of development of the Arkansas River and tributaries, Arkansas and Oklahoma, now named the McClellan-Kerr Arkansas River Navigation System. Hydroelectric power generation, navigation, recreation, water supply, bank stabilization, and enhancement of fish and wildlife resources are authorized project purposes.

1.03. Purpose of master plan. This master plan is a part of the continuing process to guide the preservation, enhancement, development, and maintenance of the project and to insure that changes in policy, land use philosophy, and public need are reflected in the development and management of the project.

1.04. Application of public laws and executive orders.

a. Flood Control Act of 1944 (Public Law 78-534). The Department of the Army is authorized to provide for recreational use of the projects under its control by Section 4 of the Flood Control Act approved 22 December 1944, as amended by Section 4 of the Flood Control Act approved 24 July 1946, as amended by Section 209 of the Flood Control Act approved

3 September 1954, and as amended by Section 207 of the Flood Control Act of 1962, as amended by Section 2 of the Land and Water Conservation Fund Act of 1965, and as further amended by Section 210 of the Rivers and Harbors Flood Control Act of 1968.

b. Fish and Wildlife Coordination Act of 1958 (Public Law 85-624). Section 3 of this Act provided for the use of Corps of Engineers Civil Works projects for the conservation, maintenance, and management of fish and wildlife resources. The land and water areas under the jurisdiction of the Department of the Army may be made available to State wildlife agencies by license agreement or by cooperative agreement with the Secretary of the Interior under the terms of a general plan approved jointly by the Secretary of the Army, the Secretary of the Interior, and the head of the State wildlife agency.

c. Federal Water Project Recreation Act (Public Law 89-72). While initial recreational development was accomplished at 100 percent Federal cost, further development requires implementation of the policy established by the Secretary of the Army in coordination with the Office of Management and Budget as outlined in EC 11-2-119 dated 30 May 1975, Recreational Development at Completed Projects. The policy states that a non-Federal body must agree to furnish not less than 50 percent of the cost of future development and further agree to operate, maintain, and provide replacement of the park development. Also it provides for 100 percent Federal expenditures only for urgently needed sanitary facilities. Section 9.03 outlines the present cost sharing program.

d. Public Law 93-303, Fee Collection System. On 7 June 1974, Public Law 93-303 was enacted. This law provides for the collection of fees at family camping and group camping areas having various classes of facilities as follows:

Class A. Waterborne restrooms; potable water; showers (warm water); sanitary disposal station; camp sites with table, fireplace (rock ring or grill); refuse containers; paved roads; designated tent or trailer spaces; visitor protection control; personal fee collection (honor system will not be used).

Class B. Vault restrooms; potable water; sanitary disposal station; campsites with table, fireplace (rock ring or grill); refuse container; access and circulation roads; designated tent or trailer spaces; visitor protection control; personal fee collection.

Class C. Pit or vault restrooms; potable water; campsites with table, fireplace (rock ring or grill); refuse containers; access and circulation roads; designated tent or trailer spaces; visitor protection control, personal fee collection.

Class D. Portable or pit restrooms; potable water; fireplace (rock ring or grill); refuse containers; access and circulation roads; designated tent or trailer spaces; visitor protection control; personal fee collection.

An additional charge of $0.50 per day may be made for use of electrical hookups in parks in Classes A, B, C, or D. At each Corps lake, where camping is permitted, at least one primitive campground containing designated campsites, sanitary facilities, and vehicular access will be provided where no fee will be charged. The primitive campground will contain sufficient campsites to qualify as reasonably large. The fee collection system will be revised as required to be consistent with current legislation and Corps policy. User fees were collected at Dam Site South and White Oak parks during 1973-1975 and at Clear Creek Park in 1976.

e. Executive Order of the President 11752 - Prevention, Control and Abatement of Environmental Pollution at Federal Facilities. This order directs that the Federal government shall provide leadership in the nationwide effort to protect and enhance the quality of our air, water, and land resources, and in the prevention of environmental pollution.

f. Executive Order of the President 11593 - Protection and Enhancement of the Cultural Environment. This order sets out a policy for the Federal Government to provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the Nation.

g. Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500. The objective of this act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

h. Safe Drinking Water Act (Public Law 92-523). This act amends the Public Health Service Act to assure that the public is provided with safe drinking water.

i. Federal Environmental Pesticide Control Act of 1972 (Public Law 92-516). This act regulates the use of pesticides to protect man and his environment.

j. Motor Vehicle Air Pollution Control Act and Solid Waste Disposal Act (Public Law 89-272). These acts require standards for controlling the emission of pollutants from certain motor vehicles and authorize a research and development program with respect to solid waste disposal. These acts are a part of the amendments to the Clean Air Act, Section 202.

k. Archeological Preservation Act (Public Law 93-291). This law authorized Federal agencies to submit a separate line item on budget requests for cultural resources considerations. Up to one percent of project funds can be allocated for identification and management of cultural resources.

SECTION II

PROJECT DESCRIPTION

2.01. Location. Ozark Lake was formed by the construction of Ozark-Jeta Taylor Lock and Dam. The project area includes the Arkansas River from navigation mile 256.8 to 292.8, all of which is in the State of Arkansas. The project is about 100 air-miles northwest of Little Rock and about 30 air-miles east of Fort Smith, Arkansas.

2.02. General description. The river valley in the vicinity of the lake is bounded on the north by the Boston Mountains of the Ozark Plateau and on the south by the Fourche Mountains of the Ouachita Province. The valley is about 3,000 feet wide at the damsite. The topography of the lands around the lake is level to undulating with many long sharp ridges and broad-top conical hills and mountains rising above the plain. Large grape vineyards reminiscent of the European Rhineland dot the surrounding countryside. Two of the largest wineries in the State are located at nearby Altus. Fruit and vegetables are also grown in the area for the fresh market, freezing, and canning.

2.03. Basin hydrologic and climate summary.

a. Water characteristics. Prior to development, the Arkansas River was a slow-moving semiclear stream which quickly became turbid during each rise and the velocity increased rapidly during large flows. Since the completion of Ozark-Jeta Taylor Lock and Dam and the other locks and dams in the McClellan-Kerr Arkansas River Navigation System, relatively quiet pools have been formed. Velocities during low and average flows vary from slow at the upper end of the lake to a near calm at the lower end and turbidity has been reduced. Tributaries within the lake area are short in length with streambeds of sand and gravel and comparatively clear water.

b. Pool fluctuation.

(1) The water surface immediately upstream from the dam will be maintained between the limits of the power pondage elevations 372 and 370 about 75 to 80 percent of the time and at elevation 372 (± 0.5 foot) the remainder of the time, except during major floods whose durations will be less than 1 percent of the time. The spillway design allows regulation of the water surface within the limits mentioned above up to a 450,000 c.f.s. discharge which has a recurrence interval of about 40 years. During the few days that higher flows would be experienced, the water surface immediately upstream from the dam would fluctuate between elevation 372 for a 40-year flood up to approximate elevation 378 for a Standard Project Flood (600,000 c.f.s.).

(2) At the head of Ozark Lake, the water surface varies more from changes in rate of flow than from the operation of the dam. The maximum expected fluctuations are about 35 feet (from the bottom of power drawdown up to the Standard Project Flood, elevation 370 to 405). During an average year, the water surface fluctuates between the bottom of power drawdown and the flow line for a discharge of about 150,000 c.f.s., elevations 370 and 389. A water surface at about elevation 372 ($\pm$ 1 foot) is experienced over half the time.

(3) Water surface fluctuations resulting from the operation of the dam will become progressively less in direct relation to the distance upstream from the dam. Water surface fluctuations resulting from variations in riverflow will be progressively less in direct relation to the distance downstream from the head of the lake. Table 2-1 lists the theoretical flood flow elevations at each park site.

TABLE 2-1

THEORETICAL WATER SURFACE ELEVATIONS - FT. M.S.L.
ARKANSAS RIVER FLOOD FLOWS

Park	Flood frequency	Elevation with 50-year sediment	Elevation without sediment - initial condition with Ozark Dam operational
Dam Site (below dam)	5	365.4	359.6
	10	367.9	362.5
	50	373.2	367.0
Dam Site (above dam)	5	372.0	372.0
	10	372.3	372.0
	50	374.9	372.4
Citadel Bluff	5	378.0	376.0
	10	379.9	377.4
	50	384.9	381.4
White Oak	5	378.8	376.5
	10	380.8	378.2
	50	385.7	382.3
Bectum Hill (Future Park)	5	381.0	377.4
	10	383.0	379.2
	50	388.0	383.6
Vine Prairie	5	382.2	378.1
	10	384.3	380.1
	50	389.4	385.0
Bluff Hole	5	-	382.4*
	10	-	385.4*
	50	-	393.2*
River Ridge	5	383.3	378.8
	10	385.5	380.9
	50	390.3	385.7
Clear Creek	5	385.7	381.3
	10	387.3	383.8
	50	391.6	388.0
Vache Grasse	5	392.5	390.0
	10	394.6	392.7
	50	398.6	396.6

*Theoretrical flood flow elevations on the Mulberry River.

c. Climate. The climate in general is moderate with an average annual temperature of about 61.6 degrees Fahrenheit. Severe cold weather during the winter months and high temperatures in the summer are experienced over short periods of time. The average annual rainfall is about 45 inches. Snowfall is light and remains on the ground for short durations.

2.04. Project structure. Table 2-2 contains a summary of pertinent data on the project structure and lake. All elevations shown in this table are feet above mean sea level.

TABLE 2-2

PERTINENT DATA

Spillway	
Total length, feet	900
Crest, elevation, ft. m.s.l.	327
Tainter gates (15), feet (radial type)	50 x 46
Embankment Section, Right Bank	
Length, feet	1,400
Maximum height, feet	34
Powerplant	
Number of power units (inclined axis type)	5
Capacity of each unit, kw.	20,000
Plant installation, kw.	100,000
Lock	
Size of chamber, feet	110 x 600
Normal lift, feet	34
Top of lockwall, elevation, ft. m.s.l.	382
Top of downstream guidewalls, elevation, ft. m.s.l.	370
Top of upstream guidewalls, elevation, ft. m.s.l.	382
Lake	
Top of power pool, elevation, ft. m.s.l.	372
Top of navigation pool, elevation, ft. m.s.l.	370
Capacity at top of power pool, acre-feet	148,400
Area of lake surface at top of power pool, acres	10,600
Length of shoreline at top of power pool, miles	173

2.05. Lake operation. Water is impounded by Ozark-Jeta Taylor Lock and Dam to sustain a minimum navigation channel depth of 9 feet and to provide sufficient water for operation of the locks. Also, sufficient water is impounded to provide 2 feet of storage for the production of hydroelectric power. Adequate spillway gate capacities allow flood flows to pass with minimum local backwater effects.

SECTION III

PROJECT STATUS

3.01. Project development and operation chronology.

a. Lock and dam. Construction of Ozark-Jeta Taylor Lock and Dam was initiated in May 1965 and was completed in November 1969. Construction of the powerhouse was completed in August 1975. There are five generating units in the powerhouse. The fifth one was placed on the line in May 1974.

b. Recreation facilities. There are nine existing Corps parks on Ozark Lake. The development of these parks was begun in 1972 and the initial development was completed in January 1976. Recreation facilities include group picnic shelters, picnic sites, campsites, boat launching ramps, sanitation facilities, trails, and an overlook at the Dam Site North Park. These facilities are shown on the plates and are listed in the cost estimate in Section 9. Also, the city of Ozark operates a small city park which they constructed on land leased to them by the Federal government. The location of each of the parks is shown on Plate 2.

3.02. Project development underway. At the present time there is no project development underway in these parks as all the contracts for facility development at this lake were physically completed in January 1976.

3.03. Scheduled project development. Since the initial park development on Ozark Lake is complete all future development must be cost-shared. At this time there are no cost-sharing projects under consideration.

3.04. Future development. Bectum Hill Park in Franklin County is reserved for future development under current cost-sharing policies.

SECTION IV

RECREATION AND ENVIRONMENMTAL RESOURCES AND FACTORS INFLUENCING RECREATIONAL DEVELOPMENT

4.01 Geological resources.

a. Soils and geological formations. The damsite and lake are located in the Arkansas Valley physiographic subprovince and is bordered on the north by the Boston Mountains of the Ozark Plateau and on the south by the Fourche Mountains of the Ouachita Province. The topography is generally undulating but is characterized by east-west trending ridges which are usually capped by 10- to 300-foot thick beds of resistant sandstone of the Hartshorne formation. High bluffs occur along the right bank of the river, whereas on the left bank the river bluffs are less pronounced. An extensive alluvial valley borders the river upstream from the damsite from the vicinity of White Oak Creek to Van Buren. The most abundant kind of rock is shale of the Atoka formation which is interbedded with thinner beds of sandstone. In the areas where the bedrock is sandstone, the soil mantle generally consists of sandy silt containing fragments of sandstone. In areas of alluvial deposits the soil mantle consists of silt, sand, and gravel with a maximum thickness of 60 feet.

b. Special problems. The alluvial deposits are subject to rapid erosion during high river stages. Extensive bank stabilization measures have been taken to maintain the alinement of the river channel.

c. Effects on recreational development. The alluvial soils promote rapid vegetative growth, drain rapidly, and should withstand heavy recreational use. Alluvial soils generally do not require special treatments for construction of roads, building foundations, and other facilities. However, launching ramps require special stone protection to prevent erosion of the adjacent soil by river currents. Portions of the shoreline at River Ridge, Citadel Bluff, and Dam Site North and South Parks have been stabilized with riprap to prevent soil erosion.

4.02 Cultural resources.

a. General. The enactment of Public Law 93-291 in May 1974, the Archeological Preservation Act, authorized Federal agencies to submit a separate line item on budget submissions for cultural resource considerations. This act allows up to 1 percent of project funds to be allocated for identification and management of cultural resources. Limited training has been conducted to create an awareness of these resources. Additional training at the field level is planned to teach park managers how to protect these resources.

b. Archeological resources.

(1) Inventory. Several archeological surveys have been made of the reach of the Arkansas River between Murray Lock and Dam and the Arkansas-Oklahoma State line. Robert E. Greengo in 1957 surveyed the Dardanelle

Lake area for the Smithsonian Institute and in 1968 Michael P. Hoffman of the University of Arkansas Museum surveyed pools 7, 8, 9, and 13 for the National Park Service. In 1966 and 1967 Michael P. Hoffman assisted by Nancy E. Myer surveyed the Ozark Lake area. Again in 1968, Hoffman assisted by Dan Printup, photographer for the Arkansas Archeological Survey, conducted aerial reconnaissance of the Ozark Lake area. The sites found in the vicinity of Ozark Lake were not spectacular ones but nontheless they gave witness to a long occupation. These investigations also brought to light information on a portion of the State for which almost no previous records of prehistoric occupations had been made. During the investigations five sites were surface sampled and two other sites were excavated. During the excavations midden was uncovered and projectile points, stone tool fragments, and pot sherds were found. Evidence of Early Ceramic Stage Gober Complex occupation was discovered at the Crooked Creek site on the south bank of the Arkansas River in Franklin County and at the Spinach Patch site in the Mulberry River bottoms near Sandy Branch. For additional detail regarding the archeological resources of Ozark Lake see an archeological survey of the Ozark Reservoir in west-central Arkansas, Michael P. Hoffman, 1965 and Aerial Photography over Ozark Reservoir in West Central Arkansas, Michael P. Hoffman, 1968.

(2) Plans for protection and preservation. Funds have been requested in the budget to continue the program of archeological resource identification and protection on the Arkansas River of which Ozark Lake is a part. Decisions concerning archeological sites identified by permit actions will be coordinated with the archeologist, the Arkansas Archeological Survey, and the State Historic Preservation Office.

(3) Effects on recreational development. Field personnel are encouraged to be alert for possible archeological resources and to report any findings so that proper consideration can be given these resources. Particular attention will be given to areas having construction activities. None of the sites mentioned in the survey reports were in the recreation areas, thus they have had no effect on recreational development.

c. Historical resources.

(1) Inventory. The Little Rock District has made an inventory of historic sites along the Arkansas River in Arkansas in compliance with Executive Order 11593, Protection and Enhancement of the Cultural Environment. The only known historical site within a park is the site of "Old Crawford Courthouse." It was the first county seat of Crawford County established in 1820 and operated until 1836. The courthouse site is located in River Ridge Park near the northwest corner of Franklin County. The building as erected then was a log cabin 15 feet by 15 feet with a clapboard roof and a rough hewed timber floor.

(2) Plans for protection and preservation. The courthouse site is presently designated and described by a metal marker that was erected by the local historical society. It is planned that this marker and the old courthouse site will not be disturbed.

(3) Effects on recreational development. The presence of the old courthouse site will have no adverse effect on the development of the park. The site is located within the existing picnic area and will be maintained for interpretive purposes.

4.03 Environmental resources.

a. Topography. Ozark Lake is bounded on the north by the Boston Mountains of the Ozark Plateau and on the south by Fourche Mountains of the Ouachita Province. The river valley is about 3,000 feet wide at the damsite. The topography of the lake area varies from level to undulating with many long, sharp ridges and broad-top conical hills and mountains rising above the flood plain. High bluffs occur along the right bank of the river whereas on the left bank the river bluffs are less pronounced. Recreational development is hindered due to flooding of low-lying areas within the park boundaries. However, the varied topography offers outstanding scenic qualities and gives a variety of settings for recreational facilities.

b. Vegetation. The vegetation on the project area varies from bottomland hardwoods to pine-oak-hickory types on the highest and best drained sites. It is estimated that 75 percent of the species of trees indigenous to the State are found on project lands.

(1) Lake clearing. Prior to formation of the lake the areas to be inundated were cleared in accordance with Design Memorandum No. 11, Reservoir Clearing. That design memorandum was coordinated with the U.S. Fish and Wildlife Service and the Arkansas Game and Fish Commission. The horizontal clearing limits were established to include those areas within 1 mile of the parks, within 1/2 mile of highway crossings, within the controlled navigation channel, and within boat trails and fish netting areas. Certain areas within the 1-mile limit of White Oak, River Ridge, Clear Creek, and Vache Grasse Parks were left uncleared because the water tolerant growth was needed in connection with bank stabilization. In accordance with the recommendation of the Arkansas Game and Fish Commission, clearing was kept to the minimum in order to increase the fishing potential of the lake.

(2) Park clearing and reforestation. A project plant material list has been prepared to assist in preserving and planting species of trees and shrubs that will keep the areas in their natural state as much as practicable. The program will consist of preserving desirable species, planting trees and shrubs in areas that are deficient in tree coverage, providing vegetative screens and ground cover where needed, and landscaping selective areas. The principal species to be preserved or used in the reforestation and landscaping of public use areas are as follows:

Common names	Scientific names
Oaks	Quercus species
Elms	Ulmus species
Ash	Fraxinus species
Black Willow	Salix nigra
Eastern Cottonwood	Populus deltoides
Black Walnut	Juglans nigra
Eastern Red Cedar	Juniperus virginiana
Pecan	Carya illinoensis
Shagbark Hickory	Carya ovata
River Birch	Betula nigra
Hackberry	Celtis occidentalis
Sugarberry	Celtis laevigata
Tulip Tree	Liriodendron tulipifera
Sweet Gum	Liquidambar styraciflua
Sycamore	Platanus occidentalis
Black Cherry	Prunus serotina
Wild Crabapple	Malus ionensis
Hawthorn	Crataegus species
Redbud	Cercis canadensis
American Holly	Ilex opaca
Maple	Acer species
Dogwood	Cornus florida
Black Gum	Nyssa sylvitica
Water Tupelo	Nyssa aquatica
Persimmon	Diospyros Virginiana

c. Scenic qualities. The project area lies south of the Ozark National Forest which is well known for its scenic qualities, brilliant fall colors, and spectacular mountain vistas. The Ozark Lake area has partly been cleared for farming along the river, but numerous large areas have been left in their natural state and provide exceptional scenic properties for outdoor recreation. Park settings vary from pastoral at Bluff Hole, to rolling wooded at River Ridge, and to steep bluffs and rugged wooded at Citadel Bluff. The pleasure boater is afforded a picturesque river view of these varying land forms and vegetative cover, the man-made bridges, and the locks and dams. It is anticipated that Ozark and Dardanelle Lakes will become principal bases for pleasure boats and boating clubs that would cater to sightseeing boat trips between the mouth of the Arkansas River and Catoosa, Oklahoma.

d. Water quality. The water quality of the Arkansas river in Arkansas has been improved as a result of the completion of the McClellan-Kerr Arkansas River Navigation System. Much of the silt settles out in the reservoirs in Oklahoma and in Ozark and Dardanelle in Arkansas. Also, the salt concentrations have been reduced through flow regulation. The following information regarding water quality is quoted from the Water Pollution Control Survey of the Arkansas River Basin, July 1974, Volume II - Stream Survey, prepared by the Arkansas Department of Pollution Control and Ecology, Water Division.

Page 647. "The river is quite clean as it comes to us from Oklahoma, but discharges from the cities of Fort Smith and Van Buren quickly degrade the quality such that the 30-mile stretch below navigation mile 308 is at the present time the most seriously polluted stretch of the entire Arkansas portion of the river." Also, "In the 150-mile distance between navigation mile 275 below Fort Smith and navigation mile 125 just above Little Rock, only two short stretches of river are polluted so that they do not meet the Department of Pollution Control and Ecology's Criteria for Class A waters (that is, suitable for all beneficial causes including primary contact recreation). These are below the city of Ozark at navigation mile 257 and below the discharges from the cities of Russellville and Dardanelle, which effect approximately a 20-mile reach from navigation mile 201 to navigation mile 181."

The waters of Ozark Lake and its tributaries are classified from various uses in the State of Arkansas booklet, Arkansas Water Quality Standards, Regulation No. 2, as amended September 1973. These use classifications are defined as follows:

Class AA: Extraordinary recreational and aesthetic value. Suitable for primary contact recreation, propagation of desirable species of fish, wildlife, and other aquatic life, raw water source for public water supplies, and other compatible uses.

Class A: Suitable for primary contact recreation, propagation of desirable species of fish, wildlife, and other aquatic life, raw water source for public water supplies, and other compatible uses.

Class B: Suitable for desirable species of fish, wildlife, and other aquatic and semi-aquatic life, raw water source for public water supplies, secondary contact recreation, and other uses.

The Arkansas River between Ozark-Jeta Taylor Lock and Dam and Dam No. 13 is classified "B." White Oak Creek, Mill Creek, Frog Bayou (Clear Creek), and Vine Prairie Creek are classified "A," while Mulberry River is classified "AA." According to these classifications water contact sports could be permitted at White Oak, Bluff Hole, Vine Prairie, and Clear Creek Parks. However, swimming facilities will not be provided at any park where the water quality does not meet the Arkansas State Department of Health standards as published in their Rules and Regulations Pertaining to Outdoor Bathing Places, dated July 1964. Water samples were taken from each of the four above mentioned parks during the summer of 1976. None of the samples passed the health standards required for outdoor bathing places. For this reason, swimming beaches are not proposed for any park on Ozark Lake. When the water quality improves and meets the health standards, we will supplement the master plan to include swimming beaches.

e. Fish and wildlife.

(1) Fish. The fishery resources of the Arkansas River and tributaries now impounded as Ozark Lake are one of the most important recreational resources of the area. In conjunction with the National Forest acreage in close proximity to the project, the diversity of recreational opportunity in the area is second to none. Fishermen access, so scarce in the past, is now sufficient for the recreational use. The recreational fishery of the stream in its underdeveloped state was insignificant and utilization was severely limited by a lack of suitable access. Upon completion of the navigation system components, the waters of Ozark Lake have become less turbid and more suitable to the production of game fish. The increased water depths in the summer have benefited fishing and general recreation. Substantial fisheries have developed immediately downstream from all locks and dams. The various species of catfish, white bass, sauger, and gars are especially prevalent in the tailwater areas. In the lake, the dominant sport fish species are largemouth bass, crappie, white bass, catfish, the various species of sunfish, and the recently introduced striped bass. Walleye have been stocked in the lake, but the success of the stocking is not known. The Arkansas Game and Fish Commission, the agency responsible for propagation and management of fish and wildlife resources of the State, has stocked numbers of native game fish since the lake was completed. The following list gives the scientific and common names of the predominate fish species to be found in Ozark Lake:

Catfish	
Flathead Catfish	*Pylodictis olivaris*
White Catfish	*Ictalurus catus*
Blue Catfish	*Ictalurus furcatus*
Channel catfish	*Ictalurus punctatus*
Basses	
White Bass	*Roccus chrysops*
Striped Bass	*Roccus saxitalis*
Sauger	
Sauger	*Stizostedion canadense*
Gars	
Spotted Gar	*Lepisosteus ocalatus*
Longnose Gar	*Lepisosteus osseus*
Shortnose Gar	*Lepisosteus platostomus*
Alligator Gar	*Lepisosteus spatula*
Perches	
Largemouth Bass	*Micropterus salmoides*
White Crappie	*Pomoxis annularis*
Black Crappie	*Pomoxis nigromaculatus*
Bluegill	*Lepomis macrochirus*
Longear	*Lepomis megalotis*

(2) Commercial fishery. The commercial fishery of the McClellan-Kerr Arkansas River Navigation System, including Ozark Lake, has steadily increased in size and value since project completion. Numbers of commercial fishermen have increased from 279 in 1966 to 1,305 in 1974. The number of boats utilized by these fishermen in 1966 was 180, while 1,305 boats were recorded in 1974. The pounds of fish caught in the entire length of the Arkansas River in Arkansas are presented in Table 4-1. The value of these fish are presented in Table 4-2. This data was obtained from a report furnished by the Arkansas Game and Fish Commission, Commercial Fishery Industry Survey.

TABLE 4-1

COMMERCIAL FISH CATCH ON THE ARKANSAS RIVER

SPECIES	POUNDS REPORTED 1966	1972	1974
Bowfin	-	10,400	12,300
Buffalo	863,400	1,700,000	2,278,335
Carp	271,000	168,700	251,900
Catfish	337,300	1,626,000	1,554,800
Gar	57,200	53,200	144,300
Paddlefish	8,600	77,100	58,100
Carpsucker	60,800	33,200	57,600
Drum	53,000	72,500	469,500
Suckers	10,000	45,100	31,500
Turtles	3,500	7,000	11,800
Total	1,664,800	3,793,200	4,870,135

TABLE 4-2

VALUE OF COMMERCIAL FISH CATCH, ARKANSAS RIVER

SPECIES	Value (Dollars) 1966	1972	1974
Bowfin	-	$520	$2,091
Buffalo	$129,510	289,000	789,630
Carp	13,550	8,435	42,823
Catfish	118,055	569,100	1,026,168
Gar	5,720	2,660	33,189
Paddlefish	1,720	13,107	29,050
Carpsucker	3,040	5,644	23,364
Drum	7,950	12,325	154,935
Suckers	500	2,255	11,025
Turtles	350	490	4,950
Total	280,395	903,539	2,126,225

Lake clearing was accomplished according to regulations but exceptions were made at the recommendation of fish and wildlife interests to provide netting areas free of obstructions to facilitate the removal of rough and commercial species of fishes. In other areas, timber was left standing for fishery purposes unless the standing timber conflicted with other uses.

(3) Wildlife. Quail, rabbits, squirrels, and doves provide a moderate amount of upland hunting opportunity. Relatively large numbers of migrating ducks and geese occasionally use the lake as a rest stop during migration. Some waterfowl hunting occurs during this period. The Ozark and Ouachita National Forests located nearby offer an abundance of wildlife, with in-season hunting for deer, turkey, and other small game.

(4) Preservation and enhancement. The construction of the Arbuckle Bend cutoff has benefited both fish and wildlife. The fishery has benefited from the exclusion of sediment to the bypassed portion of the bendway. The re-creation of an island has been beneficial to some of the more mobile animals such as deer, raccoon, and rabbits. Various species of game and nongame birds have benefited from the seclusion offered by the island.

(5) Summary. Improved access to the project area and the provision of facilities at project expense has greatly facilitated use of project lands and waters. With increased use, a more efficient and expanded harvest of the fishery resources has occurred. Net benefits from project construction have been realized by the increased fishery and improved access. The sport fishery has not been recorded, but such indicators as fishing license sales and Corps visitation figures show an increase in sport fishing similar to or greater than the increase in the commercial fishery since project completion. The number of organized fishing tournaments has steadily increased.

4.04. Recreational resources.

a. Recreational development by the Corps of Engineers. There are nine existing parks and one future park on the Ozark Lake project which will provide water access, picnicking, camping, and related activities. Also, Dam Site 13 South Park at Lock and Dam No. 13 at the upper end of Ozark Lake has been extensively developed to accommodate these same activities. That park was designed to accommodate the residents of Fort Smith area and it provides access to both Navigation Pool 13 and Ozark Lake. Table 4-3 lists other Corps of Engineers projects within 65 air miles of Ozark Lake which offer similar recreational opportunities. Also included in that table is the recorded 1975 visitation to each of these projects.

TABLE 4-3

DATA ON COMPLETED PROJECTS WITHIN 65 AIR MILES OF OZARK LAKE

Project	Air Miles from Ozark	Year Completed	1975 Visitation	1976 Visitation
Lock & Dam 13 (in Ark.)	-	1969	504,800	599,000
Dardanelle	-	1965	2,217,900	2,778,300
W. D. Mayo (14)	15	1971	149,400	278,500
Blue Mountain	25	1947	245,800	223,300
Wister	40	1949	1,085,700	1,078,500
Robert S. Kerr	40	1970	847,700	1,054,900
Nimrod	45	1945	494,400	494,800
Tenkiller Ferry	45	1953	5,226,300	5,668,200
Webbers Falls	50	1970	541,500	863,600
Ouachita	60	1953	2,201,900	2,521,500
Beaver	65	1965	3,179,000	3,842,400
Fort Gibson	65	1953	4,110,200	3,570,200
Lock & Dam 9	65	1969	176,600	353,700
Eufaula	65	1964	4,694,500	5,386,600

b. Related recreation or scientific areas by others.

(1) Ozark City Park. The city of Ozark has leased approximately 6 acres of land from the Corps of Engineers on an area north of U.S. Highway 64 and west of Gar Creek for use as a city park. The use of the land as a city park is considered the best utilization. Picnicking, tennis, and boat launching facilities are provided at this park. Approximately 65,400 visitors came to the park in 1975. Future planned construction includes additional tennis and basketball courts and a swimming pool with bathhouse.

(2) Marinas. Midwest Research Institute of Kansas City, Missouri, prepared a market analysis in 1974 entitled, A Market and Spatial Location Analysis for Fishing Concession Facilities at Ozark Lake, Arkansas. The analysis concluded that the current market for fishing services and facilities at Ozark Lake should support one or more low investment type fishing concession facilities. At the present time, there are no marinas on Ozark Lake. Embayments have been constructed at Vache Grasse and Clear Creek Parks for possible future marina concessions. Also, areas at Vine Prairie and Dam Site South Park have been reserved for future marina operations. A marina concession will be advertised for lease only after a request has been received and evaluated with reference to current market conditions.

(3) Lakes. Shores Lake in Franklin County, Lakes Fort Smith and Shepherd Springs (both water supply lakes) in northeast Crawford County and Sugarloaf Lake in southwest Sebastian County are relatively small lakes near the project area which offer swimming, fishing, and camping opportunities on a small scale.

(4) State parks. There are eight State parks within 50 miles of the Ozark project. They are Devil's Den, Queen Wilhelmina, Withrow Springs, Prairie Grove, Lake Fort Smith, and Mount Nebo in Arkansas and Wister and Tenkiller in Oklahoma. Queen Wilhelmina has recently been improved with the reconstruction of the new Queen Wilhelmina Lodge.

(5) National forest. Numerous campgrounds are scattered throughout the Ozark and Ouachita National Forests. Approximately 15 of these campgrounds are located within 50 miles of Ozark Lake.

c. Arkansas natural area plan. The Arkansas Department of Planning has prepared a plan for preserving some of the natural areas of each of the natural divisions of the State. The plan is a technical appendix to the Arkansas Statewide Comprehensive Outdoor Recreation Plan of 1974. It discusses the criteria for selection of areas to be preserved, inventory of sites, acquisition, management, and implementation. If carried out, this plan will assure preservation of natural areas for the enjoyment of future generations. There are 14 natural areas designated in the plan which lie within the nine-county project zone of influence, none of which are on Ozark Lake project lands. Two of the natural areas are in Crawford County, one in Franklin County, five in Johnson County, three in Madison County, one in Washington County, and two in Logan County. These sites lie within the Ozark Mountain Division and the Ouachita Mountain Division as described in the natural area plan. A description of the three sites within the counties adjacent to Ozark Lake are given below as quoted from the Arkansas Natural Area Plan, dated December 1974.

Ozark Mountain Division.

(a) Crawford County, Site 1 and Washington County Site, 1. "This creek lies in a wide, deep valley, completely forested, with timber of only moderate commercial value yet mature and varied in species and with a heavy understory. This area has a good deal of historic significance and contains an abundance of wildlife." This site is approximately 30 miles north of Lock and Dam 13 near Devil's Den State Park.

(b) Crawford County, Site 2 and Washington County, Site 3. "This valley area is heavily forested, but with poor timber. It affords spectacular views, supports a great deal of wildlife, and has tremendous historical value." This site is approximately 30 miles north of Lock and Dam 13 near Devil's Den State Park.

(c) Franklin County, Site 1. "This area is a wide, heavily forested valley with a picturesque stream surrounded by a horseshoe of Ozark mountains. Significant factors of the site are the unique little stream and wildlife while the forest is not comparable to adjacent valleys. It is a remote, wild, unique, and vast area that could provide tremendous recreation to hunters, hikers, backpackers, and nature lovers." This site is approximately 25 miles north of Ozark, Arkansas.

4.05 Population of the counties in which the project lies.[1]

[1] Source: 1970 Census of Population, Volume I - Characteristics of the Population, Part 5 - Arkansas, U.S. Department of Commerce.

a. Total population. The population of the nine Arkansas counties in the Ozark Lake project zone of influence was 255,872 in 1970. This was a 21.4 percent increase over the 1960 population of 210,696. All counties recorded an increase in population during this 10-year period.

b. Minorities. The population of this area during 1970 consisted of 97 percent whites, 2.6 percent blacks, and 0.4 percent for all other minorities. The greatest concentration of minorities occured in Sebastian County where they were 6 percent of the total county population.

c. Age groups. The age distribution of the zone of influence is as follows:

Age group (years)	Percent of total 1970 population
0 to 9	17.1
10 to 19	18.8
20 to 34	20.3
35 to 49	15.7
50 to 64	15.6
65 and over	12.5

Source: 1970 Census of Population, Volume I.

d. Occupations. The people located within the zone of influence are engaged in a multitude of occupations. During 1970, an estimated 92,788 persons were employed in the occupations listed in Table 4-4.

TABLE 4-4

OCCUPATIONS, PERCENT OF TOTAL EMPLOYED
16 YEARS OLD AND OVER

Occupation	Percent within the zone of influence
Professional and technical	11.0
Managers and administrators	8.8
Sale workers and clerical	19.5
Craftsmen	14.1
Operatives	22.4
Laborers	5.6
Farmers	6.5
Service workers	10.7
Private household workers	1.4

Source: 1970 Census of Population, Volume I.

e. Major industries. The major manufacturing industries of this region are located at Fort Smith in Sebastian County and at Fayetteville in Washington County. Manufacturing is very important to the economy of the region. Agriculture is also a major industry of the region and especially of the Arkansas River Valley.

f. Per capita personal income. The 1969 per capita personal income varies from a low of $1,569 in Madison County and a high of $2,636 in Sebastian County. Table 4-5 lists the per capita personal income and the percent of all families with an income less than the poverty level for each county within the zone of influence.

TABLE 4-5

INCOME

County	Per capita income	Percent of families with income less than poverty level
Crawford*	$1,901	21.9
Franklin*	1,801	23.5
Johnson	1,876	25.4
Logan	1,801	27.6
Madison	1,569	33.1
Scott	1,733	28.5
Sebastian*	2,636	12.9
Washington	2,367	15.0
Yell	1,995	19.8

*Counties on Ozark Lake.

g. Effects on recreational development. Recreational development is proportioned throughout the project based on the needs of the visitors and the total population. Recreational facility requirements are based on the projected population and income of the persons within the zone of influence. Facilities are planned for people of all age groups. The population of these counties should continue to increase and visitation to the parks should increase. Recreational development will have to be expanded to meet the need of this increased visitation or facilities and resources will be over used and deteriorate as a result of this over use.

4.06 Accessibility.

a. Major highway access routes. Interstate Highway 40 is an east-west highway which passes through Memphis, Tennessee; Little Rock, Arkansas; and Van Buren, Arkansas; and it continues westward into Oklahoma. It and U.S. Highway 64 both parallel Ozark Lake on the north side. On both sides of the lake, there is a network of paved State highways and county roads which provide access to the lake. State Highway 23 Bridge at Ozark, Arkansas, is the only bridge crossing on the lake. A bridge over Lock and Dam No. 13 at the upstream end of the lake is under construction. Dam Site North and South, Bluff Hole, Citadel Bluff, Vine Prairie, and Clear Creek Parks are accessible by paved roads, while the other three existing parks are served by gravel roads of lengths varying from 1.2 to 2.0 miles.

b. Commercial transportation. The Fort Smith city airport has scheduled air service and charter service. Also, a small airport at Ozark is served by small charter airlines. Several buslines offer passenger, charter, and package express service along the major highway network.

c. Effects on recreational development. The Federal and State highways are adequate to serve the public needs for transportation to the vicinity of Ozark Lake. Paving of the graveled county roads would improve public access to the parks considerably. The gravel roads, even though they are kept in fair condition, restrict the use of the parks due to dust and mud accumulations on towed boats and trailers.

The commercial transportation systems do not directly affect visitation to the lake since the majority of visitors live within approximately 50 miles of the project.

4.07 Effect of water surface fluctuation on public use.

a. Park lands. The low-lying lands in the parks are subject to frequent flooding. For this reason, the restroom facilities are generally sited on land above the 10-year frequency flood elevation. Picnic and camp facilities are located at lower elevations in the upper part of the lake, generally near the water and are subject to more frequent flooding.

b. Concessions. At the present time there are no concessionnaires located within the parks nor are there any privately owned marinas on Ozark Lake. Future marinas will be sited to minimize the damages which might result from high river flows, swift currents, waves, and wakes from passing boats and barges.

c. Water areas.

(1) Lake. The conditions of the river channel through Ozark Lake are generally suitable for recreational use throughout most of the year. However, boaters must exercise caution to avoid floating debris, underwater obstructions, and other hazards. The U.S. Coast Guard maintains the system of navigation aids consisting of lights, daymarks, mile boards, and buoys to properly mark the navigation channel. During flows of 70,000 cubic feet per second or above, the Corps of Engineers issues safety warnings to encourage pleasure boaters to stay off the lake. At these flows river currents are swift, floating debris is heavy, and some of the channel marker buoys may be under water.

(2) Downstream of dam. At low flows, fishing immediately downstream of the dam is generally excellent. However, during high flows fishing is generally poor in the swift currents. Boating is dangerous in this area and the Arkansas Game and Fish Commission has established regulations which prohibit boating within 300 feet of the dam.

4.08 Availability of funds for construction of recreation facilities. The current cost sharing policy may hinder further development of the parks on Ozark Lake as public bodies in the area do not generally have funds available for cost sharing recreational developments. Details of the requirements of Public Law 89-72 are given in Section 9.03.

SECTION V

RECREATION FACILITY REQUIREMENTS

5.01 Zone of influence. Recreational use surveys have not been conducted on Ozark Lake since many of the parks were under construction until late in 1975. All initial recreational development is now completed and visitor surveys will be conducted in the near future. It is estimated that approximately 80 percent of the visitors reside within 50 miles of the project. Plate 2 in Section 12 identifies the nine Arkansas counties and the regional resources within the 50-mile radius zone of influence. These counties are Washington, Madison, Crawford, Franklin, Johnson, Sebastian, Logan, Scott, and Yell. Two Oklahoma counties, Adair and Sequoyah, also lie within the 50-mile radius from Ozark Lake. However, these two counties are not included in the zone of influence for two reasons: (1) the residents of those counties have similar projects closer to them in Oklahoma such as Tenkiller Reservoir, Webbers Falls, Robert S. Kerr, and W. D. Mayo, and (2) residents of Oklahoma would have to pay nonresident fishing licenses in order to fish on Ozark Lake.

5.02 Visitation record. Visitation to Ozark Lake has more than doubled the first 4 years of operation due to the increasing availability of facilities. Table 5-1 lists the visitation record of the project and the individual parks. Citadel Bluff and River Ridge Parks received no visitation in 1975 since they were under construction. Likewise, Bluff Hole Park visitation was zero in 1974 due to construction. Since initial development of all the parks is now complete, visitation should increase significantly in the next few years.

TABLE NO. 5-1

RECORD OF VISITATION

Park	1972	1973	1974	1975	1976
Dam Site South	18,100	31,500	49,200	41,100	74,600
Dam Site North					
(a) L&D access road	113,500	129,200	109,200	99,700	116,500
(b) Overlook	1,000	57,800	82,000	93,900	75,300
Citadel Bluff	0	0	0	0	28,200
White Oak	5,300	16,900	22,400	20,100	18,100
Vine Prairie	9,000	48,700	70,400	57,100	76,500
Bluff Hole	0	0	0	107,200	154,500
River Ridge	0	0	0	0	11,600
Clear Creek	17,100	49,700	57,700	48,800	72,200
Vache Grasse	15,000	37,400	44,100	34,000	38,300
Unimproved access road	95,000	58,400	62,500	53,000	82,900
Ozark City Park	0	61,400	83,100	65,400	111,000
Total (rounded off)	384,000	491,000	580,600	620,300	859,700

1975 MONTHLY VISITATION

Month	Visitors	Percent of Annual Visitation
January	45,653	7.4
February	30,388	4.9
March	49,893	8.0
April	66,154	10.7
May	83,317	13.4
June	63,433	10.2
July	60,332	9.7
August	54,715	8.8
September	46,606	7.5
October	45,425	7.3
November	38,536	6.2
December	35,800	5.8
Total (rounded off)	620,300	99.9

5.03. Present recreational use.

a. Source of data. The data source for determining present recreational use are the observations and traffic counter readings made by the Dardanelle Resident Office personnel, Ozark Preventive Maintenance Section. The estimated current activity participation rates were prepared by personnel of Construction-Operations Division and reviewed by Dardanelle Resident Office personnel.

b. Planning base. On most lake projects in the Little Rock District the planning base is the average summer weekend day visitation for the months of June, July, and August. However, on Ozark Lake visitation in 1975 was greatest during the months of April, May, June, and July. Therefore, the planning base for Ozark Lake is the average weekend day for these 4 months, and it will be referred to as the average summer weekend day in this report. From surveys made at nearby Dardanelle Lake in June 1975, it is estimated that approximately 60 percent of the visitors visit the project on the weekend. The average summer weekend day visitation for the base year 1975 is computed as follows.

1975 average monthly visitation = (66,154 + 83,317 + 63,433 + 60,332) ÷ 4 = 68,309

1975 average summer weekend day visitation = 68,309 average monthly visitors (April - July) ÷ 4.4 weeks/month x 0.60 weekend visitors ÷ 2 days per weekend

1975 average summer weekend day visitation = 4,658 visitors

c. Participation rates. Participation rates used to determine present recreational use are based on estimates made by Construction-Operations

Division and reviewed by the Dardanelle Resident Office personnel. These rates reflect the fact that many of the recreational facilities were under construction. The primary activities are fishing and sightseeing at the present time. Table 5-2 lists the summer (April-June) and annual participation rates for the entire project as determined from 1975 recreational visitation data.

TABLE 5-2

1975 PARTICIPATION RATES

Activity	Summer	Annual
Boating	0.039	0.032
Fishing	0.536	0.509
Hunting	0	0.009
Picnicking	0.028	0.023
Sightseeing	0.520	0.447
Camping	0.013	0.011
Other	0.003	0.001
Total	1.139	1.032

d. Activity occasions. An activity occasion is defined as participation of one person in a given recreation activity during any portion of one day. For example, a person may participate in picnicking and fishing in one day. Therefore, that person generated two activity occasions at the project that day, and facilities should be provided for this person to enjoy these activities. The activity occasions generated on a summer weekend day are computed by multiplying the summer weekend day visitation by the summer participation rates for each activity. Similarly, the annual activity occasions are computed by multiplying the monthly visitation by the estimated participation rates for that particular month, and then adding the total for all 12 months. The 1975 average summer weekend day and annual activity occasions for Ozark Lake are given in Table 5-3.

TABLE 5-3

1975 ACTIVITY OCCASIONS

Activity	Summer Weekend Day	Annual
Boating	182	20,052
Fishing	2,497	315,502
Hunting	0	5,405
Picnicking	130	14,417
Sightseeing	2,422	277,043
Camping	60	6,648
Other	14	878
Total	5,305	639,945

5.04. Projected recreational use.

a. Basis for estimating future use. The following assumptions were made in projecting future use.

(1) The frequency of recreational use is proportional to population and personal income. This correlation has been proven to be relatively reliable and conservative at the older projects within the Little Rock District.

(2) Project visitation is proportional to the population residing within the zone of influence.

(3) The major percentage of visitors will continue to be generated from the zone of influence.

(4) Projected participation rates for the recreational activities will be approximately the same as those for Lake Dardanelle.

b. Population and income projections. Population and income projections were derived from the following sources:

(1) 1970 Census of Population. Volume 1 - Characteristics of the Population, part 5 - Arkansas, U.S. Department of Commerce.

(2) OBERS Projections, Series E, Economic Activity in the United States.

(3) Report RM-56, Industrial Research and Extension Center, University of Arkansas, June 1973.

The projected population and per capita personal income of the nine counties in the zone of influence were multiplied to determine the total personal income. The 1975 total personal income is divided into the projected total personal income to determine the rate of change from the base year. This rate of change is called the visitation projection factor, and it is used to determine the projected visitation. Table 5-4 lists the projected population, per capita personal income, total personal income, and the visitation projection factors.

TABLE 5-4

POPULATION AND INCOME PROJECTIONS
NINE COUNTY ZONE OF INFLUENCE
(1969 DOLLARS)

Year	Population	Per capita personal income	Total personal income ($1,000)	Visitation projection factor
1975	278,000	$2,670	742,300	1.000
1980	303,500	3,290	998,500	1.345
1990	330,500	4,420	1,460,800	1.968
2000	346,100	6,180	2,138,900	2.881
2010	357,800	8,150	2,916,100	3.928
2020	369,300	10,800	3,988,400	5.373

c. Projected activity occasions.

(1) Projected visitation. The projected visitation to Ozark Lake is given in Table 5-5.

TABLE 5-5

PROJECTED VISITATION

Year	Visitation projection factor	Projected visitation	
		Summer weekend day	Annual
1975	1.000	4,658	620,300
1980	1.345	6,265	834,300
1990	1.968	9,200	1,221,000
2000	2.881	13,400	1,787,000
2010	3.928	18,300	2,437,000
2020	5.373	25,000	3,333,000

(2) Projected participation rates. Since Ozark Lake is relatively new and recreational facilities have only recently been completed, it does not have an established recreational use trend. The public is generally not aware of the facilities that are available on the lake. For this reason it is anticipated that the 1975 participation rates shown in Table 5-2 will not be accurate by the year 1980. Therefore, we predict that the average participation rates in the future will be similar to the experienced participation rates at the adjacent older Lake **Dardanelle.** Water contact sports are not encouraged on Ozark Lake since the water quality is not acceptable. Therefore, the participation rates for water skiing and swimming on Ozark Lake are assumed to be 0, and swimming beaches will not be provided.

TABLE 5-6

PROJECTED PARTICIPATION RATES

Activity	Summer	Annual
Boating	.06	.05
Fishing	.36	.45
Hunting	0	.01
Picnicking	.20	.17
Sightseeing	.35	.36
Camping	.15	.12
Other	.17	.09
	1.29	1.25

The projected activity occasions generated by the visitors on a summer weekend day and on an annual basis are given in Tables 5-7 and 5-8, respectively. These activity occasions are the basis for determining recreation facility requirements in Section 5.07.

TABLE 5-7

PROJECTED ACTIVITY OCCASIONS
AVERAGE SUMMER WEEKEND DAY

		1980	1990	2000	2010	2020
Summer weekend day visitation		6,265	9,200	13,400	18,300	25,000
Boating	(.06)	376	552	804	1,098	1,500
Fishing	(.36)	2,255	3,312	4,824	6,588	9,000
Hunting	(0)	0	0	0	0	0
Picnicking	(.20)	1,253	1,840	2,680	3,660	5,000
Sightseeing	(.35)	2,193	3,220	4,690	6,405	8,750
Camping	(.15)	940	1,380	2,010	2,745	3,750
Other	(.17)	1,065	1,564	2,278	3,111	4,250
Total		8,082	11,868	17,286	23,607	32,250

TABLE 5-8

PROJECTED ANNUAL ACTIVITY OCCASIONS

Year		1980	1990	2000	2010	2020
Annual visitation		834,300	1,221,000	1,787,000	2,437,000	3,333,000
Boating	(.05)	41,710	61,050	89,350	121,850	166,650
Fishing	(.45)	375,430	549,450	804,150	1,096,650	1,499,850
Hunting	(.01)	8,340	12,210	17,870	24,370	33,330
Picnicking	(.17)	141,830	207,570	303,790	414,290	566,610
Sightseeing	(.36)	300,350	439,560	643,320	877,320	1,199,880
Camping	(.12)	100,120	146,520	214,440	292,440	399,960
Other	(.09)	75,090	109,890	160,830	219,330	299,970
Total		1,042,870	1,526,250	2,233,750	3,046,250	4,166,250

5.05. Comparison of projections. The projected activity occasions expected at Ozark Lake were compared with the Arkansas Statewide Comprehensive Outdoor Recreation Plan for 1974 (SCORP). The nine counties in the project zone of influence lie mainly in the Western Arkansas Planning District, No. 4. Also, two counties lie in District No. 1 and two counties lie in District No. 5. Recreation needs, or unsatisfied demand, as stated in the SCORP were determined by adding the county needs of the nine counties and the minimum additional regional need of District No. 4. These recreational needs are shown in Table 5-9 for each of the recreational activities of the project. The need for additional recreational facilities is evident for all categories of activities within this region of Arkansas.

5.06. Facility load and other design criteria.

a. General. The following criteria are applicable to overall facility development planned.

(1) EM 1110-2-400 dated 1 September 1971, Recreation Planning and Design Criteria.

(2) ER 1110-2-400 dated 1 February 1971, Design of Recreation Sites, Areas, and Facilities.

(3) ER 1120-2-400 dated 1 November 1971, Recreation Resources Planning and change 3 dated 12 February 1976.

(4) ER 1130-2-400 dated 28 May 1971, Recreation Resources Management of Civil Works Water Resource Projects.

(5) ER 1165-2-400 dated 3 August 1970, Recreational Planning, Development, and Management Policies.

(6) ER 1130-2-406 dated 13 December 1974, Lakeshore Management at Civil Works Projects.

(7) Public Law 93-303, enacted 7 June 1974, which provides for collection of user fees at parks.

(8) Park Practice Design Manual of the National Park Service.

b. Picnic units. One picnic unit will be provided for each 10 picnickers on an average summer weekend day. The picnic unit will consist of a concrete picnic table, grill or fireplace, and trash receptacle. Adquate vehicular parking will be provided for each picnic unit. A table canopy may be provided where shade is not available. Wooden picnic tables will be provided during peak summer use such as on National holidays. One group type picnic shelter will be provided for each 225 picnickers per average summer weekend day.

TABLE 5-9

RECREATION NEEDS AS STATED
IN THE 1974 ARKANSAS SCORP (NINE COUNTIES)

Activity	Unit	1975	1980	1985	1990
Boating, sailing, skiing	Acres of water	220	245	292	342
Fishing	Acres of water	8,727	9,889	12,952	16,698
Picnicking	Sites	267	346	450	568
Tent camping	Sites	505	575	662	765
Trailer (RV) camping	Sites	0	3	10	18
Hunting	Acres of habitat	66,549	76,344	91,357	108,165

c. Camping units. One camp unit will be provided for each five individual campers on an average summer weekend day. The camp unit will be similar to a picnic unit except paved parking may by provided for one or two vehicles and/or a recreation vehicle.

d. Sanitary Facilities. One waterborne restroom will be provided for each 250 camping activity occasions or one vault restroom will be provided for each 50 camping activity occasions per average summer weekend day. Also, one vault or waterborne restroom will by provided for every 2,500 other activity occasions on an average summer weekend day. Restrooms will be constructed using Little Rock District standard designs to reduce construction and maintenance costs. The masonry vault type I restroom is approximately 11 feet by 25 feet, with exterior of split-face concrete masonry units, and it has a nearly flat concrete roof with two skylights and a wind driven turbine ventilator. The women's side has two toilet stools, and the men's side has two toilet stools and a urinal. The masonry vault type II restroom is identical in appearance to the type I, but it has been equipped with wastewater plumbing to facilitate future conversion to a waterborne restroom. The masonry vault type III restroom is approximately 14 feet by 28 feet, with exterior of split-face concrete masonry units, and it has a wood framed pitched roof with asphalt shingles. This restroom has two toilet stools in the women's side and two toilet stools and a urinal in the men's side. It has a concrete porch which is designed for future conversion to shower rooms. Also, it is equipped with electrical lighting and has wastewater plumbing for future conversion to a waterborne restroom. The masonry waterborne restroom is approximately 12 feet by 31 feet, and is similar in appearance to the vault type I or II restrooms. The women's side has two water closets, a lavatory, and a mirror. The men's side has one water closet, a lavatory, a urinal, and a mirror. The masonry waterborne restroom with showers is approximately 17 feet by 33 feet. It is similar to the masonry waterborne restroom, and has two showers in each side. Trailer sanitary disposal stations will be provided at parks having a significant number of campsites. The domestic and solid wastes generated at the parks will be treated and/or disposed of in compliance with Federal or State requirements.

e. Launching ramps. In accordance with EM 1110-2-400, dated 1 September 1971, one launching lane should be provided for each 40,000 annual visitors or at any one area having 40 boat launchings per normal weekend day. Since the parks are relatively small in size and are located at close intervals, the proposed number of launching ramps are considered adequate for balanced park development.

f. Roads and parking areas. All major park circulation roads and parking areas will be designed to closely follow the existing ground surface, and clearing will be limited to the minimum necessary for safety. They will be surfaced with asphaltic concrete. Park roads and parking areas which are anticipated to be used on a limited or infrequent basis will be hard-surfaced gravel. Plates 7A and 7B show typical details for roads and parking areas.

g. Photographs of selected facilities. Photographs of selected recreational facilities are included at the end of this section.

5.07. Facility requirements.

a. Facilities required to serve the base year use. The facility design load criteria in Section 5.06 were applied to the activity occasions shown in Section 5.03 to determine the facilities required during the base year 1975.

b. Facilities required to serve the future use. The facility design load criteria in Section 5.06 were applied to the projected activity occasions shown in Section 5.04 to determine the future facility requirements. Table 5-10 lists the facility requirements for Ozark Lake.

c. Determination of optimum use. Optimum use is defined as that level of use which can be accommodated without degradation of the project resources. The development plan proposed in this master plan is for optimum use and should accommodate the recreational uses of the project until approximately the year 2000. At that time additional parks would be required to continue to meet the recreational demand.

5.08. Availability of water and project lands to accommodate recreational activities.

a. Water. Ozark Lake is approximately 38 miles long and contains 10,600 acres of water surface. It is estimated that the fishery on Ozark Lake will sustain an optimum annual yield of 44 pounds per acre. Assuming that 1.5 pounds of fish are caught per activity occasion, we estimate that the lake will support 310,933 annual fishing activity occasions. Thus, from Table 5-3 it can be seen that fishing pressure on this lake is estimated to be at optimum now. We estimate that the lake will support 75 boating activity occasions per year per acre. Therefore, this 10,600-acre lake is estimated to support an optimum of 795,000 annual boating activity occasions. The projected boating activity, in Table 5-7, will not reach optimum until after the year 2020.

b. Project lands. There are 1,359 acres of land available within the designated parks for recreational activities. These lands are adequate to meet the estimated recreational demand through the year 2000.

TABLE 5-10

FACILITY REQUIREMENTS

Facility	1975	1980	1990	2000	2010	2020	Proposed Existing(1)	Proposed Total(2)
Group picnic shelters	1	6	8	12	16	22	9	17
Picnic units	13	125	184	268	366	500	98	207
Camp units	12	188	276	402	549	750	150	447(4) 8 Group Camps
Launching lanes	16	21	31	45	61	83	9	14
Restrooms (waterborne)(3)								
Camping	1	4	6	8	11	15	7 V	15 V
Other	2	3	5	7	9	12	6 WB	11 WB
Total restrooms	3	7	11	15	20	27	1 WB/S	9 WB/S 4 CWH

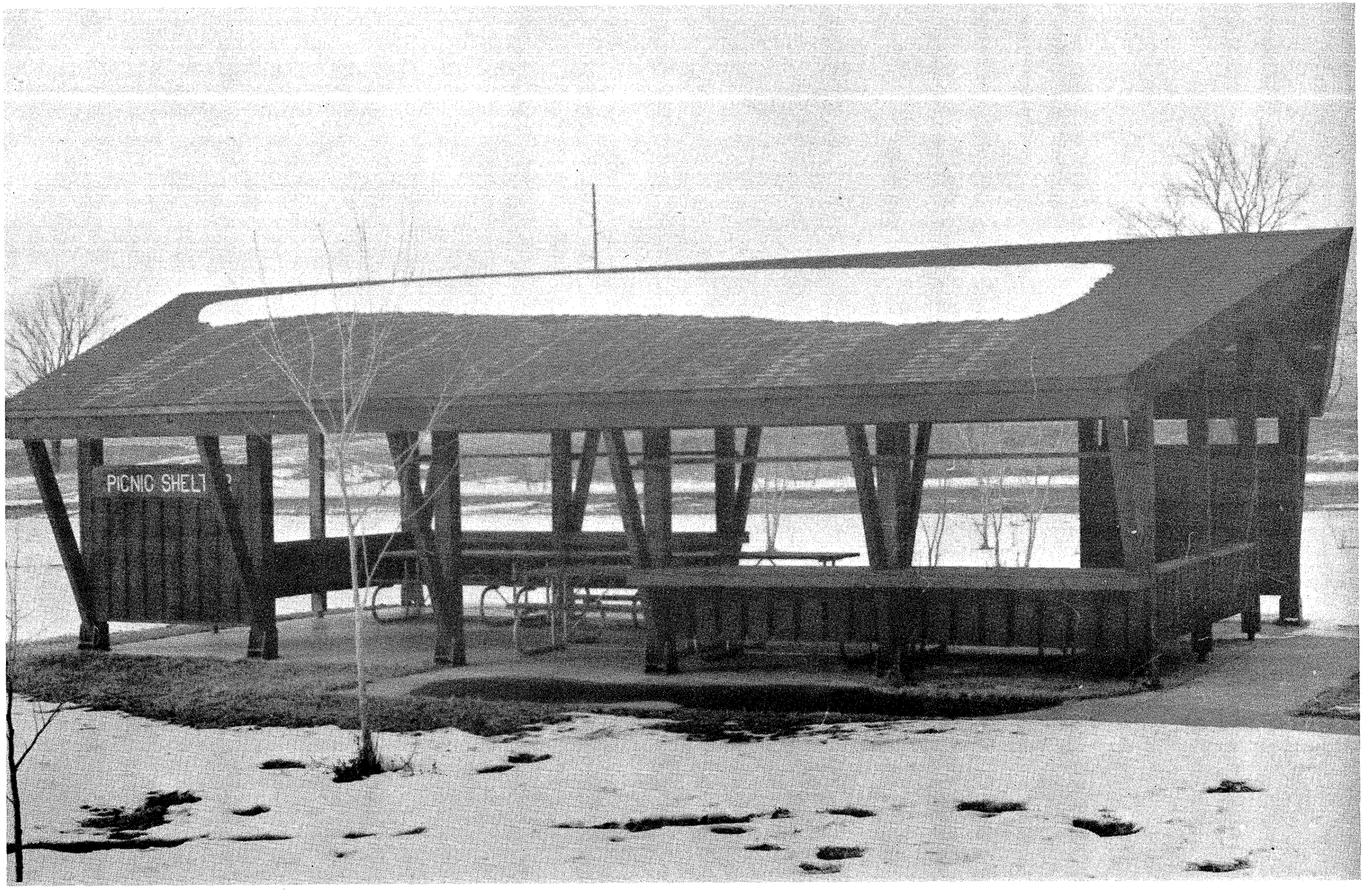
(1) Existing development includes all facilities completed.

(2) Total proposed development includes all development shown in this master plan.

(3) Restroom requirements are computed in terms of the number of waterborne restrooms.

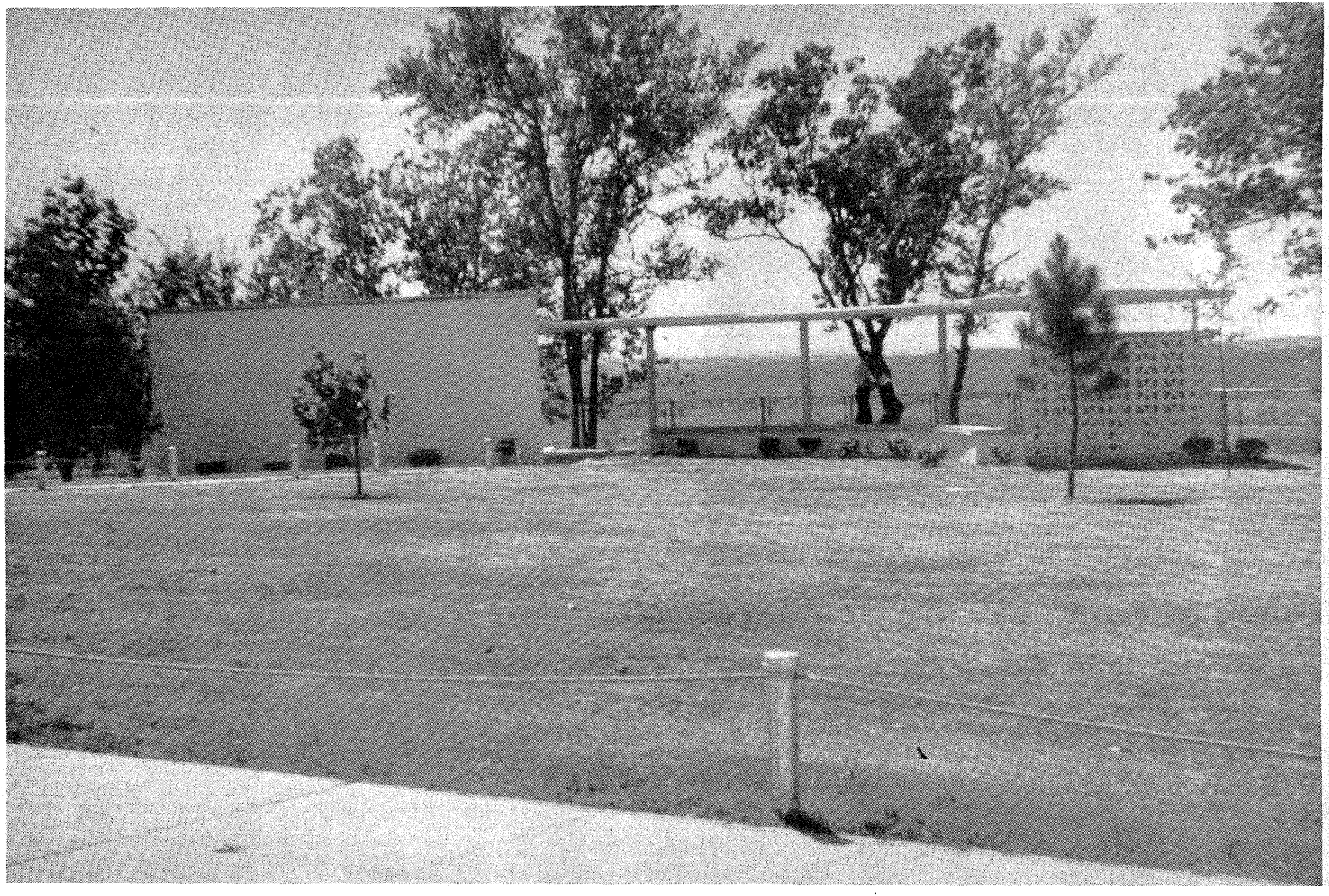
(4) Thirty-four (34) camp units in camp area number 2, Vine Prairie Park, will be converted to picnic units to achieve a better balance of facilities to demand. The 447 camp units in the total development does not include these 34 camp units.

MASONRY VAULT TYPE III RESTROOM

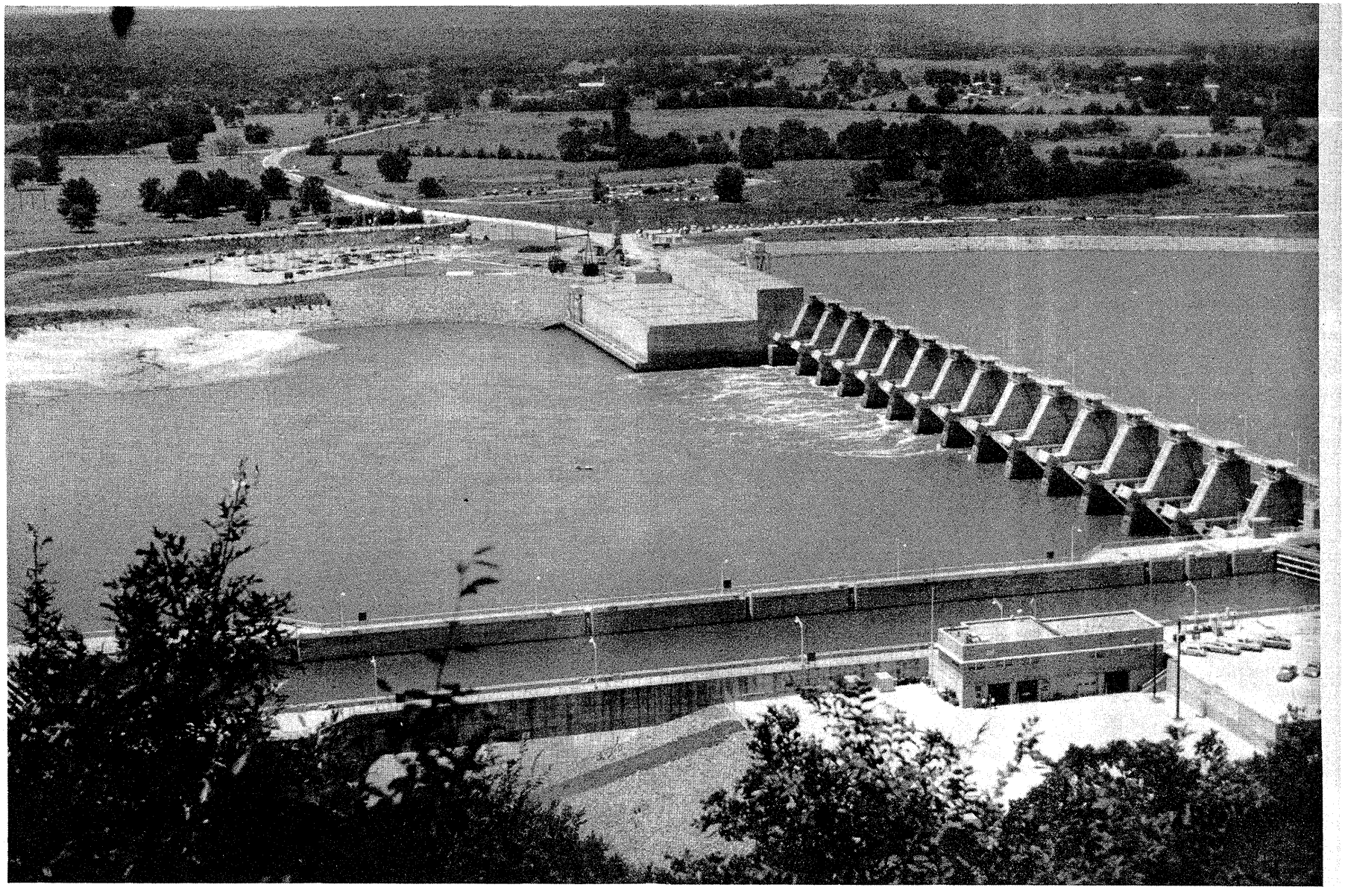


TYPICAL GROUP PICNIC SHELTER

WATERBORNE RESTROOM



OZARK - JETA TAYLOR LOCK AND DAM OVERLOOK



OZARK - JETA TAYLOR LOCK AND DAM
VIEW FROM OVERLOOK

SECTION VI

COORDINATION WITH OTHER AGENCIES

6.01. Initial coordination. The original master plan was coordinated with all interested local, State, and Federal agencies. The U.S. Department of Health, Education, and Welfare and the Arkansas State Department of Health conducted a joint survey of the reservoir area with representatives of the Little Rock District on 10-11 June 1963 to evaluate foreseeable mosquito problems which might result from the construction of the lake. A copy of this report was included in the preliminary master plan. Development plans for this project were coordinated with the Arkansas Game and Fish Commission and the U.S. Fish and Wildlife Service. Their comments were included in the original master plan. Also, a joint field reconnaissance of the area was made in June 1963 with representatives of the National Park Service, and their verbal recommendations were incorporated in the original master plan.

6.02. Subsequent coordination. The city of Ozark requested a lease on 6 acres of land for use as a city park in 1969. This action was approved in a resolution passed by the Ozark City Council on 11 March 1969. On 6 August 1975, Mr. Arnold D. Feller, mayor of the city of Mulberry, requested by letter that the name of Mulberry Park be changed to Bluff Hole Park. Supplement No. 6 to the original master plan approved this name change on 30 December 1975. Also during the summer of 1975, the mayors of the cities along the Arkansas River were contacted to determine if they would be receptive to cost sharing the development of additional recreational facilities. None were interested concerning facilities on Ozark Lake.

6.03. Correspondence. In accordance with ER 1103-2-811 dated 29 April 1976, this updated master plan has been coordinated with the State of Arkansas, Department of Local Services, which is the State A-95 clearinghouse. Copies of the preliminary and final drafts of the updated master plan were sent to this agency for review and coordination with all interested local and State agencies. A copy of each of these transmittal letters and the replies received are inclosed.

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203

REPLY TO
ATTENTION OF:

SWLED-PV

11 June 1976

Mr. Fred Kleihauer
State of Arkansas
Department of Local Services
First National Building, Suite 900
Little Rock, Arkansas 72201

Dear Mr. Kleihauer:

We are currently updating our master plan for development and management of Ozark Lake. We would appreciate your comments and recommendations concerning the inclosed working draft of the updated master plan. The land-use plan shown on Plates 4, 5, 6, and 7 will be further revised to make minor corrections and to add an additional classification of operations-wildlife management lands.

You will be furnished a copy of the final master plan draft for review possibly in September 1976. It will have all project lands classified for use, and all previous comments will be considered and incorporated.

If you have questions concerning this master plan, feel free to contact Mr. John Hogan or Mr. Richard Young, telephone 378-5836.

Sincerely yours,

Calvin W. Shelton
for D. R. RIPPEY
Chief, Engineering Division

1 Incl
As stated

STATE OF ARKANSAS
DEPARTMENT OF LOCAL SERVICES
SUITE 900 • FIRST NATIONAL BUILDING
LITTLE ROCK 72201

DAVID PRYOR
GOVERNOR

RONALD R. COPELAND
DIRECTOR

July 9, 1976

Mr. D. R. Rippey
Little Rock District
Corps of Engineers
P.O. Box 867
Little Rock, Arkansas 72203

Re: Draft Master Plan for Development & Managment of Ozark Lake

Dear Mr. Rippey:

The State Planning and Development Clearinghouse is in receipt of the Draft Master Plan for Development and Management of Ozark Lake.

The Department of Local Services is presently reviewing the Draft Master Plan at this time. Any forthcoming comments will be forwarded to you for your use and information.

If we can be of further assistance, please do not hesitate to call on us.

Sincerely,

Fred Kleihauer

Fred Kleihauer
Director, State Clearinghouse

FK:mh

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203

REPLY TO
ATTENTION OF:

SWLED-PV

8 November 1976

Mr. Fred Kleihauer
Director, State Clearinghouse
Arkansas Department of Local Services
Suite 900
First National Bank Building
Little Rock, Arkansas 72201

Dear Mr. Kleihauer:

In June of this year we furnished you a copy of the first draft of the Master Plan for development and management of Ozark Lake for your review and comments. We received your reply dated 9 July 1976. At this time we are nearing completion of our updating effort and we request that you review the inclosed second and final draft.

Your comments are desired by 29 December 1976 in order to permit us to make any necessary revisions or additions before we submit the final updated Master Plan to our Southwestern Division Engineer in February 1977 for approval.

If you have questions concerning this draft, please contact Richard Young or John Hogan at telephone 378-5836.

Sincerely yours,

D. R. RIPPEY
Chief, Engineering Division

1 Incl
As stated

STATE OF ARKANSAS
DEPARTMENT OF LOCAL SERVICES
SUITE 900 • FIRST NATIONAL BUILDING
LITTLE ROCK 72201

DAVID PRYOR
GOVERNOR

RONALD R. COPELAND
DIRECTOR

November 12, 1976

Mr. D. R. Rippey
Little Rock District,
Corps of Engineers
P.O. Box 867
Little Rock, Arkansas 72203

Re: Updated Master Plan for Development & Managment of Ozark Lake Design Memorandum Number 6-3

Dear Mr. Rippey:

The State Planning and Development Clearinghouse is in receipt of the above cited document for review and comment. The interested state agencies will be notified of the availability of this document for review and comment.

If we can be of further assistance, please don't hesitate to call on us.

Sincerely,

Fred Kleihauer

Fred Kleihauer
Director, State Clearinghouse

FK:mh

SECTION VII

PHYSICAL PLAN OF DEVELOPMENT

7.01. General description of plan. Development of Ozark Lake for public use will be confined principally to ten areas shown on Plate 2, titled, "Land Use Map Index." There are available for public use in these areas about 1,317 acres above the top of the navigation and power pool (elevation 372). Approximately 1,117 acres were acquired solely for recreation above elevation 372.

a. Full consideration is given to maintaining the highest standards of public health, safety, and sanitation in the development and management of the lake for public use.

b. Preference will continue to be given to Federal, State, and local governmental agencies for the use of areas suitable for public parks and recreational purposes on government-owned lands. The plan, as presented herein, is subject to modification at the time any of these agencies desire to participate in the construction, maintenance, management, and operation of recreational facilities to be provided.

c. Commercial boat dock sites that are not located in parks licensed to Governmental agencies for development as public parks will be awarded in accordance with ER 405-1-830 and EC-405-2-12.

d. The interest of the general public is paramount, and that interest will be safeguarded by adequate control over the use of the government-owned land adjacent to the lake. Ownership of land adjacent to government-owned land is not considered sufficient reason to allow the adjacent owner to have private and exclusive access to the lake across government-owned land.

e. The lake shoreline will be protected on a continuing basis to preserve its natural scenic beauty. No timber will be cut or removed unless removal is required in connection with the project.

f. The advice, assistance, and cooperation of various qualified governmental agencies will be sought periodically in the development, maintenance, and management of the lake area.

g. This plan presents the proposed use of lands acquired for development of Ozark Lake, and was prepared in accordance with guidance furnished by Change 3, dated 12 February 1976, to ER 1120-2-400, Investigations, Planning, and Development of Water Resources.

7.02. Allocation of lands. Lands below elevation 375 required for project operation, maintenance, and public recreational use were acquired in fee. Easements were acquired for access to construction sites and to public recreation areas. Flowage easements were acquired on lands above elevation 375, which are adversely affected as a result of project operation. All lands were acquired in accordance with provisions contained in the following Real Estate Design Memorandums and Supplements:

(1) Design Memorandum No. 4 dated June 1963, and Supplement No. 3 dated April 1968.

(2) Design Memorandum No. 6 dated December 1963.

(3) Design Memorandum No. 7-1 dated November 1963; Supplement No. 1 dated 4 November 1964; and Supplement No. 2 dated 6 January 1965.

(4) Design Memorandum No. 7-2 dated January 1965, and Supplement No. 1 dated April 1969.

Locations of the lands acquired in fee and those over which easements were acquired are shown on the land use maps, Plates Nos. 2, 3, 4, and 5. As of December 1975, the total acreage is 10,970 in fee and 21,633 in easement. Fee lands on Ozark Lake have been allocated for project operations; operations: recreation-intensive use; operations: recreation-low density use; operations: natural area; and recreation lands. These allocations are shown on the land use maps and are described in the following subparagraphs.

a. Project operations. This allocation includes lands acquired to provide for safe efficient operation of the project for its authorized purpose other than recreation. Approximately 9,994 acres have been acquired in fee for project operations.

10 970
9994
976

Several areas have been designated for placement of dredged material in the process of maintaining the project dimensions for the navigation channel. These areas are shown on Plates 3 through 5. A public notice was issued on 18 September 1974 concerning periodic dredging on the McClellan-Kerr Arkansas River Navigation System in Arkansas. This public notice identified dredged material placement areas and discussed our dredging activities. Several objections were made concerning the selected areas, and after all objections were resolved a Statement of Findings dated 29 April 1975 declared our intentions to proceed with the dredging activities. These areas are also shown in the final Operation and Maintenance Environmental Impact Statement which has been filed with the Council on Environmental Quality. When use of areas other than those included in the 18 September 1974 Public Notice are required, Public Notices are issued on an ad hoc basis.

b. Operations: recreation intensive use. These lands were acquired for project operations and are allocated for use as developed public use areas for intensive recreational activities by the visiting public. No agricultural uses are permitted on these lands. Three areas are included in this allocation: 113 acres at Dam Site North Park; 87 acres at Dam Site South Park; and 5 acres at Ozark City Park. A total of 205 acres above elevation 372 is included in this classification.

c. Operations: recreation-low density use. These are lands acquired for project operations and allocated for low density recreation use. These lands are to be used for hiking, limited camping, or similar low-density recreational use, to provide for the ecological and scenic protection of the shoreline, and to provide buffer zones adjacent to recreation lands. Where practicable, a buffer zone, 1/4-mile minimum (1/2-mile desireable) shoreline length has been established at the parks to protect the environment. Interim use of the recreation low-density use lands includes leasing for agricultural and grazing purposes where such uses enhance the maintenance of open space, scenic values, and wildlife management. Minimum corridor access across these lands is permitted for navigation related industrial purposes, such as ports, factories, and fueling dock. Requests for industrial leases are considered on an individual basis, and the minimum amount of land is used in order to preserve a maximum of the natural and scenic beauty of the lake for use by the general public. All recreation-low density use lands are managed to benefit wildlife and are open for in-season hunting.

d. Recreation lands. These lands were acquired specifically for park development. Lands above the top of power pondage, elevation 372, were acquired at ten sites and are designated for park development. Table 7-1 lists the park areas and acreages available for public use. No agricultural uses are permitted on these lands, except on an interim basis where these uses enhance the maintenance of open space, scenic values, and wildlife management. These parks are described in Section 7.06 and are shown on Plates 9 through 17.

TABLE 7-1

LANDS ALLOCATED FOR RECREATION
(acres)

Site	Project operations dam requirements in fee	Recreation lands (above EL. 372)	Total available for public use (above EL. 372)
Dam Site North	23	0	113
Dam Site South	7	8 +87 Interim =	95
Citadel Bluff		182	182
White Oak		95	95
Bectum Hill		155	155
Bluff Hole		8	8
River Ridge		109	109
Vine Prairie		183	183
Clear Creek		135	135
Vache Grasse		242	242
Total (acres)	30	1,117	1,317

e. Operations: natural area. These lands were acquired for project operations and allocated for preservation of ecological and visual values. There are two areas on Ozark Lake allocated as natural areas at the locations shown on Plate 3. Both areas are heavily wooded and contain bluffs and rock outcrops. The terrain is too steep for development of industrial access. Neither development nor agricultural uses will be permitted on these lands. Approximately 194 acres above elevation 372 are included in this allocation.

f. Flowage easement lands. These lands are presently used for agriculture, pasture, and limited timber production. The construction of structures for human habitation is prohibited. The erection of other structures is subject to review and approval by the District Engineer.

7.03. Construction in water areas along shoreline. Any work below the ordinary high water elevation, or on land over which the Government has acquired an easement, requires Corps of Engineers approval prior to its initiation. Where the deposit of dredged or fill material, or construction affecting public use of the waterway is proposed, issuance of a public notice is required under Section 404 of the Federal Water Pollution Control Act Amendments of 1972 or Section 10 of the River and Harbor Act of 1899. The notice is sent to navigation interests, newspapers, radio, and television stations, Federal, State, and local governmental agencies, and approximately 200 other interested parties, who are allowed 30 days to file valid objections to issuance of the permit. Minor work for removal from the navigation fairways may be authorized by a letter of permission, provided no filling in navigable waters is involved. Although no public notice is required for authorization by letter of permission, each application is reviewed by State and Federal fish and wildlife agencies as well as by the Corps of Engineers, prior to issuance of a permit. Applications are processed in accordance with the provisions of 33 CFR 209.120.

7.04. Interim use. Project lands which are pending future development are made available for agriculture and grazing purposes by appropriate outgrant. Currently 83 lease plots comprising 4,885 acres have been made available for agricultural and grazing leasing. These lands are managed in accordance with approved soil and water conservation practices to maintain a desirable vegetative cover, minimize erosion, and encourage wildlife. The management requirements include fire protection, seeding, and limitations on grazing use to maintain an optimum vegetative cover.

7.05. Project operation structures. The Dardanelle Resident Engineer located at Dardanelle Lock and Dam, Russellville, Arkansas, has field level responsibility for operation and maintenance of Ozark Lake, as well as for Lake Dardanelle and Navigation Pools Nos. 7, 8, 9, and 13. The lake manager located at Ozark-Jeta Taylor Lock and Dam is responsible for the parks in Ozark Lake and Pool 13. His staff and maintenance equipment are stationed at Ozark-Jeta Taylor Lock and Dam.

7.06. Recreational development.

a. General. The selection of the park sites was made after due consideration was given to the adaptability of sites to the desired facilities, accessibility by existing or proposed roads, terrain, scenic qualities, proximity to sheltered tributary areas, water frontage, and depth, and other pertinent data. Nine parks were selected for initial development, and the initial development was physically completed in January 1976. One park has been reserved for future development.

b. Developed parks.

(1) Dam Site North (Plate 9). Approximately 113 acres are available for public use in this park. An additional 23 acres is allocated for operation of the project. The park is served by the paved lock and dam access road which connects to U.S. Highway 64. Picnicking and boat launching facilities are available now, and limited camping facilities are planned for future development. The project overlook was constructed on a bluff approximately 300 feet above the lock and dam. A photograph of this structure is included at the end of Section 5. Project offices and maintenance compounds are located within this park.

(2) Dam Site South (Plate 9). Approximately 95 acres are available for public use in this park. An additional 7 acres is used for operation of the powerhouse and switchyard. Access to this park is provided by a paved access road from State Highway 23. Picnicking, camping, and boat launching facilities are available now. Additional parking and a fishing walk are planned immediately downstream of the switchyard to accommodate the bank fishermen. An area has been reserved for a commercial boat dock upstream from the dam near the boat launching ramp.

(3) Citadel Bluff (Plate 10). The area lies on the right bank 2 miles north of Cecil and State Highway 96. The area with its gentle to moderate slopes and moderate to heavy tree cover will be adaptable to a variety of outdoor recreation activities. A protective cove within the area offers a sheltered area from the main body of the lake. The site is accessible by State Highway 41 from State Highway 96 at Cecil, Arkansas. Picnicking, camping, and boat launching facilities are available for public use. The area has a large rock bluff which has been fenced for safety precautions.

(4) White Oak (Plate 11). This area is located on the White Oak Creek arm of the lake, 2 miles south of U.S. Highway 64. The area is accessible by an all weather, gravel surfaced road. It is expected to attract a large number of fishing enthusiasts in the embayment formed on White Oak Creek north of the railroad. The attractive embayment has boat access to the main body of the lake through a narrow channel under a county road and a railroad with vertical clearances of 6.7 and 7.5 feet, respectively. The park has moderately heavy tree cover and gentle to steep slopes and was easily developed for public use.

(5) Bluff Hole (formerly Mulberry) (Plate 12). This area is on U.S. Highway 64 one mile east of Mulberry, Arkansas. It has long been a popular access point to the clear water of the Mulberry River. The area is small and has little tree cover, but its gentle slopes and location make it an ideal fishing access area to Mulberry River. The park has been developed for day use. There is a rock bluff on the opposite bank.

(6) Vine Prairie (Plate 13). This area is bounded on the north by the Missouri Pacific railroad, Vine Prairie Creek to the south, and Little Mulberry Creek on the east. Little Mulberry Creek separates this area from the town of Mulberry, Arkansas. This park is considered to be the most desirable on the lake and is accessible from U.S. Highway 64 and Interstate 40 by a paved county road. The area consists of gentle to moderately steep slopes with light to medium tree cover. The area is readily adaptable to a large variety of outdoor recreational activities. Picnicking, camping, and boat launching facilities are available for public use. A site is reserved for a commercial boat dock in this park.

(7) River Ridge (Plate 14). Access to this area is by approximately 1 mile of gravel road from paved State Highway 96. The area is on the main body of the lake and the high ridge provides a commanding view of the lake. The steep slopes and heavy tree cover make it ideal for picnicking and camping development. Picnicking, camping, and boat launching facilities are available and a boat mooring area has been excavated to provide small craft protection from the currents.

(8) Clear Creek (formerly Frog Bayou) (Plate 15). This area, located at the mouth of Frog Bayou near Arbuckle Island Bendway, was highly recommended by the Fish and Wildlife Service as a major fishing area. Access to the area is by approximately 3 miles of paved county road from paved State Highway 162. This area is expected to attract a large number of fishing enthusiasts because Frog Bayou is already a well-known fishing stream. An embayment has been constructed for a future boat dock concession. Picnicking, camping, and boat launching facilities are available. It has light to moderate tree cover with gentle to steep slopes which provide good opportunities for development of a variety of recreational activity. A $3.00 per night camping fee is being charged during the summer.

(9) Vache Grasse (Plate 16). This area is located in the upper end of the lake 1-1/2 miles north of State Highway 22. The area is bounded on the west by Fort Chaffee and is 6 miles east of the city of Fort Smith, Arkansas. Considerable day use of this area is experienced because of its location near Fort Chaffee and Fort Smith. An embayment has been constructed for a proposed boat dock concession. Picnicking, camping, and boat launching facilities are available. Terrain in this area is predominately gentle with light to moderate tree cover. Access to the area is by approximately 1.2 miles of all weather gravel road from State Highway 255.

c. Future park.

Bectum Hill (Plate 17). This area, proposed for future development, is located on the north side of the lake and is accessible from U.S. Highway 64 by a gravel surfaced road. The area includes the west end of Bectum Hill with heavily wooded slopes overlooking the main body of the lake. Boating access from a protective cove into the main lake area is limited to shallow water. However, a launching ramp is planned for small boats. Both picnicking and camping facilities are planned for this area.

SECTION VIII

BENEFITS AND ECONOMIC VALUE OF THE PROJECT

8.01. General. Justification for the recreational development of Ozark Lake is based on the need for recreational facilities to provide for the pleasure, relaxation, health, and safety of the using public for the present and the future. The development proposed in this master plan provides for improved access and thereby increases and enhances the benefits realized from the recreational and fish and wildlife resources of the area.

8.02. Recreational benefits. During 1975 an estimated 620,300 people visited Ozark Lake. Based upon standards for the evaluation of recreational benefits contained in Supplement No. 1, Senate Document No. 97, 87th Congress, June 1964, the estimated value of an average recreation day at Ozark Lake is $0.60. Application of this unit value to the 1975 visitation estimates yeilds an annual gross recreational benefit of $372,180. Similarly, the anticipated 1,787,000 visitors in the year 2000 would result in an estimated annual gross recreational benefit of $1,072,200.

8.03. Collateral benefits of the project. Past experience at completed projects indicates that as a result of the construction of a lake project there is a pronounced increase in values of land, property, and sales in the surrounding area. A large subdivision featuring 5-acre home sites is presently being promoted in the vicinity of Citadel Bluff Park. Businesses and services catering to the tourists and sportsmen become a major source of income in nearby communities. Other economic values of an intangible nature are increases in property taxes, revenue to governmental agencies from the sale of hunting and fishing licenses, and revenue from gasoline taxed due to recreational travel. It is likely that these collateral benefits will continue to grow because of the construction of Ozark Jeta Taylor Lock and Dam and development of the lake.

SECTION IX

EXPENDITURES AND COST ESTIMATES

9.01. General. The following paragraphs and tables are presented to facilitate review of expenditures for existing recreation facilities and estimates of costs for development of proposed facilities.

9.02. Allocation and expenditures of Construction General Funds. As of 30 September 1976, a total of $2,615,288 had been expended for construction of recreation facilities (Account 14) on Ozark Lake. The last contract was physically completed in January 1976; however, a contract claim is pending. A total of $2,639,000 was scheduled for construction of recreation facilities on Ozark Lake. Also, a total of $141,977 has been expended through 30 September 1976 in Account 19 for the overlook shelter, buildings, utilities, turfing, and landscaping on the Ozark project.

9.03. Cost Sharing - Public Law 89-72. After completion of initial recreational development in January 1976, all further development requires 50-50 cost sharing with a non-Federal public agency under policy established by the Secretary of the Army in coordination with the Office of Management and Budget. Urgently needed sanitary facilities, needed to meet the requirements of applicable State and Federal laws, could be constructed without cost sharing. At the present time there are no urgently needed sanitary facilities. Various public agencies were contacted during the preparation of this updated master plan. Several of the agencies were informed of the cost sharing requirements, and were asked about any interest they might have in participating in cost sharing of additional recreational facilities. None were interested in cost sharing at this time.

9.04. Future recreational development cost.

a. General. The estimated cost of development of the proposed recreational facilities shown on Plates 9 through 17 are summarized in the following tables. These estimates are based on October 1976 price levels.

b. Tables of estimated cost of additional recreational facilities. The estimated total cost of construction for the proposed recreational facilities is $5,788,800. A summary of estimated cost of additional development by parks is shown in Table 9-1. A summary of estimated cost for additional development by facilities planned is shown in Table 9-2. Detailed cost estimates for additional recreational facilities in each park are shown in Table 9-3 through 9-12.

9.05. Annual operation and maintenance cost. A summary of the estimated cost for resource management and the cost of real estate management activities are given in Table 9-13.

TABLE 9-1

ESTIMATED COST OF ADDITIONAL RECREATIONAL
DEVELOPMENT BY PARKS
OZARK LAKE

Table	Park Name	Estimated cost
9-3	Dam Site North	$70,575
9-4	Dam Site South	288,230
9-5	Citadel Bluff	648,450
9-6	White Oak	702,980
9-7	Bluff Hole	44,980
9-8	Vine Prairie	1,011,340
9-9	River Ridge	314,440
9-10	Clear Creek	628,605
9-11	Vache Grasse	633,495
9-12	Bectum Hill	647,270
	Total Direct Construction Cost	4,990,365
	E&D and S&A, 16% ±	798,435
	Total Cost	$5,788,800

TABLE 9-2

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park SUMMARY Acres 1,317 See Plate

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00	17,918	37,600	827,200
b. 18 feet	do	20.00	35,234	9,710	194,200
c. 16 feet	do	18.00	868	-	-
d. 12 feet, one way	do	13.00	1,799	11,830	153,790
Gravel roads, 18 feet	do	11.75	2,515	1,455	17,095
Gravel parking areas	SY	6.50	560	1,110	7,215
Paved parking areas	SY	10.00	29,118	12,343	123,430
Launching lanes, concrete	EA	31,500	9	5	157,500
Courtesy piers	EA	6,750	6	-	-
Restrooms, masonry					
a. Vault, Type I	EA	20,000	1	6	120,000
b. Vault, Type II	do	25,000	4	2	50,000
c. Vault, Type III	do	25,600	2	-	-
d. Convert Type II to WB	do	8,000	-	6	48,000
e. Convert Type III to WB/S	do	22,500	-	2	45,000
f. Waterborne	do	38,000	6	5	190,000
g. Waterborne with showers	do	44,000	1	9	396,000
h. Washhouses	do	60,000	-	4	240,000
Disposal field for waterborn r.	Sum Job		3	16	141,255
Sewage collection system	Sum Job		2	3	201,000
Sanitary disposal station	EA	7,000	2	2	14,000
Water distribution system	Sum Job		7	9	198,450
Water well	EA	8,000	4	4	57,000
Picnic unit	do	1,000	98	109	109,000
Camp Unit (includes parking spur)	do	2,600	150	297	772,200
Table canopies	do	2,000	50	27	54,000
Electrical distribution & hookups at campsites	Sum Job		7	10	379,500
Group campsites	EA	2,500	-	8	20,000
Group Picnic shelters	do	18,500	9	8	148,000
Patio and fireplace for p.s.	do	3,500	-	14	49,000
Overlook shelters	do	9,200	1	1	9,200
Fishing berm (30 c.y./100LF)	LF	15.00		650	9,750
Concrete benches	EA	230	-	3	690
Mercury vapor lights	do	500	-	50	25,000
Entrance complex	Sum Job		-	8	64,000
Trails	Mile	13,200	.86	3.84	50,690
Playground equipment	Sum Job		1	-	-
Reforestation	acre	1,000	-	99.4	99,400
Site preparation	Sum Job		-	3	2,000
Lanscaping and Beautification	acre	2,800		6	16,800
TOTAL					$4,990,365

TABLE 9- 3

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park DAM SITE NORTH Acres 113 See Plate 9

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00	5,240		
b. 18 feet	do	20.00			
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00			
Gravel roads, 18 feet	do	11.75	1,400	1,300	15,275
Gravel parking areas	SY	6.50	560		
Paved parking areas	SY	10.00	1,694		
Launching lanes, concrete	EA	31,500	1		
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000		1	20,000
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000	1		
g. Waterborne with showers	do	44,000			
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job		1		
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job		1	1	1,000
Water well	EA	8,000			
Picnic unit	do	1,000	14	3	3,000
Camp Unit (includes parking spur)	do	2,600		8	20,800
Table canopies	do	2,000			
Electrical distribution & hookups at campsites	Sum Job		1	1	6,500
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500	1		
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200	1		
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		1	500
Entrance complex	Sum Job				
Trails	Mile	13,200	.86		
Playground equipment	Sum Job		1		
Reforestation	acre	1,000			
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800			
TOTAL					$70,575

December 1976 Price Level

TABLE 9-4

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park DAM SITE SOUTH Acres 95 See Plate 9

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities	
				Quantity	Cost
Paved roads					
a. 20 feet	LF	22.00	128		
b. 18 feet	do	20.00	8,650	910	18,200
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00			
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	3,012	2,683	26,830
Launching lanes, concrete	EA	31,500	1	1	31,500
Courtesy piers	EA	6,750	2		
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000	1	2	50,000
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000		3	24,000
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000	1		
g. Waterborne with showers	do	44,000			
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job		1	3	22,500
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job		1	1	250
Water well	EA	8,000			
Picnic unit	do	1,000	19	22	22,000
Camp Unit (includes parking spur)	do	2,600	10		
Table canopies	do	2,000	7		
Electrical distribution & hookups at campsites	Sum Job		1	1	10,500
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500	3	2	37,000
Patio and fireplace for p.s.	do	3,500		5	17,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00		650	9,750
Concrete benches	EA	230			
Mercury vapor lights	do	500		6	3,000
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200			
Playground equipment	Sum Job				
Reforestation	acre	1,000		4.4	4,400
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800		1	2,800
TOTAL					$288,230

December 1976 Price Level

TABLE 9-5

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park CITADEL BLUFF Acres 182 See Plate 10

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities	
				Quantity	Cost
Paved roads					
a. 20 feet	LF	22.00	6,934	2,000	44,000
b. 18 feet	do	20.00	3,276	3,320	66,400
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00	1,171	1,250	16,250
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	2,720		
Launching lanes, concrete	EA	31,500	1	1	31,500
Courtesy piers	EA	6,750	1		
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000	1		
c. Vault, Type III	do	25,600	1		
d. Convert Type II to WB	do	8,000		1	8,000
e. Convert Type III to WB/S	do	22,500		1	22,500
f. Waterborne	do	38,000		2	76,000
g. Waterborne with showers	do	44,000			
h. Washhouses	do	60,000		1	60,000
Disposal field for waterborn r.	Sum Job			5	40,500
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000		1	7,000
Water distribution system	Sum Job		1	1	48,000
Water well	EA	8,000	1		
Picnic unit	do	1,000	11	22	22,000
Camp Unit (includes parking spur)	do	2,600	25	33	85,800
Table canopies	do	2,000	9		
Electrical distribution & hookups at campsites	Sum Job		1	1	53,000
Group campsites	EA	2,500		3	7,500
Group Picnic shelters	do	18,500	1	1	18,500
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		7	3,500
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200		1.25	16,500
Playground equipment	Sum Job				
Reforestation	acre	1,000		9.0	9,000
Site preparation	Sum Job			1	1,000
Lanscaping and Beautification	acre	2,800			
TOTAL					$648,450

December 1976 Price Level

TABLE 9-6

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park WHITE OAK Acres 95 See Plate 11

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities	
				Quantity	Cost
Paved roads					
a. 20 feet	LF	22.00		2,700	59,400
b. 18 feet	do	20.00	3,977	3,780	75,600
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00		1,700	22,100
Gravel roads, 18 feet	do	11.75	1,090		
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	2,620	1,278	12,780
Launching lanes, concrete	EA	31,500	1		
Courtesy piers	EA	6,750	1		
Restrooms, masonry					
a. Vault, Type I	EA	20,000	1		
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000		1	38,000
g. Waterborne with showers	do	44,000		2	88,000
h. Washhouses	do	60,000		1	60,000
Disposal field for waterborn r.	Sum Job				
Sewage collection system	Sum Job			1	100,000
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job			1	16,000
Water well	EA	8,000	1	1	* 33,000
Picnic unit	do	1,000		16	16,000
Camp Unit (includes parking spur)	do	2,600	7	39	101,400
Table canopies	do	2,000			
Electrical distribution & hookups at campsites	Sum Job			1	38,500
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500		1	18,500
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200		1	9,200
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		6	3,000
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200			
Playground equipment	Sum Job				
Reforestation	acre	1,000			
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800			
TOTAL					$702,980

*Pressurized well and treatment system.

December 1976 Price Level

TABLE 9-7

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park BLUFF HOLE Acres 8 See Plate 12

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00			
b. 18 feet	do	20.00	1,350		
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00			
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	972	278	2,780
Launching lanes, concrete	EA	31,500			
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000	1		
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000		1	8,000
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000			
g. Waterborne with showers	do	44,000			
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job			1	7,700
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job			1	13,700
Water well	EA	8,000	1		
Picnic unit	do	1,000	14		
Camp Unit (includes parking spur)	do	2,600			
Table canopies	do	2,000			
Electrical distribution & hookups at campsites	Sum Job			1	10,500
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500	1		
Patio and fireplace for p.s.	do	3,500			
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500			
Entrance complex	Sum Job				
Trails	Mile	13,200			
Playground equipment	Sum Job				
Reforestation	acre	1,000		2.3	2,300
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800			
TOTAL					$44,980

December 1976 Price Level

TABLE 9-8

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park VINE PRAIRIE Acres 183 See Plate 13

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00	1,881	12,200	268,400
b. 18 feet	do	20.00	3,427		
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00		3,140	40,820
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	5,680	612	6,120
Launching lanes, concrete	EA	31,500	2		
Courtesy piers	EA	6,750	2		
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600	1		
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500		1	22,500
f. Waterborne	do	38,000	2		
g. Waterborne with showers	do	44,000		3	132,000
h. Washhouses	do	60,000		1	60,000
Disposal field for waterborn r.	Sum Job			1	14,000
Sewage collection system	Sum Job		1	1	61,000
Sanitary disposal station	EA	7,000	1		
Water distribution system	Sum Job		1	1	34,500
Water well	EA	8,000			
Picnic unit	do	1,000	7	6	6,000
Camp Unit (includes parking spur)	do	2,600	(1) 47	78	202,800
Table canopies	do	2,000	15		
Electrical distribution & hookups at campsites	Sum Job		1	1	80,800
Group campsites	EA	2,500		2	5,000
Group Picnic shelters	do	18,500	1		
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		9	4,500
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200		1.03	13,600
Playground equipment	Sum Job				
Reforestation	acre	1,000		45.0	45,000
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800		1	2,800
TOTAL					$1,011,340

(1) 34 camp units to be converted to picnic units in the future.

December 1976 Price Level

TABLE 9-9

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park RIVER RIDGE Acres 109 See Plate 14

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00	2,992	3,760	82,720
b. 18 feet	do	20.00	1,300		
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00	314		
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	2,440	472	4,720
Launching lanes, concrete	EA	31,500	1		
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000	1		
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000		1	8,000
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000			
g. Waterborne with showers	do	44,000		1	44,000
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job			2	16,710
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job		1	1	41,500
Water well	EA	8,000	1		
Picnic unit	do	1,000	6		
Camp Unit (includes parking spur)	do	2,600	18	24	62,400
Table canopies	do	2,000	6		
Electrical distribution & hookups at campsites	Sum Job		1	1	25,700
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500			
Patio and fireplace for p.s.	do	3,500			
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230		3	690
Mercury vapor lights	do	500		3	1,500
Entrance complex	Sum Job			1	8,000
Trails, includes 1 shelter	Mile	13,200		1.0	13,200
Playground equipment	Sum Job				
Reforestation	acre	1,000		4.8	4,800
Site preparation	Sum Job			1	500
Lanscaping and Beautification	acre	2,800			
TOTAL					$314,440

December 1976 Price Level

TABLE 9-10

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park CLEAR CREEK Acres 135 See Plate 15

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00	743	3,340	73,480
b. 18 feet	do	20.00	7,354	1,700	34,000
c. 16 feet	do	18.00	868		
d. 12 feet, one way	do	13.00	314		
Gravel roads, 18 feet	do	11.75		155	1,820
Gravel parking areas	SY	6.50		1,110	7,215
Paved parking areas	SY	10.00	6,140	1,870	18,700
Launching lanes, concrete	EA	31,500	1	1	31,500
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000		1	20,000
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000	1	2	76,000
g. Waterborne with showers	do	44,000	1	1	44,000
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job			1	6,500
Sewage collection system	Sum Job		1	1	40,000
Sanitary disposal station	EA	7,000	1		
Water distribution system	Sum Job		1	1	18,500
Water well	EA	8,000			
Picnic unit	do	1,000	11	10	10,000
Camp Unit (includes parking spur)	do	2,600	30	32	83,200
Table canopies	do	2,000	7	10	20,000
Electrical distribution & hookups at campsites	Sum Job		1	1	69,500
Group campsites	EA	2,500		3	7,500
Group Picnic shelters	do	18,500	1	1	18,500
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		7	3,500
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200		.56	7,390
Playground equipment	Sum Job				
Reforestation	acre	1,000		23	23,000
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800		1	2,800
TOTAL					$628,605

December 1976 Price Level

TABLE 9-11

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park VACHE GRASSE Acres 242 See Plate 16

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00		5,840	128,480
b. 18 feet	do	20.00	5,900		
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00		5,500	71,500
Gravel roads, 18 feet	do	11.75	25		
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00	3,840	417	4,170
Launching lanes, concrete	EA	31,500	1		
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000			
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000	1		
g. Waterborne with showers	do	44,000		2	88,000
h. Washhouses	do	60,000		1	60,000
Disposal field for waterborn r.	Sum Job		1	3	33,345
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000		1	7,000
Water distribution system	Sum Job		1	1	25,000
Water well	EA	8,000			
Picnic unit	do	1,000	16		
Camp Unit (includes parking spur)	do	2,600	13	52	135,200
Table canopies	do	2,000	6		
Electrical distribution & hookups at campsites	Sum Job		1	1	55,500
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500	1		
Patio and fireplace for p.s.	do	3,500		1	3,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		6	3,000
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200			
Playground equipment	Sum Job				
Reforestation	acre	1,000		8.0	8,000
Site preparation	Sum Job				
Lanscaping and Beautification	acre	2,800		1	2,800
TOTAL					$633,495

December 1976 Price Level

TABLE 9-12

ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES
OZARK LAKE

Park BECTUM HILL (FUTURE) Acres 155 See Plate 17

Item	Unit	Unit Cost	Existing Facilities	Proposed Facilities Quantity	Proposed Facilities Cost
Paved roads					
a. 20 feet	LF	22.00		7,760	170,720
b. 18 feet	do	20.00			
c. 16 feet	do	18.00			
d. 12 feet, one way	do	13.00		240	3,120
Gravel roads, 18 feet	do	11.75			
Gravel parking areas	SY	6.50			
Paved parking areas	SY	10.00		4,733	47,330
Launching lanes, concrete	EA	31,500		2	63,000
Courtesy piers	EA	6,750			
Restrooms, masonry					
a. Vault, Type I	EA	20,000		4	80,000
b. Vault, Type II	do	25,000			
c. Vault, Type III	do	25,600			
d. Convert Type II to WB	do	8,000			
e. Convert Type III to WB/S	do	22,500			
f. Waterborne	do	38,000			
g. Waterborne with showers	do	44,000			
h. Washhouses	do	60,000			
Disposal field for waterborn r.	Sum Job				
Sewage collection system	Sum Job				
Sanitary disposal station	EA	7,000			
Water distribution system	Sum Job				
Water well	EA	8,000		3	24,000
Picnic unit	do	1,000		30	30,000
Camp Unit (includes parking spur)	do	2,600		31	80,600
Table canopies	do	2,000		17	34,000
Electrical distribution & hookups at campsites	Sum Job			1	29,000
Group campsites	EA	2,500			
Group Picnic shelters	do	18,500		3	55,500
Patio and fireplace for p.s.	do	3,500		3	10,500
Overlook shelters	do	9,200			
Fishing berm (30 c.y./100LF)	LF	15.00			
Concrete benches	EA	230			
Mercury vapor lights	do	500		5	2,500
Entrance complex	Sum Job			1	8,000
Trails	Mile	13,200			
Playground equipment	Sum Job			2.9	2,900
Reforestation	acre	1,000		1	500
Site preparation	Sum Job			2	5,600
Lanscaping and Beautification	acre	2,800			
TOTAL					$647,270

December 1976 Price Level

TABLE 9-13

SUMMARY OF OPERATION AND MAINTENANCE COSTS
FOR RESOURCE MANAGEMENT AND
REAL ESTATE MANAGEMENT ACTIVITIES
(1976 Dollars)

Item	Public use	Real Estate Activities
Fiscal Year 1975		
Real Estate		32,900
Resource Management	120,100	
S&I Overhead 25%	29,600	
TOTAL	149,700	32,900
Fiscal Year 1980		
Real Estate		48,000
Resource Management	142,400	
S&I Overhead 25%	35,600	
TOTAL	178,000	48,000
Fiscal Year 2000		
Real Estate		137,000
Resource Management	276,500	
S&I Overhead 25%	69,100	
TOTAL	345,600	137,000

SECTION X

MANAGEMENT PLANS

10.01. Project Resource Management Plan.

a. General operational concepts and policies. The project resource management plan was prepared in accordance with ER 1130-2-400 dated 28 May 1971. The plan was approved by SWD in June 1976, and it will be Appendix A to this Design Memorandum. The plan describes the various management functions required for operation of the Ozark Lake portion of the McClellan-Kerr Arkansas River Navigation System. The governing policies for recreational development are contained in engineering regulations and manuals and are included in the rules and regulations governing public use as published in Title 36, Chapter 3, Part 326.1 of the Federal Code of Regulations.

b. Staffing. Ozark Lake is under the general direction of the Resident Engineer and the Chief, Lakes and Parks Branch, of the Dardanelle Resident Office, located at Russellville, Arkansas, approximately 50 miles from the Ozark Lake Office. The Lake is under the direct supervision of the Ozark Lake Park Manager, located at the Ozark Lake Office. The project staff requirements given in Table 10-1 is based on the recommendations of a SWD ad hoc committee study conducted in 1974. This committee established guidelines for work that would be contracted out and that which would be performed by employees. No projections have been made for future personnel requirements.

TABLE 10-1
STAFFING

DARDANELLE RESIDENT OFFICE

LAKES AND PARKS BRANCH
DARDANELLE

OZARK LAKE OFFICE

1 Park Manager	GS-0026-09
2 Park Managers	GS-0026-07
1 General Clerk (Type)	GS-0301-04
1 Engrg Equip Opr	WG-5716-10
1 Auto Worker	WG-5823-08
1 Motor Veh Opr	WG-5703-06
1 Serv Const Insp	GS-0301-04
1 Maint Wkr	WG-4701-06
2 Maint Wkr	WG-4701-05

c. Administration and maintenance. The administration and maintenance activities and the duties and responsibilities of the park managers are described in the plan. Maintenance activities such as painting, road repairs, solid waste removal, sanitation, and mowing are discussed in the plan.

d. Law enforcement. Park managers have citation authority for enforcement of Title 36, Code of Federal Regulations. Federal, State, and local law enforcement officials make arrests and their agencies are responsible for maintaining law and order.

e. Concession activities. There are presently no commercial concessions on project lands. Several parks are planned for future commercial concessions which will be privately operated through lease agreements. A market analysis was completed in April 1974 which concluded that several of the park sites were feasible locations for a limited fishing service concession.(1) The report states that "the general market for fishing services and facilities at Ozark Lake should support one or more of these hypothetical concessions." The park manager and Little Rock District Real Estate Division personnel will be responsible for inspections for compliance with the terms of the lease agreements of future concession leases.

f. Visitor interpretation and education. An interpretive program conducted by project personnel serves to inform and educate the public about the purpose and operation of the project and the historical and natural features of the area. This program is presented through slide talks, programs to civic organizations and schools, newspaper articles, and appearances on television and radio stations. A nature trail has been constructed at Dam Site North Park for interpretation of the natural resources. Ozark Lake brochures are distributed to visitors at the project and within the Little Rock Office. These brochures describe the location and facilities available within each park and provide other data about the project.

10.02. Forest Management Plan.

a. General. The Forest Management Plan will be prepared in accordance with ER 1130-2-400 dated 28 May 1971, and inserted as Appendix B to this master plan. This plan is scheduled for submission in June 1977. It is the object of the forest management program to increase the value of lakelands for recreation, wildlife, and to promote natural ecological conditions by following accepted silvicultural practices. The federally owned wooded lands are not suitable for intensive forest management and cannot be classified as "commercial forest lands." These woodlands will be retained and managed for esthetic, ecological, and recreational value.

b. Objective and policy. The objectives of forest management are to protect water quality through the control of soil erosion, maintain the forest in a healthy state, provide forest cover required for recreational use and development, improve wildlife and fisheries habitat, and preserve

(1) "A Market and Spatial Location Analysis for Fishing Concession Facilities at Ozark Lake, Arkansas," April 26, 1974, by Midwest Research Institute.

and improve scenic values. Forest lands are managed for their multiple resources. The removal of vegetation, living or dead, will be done only with sound justification.

c. Treatment and programs. Reforestation will be accomplished using plant species indigenous to the Ozark Lake area with one exception. Species that have been killed by inundation will be replaced by water tolerant species.

d. Personnel requirements. Proper implementation of the forest management plan would require the assistance of a landscape architect or a forester and the existing staff at the Ozark Preventive Maintenance Office.

e. Work plans. The lake manager will annually prepare a work program which will implement the forest management plan and will maintain records reflecting work which has been performed, timber products harvested, the value of the harvested products, and limits of trees planted.

10.03. Fire Protection Plan.

a. General. The purpose of the fire protection plan is to establish policies, equipment, specific actions, manning guides, and personnel training in the protection of woodlands from fires. The plan for Ozark Lake will be prepared in accordance with ER 1130-2-400 dated 28 May 1971. It is scheduled for submission in July 1977 and will become Appendix C to this master plan.

b. Training and equipment. Appropriate personnel of the project staff are trained in fire prevention and suppression methods. This training program assures that qualified personnel will be available to detect potential fire hazards and also to assist in fire suppression in emergency situations. Proper training in firefighting techniques and safety factors is a joint responsibility of the Park Manager and the District Office. Ouachita National Forest personnel have agreed to include Corps personnel in their annual fire simulator training. The Arkansas Forestry Commission is also cooperating to provide training. All tools and equipment for use in fire prevention and suppression activities will be described in the fire protection plan with respect to quantity, type, location, conditions, and adequacy.

c. Cooperative agreements. To provide adequate fire protection for the project area, cooperative agreements are being developed to provide for mutual assistance efforts by the cooperating agencies when necessary. The Arkansas Forestry Commission is cooperative in prevention activities, and will assist in fire suppression on project lands when a potential danger exists to adjacent private lands.

d. Prevention, presuppression, and suppression activities. These activities will be a part of the fire protection plan. Procedures will be established for the assignment of duties in each phase to various personnel.

10.04. Fish and Wildlife Management Plan.

a. General. The fish and wildlife management plan was submitted in accordance with ER 1130-2-400 dated 28 May 1971 and was approved on 1 February 1977. It is included as Appendix D to this master plan. It implements Section 3 of the Fish and Wildlife Coordination Act (Public Law 85-764) which provides for the use of civil works projects for the conservation, maintenance, and management of fish and wildlife resource and wildlife habitat thereon. Lands, waters, and interests thereon will be made available upon request to the Arkansas Game and Fish Commission and to the U.S. Department of Interior for fish and wildlife management, and areas not managed through licenses or other formal agreements with wildlife agencies will be managed by the Corps of Engineers. This plan includes the major species being managed, wildlife habitat maintenance and enhancement plans, and coordinated efforts with other agencies relative to fish and wildlife management on the project.

b. Aquatic. Management programs for aquatic fauna are for the purpose of providing game fish which are desirable for recreational fishing. The plan contains detailed descriptions of the fish propagation, stocking, and research programs which have been conducted, as well as plans for future programs. Fish management and regulation is the responsibility of the Arkansas Game and Fish Commission and the Fish and Wildlife Service, Department of Interior. The Corps of Engineers will assist in the management program by controlling water releases to aid the downstream fishery when possible.

c. Terrestrial. Areas for hikers, naturalists, and outdoor sportsmen are available. These areas will also provide outdoor classroom situations and areas for the photographer. Bird nesting areas are also to be provided. Programs for terrestrial fauna will be conducted by the Arkansas Game and Fish Commission and the Corps of Engineers. In general, the programs will consist of habitat improvement, provision of wildlife foods, and stocking. The principal focus of the Corps program will be in forestry management and administration of the agricultural and grazing program for wildlife enhancement.

10.05. Project Safety Plan.

a. General. In accordance with ER 1130-2-400 dated 28 May 1971, a project safety plan was prepared for Ozark Lake, and it was approved on 8 June 1973. This plan discusses design criteria and precautionary measures to prevent, reduce, or control hazardous situations. The approved project safety plan will become Appendix E to this updated master plan. According to letter SWDCO-R dated 6 August 1975, subject: Resubmission of Appendixes to Master Plan, Appendix E will not be updated until June 1978.

b. Public safety. Common recurrent hazards and unsafe conditions have been identified and procedures implemented to protect the public and minimize or eliminate the possibility of personal injury. These procedures include not only the provision of equipment such as handrails for steps and ramps, adequate lighting for sanitary facilities, and warning signs, but also frequent inspection and maintenance of public

facilities and the implementation of a continuing program of pollution and disease vector control. Numerous methods are employed to educate the public concerning possible safety hazards, and rules and regulations have been established for visitor protection. Boating safety is especially emphasized.

c. Employee safety. It is the policy of the Corps of Engineers that no employee shall be required to work in surroundings or under working conditions which are unsatisfactory, hazardous, or dangerous to his health or safety. Accordingly, appropriate sanitation procedures and safety precautions have been implemented and an equipment monitoring system instituted in compliance with Corps safety regulations. Weekly safety meetings for all employees are conducted covering topics related to current operations and activities.

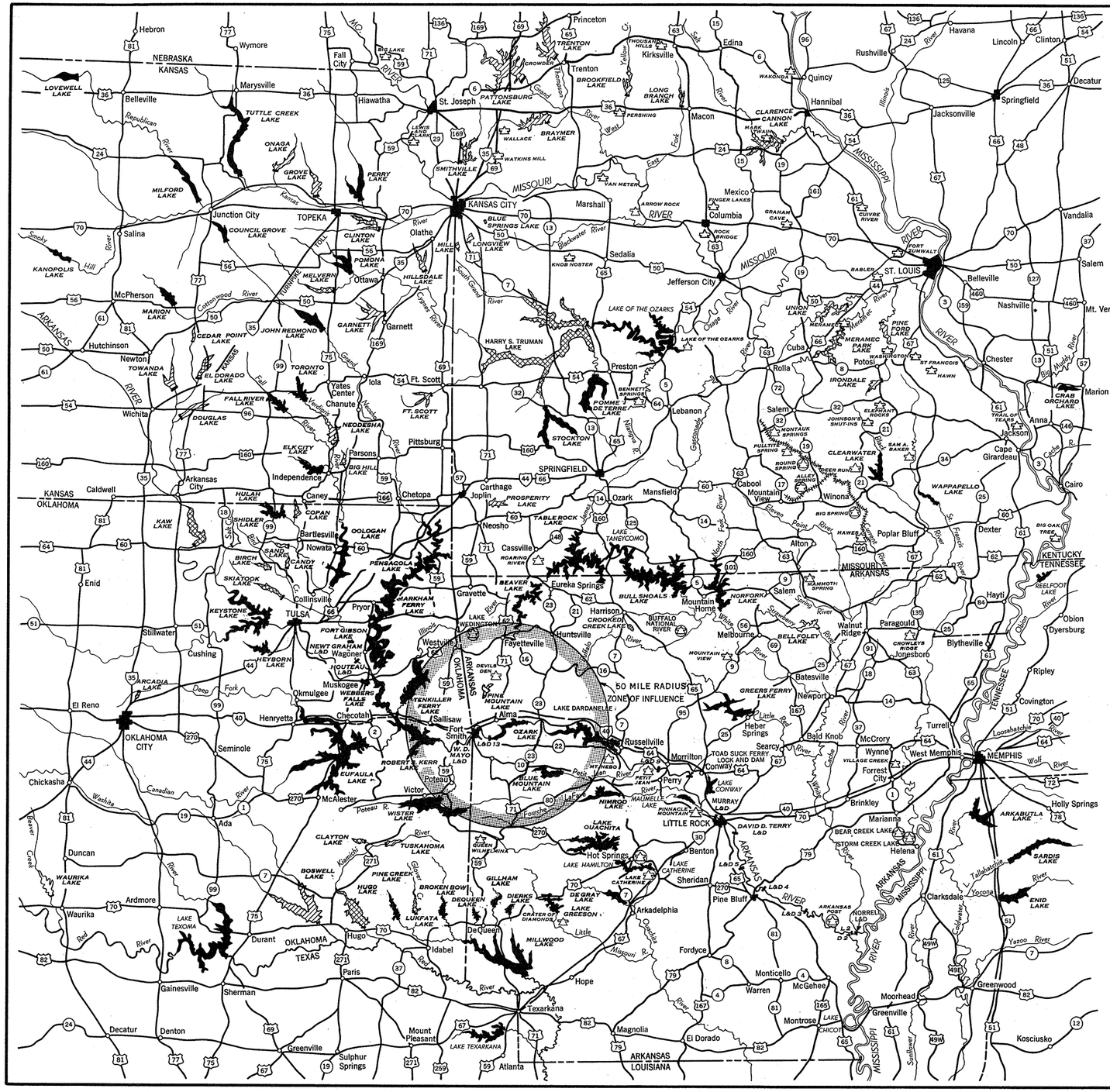
10.06. Lakeshore Management Plan. There are no private floating facilities on Ozark Lake at the present time. ER 1130-2-406 dated 13 December 1974 states private exclusive use will not be permitted on lakes where no private facilities or uses exist as of that date. Letter SWLCO-L dated 29 May 1975, subject: Private Floating Facilities, Blue Mountain, Clearwater, Nimrod, and Ozark Lakes, states that no private floating facilities will be permitted on these lakes. This letter was submitted to the Southwestern Division Engineer to satisfy the requirements for an Appendix F to the master plan. It was approved on 10 June 1975. Ths letter and approval notice will be considered as a part of this updated master plan and will be included as Appendix F.

SECTION XI

CONCLUSIONS AND RECOMMENDATIONS

11.01. Conclusions. The master plan for recreational development and management presented herein is flexible enough to absorb any changes resulting from changes in visitation and recreational activities at the project. The total facility development proposed in this plan is adequate to serve the estimated recreational demand to approximately the year 2000. However, funding restrictions will limit the construction of additional recreational facilities and thus reduce the number of visitors which the parks can accommodate without deterioration of the project resources.

11.02. Recommendations. It is recommended that this master plan be approved to provide for the orderly development and management of recreational resources on Ozark Lake.



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LEGEND

GENERAL

- RECREATION AREA, FEDERAL
- OZARK NATIONAL SCENIC RIVERWAY
- RECREATION AREA, STATE
- STATE LINE
- ROAD, PAVED
- 30 ROAD, INTERSTATE
- 62 ROAD, FEDERAL
- 16 ROAD, STATE

LAKES AND RESERVOIRS

- EXISTING
- CONSTRUCTION IN PROGRESS
- AUTHORIZED ACTIVE

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

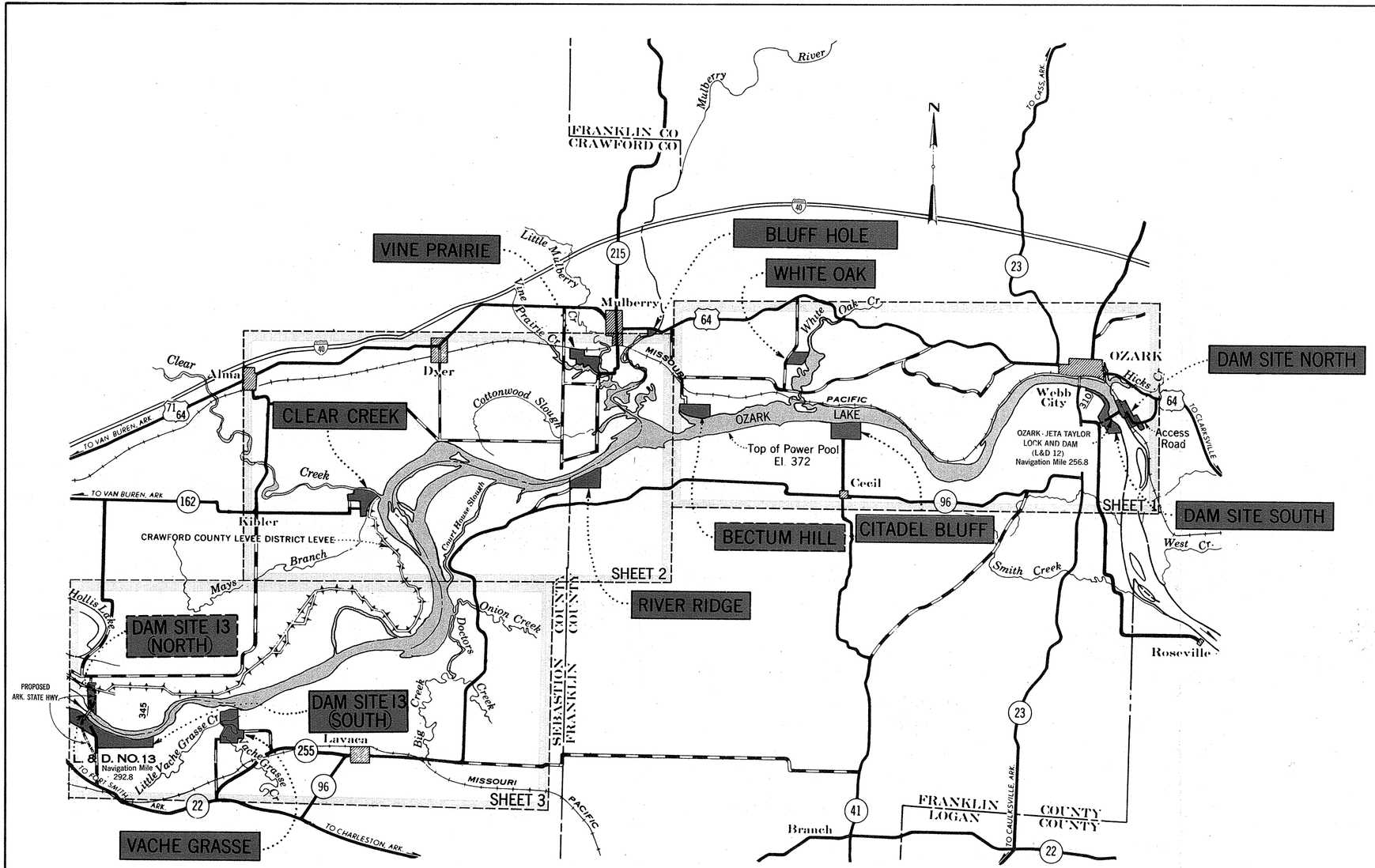
REGIONAL RECREATION AREAS

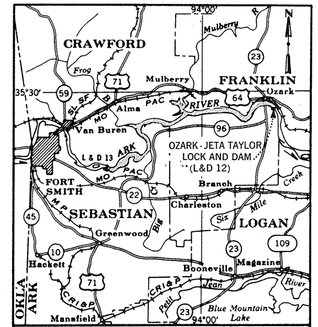
SCALE OF MILES

0 10 20 30 40 50

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977





LEGEND

- Interstate Highway
- Federal road
- State road
- Paved road
- Graveled road
- Initial development
- Future development

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

MASTER RECREATION PLAN

OZARK LAKE

LAND USE MAP INDEX

SCALE OF MILES

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS, JANUARY 1977

1. EASEMENT NO. 73-263
ARK ELEC COOP CORP
161-K.V. TRANSMISSION LINE
EXPIRES 26 NOV 97

2. LICENSE NO. 71-792
FRANKLIN CO.
ROAD, PARKING, AND
LAUNCHING RAMP
EXPIRES 19 JUL 76

3. EASEMENT NO. 70-322
OKLA GAS ELEC CO.
LLEC TRANSMISSION LINE
PERPETUAL

4. EASEMENT NO. 68-157
ARK LA GAS CO.
UUAL 20" PIPELINES
EXPIRES 6 NOV 92

5. EASEMENT NO. 74-122
OKLA GAS ELECT CO.
69-K.V. TRANSMISSION LINE
EXPIRES 23 SEP 03

6. EASEMENT NO. 70-910
ARK ELEC COOP CORP
WATER TRANSMISSION LINE
EXPIRES 19 APR 95

7. EASEMENT NO. 70-559
CITY OF OZARK
WATER PIPELINE
EXPIRES 25 JAN 95

8. LICENSE NO. 70-868
CITY OF OZARK
ROAD, PARKING, AND
LAUNCHING RAMP
EXPIRES 30 MAR 80

9. LICENSE NO. 71-261
CITY OF OZARK
ROAD, TURNAROUND, PARKING,
AND LAUNCHING RAMP
EXPIRES 19 JUL 80

10. LEASE NO. 72-266
CITY OF OZARK
RECREATION-PUBLIC PARK
EXPIRES 9 NOV 81

11. LEASE NO. 76-110
CITY OF OZARK
SEWER TREATMENT FAC
EXPIRES 31 DEC 99

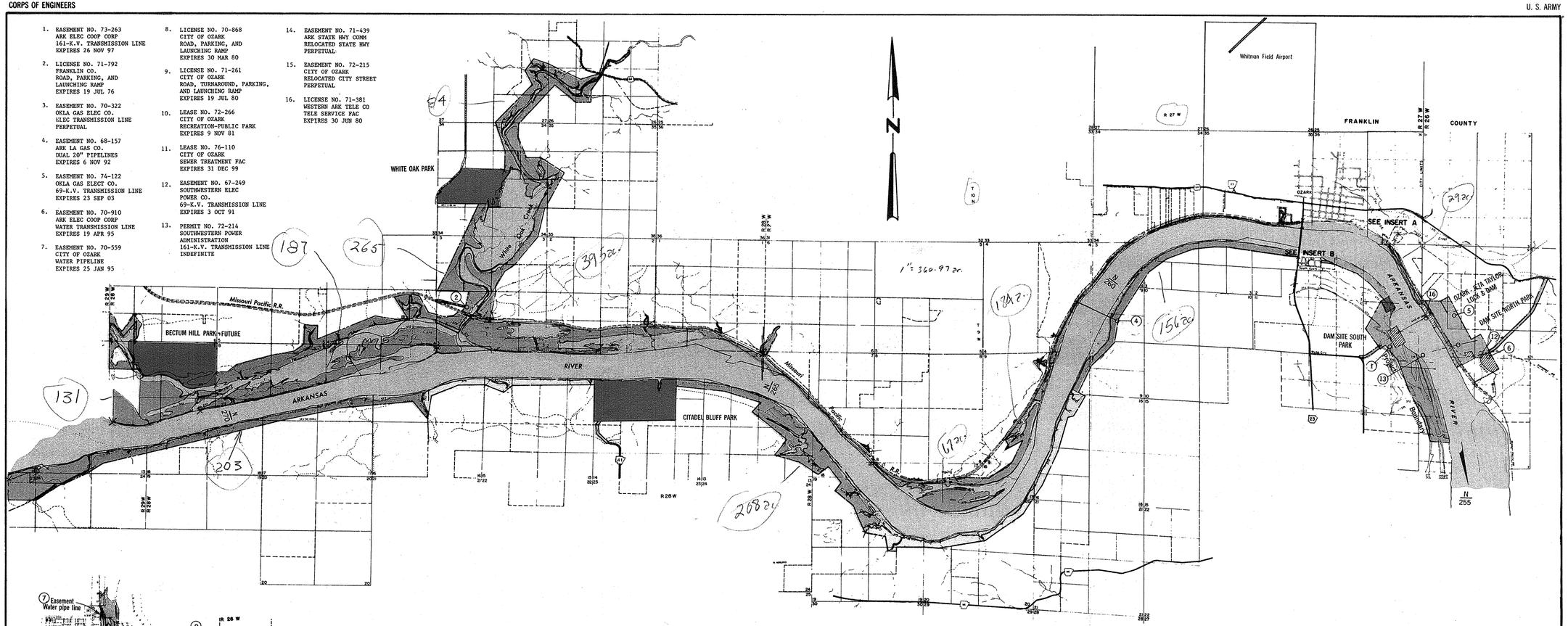
12. EASEMENT NO. 67-249
SOUTHWESTERN ELEC
POWER CO.
69-K.V. TRANSMISSION LINE
EXPIRES 3 OCT 91

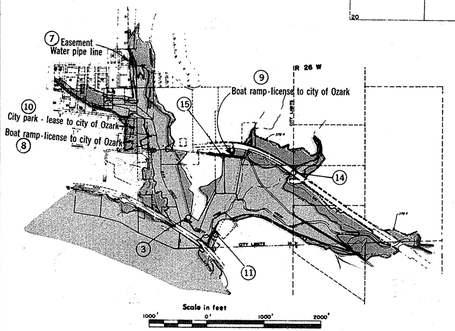
13. PERMIT NO. 72-214
SOUTHWESTERN POWER
ADMINISTRATION
161-K.V. TRANSMISSION LINE
INDEFINITE

14. EASEMENT NO. 71-439
ARK STATE HWY COMM
RELOCATED STATE HWY
PERPETUAL

15. EASEMENT NO. 72-215
CITY OF OZARK
RELOCATED CITY STREET
PERPETUAL

16. LICENSE NO. 71-381
WESTERN ARK TELE CO
TELE SERVICE FAC
EXPIRES 30 JUN 80





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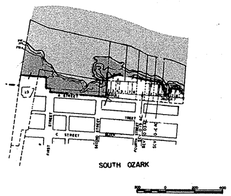


INSERT B

LEGEND

- Project Operations– navigation and hydroelectric power generation
- Project Operations– dam requirements
- Project Operations– Recreation Intensive Use
- Project Operations– Recreation-Low Density Use. These lands available for minimal industrial corridor access
- Project Operations – Natural Area
- Easement Lands
- Recreation Lands
- Dredged Material Area
- River Control Structure
- N 260 Navigation Mile
- Project Boundary

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

MASTER RECREATION PLAN
OZARK LAKE
LAND USE MAP

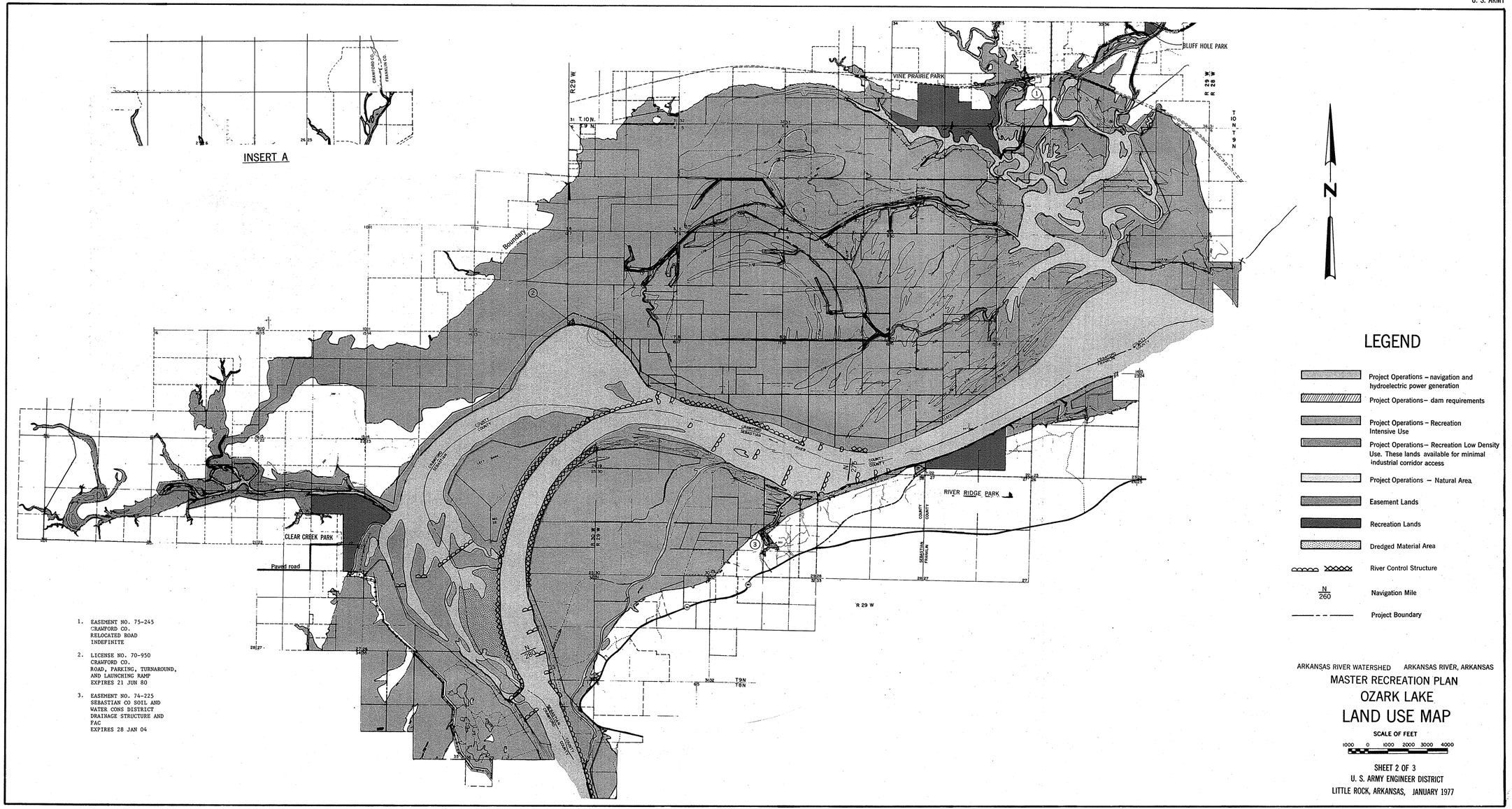
SCALE OF FEET

1000 0 1000 2000 3000 4000

SHEET 1 OF 3

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 3



1. EASEMENT NO. 75-245
   CRAWFORD CO.
   RELOCATED ROAD
   INDEFINITE

2. LICENSE NO. 70-950
   CRAWFORD CO.
   ROAD, PARKING, TURNAROUND,
   AND LAUNCHING RAMP
   EXPIRES 21 JUN 80

3. EASEMENT NO. 74-225
   SEBASTIAN CO SOIL AND
   WATER CONS DISTRICT
   DRAINAGE STRUCTURE AND
   FAC
   EXPIRES 28 JAN 04

LEGEND

- Project Operations – navigation and hydroelectric power generation
- Project Operations– dam requirements
- Project Operations – Recreation Intensive Use
- Project Operations– Recreation Low Density Use. These lands available for minimal industrial corridor access
- Project Operations – Natural Area
- Easement Lands
- Recreation Lands
- Dredged Material Area
- River Control Structure
- N/260 Navigation Mile
- Project Boundary

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

MASTER RECREATION PLAN
OZARK LAKE
LAND USE MAP

SCALE OF FEET

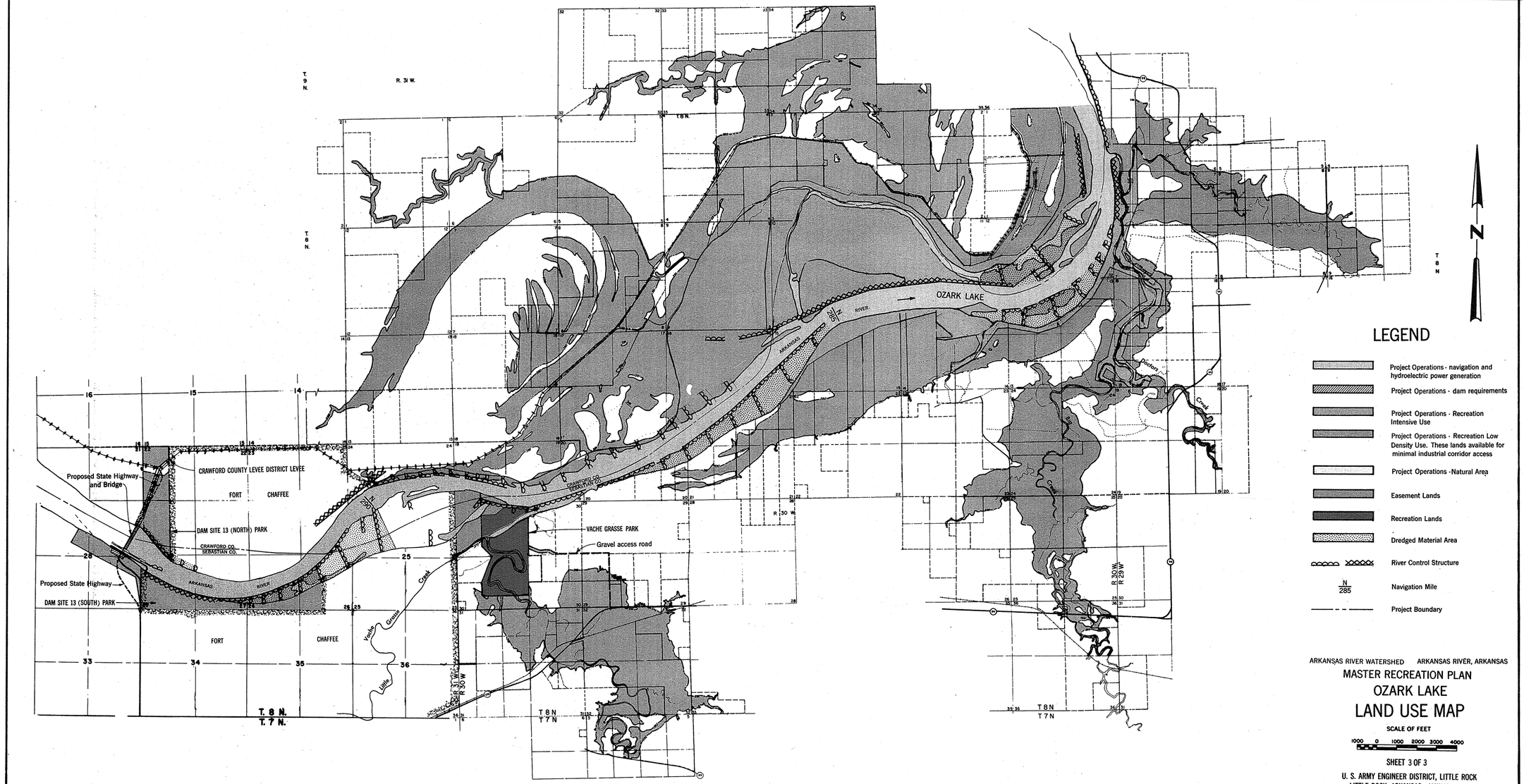
1000 0 1000 2000 3000 4000

SHEET 2 OF 3

U. S. ARMY ENGINEER DISTRICT

LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 4



LEGEND

- Project Operations - navigation and hydroelectric power generation
- Project Operations - dam requirements
- Project Operations - Recreation Intensive Use
- Project Operations - Recreation Low Density Use. These lands available for minimal industrial corridor access
- Project Operations - Natural Area
- Easement Lands
- Recreation Lands
- Dredged Material Area
- River Control Structure
- N/285 Navigation Mile
- Project Boundary

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

MASTER RECREATION PLAN
OZARK LAKE
LAND USE MAP

SCALE OF FEET

1000 0 1000 2000 3000 4000

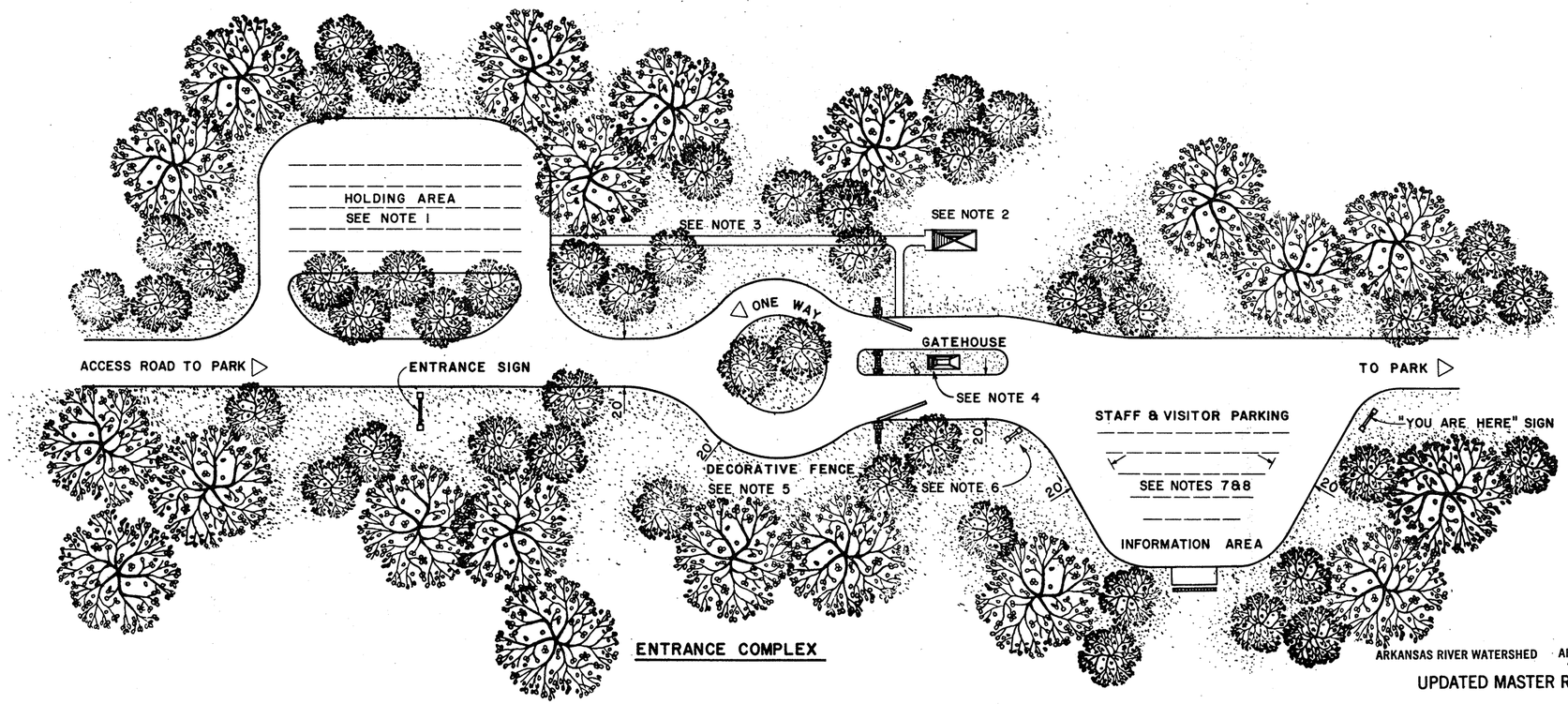
SHEET 3 OF 3

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 5

TYPICAL ENTRANCE COMPLEX NOTES

1. PARKING AREA FOR LATE ARRIVALS AND OVERFLOW (PARKING ARRANGEMENT WILL BE SITE ADAPTED TO PRECLUDE EXTENSIVE CUTTING OF TREES. GRAVEL PARKING.)
2. WHERE JUSTIFIED BY USE, RESTROOMS MAY BE PROVIDED AWAY FROM THE GATEHOUSE. THESE MAY BE SIMILAR TO CURRENT APPROVED DESIGNS OR THOSE SHOWN IN PARK PRACTICE DESIGN (PLATES 140A&G, 229H, AND 590H).
3. TRAILS AND RESTROOMS SHALL BE DESIGNED FOR USE BY THE PHYSICALLY LIMITED.
4. AT THE GATEHOUSE A MAP OF THE AREA SHALL BE PROVIDED WITH METAL OR PLASTIC NUMBERS TO BE USED BY RANGER TO DESIGNATE OCCUPIED CAMPSITES.
5. DECORATIVE FENCE AND GATES TO BLEND WITH LANDSCAPE.
6. COMPOSITE SIGN, USER FEE SIGN, AND FEE DEPOSITORY.
7. PARKING AREA WILL BE LOCATED AND SIZED TO MEET THE NEEDS OF EACH INDIVIDUAL RECREATION AREA.
8. PARKING ARRANGEMENT WILL BE SITE ADAPTED TO PRECLUDE EXTENSIVE CUTTING OF TREES. PAVED PARKING.



ENTRANCE COMPLEX

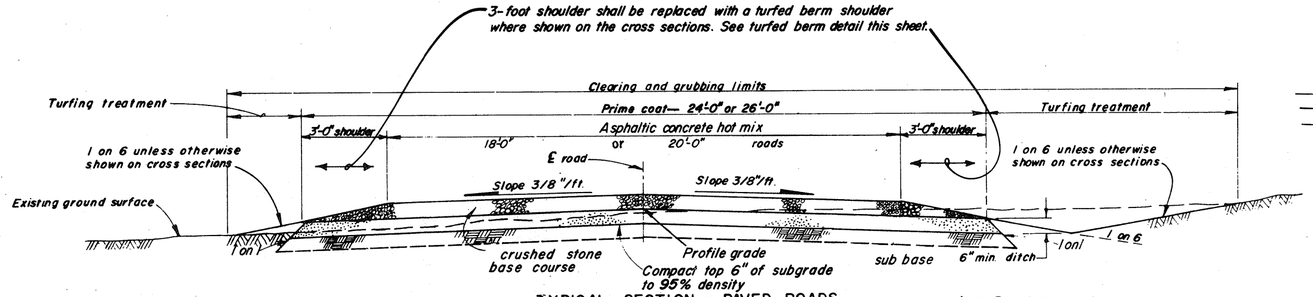
ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

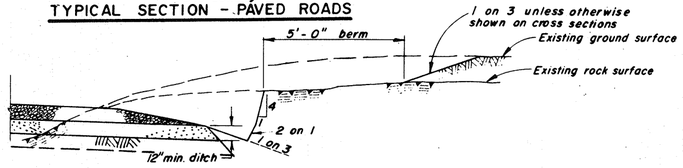
OZARK LAKE

TYPICAL ENTRANCE COMPLEX

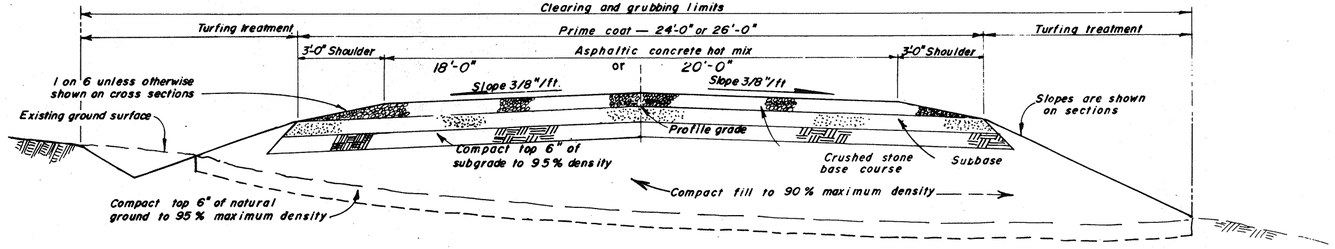
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS, JANUARY 1977



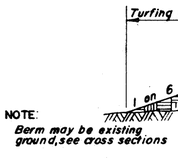
TYPICAL SECTION - PAVED ROADS



DITCH SECTION - ROCK CONDITION

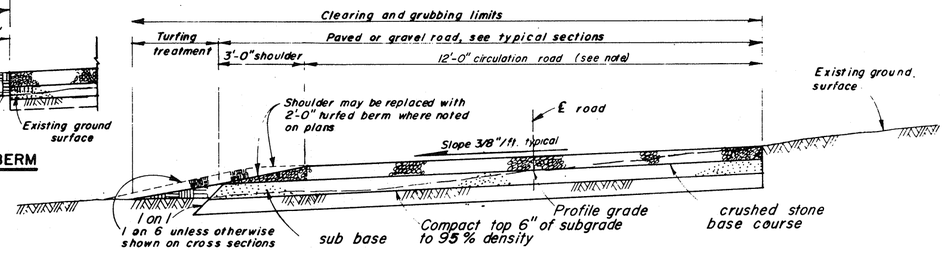


TYPICAL FILL SECTION

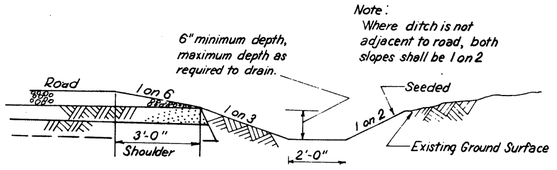


NOTE:
Berm may be existing ground, see cross sections

TURFED BERM



TYPICAL SECTION - LOOP ROAD



ALTERNATE DITCH SECTION

12" 0 3 6
SCALE

NOTES:

1. Surfacing at parking areas shall be equal to that provided for roadways.
2. Crushed stone base course for paved and gravel surfaced roads shall be class SB-2.
3. Clearing in general shall extend from toe of fill to top of back slope. Grubbing shall extend to edge of shoulders in fills to ditch bottom in cuts.
4. Desirable trees within the limits of the turfing treatment area shall be preserved to the maximum extent possible. Tree wells may be used as required, and back slopes warped where necessary to preserve desirable trees.
5. Ditches shall be the minimum ditch shown on the typical sections unless otherwise indicated on the cross sections. Care shall be exercised to construct ditches and drainage swales only where needed.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

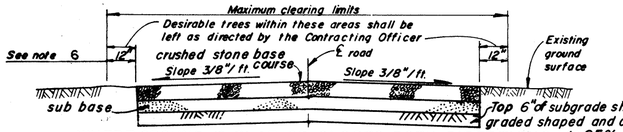
ROAD DETAILS

SCALE: AS SHOWN

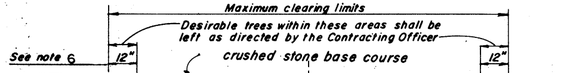
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

SHEET 1 OF 2

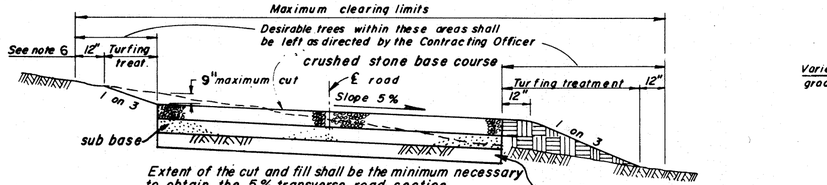
PLATE 7A



WHERE GROUND IS FLAT OR SLOPES BOTH DIRECTIONS FROM CENTERLINE

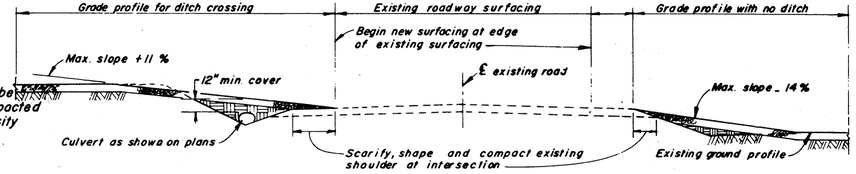


WHERE GROUND SLOPES 5% OR LESS

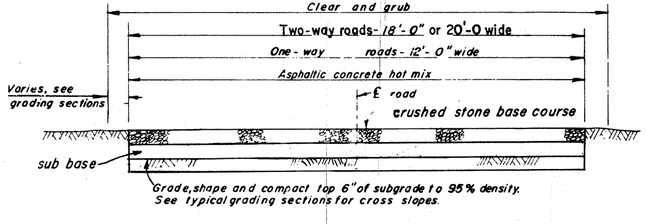


WHERE GROUND SLOPES MORE THAN 5%

TYPICAL GRADING SECTIONS

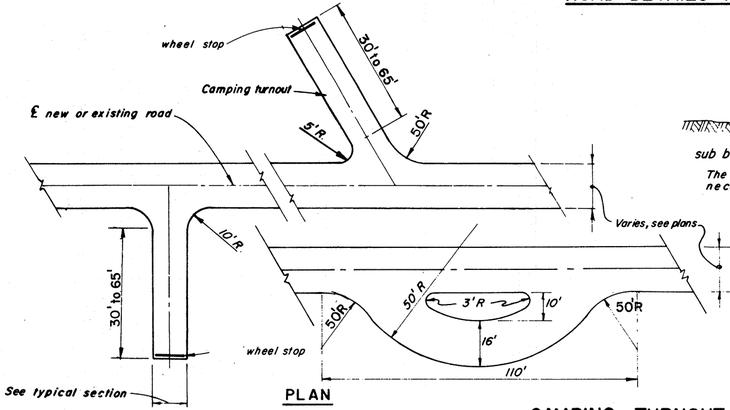


TYPICAL INTERSECTION PROFILES

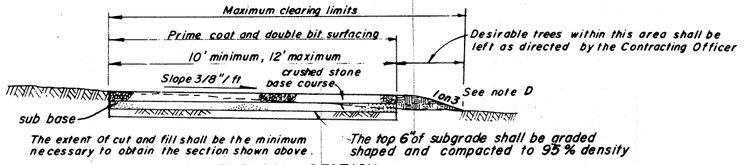


TYPICAL ROAD SECTION

ROAD DETAILS FOR STATION GRADING



PLAN

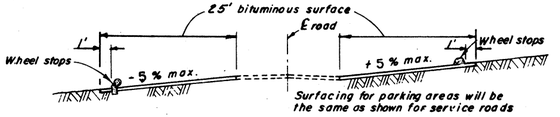


TYPICAL SECTION

CAMPING TURNOUT DETAILS

NOTES:

A. The desirable maximun centerline grade of the turnouts is 5% and the absolute maximum shall be 10%.
B. Any suitable spoil material left from grading and shaping of the turnouts shall be used to level the last 20 feet of the turnouts as much as practicable
C. The lengths of the turnouts shall be the lengths indicated on the typical layout unless otherwise shown on the plans.
D. Where the ground slopes 3/8" per foot or less the down hill side of the turnouts may be trenched into the ground as shown in the typical section for the up hill side.
E. Final location of camp turnouts will be field located by the contracting officer prior to construction unless already located by field surveys.



DOWN HILL PARKING UP HILL PARKING

TYPICAL SECTIONS

PARKING AREA DETAILS

NOTES:

1. The centerline grade for the roads shall not exceed 16 %.
2. Radii for all road intersections are 30 feet unless otherwise noted on plans.
3. Care shall be taken to protect all trees. Only those trees within the limits of excavation or fill slopes are to be removed.
4. Cleared timber and brush shall be disposed of as approved by the contracting officer,
5. Debris left from clearing, grubbing and burning shall be disposed of as approved by the contracting officer.
6. Turfing: all disturbed and graded areas shall be left in suitable condition for turfing treatment.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

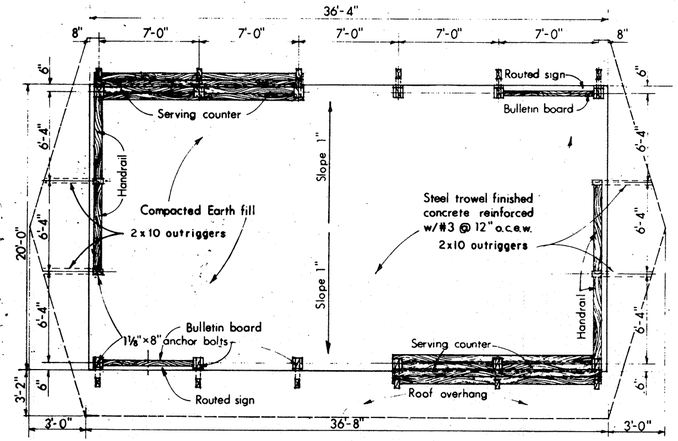
ROAD DETAILS

SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

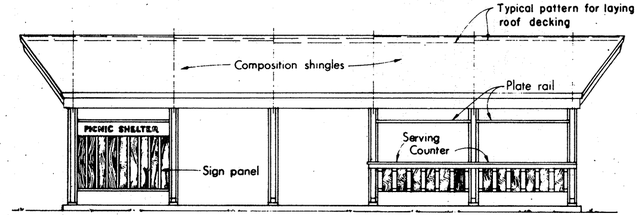
SHEET 2 OF 2

PLATE 7B



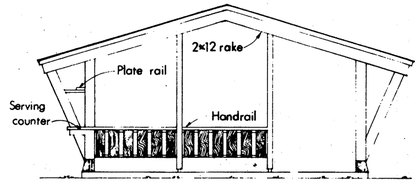
FLOOR PLAN

SCALE



SIDE ELEVATION

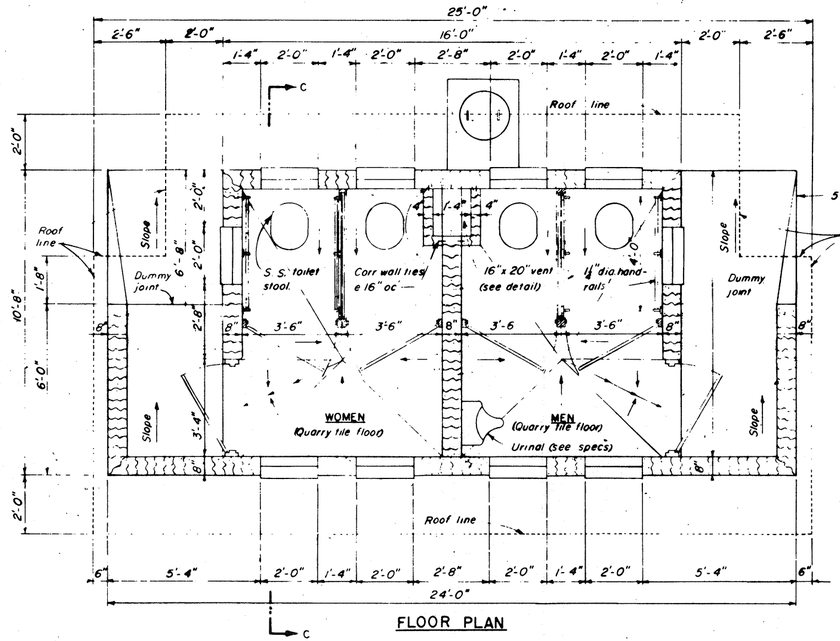
SCALE



END ELEVATION

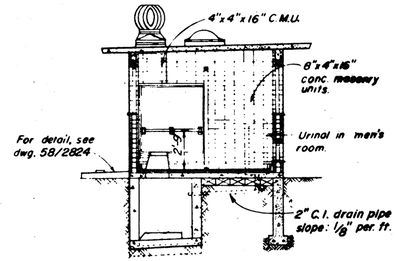
SCALE

GROUP PICNIC SHELTER



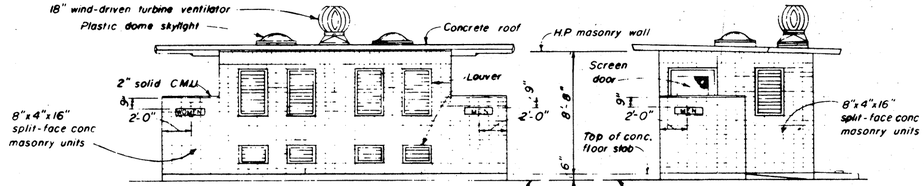
FLOOR PLAN

SCALE



SECTION C-C

SCALE



FRONT ELEVATION

SCALE

RIGHT ELEVATION

SCALE:

MASONRY VAULT TYPE I RESTROOM

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

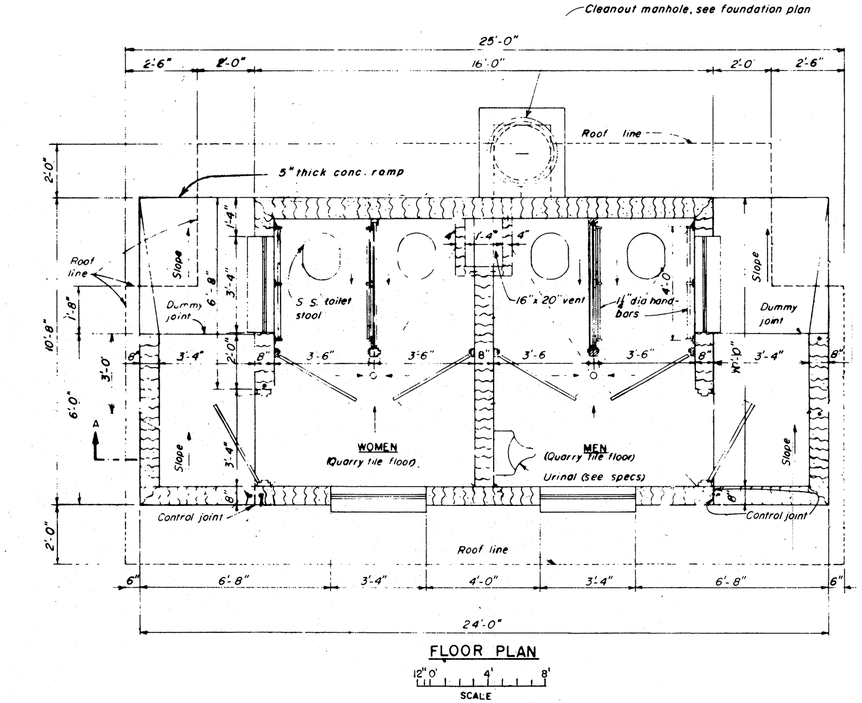
GROUP PICNIC SHELTER AND RESTROOMS

SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

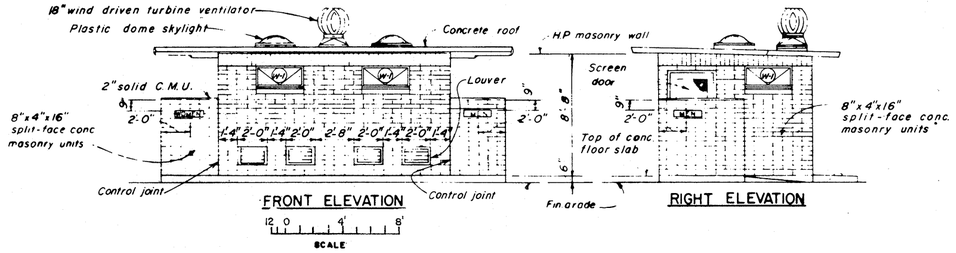
LITTLE ROCK, ARKANSAS, JANUARY 1977

SHEET 1 OF 4



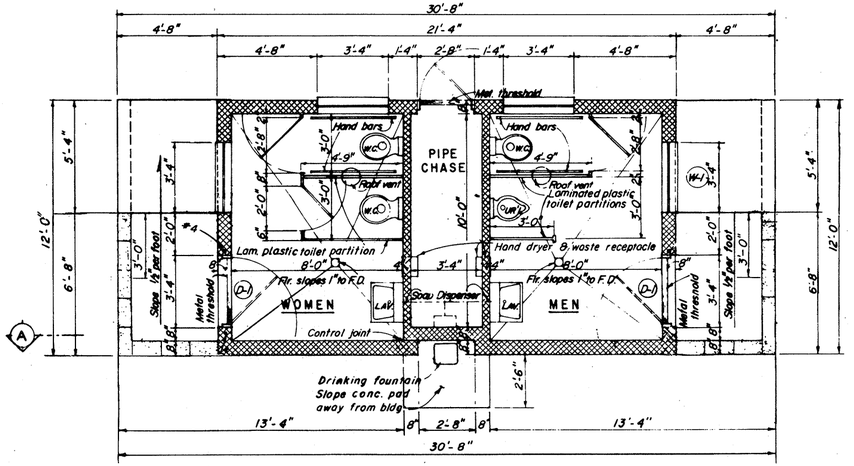
FLOOR PLAN

SCALE



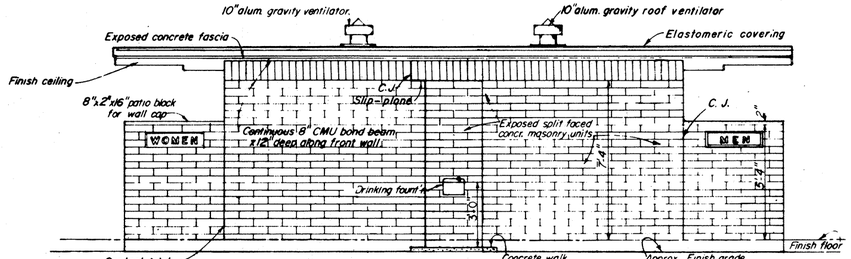
SCALE

MASONRY VAULT TYPE II RESTROOM



FLOOR PLAN

SCALE



FRONT ELEVATION

SCALE:

WATERBORNE RESTROOM

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

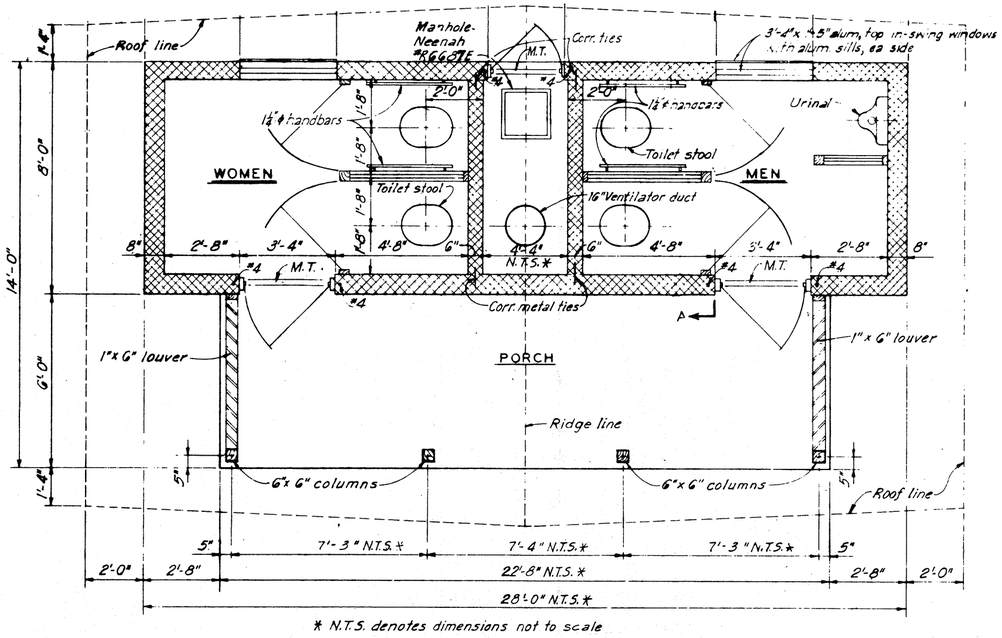
OZARK LAKE

GROUP PICNIC SHELTER AND RESTROOMS

SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

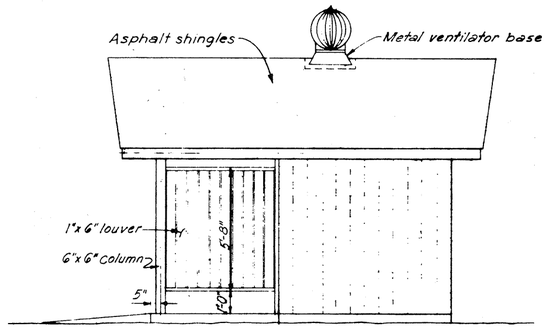
SHEET 2 OF 4



* N.T.S. denotes dimensions not to scale

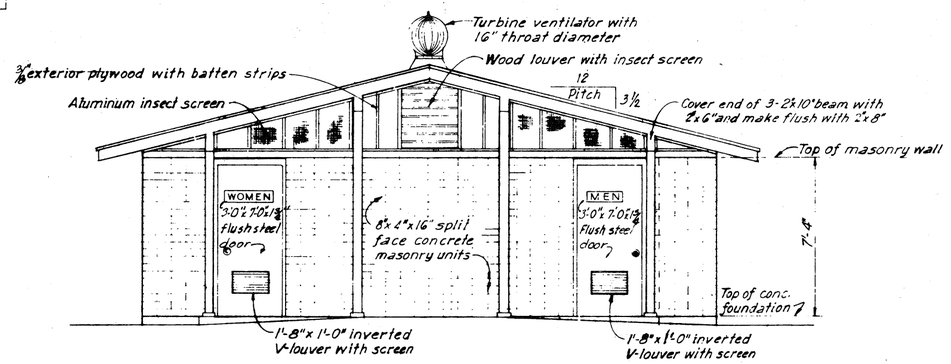
FLOOR PLAN

SCALE: 12" 0 1' 2' 3' 4'



RIGHT ELEVATION

SCALE 12" 0' 3' 7'



FRONT ELEVATION

SCALE 12' 0' 1' 4' 8'

MASONRY VAULT TYPE III RESTROOM

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

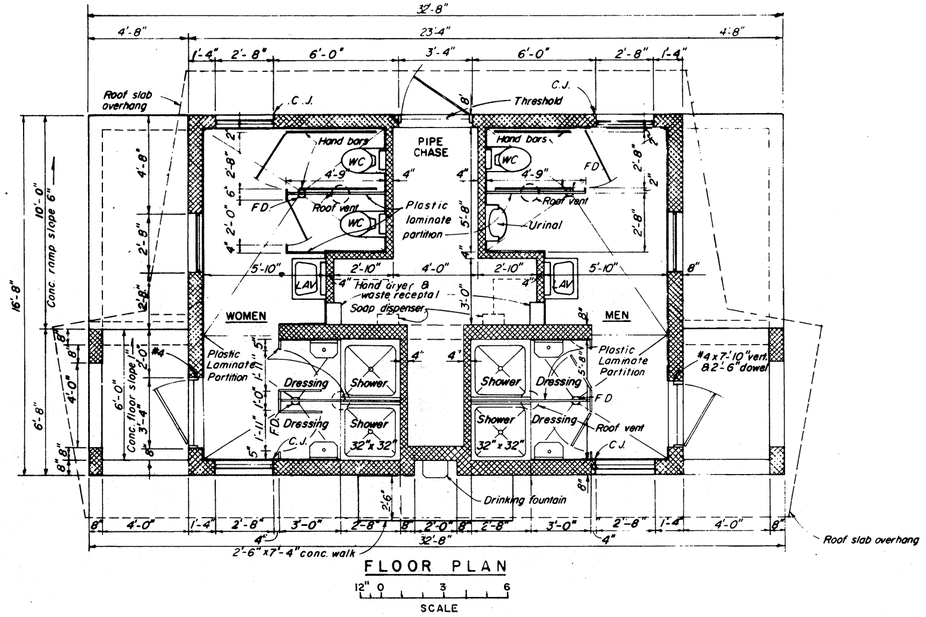
GROUP PICNIC SHELTER AND RESTROOMS

SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

SHEET 3 OF 4

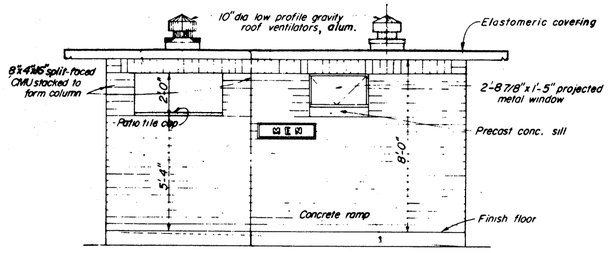
PLATE 8C



FLOOR PLAN

12" 0 3 6

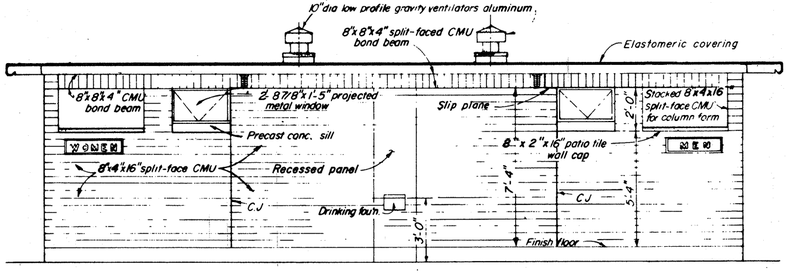
SCALE



RIGHT SIDE ELEVATION

12" 0 3 6

SCALE



FRONT ELEVATION

12" 0 3' 6'

SCALE

WATERBORNE RESTROOM WITH SHOWERS

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

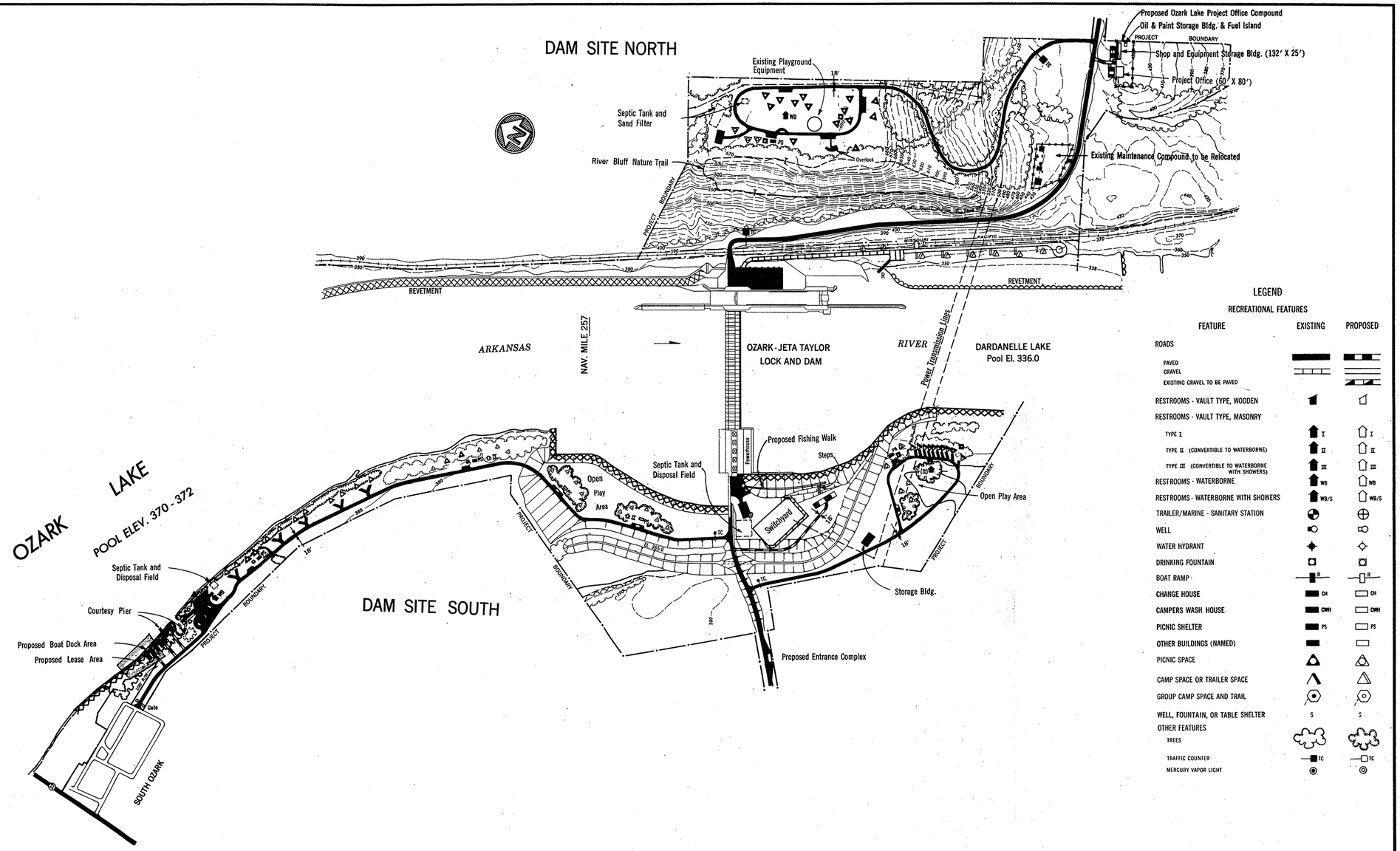
OZARK LAKE

GROUP PICNIC SHELTER AND RESTROOMS

SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

SHEET 4 OF 4



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

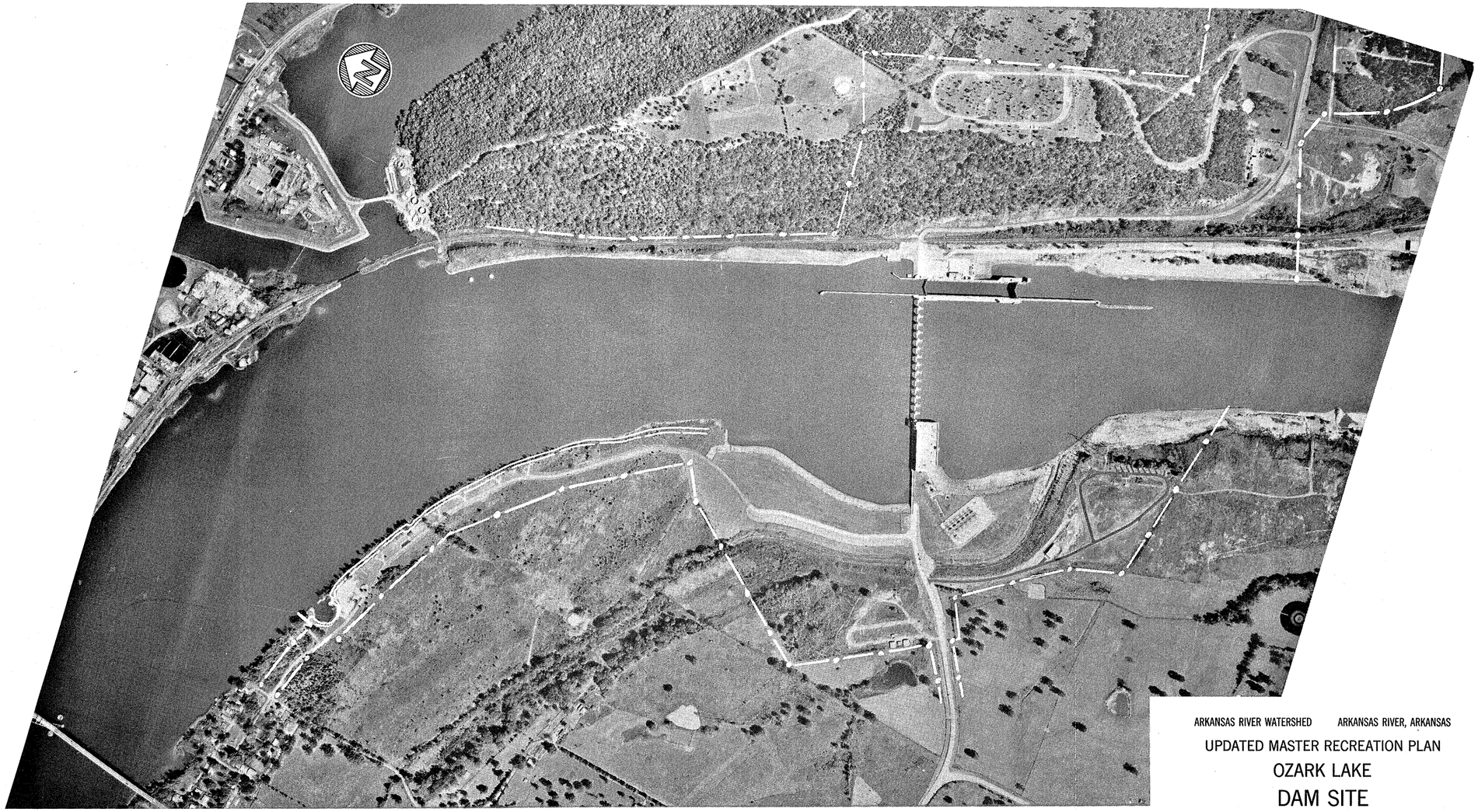
DAM SITE NORTH AND SOUTH PARKS

SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977



PREPARED FROM AERIAL PHOTOGRAPHS FLOWN 26 OCTOBER 1975

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

DAM SITE

PARK

SCALE OF FEET

400 0 400 800

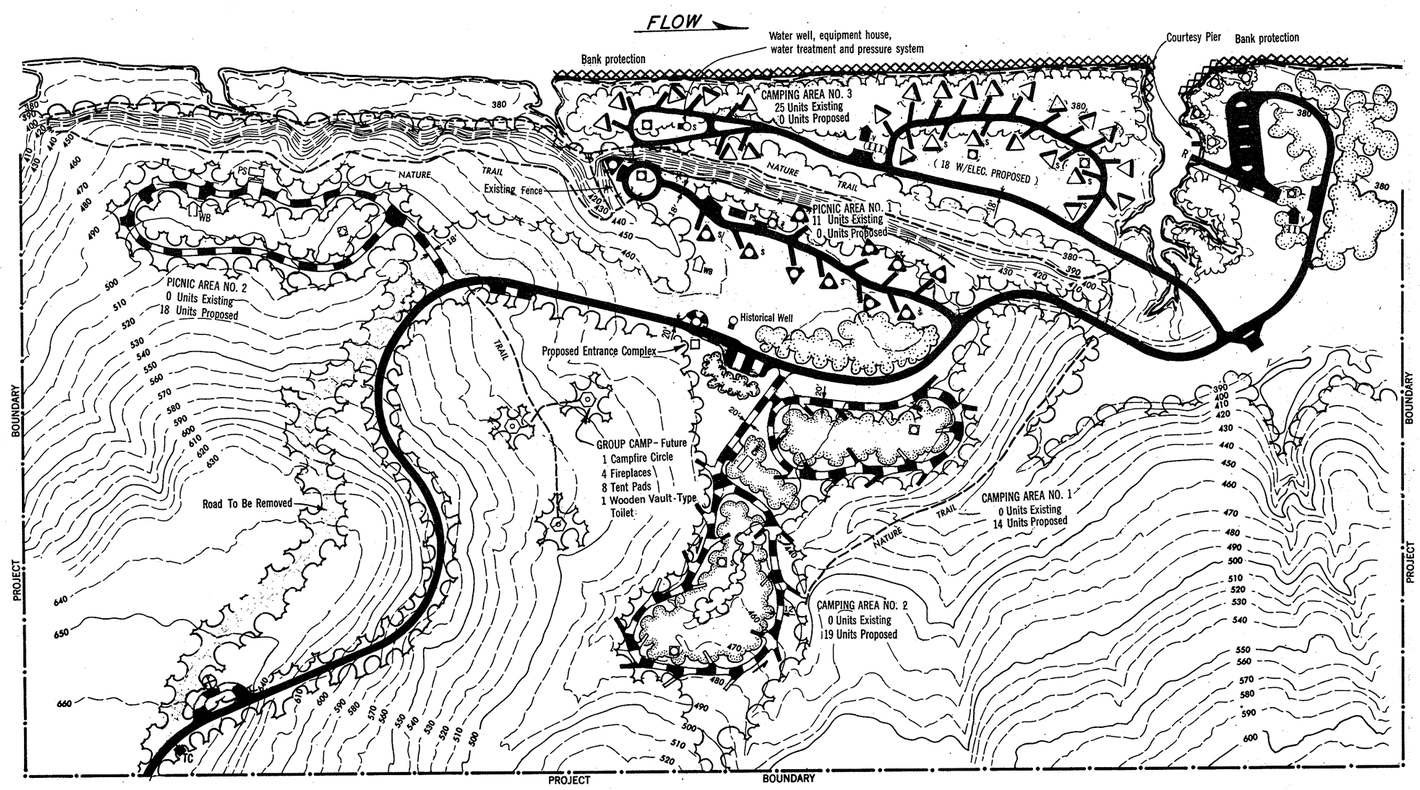
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 9A

POOL ELEV. 370 - 372

OZARK LAKE

NAV. MILE 266



NOTE: THIS AREA IS LOCATED IN SECTION 14, T. 9 N., R. 28 W., FRANKLIN CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

CITADEL BLUFF PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 26 OCTOBER 1975

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

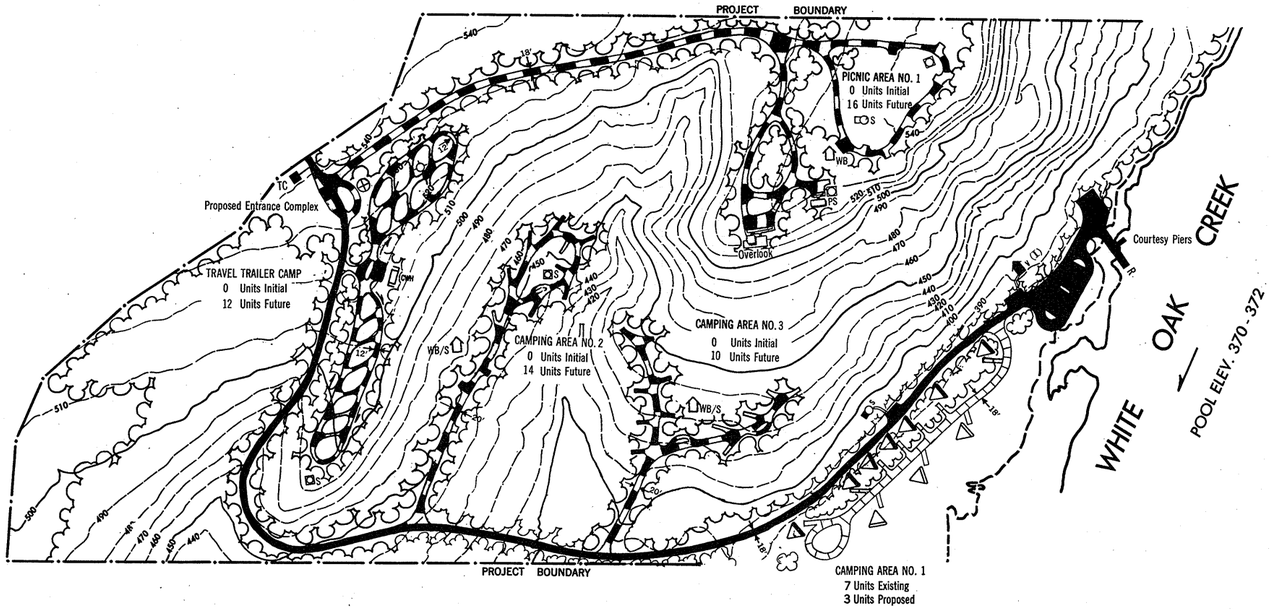
CITADEL BLUFF PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 10A



NOTE: THIS AREA IS LOCATED IN SECTION 34,
T. 10 N., R. 28 W., FRANKLIN CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

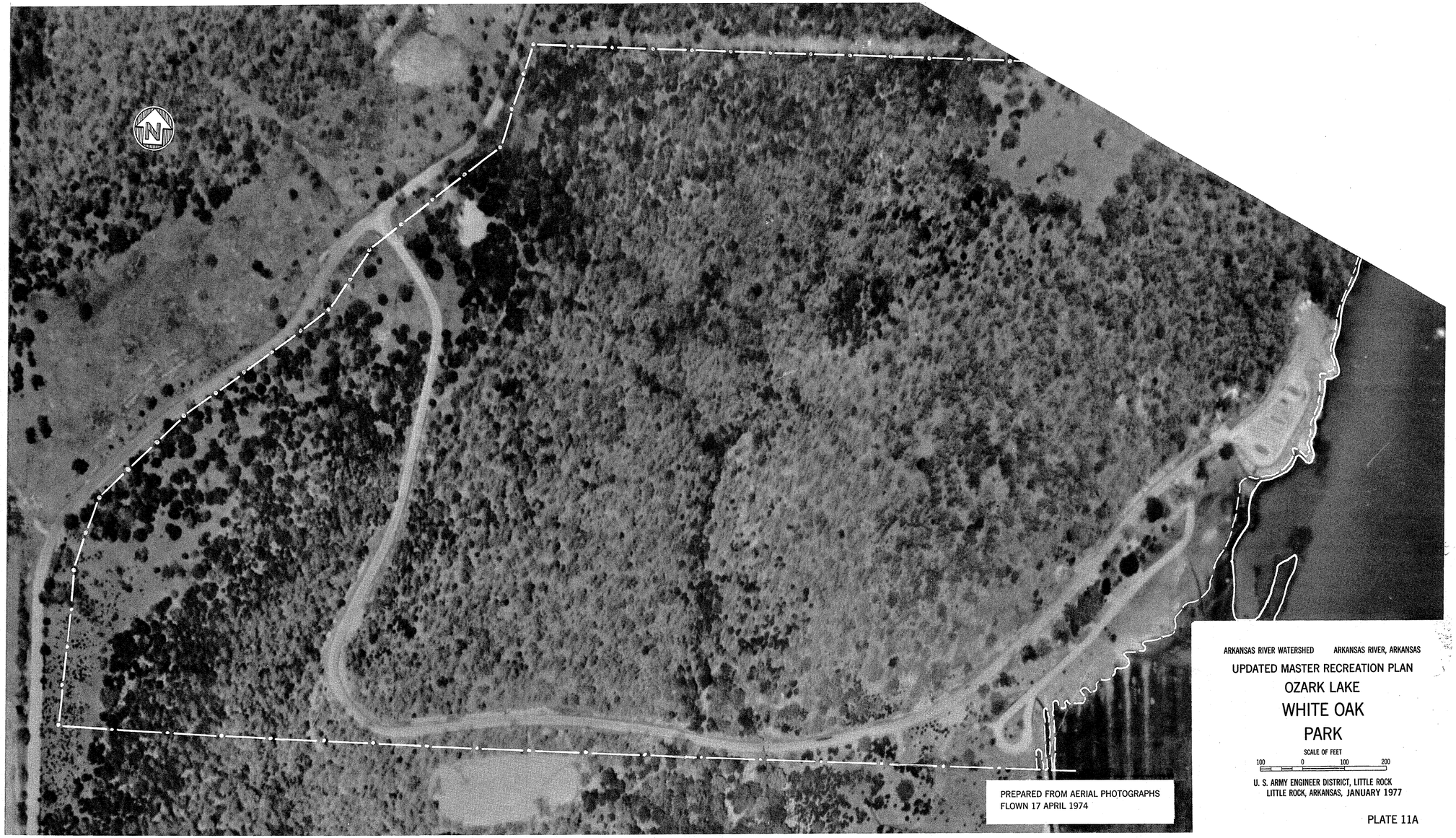
OZARK LAKE

WHITE OAK PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977



PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 17 APRIL 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

WHITE OAK

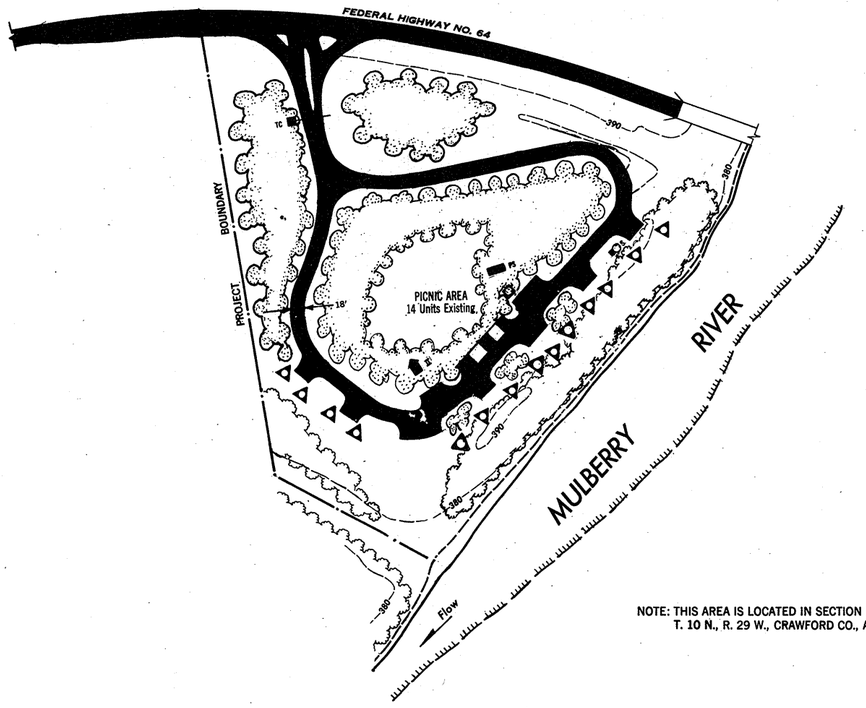
PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 11A



NOTE: THIS AREA IS LOCATED IN SECTION 36, T. 10 N., R. 29 W., CRAWFORD CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

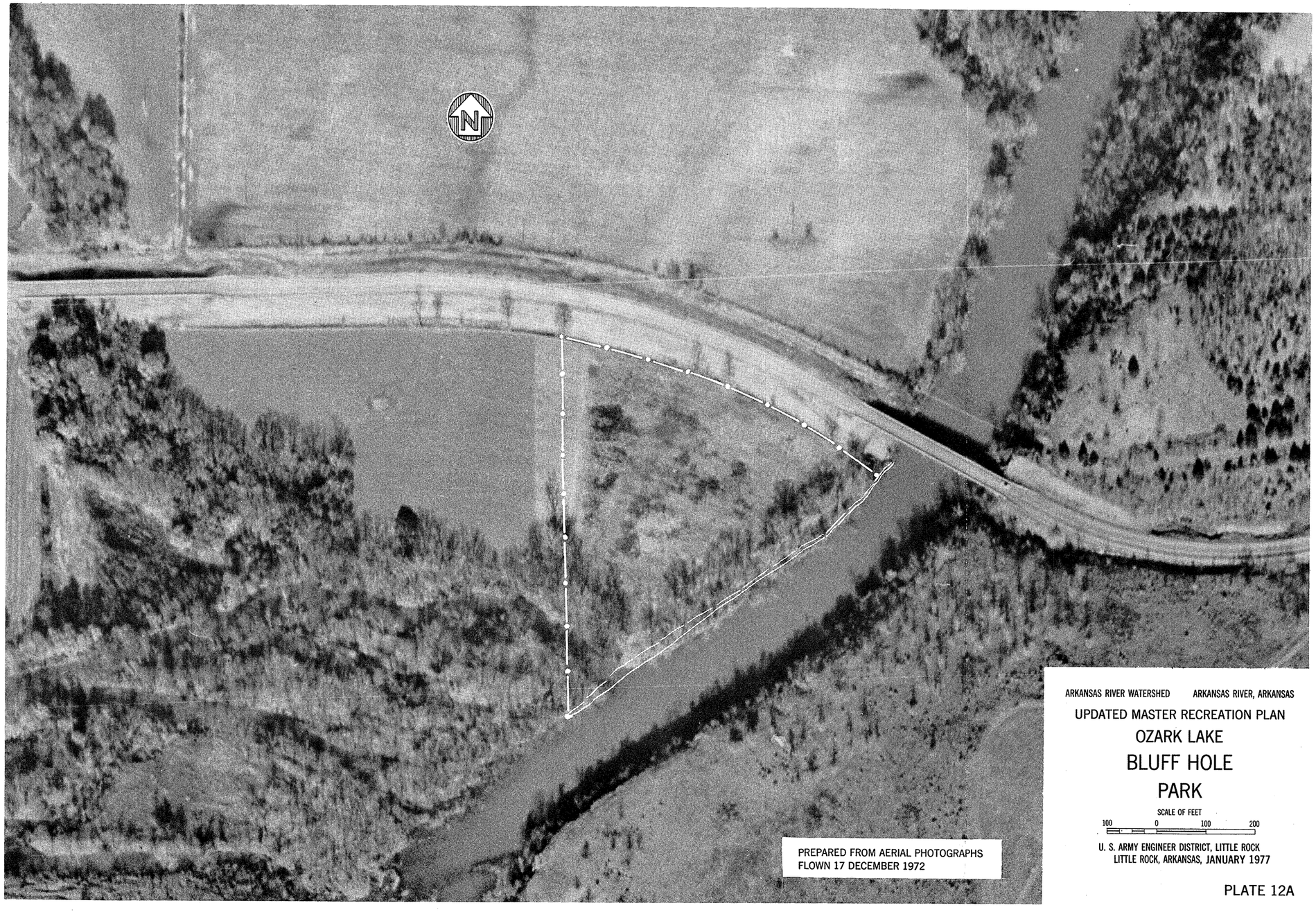
OZARK LAKE

BLUFF HOLE PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977



ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

BLUFF HOLE

PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 12A

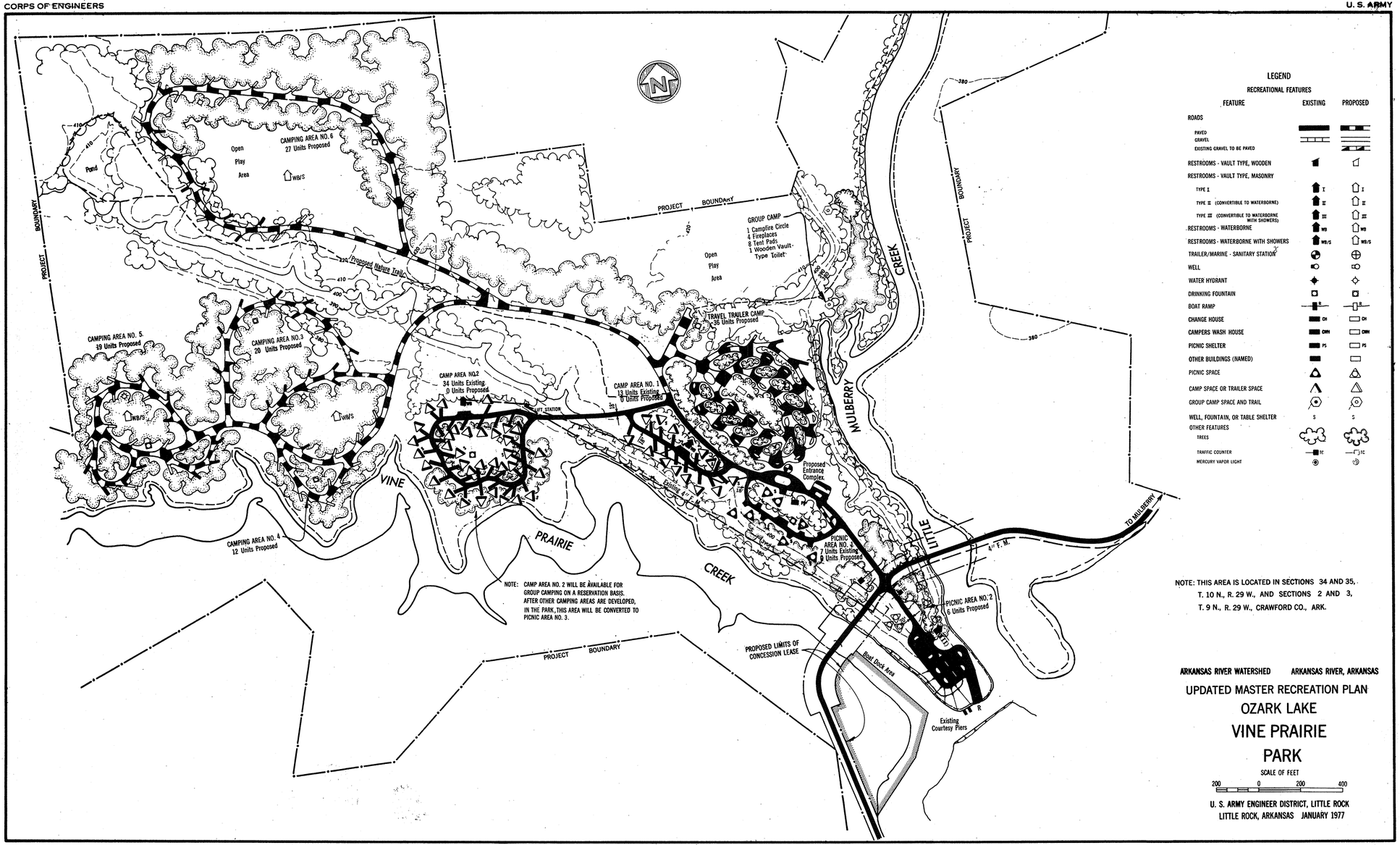
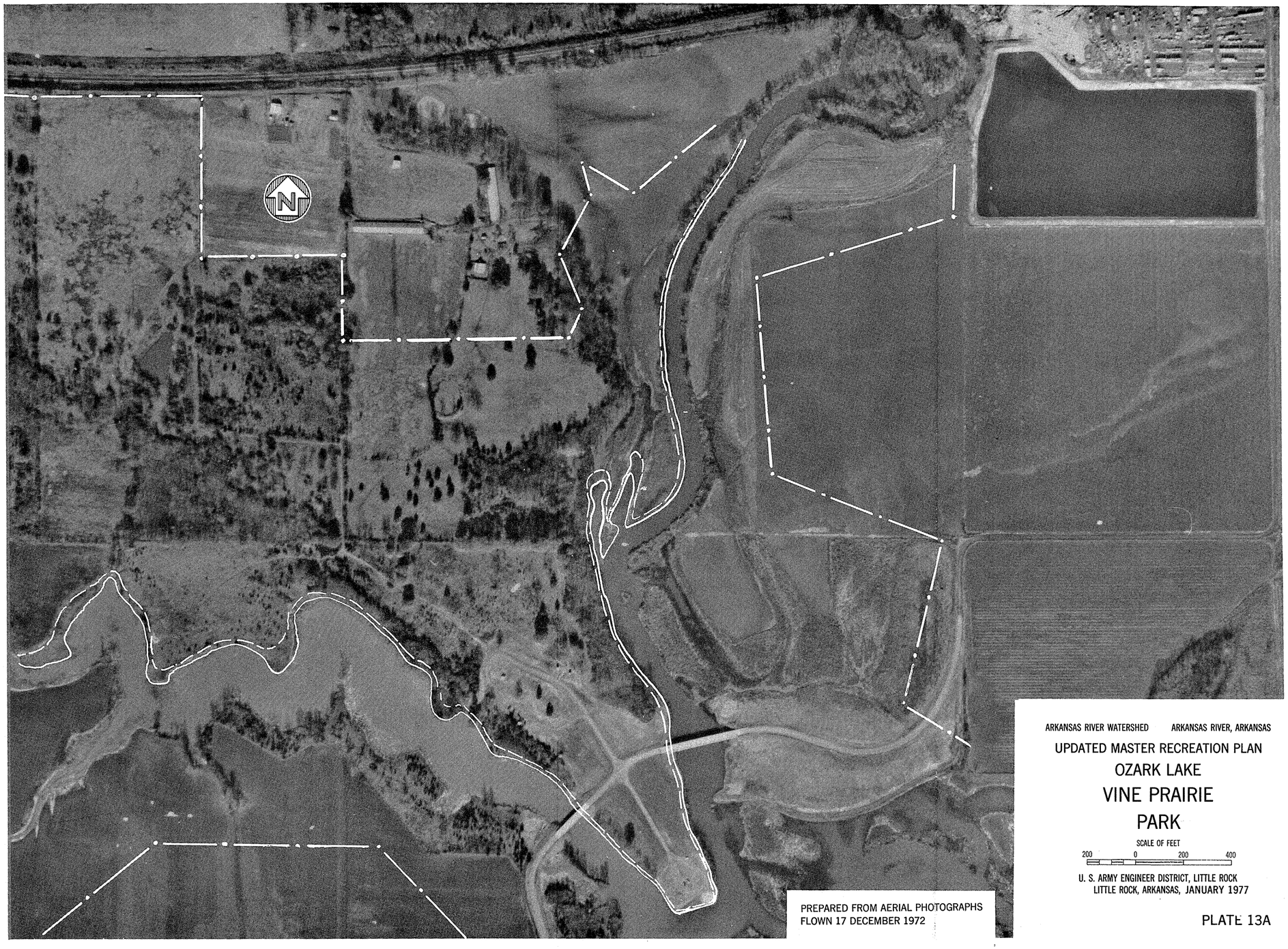

CAMPING AREA NO. 6
27 Units Proposed
Open Play Area
WB/S
Pond
PROJECT BOUNDARY
Proposed Nature Trail
GROUP CAMP
1 Campfire Circle
4 Fireplaces
8 Tent Pads
1 Wooden Vault-Type Toilet
TRAVEL TRAILER CAMP
35 Units Proposed
CAMPING AREA NO. 5
39 Units Proposed
CAMPING AREA NO. 3
20 Units Proposed
CAMP AREA NO. 2
34 Units Existing
0 Units Proposed
CAMP AREA NO. 1
13 Units Existing
0 Units Proposed
LIFT STATION
Proposed Entrance Domplex
MULBERRY CREEK
TO MULBERRY
CAMPING AREA NO. 4
12 Units Proposed
VINE PRAIRIE CREEK
LITTLE
PICNIC AREA NO. 4
7 Units Existing
9 Units Proposed
PICNIC AREA NO. 2
6 Units Proposed
NOTE: CAMP AREA NO. 2 WILL BE AVAILABLE FOR GROUP CAMPING ON A RESERVATION BASIS. AFTER OTHER CAMPING AREAS ARE DEVELOPED, IN THE PARK, THIS AREA WILL BE CONVERTED TO PICNIC AREA NO. 3.
PROPOSED LIMITS OF CONCESSION LEASE
Boat Dock Area
Existing Courtesy Piers
LEGEND
RECREATIONAL FEATURES
FEATURE EXISTING PROPOSED
ROADS
PAVED
GRAVEL
EXISTING GRAVEL TO BE PAVED
RESTROOMS - VAULT TYPE, WOODEN
RESTROOMS - VAULT TYPE, MASONRY
TYPE I
TYPE II (CONVERTIBLE TO WATERBORNE)
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)
RESTROOMS - WATERBORNE
RESTROOMS - WATERBORNE WITH SHOWERS
TRAILER/MARINE - SANITARY STATION
WELL
WATER HYDRANT
DRINKING FOUNTAIN
BOAT RAMP
CHANGE HOUSE
CAMPERS WASH HOUSE
PICNIC SHELTER
OTHER BUILDINGS (NAMED)
PICNIC SPACE
CAMP SPACE OR TRAILER SPACE
GROUP CAMP SPACE AND TRAIL
WELL, FOUNTAIN, OR TABLE SHELTER
OTHER FEATURES
TREES
TRAFFIC COUNTER
MERCURY VAPOR LIGHT
NOTE: THIS AREA IS LOCATED IN SECTIONS 34 AND 35, T. 10 N., R. 29 W., AND SECTIONS 2 AND 3, T. 9 N., R. 29 W., CRAWFORD CO., ARK.
ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS
UPDATED MASTER RECREATION PLAN
OZARK LAKE
VINE PRAIRIE
PARK
SCALE OF FEET
200 0 200 400
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS JANUARY 1977

PLATE 13



PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 17 DECEMBER 1972

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

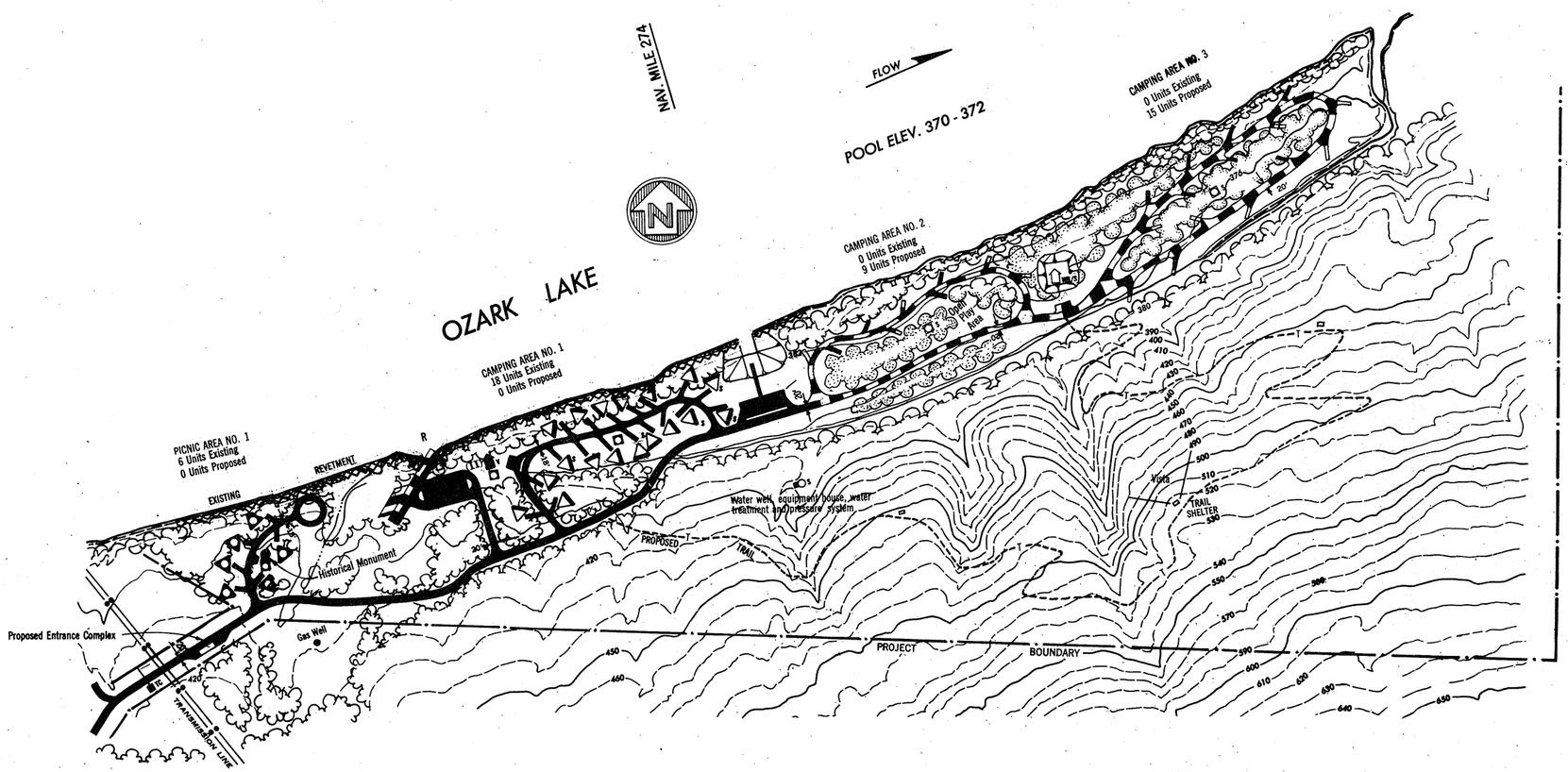
VINE PRAIRIE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 13A



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 21 AND 22, T. 9 N., R. 29 W., SEBASTIAN AND FRANKLIN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

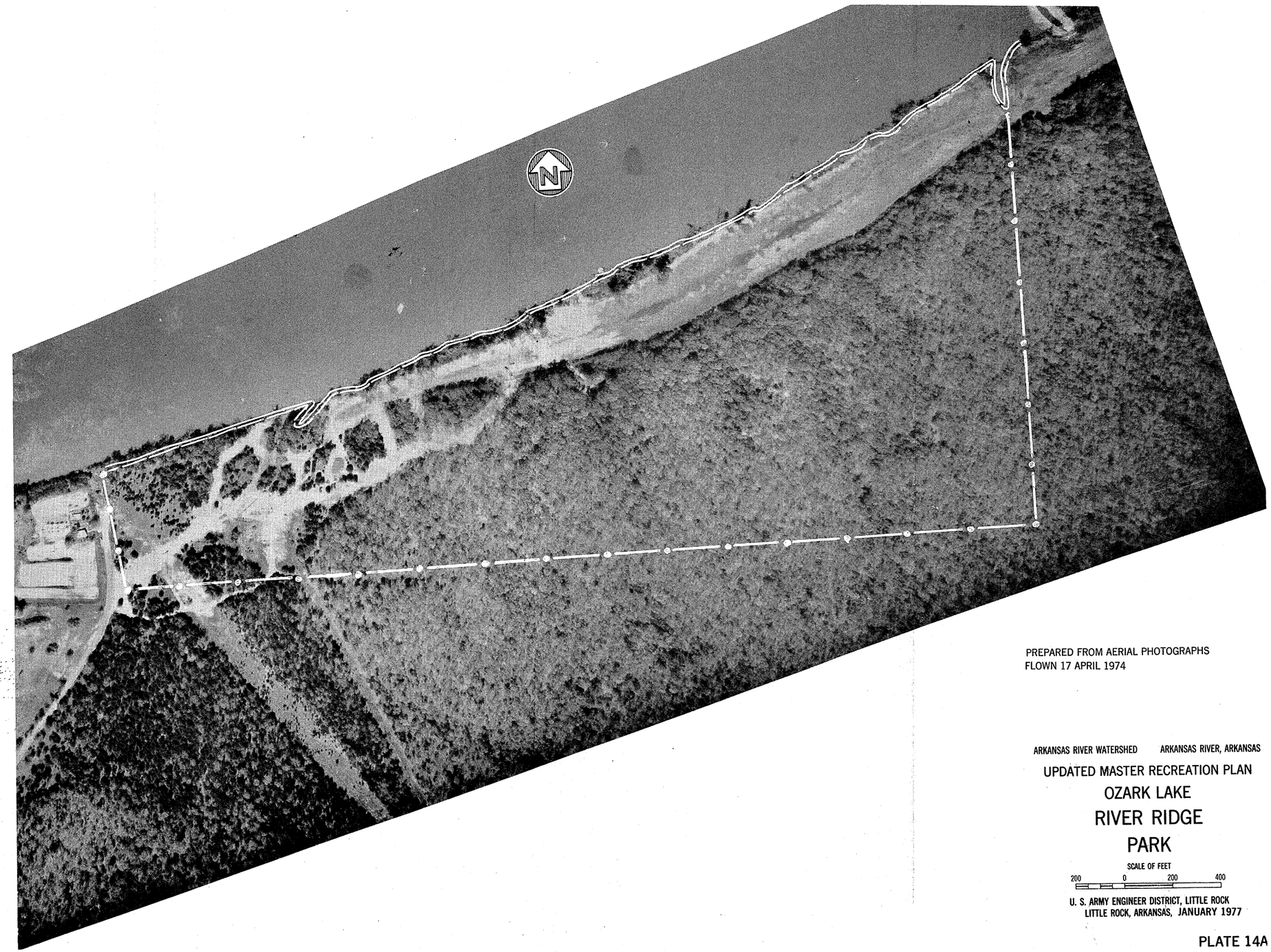
OZARK LAKE

RIVER RIDGE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977



PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 17 APRIL 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

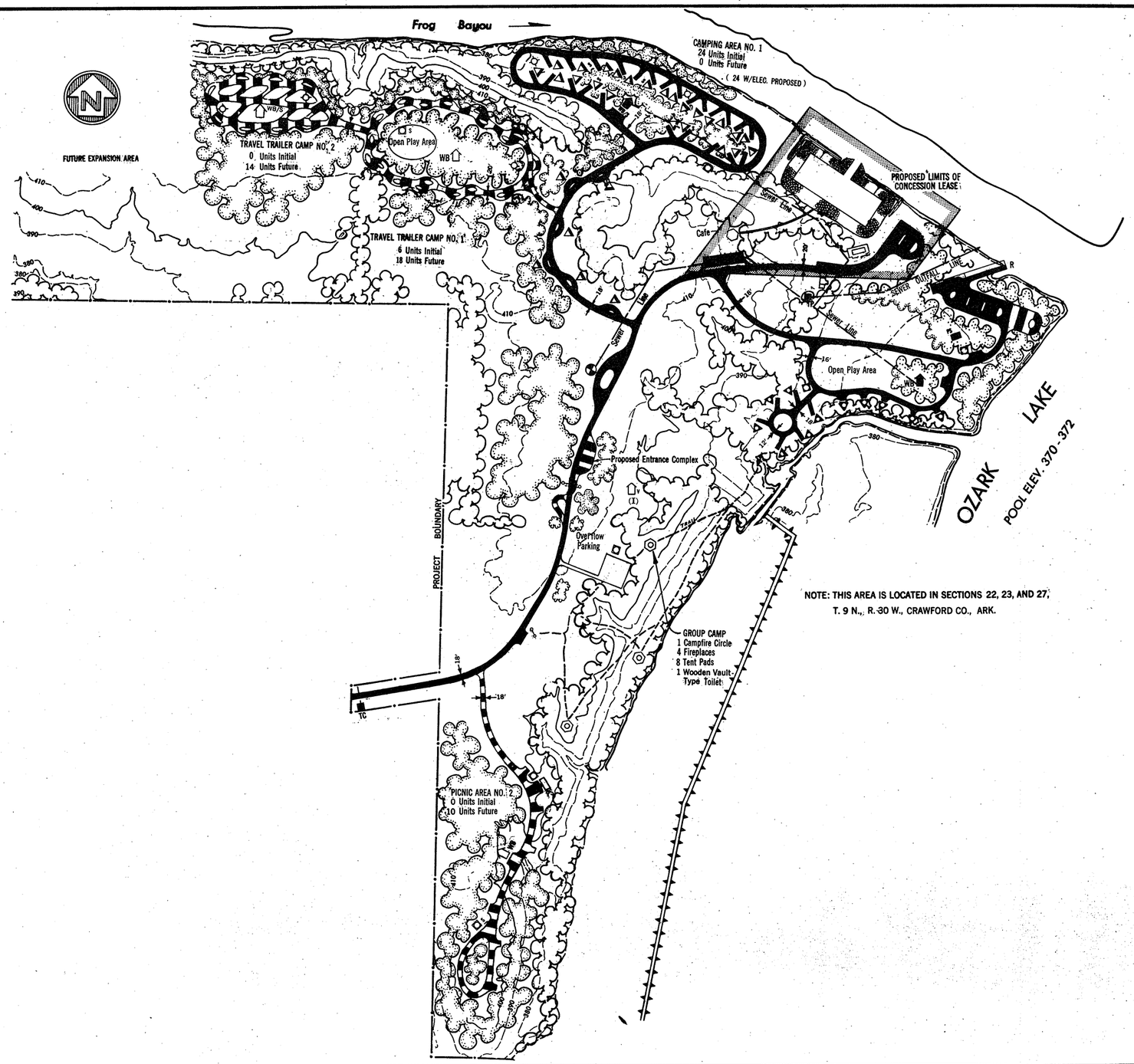
OZARK LAKE
RIVER RIDGE
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 14A



NOTE: THIS AREA IS LOCATED IN SECTIONS 22, 23, AND 27, T. 9 N., R. 30 W., CRAWFORD CO., ARK.

LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

CLEAR CREEK PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 26 OCTOBER 1975

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

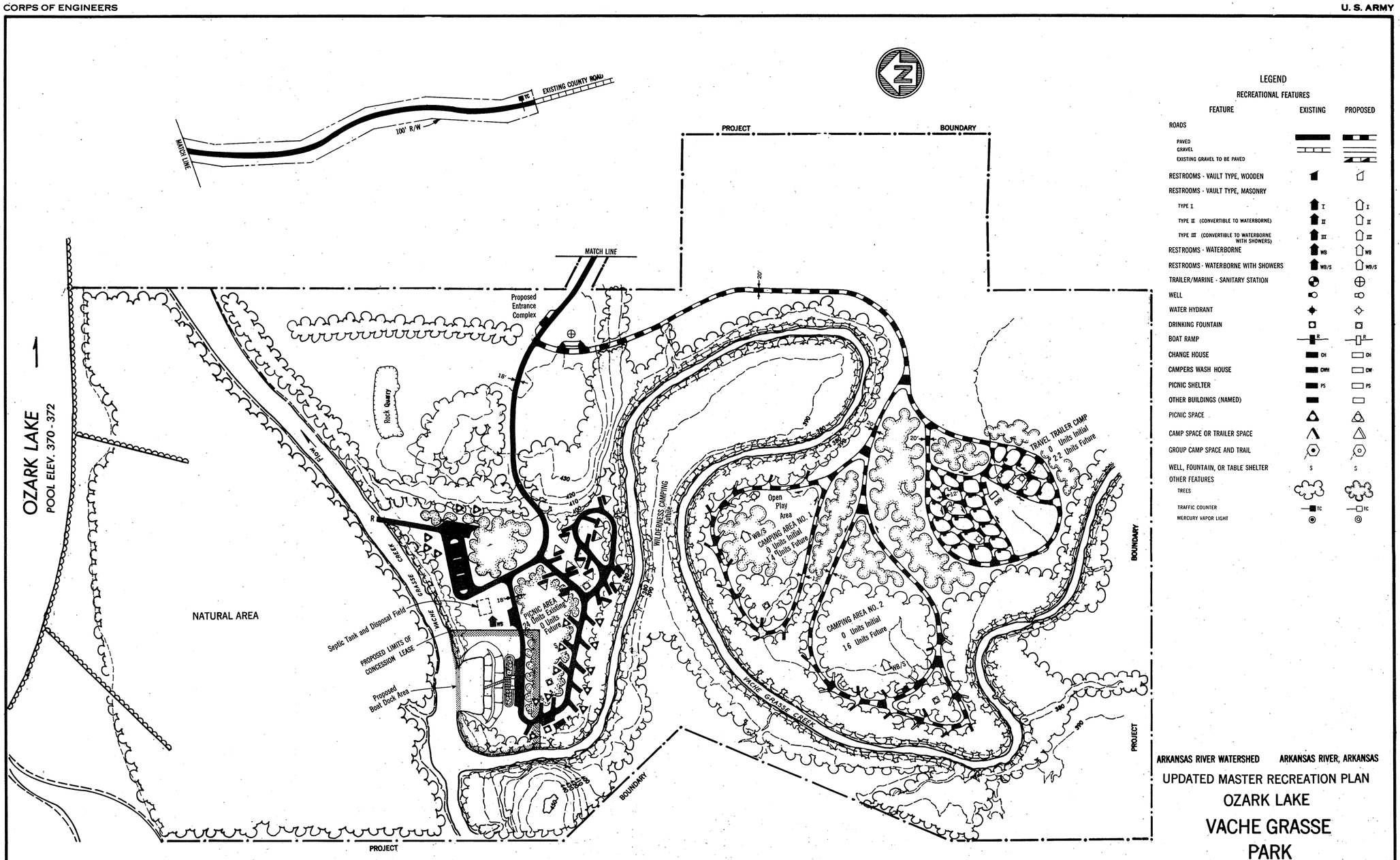
OZARK LAKE
CLEAR CREEK
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 15A



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CW
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 30, T. 8 N., R. 30 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

VACHE GRASSE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977

PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN 26 OCTOBER 1975

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

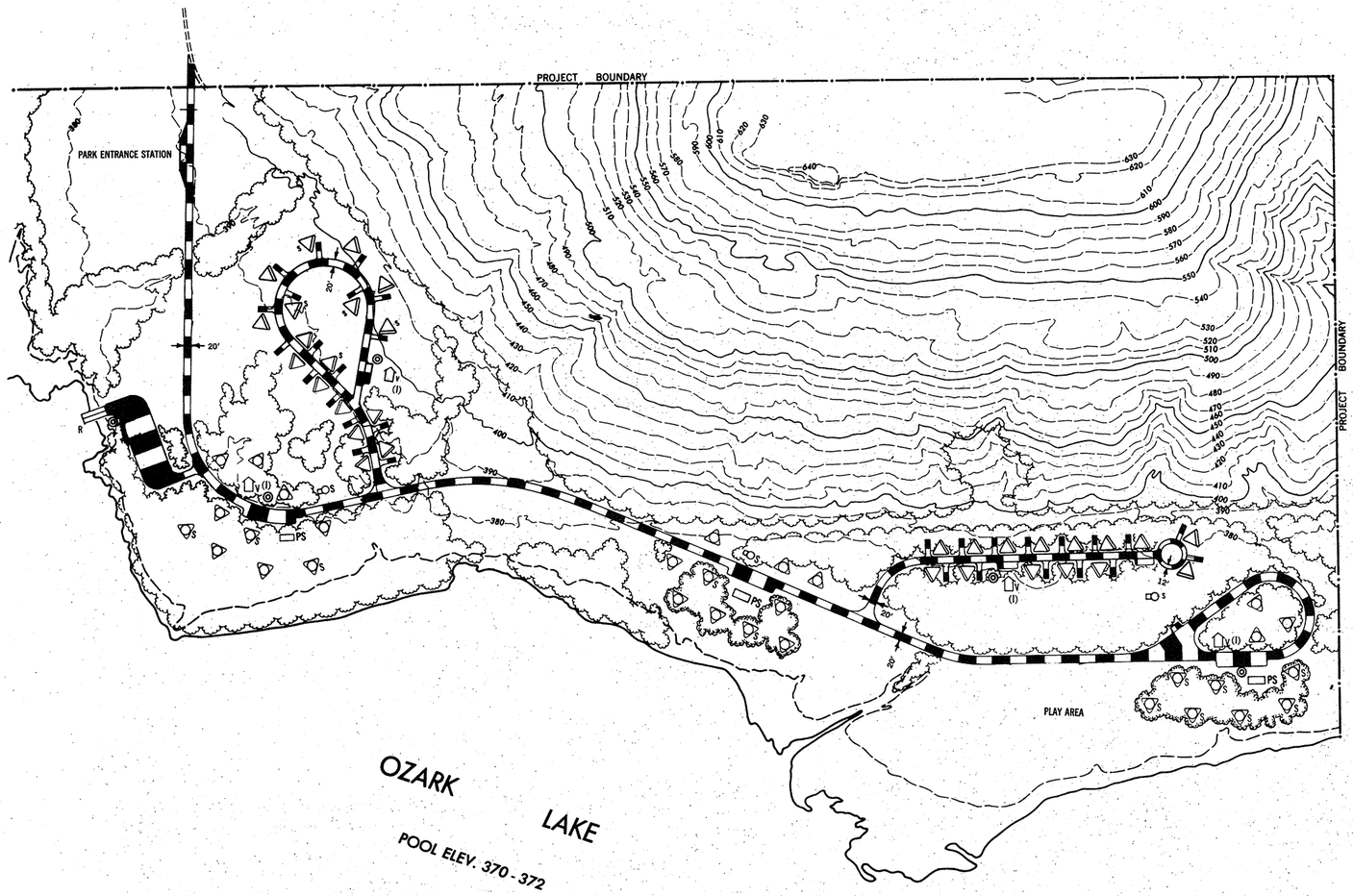
OZARK LAKE
VACHE GRASSE
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 16A



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
RESTROOMS - VAULT TYPE, WOODEN		
RESTROOMS - VAULT TYPE, MASONRY		
TYPE I	I	I
TYPE II (CONVERTIBLE TO WATERBORNE)	II	II
TYPE III (CONVERTIBLE TO WATERBORNE WITH SHOWERS)	III	III
RESTROOMS - WATERBORNE	WB	WB
RESTROOMS - WATERBORNE WITH SHOWERS	WB/S	WB/S
TRAILER/MARINE - SANITARY STATION		
WELL		
WATER HYDRANT		
DRINKING FOUNTAIN		
BOAT RAMP	R	R
CHANGE HOUSE	CH	CH
CAMPERS WASH HOUSE	CWH	CWH
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

BECTUM HILL

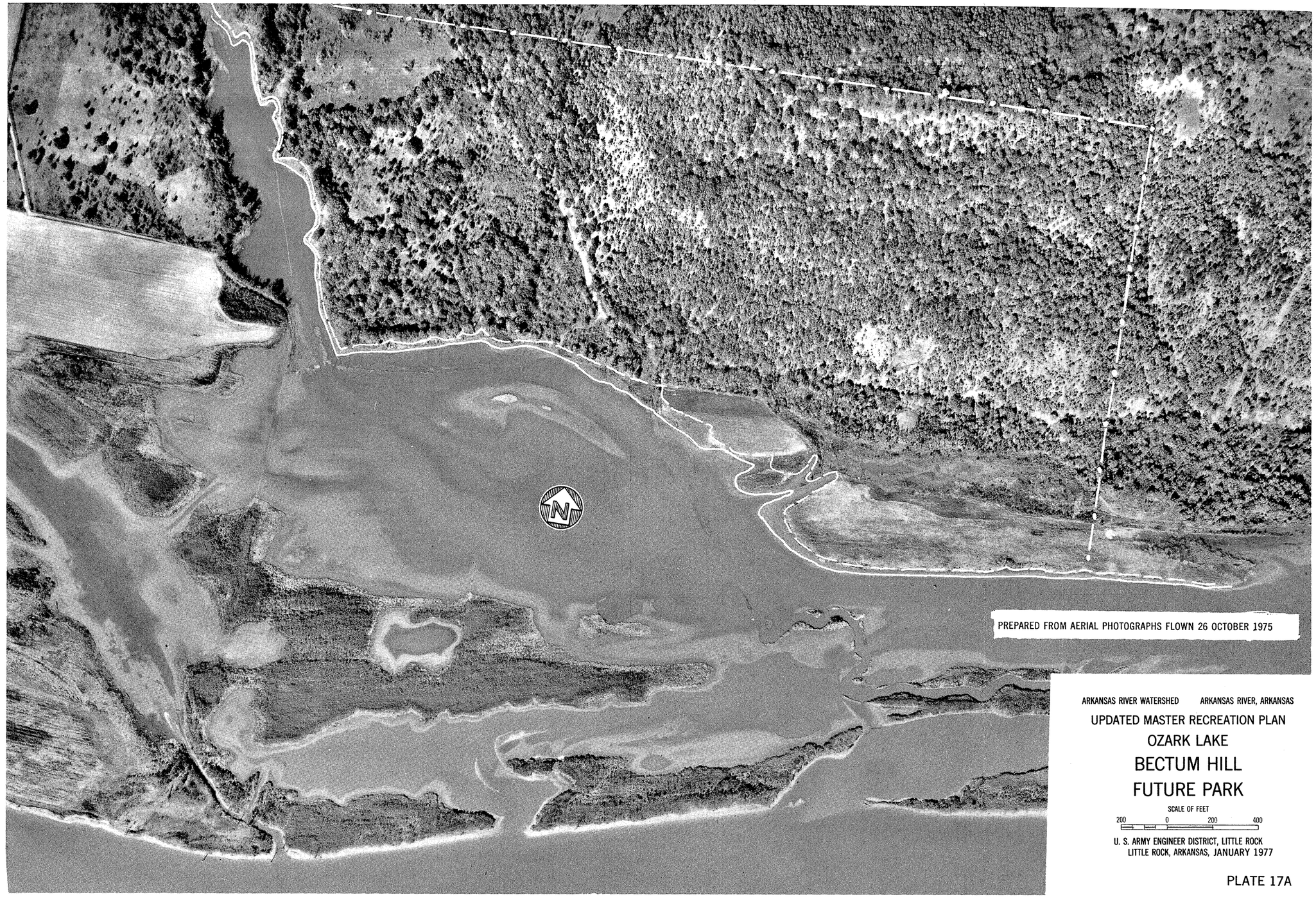
FUTURE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, JANUARY 1977



ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

OZARK LAKE

BECTUM HILL FUTURE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1977

PLATE 17A