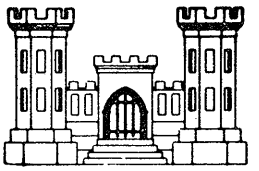
ARKANSAS RIVER, ARKANSAS
McCLELLAN - KERR ARKANSAS RIVER
NAVIGATION SYSTEM

LOCKS AND DAMS MURRAY, TOAD SUCK FERRY, AND NOS. 9 AND 13

DESIGN MEMORANDUM NO. 9

UPDATED MASTER RECREATION PLAN FOR NAVIGATION POOL DEVELOPMENT AND MANAGEMENT



15

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS
JUNE 1976

ARMY-LITTLE ROCK, ARK.

CESWL-OP 14 March 2011

MEMORANDUM FOR Operations Project Manager, Russellville Project Office

SUBJECT: Master Plan Supplement No.18, Murray and Toad Suck Ferry Locks and Dams and Rockerfeller and John Paul Hammerschmidt Lakes.

1. The purpose of this supplement is to revise the plan to include the construction of a Pedestrian/Bicycle Bridge upon and across Murray Lock and Dam at Navigation Mile 125.7 of the McClellan-Kerr Arkansas River Navigation System for public recreational uses.

2. A Memorandum of Agreement (MOA) between the U.S. Army Corps of Engineers, Little Rock District, and Pulaski County became effective on 16 November 2000. This MOA established respective responsibilities for each party. All necessary Regulatory, Real Estate Easements and Environmental permits were obtained prior to construction of the project. Pulaski County received Federal funds and a Federal grant for the design and construction of the bridge. The bridge was opened on 26 September 2006.

3. A Challenge Partnership Agreement between the U.S. Army Corps of Engineers, Little Rock District and Pulaski County will be entered into which outlines specific details for the inspection, operations and maintenance of the bridge. In addition, this supplement allows for the future construction of a Southwest Approach to the existing bridge.

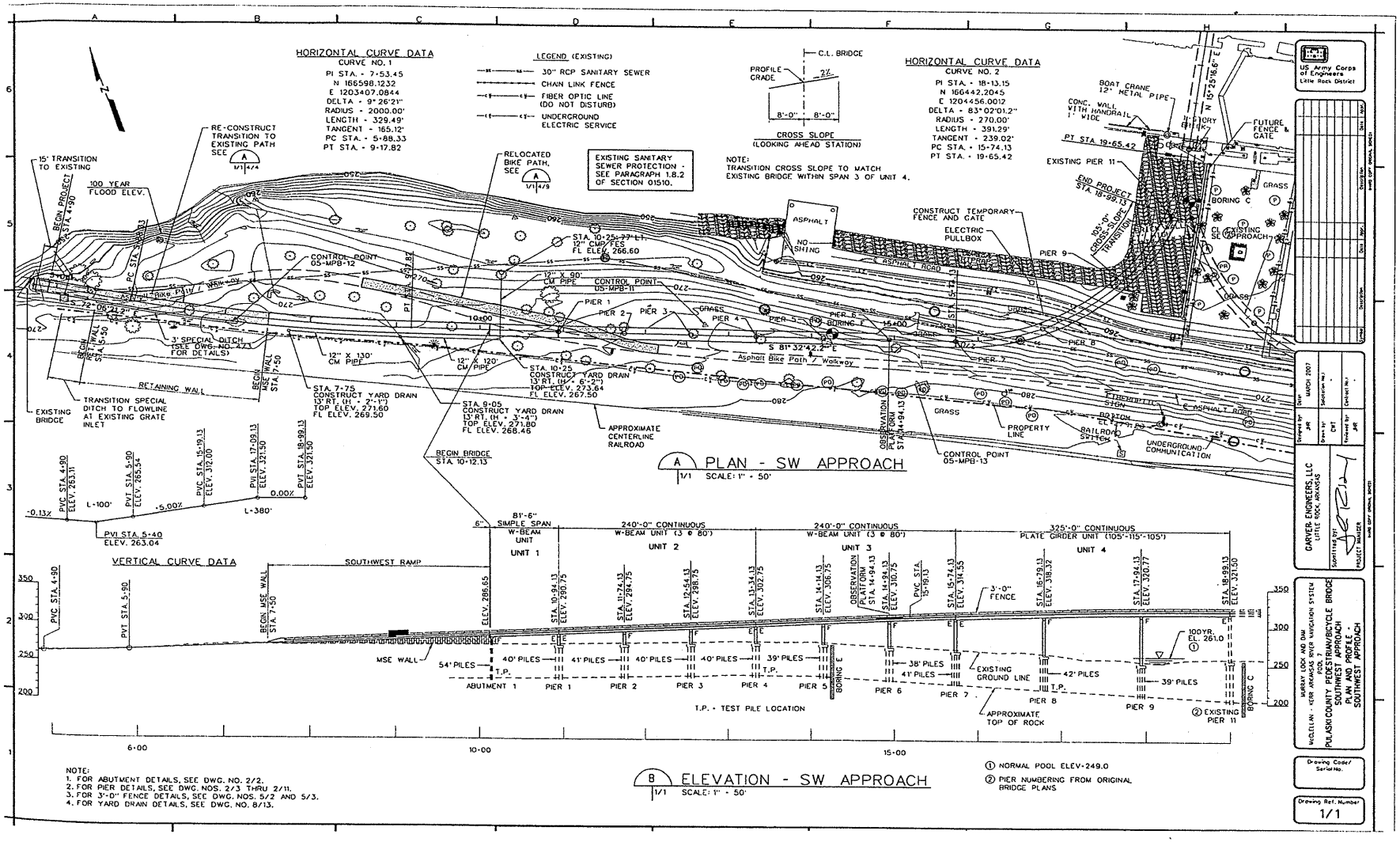
4. A map is enclosed which shows the design of the bridge and future addition of the Southwest Approach.

5. Approved.

Andrea L. Murdock-McDaniel

Encl

Andrea L. Murdock-McDaniel
Chief, Operations Division


HORIZONTAL CURVE DATA
CURVE NO. 1
PI STA. - 7+53.45
N 166598.1232
E 1203407.0844
DELTA - 9°26'21"
RADIUS - 2000.00'
LENGTH - 329.49'
TANGENT - 165.12'
PC STA. - 5+88.33
PT STA. - 9+17.82
LEGEND (EXISTING)
30" RCP SANITARY SEWER
CHAIN LINK FENCE
FIBER OPTIC LINE (DO NOT DISTURB)
UNDERGROUND ELECTRIC SERVICE
C.L. BRIDGE
PROFILE GRADE
2%
8'-0"
8'-0"
CROSS SLOPE (LOOKING AHEAD STATION)
HORIZONTAL CURVE DATA
CURVE NO. 2
PI STA. - 18+13.15
N 166442.2045
E 1204456.0012
DELTA - 83°02'01.2"
RADIUS - 270.00'
LENGTH - 391.29'
TANGENT - 239.02'
PC STA. - 15+74.13
PT STA. - 19+65.42
NOTE:
TRANSITION CROSS SLOPE TO MATCH EXISTING BRIDGE WITHIN SPAN 3 OF UNIT 4.
EXISTING SANITARY SEWER PROTECTION - SEE PARAGRAPH 1.8.2 OF SECTION 01510.
15' TRANSITION TO EXISTING
100 YEAR FLOOD ELEV.
RE-CONSTRUCT TRANSITION TO EXISTING PATH SEE
RELOCATED BIKE PATH, SEE
BEGIN PROJECT STA. 4+90
PC STA 5+88.33
PT STA 9+17.82
CONTROL POINT 05-MPB-12
CONTROL POINT 05-MPB-11
CONTROL POINT 05-MPB-13
STA. 10+25-27 LT. 12" CMP FES FL ELEV. 266.60
12" X 90' CM PIPE
12" X 130' CM PIPE
12" X 120' CM PIPE
3' SPECIAL DITCH (SEE DWG. NO. 4/23 FOR DETAILS)
TRANSITION SPECIAL DITCH TO FLOWLINE AT EXISTING GRATE INLET
EXISTING BRIDGE
RETAINING WALL
BEGIN MSE WALL STA. 7+50
STA. 7+75 CONSTRUCT YARD DRAIN 13' RT. (H. = 2'-1") TOP ELEV. 271.60 FL ELEV. 269.50
STA. 9+05 CONSTRUCT YARD DRAIN 10' RT. (H. = 3'-4") TOP ELEV. 271.80 FL ELEV. 268.46
STA. 10+25 CONSTRUCT YARD DRAIN 13' RT. (H. = 6'-2") TOP ELEV. 273.64 FL ELEV. 267.50
BEGIN BRIDGE STA. 10+12.13
APPROXIMATE CENTERLINE RAILROAD
OBSERVATION PLATFORM STA. 14+94.13
S 81°32'42.2" E
Asphalt Bike Path
Walkway
PIER 1
PIER 2
PIER 3
PIER 4
PIER 5
PIER 6
PIER 7
PIER 8
PIER 9
BORING F
BORING C
ASPHALT
NO SHING
CONSTRUCT TEMPORARY FENCE AND GATE
ELECTRIC PULLBOX
4" ASPHALT ROAD
BOAT CRANE 12" METAL PIPE
CONC. WALL WITH HANDRAIL 1' WIDE
HISTORY MARK
FUTURE FENCE & GATE
PT STA 19+65.42
EXISTING PIER 11
END PROJECT STA. 18+99.13
105'-0" CROSS-SLOPE TRANSITION
EXISTING SE APPROACH
GRASS
PROPERTY LINE
RAILROAD SWITCH
UNDERGROUND COMMUNICATION
CENTERLINE RAILROAD
ASPHALT ROAD
A PLAN - SW APPROACH
1/1 SCALE: 1" = 50'
PVC STA. 4+90 ELEV. 263.11
PVT STA. 5+90 ELEV. 265.54
PVC STA. 15+19.13 ELEV. 312.00
PVI STA. 17+09.13 ELEV. 321.50
PVT STA. 18+99.13 ELEV. 321.50
PVI STA. 5+40 ELEV. 263.04
L-100'
-5.00%
L-380'
-0.13%
0.00%
VERTICAL CURVE DATA
SOUTHWEST RAMP
81'-6" SIMPLE SPAN W-BEAM UNIT
UNIT 1
240'-0" CONTINUOUS W-BEAM UNIT (3 @ 80')
UNIT 2
240'-0" CONTINUOUS W-BEAM UNIT (3 @ 80')
UNIT 3
325'-0" CONTINUOUS PLATE GIRDER UNIT (105'-115'-105')
UNIT 4
3'-0" FENCE
ELEV. 286.65
STA. 10+94.13 ELEV. 290.75
STA. 11+74.13 ELEV. 294.75
STA. 12+54.13 ELEV. 298.75
STA. 13+34.13 ELEV. 302.75
STA. 14+14.13 ELEV. 306.75
STA. 14+94.13 ELEV. 310.75
PVC STA. 15+19.13
STA. 15+74.13 ELEV. 314.55
STA. 16+29.13 ELEV. 318.32
STA. 17+94.13 ELEV. 320.77
STA. 18+99.13 ELEV. 321.50
MSE WALL
54' PILES
40' PILES
41' PILES
40' PILES
40' PILES
39' PILES
38' PILES
41' PILES
42' PILES
39' PILES
T.P.
ABUTMENT 1
PIER 1
PIER 2
PIER 3
PIER 4
PIER 5
PIER 6
PIER 7
PIER 8
PIER 9
EXISTING GROUND LINE
APPROXIMATE TOP OF ROCK
100YR. EL. 261.0 ①
② EXISTING PIER 11
T.P. - TEST PILE LOCATION
6+00
10+00
15+00
B ELEVATION - SW APPROACH
1/1 SCALE: 1" = 50'
① NORMAL POOL ELEV-249.0
② PIER NUMBERING FROM ORIGINAL BRIDGE PLANS
NOTE:
1. FOR ABUTMENT DETAILS, SEE DWG. NO. 2/2.
2. FOR PIER DETAILS, SEE DWG. NOS. 2/3 THRU 2/11.
3. FOR 3'-0" FENCE DETAILS, SEE DWG. NOS. 5/2 AND 5/3.
4. FOR YARD DRAIN DETAILS, SEE DWG. NO. 8/13.
US Army Corps of Engineers Little Rock District
GARVER ENGINEERS, LLC LITTLE ROCK, ARKANSAS
MARCH 2007
McCLELLAN - KERR ARKANSAS RIVER NAVIGATION SYSTEM
PULASKI COUNTY PEDESTRIAN/BICYCLE BRIDGE
SOUTHWEST APPROACH
PLAN AND PROFILE - SOUTHWEST APPROACH
Drawing Code/ Serial No.
Drawing Ref. Number 1/1

CESWL-OP-ON

MEMORANDUM THRU Acting Chief, Operations Division

FOR Operations Project Manager, Russellville

SUBJECT: Murray and Toad Suck Ferry Locks and Dams and Rockefeller and John Paul Hammerschmidt Lakes, Updated Master Plan, Design Memorandum No. 9, Supplement No. 17

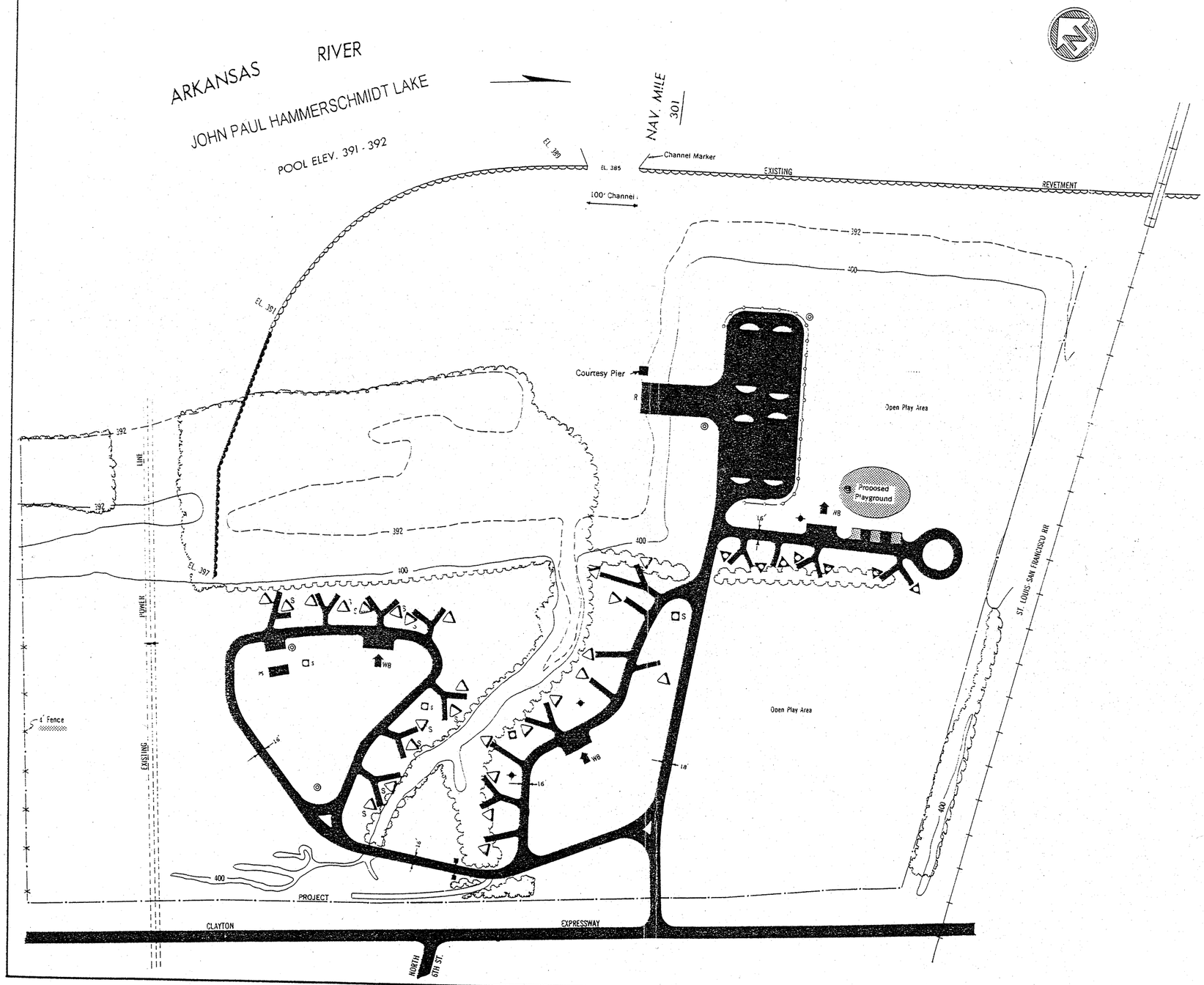
1. Reference: CESWL-OP-ON, dated 2 April 1998, SAB

2. Supplement No. 17 to the subject master plan is approved. The action makes Fort Smith Park available for leasing to the City of Fort Smith, Arkansas, and includes all lands shown on the enclosed map.

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

Encl

Copy Furnished:
CECW-ON (w/encl)
CESWD-ETO-R (w/encl)
Chief, Real Estate Division (w/encl)
Chief, General Engineering Section (w/encl)
Chief, Hydrology & Hydraulics Branch (w/encl)
Chief, Environmental Analysis Branch (w/encl)
Chief, Geotechnical Branch (w/encl)
Nos. 7, 8, 9, and 13 Master Plan (w/encl)
Files (w/encl)
Log Book (w/encl)



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
COUNCIL FIREPLACE		
REFUSE CAN		
WELL, FOUNTAIN OR TABLE SHELTER		
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 26, T. 9 N., R. 32 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN
JOHN PAUL HAMMERSCHMIDT LAKE

FORT SMITH PARK

SCALE OF FEET

100 0 100 200

U.S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MARCH 1998

CESWD-ETO-R (CESWL-CO-ON/20 Jun 96) (1130) 1st End Mr. McCauley/re/7-2434
SUBJECT: Murray and Toad Suck Ferry Locks and Dams and Rockefeller and John Paul Hammerschmidt Lakes, Updated Master Plan, Design Memorandum No. 9, Supplement No. 16

CDR, U.S. Army Corps of Engineers, Southwestern Division, ATTN: CESWD-ETO-R, 1114 Commerce Street, Dallas, TX 75242-0216

12 JUL 1996

FOR Commander, Little Rock District, ATTN: CESWL-CO-ON

The subject supplement is approved subject to the following:

a. Revision of the site plans in the master plan to reflect the name changes.

b. Revision of NRMS data. In this regard, contact Mike Owen, national coordinator for the NRMS, CESWF-OD-M, (817) 334-4637, for procedural guidance.

FOR THE COMMANDER:

PAUL D. ROBINSON, P.E.
Director, Engineering and
Technical Services Directorate

Encl
wd

CF (w/encl):
CECW-ON

CESWL-CO-ON (1130) 20 June 1996

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-ETC-R

SUBJECT: Murray and Toad Suck Ferry Locks and Dams and Rockefeller and John Paul Hammerschmidt Lakes, Updated Master Plan, Design Memorandum No. 9, Supplement No. 16

1. The purpose of this supplement is to designate Fletcher Bend Future Park and Palarm Park on Navigation Pool No. 7, Arkansas River (Murray Lock and Dam), available for leasing to the City of Mayflower, Arkansas, for public recreation purposes.

2. Palarm Park is a day use park (Plate 6). The 17-acre park consists of 8 picnic units, vault restroom, boat launching ramp, 2 courtesy docks, foot bridge and trail. Recreation visits in FY 95 totaled 273,992 hours. No public comment on this action has been solicited, as this change in park operation is considered to have minimal impact. Fletcher Bend Future Park (Plate 7) is a 137-acre area designated for recreation-intensive use, although no facilities presently exist. The area is accessible from a dedicated county road.

3. As part of the initial development plan and this supplement, the city plans to redesignate Palarm Park as Mayflower City Landing and Fletcher Bend Future Park as Mayflower City Park. A 3-5 year development plan has been proposed by the city pending approval of this supplement which schedules improvements to park lands. Successful accomplishment of planned objectives are necessary for satisfactory compliance with terms of a lease extended to the city. Termination of the lease for any reason will result in the park areas being offered to others for operation and maintenance or their being closed.

4. Approval of this master plan supplement is recommended.

FOR THE COMMANDER:

Thomas P. Thonen

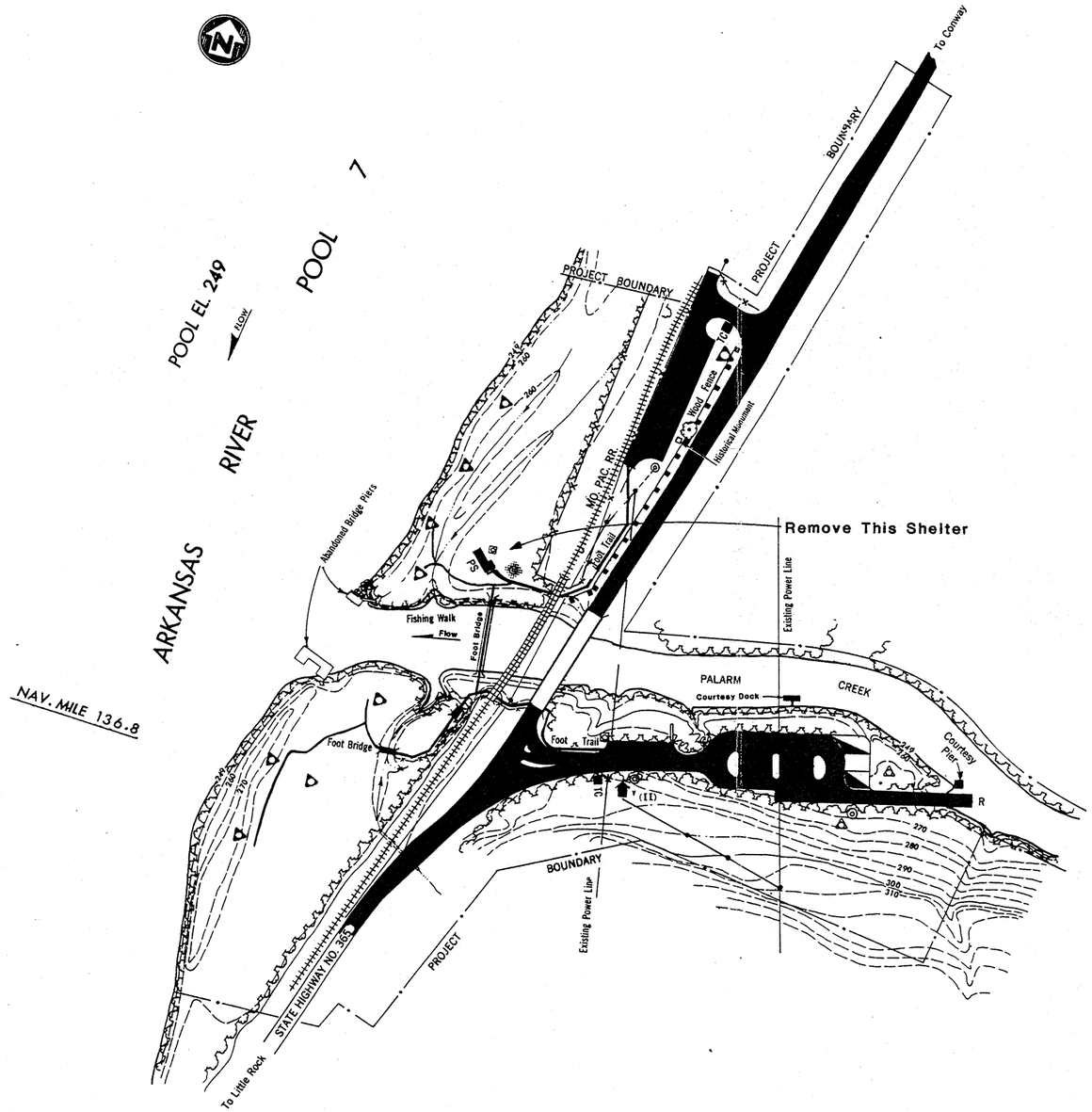
Encl (4 cys)

for KEITH THONEN, P.E.
Chief, Construction-Operations Division

ENCL

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 12 AND 13, T. 3 N., R. 14 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

PALARM

PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

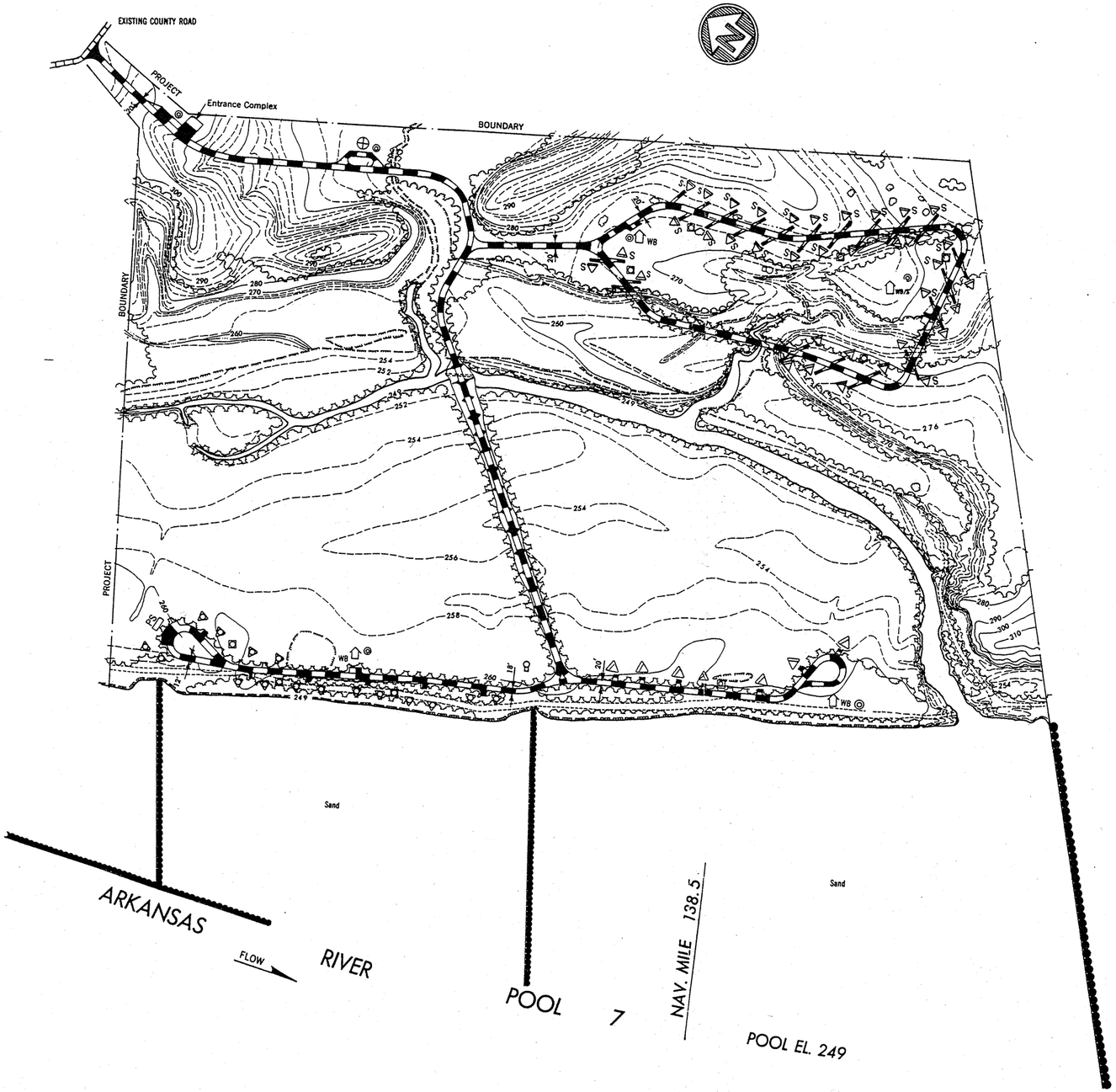
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 6

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 1 AND 2 T. 3 N., R. 14 W., AND SECTIONS 35 AND 36, T. 4 N., R13 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

FLETCHER BEND FUTURE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 7

CESWD-ETC-R (CESWL-CO-ON/23 May 95) 1st End Mr. McCauley/jw/ 7-2434
SUBJECT: Supplement No. 15, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

CDR, U.S. Army Corps of Engineers, Southwestern Division,
1114 Commerce Street, Dallas, TX 75242

27 JUN 1995

FOR Commander, Little Rock District, ATTN: CESWL-CO-ON

The subject supplement is approved.

FOR THE COMMANDER:

PAUL D. ROBINSON, P.E.
Acting Director, Engineering and
Technical Services Directorate

Encl
wd

CF (w/basic & encl):
CECW-ON

RECEIVED
JUN 30 1995
CON-OPS DIVISION

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

REPLY TO
ATTENTION OF

CESWL-CO-ON (1130) 23 May 1995

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 15, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

1. The purpose of this supplement is to indicate the relocation of seven campsites from Cypress Creek Park to Toad Suck Park and the location of an additional group shelter in Toad Suck Park on Pool 8.

2. The campsites at Cypress Creek Park have had problems involving vandalism, deviant activity and drug use. The park has low usage and has not generated any camping revenues during the past 21 years. Day use fees began this fiscal year, but collections have been minimal. Toad Suck Park has heavy camping and day use pressure and needs the proposed facilities. The seven campsites would be located in the two camping loops adjacent to the river downstream of the dam. One loop has two proposed campsites, and the other loop has five proposed campsites.

3. Construction of another group shelter with parking in Toad Suck Park will increase user fee revenues approximately $4,000 per year. Use of the proposed group shelter will not affect camping activities.

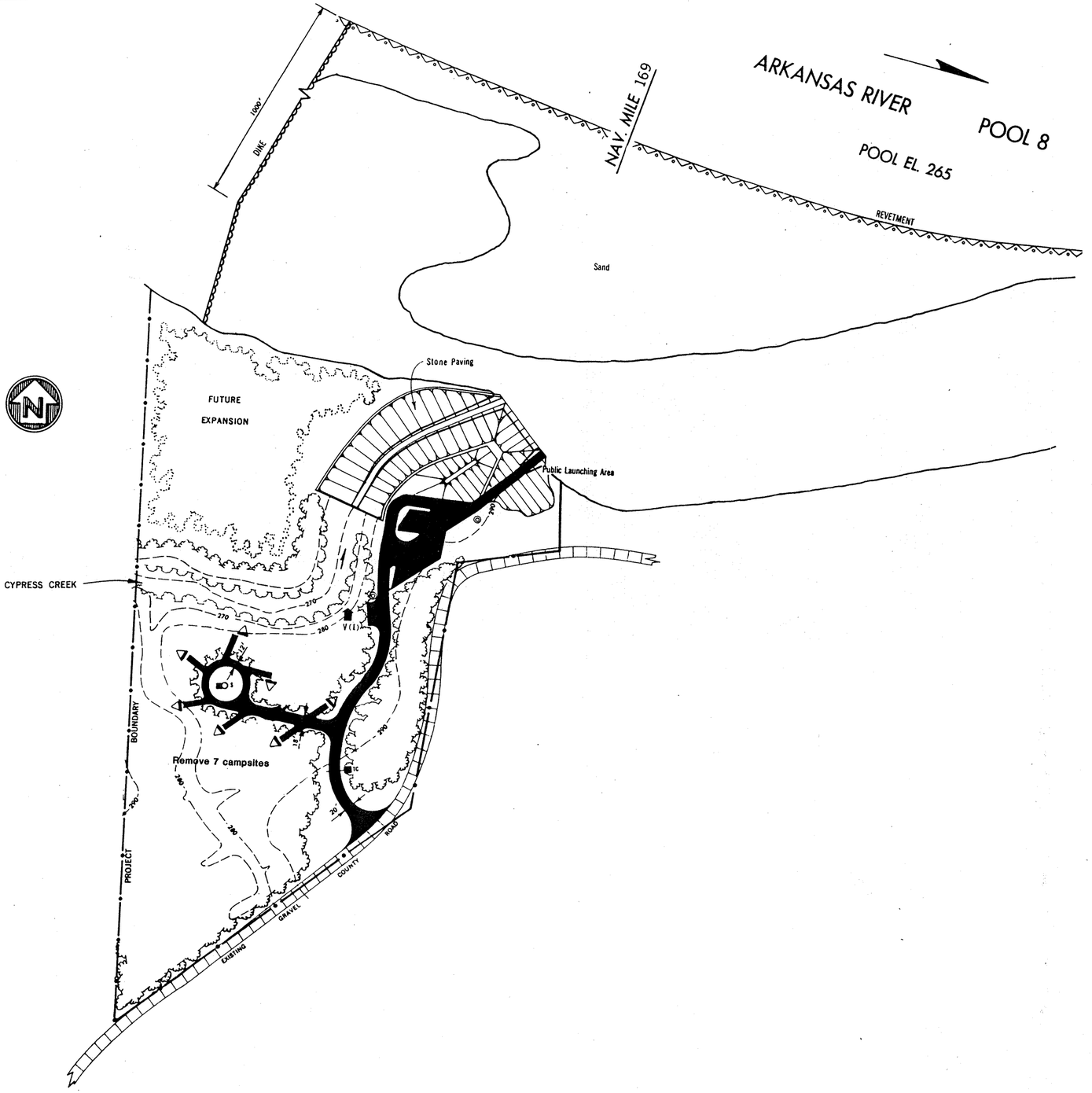
4. Approval of this supplement is recommended.

FOR THE COMMANDER:

Keith Thonen

KEITH THONEN, P.E.
Chief, Construction-Operations Division

Encl (4 cys)



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	B	B
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 20, T. 5 N., R. 16 W., PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN
ARKANSAS RIVER POOL 8
CYPRESS CREEK PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED MAY 1995

CESWD-CO-RP (CESWL-CO-L/6 Jan 95) 1st End Mr. McCauley/jw/
7-2434
SUBJECT: Supplement No. 14, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

CDR, U.S. Army Corps of Engineers, Southwestern Division,
1114 Commerce Street, Dallas, TX 75242 19 JAN 1995

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

The subject supplement is approved.

FOR THE COMMANDER:

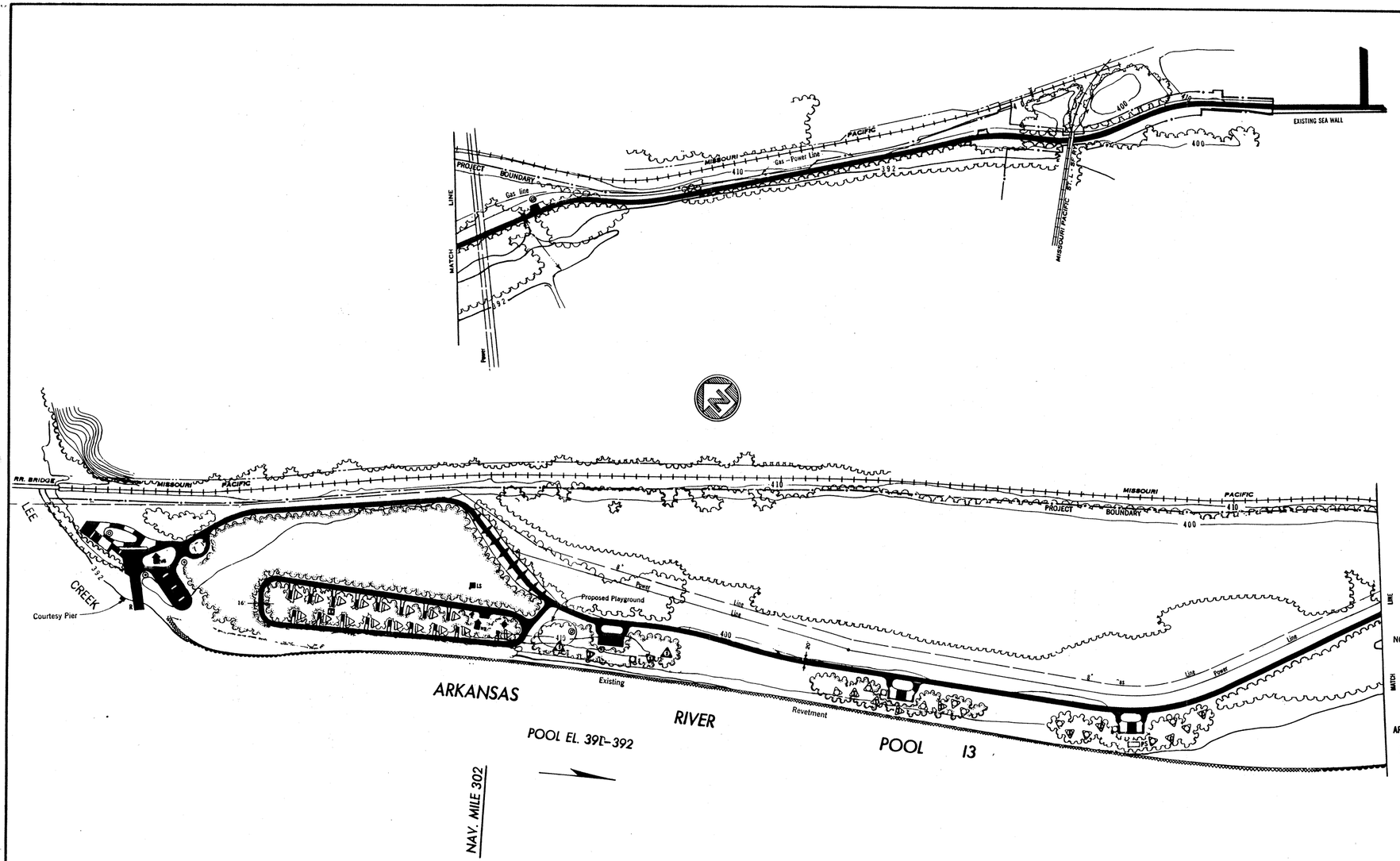
JERRY W. SMITH, P.E.
Acting Director, Directorate of
Construction-Operations

2 Encls
wd

CF (w/basic & encls):
CECW-ON

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 23, T. 9 N., R. 32 W., CRAWFORD CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

LEE CREEK PARK

SCALE OF FEET

200 0 200 400

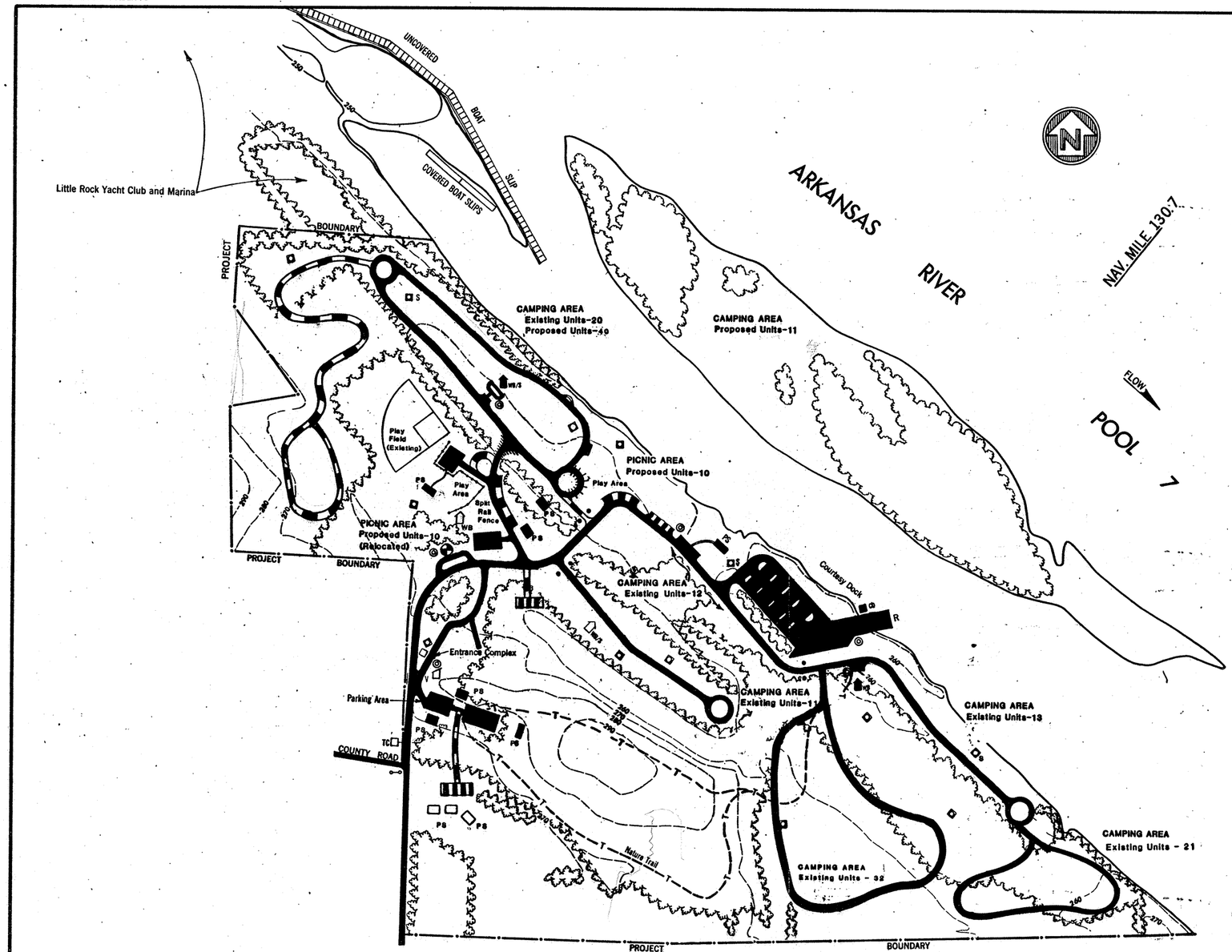
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JANUARY 1995

EXHIBIT TO SUPPLEMENT NO. 14 PLATE 22

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE, MASONRY	V	V
TOILETS - VAULT TYPE, WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP		
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS (NAMED)	Cafe	Cafe
PICNIC SPACE		
2 TABLES 1 CONCRETE PICNIC 1 UTILITY 1 FIREPLACE OR CHARCOAL UNIT 1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES 1 CONCRETE PICNIC 1 UTILITY 1 FIREPLACE OR CHARCOAL UNIT 1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERTINENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5,6,7, AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JANUARY 1995

EXHIBIT TO SUPPLEMENT NO. 13 PLATE 5

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

REPLY TO
ATTENTION OF

CESWL-CO-L (1130) 6 January 1995

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 14, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

1. The purpose of this supplement is to indicate relocation of a group shelter from Lee Creek Park to Springhill Park on John Paul Hammerschmidt Lake. The group shelter at Lee Creek Park became a problem involving graffiti, vandalism, deviant activity, and drug use. The shelter did not generate reservation income during the past 2 years.

2. The relocation to Springhill Park will provide a quality recreational experience for the public. The site in this park is next to another group shelter and will help accommodate large groups. The change will increase user fee revenues and reduce operation and maintenance costs.

3. Approval of this supplement is recommended.

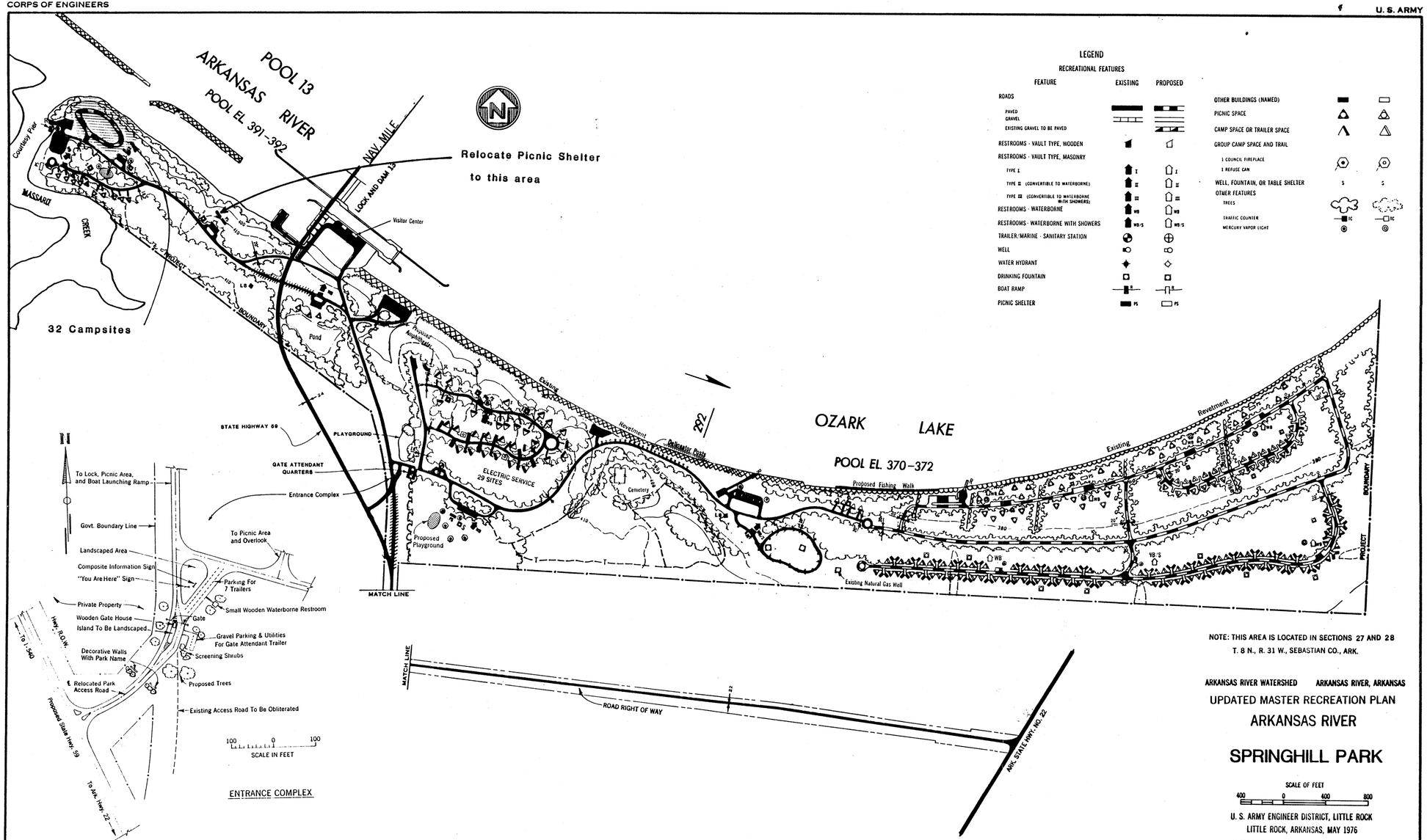
FOR THE COMMANDER:

2 Encls (4 cys)

for KEITH THONEN, P.E.
Chief, Construction-Operations
Division

CORPS OF ENGINEERS

U. S. ARMY



NOTE: THIS AREA IS LOCATED IN SECTIONS 27 AND 28
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

SPRINGHILL PARK

SCALE OF FEET
400 0 400 800

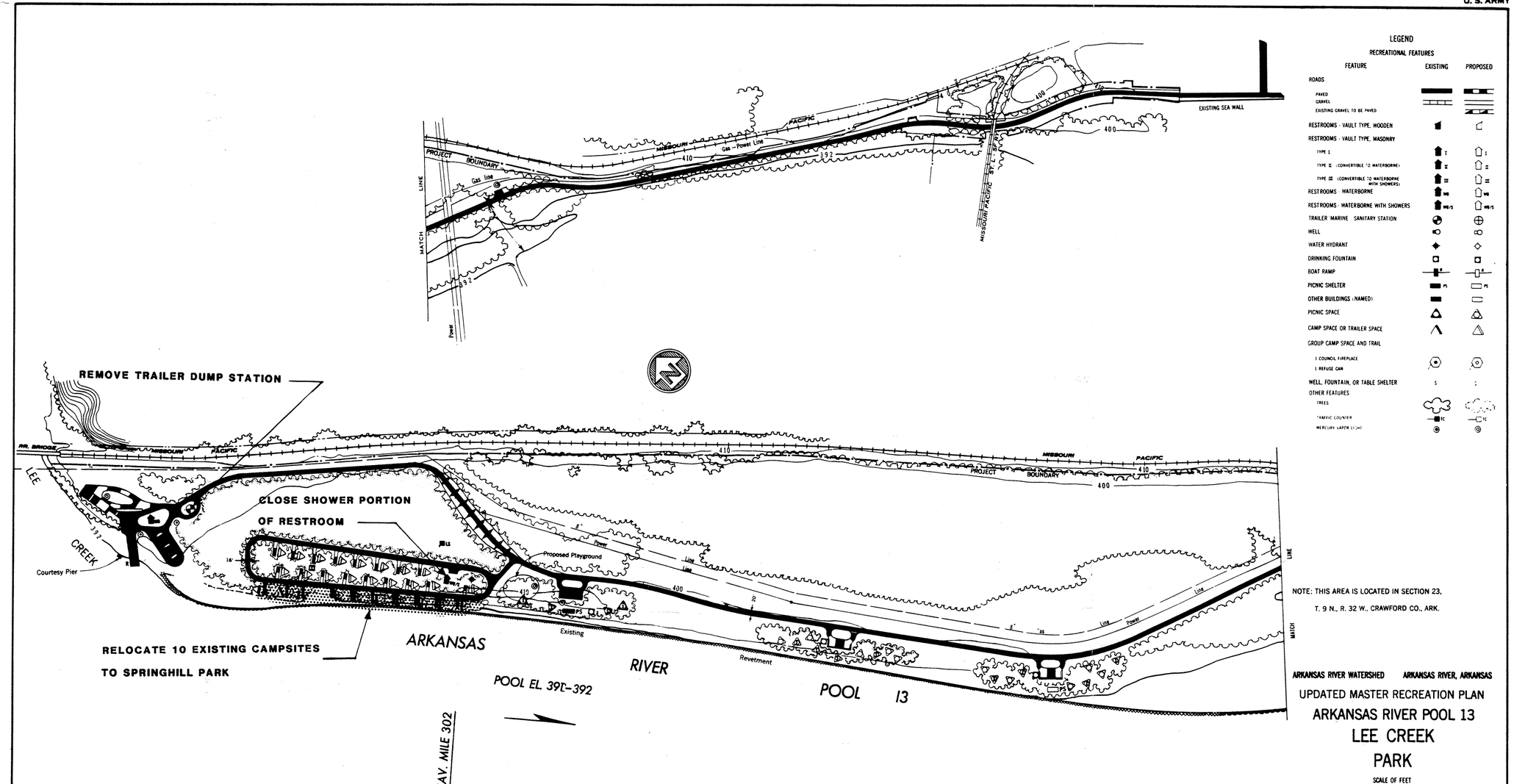
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JANUARY 1995

EXHIBIT TO SUPPLEMENT NO. 14 PLATE 20

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 23, T. 9 N., R. 32 W., CRAWFORD CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

LEE CREEK PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JUNE 1993

EXHIBIT TO SUPPLEMENT NO. 11

PLATE 22

CESWD-CO-RP (CESWL-CO-L/4 Jan 95) 1st End Mr. McCauley/jw/
7-2434
SUBJECT: Supplement No. 13, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck and Rockefeller Lake and John Paul Hammerschmidt Lake

CDR, U.S. Army Corps of Engineers, Southwestern Division,
1114 Commerce Street, Dallas, TX 75242

19 JAN 1995

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

The subject supplement is approved.

FOR THE COMMANDER:

JERRY W. SMITH, P.E.
Acting Director, Directorate of
Construction-Operations

Encl
wd

CF (w/basic & encl):
CECW-ON

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

REPLY TO
ATTENTION OF

CESWL CO-L (1130) 4 January 1995

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 13, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck and Rockefeller Lake and John Paul Hammerschmidt Lake

1. The purpose of this supplement is to revise the plan of development for Maumelle Park as shown on the enclosed Plate 5. Additional development consisting of 5 group shelters, 1 restroom, and a camp loop road with 21 campsites is proposed.

2. A group shelter has been relocated from Point Remove Park, and another has been constructed. Approval is requested for these two existing shelters and for three additional shelters.

3. A restroom is proposed for the area in which the additional group shelters are to be located.

4. The camping loop will be located in an area now proposed for such development and will consist of 9 campsites relocated from Palarm Park and 21 campsites relocated from Point Remove Park.

5. Due to its location near a metropolitan area, Maumelle Park received 2.7 million visitor hours of use and generated $176,798 in total revenue during FY 94. The additions are advantageous to the park user and the Government.

6. These additional facilities will be justified through the SRUF program and constructed as funding becomes available. Approval of this supplement is recommended.

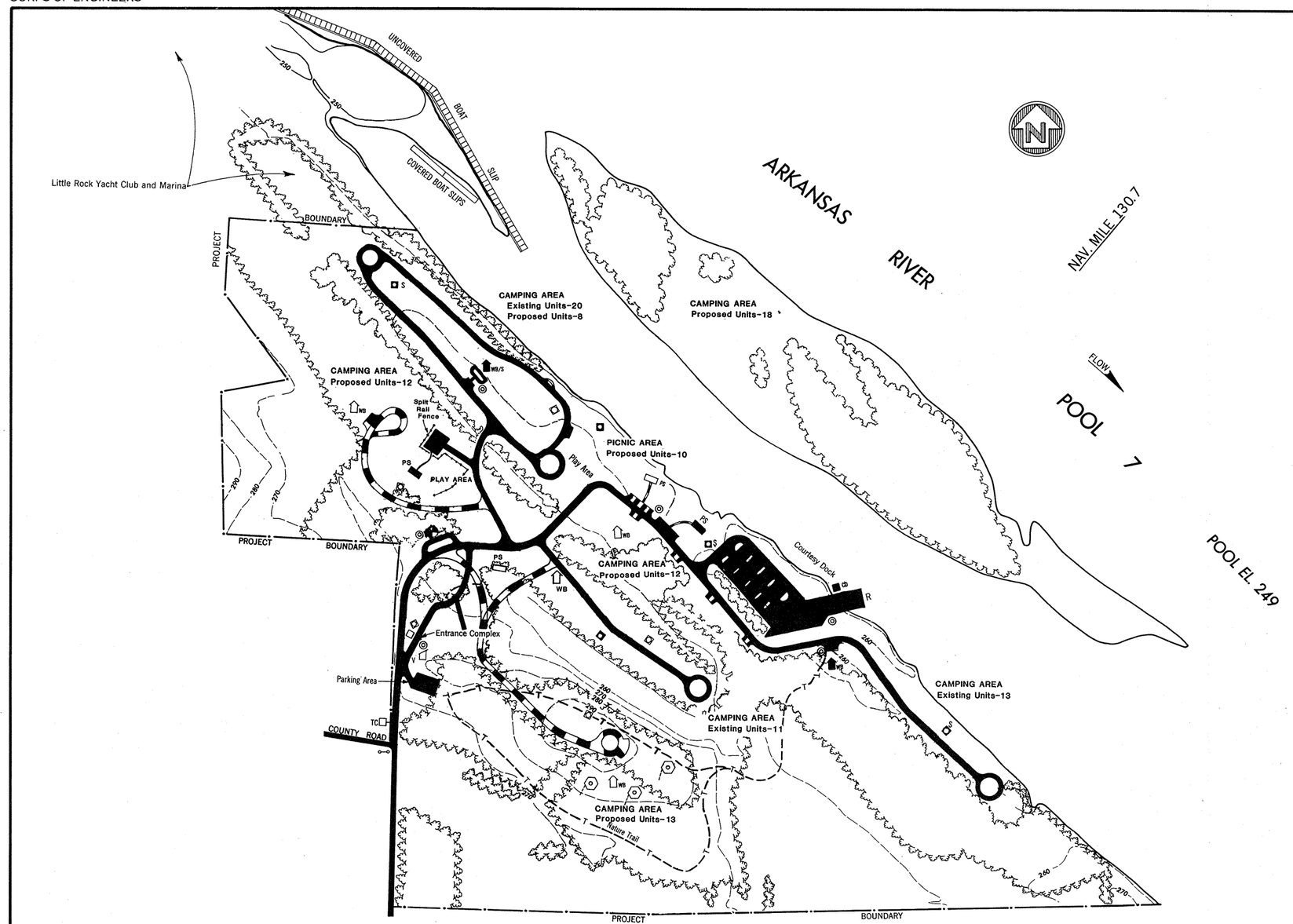
FOR THE COMMANDER:

for KEITH THONEN, P.E.
Chief, Construction-Operations Division

Encl (5 cys)

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE, MASONRY	V	V
TOILETS - VAULT TYPE, WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP	R	R
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS (NAMED)	Cafe	Cafe
PICNIC SPACE		
2 TABLES 1 CONCRETE PICNIC 1 UTILITY 1 FIREPLACE OR CHARCOAL UNIT 1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES 1 CONCRETE PICNIC 1 UTILITY 1 FIREPLACE OR CHARCOAL UNIT 1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERTINENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5, 6, 7, AND 8, T 2 N., R. 13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 5

CESWD-CO-RP (CESWL-CO-L/2 Aug 93) 1st End Mr. McCauley/jw/7-2434
SUBJECT: Supplement No. 12, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

CDR, U.S. Army Corps of Engineers, Southwestern Division,
1114 Commerce Street, Dallas, TX 75242

20 AUG 1993

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

The subject supplement is approved subject to the following comment:

As with any new construction, archaeological clearance should be accomplished prior to beginning the work.

FOR THE COMMANDER:

BARRY G. ROUGHT, P.E.
Director, Directorate of
Construction-Operations

Encl
wd

CF (w/basic & encl):
CECW-ON

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

REPLY TO
ATTENTION OF

CESWL-CO-L

2 August 1993

MEMORANDUM FOR Commander, Southwestern Division,
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 12, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray and Toad Suck Ferry and Rockefeller Lake and John Paul Hammerschmidt Lake

1. The purpose of this supplement is to indicate relocation of 32 campsites, roads, and utilities, as shown on the enclosed Plate 20, from an area downstream of James W. Trimble Lock and Dam to an area on John Paul Hammerschmidt Lake. Both areas are located within Springhill Park. In order to reduce O&M repair costs incurred each time the existing campsites are flooded, the sites will be located to a new location where flood damages will be virtually eliminated.

2. The existing sites have been flooded on three separate occasions since November 1992. The area is a lowland swamp which retains stagnate water year round. This condition results in a mosquito problem which keeps visitors from this camping area. All electrical facilities have been damaged beyond repair by the flood waters. Continued operation of the existing 32 campsites will necessitate major rehabilitation of each site, including a new electrical system. The flooding problem will continue with major O&M expense for the life of the sites with little fee revenue to compensate for the problems.

3. The new relocation site is 10 feet higher in elevation with the added benefit of being located adjacent to a pool with much less fluctuation in elevation than at the present site. With the reduced mosquito problem and the advantage of having lakeside campsites, fee revenues should increase significantly. The one-time cost of relocating the sites will be recovered by the reduced O&M costs and increased fee revenues. It is proposed to utilize Special Recreation Use Fee (SRUF) funds to accomplish the relocation.

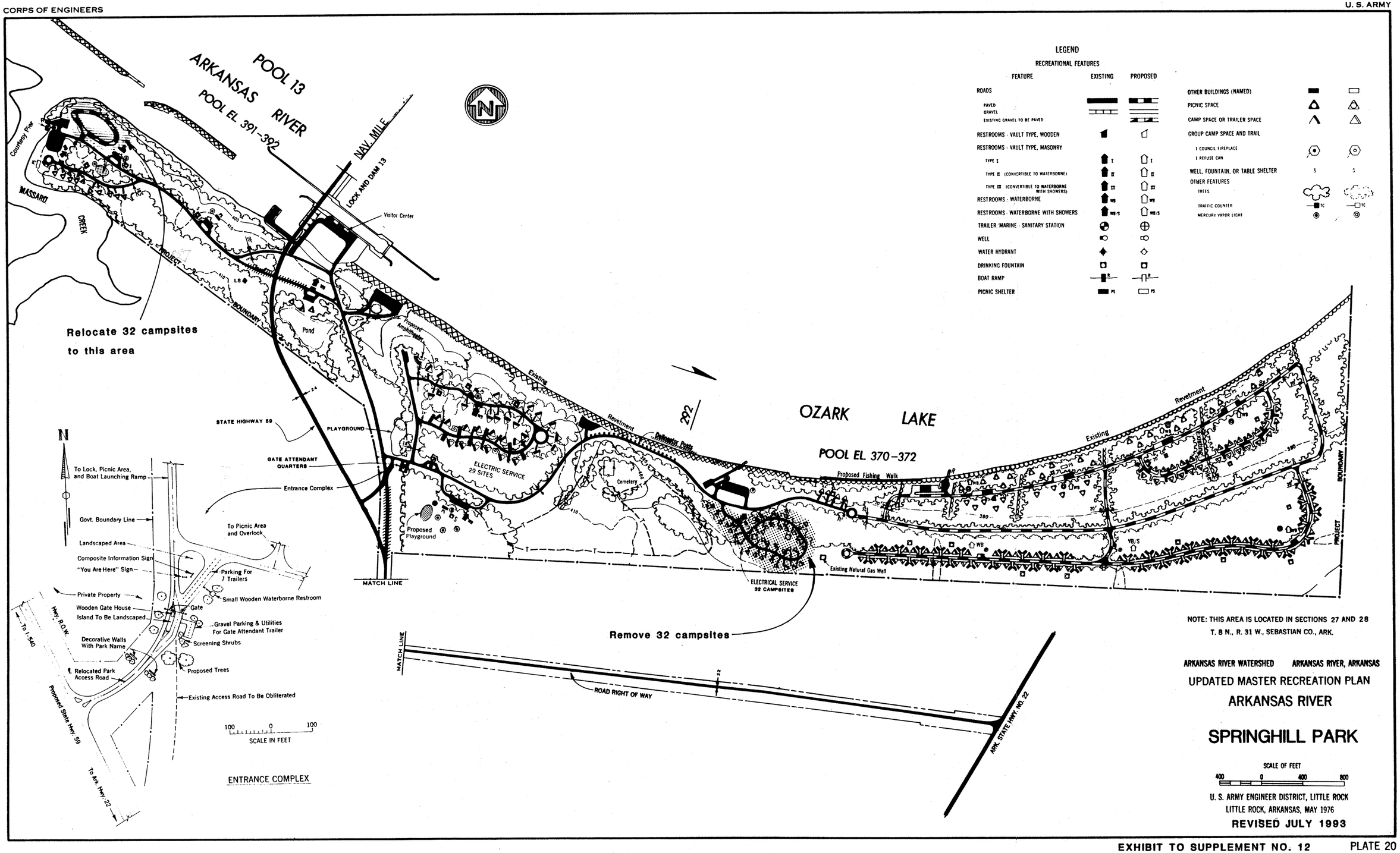
4. Approval of this supplement is recommended.

FOR THE COMMANDER:

Thomas P. Rusher

for KEITH THONEN, P.E.
Chief, Construction-Operations
Division

Encl (4cys)


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
PICNIC SHELTER
OTHER BUILDINGS (NAMED)
PICNIC SPACE
CAMP SPACE OR TRAILER SPACE
GROUP CAMP SPACE AND TRAIL
1 COUNCIL FIREPLACE
1 REFUSE CAN
WELL, FOUNTAIN, OR TABLE SHELTER
OTHER FEATURES
TREES
TRAFFIC COUNTER
MERCURY VAPOR LIGHT
POOL 13
ARKANSAS RIVER
POOL EL. 391-392
NAV. MILE
LOCK AND DAM 13
Courtesy Pier
MASSARD
CREEK
Visitor Center
PROJECT
BOUNDARY
Pond
Proposed Amphitheater
Relocate 32 campsites
to this area
STATE HIGHWAY 59
PLAYGROUND
GATE ATTENDANT QUARTERS
Entrance Complex
ELECTRIC SERVICE 29 SITES
Proposed Playground
Cemetery
Existing
Revetment
Delineator Posts
292
OZARK LAKE
POOL EL. 370-372
Proposed Fishing Walk
Existing Natural Gas Well
ELECTRICAL SERVICE 32 CAMPSITES
MATCH LINE
Remove 32 campsites
ROAD RIGHT OF WAY
ARK. STATE HWY. NO. 22
N
To Lock, Picnic Area, and Boat Launching Ramp
Govt. Boundary Line
Landscaped Area
Composite Information Sign
"You Are Here" Sign
Private Property
Wooden Gate House
Island To Be Landscaped
Decorative Walls With Park Name
Relocated Park Access Road
Proposed State Hwy. 59
To Ark. Hwy. 22
To I-540
Hwy. R.O.W.
To Picnic Area and Overlook
Parking For 7 Trailers
Small Wooden Waterborne Restroom
Gate
Gravel Parking & Utilities For Gate Attendant Trailer
Screening Shrubs
Proposed Trees
Existing Access Road To Be Obliterated
100 0 100
SCALE IN FEET
ENTRANCE COMPLEX
NOTE: THIS AREA IS LOCATED IN SECTIONS 27 AND 28
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.
ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS
UPDATED MASTER RECREATION PLAN
ARKANSAS RIVER
SPRINGHILL PARK
SCALE OF FEET
400 0 400 800
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976
REVISED JULY 1993

CESWD-CO-RP (CESWL-CO-L/25 Jun 93) 1st End Mr. McCauley/jw/7-2434
SUBJECT: Supplement No. 11, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

CDR, U.S. Army Corps of Engineers, Southwestern Division,
1114 Commerce Street, Dallas, TX 75242

FOR Commander, Little Rock District, ATTN: CESWL-CO-L 19 JUL 1993

Approved.

FOR THE COMMANDER:

Kenneth L Waldie

KENNETH L. WALDIE, P.E.
Chief, Recreation-Resources
and Regulatory Division
Directorate of Construction-
Operations

Encl
wd

CF (w/basic & encl):
CECW-ON

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

REPLY TO
ATTENTION OF

CESWL-CO-L

25 June 1993

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 11, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

1. The purpose of this supplement is to convert Lee Creek Park from a combination day use and camping park to a day use only park. The ten existing campsites are to be relocated to Springhill Park when funds become available, in accordance with a separate master plan supplement to be submitted at a later date. Also, it is proposed to close the shower portion of the waterborne restroom and remove the trailer dump station. Only day use facilities would remain in the park.

2. An economic analysis indicates that the campsites can be more effectively used in another park since camping fee collections in Lee Creek Park totaled only $683 in FY 92. Costs incurred by the Government for roving ranger fee collection, administration, and camping facility operation and maintenance greatly exceed the revenues collected. Lee Creek Park also is susceptible to flood waters and recurring flood damage. Access to the park is completely cut off during high river flows. The safety problem of evacuating campers and equipment, due to rising flood waters, would be eliminated with day use only operation.

3. Over the past several years, Lee Creek Park has consistently received excessive facility vandalism during late night hours. To help eliminate this problem, the Van Buren Police Department has verbally agreed to close the park each night at 10:00 p.m. and lock the gate. The Police Department would reopen the park at 6:00 a.m. each day. Due to the park design, the launching ramp would be unavailable for use at night. This should not be a major problem because another ramp is located across the Arkansas River in Fort Smith Park, approximately four road miles away.

4. Subject to approval of this supplement, a Memorandum of Understanding will be established with the Van Buren Police Department for daily opening and closing of the park. Also, prior to implementation of the new park operating procedures, the public will be notified by news releases.

5. Approval of this supplement is recommended.

FOR THE COMMANDER:

Keith Thonen

Encl (4cys)

KEITH THONEN, P.E.
Chief, Constrution-Operations Division

CESWD-CO-RP (CESWL-CO-L/7 Aug 91) 1st End Mr. McCauley/iv/FTS 729-2434
SUBJECT: Supplement No. 10, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, Texas 75242-0216 30 AUG 1991

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

Approved.

FOR THE COMMANDER:

BARRY G. ROUGHT, P.E.
Director, Directorate of
Construction-Operations

Encl
wd

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

REPLY TO
ATTENTION OF

CESWL-CO-L (1130) 7 August 1991

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RP

SUBJECT: Supplement No. 10, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

1. The purpose of this supplement is to revise the plan of development for Maumelle Park as shown on the enclosed Plate 5. Additional development consisting of a camping loop road and 28 campsites is proposed for the downstream portion of the park. This area of the park was formerly used as a borrow area and was covered with a dense growth of brush and vines. In order to reduce the number of insects encountered by the campers, the underbrush was cleared and the area filled with dredged material. The area now offers an excellent location for riverside campsites which are in high demand in this park. Since the area is now open and level and offers good air circulation, it provides an excellent location for additional campsites.

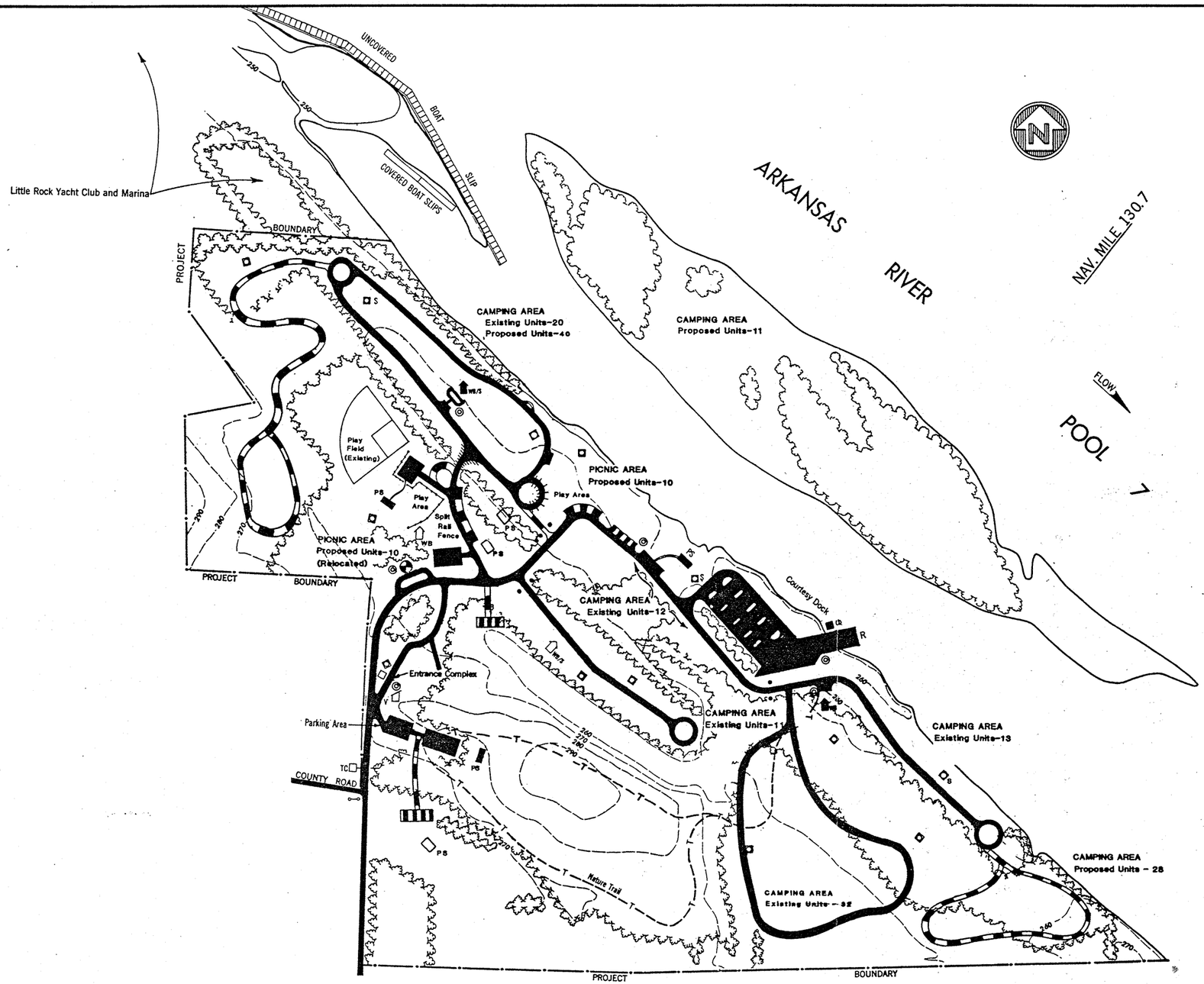
2. Maumelle Park currently has 88 campsites, but because of its location near a metropolitan area, the park is filled to capacity on most summer weekend days. In Fiscal Year 1990 the park experienced 354,000 recreation days of use with fee collections totaling over $84,000.

3. Fiscal Year 1992 Special Recreation Use Fee (SRUF) funds have been approved for construction of campsites at the upstream end of the park. However, subject to approval of this supplement, the funds will be rescheduled to construct the downstream camping area instead of the upstream area. Approval of this supplement is recommended.

FOR THE COMMANDER:

Encl (4 cys)

for KEITH THONEN
Chief, Construction-Operations
Division



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE, MASONRY	V	V
TOILETS - VAULT TYPE, WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP	R	R
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS (NAMED)	Cafe	Cafe
PICNIC SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERTINENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5,6,7, AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE
PARK

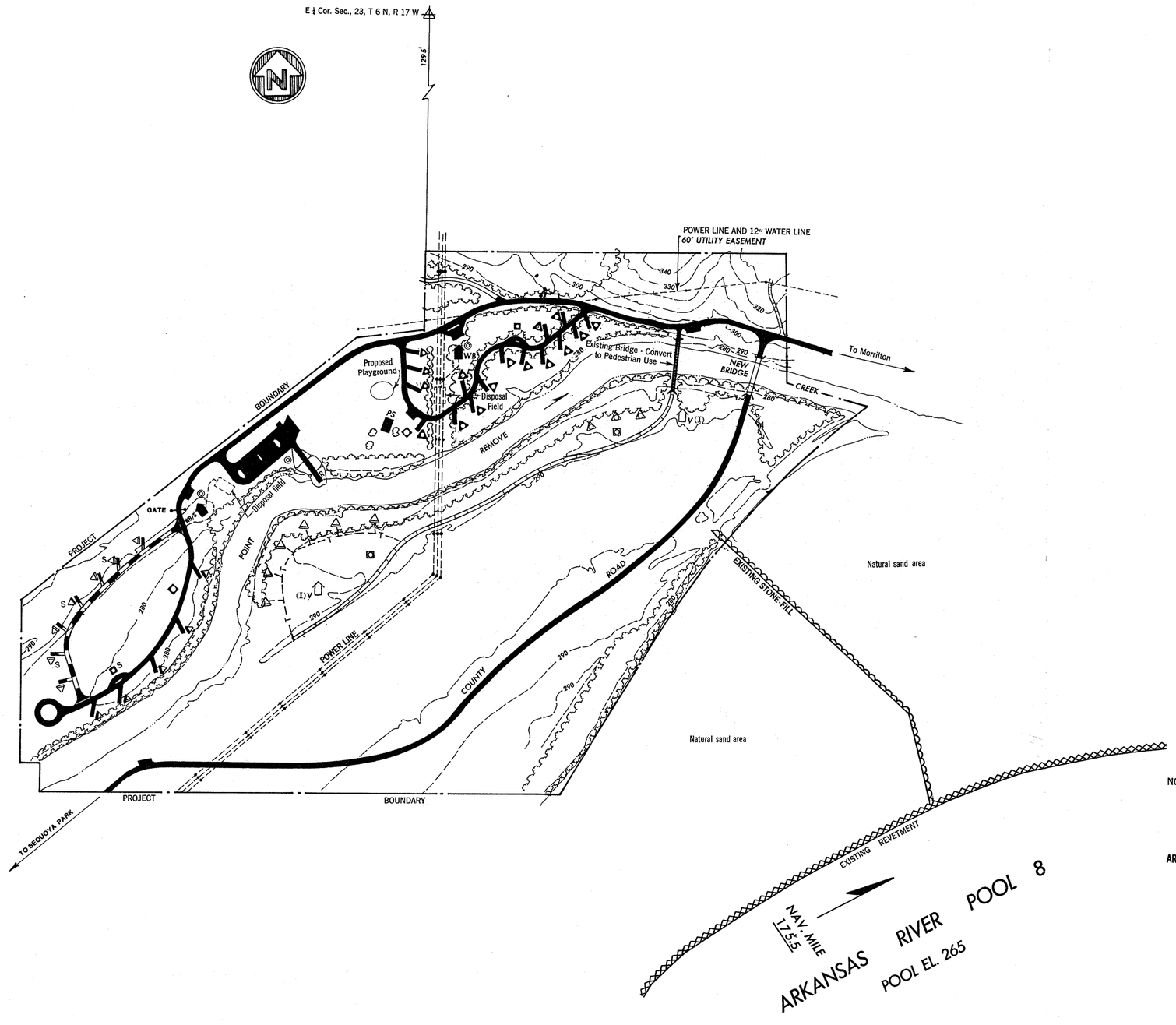
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1991

EXHIBIT TO SUPPLEMENT NO. 10 PLATE 5



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 23, 24, 25, AND 26, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8

POINT REMOVE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

CESWD-CO-RP (CESWL-CO-L/10 May 91) 1st End Mr. McCauley/vm
FTS 729-2434
SUBJECT: Supplement No. 9, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 24 MAY 1991

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

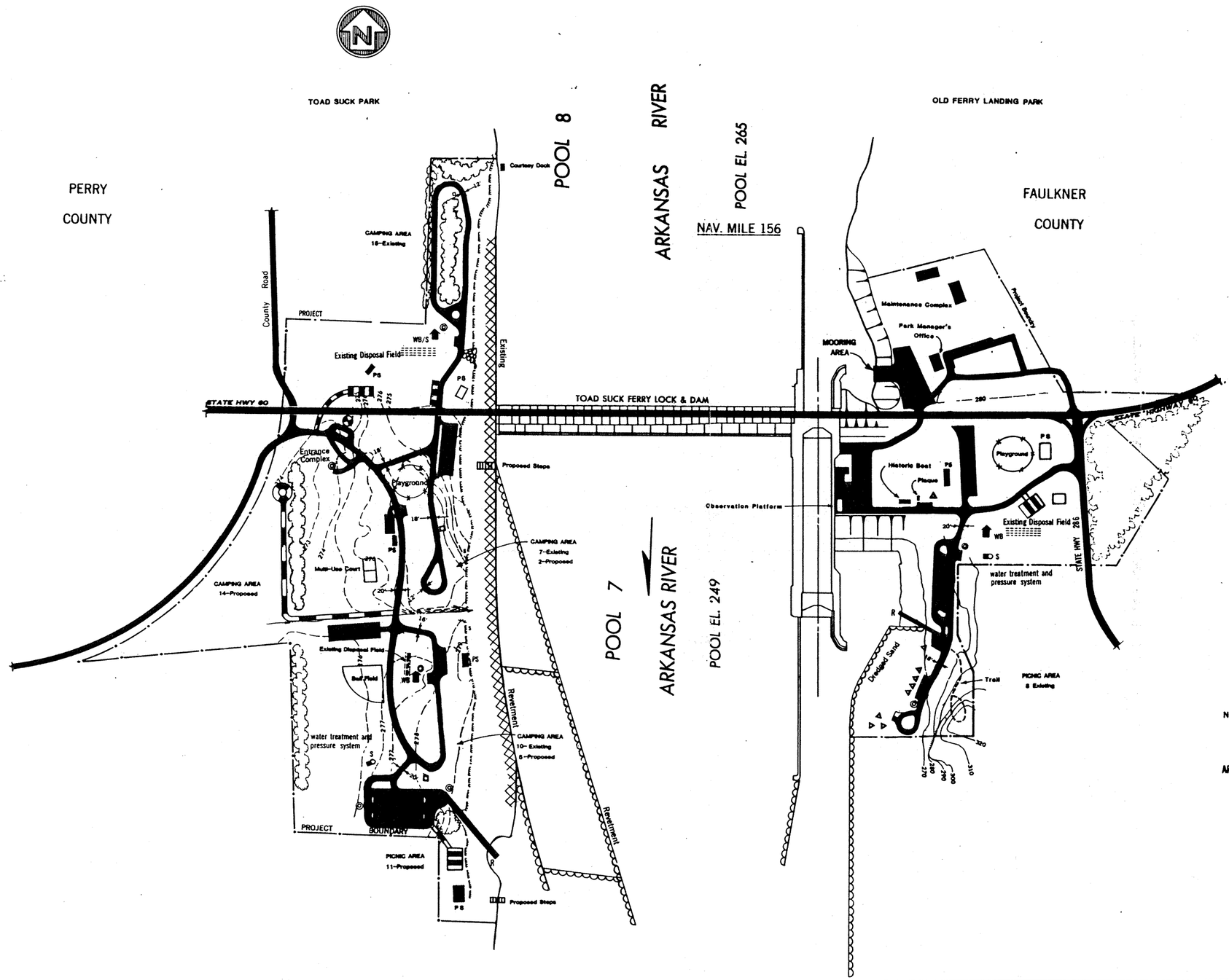
Approved.

FOR THE COMMANDER:

BARRY G. ROUGHT, P.E.
Director, Directorate of
Construction-Operations

3 Encls
wd

CF (w/basic & encls):
CECW-ON
CESWD-RE-M
CESWD-PL-R



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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER TOAD SUCK PARK AND OLD FERRY LANDING PARK

SCALE OF FEET

200 0 200 400

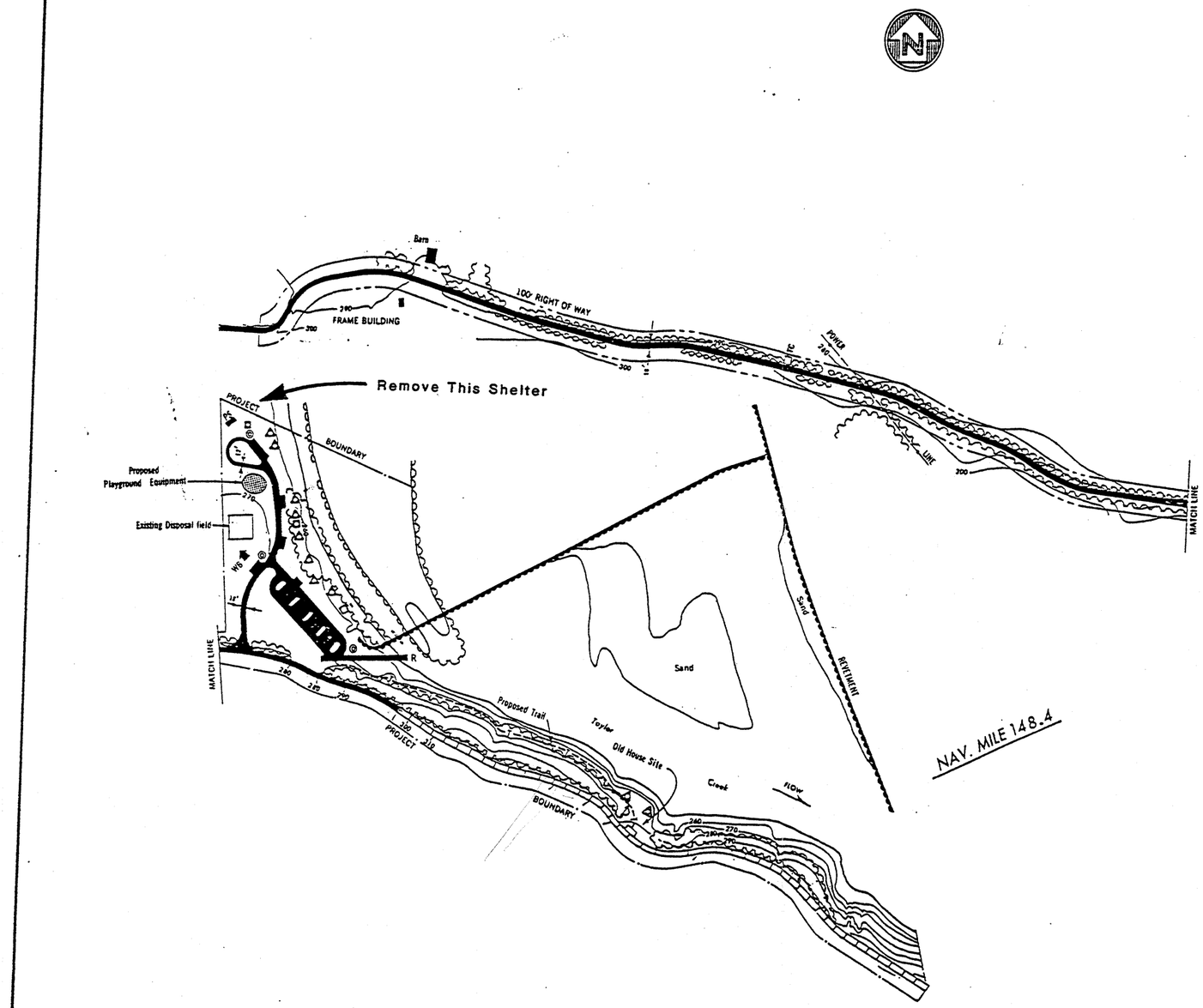
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

REVISED MAY 1995

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIRE PLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

BIGELOW PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

REVISED MAY 1991

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

REPLY TO
ATTENTION OF

CESWL-CO-L (1130)

10 May 1991

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RR

SUBJECT: Supplement No. 9, Updated Master Plan Design Memorandum 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

1. This supplement is submitted to indicate the proposed relocation of group picnic facilities at Palarm Park, Toad Suck Ferry Lock and Dam (No. 8), and Bigelow Park, Murray Lock and Dam (No. 7), to new sites at Toad Suck and Old Ferry Landing Parks at Toad Suck Ferry Lock and Dam. The two group picnic shelters are currently located in parks that are somewhat isolated and mainly provide boating access to the Arkansas River. As such, they are seldom employed for day use activities and generate little revenue.

2. Conversely, there is a growing need at Old Ferry Landing and Toad Suck Parks to serve a nearby urban population actively utilizing existing facilities. The present and proposed location of the facilities to be moved are shown on the enclosed park master plans.

3. Approval is recommended.

3 Encls

CHARLES E. McCLOSKEY III
Colonel, Corps of Engineers
District Engineer

CESWD-CO-RP (CESWL-CO-L/15 Mar 91) 1st End Mr. McCauley/vm
FTS 729-2434
SUBJECT: Supplement No. 8, Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 3 APR 1991

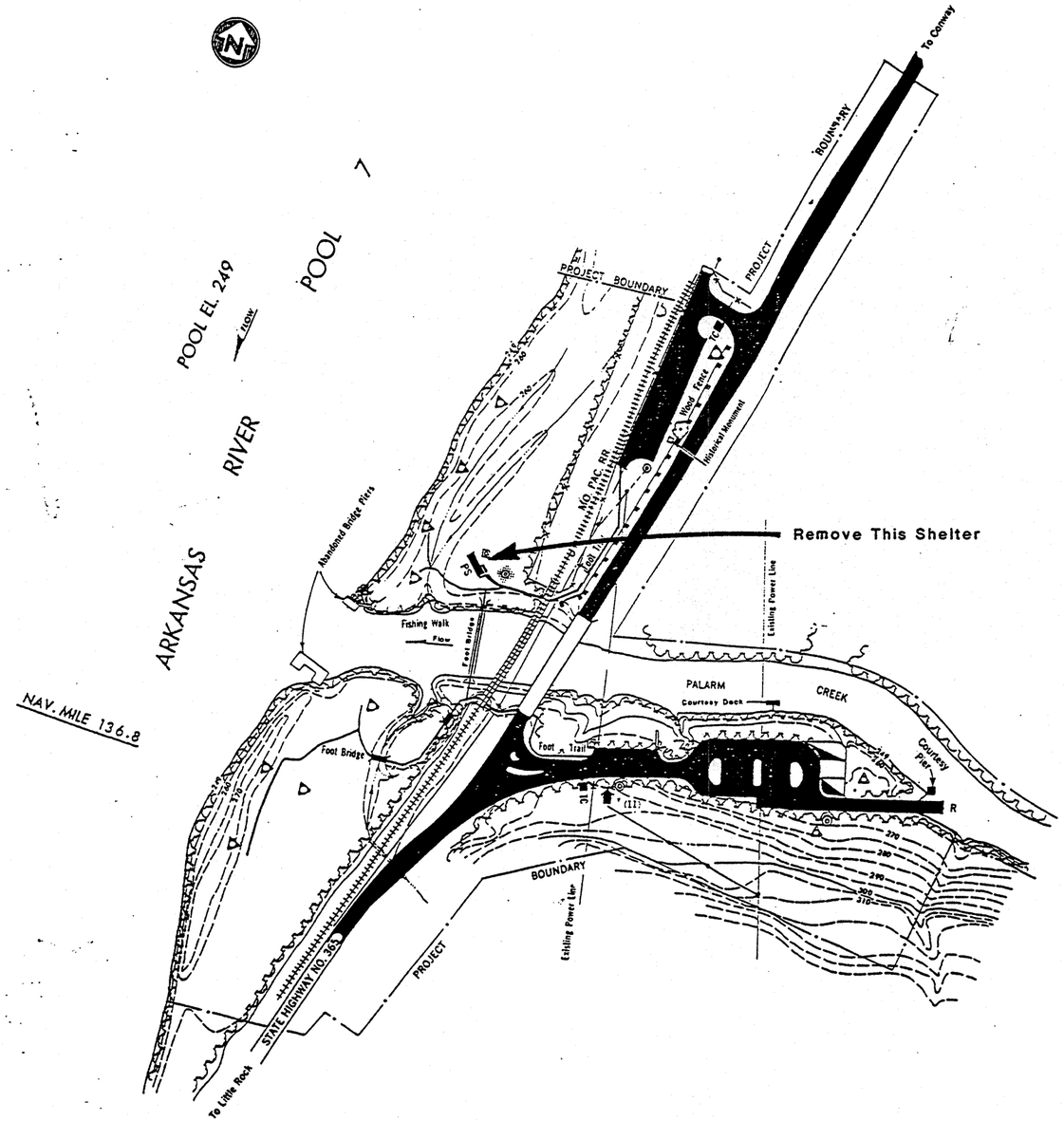
FOR Commander, Little Rock District, ATTN: CESWL-CO-L

Approved.

FOR THE COMMANDER:

2 Encl
wd

BARRY G. ROUGHT, P.E.
Director, Directorate of
Construction-Operations



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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COMMON FIREPLACE 1 REFUSE CAN		
WELL FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 12 AND 13, T. 3 N., R. 14 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

PALARM

PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976
REVISED MAY 1991

EXHIBIT TO SUPPLEMENT NO. 9 PLATE 8

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

REPLY TO
ATTENTION OF

CESWL-CO-L (1130)

15 MAR 1991

MEMORANDUM FOR Commander, Southwestern Division
Attn: CESWD-CO-RR

SUBJECT: Supplement No. 8, Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

1. The purpose of this supplement is to revise the proposed development plans for Maumelle, Toad Suck, and Old Ferry Landing Parks. Additional recreational facilities are planned for construction during the next 5 years as SRUF funds become available.

2. Maumelle Park will be expanded to meet increasing public demands. We propose two additional group shelters with parking facilities, one waterborne restroom with showers, and 40 additional campsites. These facilities will generate significant increases in revenues from camping fees and shelter reservations.

3. An additional group picnic shelter is planned in each of Toad Suck and Old Ferry Landing Parks. Existing group shelters are heavily used. The proposed shelters will increase fee revenues and improve maintenance cost efficiency of both parks.

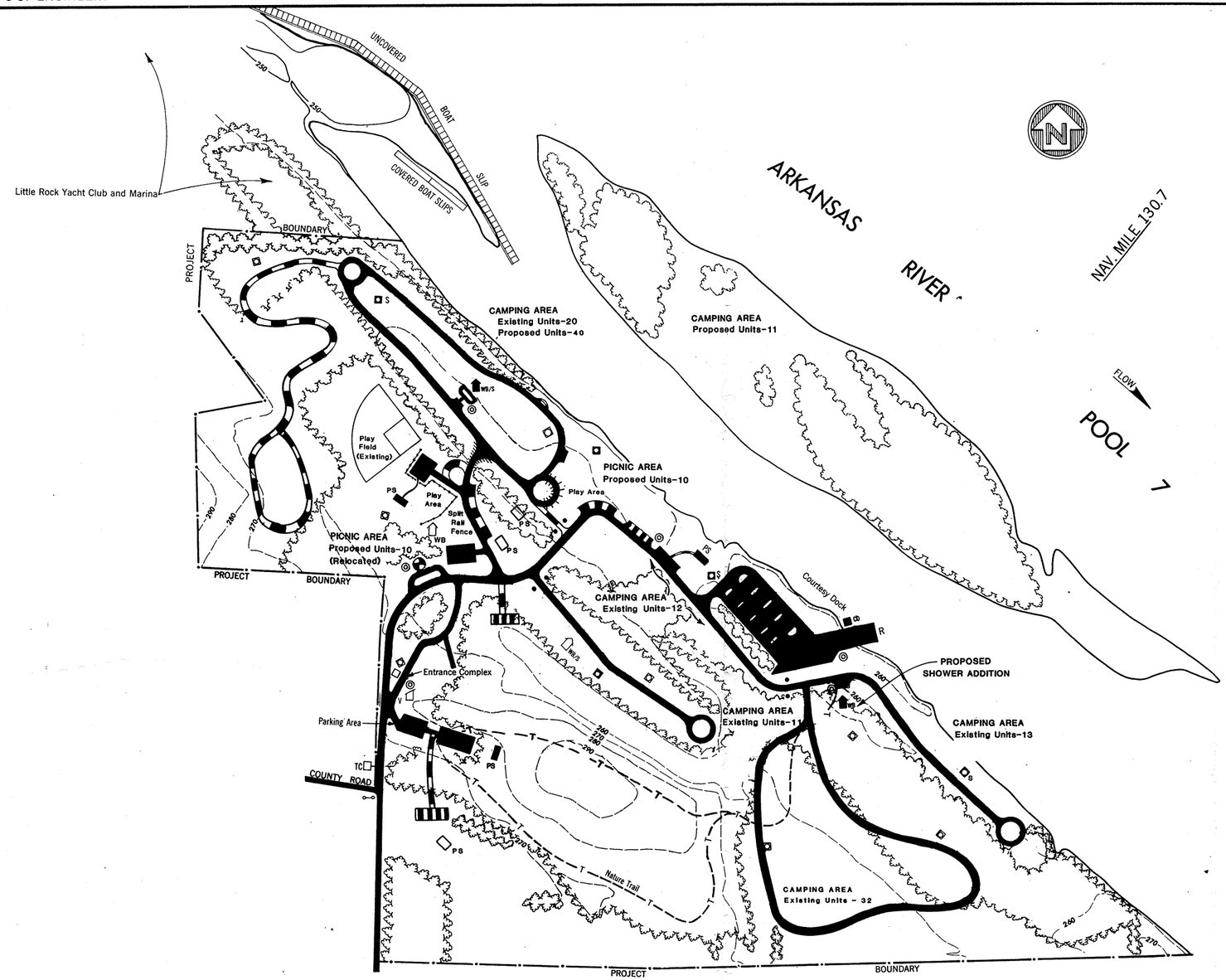
4. All of the above proposed facilities will be justified through the SRUF program prior to construction. Approval of this supplement is recommended.

2 Encls (4 cys)

CHARLES C. McCLOSKEY III
Colonel, Corps of Engineers
Commanding

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE, MASONRY	V	V
TOILETS - VAULT TYPE, WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP	R	R
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS (NAMED)	Cafe	Cafe
PICNIC SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERTINENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5,6,7, AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE
PARK

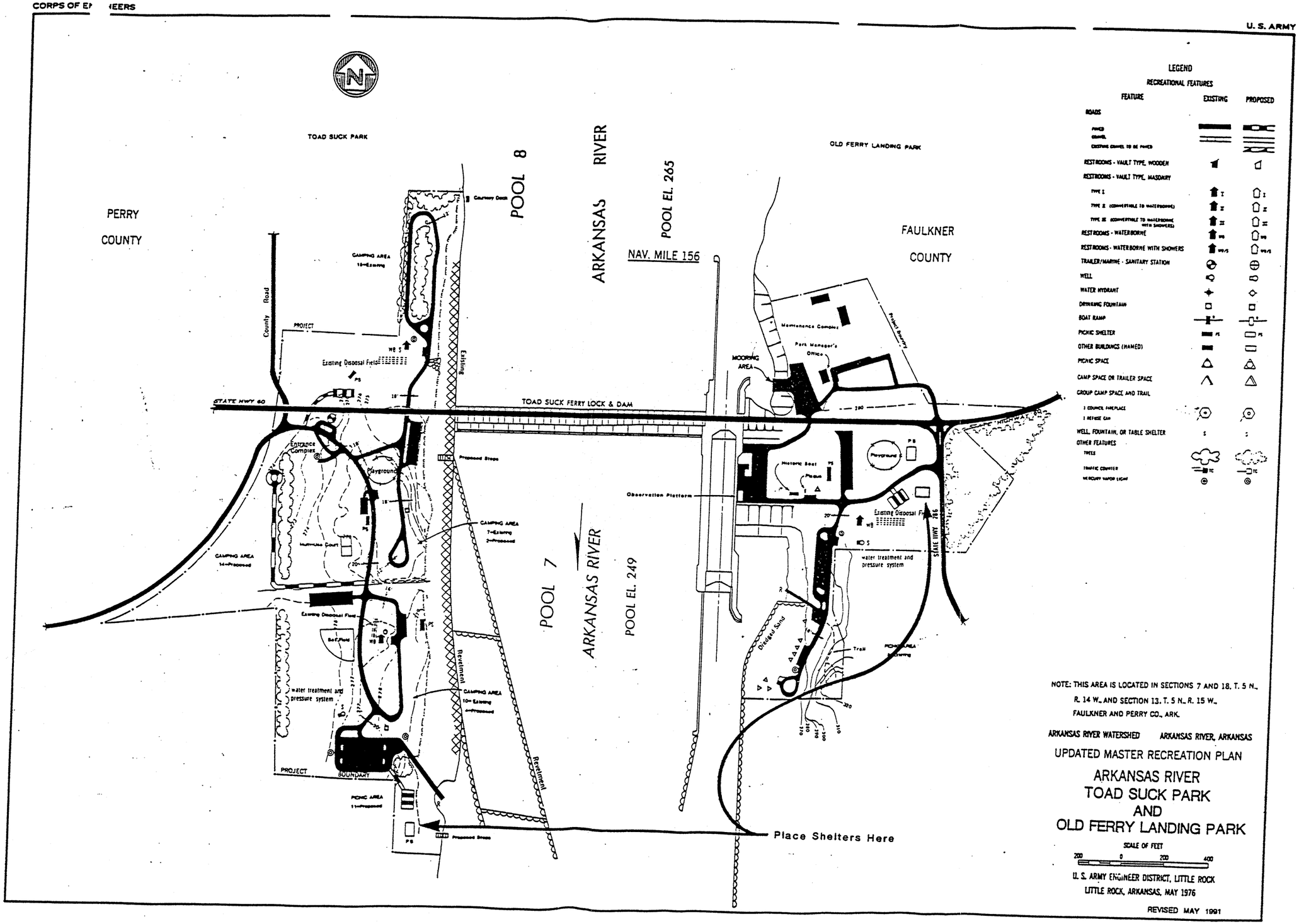
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1991

EXHIBIT TO SUPPLEMENT NO.8 PLATE 5



NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

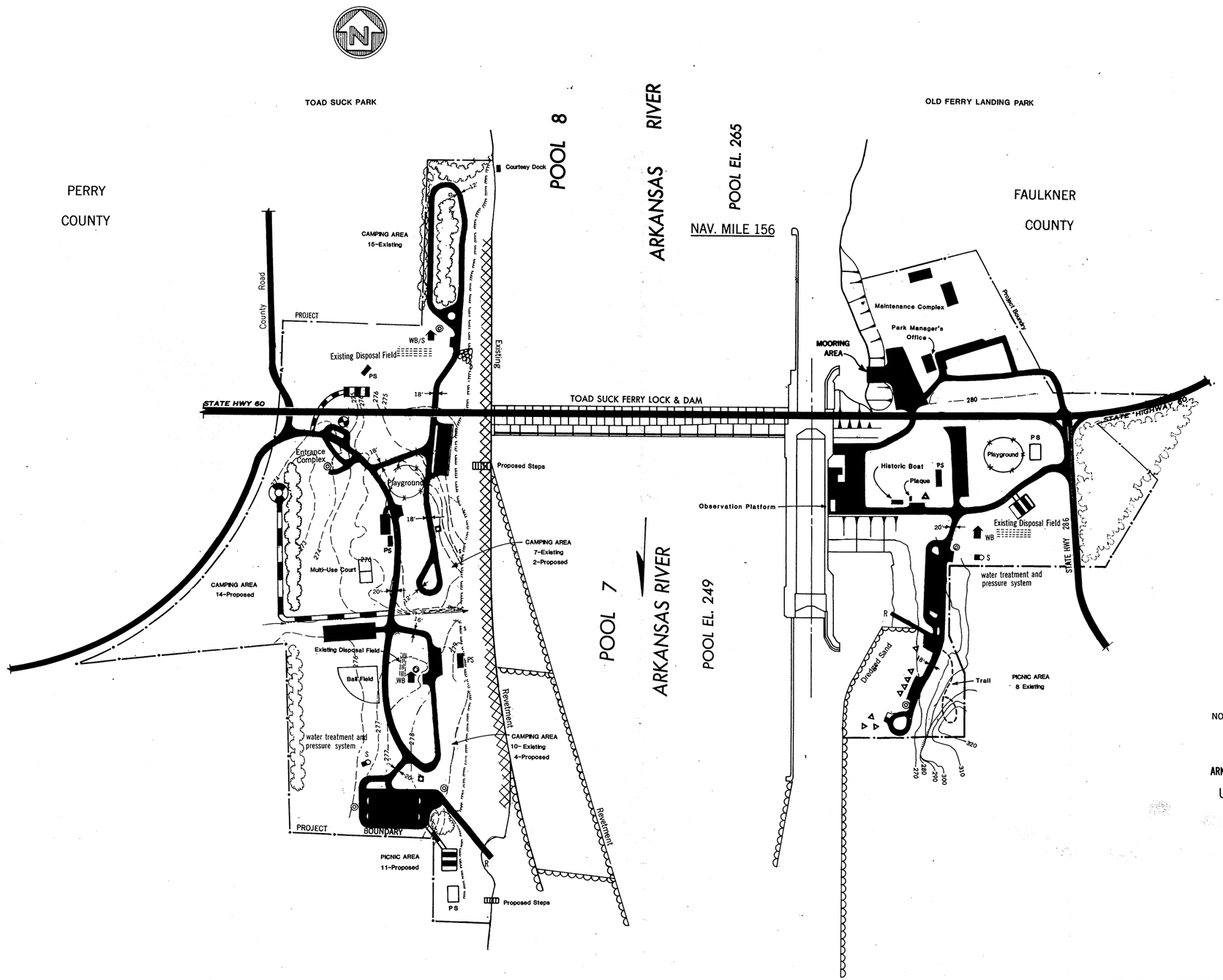
ARKANSAS RIVER
TOAD SUCK PARK
AND
OLD FERRY LANDING PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED MAY 1991



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
TOAD SUCK PARK AND OLD FERRY LANDING PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1991

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

REPLY TO
ATTENTION OF

CESWL-CO-L (1130)

14 August 1990

MEMORANDUM FOR Commander, Southwestern Division
ATTN: CESWD-CO-RR

SUBJECT: Supplement No. 7, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

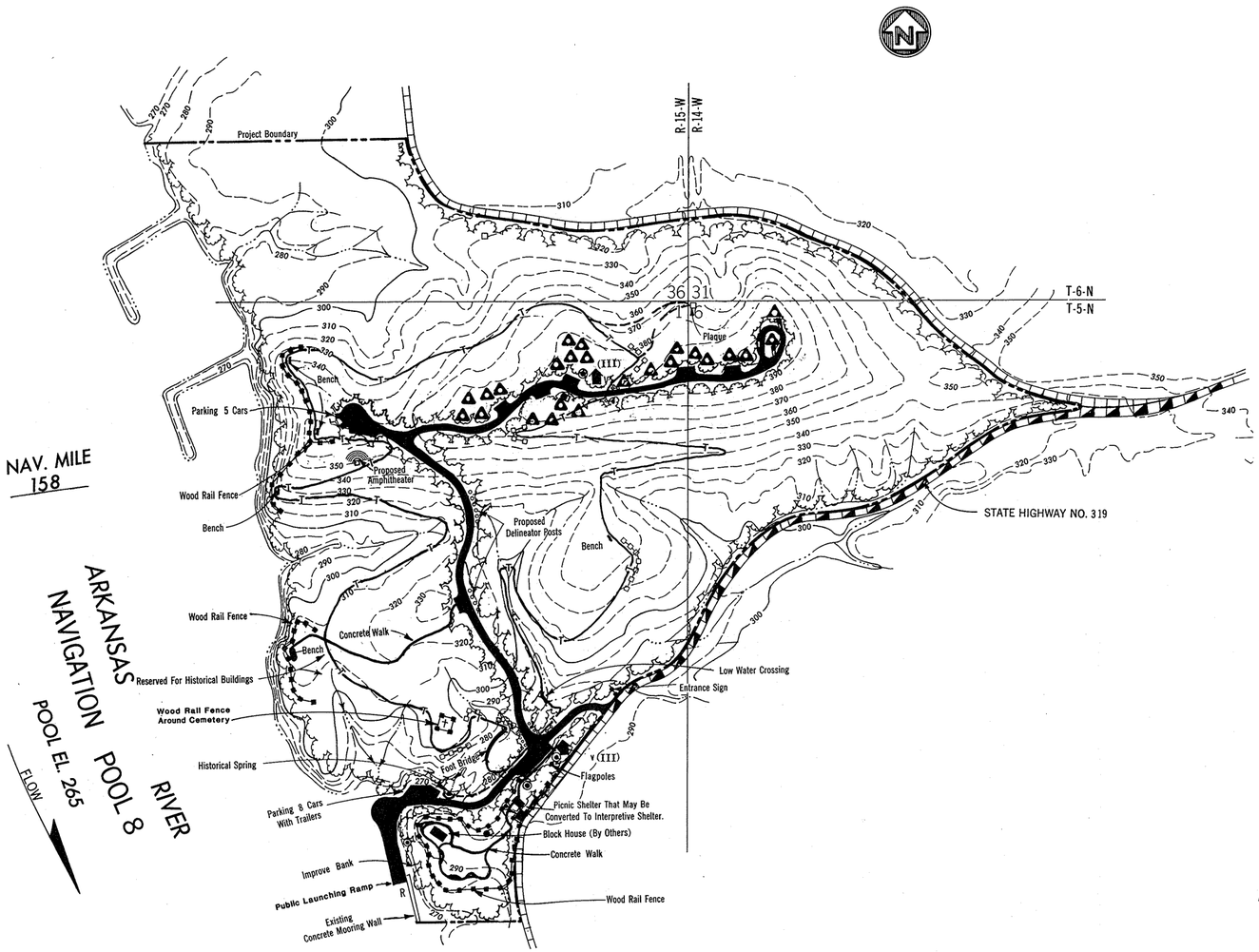
1. The purpose of this supplement is to indicate the proposed relocation of two group picnic shelters from Cherokee Park at Arthur V. Ormond Lock and Dam (L&D 9). Cherokee Park will be relocated for construction of a hydropower project by the Arkansas Electric Cooperative Corporation. All recreational facilities will be replaced by the licensee, but the two group picnic shelters remain the property of the Government. Replacement group picnic shelters in Cherokee Park provided by the licensee will be of a prefabricated type.

2. It is proposed to relocate the two group picnic shelters to Cadron Settlement Park and Maumelle Park. The location of one of the surplus group picnic shelters in Cadron Settlement Park is shown on the enclosed Plate 10. The other group picnic shelter will be relocated to Maumelle Park to a site already designated in the master plan for a proposed shelter.

3. Approval of this supplement is recommended.

Encl (4 cys)

CHARLES C. McCLOSKEY III
Colonel, Corps of Engineers
Commanding



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
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

ARKANSAS RIVER POOL 8
CADRON SETTLEMENT PARK

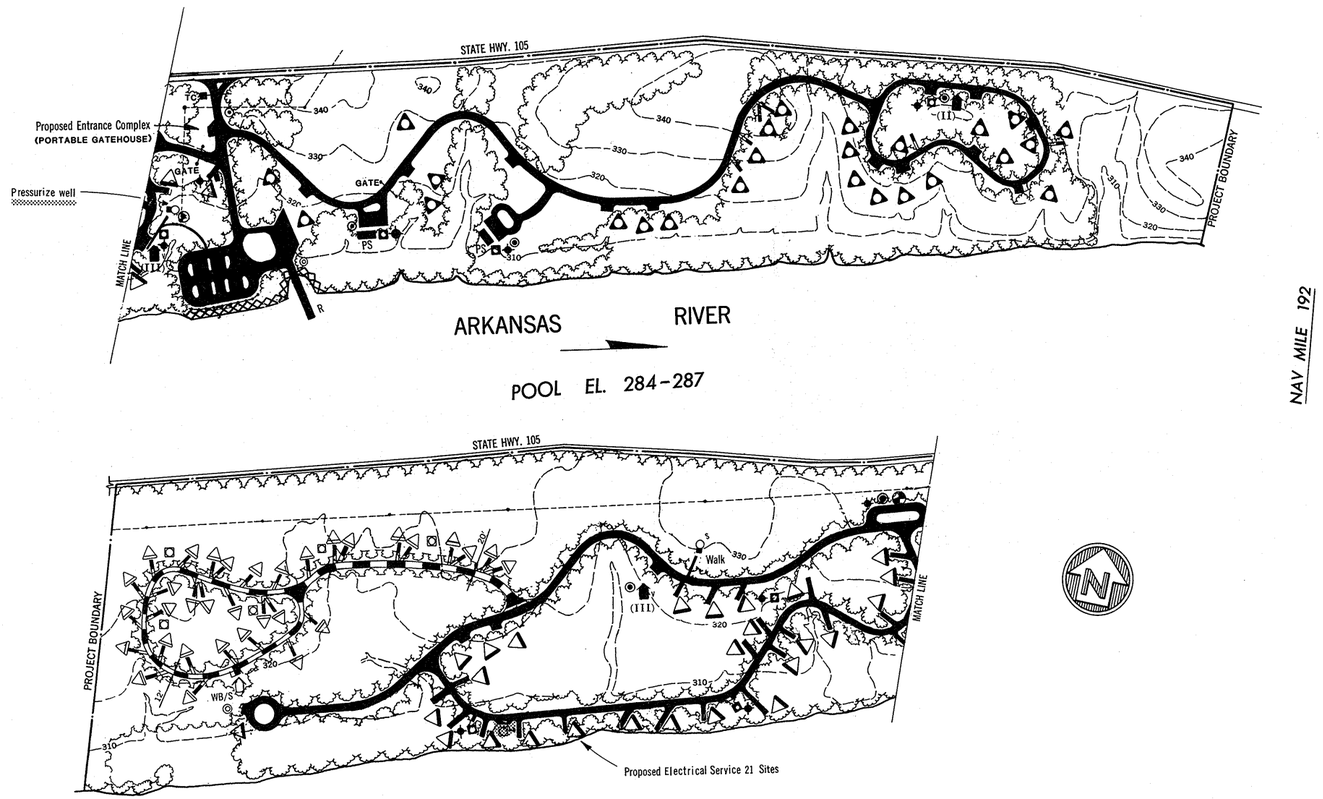
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 10



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 15 AND 16, T. 6 N., R. 19 W., POPE CO.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9
SWEEDEN ISLAND
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

CESWD-CO-RP (CESWL-CO-L/14 Aug 90) 1st End Mr. McCauley/plvd/7-2434
SUBJECT: Supplement No. 7, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 30 AUG 1990

FOR Commander, Little Rock District, ATTN: CESWL-CO-L

Approved.

FOR THE COMMANDER:

BARRY G. ROUGHT, P.E.
Director, Directorate of
Constructions-Operations

Encl
wd

CESWD-CO-RP (CESWL-CO-L/24 Aug 87) (1130) 1st End Mr. McCauley/da/72434
SUBJECT: Supplement No. 6, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

Cdr, Southwestern Division, Corps of Engineers, 1114 Commerce St., Dallas, TX 75242-0216 15 SEP 1987

FOR: Commander, Little Rock District, ATTN: CESWL-CO-L

Approved.

FOR THE COMMANDER:

A. P. HUTCHISON
Chief, Construction-
Operations Division

Encl wd

CF (w/basic & encl):
CECW-ON (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

24 AUG 1987

CESWL-CO-L

MEMORANDUM FOR: COMMANDER, SOUTHWESTERN DIVISION, ATTN: SWDCO-R

SUBJECT: Supplement No. 6, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

1. The purpose of this supplement is to revise the plan of development for Maumelle Park as shown on the enclosed Plate 5. These revisions are proposed for the purposes of separating day use and camping activities, to improve park management, and to provide additional consolidation of project facilities. The proposed work consists of relocating 24 campsites and 10 picnic sites to Maumelle from 4 underutilized parks, Palarm, Bigelow, Sequoya, and Point Remove. Also, a fourth group picnic shelter is proposed in response to increasing public usage of the three existing shelters. Minor road revisions are proposed to accommodate the relocated facilities and to separate day use and camping activities. The additional picnic sites are needed to meet public demand and prevent picnickers from occupying campsites. All improvements/revisions proposed are intended to reduce overall project O&M costs, increase fee collection potential, and improve public service.

2. Maumelle currently has 56 campsites, 2 waterborne restrooms (1 with showers), 3 group picnic shelters, and a boat launching ramp. The proposed 24 relocated campsites will be constructed along a proposed paved one-way road in the southeast area of the park. An existing waterborne restroom will serve these sites. Since there will be 49 campsites in this vicinity, showers will be added to this restroom. Other changes in road alignments and future camping loops are proposed for long-range development. These changes provide improved traffic flow and separation of camping from day use areas.

3. The proposed fourth group picnic shelter will be located within an existing picnic area. Minor road revisions are planned, along with additional parking, to facilitate traffic control. Ten relocated individual picnic sites will be placed in this vicinity, and 10 previously approved picnic sites will be placed along the shoreline as shown. One waterborne restroom will be centrally located in the park to accommodate day use visitors.

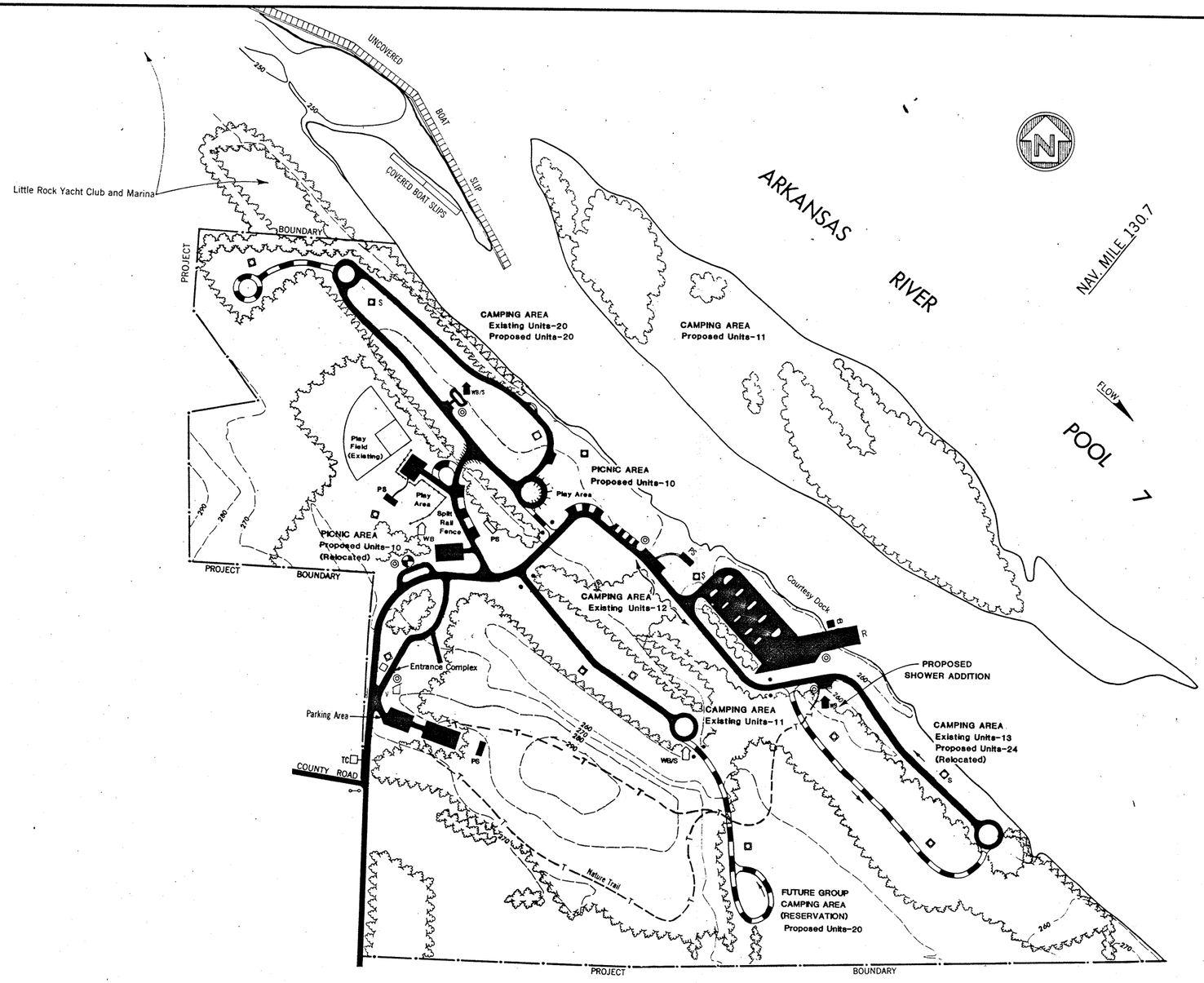
4. Approval of this supplement is recommended. Funds will be requested in future SRUF programs to accomplish the proposed work. Justification will be presented at that time.

Encl (9 cys)

LTC CE
ANTHONY T. NIDA
Colonel, Corps of Engineers
Commanding

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE MASONRY	V	V
TOILETS - VAULT TYPE WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP	R	R
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS - NAMED	Cafe	Cafe
PICNIC SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERMANENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5, 6, 7, AND 8, T 2 N., R. 13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE
PARK

SCALE OF FEET

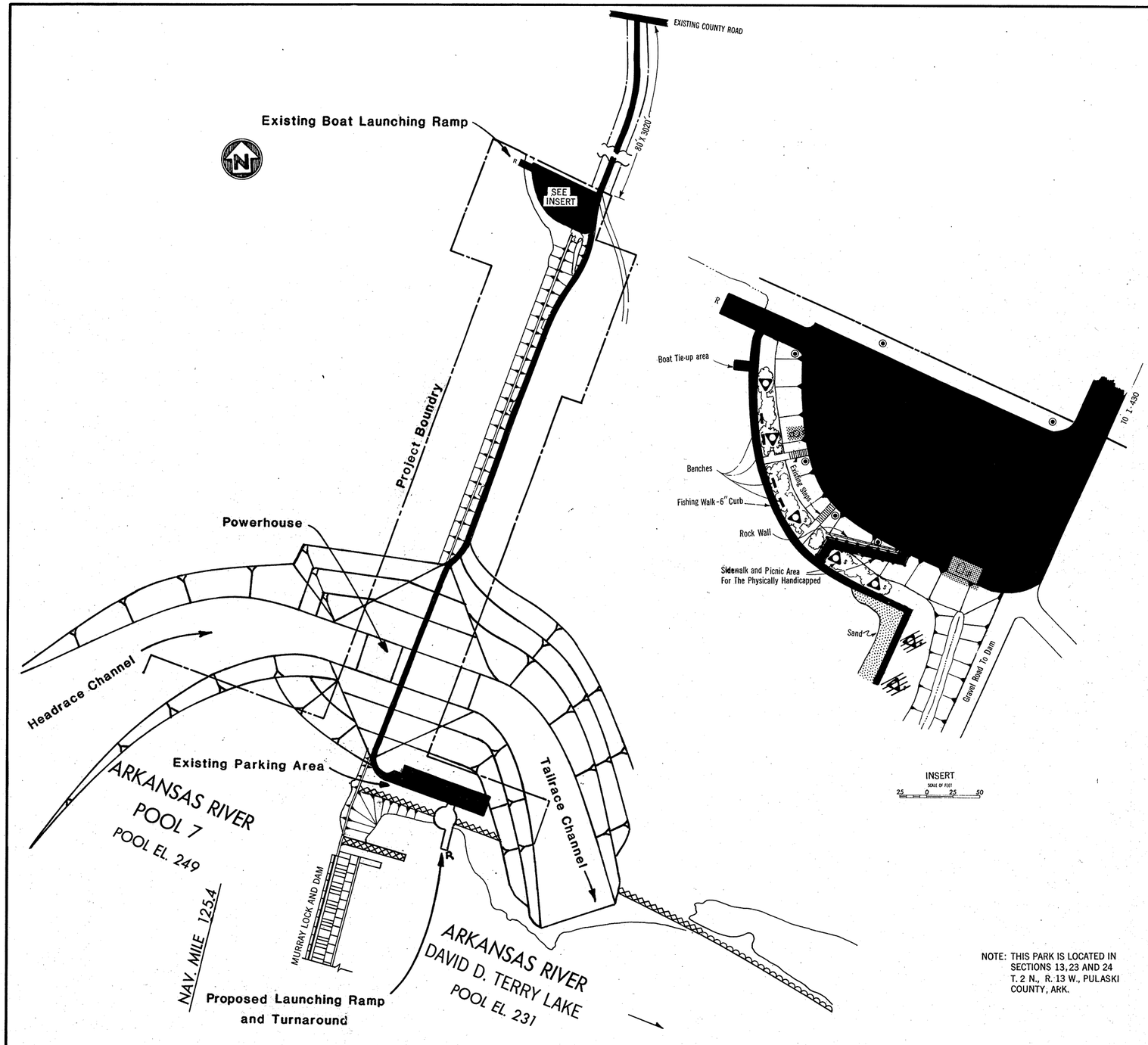
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1987

CORPS OF ENGINEERS

U. S. ARMY



NOTE: THIS PARK IS LOCATED IN SECTIONS 13, 23 AND 24 T. 2 N., R. 13 W., PULASKI COUNTY, 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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED — ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

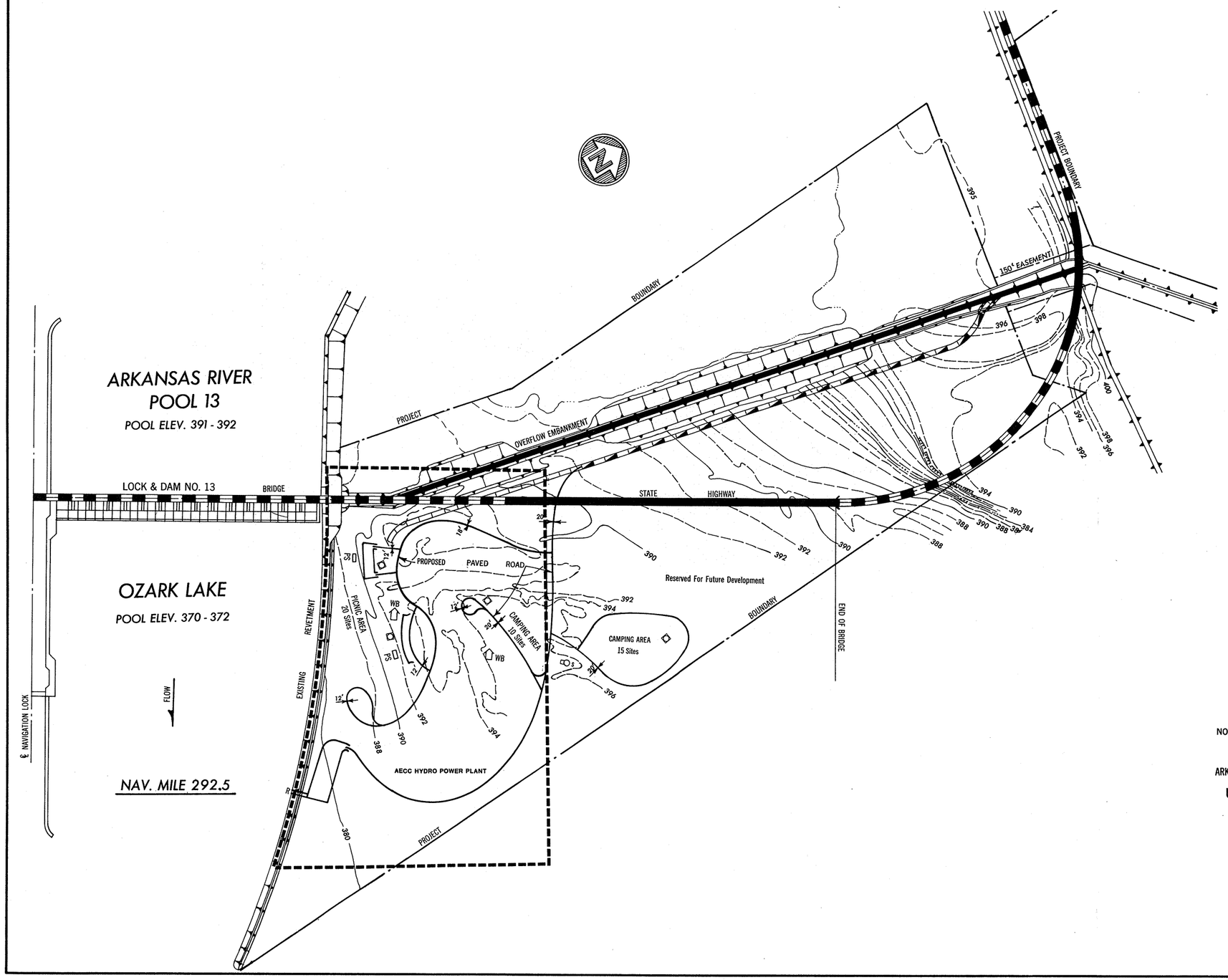
COOKS LANDING PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED SEPTEMBER 1985



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 22
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

HAROLDTON FISHING ACCESS

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

Dist. 9-26-86

SWDCO-RP (SWLCO-L/2 Sept 86) 1st End
SUBJECT: Supplement No. 5, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

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:

Encls wd

A. P. HUTCHISON
Chief, Construction-
Operations Division

CF (w/basic & 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

2 September 1986

SUBJECT: Supplement No. 5, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

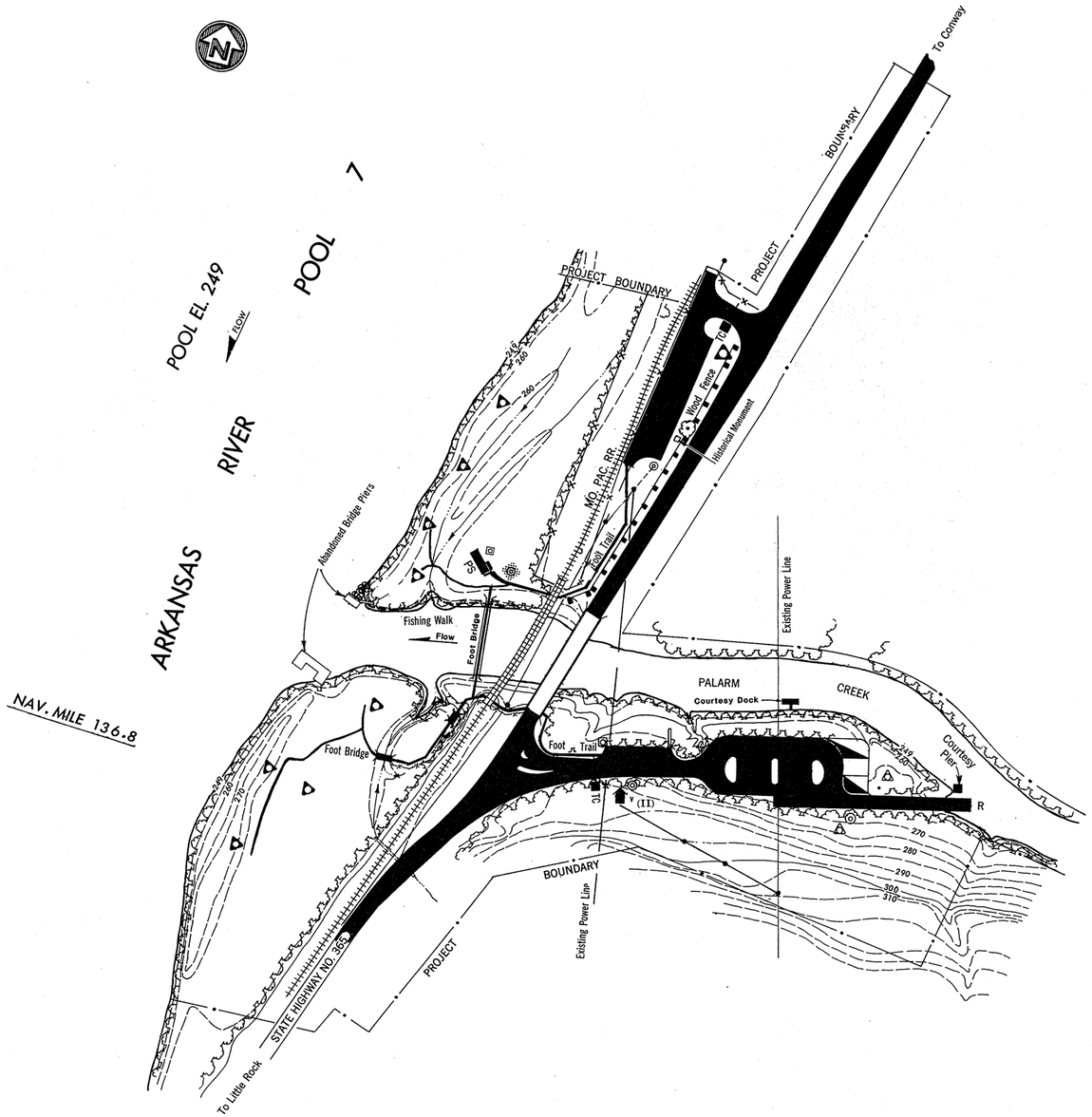
Commander, Southwestern Division
ATTN: SWDCO-R

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 May 1976 when the master plan was completely updated.

2. Approval of this supplement is recommended.

14 Encls (9 cys)

ROBERT W. WHITEHEAD
Colonel, Corps of Engineers
Commanding



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 12 AND 13, T. 3 N., R. 14 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED — ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

PALARM

PARK

SCALE OF FEET

100 0 100 200

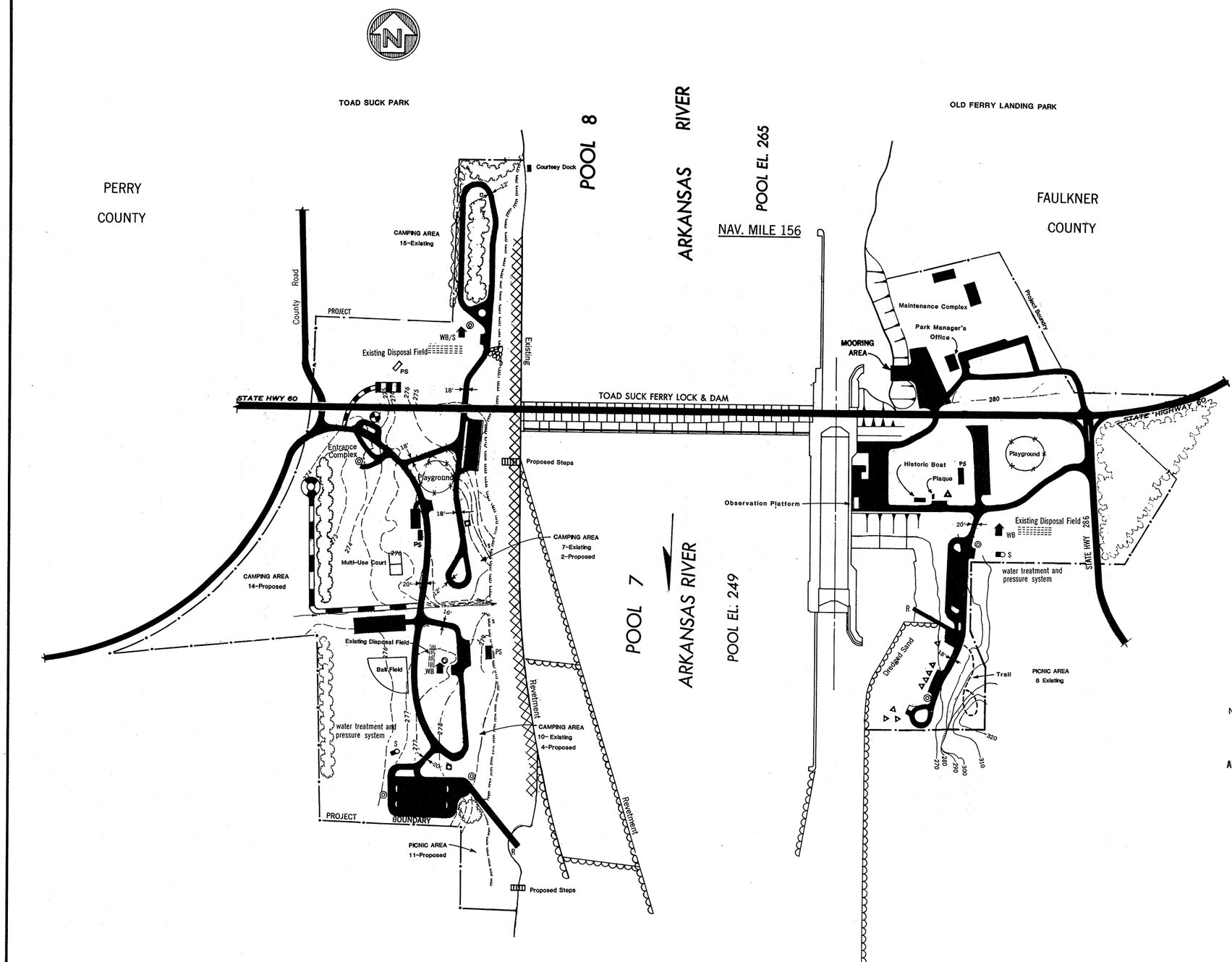
U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
TOAD SUCK PARK
AND
OLD FERRY LANDING PARK

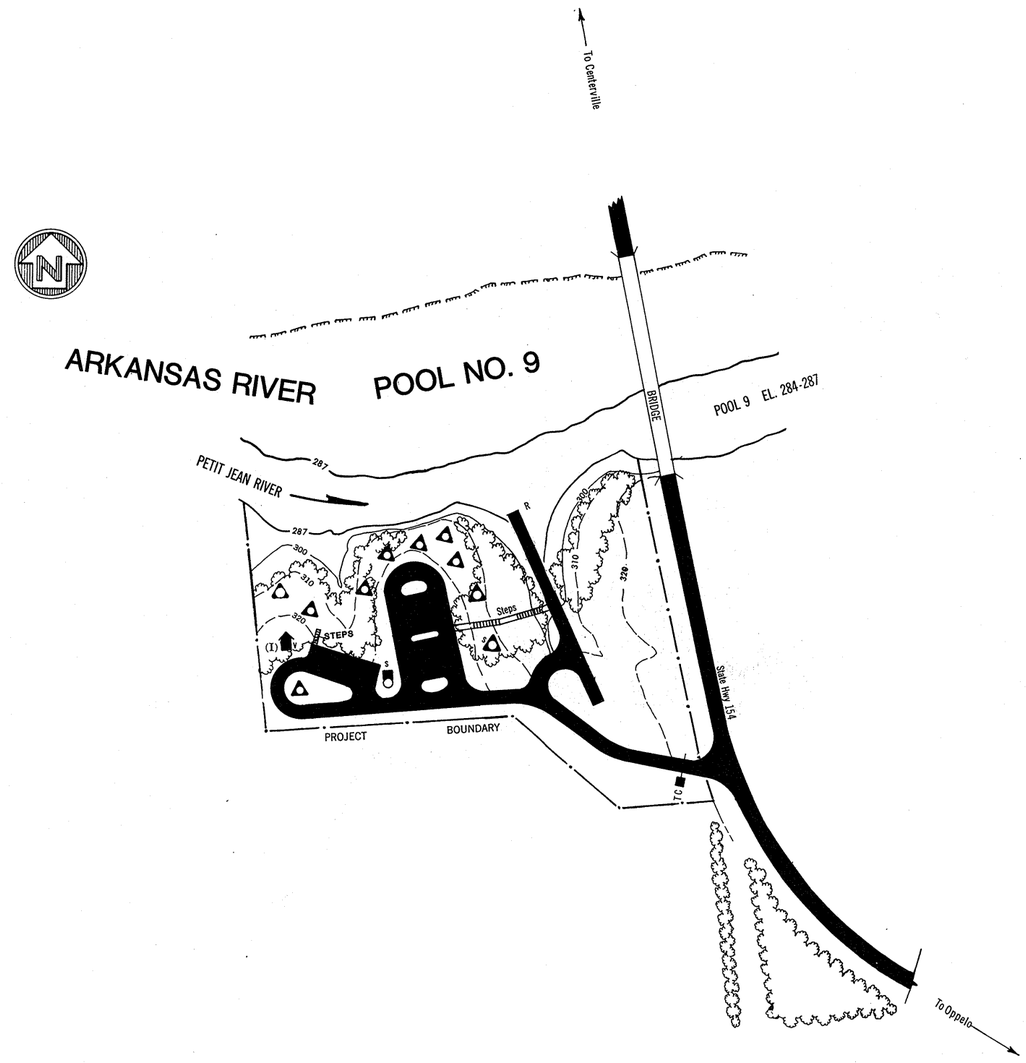
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 9



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 3, T. 5 N., R. 19 W., CONWAY CO.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9
PONTOON
PARK

SCALE OF FEET

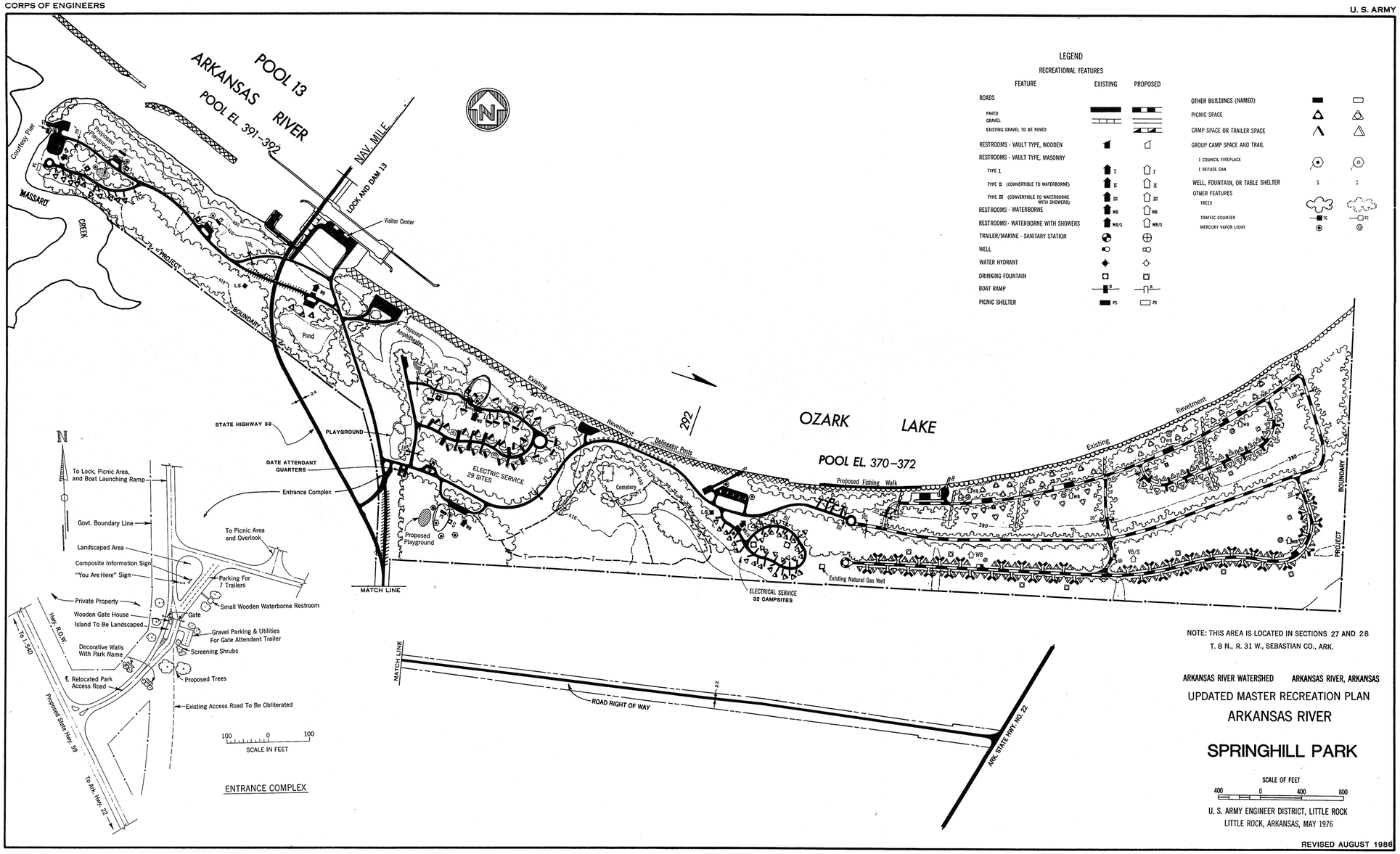
100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

CORPS OF ENGINEERS

U. S. ARMY



NOTE: THIS AREA IS LOCATED IN SECTIONS 27 AND 28
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

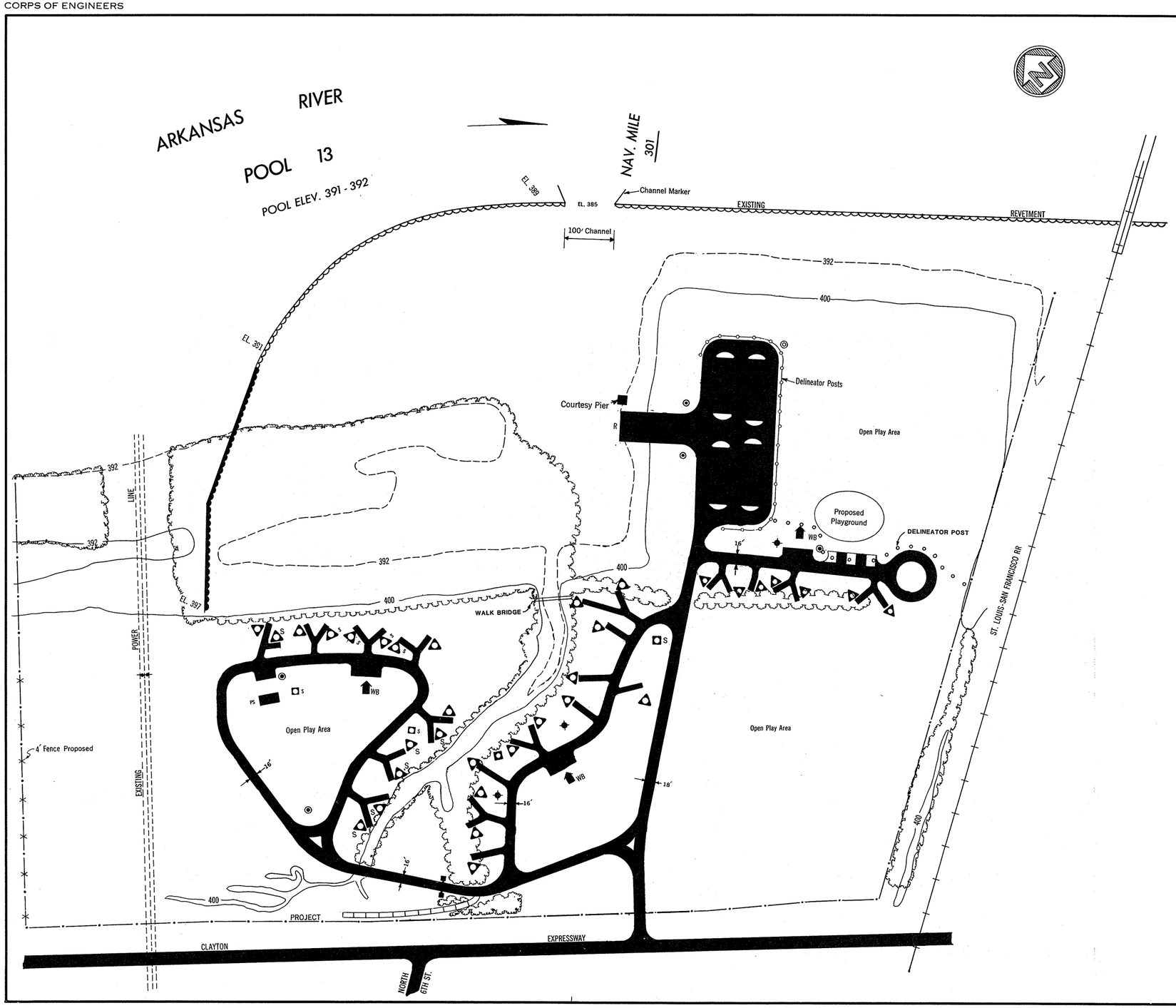
SPRINGHILL PARK

SCALE OF FEET
400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 20



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTION 26, T. 9 N., R. 32 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

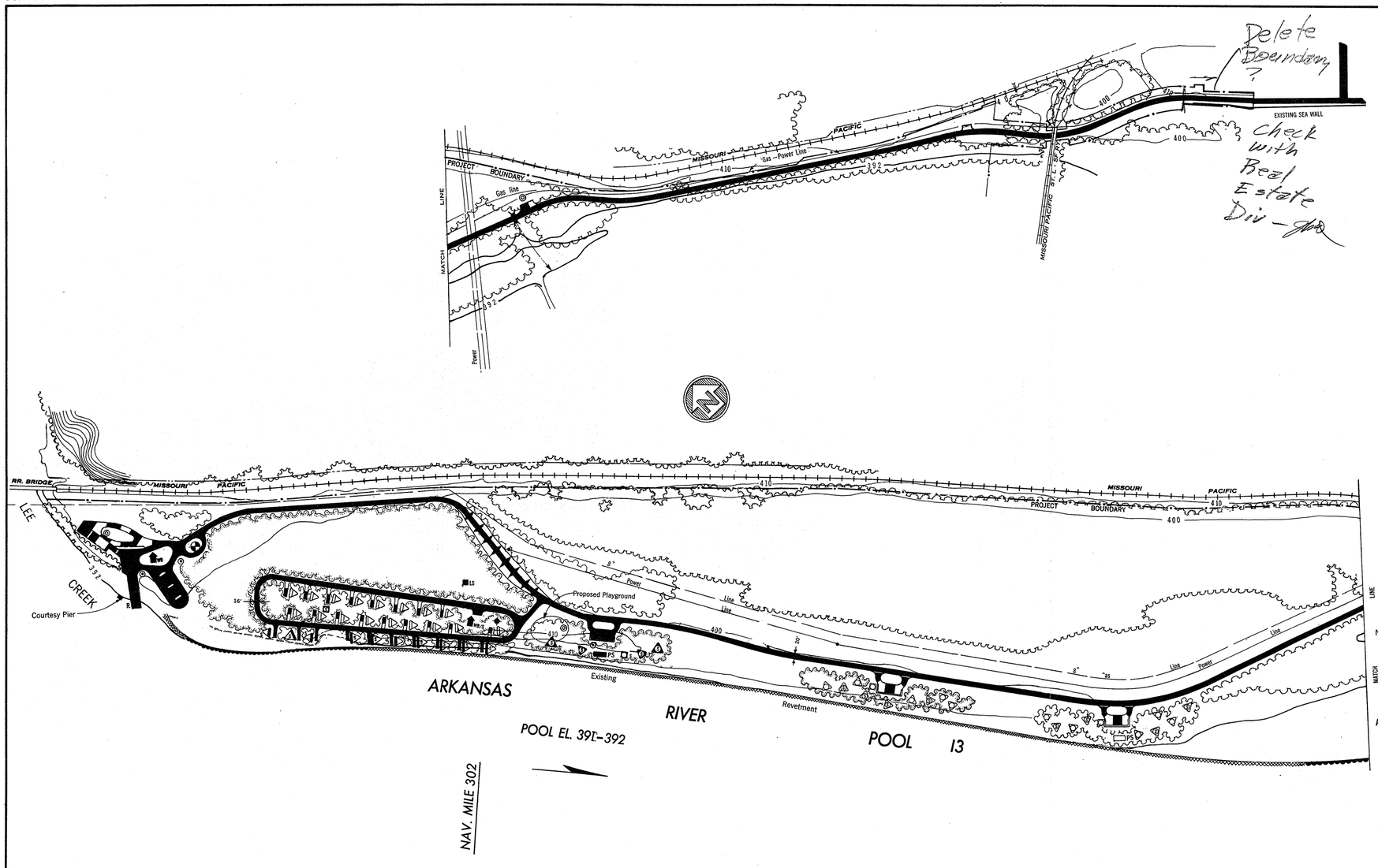
FORT SMITH PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
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

ARKANSAS RIVER POOL 13
LEE CREEK
PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

SWDCO-RP (SWLCO-L/30 Jan 86) 1st End
SUBJECT: Supplement No. 4, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Such Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 13 FEB 1986

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

The subject proposal is approved subject to economic justification of the proposed work in the FY87 SRUF program.

FOR THE COMMANDER:

A. P. HUTCHISON
Chief, Construction-
Operations Division

Encl
wd

CF (w/basic & 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

30 January 1986

SUBJECT: Supplement No. 4, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

Commander, Southwestern Division
ATTN: SWDCO-RR

1. Reference SWDR 1125-23 dated 1 July 1977, subject: Approval Authority for Additions and Betterments.

2. The purpose of this supplement is to illustrate development of Toad Suck Park to reduce camping and day-use conflicts and increase user fees. The proposed work consists of adding 20 campsites, 11 picnic sites, a group picnic shelter, and 2 sets of steps. The proposed work will be economically justified and accomplished with SRUF funds if approved. Construction of the group picnic shelter is included in the FY 87 SRUF program which is being prepared. The enclosed Plate 9 indicates the proposed changes.

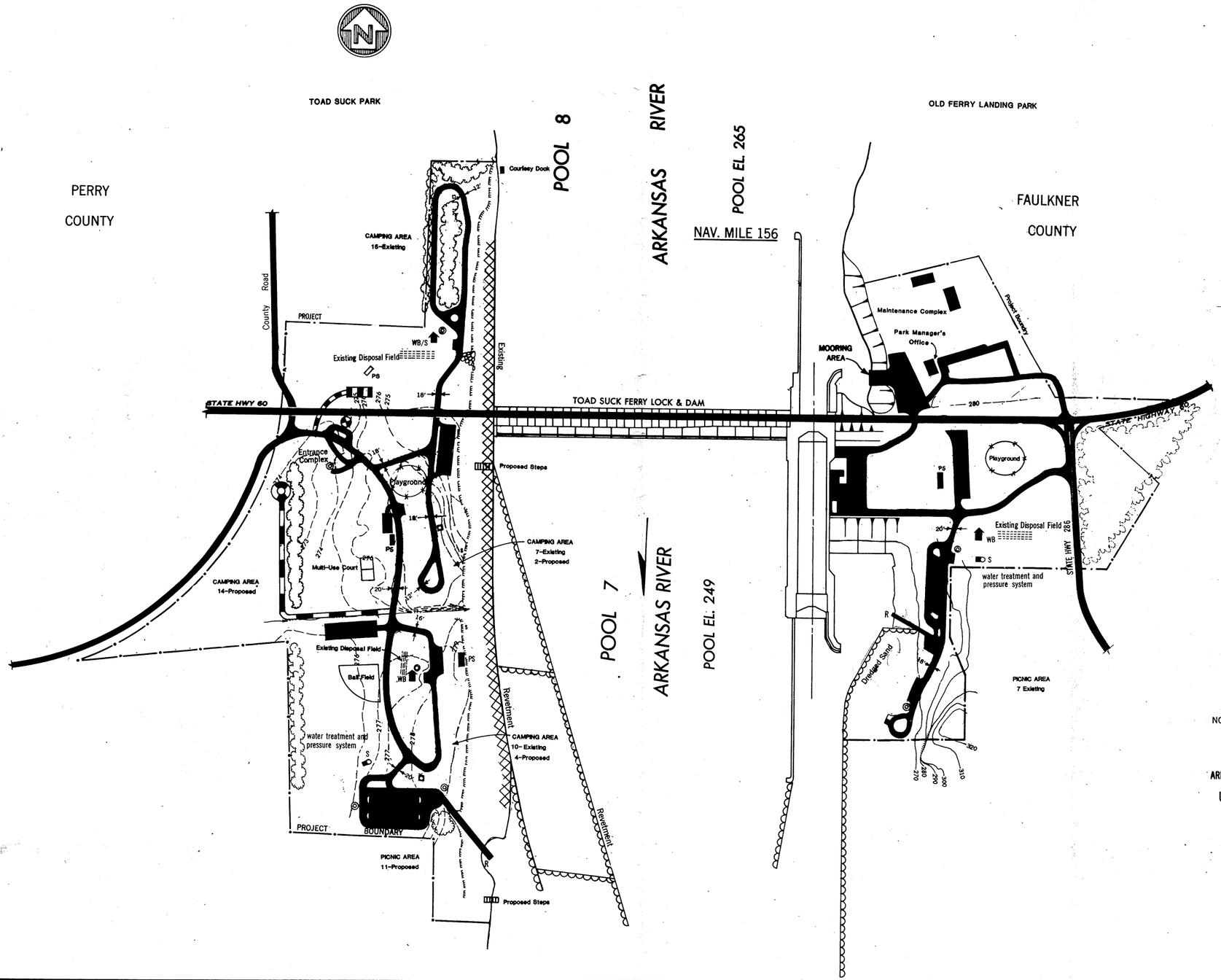
3. Toad Suck Park has 32 campsites, 2 waterborne restrooms (1 with showers), 2 group picnic shelters, and a boat launching ramp. The annual visitation for 1981 through 1985 varied between 205,000 and 459,000, while the number of campers per year varied between 17,000 and 40,000. Fee collections increased from $6,700 in FY 81 to $18,300 in FY 85. The park is adjacent to Toad Suck Ferry Lock and Dam which is 5 miles from Conway, Arkansas, and approximately 35 miles from Little Rock, Arkansas.

4. The campsites will be developed using the campsite hardening concept to protect the natural features of the area and to improve management efficiency. The proposed picnic shelter will increase fee revenues substantially and will alleviate the excessive demand on the two existing picnic shelters. The proposed picnic sites will relieve the conflict between campers and day-users because all the existing sites are used by campers. The proposed steps will eliminate some of the hazard for visitors using the shoreline because the rough and rocky banks are difficult to climb.

5. Approval of this supplement is recommended.

1 Encl (9 cys)

ROBERT W. WHITEHEAD
Colonel, Corps of Engineers
Commanding



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER TOAD SUCK PARK AND OLD FERRY LANDING PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JANUARY 1986

SWDCO-RP (SWLCO-L/22 Oct 85) 1st End
SUBJECT: Supplement No. 3, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Such Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 31 OCTOBER 1985

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

Approved.

FOR THE COMMANDER:

for A. P. HUTCHISON
Chief, Construction-
Operations Division

Encl wd

CF (w/basic & 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

22 OCT 1985

SUBJECT: Supplement No. 3, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

Commander, Southwestern Division
ATTN: SWDCO-R

1. The purpose of this supplement is to relocate a boat launching ramp and turnaround from the closed West Creek Park, Lake Dardanelle, to Cooks Landing Park downstream of Murray Lock and Dam. Construction of a proposed 39,000 kilowatt hydropower facility at the north end of Murray Lock and Dam by the City of North Little Rock will create a safety hazard for some boaters using the existing upstream boat launching ramp at Cooks Landing Park. Additionally, the relocated ramp is needed to reduce excessive O&M costs incurred by locking through of the numerous fishermen who launch their boats upstream of the dam to reach the prime fishing area immediately downstream of the dam.

2. Boaters on the left bank or North Little Rock side of the Arkansas River must presently launch at Cooks Landing Park upstream of the dam or at the Burns Park ramp approximately 2 miles downstream of the dam. Since access to the Burns Park ramp passes through a municipal golf course, the City presently limits the hours of operation of the ramp to the daylight hours in order to reduce vandalism of the golf course. Therefore, the majority of fishermen use the upstream Cooks Landing ramp and lock through the dam.

3. The headrace channel to the hydropower plant, as shown on the enclosed Plate 4, will represent a safety hazard to those boaters who travel along the upstream face of the overflow embankment to reach the lock. Relocation of the proposed ramp will eliminate the need to travel this unsafe route.

4. During the spring and summer months, the lock operators estimate that 25 lockages per day are made just to accommodate fishermen wanting to fish immediately downstream of the dam. The additional lock operation costs that result from the increased pleasure boat lockages will be reduced with construction of a downstream launching ramp. The safety improvement and decreased O&M costs of the lock operation justify the cost of relocating the launching ramp. It is proposed to utilize FY 87 Special Recreation Use Fee Funds to relocate the facility from West Creek Park.

5. Approval of this supplement is recommended.

Encl (9 cys)

for ROBERT W. WHITEHEAD
Colonel, Corps of Engineers
Commanding

SWDCO-RP (SWLCO-L 8 Jan 85) 1st End
SUBJECT: Supplement No. 2, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street, Dallas, TX 75242-0216 4 FEBRUARY 1985

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

Approved.

FOR THE COMMANDER:

A. P. HUTCHISON
Chief, Construction-
Operations Division

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

8 January 1985

SUBJECT: Supplement No. 2, Updated Master Plan Design Memorandum No. 9, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13

Commander, Southwestern Division
ATTN: SWDCO-RR

1. The purpose of this supplement is to illustrate development/consolidation of Maumelle Park, Point Remove Park, and Sequoya Park to reduce operation and maintenance costs and increase user fees. The proposed work consists of developing 20 campsites, adding 10 picnic sites, and adding a group picnic shelter in Maumelle Park. Four camp/picnic sites would be removed from Sequoya Park and 8 camp/picnic sites would be removed from Point Remove Park. A proposed camping loop in Maumelle Park with 12 campsites and a waterborne restroom would be deleted from the master plan because of poor site conditions. Most of the proposed work would be accomplished with SRUF funds, although operation and maintenance funds may be used for part of the relocation work. The inclosed plates 5, 13, and 15 indicate the proposed changes.

2. Sequoya Park has 25 camp/picnic sites, 2 waterborne restrooms (1 with showers), and a group picnic shelter. The annual visitation increased from 56,000 in 1981 to 72,000 in 1984 while the number of campers per year varied between 650 and 1,150. The park is free and is used mainly by sightseers and picnickers. The removal of four camp/picnic sites will have little negative impact upon the visitation or use of the park. The annual occupancy rate for the remaining sites would average approximately 10 percent. Annual operation and maintenance costs are estimated to be $14,500, and the estimated cost of removing the four camp/picnic sites is $400. Consolidation would reduce the annual operation and maintenance costs at Sequoya Park approximately $1,500 by reducing contract costs for mowing and cleanup.

3. Point Remove Park has 24 camp/picnic sites, 2 waterborne restrooms (1 with showers), group picnic shelter, and boat launching ramp. The annual visitation for 1981 through 1984 varied between 151,000 and 225,000, while the number of campers per year was less than 100. It is a class C park which is used mainly by fishermen. The removal of eight camp/picnic sites will not negatively affect the visitation or use of the park. The upstream camping loop has five sites which would be relocated, as the loop is already closed seasonally and during periods of high water that inundates some of the sites.

The remaining campsites would accommodate the demand for camping. Annual operation and maintenance costs are estimated to be $16,000, and the estimated cost of removing the eight camp/picnic sites is $800. Consolidation would reduce the annual operation and maintenance costs at Point Remove Park approximately $3,600 by reducing contract costs for mowing and cleanup and hired labor costs for maintenance.

4. Maumelle Park has 44 campsites, 2 waterborne restrooms (1 with showers), 2 group picnic shelters, and a boat launching ramp. The annual visitation increased from 197,000 in 1981 to 242,000 in 1984 while the number of campers increased from 23,000 in 1981 to 38,000 in 1984. The park is located 2 miles west of Interstate 430 and 2 miles north of Highway 10 and adjacent to the city of Little Rock, Arkansas. Fee collections increased from $6,700 in FY 81 to $21,500 in FY 84. The relocation of 12 camp/picnic sites from Sequoya Park and Point Remove Park, development of 8 additional campsites, addition of 10 picnic sites, and addition of a group picnic shelter could increase fee collections 50 percent at Maumelle Park during future years. The estimated cost of the group picnic shelter and 10 picnic sites is $41,000, and the estimated cost to relocate and develop the campsites is $65,000. The inclosed economic analysis demonstrates that this proposal is cost effective.

5. Approval of this supplement is recommended.

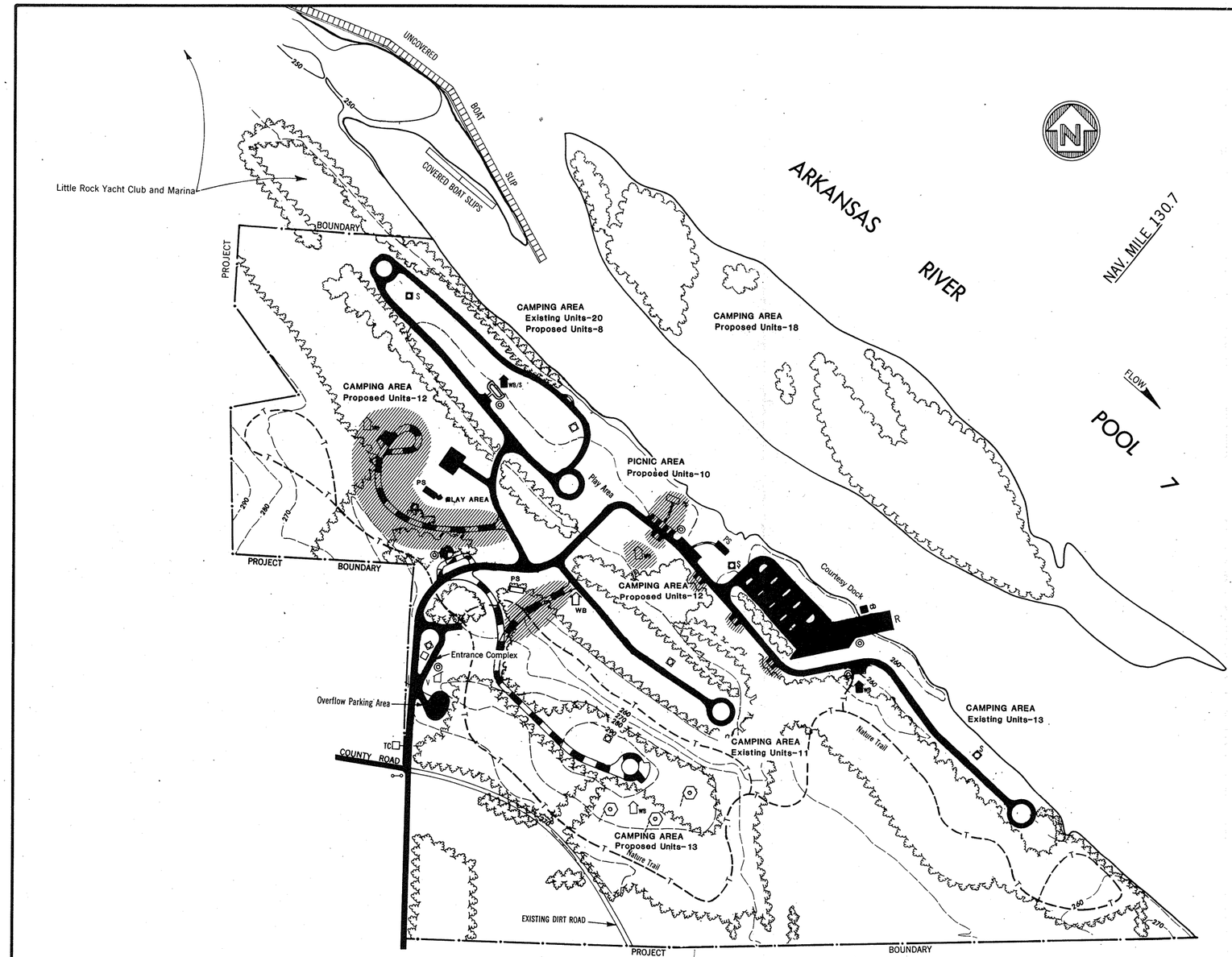
FOR THE COMMANDER:

4 Incl (9 cys)
as

JEROME B. SIDIO
Major, Corps of Engineers
Deputy Commander

CORPS OF ENGINEERS

U. S. ARMY



LEGEND

RECREATIONAL FEATURES

FEATURE	EXISTING	PROPOSED
ROADS		
PAVED		
GRAVEL		
EXISTING GRAVEL TO BE PAVED		
EXISTING DIRT TO BE GRAVELED		
STRUCTURES		
TOILETS - VAULT TYPE, MASONRY	V	V
TOILETS - VAULT TYPE, WOODEN	V	V
TOILETS - WATER BORNE	WB	WB
WELL		
WELL WITH SHELTER	S	S
DRINKING FOUNTAIN		
DRINKING FOUNTAIN WITH SHELTER	S	S
BOAT RAMP	R	R
PICNIC SHELTER	PS	PS
CHANGE HOUSE	CH	CH
OTHER BUILDINGS (NAMED)	Cafe	Cafe
PICNIC SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
WITH TABLE SHELTER	S	S
CAMP SPACE OR TRAILER SPACE		
2 TABLES		
1 CONCRETE PICNIC		
1 UTILITY		
1 FIREPLACE OR CHARCOAL UNIT		
1 REFUSE CAN		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
SIGN		
OTHER FEATURES		
BEACH IMPROVEMENT	BEACH	BEACH
TREES		
TRAFFIC COUNTER	TC	TC
PERTINENT ELEVATION (MSL)		
NAVIGATION POOL EL. 249		

ALL FACILITIES TO BE DEVELOPED IN THE FUTURE ARE SHOWN IN DASH.

PROPOSED DEVELOPMENT TO BE DELETED

NOTE: THIS AREA IS LOCATED IN SECTIONS 5, 6, 7, AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE
PARK

SCALE OF FEET

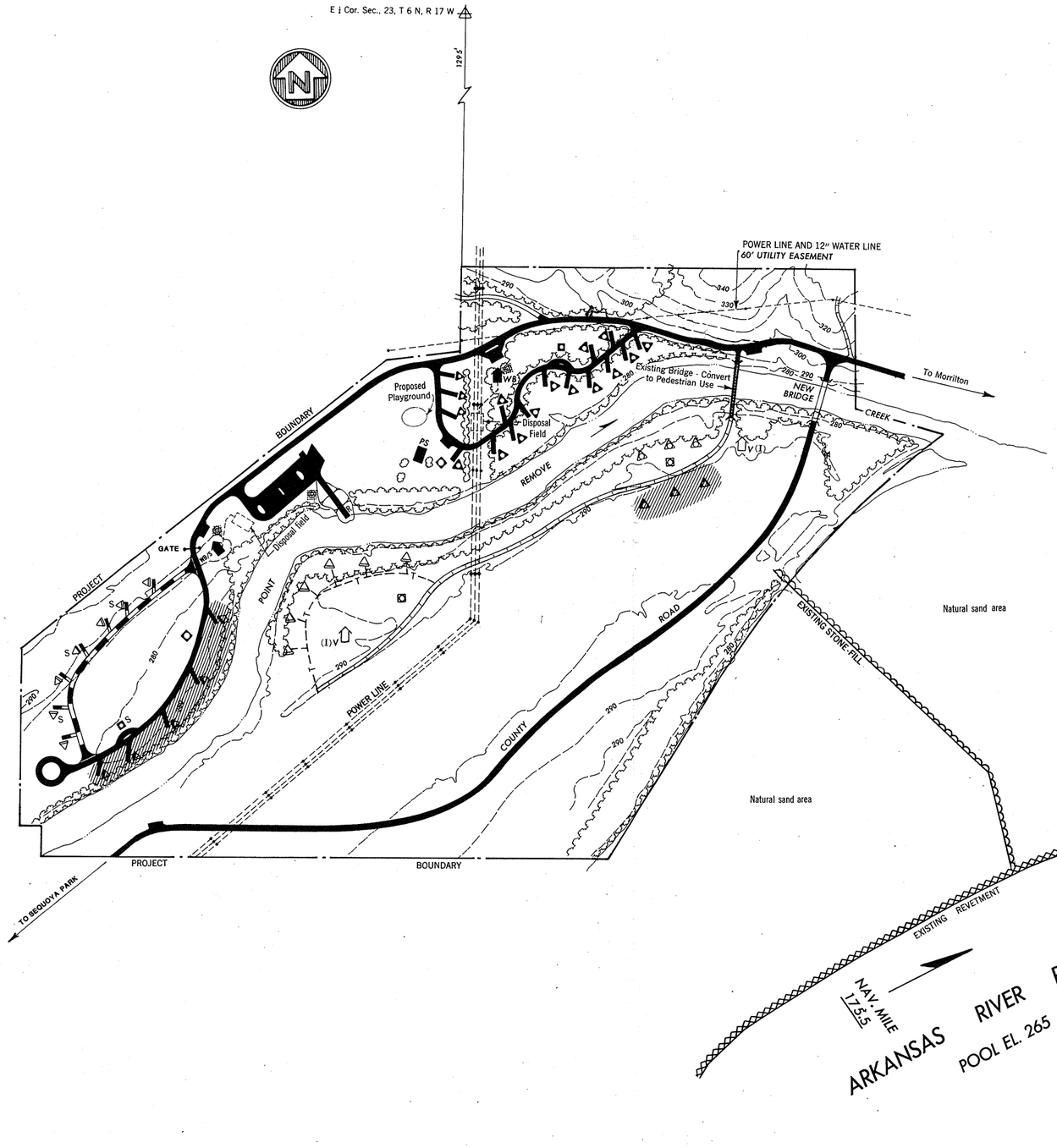
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED JANUARY 1985

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		
TO BE REMOVED		

NOTE: THIS AREA IS LOCATED IN SECTIONS 23, 24, 25, AND 26, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8

POINT REMOVE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED DECEMBER 1984

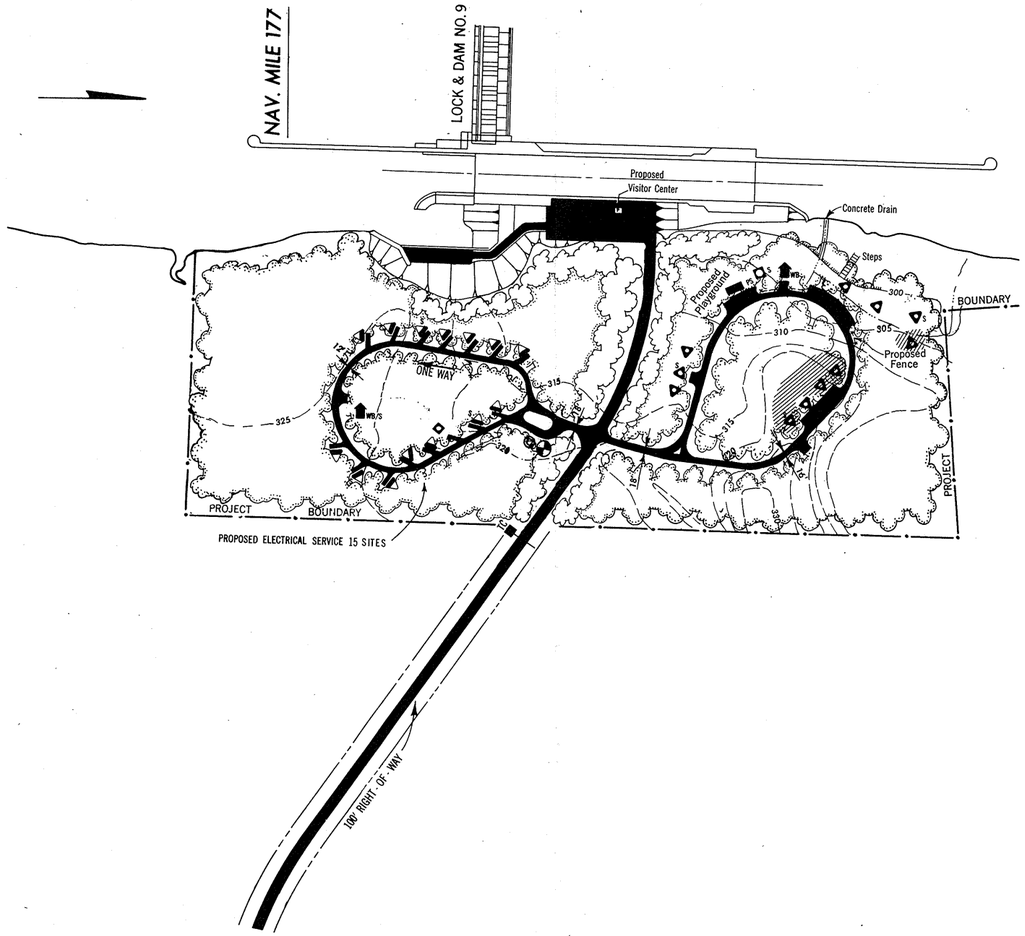
POOL 9

POOL EL. 284-287

ARKANSAS RIVER

POOL 8

POOL EL. 265



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
COURTESY DOCK	CD	CD
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		
TO BE REMOVED		

NOTE: THIS AREA IS LOCATED IN SECTIONS 34 AND 35, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

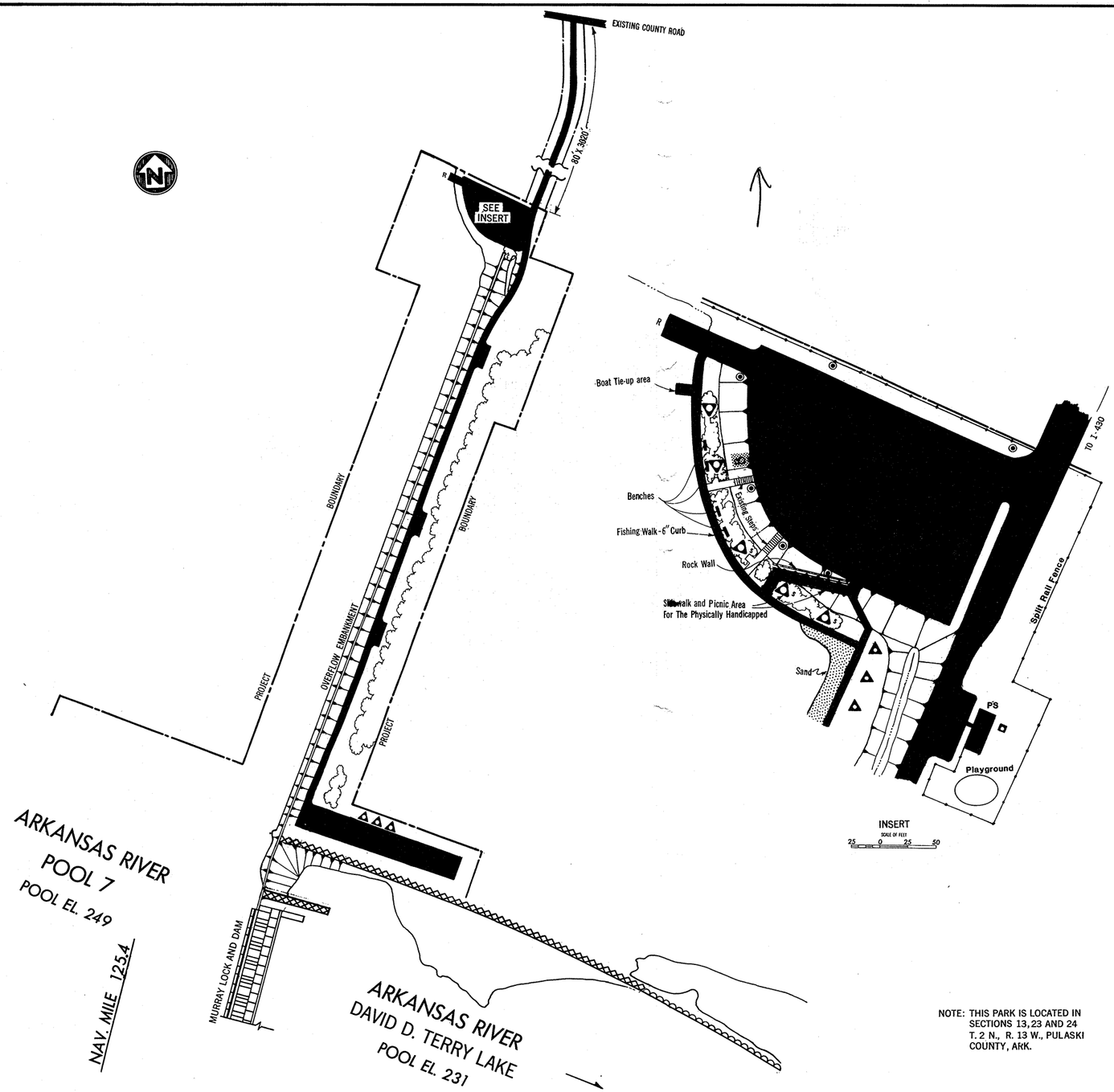
ARKANSAS RIVER SEQUOYA PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED DECEMBER 1984



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS PARK IS LOCATED IN SECTIONS 13, 23 AND 24 T. 2 N., R. 13 W., PULASKI COUNTY, ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

COOKS LANDING PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

ECONOMIC ANALYSIS

Capital Investment

1.	Install camping furniture	$15,200
2.	Develop campsites and pave turnouts	34,000
3.	Install picnic furniture and pave parking lot	13,200
4.	Install electrical service at 20 campsites	15,800
5.	Construct group picnic shelter and parking lot	28,200
	Total	106,400

Annual Costs Resulting from Consolidation

1.	Amortized cost of capital investment for 30 years at 8-3/8 percent interest (First Cost x .09199)	$9,800
2.	Increased O&M of added facilities	3,550
	Subtotal	13,350
3.	Minus O&M savings from Sequoya and Point Remove Parks	5,100
	Total Annual Cost	8,250

Added Annual Revenues Anticipated
(30-Year Average)

1.	Income from added electrical outlets	$3,500
2.	Income from increased visitation	9,860
3.	Group shelter reservation fees	1,750
	Total	15,110

Net Annual Benefits = $15,110 - $8,250 = $6,860

Expenditure Schedule

	FY 85	FY 86	FY 87	Total
SRUF Funds	$49,800(1)	$28,200	$28,400	$106,400

(1) Operation and maintenance funds may be used for a portion of the relocation work.

SWDPL-R (SWLED-PV 24 Sep 76) 1st Ind
SUBJECT: Arkansas River, Arkansas, McClellan-Kerr Navigation System, Design Memorandum No. 9 - Updated Master Recreation Plan for Navigation Pool Development and Management - Supplement No. 1

DA, Southwestern Division, Corps of Engineers, Main Tower Building, 1200 Main Street, Dallas, TX 75202 4 OCT 1976

TO: District Engineer, Little Rock

Subject supplement is approved.

FOR THE DIVISION ENGINEER:

Barry G. Rought

BARRY G. ROUGHT, P.E.
Chief, Planning Division

CF: w/cy basic
DAEN-CWO-R (dupe)

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

SEP 24 1976

REPLY TO
ATTENTION OF:

SWLED-PV

24 September 1976

SUBJECT: Arkansas River, Arkansas, McClellan-Kerr Navigation System, Design Memorandum No. 9 - Updated Master Recreation Plan for Navigation Pool Development and Management - Supplement No. 1

Division Engineer, Southwestern

1. This Supplement proposes to change the "north" and "south" park designations at Lock and Dam No. 9 to "Cherokee" and "Sequoya", respectfully .

2. The current "north" and "south" designations are often confusing to the public since many people have difficulty determining directions. The current designation does not relate to any natural or cultural resource in the surrounding area.

3. The proposed park names commemorate local Indian heritage. They were selected as a result of a county-wide naming contest sponsored by the Conway County Bicentennial Committee. The recognition gained as a result of the contest should foster future cooperation in the administration of our programs and facilities in the area.

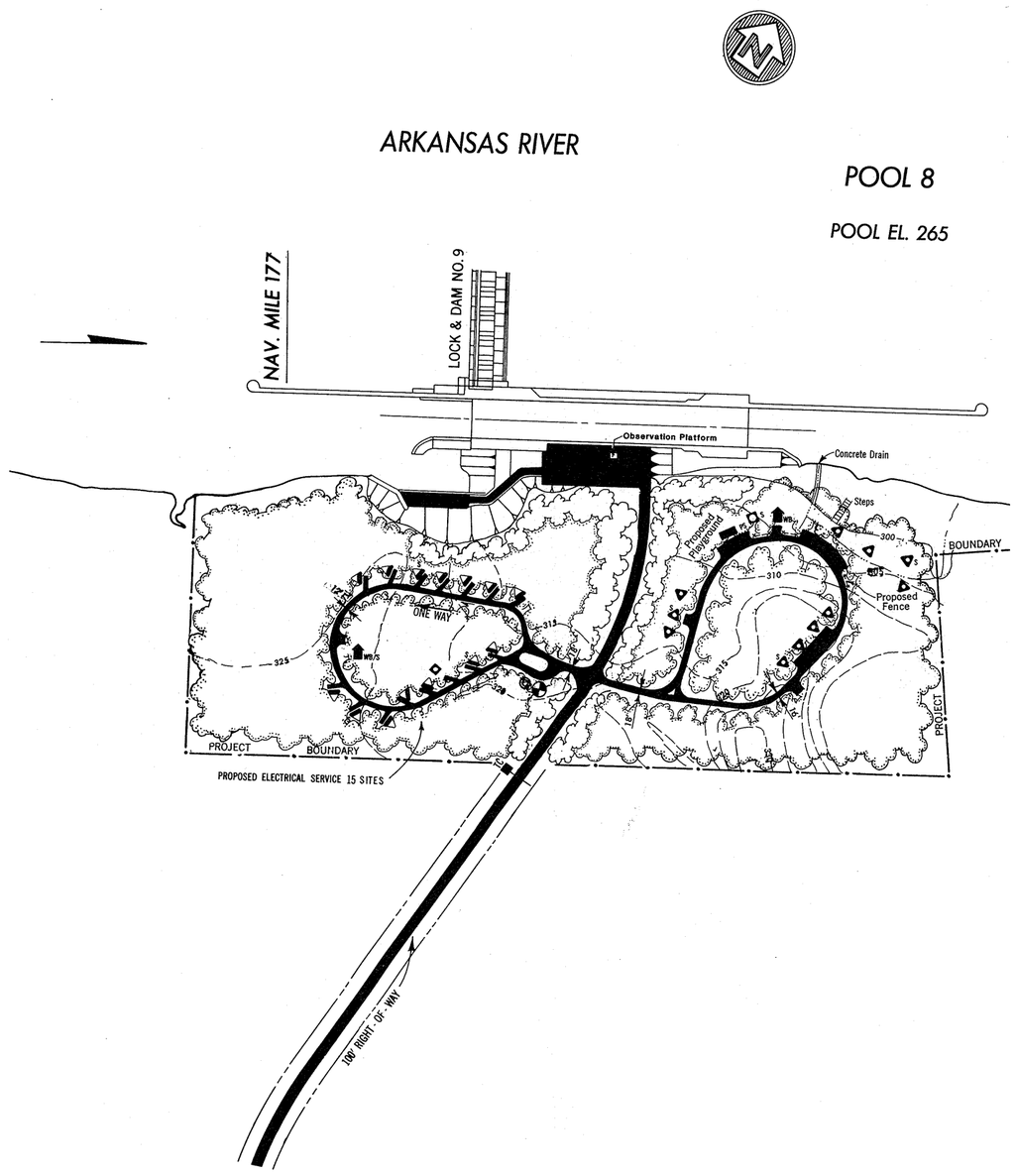
4. Approval of this Supplement is recommended. Signs, folder maps, and master plan plates will be revised during regularly scheduled maintenance and updatings.

Charles Edgar LTC

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

VANGUARD OF FREEDOM
BICENTENNIAL 1775-1975
UNITED STATES ARMY

AMERICAN REVOLUTION BICENTENNIAL
1776-1976



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
COURTESY DOCK	CD	CD
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 34 AND 35, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
SEQUOYA
PARK

SCALE OF FEET
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

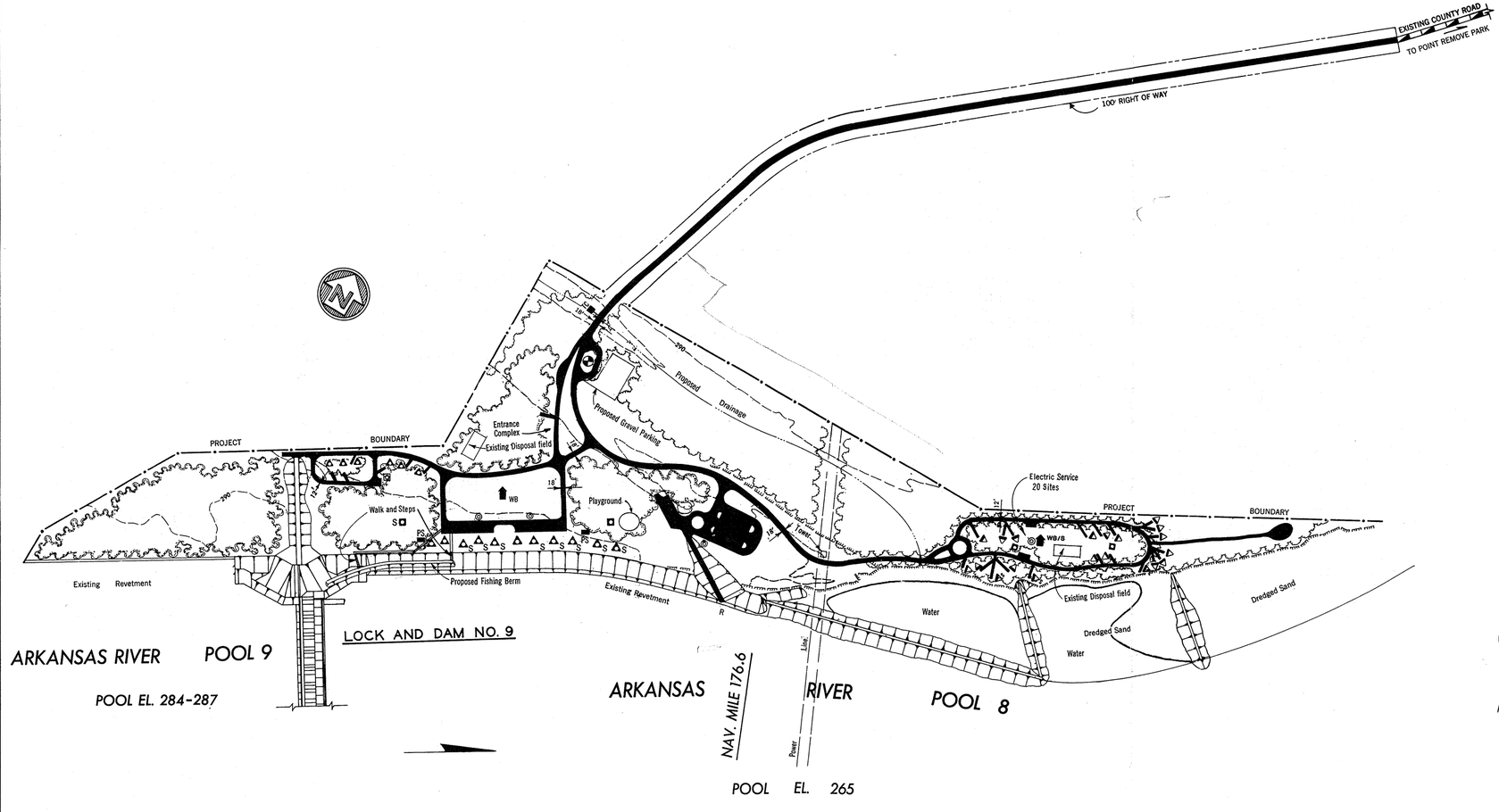
REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5

PLATE 15

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 26, 34 AND 35, T. 6 N., R. 17 W., CONWAY CO. ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

CHEROKEE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED AUGUST 1986

EXHIBIT TO SUPPLEMENT NO.5 PLATE 14

SWDPL-R (SWLED-PV 25 Jun 76) 3d Ind
SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

DA, Southwestern Division, Corps of Engineers, Main Tower Building, 1200 Main Street, Dallas, TX 75202 18 April 1977

TO: District Engineer, Little Rock

Subject updated master plan is approved subject to the following comments:

a. Para 1.04h. This paragraph was not clarified adequately in the revision as anticipated. Considering the recent emphasis on clean air, solid waste disposal, and noise control, it is suggested that paragraph 1.04h be revised in the next update to read similar to the following:

h. Air, Solid Waste, Noise.

(1) The Clean Air Act As Amended, June 1974. This act includes control of pollution from Federal facilities and emissions from motor vehicles.

(2) Resource Conservation and Recovery Act of 1976 (Public Law 94-580). The objectives of this act are to promote the protection of health and the environment and to conserve valuable material and energy resources. This act is formerly known as the Solid Waste Disposal Act.

(3) Noise Control Act of 1972 (Public Law 92-574. This act provides for effective coordination of research, establishment of noise emission standards for commercial products, and dissemination of information to the public on such products.

b. Table 9-1. Scheduled expenditures of $715,000 in FY 77 and FY 78 for Account 14 shown here does not agree with the direct cost of $628,850 for "initial" development shown in Table 9-2. This should be reconciled.

c. Plates 5 and 5a. The northern park boundary line shown on the site layout plate does not agree with that shown on the aerial photo plate. These should be reconciled.

FOR THE DIVISION ENGINEER:

Barry G. Rought

BARRY G. ROUGHT, P.E.
Chief, Planning Division

wd incl

CF:
HQDA (DAEN-CWO-R) (quint) w/cy basic, 1st & 2d Ind & incl

SWLED-PV (SWLED-PV 25 Jun 76) 2d Ind
SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

DA, Little Rock District, Corps of Engineers, P.O. Box 867, Little Rock, Arkansas 72203 10 Mar 77

TO: Division Engineer, Southwestern

1. The master plan has been revised in accordance with comments of the 1st indorsement and to comply with changes occurring since submittal. Revisions are discussed in the following paragraphs.

a. Paragraph a, 1st Ind. Maumelle, Toad Suck Ferry Dam Site, Cherokee, Sweeden Island, and Dam Site 13 (South) Parks were selected for further initial development to enhance the fee collection potential and reduce O&M costs. The remaining parks will receive only minor additional development of facilities essential to health and safety such as drinking water supplies, sanitation facilities, and night lights, etc. The Fort Smith Park site plan was revised to designate the park for day use activities only since it can better serve the day-use demand of the Fort Smith urban area. Dam Site 13 Park site plan was revised to reduce the number of existing picnic sites and increase the number of camping sites, and therefore improve its fee collection potential. These revisions to the Fort Smith and Dam Site 13 Park site plans will enable us to meet the public's needs and reduce our O&M effort. Additional camping facilities have been added for the initial development plan at Maumelle Park to enhance fee collection. The Palarm Creek Park plan was revised to omit the proposed observation platform and the masonry vault restroom. A foot bridge over Palarm Creek is proposed for pedestrian safety and is discussed in section 7, paragraph 7.06 a(3).

b. Paragraph h, 1st Ind. Dam Site 13 Park is considered one park. The north portion is proposed as a future expansion of the existing park. The word (NORTH) has been added to the title block on Plate 19 to correct this error. The current official Little Rock District park list used for budgetary, public relations, and related activities lists the Dam Site 13 park as one park.

c. Other. Several revisions have been made to reflect the park name changes approved by Supplement No. 1 concerning Cherokee and Sequoya Parks, formerly Dam Site 9 North and South.

2. The following revisions are inclosed for substition in the master plan:

a. Revised pages x, xi, xii, xiii, 1-3, 3-1, 3-2, 4-7, 4-8, 7-1 through 7-6, all of Section 9, 10-5 and 10-6.

b. Revised plates 4, 5, 6, 8, 9, 10, 13, 14, 15, 17, 19, 20, 21, and 22.

SWLED-PV (SWLED-PV 25 Jun 76) 2d Ind
SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

3. I recommend that the updated master plan, as revised, be approved.

1 Incl (7 cys) revised

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

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11.02	Recommendation	11-1

TABLE OF CONTENTS (con.)

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3	Project Recreational Areas (Sheet 2 of 2)
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4A	Cooks landing Photomap
5	Maumelle
5A	Maumelle Photomap
6	Palarm
6A	Palarm Photomap
7	Fletcher Bend Future
7A	Fletcher Bend Future Photomap
8	Bigelow
8A	Bigelow Photomap
9	Toad Suck Ferry
9A	Toad Suck Ferry Photomap
10	Cadron Settlement
10A	Cadron Settlement Photomap
11	Cadron Creek Future
11A	Cadron Creek Future Photomap
12	Cypress Creek
12A	Cypress Creek Photomap
13	Point Remove
13A	Point Remove Photomap
14	Cherokee
14A	Cherokee Photomap
15	Sequoya
15A	Sequoya Photomap
16	Pontoon
16A	Pontoon Photomap
17	Sweeden Island
17A	Sweeden Island Photomap
18	Holla Bend Future
18A	Holla Bend Future Photomap
19	Dam Site 13 (Sheet 1 of 2)
19A	Dam Site 13 Photomap
20	Dam Site 13 (Sheet 2 of 2)
20A	Dam Site No. 13 Photomap
21	Fort Smith
21A	Fort Smith Photomap
22	Lee Creek
22A	Lee Creek Photomap
22B	Lee Creek Photomap
23	Typical Entrance Complex

SECTION XIII - APPENDIXES

	Scheduled Submission Date	Approved
Appendix A - Project Resource Management Plan	June 1976	
Appendix B - Forest Management Plan	June 1976	
Appendix C - Fire Protection Plan	August 1976	
Appendix D - Fish and Wildlife Management Plan	November 1976	
Appendix E - Project Safety Plan		February 1974

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9-14	Cherokee	9-14
9-15	Sequoya	9-15

(4) 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 camp sites, 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.

e. 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.

f. Safe Drinking Water Act (Public Law 93-523). This act amends the Public Health Service Act to assure that the public is provided with safe drinking water.

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

h. 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.

i. 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.

j. Executive Order 11593 of the President-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.

k. Executive Order 11752 of the President-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.

SECTION III

PROJECT STATUS

3.01. Project development and operation chronology.

a. Locks and dams. The dates of construction of the locks and dams are as follows:

Name	Date Started	Date Completed
Murray Lock and Dam	April 1965	October 1969
Toad Suck Ferry Lock and Dam	December 1965	November 1969
Lock and Dam No. 9	January 1966	July 1969
Lock and Dam No. 13	April 1966	August 1969

b. Recreation facilities. Park development in navigation pools 7, 8, 9, and 13 is in the initial development stage. The status of park development as of 31 March 1976 is as follows:

(1) Navigation pool 7. Four parks have been partially developed in pool 7. Maumelle, Palarm, and Bigelow Parks were constructed by contracts during the period from October 1973 to August 1975. Cooks Landing was constructed with hired labor during the summer of 1975.

(2) Navigation pools 8 and 9. Eight parks have been or are being partially developed in pools 8 and 9 by construction contracts. Pontoon Park was constructed between August 1972 and November 1973. Point Remove Park was constructed between April 1973 and October 1974. Construction began on Toad Suck Ferry Dam Site, Cypress Creek, Cherokee, Sequoya, and Sweeden Island Parks in June 1973, and they should be completed in June 1976. Cadron Settlement Park is under construction also. The contract for this park was awarded in January 1975 and should be completed by June 1976. Also construction is in progress on the new paved access road and Point Remove Bridge which will serve Point Remove and Dam Site 9 North Parks. This contract began in July 1975 and should be completed in June 1976.

(3) Navigation pool 13. Three parks have been partially developed in pool 13. Construction began in June 1973 for development of Dam Site 13, Fort Smith and Lee Creek Parks and was essentially completed in August 1975. Construction is in progress on the connection of the Fort Smith Park sewer system to the city of Fort Smith municipal sewer system. A contract has been executed for a similar connection at Dam Site 13 park.

3.02. Project development under way. Present construction activities consist of the initial basic development of the above-mentioned parks. This includes paved roads, parking areas, restrooms, wells, water distribution systems, picnic shelters, campsites, picnic sites, and boat launching ramps.

3.03. Scheduled project development. Additional recreational facilities are scheduled for construction during FY 77 and FY 78 to complete the initial development. These facilities include entrance complexes at Dam Site 13 and Maumelle Parks, additional paved roads and parking areas, picnic sites, campsites, electrical outlets at campsites, landscaping, restrooms, etc.

3.04. Future development. There are three parks that are reserved for future development under current cost-sharing policies. These parks are Fletcher Bend, pool 7; Cadron Creek, pool 8; and Holla Bend, pool 9.

The number of pieces of gear used by these fishermen increased from 2,567 in 1966 to 5,268 in 1974. The number of boats utilized by these fishermen in 1966 was 280, while 1,305 boats were recorded in 1974. The pounds of fish caught have been recorded in Table 4-1, while the value of these fish can be found in Table 4-2.

(3) Wildlife. Deer, quail, ducks, geese, squirrels, rabbits, wild turkey, and other species of birds and animals inhabit the area surrounding this portion of the river. The U.S. Fish and Wildlife Service allows managed hunting in the Holla Bend National Wildlife Refuge. This refuge was formed by the construction of the Holla Bend Cutoff across a large loop of the river which formed an island of about 4 square miles in area.

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

*Information gained from report furnished by the Arkansas Game and Fish Commission, Commercial Fishery Industry Survey, for the entire length of river in Arkansas.

TABLE 4-2

VALUE OF COMMERCIAL FISH CATCH, ARKANSAS RIVER

Species	Value (Dollars) 1966	1972	1974
Bowfin	-	$502	$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	4,940
Total	$280,395	$903,539	$2,126,225

(4) Preservation and enhancement. Fish and wildlife have benefited to some extent by the construction of cutoffs to improve the river alinement. The fishery habitat in the oxbow lakes formed by the cutoff is improved as flow in the lakes is slowed, silt is deposited and the water becomes less turbid, except during high flows. The partial islands thus formed offer some seclusion to game animals such as deer, raccoon, bear, and various species of birds.

(5) Summary. The provision of facilities and developments at project expense has improved access and facilitated use of project lands and waters. With increased use, a greater harvest of fish and wildlife resources has occurred. Net benefits from the project have been realized by the fisherman and the general recreationist. The sport fishery use has not been fully tabulated but indicators such as fishing license sales and visitation figures show an increase in sport fishing similar to the increase in the commercial fishery.

f. Mosquitoes. The prevalence of mosquitoes in the area under existing conditions is recognized by the U.S. Public Health Service. Development of the Arkansas River has not increased the vector problems. There is considerable recreation experienced in this reach of the river despite the mosquitoes and this use is expected to increase with the continued development of access roads to the river and the public parks. Mosquitos are possible disease vectors and do pose a threat to public health. Mosquito surveys and control programs have been established to reduce mosquito populations within the parks and around the locks and dams. The Project Resource Management Plan, Appendix A to the master plan, will discuss the overall pest control program including mosquito control.

4.04 Recreational resources.

a. Recreational development by the Corps of Engineers. To provide water access, picnicking, and camping activities, 14 parks have been

SECTION VII

PHYSICAL PLAN OF DEVELOPMENT

7.01. General description of plan. Navigation pools 7, 8, 9, and 13 to the Arkansas-Oklahoma border, form a 95.7 mile segment of the McClellan-Kerr Arkansas River Navigation System. Pools 9 and 13 are separated by the Lake Dardanelle and Ozark Lake projects. Recreational development will not conflict with the operation of the project for navigation. Development of the navigation pools for public use is confined principally to the areas shown on Plates 2 and 3, titled "Project Recreation Areas." There are available for public use in these areas about 1,574 acres above the top of the respective navigation pools. Full consideration and preference is given to Federal, State, and local governmental agencies for the use of areas suitable for recreational purposes on Government-owned land. This plan is subject to modification at the time any of these agencies desire to participate in the construction, maintenance, management, and operation of recreational facilites.

7.02. Allocation of lands. Acquisition of land in fee title and by flowage easements is substantially complete. Only such lands as are required for project operation, public park and recreational use, and access were acquired. Table 7-1 shows acreages acquired in fee and easement for this portion of the Arkansas River.

TABLE 7-1

LAND ACQUISITION

	Fee	Easement
Murray Lock & Dam	462.24	4,506.96
Toad Suck Ferry Lock & Dam	614.38	5,281.26
Lock & Dam No. 9	845.87	2,471.01
Lock & Dam No. 13 (in Ark. only)	682.70	2,681.74
Total	2,605.19	14,940.97

Includes land acquired for bank stabilization.

a. Project operations. These lands were acquired and allocated to provide for safe, efficient operation of the project for those authorized purposes other than recreation and fish and wildlife. In all cases this will include, but is not limited to, the land on which project operational structures are located. Approximately 1,029 fee

acres are included in this classification, many of which were purchased for construction, operation, and maintenance of bank stabilization structures. Several areas scattered throughout the project 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 2 and 3. 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 dredged material placement 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 Counsel 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 allocated for use as developed parks for intensive recreational activities by the visiting public, including areas for concessions and quasi-public development. No agricultural uses are permitted on these lands except on an interim basis. Table 7-2 lists the park acreages.

TABLE 7-2

LANDS ALLOCATED FOR RECREATION - INTENSIVE USE

	Lands Available for Public Use (Acre		
	Project Requirement	Solely For Public Use	Estimated Total Available
Cooks Landing	16	0	16
Maumelle	15	165	180
Palarm	1	16	17
Fletcher Bend Future	10	127	137
Bigelow	0	15	15
Toad Suck Ferry Dam Site	33	42	75
Cadron Settlement	0	74	74
Cadron Creek Future	6	36	42
Cypress Creek	0	14	14
Point Remove	0	91	91
Cherokee	76	0	76
Sequoya	41	0	41
Pontoon	0	6	6
Sweeden Island	0	91	91
Holla Bend Future	0	20	20
Dam Site 13	481	0	481
Fort Smith	10	34	44
Lee Creek	5	150	155
Total	694	881	1,575

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. Four lease plots comprising 356 acres have been made available for leasing. These lands are primarily leased to an adjoining landowner, and they 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 pools 7, 8, 9 and 13, as well as for Dardanelle and Ozark Lakes. A lake manager located at Toad Suck Ferry Lock and Dam is responsible for operation and maintenance of parks in pools 7, 8, and a part of pool 9. The lake manager located at Ozark Lock and Dam is responsible for parks in pool 13 and Ozark Lake.

7.06. Recreational development

a. General. Construction of 15 parks in this portion of the Arkansas River is substantially complete. Three park sites have been acquired and are reserved for future development.

b. Developed Parks.

(1) Cooks Landing. Minimum facilities for public health, safety and convenience of the public are available in this 16 acre access point located adjacent to the Murray Lock and Dam overflow embankment on the left bank. Access to the area is from both Interstate 430 and Interstate 40 via the Crystal Hill Road. Existing recreational development at this site includes picnic and boat launching facilities and parking. A curbed, concrete walk along the shoreline provides for bank fishing. Facilities at this site provide for use by physically handicapped persons.

(2) Maumelle Park. Located adjacent to the mouth of the Maumelle River, this 180 acre park provides recreational opportunities in the western Little Rock area. Access to the park is by approximately 2 miles of paved County road from State Highway 10 west of Little Rock. Site topography consists of two low, wooded ridges parelleling the Arkansas River with open fields between the ridges. A 25 acre island in the Arkansas River adjacent to the park is reserved for future development of nature study trails and primitive camping and picnic areas. Existing recreational development includes campsites, individual and group picnic sites, boat launching facilities, and parking and sanitary facilities. Proposed facilities include additional picnic and group and individual camping areas. Because it provides water related recreation opportunities which will complement the other types of recreation proposed as part of River Mountain Park, Maumelle Park is expected to receive heavy recreational use. A $3 fee will be charged for camping at this park in 1976.

(3) Palarm Park. This 17 acre park, a popular bank fishing area, is located at the mouth of Palarm Creek. The site is in four separate parts being bisected by Palarm Creek and further divided by State Highway 365 and the Missouri Pacific Lines railroad which parallel the Arkansas River. The parts located on each side of the creek are connected by pedestrian trails which pass under the existing highway and railroad bridges. Existing facilities include group and individual picnic sites, boat-launching facilities and sanitary facilities. The foot bridge over Palarm Creek is proposed for pedestrian safety. It will also serve as an observation point for a view of the Arkansas River. By tying all three developed parts of the park together the foot bridge will eliminate the need for a second restroom.

(4) Bigelow Park. This 15 acre park is located on the right bank of the Arkansas River at the mouth of Taylor Creek approximately 2 miles east of Bigelow, Arkansas. The site has moderate tree cover, a low bank, and a good open embayment to the Arkansas River. Existing facilities include group and individual picnic sites, boat-launching facilities and sanitary facilities.

(5) Toad Suck Ferry Damsite Park. This 75-acre park is located on the right and left bank of the Arkansas River at Toad Suck Ferry Lock and Dam. The existing camping area on the right bank is located upstream and downstream from the lock and dam, and access is provided to the upstream area under the highway bridge. Recreational facilities in the day use area on the right bank include group and individual picnic sites, boat-launching facilities and sanitary facilities. A day-use area consisting of picnic and boat-launching facilities is located on the left bank of the Arkansas River downstream from the lock and dam. Because it is located only 5 miles from Conway, Arkansas, and on a major highway and river crossing, this park is expected to receive heavy recreational use. A $3 fee will be charged for camping at this park in 1976.

(6) Cadron Settlement Park. This 74-acre park is located at the site of a historical settlement on the Arkansas River. Access to the park is by approximately 2 miles of gravel road from State Highway 64 west of Conway, Arkansas. This gravel road will be paved by the State in the near future. The heavily wooded site is situated on three ridges

which form steep bluffs along the Arkansas River. Because of the site's historical significance, recreational facilities have been developed to preserve and interpret the historical resources of the site. Existing development includes group and individual picnic sites, boat-launching facilities, sanitary facilities, and approximately 1½ miles of hiking trails.

(7) Cypress Creek Park. Situated on the right bank of the Arkansas River at Cypress Creek, this 14 acre park provides recreation opportunities for nearby Morrilton, Arkansas, and other smaller communities. Access to the park is by a gravel county road from State Highway 113 north of Houston, Arkansas. The heavily wooded portion of the site located on the right bank of Cypress Creek contains camping, a boat-launching ramp, and sanitary facilities. The part of the park located on the left bank of Cypress Creek is sparsely wooded, and is not accessible except across Cypress Creek. This part of the park is reserved for future development.

(8) Point Remove Park. This 91 acre park is located on both sides of Point Remove Creek approximately 1 mile west of Morrilton, Arkansas. Access to the park is by a county road which bridges Point Remove Creek in the park. This road is now being paved and also provides acess to Cherokee Park located south of Point Remove Park. A new bridge across Point Remove Creek is being constructed in the park; and the old bridge, a steel frame structure with wood decking, will be rehabilitated for pedestrian use. Existing recreational development includes group and individual picnic sites, campsites, and boat-launching and sanitary facilities. Proposed development consists of walk-in picnic and camping areas with access by a pedestrian trail which will cross the rehabilitated bridge. Since bankline fishing is a popular recreational activity at this park, selected areas will be maintained for this purpose.

(9) Cherokee Park (formerly Dam Site 9 North). This 76 acre park is located on the left bank of the Arkansas River at Lock and Dam 9 approximately 3 miles west of Morrilton, Arkansas. Access is by a gravel county road from Morrilton, through Point Remove Park. This road is now being paved. The relatively flat site is heavily wooded in the downstream bankline area, with large open areas near the dam site. Existing facilities at this park include group and individual picnic sites, camping sites, and boat-launching, and sanitary facilities. A $3 fee will be charged for camping at this park in 1976.

(10) Sequoya Park (formerly Dam Site 9 South). Located 2 miles from Oppelo, Arkansas, this 41 acre park occupies an open site on the right bank of the Arkansas River at Lock and Dam 9. Access to the park is by a paved county road from State Highway 9 south of Morrilton, Arkansas. Recreational facilities provided at this park include group and individual picnic sites, campsites and sanitary facilities. Extensive tree planting is proposed for this barren park.

(11) Pontoon Park. This 6 acre park is located on the right bank of the Petit Jean River west of the town of Pontoon, Arkansas, approximately 10 miles from where it joins the Arkansas River. Access to the park is from State Highway 154, the most direct highway route between Petit Jean State Park and Mt Nebo State Park, two of Arkansas' major recreational

attractions. Boat-launching facilities at this park provide access to excellent fishing in the Petit Jean and Arkansas Rivers. Other recreation facilities are picnic sites and sanitary facilities.

(12) Sweeden Island Park. Located approximately 10 miles south of Atkins, Arkansas, near Lake Atkins and the Galla Creek Game Management Area, this 91 acre park provides extensive camping and picnic facilities. The wooded site extends for over a mile along the left bank of the Arkansas River, providing excellent opportunities for bankline fishing and views of the river. In addition to the existing camping and group and individual picnic sites, boat-launching and sanitary facilities are provided at this park. Additional camping facilities are proposed for future development.

(13) Dam Site 13 Park. This park is divided into two areas as follows.

a. South. This portion is located on the right bank of the Arkansas River at Lock and Dam 13 approximately 5 miles east of Fort Smith, Arkansas. Access to this 337 acre park is by a 1-mile paved access road from State Highway 22 which parallels the Arkansas River between Fort Smith and Dardanelle, Arkansas. The park provides approximately 2 miles of recreational development along the river which includes group and individual picnic and camping areas, an overlook, and boat-launching and sanitary facilities. Other proposed development includes expansion of the existing camping and picnic areas. Proposed construction of a highway bridge across Lock and Dam 13 is expected to provide improved access and attract more visitors to this park. The bridge approach will be elevated in the day-use section of the park and should not detract from recreational use of this area. An existing park road will be relocated to pass under the bridge. A $3 fee will be charged for camping at this park in 1976.

b. North. This 144 acre area, located on the left bank of the Arkansas River at Lock and Dam 13, will be accessible from the proposed highway bridge approach north of Lock and Dam 13. Present access to the site, approximately 6 miles south of Van Buren, Arkansas, is by a gravel road on the levee. Future recreation development includes camping, picnicking and boat launching facilities.

(14) Fort Smith Park. Located within the city limits of Fort Smith, Arkansas, on the right bank of the Arkansas River, this 44-acre park receives heavy local use. It has been developed to provide for day-use recreation activities. The site is relatively flat with light tree cover. A portion of the park beyond the original bankline has been filled with dredged material. This area is developed for boat-launching and picnicking, and the sand deposits are used as play areas and for sunbathing.

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. Allocations and expenditure of construction general funds. As of 30 September 1976, a total of $7,400,000 has been expended for construction of recreation facilities in Pools 7, 8, 9, and 13. Table 9-1 lists the expenditures thru FY 76 of Construction General, Account 14 funds for recreation facilities in each pool formed by the navigation locks and dams. Also, included in this table are proposed expenditures for FY 77 and FY 78 for completion of initial recreational development.

TABLE 9-1

ALLOCATION AND EXPENDITURES OF FUNDS
(INITIAL DEVELOPMENT)
CONSTRUCTION GENERAL, ACCOUNT 14 ($1,000)

Lock and Dam	Cost thru FY 76 (1)	Scheduled Expenditures FY 77	FY 78
Murray (2)	1,073	142	129
Toad Suck Ferry	2,418	10	69
No. 9	1,547	25	132
No. 13	2,362	27	181
Total	7,400	204	511

(1) Source of data: Estimates of Annual Appropriation Requirements for Civil Functions of the Corps of Engineers, FY 78, for Continuing Construction, McClellan-Kerr Arkansas River Navigation System, Locks and Dams, 17 December 1976.

(2) Does not include Murray Dam Site Park in pool 6, ($2,252,000).

9.03. Cost sharing - Public Law 89-72. After completion of initial recreation facilities all further development requires 50-50 cost sharing with a non-Federal public agency. Under current policy urgently needed sanitary facilities, needed to meet requirements of applicable State and Federal laws, could be constructed without cost sharing. Since the project is in the initial development stage, there are no urgently needed sanitary facilities at this time or within the near future. Efforts to obtain cost sharing participants have been unsuccessful for this reach of the Arkansas River. Therefore, no cost sharing program is included in this master plan.

9.04. Future recreational development cost.

a. General. The estimated cost of development of the proposed recreational facilities shown on Plates 4 through 22 are summarized in the following tables. These estimates are based on January 1976 price levels.

b. Tables of estimated cost of additional recreational facilities. The estimated total cost of construction for the proposed recreational facilities is $4,719,850. A summary of estimated cost of additional development by parks is shown in Table 9-2. A summary of estimated cost for additional development by facilities planned is shown in Table 9-3. A detailed cost estimate for additional recreational facilities in each park are shown in Tables 9-4 through 9-21. Proposed facilities are itemized for two stages of development. The items identified as "initial" are proposed for construction through FY 78 subject to the availability of funds. The items identified as "future" are proposed for construction at an undetermined date if and when non-Federal entitites can be identified who will share at least one-half the construction cost and be responsible for all the operation and maintenance costs.

TABLE 9-2

ESTIMATED COST OF ADDITIONAL RECREATION DEVELOPMENT BY PARKS
McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Table	Park Name	Estimated Cost Initial	Future
9-4	Cooks Landing	$37,900	12,950
9-5	Maumelle	155,350	370,900
9-6	Palarm	29,550	26,000
9-7	Fletcher Bend Future	0	634,100
9-8	Bigelow	3,700	11,100
9-9	Toad Suck Ferry Dam Site	51,800	16,250
9-10	Cadron Settlement	700	19,950
9-11	Cadron Creek Future	0	512,400
9-12	Cypress Creek	1,700	1,900
9-13	Point Remove	16,400	112,350
9-14	Cherokee	75,450	10,450
9-15	Sequoya	8,150	38,600
9-16	Pontoon	0	0
9-17	Sweeden Island	59,350	194,850
9-18	Holla Bend Future	0	176,550
9-19	Dam Site 13	179,800	1,731,000
9-20	Fort Smith	5,000	17,700
9-21	Lee Creek	4,000	203,950
	TOTAL DIRECT COST	628,850	4,091,000
	Engineering and design	62,900	409,100
	Supervision and administration	37,750	245,500
	GRAND TOTAL	$729,500	4,745,600

TABLE 9 - 3

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

SUMMARY

Acres 1,574 — See Plate 4 - 22

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	7,520	400	5,200	2,200	28,600
(2) Flexible pavement	do	19.00	78,906	3,125	59,400	49,970	949,450
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75		310	2,400		
(2) Flexible pavement	do	11.50	6,821	310	3,550	5,200	59,750
Parking areas							
a. Gravel to be paved	SY	6.50				3,158	20,550
b. Flexible pavement	do	8.75	71,674	2,397	20,950	21,041	184,050
Launching lanes, concrete	EA	27,500	27			3	82,500
Courtesy piers	do	6,750	7			1	6,750
Restroom, masonry							
a. Vault	do	17,500	3			6	105,000
b. Vault-convertible type	do	25,600	5	1	25,600		
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	17			14	431.200
e. Waterborne with showers	do	38,000	5			3	114,000
Disposal field for waterborne r.	EA	12,000	12			10	120,000
Sewage collection system	Sum Job		3			1	145,000
Water distribution system	Sum Job		10	4	43,700	8	114,400
Water well	EA	8,300	8	1	8,300	7	58,100
Picnic unit	do	1,500	234			138	207,000
Camp unit (includes parking spur)	do	2,600	145	34	88,400	329	855,400
Table canopies	do	1,600	37	29	46,400	63	100,800
Electrical distribution & hookups	Sum Job		15	11	111,750	8	63,300
Group camp	EA	2,200	3			3	6,600
Group picnic shelters	do	13,300	17			7	93,100
Overlook shelters	do	9,200	1				
Sanitary disposal stations	do	5,600	6	(pave 2)1	9,600	(pave 1) 1	7,600
Fishing berm (30 c.y./100 LF)	LF	15.00		450	6,750	1,220	18,300
Concrete benches	EA	200	9			6	1,200
Mercury vapor lights	do	550	11	57	31,350	25	13,750
Entrance complex	Sum Job			4	68,050	(Imp 1)1	62,550
Trails							
a. Foot bridge	Sum Job		3	1	27,000		
b. Park circulation	mile	17,500	1.51	.08	1,400	3.77	65,900
c. Trail shelters	EA	2,100				3	6,300
Playground equipment	Sum Job			5	20,500	5	18,400
Amphitheater	EA	3,400				2	6,800
Reforestation	acre	950		3.5	3,300	83.5	79,300
Site preparation	Sum Job				20,300		21,100
Landscaping and Beautification	acre	2,800		1.6	4,500	13.95	39,100
Concrete steps	Sum Job				1,700		
Fence	do						5,150
Delineator Posts	do				4,750		
Refurbish Old Bridge for pedestrian use	do				14,000		
TOTALS					$628,850		$4,091,000

Revised February 1977

TABLE 9 - 4

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

COOKS LANDING

Acres 16 — See Plate 4

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	2,400				
(2) Flexible pavement	do	19.00	3,020				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50				1,990	12,950
b. Flexible pavement	do	8.75	1,622				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600		1	25,600		
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300		1	8,300		
Picnic unit	do	1,500	7				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600	7				
Electrical distribution & hookups	Sum Job		1				
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550	6				
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job				4,000		
Landscaping and Beautification	acre	2,800					
TOTAL					$37,900	1,990	12,950

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TABLE 9 - 5

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

MAUMELLE PARK

Acres 180 — See Plate 5

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	5,716	1,820	34,600	1,650	31,350
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50		310	3,550	550	6,300
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	8,784	111	950	1,055	9,250
Launching lanes, concrete	EA	27,500	5				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1			3	92,400
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2			3	36,000
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1	1	(1) 3,500	1	(3) 4,200
Water well	EA	8,300					
Picnic unit	do	1,500	13			14	21,000
Camp unit (includes parking spur)	do	2,600	11	20	52,000	40	104,000
Table canopies	do	1,600		9	14,400	3	4,800
Electrical distribution & hookups	Sum Job		1	1	(2)20,000	1	3,200
Group camp	EA	2,200				3	6,600
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1	Pave	2,000		
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		7	3,850		
Entrance complex	Sum Job			1	10,000	Improve	22,500
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				1.4	24,500
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	5,500		
Amphitheater	EA	3.400					
Reforestation	acre	950					
Site preparation	Sum Job				5,000		2,000
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL					$155,350		$370,900

(1) 2 drinking fountain with hydrant, 600' of 1" water line
(2) 31 camp sites to receive electrical service.
(3) 1,250 feet of waterline and 2 drinking fountains

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TABLE 9 - 6

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

PALARM PARK

Acres 17 — See Plate 6

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	727				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	2,756			355	3,100
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job					1	15,000
Water distribution system	Sum Job						
Water well	EA	8,300					
Picnic unit	do	1,500	9			2	3,000
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	900		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00				220	3,300
Concrete benches	EA	200				3	600
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job		2	1	27,000		
b. Park circulation	mile	17,500	0.14				
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					1,000
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$29,500		$26,000

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TABLE 9 - 7

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

FLETCHER BEND, FUTURE PARK

Acres 137 — See Plate 7

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				8,800	167,200
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				650	7,450
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75				1,083	9,500
Launching lanes, concrete	EA	27,500					
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800				3	92,400
e. Waterborne with showers	do	38,000				1	38,000
Disposal field for waterborne r.	EA	12,000				4	48,000
Sewage collection system	Sum Job					1	(1) 17,300
Water distribution system	Sum Job					2	16,600
Water well	EA	8,300				16	24,000
Picnic unit	do	1,500				44	114,400
Camp unit (includes parking spur)	do	2,600				24	38,400
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job					1	(2) 13,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300				1	13,300
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600				1	5,600
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				6	3,300
Entrance complex	Sum Job					1	20,050
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800				2	5,600
TOTAL							634,100

(1) Water distribution line estimated 4,150 L.F., 9 drinking fountains.
(2) Estimated 6,500 L.F. of underground electrical service line.

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TABLE 9 - 8

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

BIGELOW PARK

Acres 15 — See Plate 8

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	2,120				
(2) Flexible pavement	do	19.00	4,740				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	385				
Parking areas							
a. Gravel to be paved	SY	6.50				90	600
b. Flexible pavement	do	8.75	4,266				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000	1				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	8			2	3,000
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	2,050		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				0.23	4,000
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job					1	3,500
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$3,700		$11,100

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TABLE 9 - 9

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

TOAD SUCK FERRY DAM SITE PARK

Acres 75 — See Plate 9

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	5,110				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	1,480				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	8,840	526	4,600	111	950
Launching lanes, concrete	EA	27,500	2				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	2				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	3				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		2				
Water well	EA	8,300	2				
Picnic unit	do	1,500	17			8	12,000
Camp unit (includes parking spur)	do	2,600	22				
Table canopies	do	1,600	3	9	14,400		
Electrical distribution & hookups	Sum Job		2	1	(1)13,700		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		6	3,300		
Entrance complex	Sum Job		1	1	5,000		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	4,500		
Amphitheater	EA	3,400					
Reforestation	acre	950		3.5	3,300	3.5	3,300
Site preparation	Sum Job				3,000		
Landscaping and Beautification	acre	2,800					
TOTAL					$51,800		$16,250

(1) 22 Camp sites to have electrical hookups

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TABLE 9 - 10

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CADRON SETTLEMENT PARK

Acres 74 — See Plate 10

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	3,409				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	297				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	1,907			246	2,150
Launching lanes, concrete	EA	27,500	3				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600	2				
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	2				
Picnic unit	do	1,500	24				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1				(1)4,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200	9				
Mercury vapor lights	do	550	5			3	1,650
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job		1				
b. Park circulation	mile	17,500	1.37			0.12	(2) 2,100
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400				1	3,400
Reforestation	acre	950					
Site preparation	Sum Job						5,750
Landscaping and Beautification	acre	2,800				0.1	300
Delineator posts along road	Sum Job				700		
White Picket fence	Sum Job						600
TOTAL					$700		$19,950

(1) Relocate powerline out of historical area.
(2) Includes marking and improving trail identification on existing trail also.

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TABLE 9 - 11

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CADRON CREEK FUTURE PARK

Acres 42 — See Plate 11

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				10,000	190,000
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				1,600	18,400
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75				5,900	51,600
Launching lanes, concrete	EA	27,500				1	27,500
Courtesy piers	do	6,750				1	6,750
Restroom, masonry							
a. Vault	do	17,500				3	52,500
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300				3	24,900
Picnic unit	do	1,500				23	34,500
Camp unit (includes parking spur)	do	2,600				26	67,600
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job					1	(1)17,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				3	1,650
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				0.87	15,200
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						2,000
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL							$512,400

(1) 8,600 L. F. of electrical service line.

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TABLE 9-12

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CYPRESS CREEK PARK

Acres 14 — See Plate 12

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	1,077				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	270				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	678				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	1				
Picnic unit	do	1,500					
Camp unit (includes parking spur)	do	2,600	9				
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	600		
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		2	1,100		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950				2	1,900
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$1,700		$1,900

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TABLE 9 - 13

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

POINT REMOVE PARK

Acres 91 — See Plate 13

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	400				
(2) Flexible pavement	do	19.00	4,424			840	15,950
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	3,577			278	2,400
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500				2	35,000
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1			1	(1) 2,200
Water well	EA	8,300					
Picnic unit	do	1,500	16			6	9,000
Camp unit (includes parking spur)	do	2,600	5			13	33,800
Table canopies	do	1,600				3	4,800
Electrical distribution & hookups	Sum Job		1	1	750		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				0.15	2,600
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job					1	3,500
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800				1.1	3,100
Refurbish old bridge for pedestrian use only	Sum Job				14,000		
TOTAL					$16,400		$112,350

(1) Estimated 100 L. F. of water line and 2 drinking fountains.

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TABLE 9 - 14

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CHEROKEE

Acres 76 — See Plate 14

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	7,700				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	2,452				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	5,962	360	3,150		
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	2				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1	1	2,000		
Water well	EA	8,300					
Picnic unit	do	1,500	17				
Camp unit (includes parking spur)	do	2,600	20				
Table canopies	do	1,600	7	8	12,800		
Electrical distribution & hookups	Sum Job		1	1	(1) 15,300		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	2				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	15.00		450	6,750		
Concrete benches	EA	200					
Mercury vapor lights	do	550		4	2,200		
Entrance complex	Sum Job			1	20,050		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500		0.08	1,400		
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	3,500		
Amphitheater	EA	3,400					
Reforestation	acre	950				11	10,450
Site preparation	Sum Job				3,000		
Landscaping and Beautification	acre	2,800		1.6	4,500		
Concrete steps	Sum Job				800		
TOTAL					$75,450		$10,450

(1) Electrical hookups at 20 campsites.

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TABLE 9 - 15

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

SEQUOYA

Acres 41 — See Plate 15

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	2,013				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	1,477				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	1,417				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	11				
Camp unit (includes parking spur)	do	2,600	15				
Table canopies	do	1,600	6				
Electrical distribution & hookups	Sum Job		1	1	2,000		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200				3	600
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job					1	3,500
Amphitheater	EA	3,400					
Reforestation	acre	950				30	28,500
Site preparation	Sum Job				4,100		
Landscaping and Beautification	acre	2,800				1.86	5,200
Concrete steps	Sum Job				400		
Fence	Sum Job						800
TOTAL					$8,150		$38,600

Revised February 1977

TABLE 9 - 16

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

PONTOON PARK

Acres 6 — See Plate 16

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	983				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	2,150				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	1				
Picnic unit	do	1,500	10				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job						
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550					
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					0		0

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TABLE 9 - 17

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

SWEEDEN ISLAND PARK

Acres 91 — See Plate 17

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	8,800			720	13,700
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	460			1,200	13,800
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	6,730			400	3,500
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600	3				
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800				1	38,000
e. Waterborne with showers	do	38,000				1	12,000
Disposal field for waterborne	EA	12,000					
Sewage collection system	Sum Job			1	(2) 34,700	1	(3) 11,500
Water distribution system	Sum Job						
Water well	EA	8,300	2				
Picnic unit	do	1,500	25				
Camp unit (includes parking spur)	do	2,600	28			33	85,800
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	(1) 15,200	1	1,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300	2				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600		1	5,600		
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		7	3,850	1	550
Entrance complex	Sum Job					1	15,000
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$59,350		$194,850

(1) Includes electrical hookups for 21 camp sites
(2) Includes 7 drinking fountains, 3500 L.F. line, pressurize well and well house.
(3) Includes 5 drinking fountains, 2000 L.F. Line.

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TABLE 9 - 18

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

HOLLA BEND FUTURE PARK

Acres 20 — See Plate 18

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				3,200	60,800
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50				1,011	6,550
b. Flexible pavement	do	8.75				111	950
Launching lanes, concrete	EA	27,500					
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500				1	17,500
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300				1	8,300
Picnic unit	do	1,500					
Camp unit (includes parking spur)	do	2,600				21	54,600
Table canopies	do	1,600				5	8,000
Electrical distribution & hookups	Sum Job					1	2,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				1	550
Entrance complex	Sum Job					1	5,000
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950				10	9,500
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL							$176,550

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TABLE 9 - 19

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

DAM SITE 13

Acres 481 — See Plates 19 & 20

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	400	400	5,200	2,200	28,600
(2) Flexible pavement	do	19.00	14,707	1,305	24,800	24,120	458,300
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75		310	2,400		
(2) Flexible pavement	do	11.50				1,200	13,800
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	11,485	1,400	12,250	9,036	79,050
Launching lanes, concrete	EA	27,500	3			2	55,000
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	4			8	246,400
e. Waterborne with showers	do	38,000	1			1	38,000
Disposal field for waterborne r.	EA	12,000				2	24,000
Sewage collection system	Sum Job		1			1 (2)	145,000
Water distribution system	Sum Job		1	1	3,500	2 (3)	59,400
Water well	EA	8,300				1	8,300
Picnic unit	do	1,500	13			49	73,500
Camp unit (includes parking spur)	do	2,600	51	14	36,400	135	351,000
Table canopies	do	1,600		3	4,800		
Electrical distribution & hookups	Sum Job		1	1	(1)38,900	2 (4)	23,100
Group camp	EA	2,200	3				
Group picnic shelters	do	13,300	4			5	66,500
Overlook shelters	do	9,200	1				
Sanitary disposal stations	do	5,600	1	Pave	2,000		
Fishing berm (30 c.y./100 LF)	LF	15.00				1,000	15,000
Concrete benches	EA	200					
Mercury vapor lights	do	550		11	6,050	9	4,950
Entrance complex	Sum Job			1	33,000		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				1.0	17,500
c. Trail shelters	EA	2,100				3	6,300
Playground equipment	Sum Job			2	7,000		
Amphitheater	EA	3,400				1	3,400
Reforestation	acre	950					
Site preparation	Sum Job				1,200	1	5,500
Landscaping and Beautification	acre	2,800				3	8,400
Delineator post on roads	Sum Job				1,800		
Concrete steps					500		
TOTAL					$179,800		$1,731,000

(1) Includes electrical hookups at 61 campsites.
(2) Includes 3500 L.F. 4" force main, 6,550 L.F. of 6" gravity sewer, and 1 lift station.
(3) Includes 13,720 L.F. of waterline and 10 drinking fountains.
(4) Includes 13,570 L.F. of electrical line.

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TABLE 9 - 20

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

FORT SMITH PARK

Acres 44 — See Plate 21

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	4,230				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	6,930			278	2,450
Launching lanes, concrete	EA	27,500	4				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	3				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job		1				
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	33				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600	5			5	8,000
Electrical distribution & hookups	Sum Job		1				
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		5	2,750		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job					1	3,500
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
Fence	Sum Job						3,750
Delineator posts					2,250		
TOTAL					$5,000		$17,700

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TABLE 9 - 21

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

LEE CREEK PARK

Acres 155 — See Plate 22

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	12,250			640	12,150
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50				67	450
b. Flexible pavement	do	8.75	4,570			2,188	19,150
Launching lanes, concrete	EA	27,500	2				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job		1				
Water distribution system	Sum Job		1			1	(1) 4,800
Water well	EA	8,300					
Picnic unit	do	1,500	4			18	27,000
Camp unit (includes parking spur)	do	2,600	10			17	44,200
Table canopies	do	1,600	9			23	36,800
Electrical distribution & hookups	Sum Job		1	1	2,350		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1			1	13,300
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1			Pave	2,000
Fishing berm (30 c.y./100 LF)	LF	15.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		3	1,650	2	1,100
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job					1	4,400
Amphitheater	EA	3,400					
Reforestation	acre	950				27	25,650
Site preparation	Sum Job						4,850
Landscaping and Beautification	acre	2,800				2.89	8,100
TOTAL					$4,000		$203,950

(1) Includes 650 feet of waterline and 2 drinking fountains.

Revised February 1977

9.05. Annual operation and maintenance cost. A summary of the operation and maintenance costs for recreational facilities and the cost of Real Estate Management Activities are given in Table 9-22.

TABLE 9-22

SUMMARY OF OPERATION AND MAINTENANCE COSTS
FOR RECREATIONAL FACILITIES AND REAL ESTATE
MANAGEMENT SERVICES

Item	Public Use	Real Estate Activities
Fiscal Year 1975		
Real Estate		$17,600
Recreational Facilities	$250,000	
S&I Overhead 17.8%	40,000	
Total	290,000	17,600
Fiscal Year 1980		
Real Estate		26,800
Recreational Facilities	280,000	
S&I Overhead 23%	60,000	
Total	340,000	26,800
Ultimate - Fiscal Year 2010		
Real Estate		32,700
Recreational Facilities	480,000	
S&I Overhead 23%	110,000	
Total	$590,000	$32,700

b. Concept plan for fishery management. Management programs for aquatic fauna are for the purpose of providing game fish which are desirable for recreational fishing. Fish management and regulation is the responsibility of the Arkansas Game and Fish Commission. The Arkansas Game and Fish Commission has stocked navigation pools 7, 8, 9, and 13 with bream, redear bream, crappie, channel catfish, and largemouth bass. They conduct periodic rotenone samples to collect information on fish population trends. The U.S. Fish and Wildlife Service participated in the planning aspects of the development of the projects. The overall function of the Corps of Engineers has been primarily one of cooperation with the agencies in planning and management. Also, the Corps of Engineers will assist in the management program by controlling water releases to aid the downstream fishery when possible and they will pursue enforcement of State and Federal pollution control laws.

c. Concept plan for wildlife management. The majority of the fee land in pools 7, 8, 9, and 13 is contained in the parks and around the damsites (1,575 acres), and the remaining 356 acres of fee land is presently leased for crop production and pasture. The management plan for wildlife in these small scattered areas is restricted to habitat improvement practices which will attract small mammals and birds, game and nongame, and also provide beauty and/or shade for the park visitors. Some of these practices include the planting of mast-producing trees and shrubs, and establishment of food plots containing sunflower, brown top millet, and field peas, etc. Also, nesting aids which provide homes for squirrels and wood ducks may be placed in areas along the parks. Hikers, naturalists, photographers, and outdoor sportsmen will be able to observe the wildlife within the park areas. A limited quantity of game will be harvested from the fee land which is leased. The Arkansas Game and Fish Commission is responsible for enforcement of hunting regulations and managing the State's wildlife resources. The Corps of Engineers is responsible for management of the forests on its fee-owned land, wildlife habitat improvement, and administration of the agricultural and grazing lease 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 Navigation Pools 7, 8, 9, and 13, and it was approved February 1974. This plan discusses design criteria and precautionary measures to prevent, reduce, or control hazardous situations. The Project Safety Plan will be Appendix E to this Master Plan.

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 lignting 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. Pleasure boat warnings are issued through local news media for periods of high river flows. Pleasure boaters are warned to stay in the navigation channel because of the dangers presented by underwater dikes.

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 unsanitary, 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.

10.06 Shoreline Management Plan.

a. General. Most lands along the Arkansas River are privately owned, and therefore, land-use planning of these lands is outside the jurisdiction of the Federal Government. Accordingly, such a plan would have to be implemented by the State of Arkansas. In view of the absence of positive action by the State of Arkansas to implement such a plan, none is submitted.

b. Permits. See Section 7.03 for a description of the permit program.

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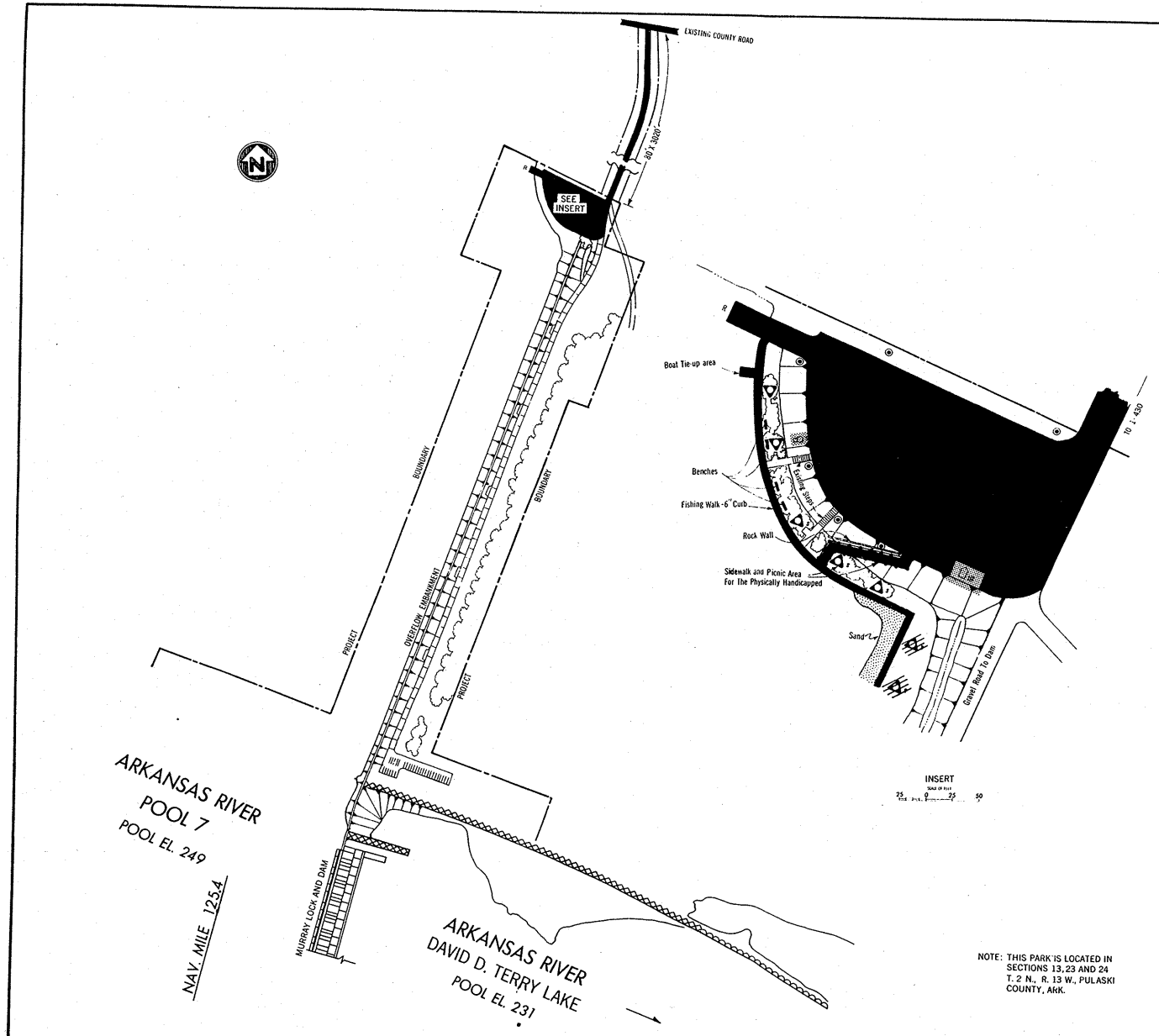
U. S. ARM



INSERT

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		
PICNIC SHELTER		
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
[illegible]		
WELL, FOUNTAIN, OR TABLE SHELTER		
OTHER FEATURES		
[illegible]		
INITIAL DEVELOPMENT		

NOTE: THIS PARK IS LOCATED IN SECTIONS 13, 23 AND 24 T. 2 N., R. 13 W., PULASKI COUNTY, ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN
ARKANSAS RIVER POOL 7
COOKS LANDING PARK

SCALE OF FEET

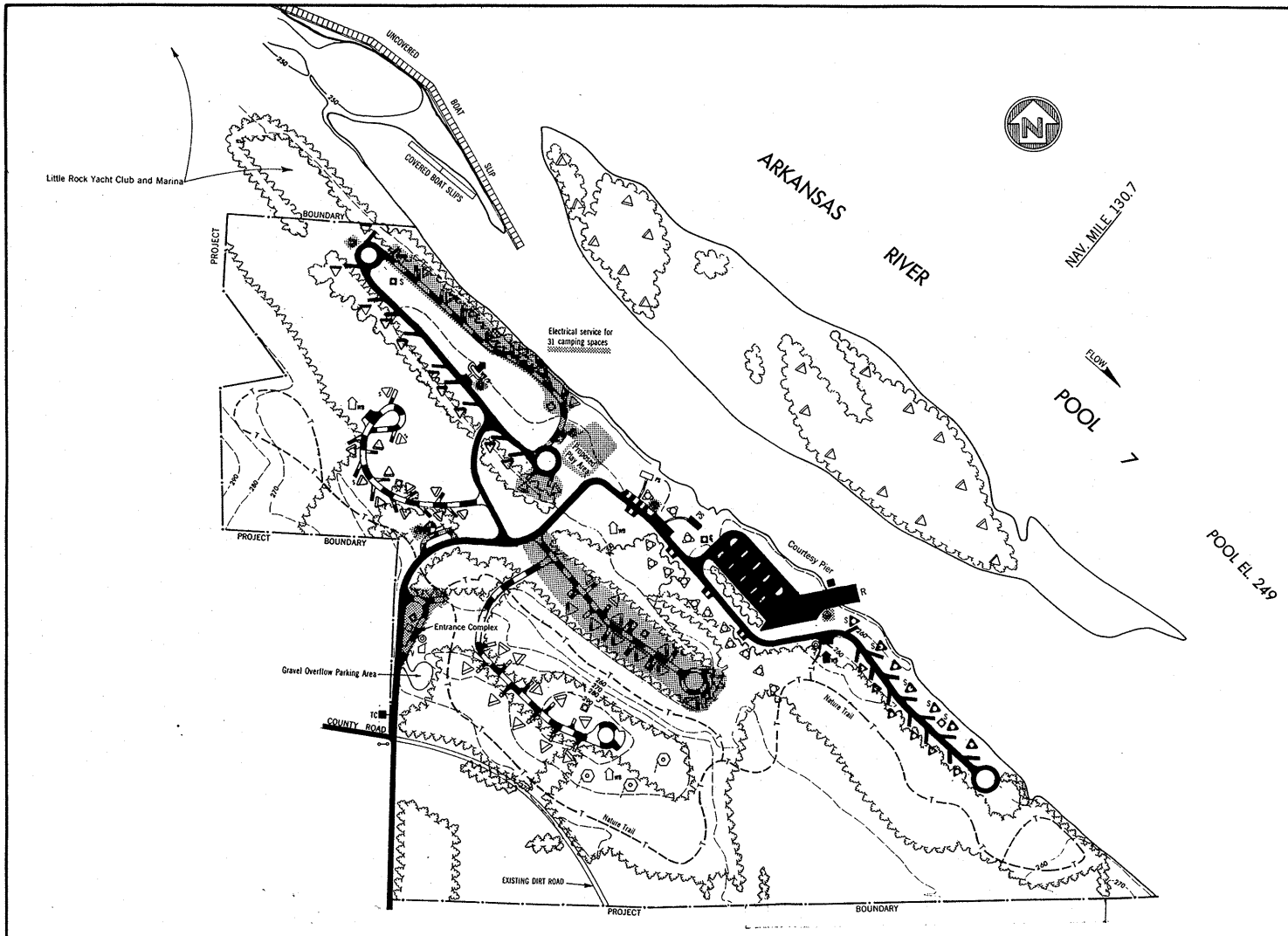
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MEMORIAL STATION PLATE		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5,6,7,AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

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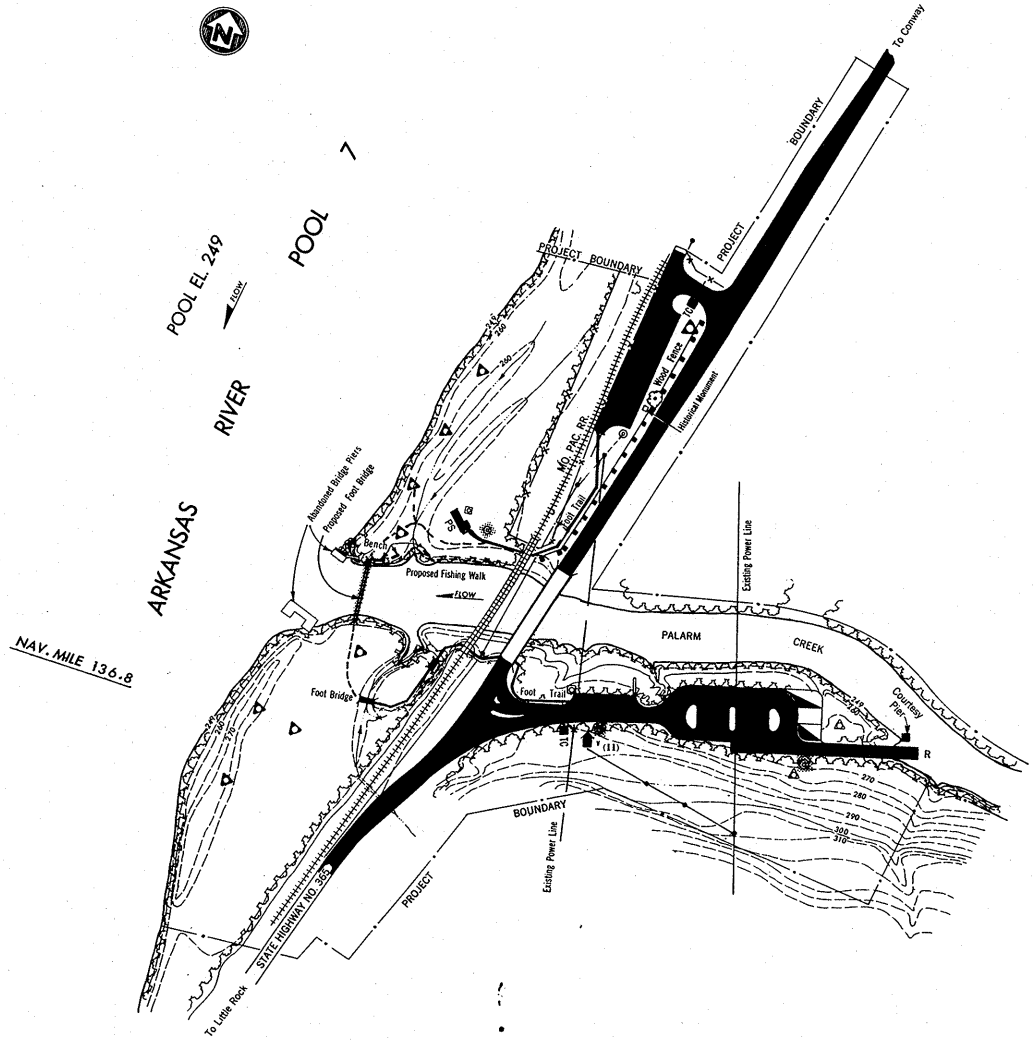
U. S. ARMY



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
I COUNCIL FIREPLACE		
3 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 12 AND 13, T. 3 N., R. 14 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED — ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

PALARM

PARK

SCALE OF FEET

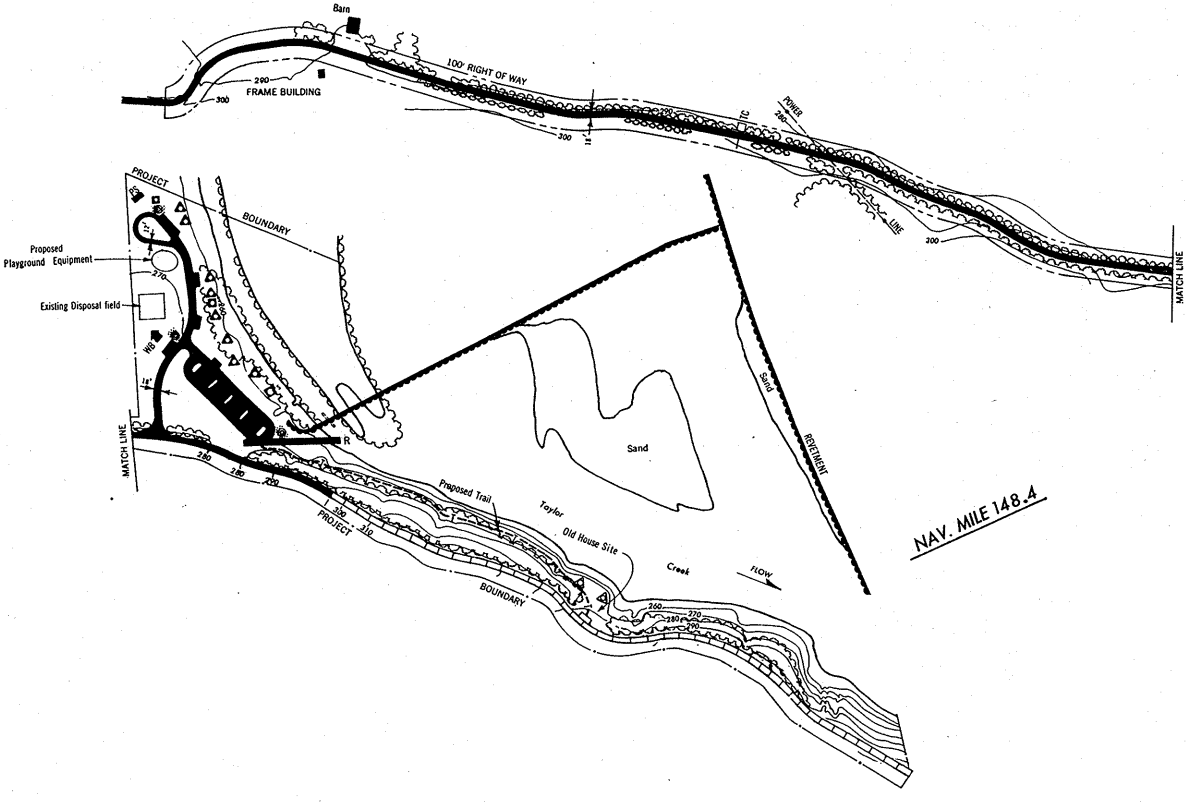
100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

BIGELOW PARK

SCALE OF FEET

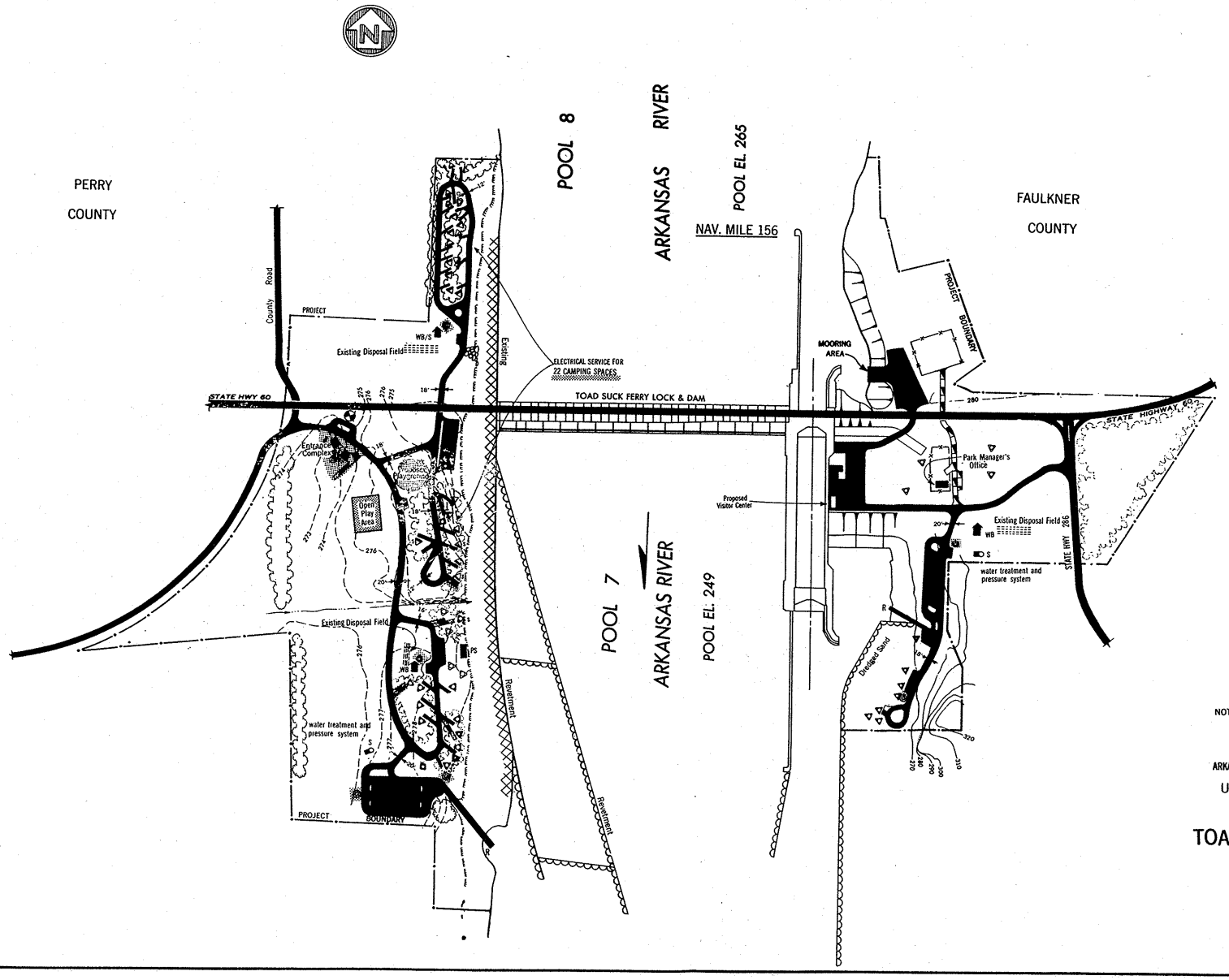
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13 T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
TOAD SUCK FERRY DAM SITE PARK

SCALE OF FEET

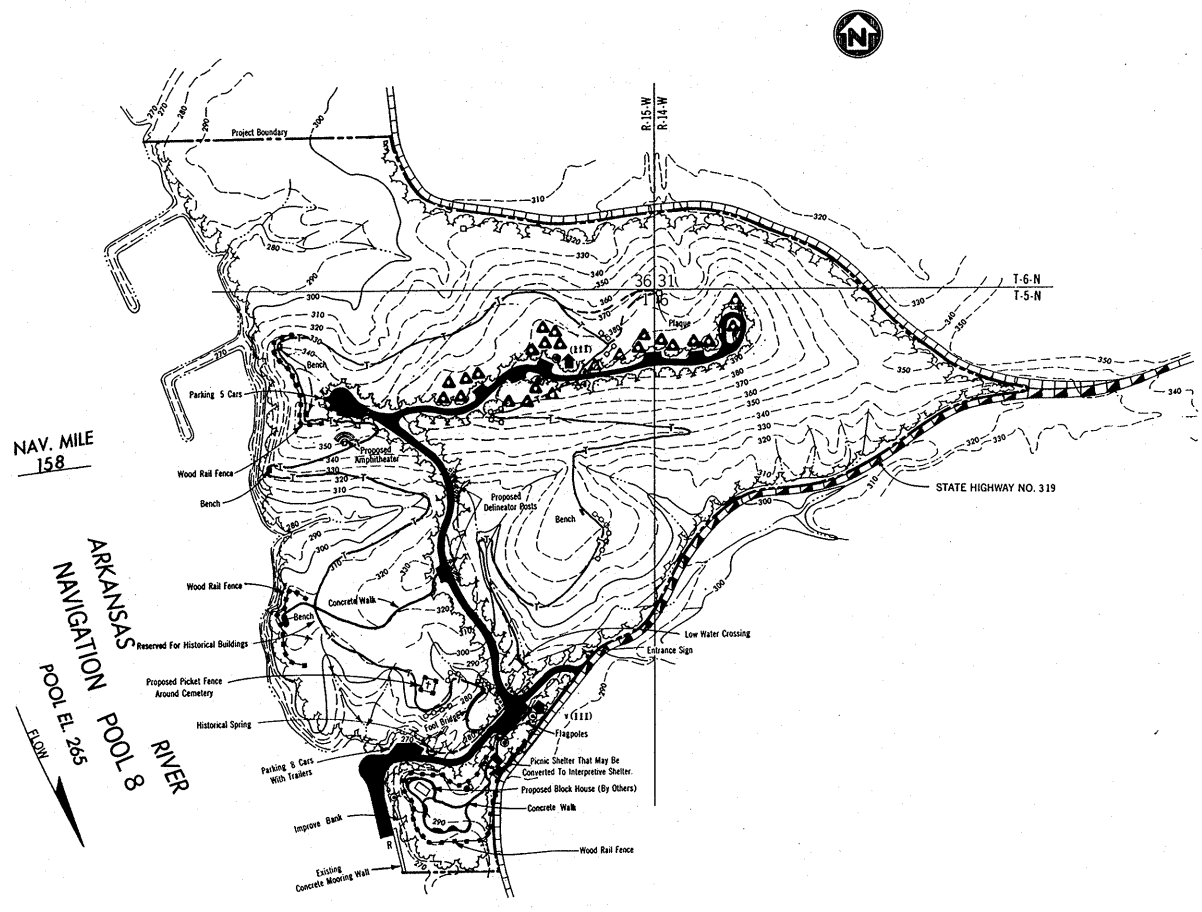
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIRE PLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8
CADRON SETTLEMENT PARK

SCALE OF FEET

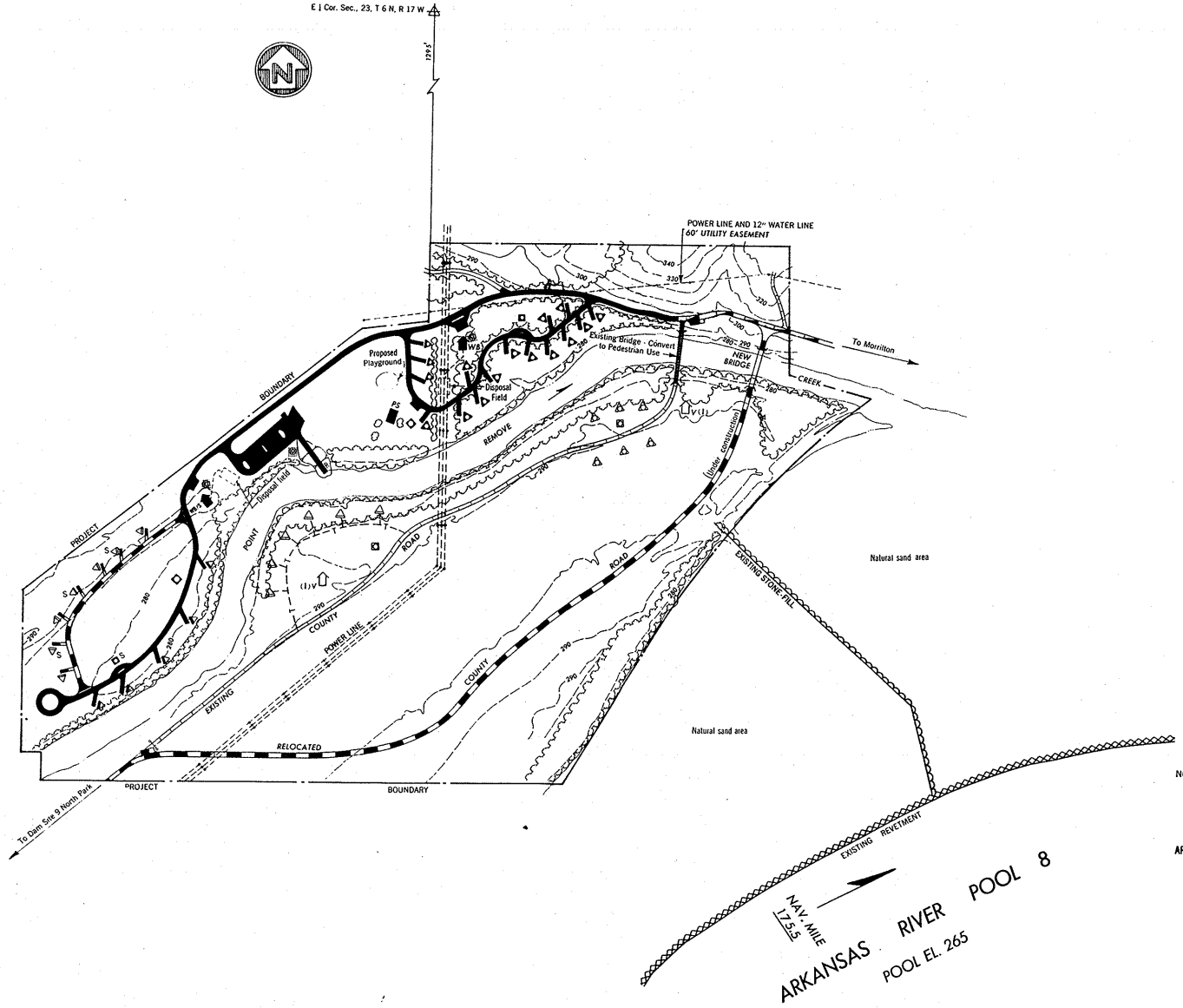
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
FIREPLACE		
REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
WEIGHT SCALE, STONE		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 23, 24, 25, AND 26, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8

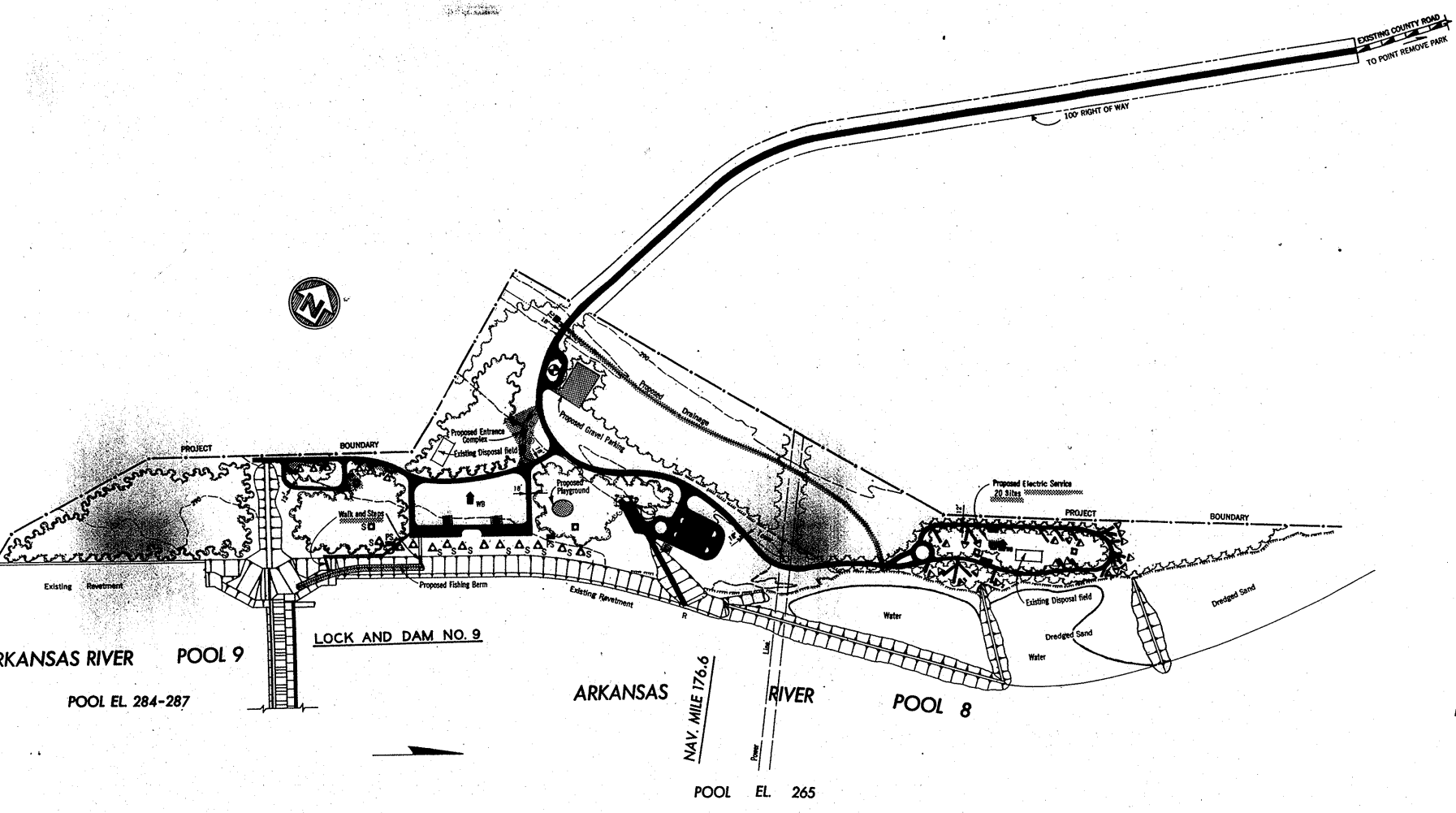
POINT REMOVE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIRE PLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 26, 34 AND 35, T. 6 N., R. 17 W., CONWAY CO. ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSA

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

CHEROKEE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1

PLAT

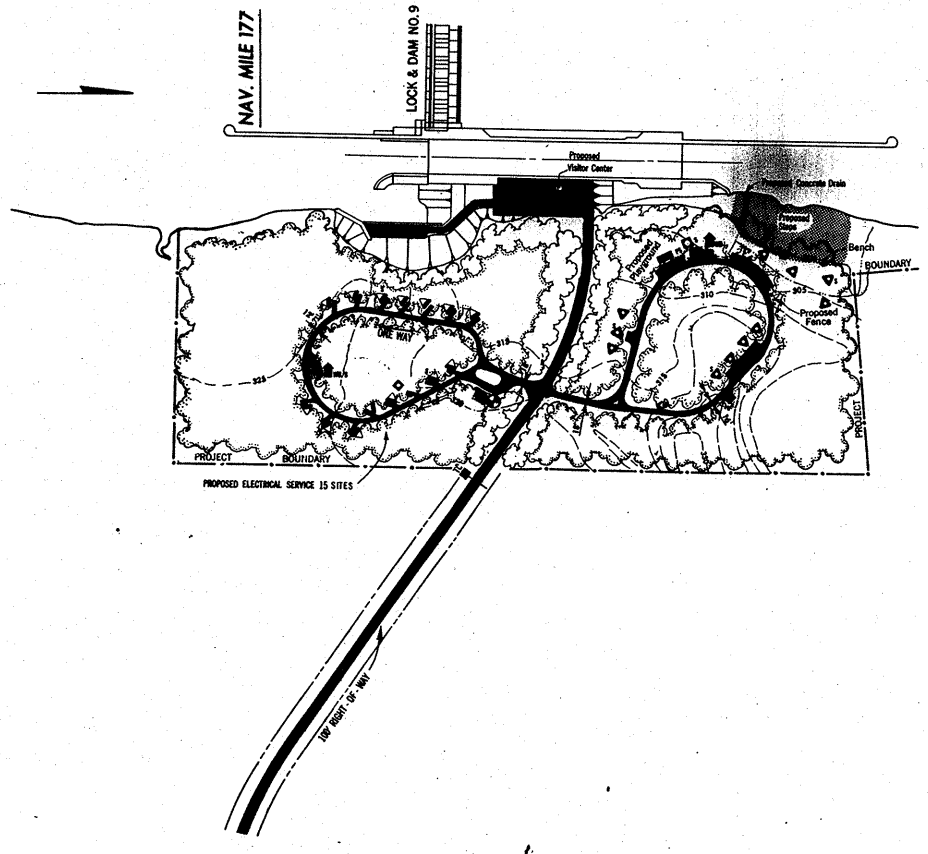
ARKANSAS RIVER

POOL 9

POOL EL. 284-287

POOL 8

POOL EL. 265



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		
COURTESY DOCK		
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER		
OTHER FEATURES		
TREES		
TRAFFIC COUNTER		
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 34 AND 35, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED · ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

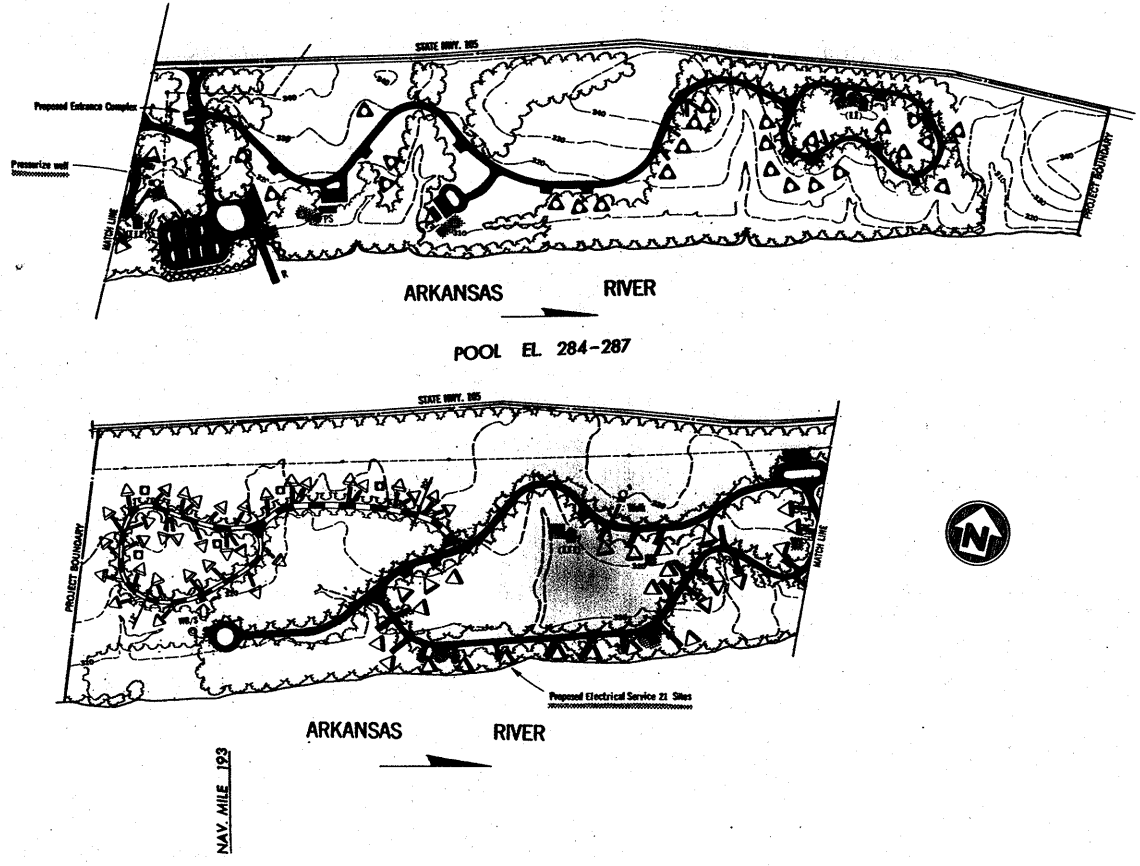
ARKANSAS RIVER SEQUOYA PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977



LEGEND

TIONAL FEATURES

FEAT.	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		
PICNIC SHELTER		
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COOKIE FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER		
OTHER FEATURES		
TREES		
TRAFFIC COUNTER		
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 15 AND 16, T. 6 N., R. 19 W., POPE CO.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9
SWEEDEN ISLAND
PARK

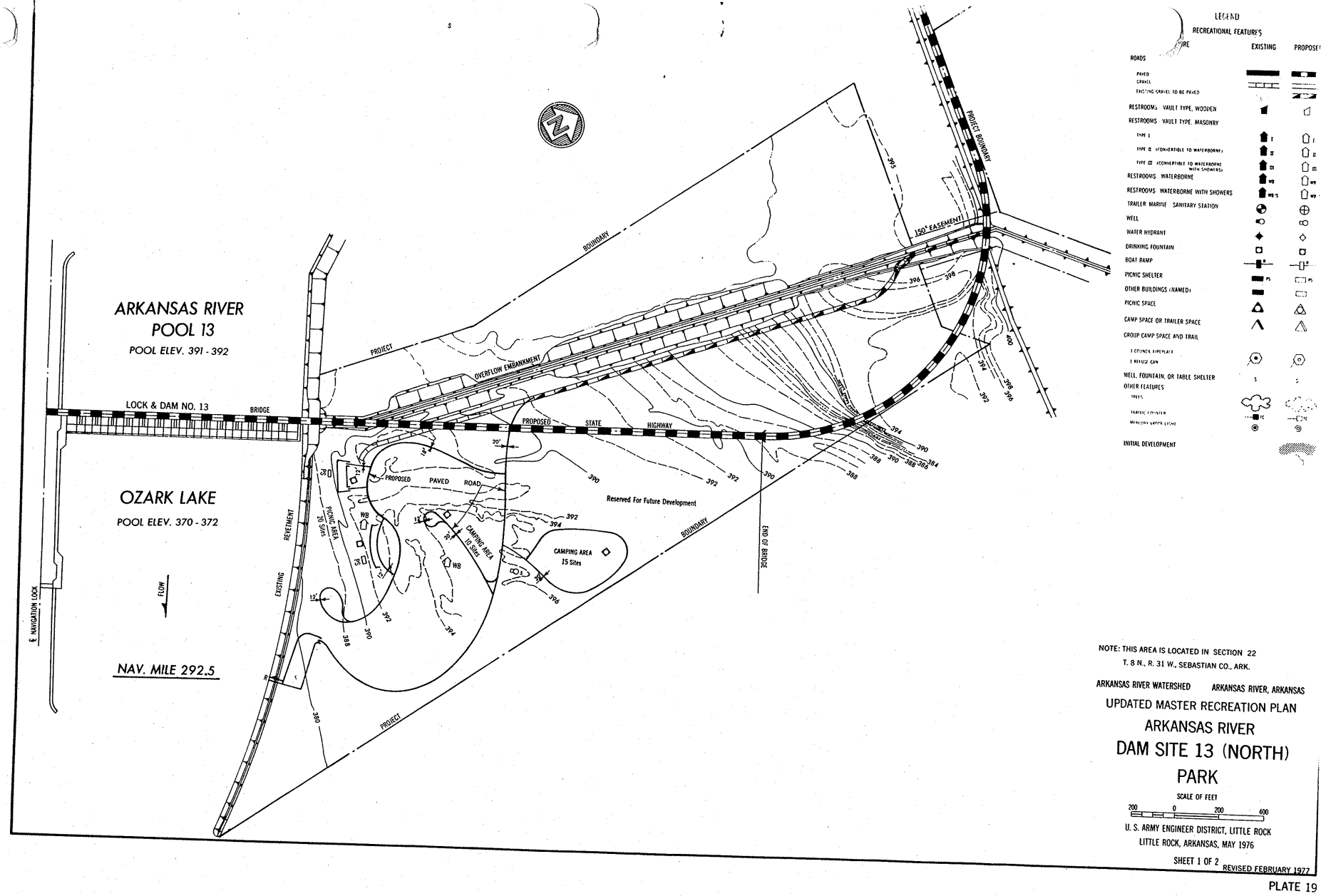
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

PLATE 17



NOTE: THIS AREA IS LOCATED IN SECTION 22
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

DAM SITE 13 (NORTH) PARK

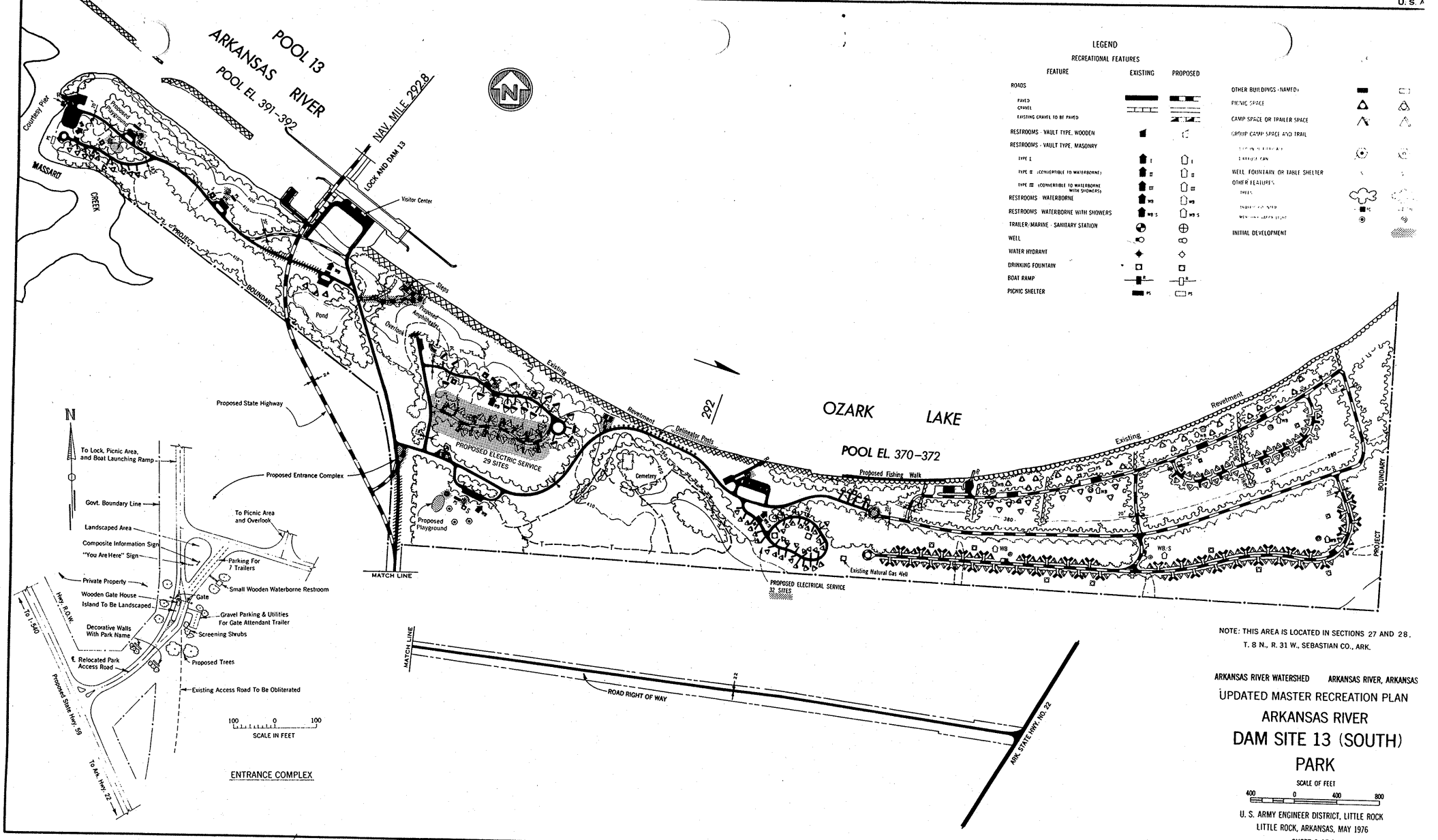
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

SHEET 1 OF 2 REVISED FEBRUARY 1977

PLATE 19



NOTE: THIS AREA IS LOCATED IN SECTIONS 27 AND 28, T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
DAM SITE 13 (SOUTH) PARK

SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

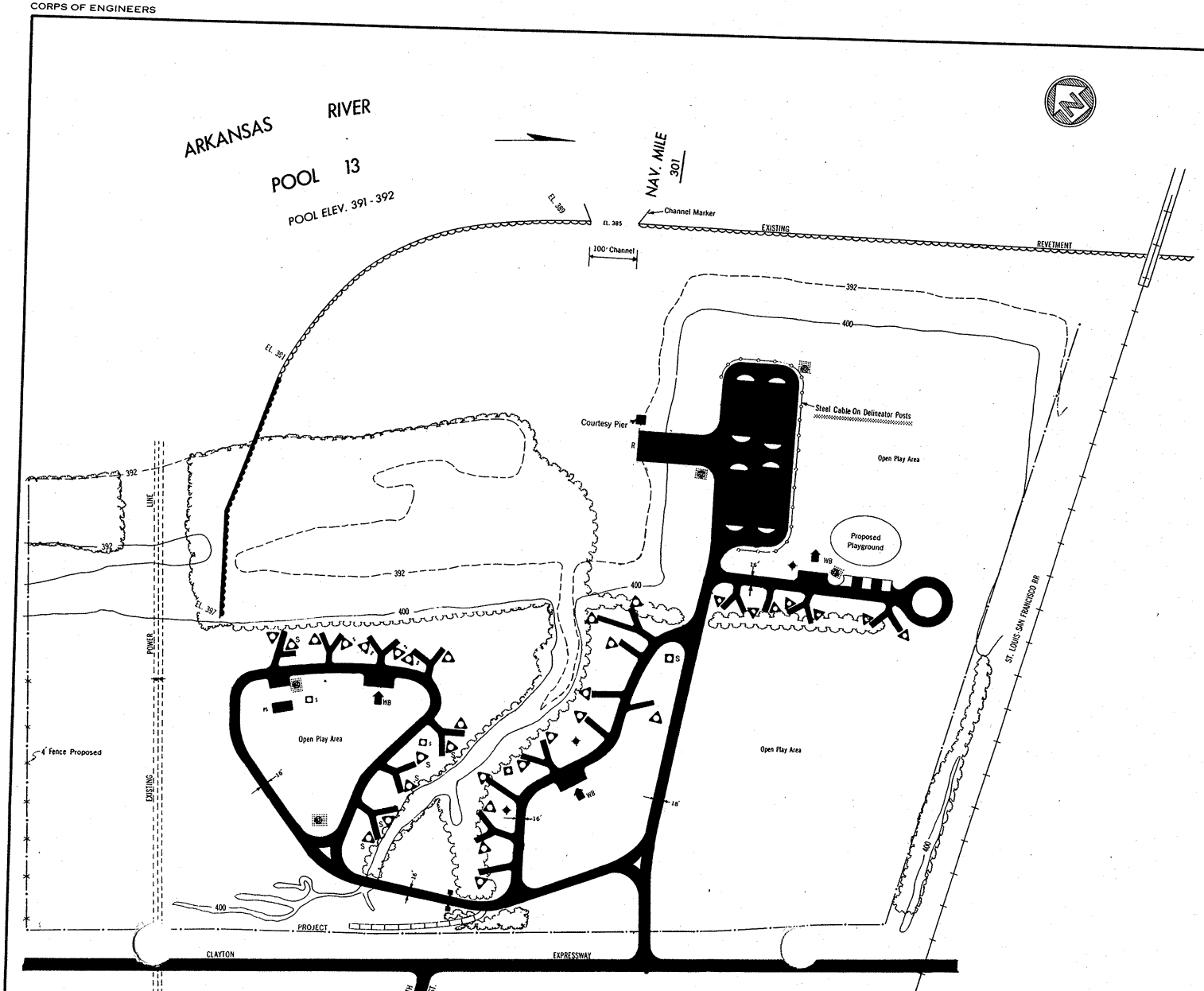
SHEET 2 OF 2

REVISED FEBRUARY 19

PLATE

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 26, T. 9 N., R. 32 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

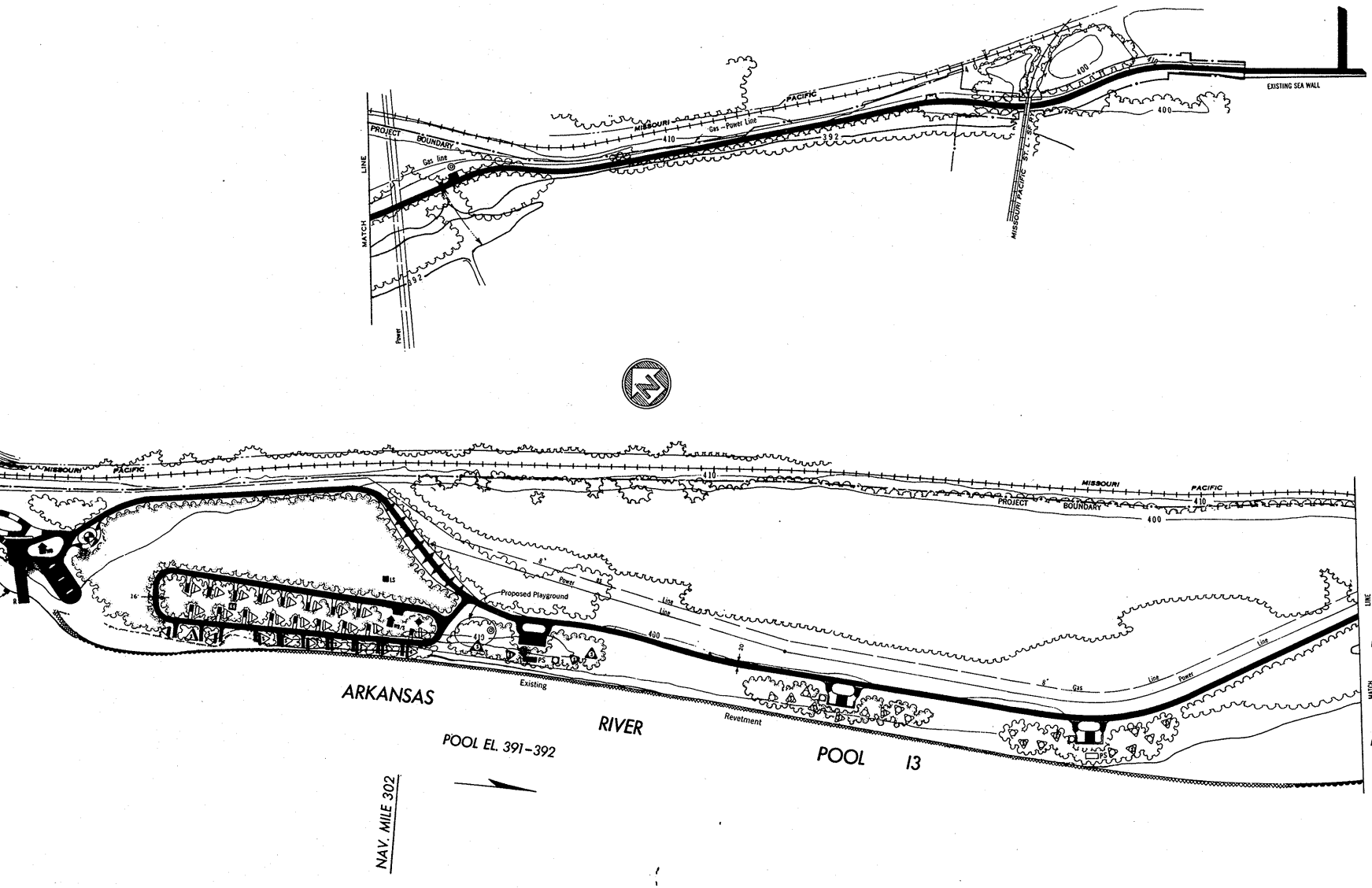
FORT SMITH PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DIST.

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 23, T. 9 N., R. 32 W., CRAWFORD CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

LEE CREEK PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

REVISED FEBRUARY 1977

SWDPL-R (SWLED-PV 25 Jun 76) 1st Ind
SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

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

17 SEP 1976

TO: District Engineer, Little Rock

Subject updated master plan is returned for revision in accordance with the following comments:

a. General.

(1) In view of increasing pressure on O&M fund resources, it is considered essential that appropriate measures be taken to concentrate development into fewer areas. Recognizing that the park areas presented in this plan are established, we feel that the remaining initial construction funds can best be utilized by enhancing four or five parks which, through the fee program, you consider to be the most economically feasible to operate and maintain. Accordingly, initial site layout development should be revised to reflect the above. The only items which should be proposed in the remaining areas initially, are those absolutely essential to health and safety of the visiting public.

(2) No facilities will be approved for initial development that are not included in the present approved budgetary estimates.

b. Para 1.04h. The discussion should be revised to indicate that the standards for controlling the emission of pollutants from certain motor vehicles are under jurisdiction of the Clean Air Act, Section 202, rather than the Solid Waste Disposal Act.

c. Para 4.03f. The discussion should address the public health significance of mosquitos as possible disease vectors.

d. Para 7.03. In addition, for construction of structures, Corps permits are also required for the excavation or discharge of dredged or fill material into this waterway. This should be discussed.

e. Para 7.04. Wording should be revised to state the thought intended.

f. Table 9-3. Proposed patios and fireplaces for picnic shelters should not be proposed for Corps management since they are not considered necessary to basic project needs.

SWDPL-R (SWLED-PV 25 Jun 76) 1st Ind
SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

g. Para 10.04. A concept plan for management of fish and wildlife resources should be provided.

h. Plate 19. This park should be called Dam Site 13 North to agree with paragraph 7.06b(13). Also, the title block should show that this is a future park.

FOR THE DIVISION ENGINEER:

Barry G. Rought

BARRY G. ROUGHT, P.E.
Chief, Planning Division

1 Incl (sext)
Dupe cy incl 1 wd

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

REPLY TO
ATTENTION OF:

SWLED-PV

25 June 1976

SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

Division Engineer, Southwestern

Design Memorandum No. 9, Updated Master Recreation Plan for Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13 is submitted for approval.

1 Incl (7 cys)
as

CHARLES E. DOWNS
LTC, Corps of Engineers
Acting District Engineer

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

REPLY TO
ATTENTION OF:

SWLED-PV

25 June 1976

SUBJECT: Arkansas River, Arkansas, Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13, Design Memorandum No. 9, Updated Master Recreation Plan for Navigation Pool Development and Management

Division Engineer, Southwestern

Design Memorandum No. 9, Updated Master Recreation Plan for Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13 is submitted for approval.

1 Incl (7 cys)
as

CHARLES E. DOWNS
LTC, Corps of Engineers
Acting District Engineer

VANGUARD OF FREEDOM
BICENTENNIAL 1775-1975
UNITED STATES ARMY

AMERICAN REVOLUTION BICENTENNIAL
1776-1976

PREVIOUSLY ISSUED AND CURRENTLY SCHEDULED DESIGN MEMORANDUMS

MURRAY LOCK AND DAM

Memo. No.	Subject	Date submitted or scheduled	Date approved
1	General	5 Aug 64	12 Oct 64
2	Access and Service Facilities	5 Jun 64	24 Aug 64
	Real Estate		
3-1	Dam Site, Work Areas, and Access Roads	10 Aug 64	20 Oct 64
	Supplement No. 1, Acquisition of Additional Land	4 Dec 64	28 Dec 64
	Supplement No. 2, Acquisition of Additional Land	27 Jan 67	28 Mar 67
	Supplement No. 3	4 Jun 69	10 Sep 69
Ltr Rpt	Access Roads	21 Apr 64	24 Jul 64
3-2	Pool Area and Public Use Areas	14 Dec 65	26 May 66
	Supplement No. 1, Additional Land for Clearing	23 Mar 67	12 Apr 67
	Supplement No. 2, Bigelow Public Use Area	26 Jun 67	16 Nov 67
	Supplement No. 3, Land and Acquisition Costs for Sediment Ranges	10 Sep 69	20 Nov 69
3-3	Dredging, Pools Nos. 7, 8, and 9 (Real Estate)	10 Jan 67	4 May 67
4	Clearing	9 Sep 66	9 Dec 66
	Supplement No. 1	9 Sep 68	5 Dec 68
5	Dredging, Pools Nos. 7, 8, and 9	19 Oct 66	10 Jan 67
	Relocations		
6	Little Rock Municipal Water Works	22 May 68	13 Jun 68
7	Railroad Crossing and Utilities for Overlook and Access Road	10 Mar 67	14 Apr 67
8	Sedimentation Ranges, Locks and Dams 7, 8, and 9	2 Jun 69	31 Jul 69
9	**Updated Master Plan (Murray, Toad Suck Ferry and Nos. 9 and 13)**	Jun 76	

Reference Design Memorandums

3 (L&D 6)	Construction Materials (David D. Terry Lake and Lock and Dam No. 7)	8 Nov 63	10 Jan 64
6 (L&D 5)	Master Plan (Recreation for Pools 5, David D. Terry Lake and Dam No. 7)	10 Nov 66	21 Aug 67
	Supplement No. 1, New Design for Overlook Facility, Lock and Dam No. 7	2 Mar 66	21 Apr 67
10 (PDM)	Preliminary Master Plan, Supplement No. 3 (Locks and Dams Nos. 5, David D. Terry (No. 6) and 7)	5 Mar 64	4 Jan 65
11 Part II (L&D 4)	Alterations to Drainage Structures	12 Apr 68	16 Jul 68

TOAD SUCK FERRY LOCK AND DAM

Memo. No.	Subject	Date submitted or scheduled	Date approved
1	General	2 Feb 65	3 Jun 65
2	Highway Bridge Crossing	23 Dec 64	18 Feb 65
	Real Estate		
3-1	Dam Site, Work Area, Quarry Area, and Public Use Area	10 Mar 65	2 Jul 65
3-2	Navigation Pool	9 Feb 66	17 Mar 66
	Supplement No. 1, Additional Land for Clearing	12 Apr 67	
3-3	Conway Water Supply	Jul 67	31 May 68
Ltr Rpt	Relocation of Arkansas State Highway 60 to Proposed Relocated Toad Suck Ferry	10 Sep 64	16 Dec 64
4	Construction Materials (Locks and Dams Nos. 8 and 9)	30 Apr 65	1 Jul 65
	Relocations		
8-1A	Arkansas State Highway 9 Bridge Over Arkansas River	14 Apr 66	5 Jul 66
	Supplement No. 1, Pier Protection	14 Sep 66	28 Sep 66
8-1B	Arkansas State Highway 60, Toad Suck Ferry	8 Oct 64	11 Dec 64
	Supplement - Realinement of State Highway 60 to Bypass the Lake	19 May 65	1 Jun 65
8-3	Conway Water Supply	18 Jan 67	14 Sep 67
10	Master Plan, Recreation (Locks and Dams Nos. 8, 9, and 13)	5 Feb 68	17 May 68
10(PDM)	Preliminary Master Plan (Supplement 4) (Locks and Dams Nos. 8, 9, and 13)	20 Oct 64	3 May 65
11	Clearing (Locks and Dams Nos. 8, 9, and 13)	10 Mar 67	28 Jun 67
12	Relocation Point Remove Creek Road, Conway County	3 Feb 75	24 Feb 75
13	Relocation Conway Water Supply	Jun 76	

Memo. No.	Subject	Date submitted or scheduled	Date approved
	Reference Design Memorandums		
3-3(L&D 7)	Dredging, Pools 7, 8, and 9 (Real Estate)	10 Jan 67	4 May 67
5	Dredging, Pools 7, 8, and 9	19 Oct 66	10 Jan 67
8(L&D 7)	Sedimentation ranges	2 Jun 69	31 Jul 69
11 - Part II (L&D 4)	Alterations to drainage structures	12 Apr 68	16 Jul 68
9	Updated Master Plan (Murray, Toad Suck Ferry and Nos. 9 and 13)	Jun 76	

LOCK AND DAM NO. 9

Memo. No.	Subject	Date submitted or scheduled	Date approved
1	General	5 Mar 65	9 Jun 65
	Supplement No. 1, Groundwater Effects	27 Dec 65	11 Jan 66
2	Access and Service Facilities	11 May 64	14 Jul 64
	Supplement No. 1, Resident Construction Office	26 Mar 65	11 May 65
	Revision to Supp 1 to Delete Bituminous Surfaces	15 Apr 65	14 May 65
	Real Estate		
Ltr DM	Access Roads	14 Oct 64	21 Dec 64
3-1	Dam Site, Work Area, Quarry Area, and Public Use Area	9 Apr 65	24 Jun 65
	Supplement No. 1, Borrow Area	8 Jul 65	28 Jul 65
	Supplement No. 2, Fee Title Limitation	3 Nov 65	9 Feb 66
3-2	Navigation Pool	9 Mar 66	25 Apr 66
	Relocations		
7-1	Dardanelle Highway Bridge - Arkansas State Highway 7	21 Jan 66	28 Apr 66
	Supplement No. 1 - Pier Protection	31 Aug 66	8 Sep 66
7-2B	Arkansas Louisiana Gas Company Pipeline	15 Sep 66	13 Oct 66
7-2C	Southwestern Bell Telephone Company - Telephone Line	3 Mar 65	16 Oct 65
7-2D	First Electric Cooperative Corporation - Power Lines	1 Mar 65	19 Mar 65
7-2F	Oklahoma-Mississippi River Products Line, Inc., Pipeline	21 Sep 66	13 Oct 66
7-3	Drainage Structure - Conway County Drainage and Levee District No. 1	13 Dec 67	28 Dec 67

Memo. No.	Subject	Date submitted or scheduled	Date approved
	Reference Design Memorandums		
11 Part II (L&D 4)	Alterations to Drainage Structures	12 Apr 68	16 Jul 68
5(L&D 7)	Dredging - Pools 7, 8, and 9	10 Oct 66	10 Jan 67
8(L&D 7)	Sedimentation Ranges	2 Jun 69	31 Jul 69
4(L&D 8)	Construction Materials (Locks and Dams 8 and 9)	30 Apr 65	1 Jul 65
10(L&D 8)	Master Plan (Locks and Dams Nos. 8, 9, and 13)	5 Feb 68	17 May 68
11(L&D 8)	Clearing (Locks and Dams Nos. 8, 9, and 13)	10 Mar 67	28 Jun 67
10 (PDM)	Preliminary Master Plan (Supp 4) (Locks and Dams Nos. 8, 9, and 13)	20 Oct 64	3 May 65
9	Updated Master Plan (Murray, Toad Suck Ferry and Nos. 9 and 13)	Jun 76	

LOCK AND DAM NO. 13

Memo. No.	Subject	Date submitted or scheduled	Date approved
1	General	30 Mar 65	9 Jul 65
	Supplement No. 1 - Provision for Future Highway Crossing	17 Sep 65	11 Oct 65
	Supplement No. 2 - Ground Water Effects	14 Feb 66	16 Mar 66
2	Access and Service Facilities	9 Nov 64	11 Dec 64
	Real Estate		
3-1	Lock and Dam Site, Work Areas and Access Roads and Public Use Areas	10 May 65	18 Aug 65
	Supplement No. 1 - Letter	3 Nov 65	26 May 66
Ltr DM	Right Bank Access Road	2 Nov 64	19 Jan 65
3-2	Navigation Pool	4 Nov 66	1 Feb 67
3-3	Van Buren Water Supply	19 Sep 68	24 Jun 69
3-4	Sediment Ranges	30 Mar 70	
4	Construction Materials	3 Aug 65	20 Sep 65
	Supplement No. 1 - Additional Source for Sand and Gravel	15 Sep 65	12 Oct 65
	Relocations		
8-1A	Missouri Pacific Railroad Company and Western Union Telegraph Lines, Fort Smith Bridge	29 Aug 66	21 Nov 66
8-1B	St. Louis-San Francisco Railway and Western Union Telegraph Lines at Van Buren Bridge	21 Apr 66	15 Sep 66
	Supplement No. 1 - Letter	16 Sep 66	12 Oct 66
8-1D	U.S. Highway 64-71 Bridge Over the Arkansas River	25 Aug 66	12 Dec 66
8-2B	Oklahoma Gas and Electric Company Power Lines	31 Aug 66	8 Dec 66
8-3A	Remedial Drainage, Crawford County Levee District	10 Jun 66	16 Sep 66
	Supplement No. 1 - Arkansas Louisiana Gas Company Lines - Crawford County	2 May 67	26 May 67
8-3B	Van Buren Water Supply - Lee Creek Weir	6 Feb 67	16 Jul 68
9	Sedimentation Ranges	23 Dec 69	30 Jun 70

Memo. No.	Subject	Date submitted or scheduled	Date approved
	Reference Design Memorandums		
7-1D (D.D. Terry L&D)	Relocations - Main Street & Broadway Bridges, Little Rock, David D. Terry Pool, and U.S. Highway 64 Bridge, Fort Smith, Pool No. 13	14 Sep 66	12 Dec 66
10 (L&D 8)	Recreation Facilities - Master Plan Locks and Dams Nos. 8, 9, and 13)	5 Feb 68	17 May 68
10 (PDM)	Preliminary Master Plan (Supplement No. 4, Lock and Dams Nos. 8, 9, and 13)	20 Oct 64	3 May 65
11(L&D 8)	Clearing (Locks and Dams Nos. 8, 9, and 13)	10 Mar 67	28 Jun 67
9	Updated Master Plan (Murray, Toad Suck Ferry and Nos. 9 and 13	Jun 76	

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Appendix B - Forest Management Plan	June 1976	
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PERTINENT DATA
LOCK AND DAM NO. 9

General	
Purpose of project	Regulation and Navigation
Location navigation mile	176.9
Navigation pool elevation, upper pool	284.0-287.0
Navigation pool elevation, lower pool	265.0
Streamflow at damsite, c.f.s.	
Estimated maximum flood of record (1927)	645,000
Maximum modified flood of record (1943) (1)	478,000
5-year frequency modified (1)	290,000
Discharge, 50 percent of time	17,000
Average flow (4)	37,450
Minimum modified flow (1) (2)	4,250
Dam	
Dam spillway section	
Gates, number and size	14 - 60' x 35'
Piers, width, feet	10
Total length, feet	980
Elevation of sills	253
Embankments	
Right embankment, length, feet (3)	100
Right embankment, crest elevation	297
Left embankment, length, feet	523
Left embankment, crest elevation	292
Lock	
Nominal size of chamber, feet	110 by 600
Design lift, feet	22
Elevation of top of lock walls	297

(1) Modified by all authorized lakes in Arkansas Basin.
(2) Minimum average monthly discharge.
(3) Esplanade only.
(4) From USGS Records Sep 1927-Sep 1975.

TABLE 2-2 (con.)

PERTINENT DATA
LOCK AND DAM NO. 13

General	
Purpose of project	Power Storage and Navigation
Location navigation mile	292.8
Navigation pool elevation, upper pool	391.0-392.0
Navigation pool elevation, lower pool	370.0-372.0
Streamflow at damsite, c.f.s.	
Maximum flood of record (1943)	850,000
Maximum modified flood of record (1943) (1)	516,000
5-Year frequency modified (1)	190,000
Discharge, 50 percent of time	13,000
Average flow (3)	31,700
Minimum modified flow (1) (2)	3,900
Dam	
Dam spillway section	
Gates, number and size	15 - 60' x 30'
Piers, width, feet	10
Total length, feet	1,050
Elevation of sills	363
Embankments	
Right embankment, length, feet	465
Right embankment, crest elevation	402
Left embankment, length, feet	3,210
Left embankment, crest elevation	395
Lock	
Nominal size of chamber, feet	110 by 600
Design lift, feet	22
Elevation of top of lock walls	402

(1) Modified by all authorized reservoirs in Arkansas Basin.
(2) Minimum average monthly discharge.
(3) From USGS Records Sep 1927-Sep 1975.

Revised January 1976

2.05. Pool operation. The navigation locks and dams discussed in this Master Plan have no flood control storage, therefore, they do not contribute to the flood control benefits of the McClellan-Kerr Arkansas River Navigation System. Water is impounded at the locks and dams to sustain a minimum channel depth of 9 feet for navigation and to provide sufficient water for operation of the locks. Adequate spillway gate capacities allow flood flows to pass with minimum local backwater effect.

ARKANSAS RIVER, ARKANSAS
McCLELLAN-KERR ARKANSAS RIVER
NAVIGATION SYSTEM

LOCKS AND DAMS - MURRAY, TOAD SUCK FERRY,
AND NOS. 9 AND 13

DESIGN MEMORANDUM NO. 9

UPDATED MASTER RECREATION PLAN FOR NAVIGATION
POOL DEVELOPMENT AND MANAGEMENT

SECTION I

INTRODUCTION

1.01. Project Authorization . Murray Lock and Dam, Toad Suck Ferry Lock and Dam and Locks and Dams Nos. 9 and 13 were authorized by the Rivers and Harbors Act of 24 July 1946 for navigation as part of a comprehensive plan for navigation, flood control and hydroelectric power generation. This act approved the multiple-purpose plan recommended in the report to 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. The Arkansas River project has been named the McClellan-Kerr Arkansas River Navigation System, honoring Senators John L. McClellan from Arkansas and Robert S. Kerr from Oklahoma. Lock and Dam No. 7 has been renamed Murray Lock and Dam in honor of a booster of the Arkansas River Project, Mr. Jack C. Murray. Lock and Dam No. 8 has been renamed Toad Suck Ferry Lock and Dam after the Toad Suck Ferry which operated at that site for many years.

1.02. Project purposes. The subject projects are major navigation units in the multiple-purpose plan of development of the McClellan-Kerr Arkansas River Navigation System. Additional benefits other than navigation are derived through use of the impounded waters and the shoreline for recreation, soil conservation, and fish and wildlife management.

1.03. Purpose of Master Plan. This master plan is a part of the continuing process to guide the preservation, enhancement, development, maintenance of the project, and to ensure that changes in policy, land use philosophy, and public need are reflected in the development and management of the project. This updated plan specifically includes Navigation Pools Murray, 8, 9, and 13 portion in Arkansas.

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 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 is being 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. This law, enacted on 7 June 1974, provides for the collection of fees at family camping and group camping areas having various classes of facilties as follows:

(1) Class A. Waterborne restrooms; potable water; showers (warm water); sanitary disposal station; campsites 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).

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

(3) 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.

(4) 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 camp sites, 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.

e. 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.

f. Safe Drinking Water Act (Public Law 93-523). This act amends the Public Health Service Act to assure that the public is provided with safe drinking water.

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

h. Solid Waste Disposal Act (Public Law 89-272). This act requires standards for controlling the emission of pollutants from certain motor vehicles, and authorizes a research and development program with respect to solid-waste disposal.

i. 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.

j. Executive Order 11593 of the President-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.

k. Executive Order 11752 of the President - 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.

SECTION II

PROJECT DESCRIPTION

2.01. Location. The project area includes the Arkansas River from navigation mile 125.4 to 205.5 (navigation pools 7, 8, and 9) and from navigation mile 292.8 to 308.4 (navigation pool 13), all of which is in the State of Arkansas These two reaches are separated by Dardanelle and Ozark Lakes.

2.02. General description.

a. Pool 7. The river valley in the vicinity of Murray Lock and Dam is generally narrow but at places extends to a width of approximately 4 miles. The area adjacent to the river valley is mountainous and intermittently covered with predominantly hardwood timber. Land near the damsite is highly populated and numerous residential developments are nearby. Suitable land situated in nonurban locations is largely used for agricultural purposes. Tributary streams in the area are nearly clear and have relatively flat gradients.

b. Pools 8 and 9. The portion of the Arkansas River included in navigation pools 8 and 9 is contained in a relatively narrow valley bordered by the Ozark Mountains on the north and the Ouachita Mountains on the south. The river meanders between these mountain ranges on a predominately flat alluvial plain. Numerous levees have been constructed along this area providing protection for lands largely used for agricultural purposes.

c. Pool 13. The pool is in a wide alluvial plain and oxbow lakes are frequent. Land near the dam on the right bank is suburban, on the left it is rural and is used principally for agricultural purposes, while that near the Arkansas-Oklahoma State line is highly populated and many residential and commercial developments are evident. Tributary streams in both areas are nearly clear and have relatively flat gradients in their lower reaches.

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 the project relatively quiet pools have been formed. Velocities during low and average flows vary from slow at the upper end of the pools to a near calm in the lower reaches and turbidity has been reduced. Several major tributaries which enter the navigation pools are nearly clear and normally have streambeds of gravel and rock.

b. Pool fluctuation. Navigation pools 7, 8, 9, and 13 are predicted to fluctuate as follows:

TABLE 2-1

POOL FLUCTUATION AT DAM (IMMEDIATELY UPSTREAM)

Navigation pool	Navigation pool elevation	Percent of time navigation pool exceeded	Elevation equaled or exceeded 10 years	50 years
7	249	3	255.6	259.7
8	265	13	279.0	283.0
9	284	100	295.6	300.1
13	391	90	399.0	403.9

POOL FLUCTUATION AT UPPER END OF POOLS
(IMMEDIATELY DOWNSTREAM FROM UPPER DAM)

Navigation pool	Elevation equaled or exceeded 2 years	10 years	50 years
7	272.6	278.0	282.2
8	289.4	294.7	299.3
9	310.4	315.6	320.8
13	416.7	419.2	428.2

c. Climate. The climate is moderate with an average annual temperature of about 62 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 approximately 46.5 inches. Snowfall is light and remains on the ground for short durations.

2.04. Project structures. Table 2-2 contains a summary of pertinent data on the project structures comprising Murray Lock and Dam, Toad Suck Ferry Lock and Dam, and Locks and Dams Nos. 9 and 13. All elevations shown in this table are feet above mean sea level.

TABLE 2-2

PERTINENT DATA
MURRAY LOCK AND DAM
(Lock and Dam No. 7)

General	
Purpose of project	Navigation
Location, navigation mile	125.4
Navigation pool elevation, upper	249.0
Navigation pool elevation, lower	231.0
Streamflow at damsite, c.f.s.	
Estimated maximum known flood (1927)	700,000
Maximum flood of record modified (1943) (1)	448,000
Maximum known flood modified (1927) (1)	355,000
5-year frequency modified (1)	300,000
Discharge, 50 percent of time	20,000
Average flow (2)	39,800
Minimum modified monthly flow (1)	4,600
Dam	
Dam spillway section	
Gates, number and size	14 - 60' x 33'
Piers, width, feet	14 - 10'
Total length, feet	980
Elevation of sills	218
Embankments	
Right embankment, length, feet	210
Right embankment, crest elevation	259
Left embankment, length, feet	2,550
Left embankment, crest elevation	252
Lock	
Nominal size of chamber, feet	110 by 600
Design lift, feet	18
Elevation of top of lock walls	259

(1) Modified by all authorized lakes in Arkansas Basin.
(2) From USGS Records Sep 1927 - Sep 1975.

Revised January 1976

TABLE 2-2 (con.)

PERTINENT DATA
TOAD SUCK FERRY LOCK AND DAM
(Lock and Dam No. 8)

General	
Purpose of project	Navigation
Location navigation mile	155.9
Navigation pool elevation, upper pool	265.0
Navigation pool elevation, lower pool	249.0
Streamflow at damsite, c.f.s.	
Estimated maximum flood of record (1927)	665,000
Maximum modified flood of record (1943) (1)	467,000
5-Year frequency modified (1)	295,000
Discharge, 50 percent of time	18,000
Average flow (3)	38,950
Minimum modified flow (1) (2)	4,400
Dam	
Dam spillway section	
Gates, number and size	16 - 60' x 24'
Piers, width, feet	10
Total length, feet	1,110
Elevation of sills	242
Embankments	
Left embankment, length, feet	380
Left embankment, crest elevation	279
Right embankment, length, feet	80
Right embankment, crest elevation	268
Lock	
Nominal size of chamber, feet	110 by 600
Design lift, feet	16
Elevation of top of lock walls	279

(1) Modified by all authorized lakes in Arkansas Basin.
(2) Minimum average monthly discharge.
(3) From USGS Records Sep 1927-Sep 1975.

SECTION III

PROJECT STATUS

3.01. Project development and operation chronology.

a. Locks and dams. The dates of construction of the locks and dams are as follows:

Name	Date Started	Date Completed
Murray Lock and Dam	April 1965	October 1969
Toad Suck Ferry Lock and Dam	December 1965	November 1969
Lock and Dam No. 9	January 1966	July 1969
Lock and Dam No. 13	April 1966	August 1969

b. Recreation facilities. Park development in navigation pools 7, 8, 9, and 13 is in the initial development stage. The status of park development as of 31 March 1976 is as follows:

(1) Navigation pool 7. Four parks have been partially developed in pool 7. Maumelle, Palarm, and Bigelow Parks were constructed by contracts during the period from October 1973 to August 1975. Cooks Landing was constructed with hired labor during the summer of 1975.

(2) Navigation pools 8 and 9. Eight parks have been or are being partially developed in pools 8 and 9 by construction contracts. Pontoon Park was constructed between August 1972 and November 1973. Point Remove Park was constructed between April 1973 and October 1974. Construction began on Toad Suck Ferry Dam Site, Cypress Creek, Dam Site 9 (North and South), and Sweeden Island Parks in June 1973, and they should be completed in June 1976. Cadron Settlement Park is under construction also. The contract for this park was awarded in January 1975 and should be completed by June 1976. Also construction is in progress on the new paved access road and Point Remove Bridge which will serve Point Remove and Dam Site 9 North Parks. This contract began in July 1975 and should be completed in June 1976.

(3) Navigation pool 13. Three parks have been partially developed in pool 13. Construction began in June 1973 for development of Dam Site 13, Fort Smith and Lee Creek Parks and was essentially completed in August 1975. Construction is in progress on the connection of the Fort Smith Park sewer system to the city of Fort Smith municipal sewer system. A contract has been executed for a similar connection at Dam Site 13 park.

3.02. Project development under way. Present construction activities consist of the initial basic development of the above-mentioned parks. This includes paved roads, parking areas, restrooms, wells, water distribution systems, picnic shelters, campsites, picnic sites, and boat launching ramps.

3.03. Scheduled project development. Additional recreational facilities are scheduled for construction during FY 78 and FY 79 to complete the initial development. These facilities include entrance complexes at Dam Site 13 and Maumelle Parks, additional paved roads and parking areas, picnic sites, campsites, electrical outlets at campsites, landscaping, restrooms, etc.

3.04. Future development. There are three parks that are reserved for future development under current cost-sharing policies. These parks are Fletcher Bend, pool 7; Cadron Creek, pool 8; and Holla Bend, pool 9.

SECTION IV

RECREATIONAL AND ENVIRONMENTAL RESOURCES AND FACTORS INFLUENCING RECREATIONAL DEVELOPMENT

4.01. Geological resources.

a. Soils and geological formations

(1) Pool 7. The area surrounding navigation pool 7 is of the Fourche Mountain physiography subprovince of the Ouachita Mountains. Parallel ridges are most characteristic of the province, but synclinal eminences and horseshoe ridges are common. Rock bluffs occur along both banks of the river but are less pronounced on the left, or north, bank. The predominant features of the ground surface is the formation of sandstone and shale, with shale being the most abundant. The immediate river valley is recent alluvium similar to that of the lower pools.

(2) Pools 8, 9, and 13. The area surrounding pools 8, 9, and 13 is of the Arkansas Valley physiographic subprovince of the Ouachita Mountains. Rocks comprising the uplands consist of sandstones and shales of Mississippian and Pennsylvanian age. Residual soils covering the upland bedrock formations range from highly plastic clays to sandy clay containing sandstone fragments. In general, the residual soils range from 1 to 10 feet in thickness. At several locations, unconsolidated Pleistocene terrace deposits overlie bedrock and constitute the upland soils. In other areas they are intermediate in elevation between the upland bedrock and the Arkansas River floodplain. These soils were formed prior to deposition of the Arkansas River alluvial sediments and are often more firm due to their greater age. The terrace deposits consist of interbedded gravel, clay, and sand, and are typically red. Locally, a well-sorted sand or gravel is found near the base of the terrace deposits, grading upward to silt or clay near the ground surface. Soils in the lowland of the Arkansas River flood plain were deposited subsequent to melting of continental glaciers in late Pleistocene time. In general, the soils of this deposit grade from sand and gravel at their contact with bedrock to heterogenous deposits of sand, silt, and clay at the ground surface. The materials comprising the alluvium tend to decrease in thickness upstream from an average of approximately 70 feet at Little Rock to approximately 40 feet at Fort Smith. The lowlands are typified by natural levees, oxbow lakes, and ridge and swale topography.

b. Special problems. The alluvial deposits were subject to rapid erosion during high river stages. Extensive bank stabilization measures have been taken to develop and maintain the desired 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.

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 a budget submission for cultural resource considerations. This act allows up to one percent of project funds to be allocated for identification and management of cultural resources. Consideration is being given to have training sessions on identifying and managing the cultural resources in the Little Rock District. This training will be for lake managers in the field as well as selected employees of the District Office.

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 Institution and Michael P. Hoffman, in 1965, surveyed the Ozark Lake area for the National Park Service. In 1968, Michael P. Hoffman of the University of Arkansas Museum surveyed pools 7, 8, 9, and 13 for the National Park Service. This survey investigated 19 sites in this reach of the river, and it was recommended that 7 of these sites be further investigated. These 7 sites are discussed briefly in the following paragraphs:

(a) Hudson site. This site is located within the Maumelle Park in pool 7 on a low natural levee. It appears to have had a dominant Late Ceramic Stage occupation as evidenced by considerable shell tempered pottery. The survey report recommended extensive testing of the site to gain knowledge of the Late Ceramic Stage in the area.

(b) New Toad Suck Ferry site. This site is on a high terrace on the east bank of the Arkansas River in pool 8 immediately north of the Toad Suck Ferry which was in operation prior to completion of the Highway 60 Bridge over Toad Suck Ferry Lock and Dam. The survey report recommended that this site also be investigated to gain knowledge of the Late Ceramic Stage in the area. It is located on privately owned land.

(c) Nutt site. This site is located on a peninsula of land between the north side of the Fourche LaFave River and the south side of the Arkansas River in pool 7 on privately owned land. An examination of the midden present at the site revealed evidence of Early Ceramic to Historic occupation. Further investigation of this site was recommended to gain knowledge of its dominant Late Ceramic occupation.

(d) Cadron Creek site. This site is located within Cadron Creek Park. Midden deposits and a few clay-tempered sherds were found on this site. The site should be further tested to determine its potential and learn more about the Early Ceramic stage in the area.

(e) Galla Swamp and Galla Rock sites. These two sites are located within Sweeden Island Park. Further testing of this site was recommended to reveal knowledge of the Archaic Stage of the area. It is likely that much of the park has archaic aboriginal debris on it.

(f) Point Remove site. This site is located on privately owned land adjacent to Point Remove Creek southwest of Morrilton, Arkansas. An important mound group is located at this site. The dominant occupation appears to be a mixture of late Caddoan and Middle Mississippian.

(g) Massard Creek Mouth site. This site is located on Dam Site 13 South Park on a high bank adjacent to Massard Creek. Evidence of Archaic Stage occupation was discovered during the survey. The area should be tested to determine whether more extensive excavations are warranted.

(2) Plans for protection and preservation. There were no major findings discovered in the park sites, however, it was recommended that it would be well to have more extensive investigations made. Funds have been requested in the budget to continue the program of archeological resource identification and protection on the Arkansas River. 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) Archeological survey at Van Buren Water Supply Relocation, Lee Creek, Arkansas. In the winter of 1974 and 1975, the Arkansas Archeological Survey conducted an archeological survey of the Van Buren water supply relocation site. Based on the archeological information known about the area, the survey rated the Lee Creek Valley a potentially rich area for archeological resources. Fourteen sites were located with testing being conducted on four sites. One of the sites was declared to be eligible for inclusion on the National Register of Historic Places. Projectile points recovered indicated that Archaic Hunters utilized the valley and later the woodland culture inhabited the area. Another contract was let in December 1975 to the Arkansas Archeological Survey to excavate the significant National Register site and to further test the additional sites. The final report has not been completed at the time of this writing, but preliminary findings reveal most of the information has been destroyed by erosion and flooding.

(4) Effects on recreational development. Field personnel are encouraged to be alert for possible archeological resources and to report any findings so that proper consideration will be given these resources. Particular attention will be given to areas having construction activities.

c. Historical resources.

(1) Inventory. Executive Order 11593 signed on 13 May 1971 sets out a policy for the Federal Government to provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the Nation. The Little Rock District has made an inventory of historic sites along the Arkansas River in Arkansas. Several archeological sites were identified as well as one historical archeological site. The description of that site follows:

(a) Cadron Settlement. The name Cadron Settlement was applied to a vaguely defined area extending several miles upstream and downstream from the mouth of Cadron Creek on both sides of the Arkansas River near navigation mile 155. The area was settled as early as 1808 and was the first white settlement in Central Arkansas. Judging from an old river map, Cadron Creek at one time entered the Arkansas River at Cadron Settlement, also knows as Old Cadron. This would have made it a focal point during early days of river transportation.

(b) Cadron was the site of a French-Indian trading post in the 1770's. By 1816 the postal route from St. Louis to Hot Springs and thence to Natchitoches, Louisiana, crossed the Arkansas River at Cadron Settlement. A post office was established at Cadron Settlement in 1818, was visited by the botanist, Nuttall, in 1819, and the 1820 census showed a population of 717. The settlement was considered for the capitol of Arkansas Territory, became the seat of Pulaski County in 1820 and the county seat of Conway County in 1825. The Military Road leading from Little Rock, Arkansas, to Fort Gibson, Oklahoma, crossed Cadron Creek at Cadron Settlement. The town was abandoned in 1831. The State of Arkansas was admitted to the Union in 1836. In 1834 a party of Cherokee Indians being transferred to Oklahoma during the Trail of Tears Era landed at Cadron. A malignant type of cholera broke out and a large number of the Indians died and were buried there. Later the town was revived and in 1858 Cadron was a station on the Butterfield mail route from Memphis to San Francisco. Activity in the settlement declined with the establishment of the Little Rock-Fort Smith Railroad in 1874 and today there are no historic buildings on the site.

(c) A survey and assessment of the archeological resources of Cadron Settlement, Arkansas, dated February 1974, has been made by the Arkansas Archeological Survey. This survey and assessment resulted in 15 separate excavations made to various depths based on areas found during surface explorations. The artifacts in possession of the State Archeologist, consist of ceramic sherds of the 1795 to 1840 era, 696 glass fragments mostly of recent origin, firearms parts, fragments of pipes, and many hand-wrought nails.

(d) Cadron Settlement is listed on the National Register of Historic Places and the development of the area is being coordinated with the State Historic Preservation Officer.

See pg. 10 of booklet "Cadron Settlement Arkansas".

(e) The Faulkner County Historical Society has been granted permission to reconstruct the "blockhouse" which existed in the area during the early 1800's. The Society proposes to construct the "blockhouse" at their expense and upon completion donate it to the Corps of Engineers. The blockhouse was used as a trading post, as a residence, for defense purposes, and as a public gathering place. The blockhouse may have been destroyed by fire some time between 1819 and 1834. The design concept of the blockhouse is based primarily on the sketch made by Nuttall in 1819.

(2) Plans for protection and preservation. The Cadron area is being developed into a park and attempts have been made to avoid development in the park areas of most significant historical importance. Only foot trails are being provided into a portion of the known historical areas of the park. Other portions of the historical areas are being left undeveloped. Day use facilities are provided in areas of little or no historical significance . It is planned, in the future, to convert the picnic shelter to an interpretive center containing displays of artifacts found in the area. This center is to be managed by the Faulkner County Historical Society.

(3) Effects on recreational development. The recreational development of Cadron Settlement Park is to have a historical theme. Rustic and native materials are used in construction where possible.

4.03. Environmental resources.

a. Topography.

(1) The Arkansas River begins high in the Rocky Mountains of Colorado, descends the eastern slopes of the Continental Divide, and flows through the breath taking Royal Gorge on its long journey to the Mississippi. Between the Arkansas-Oklahoma State line and Murray Lock and Dam, the Arkansas River drops 142 feet in elevation.

(2) Most of the terrain in the park areas is generally flat to mildly undulating and is subject to inundation during high river stages. Recreational development has been accomplished with proper consideration of the flood potential, and flood frequencies are carefully considered during park planning.

b. Vegetation. Bottomland hardwood trees are the major natural vegetation in the project area. Cypress trees grow in the old oxbow lakes along the river and oak, hickory, tupelo gum, ash, holly, pecan, cottonwood, willows, and river birch are found along the project. The lower land elevations in the river valley are generally used for agriculture and the upper elevations are usually forested. The park areas generally have sufficient vegetation for shade, but in areas that need shade, trees have been planted to enhance their recreational potential. Trees have also been planted around the locks and dams. The developed portions of the parks have been cleared of under brush.

c. Scenic qualities. There are many sand beaches along the river. Many miles of pleasure boating and sightseeing are offered by the river. There are many mountains and low hills located a short distance from the river on either side which offer a very scenic vista from the river. Each navigation lock has an observation platform to allow visitors to view the structure and boats locking through. These observation platforms will be replaced in the future by visitor centers.

d. Water quality. Historically, the Arkansas River has been a "polluted" stream. Even before cities and industries grew up along its banks the river was unfit due to "natural pollution," primarily silt and dissolved salts from natural upstream sources. As a result of the completion of the project the water quality of the river has been improved. Much of the silt settles out in the upstream lakes in Oklahoma, and the salt concentrations have been reduced by dilution through flow regulation. Studies were conducted in 1972 and 1973 by the Arkansas Department of Pollution Control and Ecology(1) of the water quality in the Arkansas River. This study states that inadequately treated sewage and industrial wastes from the cities along the river degrade the water quality. However, this report also states that the water quality above Murray Lock and Dam for about 30 miles is very good. The only large industrial discharges, the Arkansas Kraft Corporation paper mill near Morrilton, provides adequate treatment, and effects of this source of pollution are virtually undetectable. Facilities to encourage water body contact sports will not be provided until the water quality improves and meets the Arkansas State Health Department Standards.

e. Fish and wildlife.

(1) Fishery. The fishery resource of the Arkansas River is probably the most important recreational resource of the general area. Utilization of this resource has greatly improved upon completion of the project. Completion of the upstream components of the navigation system has caused the water to become less turbid due to silt being deposited in the upstream lakes and to stabilize bank and channel conditions. The fishery has further benefited by increased water levels and increased minimum flows. Substantial fisheries have developed immediately downstream from all locks and dams. The various species of catfish, white bass, and sauger are prevalent in the tailwater areas. The dominant sport fish species in the pools are largemouth bass, crappie, white bass, catfish and the recently introduced striped bass. The Arkansas Game and Fish Commission has stocked numbers of native game fish in the navigation pools.

(2) Commercial fishery. The commercial fishery of the McClellan-Kerr Arkansas River Navigation System has steadily increased in size and value since project completion. Numbers of commercial fishermen have increased from 279 in 1966; to 794 in 1972; to 1,305 in 1974.

(1) Water Pollution Control Survey of the Arkansas River Basin July 1974, Volumes I and II, by the Arkansas Department of Pollution Control and Ecology, Water Division.

The number of pieces of gear used by these fishermen increased from 2,567 in 1966 to 5,268 in 1974. The number of boats utilized by these fishermen in 1966 was 280, while 1,305 boats were recorded in 1974. The pounds of fish caught have been recorded in Table 4-1, while the value of these fish can be found in Table 4-2.

(3) Wildlife. Deer, quail, ducks, geese, squirrels, rabbits, wild turkey, and other species of birds and animals inhabit the area surrounding this portion of the river. The U.S. Fish and Wildlife Service allows managed hunting in the Holla Bend National Wildlife Refuge. This refuge was formed by the construction of the Holla Bend Cutoff across a large loop of the river which formed an island of about 4 square miles in area.

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

*Information gained from report furnished by the Arkansas Game and Fish Commission, Commercial Fishery Industry Survey, for the entire length of river in Arkansas.

TABLE 4-2

VALUE OF COMMERCIAL FISH CATCH, ARKANSAS RIVER

Species	Value (Dollars) 1966	1972	1974
Bowfin	-	$502	$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	4,940
Total	$280,395	$903,539	$2,126,225

(4) Preservation and enhancement. Fish and wildlife have benefited to some extent by the construction of cutoffs to improve the river alinement. The fishery habitat in the oxbow lakes formed by the cutoff is improved as flow in the lakes is slowed, silt is deposited and the water becomes less turbid, except during high flows. The partial islands thus formed offer some seclusion to game animals such as deer, raccoon, bear, and various species of birds.

(5) Summary. The provision of facilities and developments at project expense has improved access and facilitated use of project lands and waters. With increased use, a greater harvest of fish and wildlife resources has occurred. Net benefits from the project have been realized by the fisherman and the general recreationist. The sport fishery use has not been fully tabulated but indicators such as fishing license sales and visitation figures show an increase in sport fishing similar to the increase in the commercial fishery.

f. Mosquitoes. The prevalence of mosquitoes in the area under existing conditions is recognized by the U.S. Public Health Service. Development of the Arkansas River has not increased the vector problems. There is considerable recreation experienced in this reach of the river despite the mosquitoes and this use is expected to increase with the continued development of access roads to the river and the public parks.

4.04 Recreational resources.

a. Recreational development by the Corps of Engineers. To provide water access, picnicking, and camping activities, 14 parks have been

constructed in Murray, Toad Suck, and Pools 9 and 13. There are 3 parks planned for future development. The status of the parks is given in Section III. Similar recreational opportunities are also offered at 17 Corps of Engineers projects located within a radius of 65 air miles from these projects. The visitation to these competing projects is tabulated in Table 4-3.

TABLE 4-3

RELATED CORPS OF ENGINEERS PROJECTS

Project	Air miles from pools 7, 8, 9, or 13	Visitation in 1974
Dardanelle Lake	0	2,325,700
Ozark Lake	0	580,600
W.D. Mayo	0	86,600
David D. Terry	0	398,100
Nimrod	17	493,500
Robert S. Kerr	22	670,200
Blue Mountain	30	262,400
Pool 5	32	259,300
Wister	35	999,400
Tenkiller Ferry	38	5,001,700
Webbers Falls	40	235,200
Ouachita	42	2,231,000
Greers Ferry	45	3,423,600
Eufaula	48	4,562,400
Pool 4	48	593,800
Fort Gibson	52	4,083,100
Pool 3	62	186,000

b. Related recreational areas by others. There are 14 privately owned and operated marinas on the reach of the riverway between Murray Lock and Dam and the Arkansas-Oklahoma State line including those in Dardanelle and Ozark Lakes. These marinas are located at navigation miles 126.2 R, 131.4 R, 157.8 L, 174.1 L, 177.7 R, two at 208.2 L, 208.8 R, 222.0 R, 230.2 L, 293.2 R, 300.5 L, 301.4 R and 302.3 L (L indicates the left bank and R indicates the right bank as viewed looking downstream). Other significant water-oriented similar recreation facilities within 65 air miles of the project are: Lake Catherine and Lake Fort Smith State Parks and Lake Hamilton. Smaller lakes providing fishing and boating activities are Lake Conway and Lake Maumelle which are located near Little Rock, Lake Atkins located near Russellville, and Lake Overcup located near Morrilton. There are numerous National Forest campsites located within the Ozark and Ouachita National Forests and within 65 miles of the riverway which provide picnicking, camping, hiking, and related activities. Wooley Hollow, Petit Jean, and Mount Nebo State Parks located near Greenbrier, Morrilton, and Dardanelle, respectively, offer similar recreational activities. The city of North Little Rock has extensive recreational developments within its 1,575-acre Burns Park. Included in this development

are group picnic shelters, picnic sites, campsites, tennis courts, miniature golf, baseball fields, amusement rides, animal zoo, golf course, playground equipment, and trails. The city of Little Rock has plans to construct a continuous riverfront park from the Rebsamen Park golf course through Murray Dam Site Park up to the 1,300-acre Pinnacle Mountain State Park adjacent to the navigation pool 7. A variety of recreational facilities will be constructed including camping, hiking, picnicking, bicycle trails, etc., in this 1,600-acre city park. All of the above-mentioned projects will assist in satisfying a portion of the recreational demand of the area.

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. Nineteen of these areas are located within the counties which are included in the project zone of influence. They are briefly discussed in the priority listed in the plan as follows:

(1) Ozark Mountain Division.

(a) Crawford County, Site 1, and Washington County, Site 1. This area is a wide, deep forested valley and contains a creek. There are many species of trees in the valley and wildlife is abundant. There are remains of old settlements in the valley. On the north rim above the creek is a bricked-over cave built in 1895 for a temporary home and later used to enclose a moonshine still. Near this is a 20- to 30-foot waterfall of outstanding beauty. About 3/4 mile to the northeast are two graves of farm boys shot by soldiers at the close of the Civil War.

(b) Crawford County, Site 2, and Washington County, Site 3. The valley which includes this site is actually a small box canyon which looks like a big crevice with steep rock walls. At the base of the walls are shallow caves that appear to be good bluff-dweller sites. Along the rim are several waterfalls which drain the ridge top in wet weather.

(c) Franklin County, Site 1. This area is a wide heavily forested valley with a picturesque stream surrounded by a horseshoe of Ozark mountains. It is a remote, wild, unique and vast area that could provide tremendous recreation to hunters, hikers, backpackers, and nature lovers. The upper portions of the creek are extremely interesting because the solid rock bed contains many fossils.

(d) Johnson County, Site 1. This area is a very wild wooded land, mountainous, very rugged, steep and contains a creek. This area is perfect for all Ozark wildlife.

(e) Johnson County, Site 3. This small area consists mainly of a medium-sized creek flowing between high ridges and containing a spectacular falls. The water in the creek is a deep azure blue, apparently due to mineral content and it flows over a wide solid rock bed with 3- to 6-foot waterfalls and large pools.

(f) Johnson County, Site 4. This area contains a small stream flowing through a heavily timbered valley. The forest of the area is of considerable natural value. The area is large, has a good wildlife population and has tremendous recreation potential for hunting, hiking, and backpacking. A white oak tree in the area measured 11 feet in circumference and several beech trees had a circumference of about 9 feet. At the point where the road crosses the creek are found several smooth gigantic boulders on which are found many old and worn inscriptions. The carved inscriptions are hard to read because they are so badly worn, however, one date reads "1881" and two others read "1872."

(g) Johnson County, Site 5. This site is a remote wild valley with a creek at the bottom. For about 70 yards of the creek there is a solid rock bottom that is pitted and eroded to resemble a washboard without any gravel or rock around. There are remains of century-old cabins in the area.

(h) Pope County, Site 2. This area is a deep narrow canyon about 5-1/2 miles long and from 200 yards to 1/4 mile wide, encompassing a spectacular little creek with numerous 5- to 15-foot waterfalls flowing over solid rock. The surrounding forest is not of high quality. This area is significant for its scenic beauty alone.

(i) Washington County, Site 2. This area includes a waterfall and valley which begins with a spring-fed stream that tumbles 65 to 75 feet at the site of the falls. The wooded valley is filled with caves and the forest is an example of mature Ozark oak and hickory trees.

(2) Ouachita Mountain Division.

(a) Conway County, Site 1. This area is a deep heavily wooded gorge containing a continuously flowing stream with a spectacular 95-foot waterfall. There is a cave in the area which is a known bluff dweller shelter. The cave is about 90 feet wide, 50 feet deep and 35 feet high and near the entrance is an enormous boulder containing 8- to 10-inch deep cups ground into it by the bluff-dwellers, who used it as a place to grind grain and nuts. There remains evidence of extensive Civilian Conservation Corps work in the form of trails, bridges, etc., in the area.

(b) Conway County, Site 2. This unique area is comprised of parallel ridges forming seven hollows which are forested with large healthy trees. The ridges offer occasional beautiful views and are studded with big hump-backed rocks known as turtle rocks. There are two spectacular geological features in the area, the first is a natural bridge which

is said to be the highest in the State; the other is a rock wall resembling the face, eyes, nose, and mouth of a giant baboon. There is also a canyon with a cave and waterfall in this area. The cave is a natural bluff shelter with a dry earth floor which was no doubt used by Indians.

(c) Faulkner County, Site 1. This site is a valley containing two large mounds about 20 feet in diameter and about 3-1/2 feet in height. These mounds may bear archaeological significance and deserve further investigation.

(d) Logan County, Site 2. This area is a mountain which is one of the State's most outstanding natural areas. The mountain is a treasure house of beauty in the form of rocks, wildlife, plants, and unexcelled vistas of the surrounding countryside.

(e) Logan County, Site 3. This area is a small mountain stream of great natural beauty lying within a wooded valley.

(f) Pope County, Site 1. The site consists of a small group of spectacular sandstone outcrops containing deep ravines and caves and has an elevation range from about 480 feet to 820 feet. Indians have apparently been associated with this beautiful area since prehistoric times as pictographs are found in the area as well as several archeological sites.

(3) West Gulf Coastal Plain Division.

Grant County, Site 1. This is a 38-acre site of natural second-growth pine forest. It is habitat for the rare Red-cockaded Woodpecker and a Tickseed, a plant which formerly was known only from Bradley County. The site is important for conservation, nature study, and hunting. In 1971 this area was set aside as a sanctuary for the Red-cockaded Woodpecker.

(4) Mississippi Alluvial Plain Division

(a) Pulaski County, Site 1. This site is a 1,200-acre Bald Cypress swamp which is in a broad coastal plain depression as opposed to a channel scar or oxbow. Approximately 200 acres of the area are open water which is covered in summer with tall sedge and waterlilies. No evidence of logging is present.

(b) Lonoke County, Site 1 and Prairie County, Site 10. The area is one of the few remnants of the Grand Prairie which has not been plowed and placed in cultivation. It is located along a highway/railroad right-of-way for a distance of about 14 miles. Approximately 150 to 175 acres of this area is in natural vegetation. It has tremendous educational value.

(c) Pulaski County, Site 2. This site is a 350-acre cypress-fringed oxbow lake which is an old channel of the Arkansas River. It possesses

a moderate degree of naturalness, but it ranks high in scenic and recreational values. A major highway runs adjacent to it.

4.05. Population of the counties in which the project lies(1).

a. Total population. There was a population of 807,772 in 1970 residing in the 21 county zone of influence. Of this population, 80,226 reside in four counties in Oklahoma. It is expected that most of this population will visit W. D. Mayo and Robert S. Kerr pools or Tenkiller Ferry or Wister Lakes, therefore, this population is not considered. The population of the 17 counties in Arkansas had a population of 604,993 in 1960, therefore, the area experienced a 17 percent population increase during the 10-year period. In 1970, Pulaski County had the largest population of 287,189, Sebastian County was second with 79,237, and Perry County had the smallest with only 5,634. Between 1960 and 1970 every county in the 17 county area experienced an increase in population. Washington County had the largest increase with 38.7 percent and Lonoke County had the smallest with a 6.9 percent increase.

(b) Minorities. The population in Arkansas of this reach of the riverway consists of approximately 88 percent white, 11 percent black and less than 1 percent of other races. Other races present in the area are Indian, Japanese, Chinese, Filipino, and others. Pulaski County is 20 percent black and it contains 74 percent of all the black population in the area. Franklin County has the least black population, it being about 1 percent.

c. Age groups . The following averages represent the age groups within the zone of influence in Arkansas of pools 7, 8, 9, and 13.

Age group (years)	Percent of total 1970 population
0 to 10	19
11 to 20	19
21 to 34	20
35 to 49	16
50 to 64	15
65 and over	11

d. Occupations. The people located within the zone of influence are engaged in a multitude of occupations. The following table represents the mixture of these occupations.

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

TABLE 4-4

OCCUPATIONS, PERCENT OF TOTAL EMPLOYED
16 YEARS AND OVER

Occupation	Percent within the zone of influences
Professional and technical	13.5
Managers and administrators	9.5
Sales workers and clerical	24.3
Craftsmen	15.2
Operatives	15.9
Laborers	5.6
Farmers	2.4
Service workers	11.7
Private household workers	1.9

e. Major industries. The major industries in the zone of influence are listed in order of greatest employment as follows: manufacturing, education, construction, health services, agriculture, food sales and service, personal services, wholesale and retail sales, public administration, finance, transportation, repair services, legal services, utilities, welfare, and communications. As of March 1974, there were nine river terminals between Murray Lock and Dam and the Arkansas-Oklahoma State line. These terminals provide repair services, supplies, loading and unloading facilities for such commodities as coal, oil, stone, sand and gravel, and miscellaneous items. Four of these terminals have railroad connections, two have dry storage facilities, and one has an oil storage tank and is connected to a pipeline(1).

f. Per capita personal income. The 1969 per capita personal income varies from a low of $1,693 in Perry County to a high of $2,811 in Pulaski 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 Personal income 1969	Percent of families with income less than poverty level
Washington	$2,388	18.3
White	1,979	27.3
Logan	1,801	30.9
Franklin	1,801	30.0

(1) Source: Navigation charts, McClellan-Kerr Arkansas River Navigation System, March 1974, U.S. Army Engineer Districts, Little Rock and Tulsa, Corps of Engineers.

TABLE 4-5 (con.)

County	Per capita Personal income 1969	Percent of families with income less than poverty level
Crawford	$1,944	25.4
Sebastian	2,636	16.9
Scott	1,733	31.4
Conway	1,878	28.4
Perry	1,693	36.3
Yell	1,995	21.7
Pope	2,086	24.3
Johnson	1,876	30.0
Lonoke	1,941	33.0
Pulaski	2,811	17.9
Saline	2,391	14.0
Faulkner	2,086	20.2
Grant	2,205	18.0

g. Effects on recreational development. Recreational development is proportioned throughout the project based on the needs of the visitors and the total population. The facilities are planned to meet the needs of the visitors. Camping areas will be developed in a manner to permit charging only the minimum fee in most cases. Industrial development along the river has produced more jobs and has brought new families to the adjacent counties. The population of these counties should continue to grow and visitation to the parks should increase and recreational development will have to be expanded to meet the need of this increased visitation.

4.06. Accessibility.

a. Major highway access routes. Interstate Highway 40 is an east-west highway which passes through Memphis, Tennessee, and points east and continues westward through Little Rock. It parallels the north side of the Arkansas River to Fort Smith and continues on to Oklahoma City and points west. On both sides of the river there is a network of paved State highways and county roads which provide access to and across the river at several points. The only north-south highways through the area are Federal, State, and county roads. All the highways have a 55 miles per hour speed limit unless otherwise posted. Some of the parks are accessible only by graveled county roads from the paved highways, however most parks are accessible by paved roads.

b. Commercial transportation. Two airports that have scheduled interstate service serve the project area, one at Little Rock and the other at Fort Smith. Both of these airports offer scheduled passenger service and charter services. There are seven small airports between Little Rock and Fort Smith which are located at Conway, Petit Jean Mountain, Morrilton,

Russellville, Clarksville, Ozark, and Van Buren. Most of them have charter service available. Several buslines offer passenger, charter, and package express service, and connection service to all points within and without the project area. Railroad passenger service is provided by Amtrak at Little Rock. The railroad line runs from St. Louis, Missouri, through Little Rock, Texarkana, and on through Texas into Mexico.

c. Effects on recreational development. The Federal and State highways are considered adequate to serve the public needs for transportation to the parks located along the river. Additional improvements are needed to the county road system as paving of the graveled county roads would improve public access to the parks. The commercial transportation systems do not directly affect visitation to the project as the majority of the visitors live within approximately 50 miles of the river.

4.07. Effect of pool regulation on public use.

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

b. Concessions. At the present time there are no concessionaires located within the parks. The privately owned marinas mentioned in Section 4.04b are subject to damage by high river flows, swift currents, waves and wakes from passing boats and barges. Most marinas have been sited to reduce the impact of these damaging forces.

c. Water areas.

(1) River. The conditions of the river 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 high 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 river. At these flows river currents are swift, floating debris is heavy, and the channel marker buoys may be under water in some areas.

(2) Downstream of dam. At low flows, fishing immediately downstream of the dams 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 all dams.

4.08. Availability of funds for construction of recreation facilities. The current policy requires that any future recreational development will be cost-shared. Details of the requirements of Public Law 89-72 and our current program of development are given in Section 9.03. This policy may preclude further development of the parks after the initial development is complete.

SECTION V

RECREATION FACILITY REQUIREMENTS

5.01. Zone of influence. Recreational use surveys have not been made for the Navigation Pools formed by Murray Lock and Dam, Toad Suck Ferry Lock and Dam, Lock and Dam No. 9 and Lock and Dam No. 13. Recreation use surveys were completed in 1969 and 1971 at 3 parks in the reach of the river between Norrell Lock and Dam and Lock and Dam No. 4. These surveys indicate that approximately 80 to 83 percent of the visitors reside within 50 highway miles of the project. It is considered that the 50 highway mile limit should also be used for the primary zone of influence for the reach of the Arkansas River between Murray Lock and Dam and the Oklahoma-Arkansas State line. Additional visitors come from such metropolitan centers as Memphis, Tennessee; Dallas and Fort Worth, Texas; Shreveport, Louisiana; Tulsa, Oklahoma; and Kansas City, Missouri. Plate 1 identifies the 21 counties and the regional resources within the zone of influence.

5.02. Visitation record. The keeping of records of visitation to the project were begun in 1971. Visitation to the project has almost doubled since that time. Table 5-1 lists the total visitation to the project by Lock and Dam and this table displays the visitation growth. As several parks are presently under contract for completion of initial development, visitation should increase significantly during 1976 and 1977.

TABLE 5-1

RECORD OF VISITATION

Project	1971	1972	1973	1974
Murray Lock & Dam (No.7)	251,000	230,500	387,200	402,400
Toad Suck Ferry L&D (No.8)	63,400	63,300	71,000	134,300
Lock & Dam No. 9	75,500	91,700	150,800	136,700
Lock & Dam No. 13	188,100	249,900	184,400	198,500
Total	578,000	635,400	793,400	871,900

Note: The Murray Lock and Dam visitation figures do not include the visitation recorded at the Murray Dam Site Park which is located immediately downstream of Murray Lock and Dam. Visitation to that park and Murray Overlook was reported to be approximately 143,000 during 1974.

5.03. Present recreational use.

a. Source of data. The data source for determining present recreational use are observations and traffic counter readings made 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 for the months of June, July, and August as this is the period of greatest visitation. However, in 1974 fishing and sightseeing visitation greatly exceeded visitation for any other use in pools 7, 8, 9, and 13, as the parks in these pools had not at that time been developed for other activities. The highest months for visitation in 1974 occurred as follows:

Pool 7 - March, April, May, June

Pool 8 - July August, September, October

Pool 9 - July, August, September, October

Pool 13 - July, September, October, November

Therefore, the visitation which occurred during the four-month periods shown above will be used as the planning base in computing the average weekend day visitation. The average weekly visitation is computed by dividing the average monthly visitation by 4.4 weeks. Since approximately 60 percent of the visitation is on the weekend, the average weekend day visitation is computed by multiplying the average weekly visitation by 60 percent and dividing by 2. The computed average weekend day visitation is 6,862 for the base year 1974.

c. Participation rates. Recreation use surveys have not been made on this reach of the river. Consequently, it is considered that approximately the same participation rates which were experienced on the lower reach of the river should be used in this reach, also. However, these rates have been adjusted because there are five centers of population of 10,000 or more population in the upper reach of the river as compared to only two centers of population of equal size in the lower reach. The proximity of this population should cause increased participation in some activities.

TABLE 5-2

PARTICIPATION RATES

Activity	Summer	Annual
Boating	.20	.20
Fishing	.33	.33
Picnicking	.09	.07
Camping	.08	.07
Sightseeing	.53	.44
Hunting	0	.01
Other	.03	.02
Skiing	.03	.02
Swimming	.03	.02
Total	1.32	1.08

d. Activity occasion. An activity occasion is defined as the participation by one person in a given recreation activity during any portion of one day. One person may generate several activity occasions in a day. For example, a person may participate in picnicking, fishing and boating in one day. Therefore, that person generated three activity occasions at the project that day, and facilites 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. Likewise, the annual activity occasions are computed by multiplying the annual visitation by the annual participation rates. The 1974 average summer weekend day and annual activity occasions are given in Table 5-3.

TABLE 5-3

1974 ACTIVITY OCCASIONS

Activity	Summer weekend day	Annual
Boating	1,372	174,380
Fishing	2,264	287,730
Picnicking	618	61,030
Camping	549	61,030
Sightseeing	3,637	383,640
Hunting	0	8,720
Other	206	17,440
Skiing	206	17,440
Swimming	206	17,440

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 proven to be relatively reliable and conservative at 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.

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, Economic Activity in the United States.

The projected population and per capita personal income of the 17 counties in Arkansas in the zone of influence were multiplied to determine the total personal income. Since 1974 is the base year for the visitation projection, it is also the base year for the total personal income projection. The 1974 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 multiplier, 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 computed multipliers.

TABLE 5-4

POPULATION AND INCOME PROJECTIONS
17 ARKANSAS COUNTIES OF THE
21 COUNTY ZONE OF INFLUENCE
(1970 DOLLARS)

Year	Population	Per capita personal income	Total personal income (1,000,000)	Multiplier
1970	807,000	3,183	2,568.7	0.807
1974	855,400	3,720	3,182.1	1.000
1980	939,500	4,719	4,433.3	1,393
1990	1,094,400	6,107	6,683.5	2.100
2000	1,280,000	8,210	10,508.8	3.302
2010	1,500,000	10,790	16,185.0	5.086
2020	1,750,000	14,123	24,715.3	7.767

c. Projected activity occasions. The projected visitation to each of the lock and dam projects is given in Table 5-5. Also, Table 5-5 presents the projected visitation for the entire project.

TABLE 5-5

PROJECTED VISITATION

Project	1974	1980	1990
Projection factor	1.000	1.393	2.100
Murray Lock & Dam	402,400	560,000	845,000
Toad Suck Ferry Lock & Dam	134,300	187,000	282,000
Lock & Dam No. 9	136,700	190,000	287,000
Lock & Dam No. 13	198,500	277,000	417,000
Total	871,900	1,214,000	1,831,000

Project	2000	2010	2020
Projection factor	3.302	5.086	7.767
Murray Lock & Dam	1,329,000	2,047,000	3,125,000
Toad Suck Ferry Lock & Dam	443,000	683,000	1,043.000
Lock & Dam No. 9	451,000	695,000	1,062,000
Lock & Dam No. 13	655,000	1,010,000	1,542,000
Total	2,878,000	4,435,000	6,772,000

d. The projected activity occasions generated by the visitors on the average weekend day are given in Table 5-6 for Pools 7, 8, 9, and 13. These activity occasions are the basis for determining recreation facility requirements in Section 5.07. The projected annual activity occasions generated by the visitors are given in Table 5-7. These projections indicate the magnitude of recreational activity which is anticipated at the project.

TABLE 5-6

PROJECTED ACTIVITY OCCASIONS
AVERAGE WEEKEND DAY

		1974	1980	1990	2000	2010	2020
Projection factor		1.000	1.393	2.100	3.302	5.086	7.767
Average weekend day visitation		6,862	9,560	14,410	22,660	34,900	53,300
Boating	(.20)	1,372	1,910	2,880	4,530	6,980	10,660
Fishing	(.33)	2,264	3,150	4,760	7,480	11,520	17,590
Picnicking	(.09)	618	860	1,300	2,040	3,140	4,800
Camping	(.08)	549	760	1,150	1,810	2,790	4,260
Sightseeing	(.53)	3,637	5,070	7,640	12,010	18,500	28,250
Hunting	(0)	0	0	0	0	0	0
Other	(.03)	206	290	430	680	1,050	1,600
Skiing	(.03)	206	290	430	680	1,050	1,600
Swimming	(.03)	206	290	430	680	1,050	1,600
Total	(1.32)	9,058	12,620	19,020	29,910	46,080	70,360

TABLE 5-7

PROJECTED ANNUAL ACTIVITY OCCASIONS

		1974	1980	1990
Annual visitation		871,900	1,214,000	1,831,000
Boating	(.20)	174,380	242,800	366,200
Fishing	(.33)	287,730	400,620	604,230
Picnicking	(.07)	61,030	84,980	128,170
Camping	(.07)	61,030	84,980	128,170
Sightseeing	(.44)	383,640	534,160	805,640
Hunting	(.01)	8,720	12,140	18,310
Other	(.02)	17,440	24,280	36,620
Skiing	(.02)	17,440	24,280	36,620
Swimming	(.02)	17,440	24,280	36,620
Total	(1.18)	1,028,850	1,432,520	2,160,580

		2000	2010	2020
Annual visitation		2,878,000	4,435,000	6,772,000
Boating	(.20)	575,600	887,000	1,354,400
Fishing	(.33)	949,740	1,463,550	2,234,760
Picnicking	(.07)	201,460	310,450	474,040
Camping	(.07)	201,460	310,450	474,040
Sightseeing	(.44)	1,266,320	1,951,400	2,979,680
Hunting	(.01)	28,780	44,350	67,720
Other	(.02)	57,560	88,700	135,440
Skiing	(.02)	57,560	88,700	135,440
Swimming	(.02)	57,560	88,700	135,440
Total	(1.18)	3,396,040	5,233,300	7,990,960

5.05. Comparison of projections - Arkansas Statewide Comprehensive Recreation Plan for 1974.

There are 21 counties in the project zone of influence of which 17 are in Arkansas and 4 in Oklahoma. These 17 counties in Arkansas lie mainly in Planning Districts 4, 5, and 6. One county lies in each of Districts 1, 2, and 8. Recreational needs of the project area as stated in the Arkansas SCORP is determined by adding the county needs of the 17 counties and the minimum additional region needs of Districts 4, 5, and 6. These recreational needs are shown in Table 5-8 for each of the recreational activities of the project. The need for additional recreational activities is evident for all categories. Needs are defined as unsatisfied demands.

TABLE 5-8

RECREATION NEEDS AS STATED
IN THE 1974 ARKANSAS SCORP (17 COUNTIES)

Activity	Unit	1975	1980	1985	1990
Boating, sailing, skiing	Acres of water	1,464	1,476	1,706	1,994
Fishing	Acres of water	24,275	28,152	36,468	46,929
Picnicking	Sites	3,075	3,596	4,257	5,008
Tent camping	Sites	1,400	1,589	1,823	2,107
Trailer(RV) camping	Sites	196	226	265	309
Hunting	Acres of habitat	211,687	231,054	263,741	301,871
Swimming	Square feet of water area	561,871	656,839	799,409	975,609

5.06. Facility load and other design criteria.

a. General. The following criteria are applicable to the 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.

(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 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 weekend day. The picnic unit will consist of a concrete picnic table, grill or fireplace, paved parking for one vehicle, and trash receptable. 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 weekend day.

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

d. Swimming beach. Swimming in the Arkansas River is not approved by the Arkansas State Health Department, therefore, no swimming facilites have been provided.

e. 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. Also, one vault or waterborne restroom will be provided for every 2,500 other activity occasions on a normal summer weekend day. Restrooms will be constructed using Little Rock District standard designs. 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 mirror. The men's side has one water closet, a lavatory, a urinal, and a mirror. The masonry waterborne restroom with showers is approximatlely 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.

f. Launching ramps. In accordance with EM 1110-2-400, dated 1 September 1971, 1 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 in most pools, the proposed number of launching ramps are considered adequate for balanced park development.

g. Photographs of selected facilities. There are included at the end of this Section, photographs of selected facilities.

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 1974.

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 5-9 lists the facility requirements for Pools 7, 8, 9, and 13. Since the parks are new and visitation statistics are sketchy at this time, the proposed development has not been adjusted to properly balance the picnic and campsite demand. These facilities will be used as the need dictates at each park. Future updatings of this master plan will be based on more factual visitation surveys, and at that time the proposed campsites and picnic sites will be properly balanced.

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 flexible and should accommodate the recreational uses of the project until approximately the year 2010. At that time additional parks would be required to continue to meet the recreational demand.

TABLE 5-9

FACILITY REQUIREMENTS

	1974	1980	1990	2000
Group picnic shelters	3	4	6	9
Picnic units	62	86	130	204
Camp units	110	152	230	362
Launching lanes	22	30	46	72
Restrooms (waterborne)				
Camping	3	3	5	7
Other	4	5	7	11
Total restrooms	7	8	12	18

			Proposed	
	2010	2020	(1) Initial	(2) Total
Group picnic shelters	14	21	19	29
Picnic units	314	480	225	405
Camp units	558	852	175	511
Launching lanes	111	169	27	32
Restrooms (waterborne)				
Camping	11	17		
Other	17	26		
Total restrooms	28	43	22 WB 10 V	39 WB 19 V

(1) Initial = Existing development and proposed initial through FY 79.

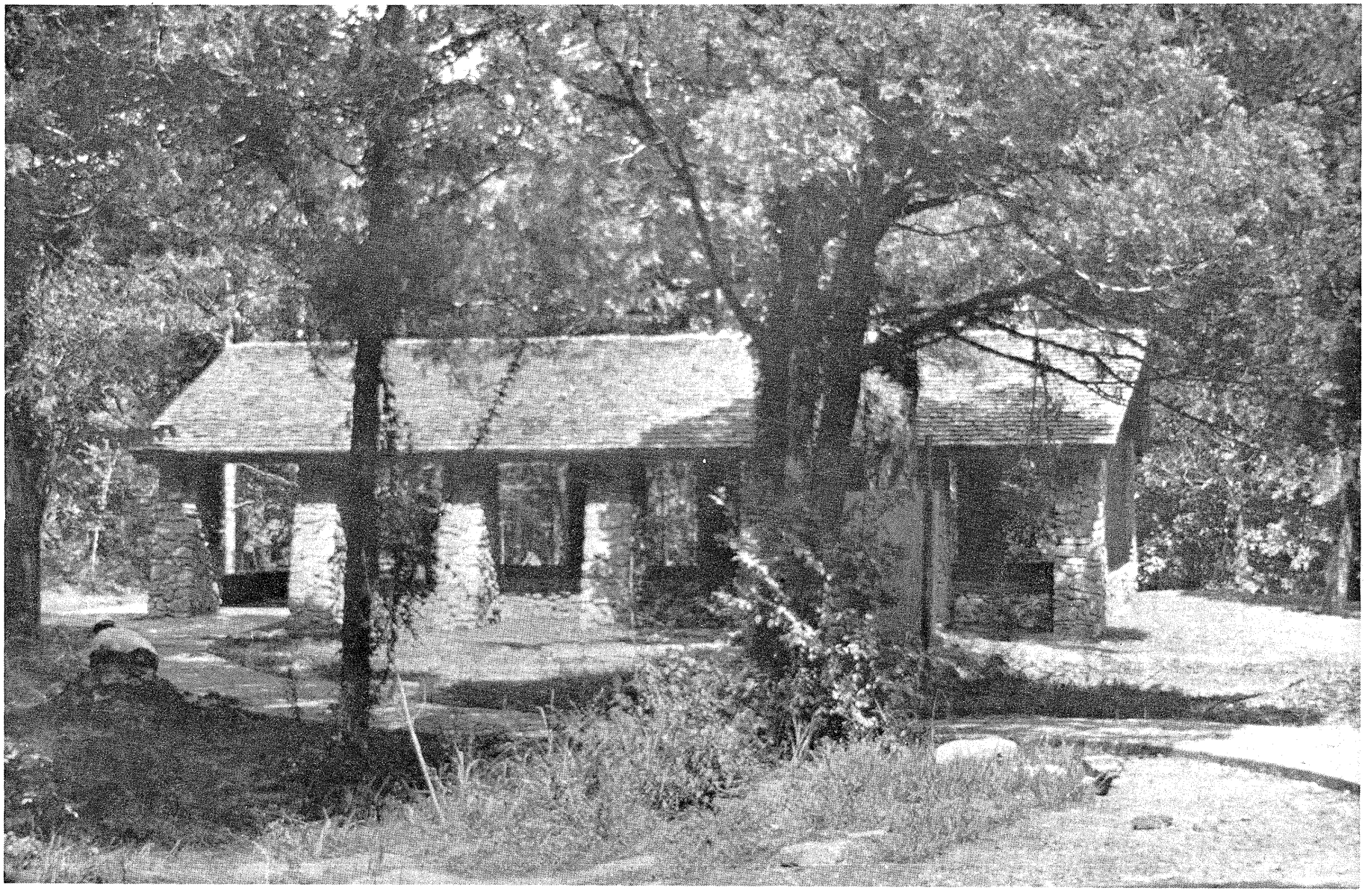
(2) Total = All development shown in this master plan.

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

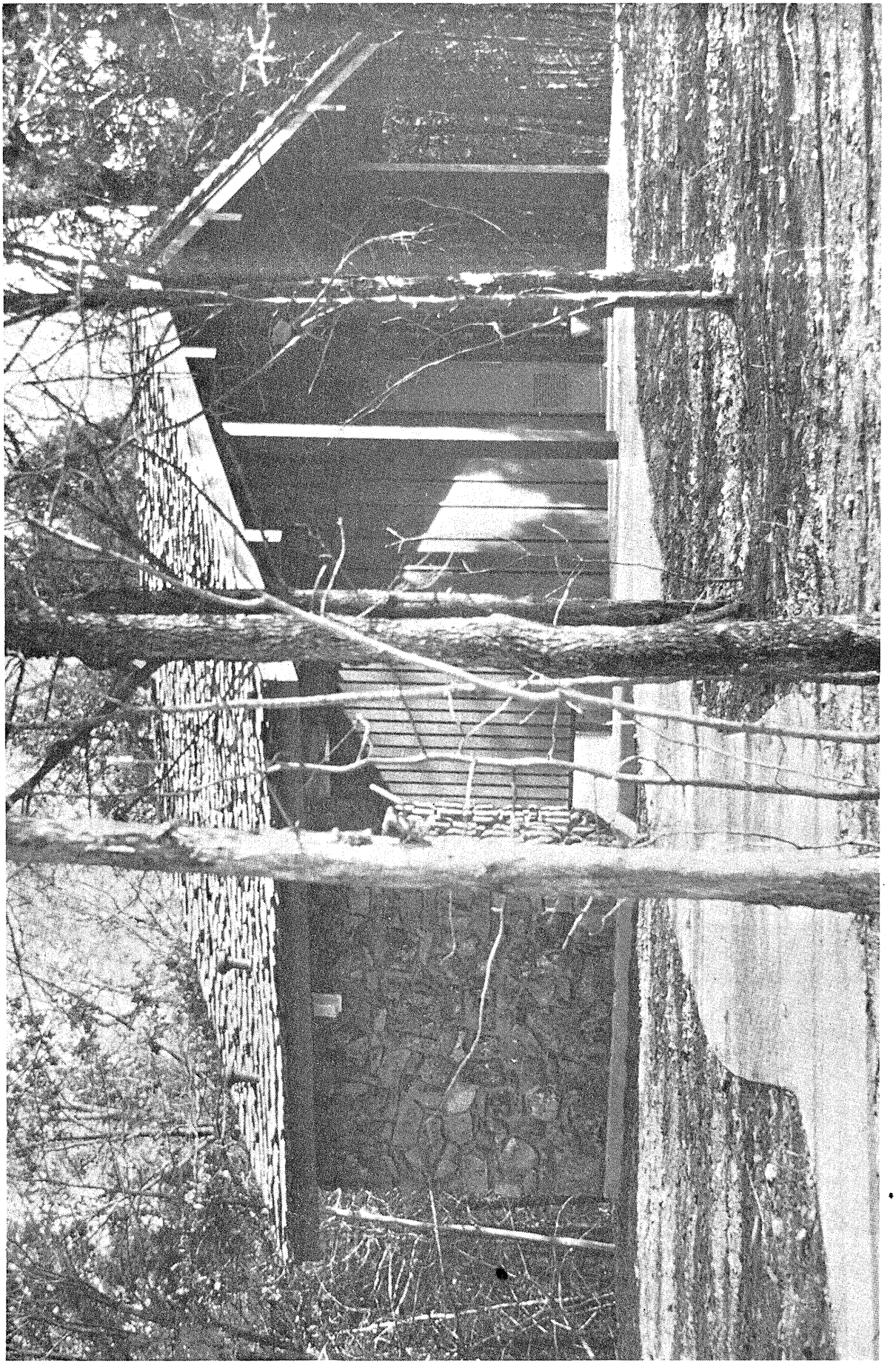
a. Water. At top of navigation pool, there are about 22,753 acres of water surface area available in the four navigation pools included in this master plan which cover a distance of approximately 95 navigation miles. According to the 1974 Arkansas Statewide Comprehensive Outdoor Recreation Plan, a stream or river will support 600 fishing activity occasions per year per mile. Also, a reservoir or lake will support 60 to 90 boating activity occasions per year, per acre, and 18 fishing activity occasions per year per acre. Since the Arkansas River is controlled as a series

of pools, the lake criteria should be used in determining its boating capacity. However, based on fishery production at similar projects, we estimate that the highly productive fishery on the Arkansas River will yield 44 pounds per acre. Assuming 1.5 pounds of fish caught per activity occasion the river will support 29 fishing activity occasions per year per acre. Thus the optimum annual fishing activity occasions equals about 22,753 by 29 or 659,837. Also, it would support 22,753 by 75 or 1,706,475 boating activity occasions per year. Thus, from Table 5-7 it can be seen that fishing pressure will reach optimum about 1992 and optimum boating use is estimated not to occur until after the year 2020.

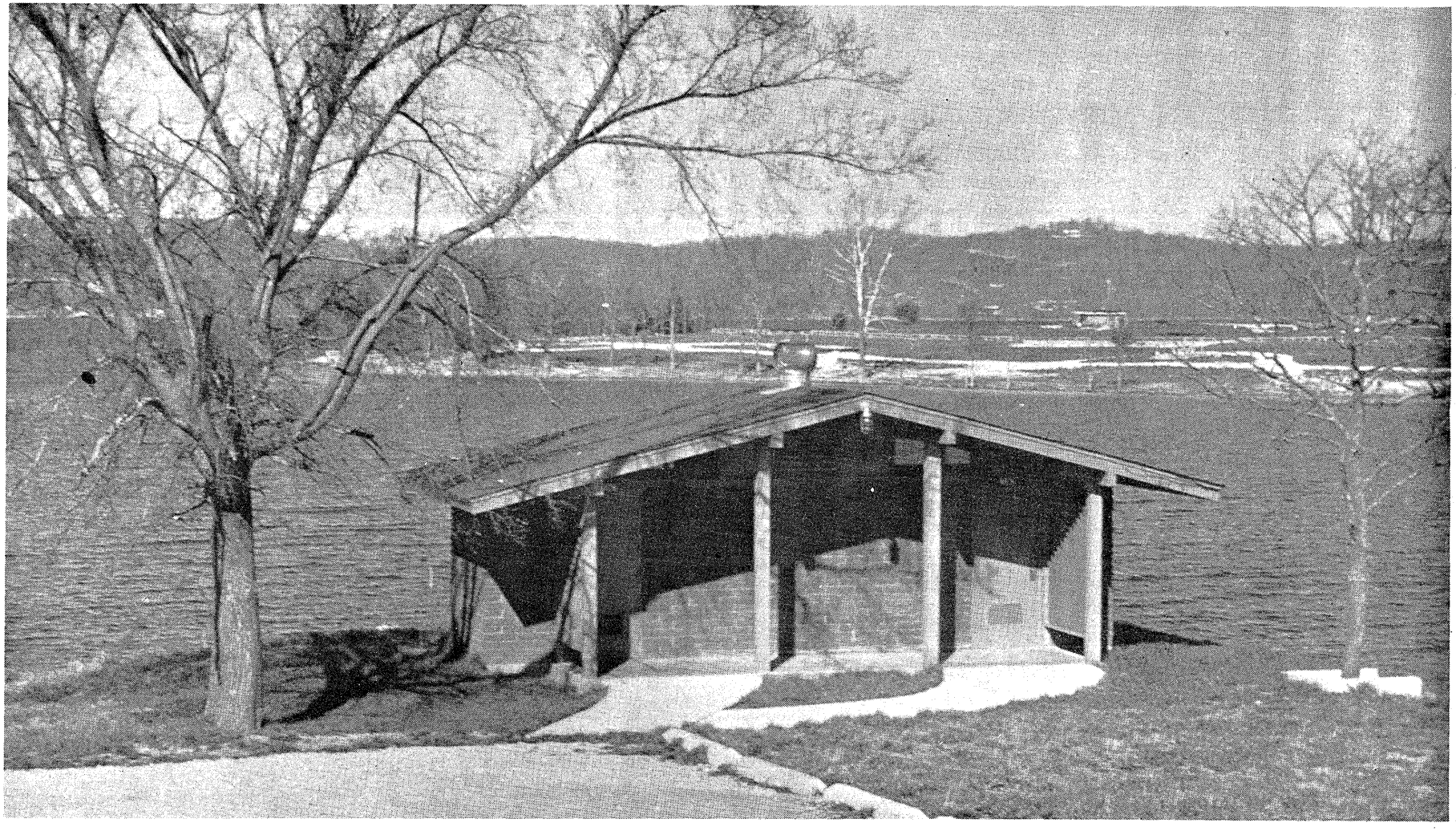
b. Project lands. There are 1,574 acres of land available within the parks for recreational activities. These lands are adequate for meeting the estimated recreational demand through the year 2010.



PICNIC SHELTER - CADRON SETTLEMENT PARK

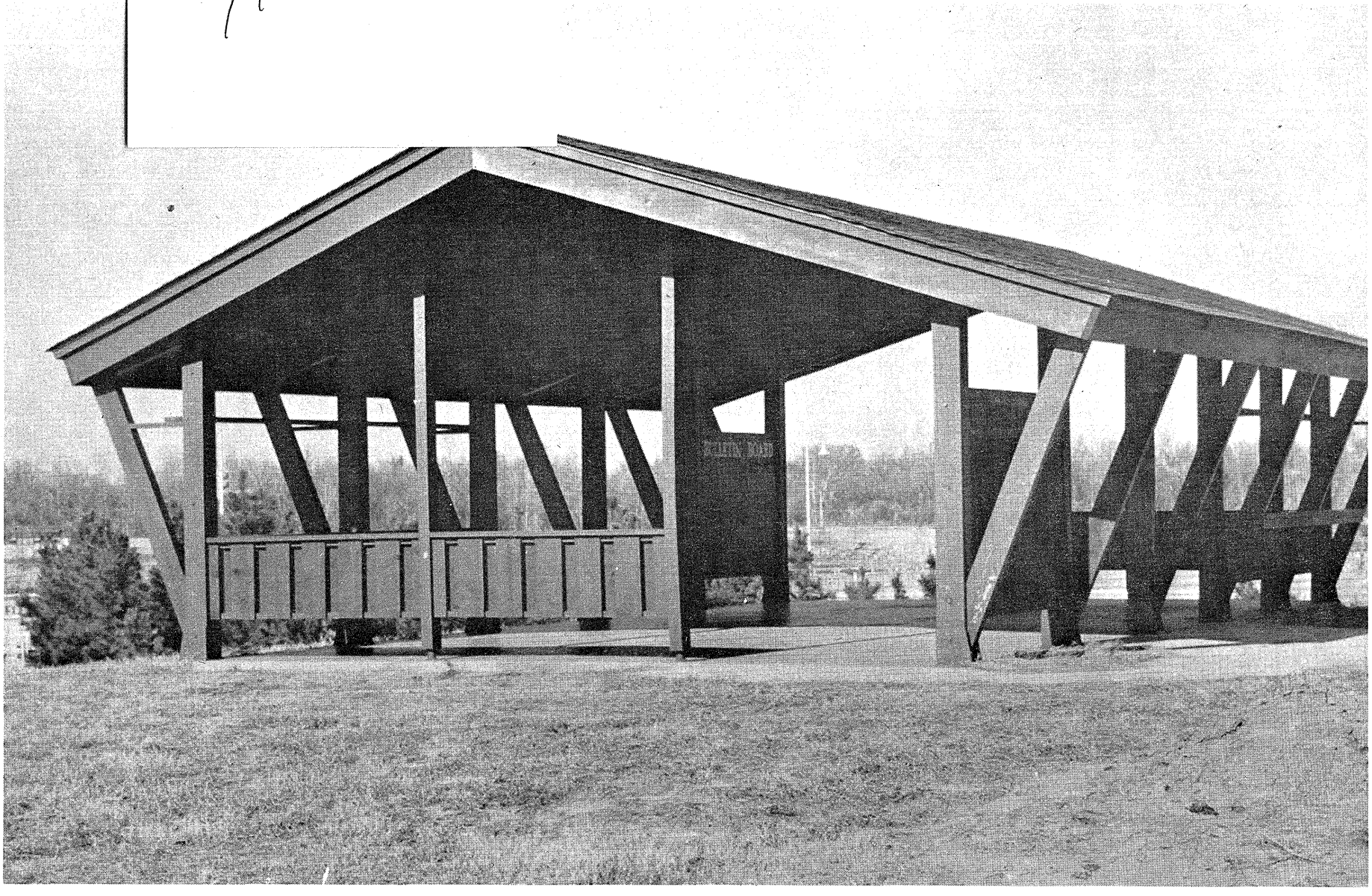


RESTROOM - CADRON SETTLEMENT PARK



RESTROOM - TYPE III

7157



TYPICAL GROUP PICNIC SHELTER

SECTION VI

COORDINATION WITH OTHER AGENCIES

6.01. Initial coordination. The original master plan was coordinated with interested local, State, and Federal agencies. Included were the city officials of Little Rock, North Little Rock, Conway, Morrilton and Fort Smith, Arkansas, and the Arkansas Game and Fish Commission, Arkansas State Health Department, and the Arkansas State Highway Department.

6.02. Subsequent coordination. The Mayors of the cities along the river were contacted in 1975 to determine if they would be receptive to cost sharing the development of additional recreational facilities in their vicinity. None of the Mayors contacted were receptive to the proposal. In addition, the Conway Chamber of Commerce and the Faulkner County Historical Society have expressed a desire to construct a historical blockhouse in Cadron Settlement Park and convey the completed improvements to the Government. A copy of a letter to this effect is included.

6.03. Correspondence. At the beginning of the updating of this master plan, letters were mailed to interested local, State and Federal agencies requesting their comments and recommendations. The following letters were mailed to the agencies listed. Replies have been received from several of the agencies and are included herein. All the replies have been reviewed and considered in preparation of this master plan.

6.04. **A-95 Clearinghouse coordination**. On 19 April 1976 a draft of the master plan was submitted to the Department of Local Services, State of Arkansas for review. On 11 May 1976, a reply was received from this state agency stating that the State Clearinghouse was in receipt of the master plan and that the proper State agencies had been notified of the availability of the document for review and that no comments has been received. A copy of this correspondence is included herein.

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

REPLY TO
ATTENTION OF:

SWLED-PV

18 July 1975

Our Environmental Resources Section is presently updating the Master Plans for Recreational Development and Management of Arkansas River Navigation Pools 1-6, and for Navigation Pools 7, 8, 9, and 13. These comprehensive plans will be used as guides in all recreational development, maintenance, and administration of Corps of Engineers project lands and resources.

Please review the inclosed project information folders and furnish any comments which you feel would affect these plans at your earliest convenience.

Sincerely yours,

D. R. RIPPEY
Chief, Engineering Division

1 Incl
As stated

List for letter SWLED-PV dated 18 Jul 75 transmitting project information folders on navigation pools 1-6 and 7, 8, 9, and 13

Honorable Dale Shelton
County Judge, Arkansas County
De Witt, Arkansas 72042

Honorable Walter Kaylor
County Judge, Crawford County
Van Buren, Arkansas 72956

Honorable Thomas W. Scott
County Judge, Conway, County
Morrilton, Arknasas 72110

Honorable Bonnie Zook
County Judge, Desha County
Arkansas City, Arkansas 71630

Honorable Jesse Carter
County Judge, Faulkner County
Conway, Arkansas 72032

Honorable Nickey Gilsinger
County Judge, Franklin County
Ozark, Arkansas 72949

Honorable Joe T. Henslee
County Judge, Jefferson County
Pine Bluff, Arkansas 71601

Honorable C. O. Blackard
County Judge, Johnson County
Clarksville, Arkansas 72830

Honorable Charles Green
County Judge, Lincoln County
Star City, Arkansas 71667

Honorable Buster Tritt
County Judge, Logan County
Paris, Arkansas 72855

Honorable Malvin U. Brand
County Judge, Perry County
Perryville, Arkansas 72126

Honorable Ermil Grant
County Judge, Pope County
Russellville, Arkansas 72801

Honorable B. Frank Mackey
County Judge, Pulaski County
Pulaski County Courthouse
Little Rock, Arkansas 72201

Honorable Glenn Thames
County Judge, Sebastian County
Fort Smith, Arkansas 72901

Honorable Robert Hodges
County Judge, Yell County
Danville, Arkansas 72833

Honorable Billy Free
Mayor of Dumas
Dumas, Arkansas 71639

Honorable Austin Franks
Mayor of Pine Bluff
Pine Bluff, Arkansas 71601

Honorable Carleton E. McMullin
City Manager
City of Little Rock
Little Rock, Arkansas 72201

Honorable Edward Powell
Mayor of North Little Rock
North Little Rock, Arkansas 72114

Honorable Walter Dunaway
Mayor of Conway
Conway, Arkansas 72032

Honorable Thomas H. Hickey
Mayor of Morrilton
Morrilton, Arkansas 72110

Honorable Ray Riley
Mayor of Fort Smith
Fort Smith, Arkansas 72901

Honorable Allen Ray Toothaker
Mayor of Van Buren
Van Buren, Arkansas 72956

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

REPLY TO
ATTENTION OF:

SWLED-PV

18 July 1975

Our Environmental Resources Section is presently updating the Master Plans for Recreational Development and Management of Arkansas River Navigation Pools 1-6, and for Navigation Pools 7, 8, 9, and 13. These comprehensive plans will be used as guides in all recreational development, maintenance, and administration of Corps of Engineers project lands and resources.

Please review the inclosed master plans and project information folders and furnish any comments which you feel would affect these plans at your earliest convenience.

Sincerely yours,

D. R. RIPPEY
Chief, Engineering Division

2 Incl
As stated

List for letter SWLED-PV dated 18 Jul 75 transmitting plans for updating master plans for recreational development and management of Arkansas River navigation pools 1-6 and 7, 8, 9, and 13 and project information folders.

Mr. Joseph Rumburg, Regional Director
United States Department of the Interior
National Park Service
Southwest Region
P. O. Box 728
Santa Fe, New Mexico 87501

Mr. Kenneth E. Black, Regional Director
U.S. Fish and Wildlife Service
17 Executive Park Drive, N.E.
Atlanta, Georgia 30323

Mr. Sidney Weitzman, Area Director
U.S. Forest Service
1720 Peachtree Road, N.W.
Atlanta, Georgia 30309

Mr. Charles T. Crow, Director
Arkansas Department of Planning
400 Train Station Square
Little Rock, Arkansas 72202

Mr. Charles R. McGimsey III
Director, Coordinating Office
University of Arkansas Museum
Fayetteville, Arkansas 72701

Mr. William E. Henderson, Director
Department of Parks and Tourism
149 State Capitol Building
Little Rock, Arkansas 72201

Mr. Andrew Hulsey, Director
Arkansas Game and Fish Commission
Game and Fish Commission Building
Little Rock, Arkansas 72201

Mr. S. Ladd Davies, Director
Pollution Control and Ecology
8001 National Drive
Little Rock, Arkansas 72209

Mr. William Gresham
State Forester
Arkansas Forestry Commission
3821 West Roosevelt Road
Little Rock, Arkansas 72204

Mr. Lon Hardin, Director
Western Arkansas Planning and
Development District, Ind.
510 North Greenwood Avenue
Fort Smith, Arkansas 72901

Mr. Don Fulenwider, Director
West Central Arkansas Planning and
Development District
P. O. Box 773
Hot Springs, Arkansas 71901

Mr. W. O. Dunaway, Director
Central Arkansas EDD P.O. Box 187
Lonoke, Arkansas 72086

Mr. Paul D. Bates, Director
Southeast Arkansas Planning and
Development District
P. O. Box 6806
Pine Bluff, Arkansas 71601

Mr. G. T. Kellogg, P.E., Director and Chief Engineer
Arkansas State Department of Health
4815 West Markham Street
Little Rock, Arkansas 72205

DEPARTMENT OF COMMERCE
ARKANSAS FORESTRY COMMISSION

P. O. BOX 4523 ASHER STATION
LITTLE ROCK, ARKANSAS 72204

July 25, 1975

B. G. GRESHAM
State Forester
Phone 501-371-1732

DONALD V. ALLEN
Director of Commerce
Phone 501-371-2231

COMMISSION MEMBERS
W. S. FOX, CHAIRMAN
Pine Bluff
PETER D. JOERS
Hot Springs
JOHN W. ELROD
Rison
P. C. WOOD
Pangburn
KENNETH SMITH
Mulberry
CHARLES R. BLACK, JR.
Corning
BERYL ANTHONY
El Dorado
DALE RODGERS
Mena
J. A. RODMAN
Melbourne

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

Dear Mr. Rippey:

The Forestry Commission deals with the forest resources of Arkansas and in so doing it deals with recreation only in secondary ways, or not at all. Therefore, we have no comments to make on those areas which are presently developed or are being developed, except to say that we agree with the decision of selecting water tolerant trees for the areas which may be inundated for lengthy periods of time.

We would like to make a brief comment on areas such as Fletcher Bend and Brodie public use areas. Areas such as these which cover fairly large acreages could be used to provide jobs for local timber harvestors while the area is waiting for development. This would also generate some monies for the Corps. By using some type of selective harvesting system, the timber can be improved both for lumber and for recreation. The timber is improved for recreation, because the remaining stand is much more healthy and less likely to be of danger to recreationists who are using the area.

Thank you for the opportunity to comment on your master plans which you sent us. We hope that our brief comments will be of value in updating these plans.

Sincerely,

B. G. Gresham
State Forester

James E. Grant Jr.

By: James E. Grant
Administrative Assistant

JEG:mw

OMM SSIONERS

JOE D. SCOTT
CHAIRMAN
NASHVILLE

RALPH B. GRIFFIN
VICE CHAIRMAN
JONESBORO

R. A. NELSON
BLYTHEVILLE

GUY FENTER
CHARLESTON

RALPH H. BOWERS
HARRISON

IICHAEL F. MAHONY
EL DORADO

WM F. WRIGHT
NORTH LITTLE ROCK

DR P M JOHNSTON
FAYETTEVILLE

ANDREW H. HULSEY Director

Arkansas
Game and Fish Commission

LITTLE ROCK, ARKANSAS 72201

August 4, 1975

Mr. D. R. Rippey
Chief, Engineering Division
Department of the Army
Little Rock District Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203

RE: SWLED-PV

Dear Mr. Rippey:

Reference is made to your letter dated July 18, 1975, requesting that the Master Plans for Recreational Development and Management of Arkansas River Navigational Pools 1-9, and 13, be reviewed and comments furnished.

Following are our comments:

1. We believe that the policy of granting agricultural and grazing leases as an interim use on these projects is not in the best public interest.

   Cattle grazing and hay harvest are not compatible with wildlife or recreational uses as cattle compete directly with wildlife for food and cover. Cattle also are carriers or transmitters of ticks and tick borne diseases, which are detrimental to wildlife populations and bothersome to people using the areas.

   We believe a better interim use would be management for small game species. This would benefit more people and provide more recreational uses.

2. The wildlife areas which have been agreed upon by Corps personnel and the Arkansas Game and Fish Commission should preempt the installation of boat docks or other commercial enterprises.

3. We note that on Corps Projects planting of trees is often necessary after completion of construction. If only minimum numbers of trees are removed during construction, this expensive procedure would not be needed. Also, mature established trees which could be left are more beneficial to wildlife than newly planted trees.

4. The Arkansas Game and Fish Commission would be receptive to entering into Cooperative Farming Agreements on suitable lands in the vicinity of Navigational Pool No. 2, such as we now have in the areas near Merrisach Lake.

The opportunity to review your Master Plans at this early date is appreciated.

Very truly yours,

Andrew H. Hulsey
Director

AHH:LJ:gs

cc: U. S. Fish & Wildlife Service, Vicksburg
U. S. Fish & Wildlife Service, Little Rock

WESTERN ARKANSAS PLANNING AND DEVELOPMENT DISTRICT, INC.
510 NORTH GREENWOOD AVENUE
FORT SMITH, ARKANSAS 72901
785-2651

August 14, 1975

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

Dear Mr. Rippey:

We are in receipt of the updated Master Plans for the Recreational Development and Management of Arkansas River Navigation Pools 1-6, 7, 8, 9, and 13 and are reviewing the revisions as requested. We do not have however, a copy of the original Arkansas River Navigation Master Plan and would approciate having the text mailed to us at your earliest convenience.

Sincerely yours,

Ellen Brooker

Ellen Brooker
Planning Technician

EB:bb

WEST CENTRAL ARKANSAS PLANNING AND DEVELOPMENT DISTRICT, INC.

Municipal Building Suite 108 | P. O. Box 1558 500 Building | A/C 501 624 - 2508 A/C 501 968 - 4746 | Hot Springs, Arkansas 71901 Russellville, Arkansas 72801

August 19, 1975

Mr. D. R. Rippey, Chief
Engineering Division
Department of the Army
Little Rock District, Corps of Engineers
Box 867
Little Rock, Arkansas 72203

Re: Update Master Plans for Recreational Development & Management of Arkansas River Navigation Pools 1-6, 7, 8, 9, 13

Dear Mr. Rippey:

The West Central Arkansas Planning and Development District, as regional clearinghouse, notified local jurisdictions affected by the above-referenced project. The District has received no comments.

Although the District does not wish to comment we do wish to thank you for the opportunity to review the project.

Sincerely,

Don Fulenwider
Executive Director

DF/NW/se

United States Department of the Interior

FISH AND WILDLIFE SERVICE
409 Merchants National Bank Building
Vicksburg, Mississippi 39180
September 2, 1975

Mr. D. R. Rippey
Chief, Engineering Division
U. S. Army Corps of Engineers
P. O. Box 867
Little Rock, Arkansas 72203

ATTN: SWLED-PW

Dear Sir:

Reference is made to your letter of July 18, 1975, requesting review and comments on the Master Plans for Recreational Development of Arkansas River Navigation Pools 1-6, and for Navigation Pools 7, 8, 9, and 13. Our comments, all of a general nature, are as follows:

We believe that the project lands currently under an interim lease for agricultural and grazing purposes could better serve the public interest if made available to the Arkansas Game and Fish Commission for management purposes.

On the Ste. Marie PVA, consideration should be given to one wide boat ramp rather than two narrow ramps. This could be accomplished by removing the Courtesy Dock and paving between existing ramps. We recommend that all ramps should be at least three vehicle widths.

It would also appear appropriate to include the Arkansas River Shoreline Management Plan which was developed jointly by this Service, the Corps of Engineers, and the Arkansas Game and Fish Commission as an integral part of your Master Plan for that part of the Arkansas River System covered by the Little Rock District Corps of Engineers. Such action would insure a more orderly growth for all interests utilizing the system.

Sincerely yours,

Joe W. Hardy

Joe W. Hardy
Field Supervisor

CITY OF FORT SMITH, ARKANSAS

September 2, 1975

Mr. D. R. Rippey
Chief, Engineering Division
Little Rock District, Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203

Attention: SWLED-PV

Dear Mr. Rippey:

Per your letter of 18 July 1975 regarding updating Master Plans for Recreational Development and Management of Arkansas River Navigation Pools 1-6, and 7, 8, 9, and 13, we are enclosing a map detailing the latest city limit boundary of Fort Smith for preparation of the brochure on Lock and Dam 13.

Sincerely,

Ray A. Riley
City Administrator

js

enclosure

P.O. BOX 1908 FORT SMITH, ARKANSAS 72901 501 - 785-2801

Conway
Chamber
of
Commerce

Conway, Arkansas

September 2, 1975

Col. Charles E. Edgar
District Engineer
Little Rock District
U. S. Corp of Engineers
Federal Building
Little Rock, AR 72032

Dear Mr. Edgar:

In accordance with suggestions made by Mr. Durham, Mr. Spencer, and Mr. Thacker in our conference in Conway, August 29 regarding the Blockhouse project in the Cadron Settlement Park, we hereby request necessary lease forms to lease a portion of the property during the construction period. We would like for the lease to run from early fall, 1975, to completion date of the project, which will be no later than May 15, 1976. After completion of the construction, we will relinquish the lease and convey to the U. S. the proposed improvements (i.e. the reconstructed Blockhouse) and release any future claims to the property.

The project as initially proposed is a joint venture by the Conway Chamber of Commerce and the Faulkner County Historical Society in cooperation with the U. S. Corp of Engineers; therefore, it will be necessary for the following officers of the respective organizations involved execute the lease agreement in their behalf:

Conway Chamber of Commerce, Inc.
Box 1492
Conway, AR 72032
B. J. Daugherty, President
Guy W. Murphy, Secretary-Treasurer

Faulkner County Historical Society, Inc.
Box 731
Conway, AR 72032
George Thompson, President
Mrs. H. L. Fergeson, Secretary-Treasurer

If you require additional information for preparation of the lease, please let us know.

Sincerely,

Guy W. Murphy
Executive Vice-President

GWM:ceh

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Southeastern Area, State and Private Forestry
Atlanta, Georgia 30309

September 15, 1975

Mr. D. R. Rippey
Chief, Engineering Division
Department Of The Army
Little Rock District, Corps Of Engineers
Little Rock, Arkansas 72203

Dear Mr. Rippey:

The Master Plans and project information folders for Recreation Development and Management of Arkansas River Navigation Pools 1-6, and for Navigation Pools 7,8,9 and 13 have been reviewed by Forest Service resource specialists, Southeastern Area - State and Private Forestry. These documents disclose no significant project impacts on the management and use of forest lands and resources in the project areas involved. Consequently, we have no comments or suggestions to contribute.

Thank you for the opportunity to review and comment on the drafts of the above named Master Plans.

Sincerely,

ROBERT K. DODSON
Area Environmental Coordinator

ARKANSAS STATE DEPARTMENT OF HEALTH
4815 WEST MARKHAM STREET
LITTLE ROCK

CONSUMER PROTECTION SERVICE
ENGINEERING

September 16, 1975

United States Army Corps of Engineers
Little Rock District
P. O. Box 867
Little Rock, Arkansas 72203

Attn: Mr. D. R. Rippey, Chief
Engineering Division

Re: Master Plans for Recreational Development and Management of Arkansas River Navigation Pools 1-9 and 13
76 E 48

Dear Mr. Rippey:

We have reviewed the above referenced material and we have no specific comments at this time.

Detailed plans and specifications for each development should be submitted for review and approval by this Bureau. They should include water supply facilities, sanitary sewage and solid waste disposal facilities, swimming beaches, and vector control programs.

The master plans are being retained in file for future reference.

Yours truly,

T. A. Skinner

T. A. Skinner, P.E., Director
Division of Engineering

TAS:BK:JJO:HRS:WAE:lk

cc: Vector Control

ARKANSAS DEPARTMENT OF PARKS & TOURISM
149 State Capitol Little Rock, Arkansas 72201 Telephone (501) 371-1511

David Pryor
Governor

William E. Henderson
Director

Jack E. Miller
Director of State Parks

Lou Oberste
Travel Director

Dr. John L. Ferguson
Director - History Division

September 25, 1975

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

Dear Mr. Rippey:

Reference your letter concerning the Master Plans for Recreational Development and Management of Arkansas River Navigation Pools 1-6, and Pools 7, 8, 9, and 13.

These plans were reviewed by our State Parks Division for proposed development and maintenance in all sites plus preservation of the resource in pertinent historic sites. The Department of Parks and Tourism has no objections or comments to the plans as they now exist.

Thank you for the opportunity to review this project.

Sincerely,

William E. Henderson

WEH/vs

PRESERVING THE PAST FOR THE FUTURE

ARKANSAS ARCHEOLOGICAL SURVEY

DIRECTOR • CHARLES R. MCGIMSEY III
STATE ARCHEOLOGIST • HESTER A. DAVIS

Coordinating Office
University of Arkansas Museum
Fayetteville, AR 72701

28 October 1975

Mr. D. R. Rippey
Chief, Engineering Division
Little Rock District
Corps of Engineers
P. O. Box 867
Little Rock, AR 72203

Dear Sir:

This is in reference to your letter of 15 September concerning the proposed construction by the Faulkner County Historical Society and Conway Chamber of Commerce of a blockhouse at Cadron Settlement Park.

This letter will serve as a reminder that the report submitted to the Corps by Sam Smith indicated that the area of the original Cedar Park was the one of prime historical interest relative to Cadron settlement. Let me quote from page 60 of that report:

"It is, of course, Area A which attracts much of our attention at this time. Here we have found some of the kinds of evidence we originally hoped might still be extant. At least two general patterns seem indicated by the artifacts. Household ceramic materials suggest an occupation period primarily during the first third of the nineteenth century. Other kinds of artifacts indicate a much longer time span. This conforms rather well with the documents which say that there was an actual settlement here from just after 1800 until about 1830. Before and after these dates most of the activity seems to have been of a commercial nature.

"Most elusive is the question of the pre-Cadron Settlement "post" known as Quadrant. The present artifact sample does not confirm or deny its existence, but it must be made clear that this sample was not collected in order to test this particular hypothesis. Such a determination will have to be made on the basis of future archeological work. At this time, we can see no reason to doubt that, whatever Quadrant was, it was probably located in the area more recently known as Cedar Park.

"Within this same area (Area A), the stratigraphic situation looks promising for future work. As indicated earlier there is sufficient

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depth of deposits to indicate that some temporally distinct archeological features may still be preserved."

We cannot comment upon the construction of the blockhouse itself, but there can be no doubt that considerable archeological excavation needs to be conducted in all the Smith's Area A prior to any construction activities relative to the Blockhouse. It seems likely that the sidewalk, which was built of concrete and in a slightly different location than any of our original maps from the Corps indicated, may have already destroyed some of the information of the early 19th century occupation. Smith indicates a good possibility for stratigraphy in the area, so that earlier and later occupations of "Quadrant" and Cadron might be identified. It seems possible that the very data which would be so vital to the identification of the blockhouse as having been in this area as early as 1770 would be there in the ground. The sketch map shows the blockhouse itself as proposed to be set upon pilasters, so that actual excavation in the ground for construction will not disturb the ground to any great extent. However, the depths of the cultural deposits are not great, and the attendant development in the area for visitor use can be assumed to render considerable disturbance to all of Area A--the prime historic area.

We can go a long way toward answering the question of dates and uses of this important National Register site, through excavation of the main area of settlement. Since this is also the main area of present development, it is inexcusable that plans have not been made for this archeological work to be done before now.

I would suggest that the Advisory Council be asked to comment on the undertaking (the construction of the blockhouse), and that meanwhile, the Arkansas Archeological Survey will prepare a proposal and budget for the investigation of the prime historic area as identified by Smith in his initial assessment report. This archeological work may, unfortunately, delay the completion date for the blockhouse, but it will add immeasurably to the Faulkner County's ability to provide interpretive data on the site; will provide actual artifacts which can be displayed and interpreted at the blockhouse; and will provide compliance for the Corps of Engineers in their responsibilities to the cultural resources at this site.

Sincerely,

Hester A. Davis
State Archeologist

HAD/rcl
cc: Gene Richardson, SHPO
Advisory Council on Historic Preservation
Lou Wall, Denver
Guy Murphy, Conway
Executive Order Consultant, National Park Service, WHSO

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

REPLY TO
ATTENTION OF

SWLED-PV

19 April 1976

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

Dear Mr. Kleihauer:

We have essentially completed our updating effort of the Master Recreation Plan for Navigation Pool Development and Management of Locks and Dams Murray, Toad Suck Ferry, and Nos. 9 and 13. A draft copy is inclosed for your review. As indicated in section 6 of this draft, coordination was initiated with the Arkansas Department of Planning.

Completion of your review and receipt of your comments and recommendations at an early date would greatly aid us in the timely completion of this effort. Should you have any questions please feel free to call John Hogan at 378-5837.

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

May 11, 1976

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

Re: Master Recreation Plan for
Navigation Pool Development
& Management of Locks & Dams
Murray, Toad Suck Ferry,
& Numbers 9 and 13

Dear Mr. Rippey:

The State Clearinghouse is in receipt of the above cited document submitted by the U.S. Corps of Engineers in accordance with the Project Notification and Review System.

The proper State Agencies were notified of the availability of the document for review and comment. We have received no comments as of this date. Forthcoming comments will be sent to you for your use and information.

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

THE DEPARTMENT OF LOCAL SERVICES IS AN EQUAL OPPORTUNITY EMPLOYER

SECTION VII

PHYSICAL PLAN OF DEVELOPMENT

7.01. General description of plan. Navigation pools 7, 8, 9, and 13 to the Arkansas-Oklahoma border, form a 95.7 mile segment of the McClellan-Kerr Arkansas River Navigation System. Pools 9 and 13 are separated by the Lake Dardanelle and Ozark Lake projects. Recreational development will not conflict with the operation of the project for navigation. Development of the navigation pools for public use is confined principally to the areas shown on Plates 2 and 3, titled "Project Recreation Areas." There are available for public use in these areas about 1,574 acres above the top of the respective navigation pools. Full consideration and preference is given to Federal, State, and local governmental agencies for the use of areas suitable for recreational purposes on Government-owned land. This plan is subject to modification at the time any of these agencies desire to participate in the construction, maintenance, management, and operation of recreational facilites.

7.02. Allocation of lands. Acquisition of land in fee title and by flowage easements is substantially complete. Only such lands as are required for project operation, public park and recreational use, and access were acquired. Table 7-1 shows acreages acquired in fee and easement for this portion of the Arkansas River.

TABLE 7-1

LAND ACQUISITION

	Fee	Easement
Murray Lock & Dam	462.24	4,506.96
Toad Suck Ferry Lock & Dam	614.38	5,281.26
Lock & Dam No. 9	845.87	2,471.01
Lock & Dam No. 13 (in Ark. only)	682.70	2,681.74
Total	2,605.19	14,940.97

Includes land acquired for bank stabilization.

a. Project operations. These lands were acquired and allocated to provide for safe, efficient operation of the project for those authorized purposes other than recreation and fish and wildlife. In all cases this will include, but is not limited to, the land on which project operational structures are located. Approximately 1,029 fee

acres are included in this classification, many of which were purchased for construction, operation, and maintenance of bank stabilization structures. Several areas scattered throughout the project 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 2 and 3. 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 dredged material placement 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 Counsel 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 allocated for use as developed parks for intensive recreational activities by the visiting public, including areas for concessions and quasi-public development. No agricultural uses are permitted on these lands except on an interim basis. Table 7-2 lists the park acreages.

TABLE 7-2

LANDS ALLOCATED FOR RECREATION - INTENSIVE USE

	Lands Available for Public Use (Acre		
	Project Requirement	Solely For Public Use	Estimated Total Available
Cooks Landing	16	0	16
Maumelle	15	165	180
Palarm	1	16	17
Fletcher Bend Future	10	127	137
Bigelow	0	15	15
Toad Suck Ferry Dam Site	33	42	75
Cadron Settlement	0	74	74
Cadron Creek Future	6	36	42
Cypress Creek	0	14	14
Point Remove	0	91	91
Dam Site 9 North	76	0	76
Dam Site 9 South	41	0	41
Pontoon	0	6	6
Sweeden Island	0	91	91
Holla Bend Future	0	20	20
Dam Site 13	481	0	481
Fort Smith	10	34	44
Lee Creek	5	150	155
Total	694	881	1,575

7.03. Construction in water areas and along shoreline. The water areas and shoreline of the navigation pools are controlled through a permit program. All plans and proposals which involve use of the navigation pools are subject to review. All navigation interests and other interested parties are informed, as required by law, by means of public notice, of such proposals and are given the opportunity to object to the work before a permit is issued. All applications for permits are accepted in accordance with the Corps of Engineers Pamphlet "Permits for Work in Navigable Waters," and other current guidelines.

7.04. Interim use. Interim use of project lands pending development for agriculture and grazing purposes is made by appropriate outgrant. Four lease plots comprising 356 acres have been made available for leasing. Interest for use of these lands is primarily with the adjoining landowner. Land usage is 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 pools 7, 8, 9 and 13, as well as for Dardanelle and Ozark Lakes. A lake manager located at Toad Suck Ferry Lock and Dam is responsible for operation and maintenance of parks in pools 7, 8, and a part of pool 9. The lake manager located at Ozark Lock and Dam is responsible for parks in pool 13 and Ozark Lake.

7.06. Recreational development

a. General. Construction of 15 parks in this portion of the Arkansas River is substantially complete. Three park sites have been acquired and are reserved for future development.

b. Developed Parks.

(1) Cooks Landing. Minimum facilities for public health, safety and convenience of the public are available in this 16 acre access point located adjacent to the Murray Lock and Dam overflow embankment on the left bank. Access to the area is from both Interstate 430 and Interstate 40 via the Crystal Hill Road. Existing recreational development at this site includes picnic and boat launching facilities and parking. A curbed, concrete walk along the shoreline provides for bank fishing. Facilities at this site provide for use by physically handicapped persons. (1)

$100,000

(2) Maumelle Park. Located adjacent to the mouth of the Maumelle River, this 180 acre park provides recreational opportunities in the western Little Rock area. Access to the park is by approximately 2 miles of paved County road from State Highway 10 west of Little Rock. Site topography consists of two low, wooded ridges parelleling the Arkansas River with open fields between the ridges. A 25 acre island in the Arkansas River adjacent to the park is reserved for future development

Completed in March 1979.

of nature study trails and primitive camping and picnic areas. Existing recreational development includes campsites, individual and group picnic sites, boat launching facilities, and parking and sanitary facilities. Proposed facilities include additional picnic and group and individual camping areas. Because it provides water related recreation opportunities which will complement the other types of recreation proposed as part of River Mountain Park, Maumelle Park is expected to receive heavy recreational use. A $3 fee will be charged for camping at this park in 1976.

(3) Palarm Park. This 17 acre park, a popular bank fishing area, is located at the mouth of Palarm Creek. The site is in four separate parts being bisected by Palarm Creek and further divided by State Highway 365 and the Missouri Pacific Lines railroad which parallel the Arkansas River. The parts located on each side of the creek are connected by pedestrian trails which pass under the existing highway and railroad bridges. Existing facilities include group and individual picnic sites, boat-launching facilities and sanitary facilities.

(4) Bigelow Park. This 15 acre park is located on the right bank of the Arkansas River at the mouth of Taylor Creek approximately 2 miles east of Bigelow, Arkansas. The site has moderate tree cover, a low bank, and a good open embayment to the Arkansas River. Existing facilities include group and individual picnic sites, boat-launching facilities and sanitary facilities.

(5) Toad Suck Ferry Damsite Park. This 75-acre park is located on the right and left bank of the Arkansas River at Toad Suck Ferry Lock and Dam. The existing camping area on the right bank is located upstream and downstream from the lock and dam, and access is provided to the upstream area under the highway bridge. Recreational facilities in the day use area on the right bank include group and individual picnic sites, boat-launching facilities and sanitary facilities. A day-use area consisting of picnic and boat-launching facilities is located on the left bank of the Arkansas River downstream from the lock and dam. Because it is located only 5 miles from Conway, Arkansas, and on a major highway and river crossing, this park is expected to receive heavy recreational use. A $3 fee will be charged for camping at this park in 1976.

(6) Cadron Settlement Park. This 74-acre park is located at the site of a historical settlement on the Arkansas River. Access to the park is by approximately 2 miles of gravel road from State Highway 64 west of Conway, Arkansas. This gravel road will be paved by the State in the near future. The heavily wooded site is situated on three ridges which form steep bluffs along the Arkansas River. Because of the site's historical significance, recreational facilities have been developed to preserve and interpret the historical resources of the site. Existing development includes group and individual picnic sites, boat-launching facilities, sanitary facilities, and approximately 1½ miles of hiking trails.

(7) Cypress Creek Park. Situated on the right bank of the Arkansas River at Cypress Creek, this 14 acre park provides recreation opportunities for nearby Morrilton, Arkansas, and other smaller communities. Access to the park is by a gravel county road from State Highway 113 north of Houston, Arkansas. The heavily wooded portion of the site located on the right bank of Cypress Creek contains camping, a boat-launching ramp, and sanitary facilities. The part of the park located on the left bank of Cypress Creek is sparsely wooded, and is not accessible except across Cypress Creek. This part of the park is reserved for future development.

(8) Point Remove Park. This 91 acre park is located on both sides of Point Remove Creek approximately 1 mile west of Morrilton, Arkansas. Access to the park is by a gravel county road which bridges Point Remove Creek in the park. This road is now being paved and also provides access to Dam Site 9 North Park located south of Point Remove Park. A new bridge across Point Remove Creek is being constructed in the park; and the old bridge, a steel frame structure with wood decking, will be rehabilitated for pedestrian use. A photograph of the old bridge is shown on page 5-14. Existing recreational development includes group and individual picnic sites, campsites, and boat-launching and sanitary facilities. Proposed development consists of walk-in picnic and camping areas with access by a pedestrian trail which will cross the rehabilitated bridge. Since bankline fishing is a popular recreational activity at this park, selected areas will be maintained for this purpose.

(9) Dam Site 9 North Park. This 76 acre park is located on the left bank of the Arkansas River at Lock and Dam 9 approximately 3 miles west of Morrilton, Arkansas. Access is by a gravel county road from Morrilton, through Point Remove Park. This road is now being paved. The relatively flat site is heavily wooded in the downstream bankline area, with large open areas near the dam site. Existing facilities at this park include group and individual picnic sites, camping sites, and boat-launching and sanitary facilities. A $3 fee will be charged for camping at this park in 1976.

(10) Dam Site 9 South Park. Located 2 miles from Oppelo, Arkansas, this 41 acre park occupies an open site on the right bank of the Arkansas River at Lock and Dam 9. Access to the park is by a paved county road from State Highway 9 south of Morrilton, Arkansas. Recreational facilities provided at this park include group and individual picnic sites, campsites and sanitary facilities. Extensive tree planting is proposed for this barren park.

(11) Pontoon Park. This 6-acre park is located on the right bank of the Petit Jean River west of the town of Pontoon, Arkansas, approximately 10 miles from where it joins the Arkansas River. Access to the park is from State Highway 154, the most direct highway route between Petit Jean State Park and Mt Nebo State Park, two of Arkansas' major recreational

attractions. Boat-launching facilities at this park provide access to excellent fishing in the Petit Jean and Arkansas Rivers. Other recreation facilities are picnic sites and sanitary facilities.

(12) Sweeden Island Park. Located approximately 10 miles south of Atkins, Arkansas, near Lake Atkins and the Galla Creek Game Management Area, this 91 acre park provides extensive camping and picnic facilities. The wooded site extends for over a mile along the left bank of the Arkansas River, providing excellent opportunities for bankline fishing and views of the river. In addition to the existing camping and group and individual picnic sites, boat-launching and sanitary facilities are provided at this park. Additional camping facilities are proposed for future development.

(13) Dam Site 13 Park.

a. South. This portion is located on the right bank of the Arkansas River at Lock and Dam 13 approximately 5 miles east of Fort Smith, Arkansas. Access to this 337 acre park is by a 1-mile paved access road from State Highway 22 which parallels the Arkansas River between Fort Smith and Dardanelle, Arkansas. The park provides approximately 2 miles of recreational development along the river which includes group and individual picnic and camping areas, an overlook, and boat-launching and sanitary facilities. Other proposed development includes expansion of the existing camping and picnic areas. Proposed construction of a highway bridge across Lock and Dam 13 is expected to provide improved access and attract more visitors to this park. The bridge approach will be elevated in the day-use section of the park and should not detract from recreational use of this area. An existing park road will be relocated to pass under the bridge. A $3 fee will be charged for camping at this park in 1976.

b. North. This 144 acre area, located on the left bank of the Arkansas River at Lock and Dam 13, will be accessible from the proposed highway bridge approach north of Lock and Dam 13. Present access to the site, approximately 6 miles south of Van Buren, Arkansas, is by a gravel road on the levee. Future recreation development includes camping, picnicking and boat launching facilities.

(14) Fort Smith Park. Located within the city limits of Fort Smith, Arkansas, on the right bank of the Arkansas River, this 44-acre park receives heavy local use. It has been developed to provide for camping and day-use recreation activities. The site is relatively flat with light tree cover. A portion of the park beyond the original bankline has been filled with dredged material. This area is developed for boat-launching and picnicking, and the sand deposits are used as play areas and for sunbathing. A $3 fee will be charged for camping at this park in 1976.

(15) Lee Creek Park. This 155-acre park is located on the left bank of the Arkansas River at the mouth of Lee Creek. It is within the city limits of Van Buren, Arkansas, approximately 1.5 miles south of Interstate 40. The 2-mile long park is relatively flat with few trees. The Missouri-Pacific Railway tracks separate the site from steep bluffs to the North. Existing development is confined to the bankline area and consists of group and individual picnic sites, camping sites, and boat-launching and sanitary facilities. Proposed development includes additional camping and picnicking facilities.

c. Future Parks.

(1) Fletcher Bend Park. This 137 acre area is located on the left bank of the Arkansas River downstream from Beaver Dam Creek. Access to the area is by 2 miles of graveled county road from State Highway 365. The site is partially wooded with rolling hills. A 500/230 KV overhead transmission line is located upstream from this area. Proposed facility development includes picnic and camping areas.

(2) Cadron Creek Park. Located on the left bank of the Arkansas River at the right bank of Cadron Creek, access to this 42 acre park site is via a 1-mile proposed access road from old U.S. Highway 64 east of Menifee, Arkansas. The site is relatively flat, low and heavily wooded with large trees, and provides an unusually scenic setting with excellent views of the Arkansas River. Because of limited land area, minor development with water access only is proposed.

(3) Holla Bend Park. Because of its location adjacent to the Holla Bend National Wildlife Refuge, this 20 acre site has good potential for future development of recreation facilities. The site, located on the right bank of the Arkansas River approximately 8 miles east of Dardanelle, Arkansas, has scattered tree cover and sandy soil conditions. Proposed development includes campsites, a water well, and sanitary facilities.

SECTION VIII

BENEFITS AND ECONOMIC VALUE OF THE PROJECT

8.01. General. Justification for the recreational development of navigation pools 7, 8, 9, and 13, in Arkansas, is based on the need for facilities to provide for the pleasure, relaxation, health and safety of the using public. The Arkansas River Valley has long been well-known for its fish and wildlife potential, but limited public access has precluded full utilization of these resources. Park development has assured excellent access to enhance and increase the benefits realized from the fish and wildlife resources of the area.

8.02. Recreational benefits. During 1974 an estimated 871,900 people visited navigation pools 7, 8, 9, and 13 in Arkansas for recreational purposes. 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 the navigation pools is $0.50. Application of this unit value to the 1974 visitation estimate yields an annual gross recreational benefit of $435,950.

8.03. Collateral benefits of the project. During the 10-year period, 1964-1974, economic benefits of over 75 million dollars have been produced by the McClellan-Kerr Arkansas River Navigation System in Arkansas. Areas in which benefits have gained are shown in Table 8-1. The average annual tonnage transported on the section of the river from the mouth to Fort Smith during the 10-year period, 1964-1974, was about 3,302,788 tons. There is usually a pronounced increase in values of land, property, and sales in the surrounding area of a newly constructed project. Business and services catering to the tourist and sportsman can become a major source of income to nearby communities. Other economic values include increases in land taxes, revenue to governmental agencies from the sale of hunting and fishing licenses, and in tax revenue from gasoline used in recreational travel. The introduction of navigation has promoted industrial development which in turn has enhanced the economic growth of the region.

TABLE 8-1

ESTIMATED BENEFITS(1)	
Savings in transportation	$40,470,000
Power value	14,838,900
Flood control benefits	6,602,600
Water supply	828,900
Channel stabilization	6,575,000
Fish and wildlife	312,000
Recreation	2,297,000
Redevelopment	3,355,800
Total	75,280,200

(1)Source: Water Resources Development in Arkansas, 1975, U.S. Army Corps of Engineers

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. Allocations and expenditure of construction general funds. As of 30 June 1975, a total of $5,897,000 has been expended for construction of recreation facilities in Pools 7, 8, 9, and 13. Table 9-1 lists the expenditures thru FY 75 of Construction General, Account 14 funds for recreation facilities in each pool formed by the navigation locks and dams. Also, included in this table are proposed expenditures for FY 76 and FY 76 transition quarter. Subject to the availability of funds, additional amounts are scheduled for completion of initial recreational development by FY 79.

TABLE 9-1

ALLOCATION AND EXPENDITURES OF FUNDS
(INITIAL DEVELOPMENT)
CONSTRUCTION GENERAL, ACCOUNT 14 ($1,000)

Lock and Dam	Cost thru FY 75	Scheduled Expenditures FY 76	Expenditures FY 76 TQ
Murray (1)	988	0	0
Toad Suck Ferry	1,247	1,194	80
No. 9	1,427	197	0
No. 13	2,235	222	0
Total	5,897	1,613	80

(1) Does not include Murray Dam Site Park in pool 6.

9.03. Cost sharing - Public Law 89-72. After completion of initial recreation facilities all further development requires 50-50 cost sharing with a non-Federal public agency. Under current policy urgently needed sanitary facilities, needed to meet requirements of applicable State and Federal laws, could be constructed without cost sharing. Since the project is in the initial development stage, there are no urgently needed sanitary facilities at this time or within the near future. Efforts to obtain cost sharing participants have been unsuccessful for this reach of the Arkansas River. Therefore, no cost sharing program is included in this master plan.

Source of data: Estimates of Annual Appropriation Requirements for Civil Functions of the Corps of Engineers, FY 77, for Continuing Construction, McClellan-Kerr Arkansas River Navigation System, Locks and Dams, 14 January 1976.

9.04. Future recreational development cost.

a. General. The estimated cost of development of the proposed recreational facilities shown on Plates 4 through 22 are summarized in the following tables. These estimates are based on January 1976 price levels.

b. Tables of estimated cost of additional recreational facilities. The estimated total cost of construction for the proposed recreational facilities is $4,789,350. A summary of estimated cost of additional development by parks is shown in Table 9-2. A summary of estimated cost for additional development by facilities planned is shown in Table 9-3. A detailed cost estimate for additional recreational facilities in each park are shown in Tables 9-4 through 9-21. Proposed facilities are itemized for two stages of development. The items identified as "initial" are proposed for construction through FY 79 subject to the availability of funds. The items identified as "future" are proposed for construction at an undetermined date if and when non-Federal entitites can be identified who will share at least one-half the construction cost and be responsible for all the operation and maintenance costs.

TABLE 9-2

ESTIMATED COST OF ADDITIONAL RECREATION DEVELOPMENT BY PARKS
MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Table	Park Name	Estimated Cost Initial	Future
9-4	Cooks Landing	$50,850	0
9-5	Maumelle	137,950	410,700
9-6	Palarm	59,500	0
9-7	Fletcher Bend Future	0	637,000
9-8	Bigelow	7,200	10,600
9-9	Toad Suck Ferry Dam Site	45,950	12,000
9-10	Cadron Settlement	21,350	0
9-11	Cadron Creek Future	0	515,400
9-12	Cypress Creek	1,700	1,900
9-13	Point Remove	49,900	104,550
9-14	Dam Site 9-North	76,950	10,450
9-15	Dam Site 9-South	26,600	28,500
9-16	Pontoon	0	0
9-17	Sweeden Island	67,750	191,350
9-18	Holla Bend Future	0	176,550
9-19	Dam Site 13	139,800	1,759,850
9-20	Fort Smith	25,950	0
9-21	Lee Creek	84,550	134,400
	TOTAL DIRECT COST	796,000	3,993,350
	Engineering and design	79,600	399,400
	Supervision and administration	47,800	239,650
	GRAND TOTAL	923,400	4,632,400

TABLE 9 - 3

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

SUMMARY

Acres 1,574 — See Plate 4 - 22

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	7,520	400	5,200	2,200	28,600
(2) Flexible pavement	do	19.00	78,906	1,255	23,850	51,840	985,000
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	6,821			5,510	63,350
Parking areas							
a. Gravel to be paved	SY	6.50		2,057	13,400	1,101	7,150
b. Flexible pavement	do	8.75	71,674	4,299	37,600	18,757	164,050
Launching lanes, concrete	EA	27,500	27			3	82,500
Courtesy piers	do	6,750	7			1	6,750
Restroom, masonry							
a. Vault	do	17,500	3			6	105,000
b. Vault-convertible type	do	25,600	5	2	51,200		
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	17			14	431,200
e. Waterborne with showers	do	38,000	5			3	114,000
Disposal field for waterborne r.	EA	12,000	12			10	120,000
Sewage collection system	Sum Job		3			1	145,000
Water distribution system	Sum Job		10	4	52,900	7	105,200
Water well	EA	8,300	8	1	8,300	7	58,100
Picnic unit	do	1,500	223	2	3,000	150	225,000
Camp unit (includes parking spur)	do	2,600	156	19	49,400	336	873,600
Table canopies	do	1,600	37	40	64,000	43	68,800
Electrical distribution & hookups	Sum Job		15	12	103,900	7	59,300
Group camp	EA	2,200	3			3	6,600
Group picnic shelters	do	13,300	17	1	13,300	7	93,100
Patio and fireplace for p.s.	do	3,000		15	45,000	9	27,000
Overlook shelters	do	9,200	1				
Sanitary disposal stations	do	5,600	6	(pave 3)1	11,600	1	5,600
Fishing berm (30 c.y./100 LF)	LF	5.00		670	3,350	1,000	5,000
Concrete benches	EA	200	9	6	1,200		
Mercury vapor lights	do	550	11	56	30,800	20	11,000
Entrance complex	Sum Job			4	109,750	3	40,050
Trails							
a. Foot bridge	Sum Job		3				
b. Park circulation	mile	17,500	1.51	1.20	21,700	2.65	46,300
c. Trail shelters	EA	2,100		3	6,300		
Playground equipment	Sum Job			10	38,900		
Amphitheater	EA	3,400		1	3,400	1	3,400
Reforestation	acre	950		3.5	3,330	80	76,000
Site preparation	Sum Job				26,200		11,500
Landscaping and Beautification	acre	2,800			18,300	9	25,200
Concrete steps	Sum Job				1,700		
Fence	do				5,150		
Delineator Posts	do				2,500		
Observation Platform	do				4,000		
Refurbish Old Bridge for pedestrian use	do				36,800		
TOTALS					$796,000		$3,993,350

TABLE 9 - 4

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

COOKS LANDING

Acres 16 — See Plate 4

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	2,400				
(2) Flexible pavement	do	19.00	3,020				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50		1,990	12,950		
b. Flexible pavement	do	8.75	1,622				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600		1	25,600		
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300		1	8,300		
Picnic unit	do	1,500	7				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600	7				
Electrical distribution & hookups	Sum Job		1				
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550	6				
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job				4,000		
Landscaping and Beautification	acre	2,800					
TOTAL					$50,850		

TABLE 9 - 5

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

MAUMELLE PARK

Acres 180 — See Plate 5

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	5,716	1,050	19,950	2,420	46,000
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				860	9,900
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	8,784	278	2,450	777	6,800
Launching lanes, concrete	EA	27,500	5				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1			3	92,400
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2			3	36,000
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1	1	(1) 1,200	1	(3) 6,500
Water well	EA	8,300					
Picnic unit	do	1,500	13			14	21,000
Camp unit (includes parking spur)	do	2,600	11	9	23,400	57	148,200
Table canopies	do	1,600		9	14,400	3	4,800
Electrical distribution & hookups	Sum Job		1	1	(2)12,800	1	3,200
Group camp	EA	2,200				3	6,600
Group picnic shelters	do	13,300	1	1	13,300		
Patio and fireplace for p.s.	do	3,000		2	6,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1	Pave	2,000		
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		4	2,200		
Entrance complex	Sum Job			1	32,500		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				1.4	24,500
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	5,500		
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job				2,250		2,000
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL					$137,950		$410,700

(1) 1 drinking fountain with hydrant, 100' of 1" water line
(2) 20 camp sites to receive electrical service.
(3) 1,750 feet of waterline and 3 drinking fountains

TABLE 9 - 6

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

PALARM PARK

Acres 17 — See Plate 6

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	727				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	2,756	355	3,100		
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600		1	25,600		
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job			1	15,000		
Water well	EA	8,300					
Picnic unit	do	1,500	9	2	3,000		
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	900		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000		1	3,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00		220	1,100		
Concrete benches	EA	200		3	600		
Mercury vapor lights	do	550		4	2,200		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job		2				
b. Park circulation	mile	17,500	0.14				
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job				1,000		
Landscaping and Beautification	acre	2,800					
Observation platform	Sum Job			1	4,000		
TOTAL					$59,500		

TABLE 9 - 7

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

FLETCHER BEND, FUTURE PARK

Acres 137 — See Plate 7

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				8,800	167,200
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				650	7,450
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75				1,083	9,475
Launching lanes, concrete	EA	27,500					
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800				3	92,400
e. Waterborne with showers	do	38,000				1	38,000
Disposal field for waterborne r.	EA	12,000				4	48,000
Sewage collection system	Sum Job					1	(1) 17,300
Water distribution system	Sum Job					2	16,600
Water well	EA	8,300				16	24,000
Picnic unit	do	1,500				44	114,400
Camp unit (includes parking spur)	do	2,600				24	38,400
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job					1	(2) 13,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300				1	13,300
Patio and fireplace for p.s.	do	3,000				1	3,000
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600				1	5,600
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				6	3,300
Entrance complex	Sum Job					1	20,050
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800				2	5,600
TOTAL							637,100

(1) Water distribution line estimated 4,150 L.F., 9 drinking fountains.
(2) Estimated 6,500 L.F. of underground electrical service line.

TABLE 9 - 8

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

BIGELOW PARK

Acres 15 — See Plate 8

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	2,120				
(2) Flexible pavement	do	19.00	4,740				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	385				
Parking areas							
a. Gravel to be paved	SY	6.50				90	600
b. Flexible pavement	do	8.75	4,266				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000	1				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	8			2	3,000
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	2,050		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000				1	3,000
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				0.23	4,000
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	3,500		
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$7,200		$10,600

TABLE 9 - 9

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

TOAD SUCK FERRY DAM SITE PARK

Acres 75 — See Plate 9

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	5,110				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	1,480				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	8,840	366	3,200		
Launching lanes, concrete	EA	27,500	2				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	2				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	3				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		2				
Water well	EA	8,300	2				
Picnic unit	do	1,500	17			8	12,000
Camp unit (includes parking spur)	do	2,600	22				
Table canopies	do	1,600	3				
Electrical distribution & hookups	Sum Job		2	1	(1)13,700		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000		1	3,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		6	3,300		
Entrance complex	Sum Job			1	12,900		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	4,500		
Amphitheater	EA	3,400					
Reforestation	acre	950		3.5	3,300		
Site preparation	Sum Job				2,050		
Landscaping and Beautification	acre	2,800					
TOTAL					$45,950		$12,000

(1) 22 Camp sites to have electrical hookups

TABLE 9 - 10

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CADRON SETTLEMENT PARK

Acres 74 — See Plate 10

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	3,409				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	297				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	1,907	246	2,150		
Launching lanes, concrete	EA	27,500	3				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600	2				
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	2				
Picnic unit	do	1,500	24				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1		(1) 4,000		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200	9				
Mercury vapor lights	do	550	5	3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job		1				
b. Park circulation	mile	17,500	1.37	0.12	(2) 2,800		
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400		1	3,400		
Reforestation	acre	950					
Site preparation	Sum Job				5,750		
Landscaping and Beautification	acre	2,800		0.1	300		
Delineator posts along road	Sum Job				700		
White Picket fence	Sum Job				600		
TOTAL					$21,350		

(1) Relocate powerline out of historical area.
(2) Includes marking and improving trail identification on existing trail also.

TABLE 9 - 11

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CADRON CREEK FUTURE PARK

Acres 42 — See Plate 11

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				10,000	190,000
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				1,600	18,400
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75				5,900	51,600
Launching lanes, concrete	EA	27,500				1	27,500
Courtesy piers	do	6,750				1	6,750
Restroom, masonry							
a. Vault	do	17,500				3	52,500
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300				3	24,900
Picnic unit	do	1,500				23	34,500
Camp unit (includes parking spur)	do	2,600				26	67,600
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job					1	(1)17,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000				1	3,000
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				3	1,650
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500				0.87	15,200
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						2,000
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL							$515,400

(1) 8,600 L. F. of electrical service line.

TABLE 9-12

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

CYPRESS CREEK PARK

Acres 14 — See Plate 12

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	1,077				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	270				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	678				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	1				
Picnic unit	do	1,500					
Camp unit (includes parking spur)	do	2,600	9				
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	600		
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		2	1,100		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950				2	1,900
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$1,700		$1,900

TABLE 9 - 13

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

POINT REMOVE PARK

Acres 91 — See Plate 13

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	400				
(2) Flexible pavement	do	19.00	4,424			840	15,950
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	3,577	139	1,200	139	1,200
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500				2	35,000
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1			1	(1) 2,200
Water well	EA	8,300					
Picnic unit	do	1,500	16			6	9,000
Camp unit (includes parking spur)	do	2,600	5			13	33,800
Table canopies	do	1,600				3	4,800
Electrical distribution & hookups	Sum Job		1	1	750		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000		1	3,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job				14,000		
b. Park circulation	mile	17,500				0.15	2,600
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	3,500		
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800		1.1	3,000		
Refurbish old bridge for pedestrian use only	Sum Job				36,800		
TOTAL					$49,900		$104,550

(1) Estimated 100 L. F. of water line and 2 drinking fountains.

16,000

TABLE 9 - 14

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

DAM SITE 9 NORTH PARK

Acres 76 See Plate 14

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	7,700				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	2,452				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	5,962	360	3,150		
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	2				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1	1	2,000		
Water well	EA	8,300					
Picnic unit	do	1,500	17				
Camp unit (includes parking spur)	do	2,600	20				
Table canopies	do	1,600	7	8	12,800		
Electrical distribution & hookups	Sum Job		1	1	(1) 15,300		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	2				
Patio and fireplace for p.s.	do	3,000		2	6,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	5.00		450	2,250		
Concrete benches	EA	200					
Mercury vapor lights	do	550		4	2,200		
Entrance complex	Sum Job			1	20,050		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500		0.08	1,400		
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	3,500		
Amphitheater	EA	3,400					
Reforestation	acre	950				11	10,450
Site preparation	Sum Job				3,000		
Landscaping and Beautification	acre	2,800		1.6	4,500		
Concrete steps	Sum Job				800		
TOTAL					$76,950		$10,450

(1) Electrical hookups at 20 campsites. 75,000

READY TO BE AWARDED

TABLE 9 - 13

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

POINT REMOVE PARK

Acres 91

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Existing Facilities Costs
Roads				
a. 20 feet wide access and circulation				
(1) Gravel to be paved	LF	13.00	400	5,200.00
(2) Flexible pavement	do	19.00	4,424	84,056.00
b. 12 feet wide one way				
(1) Gravel to be paved	do	7.75		
(2) Flexible pavement	do	11.50		
Parking areas				
a. Gravel to be paved	SY	6.50		
b. Flexible pavement	do	8.75	3,577	31,298.75
Launching lanes, concrete	EA	27,500	1	
Courtesy piers	do	6,750		
Restroom, masonry				
a. Vault	do	17,500		
b. Vault-convertible type	do	25,600		
c. Vault-convert to waterborne	do	20,500		
d. Waterborne	do	30,800	1	30,800.00
e. Waterborne with showers	do	38,000	1	38,000.00
Disposal field for waterborne r.	EA	12,000	2	24,000.00
Sewage collection system	Sum Job			
Water distribution system	Sum Job		1	
Water well	EA	8,300		
Picnic unit	do	1,500	16	24,000.00
Camp unit (includes parking spur)	do	2,600	5	13,000.00
Table canopies	do	1,600		
Electrical distribution & hookups	Sum Job		1	
Group camp	EA	2,200		
Group picnic shelters	do	13,300	1	13,300.00
Patio and fireplace for p.s.	do	3,000		
Overlook shelters	do	9,200		
Sanitary disposal stations	do	5,600		
Fishing berm (30 c.y./100 LF)	LF	5.00		
Concrete benches	EA	200		
Mercury vapor lights	do	550		
Entrance complex	Sum Job			
Trails				
a. Foot bridge	Sum Job			
b. Park circulation	mile	17,500		
c. Trail shelters	EA	2,100		
Playground equipment	Sum Job			
Amphitheater	EA	3,400		
Reforestation	acre	950		
Site preparation	Sum Job			
Landscaping and Beautification	acre	2,800		
Refurbish old bridge for pedestrian use only	Sum Job			
TOTAL				$263,654.75

(1) Estimated 100 L. F. of water line and 2 drinking fountains.

TABLE 9 - 14

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

DAM SITE 9 NORTH PARK

Acres 76

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Existing Facilities Costs
Roads				
a. 20 feet wide access and circulation				
(1) Gravel to be paved	LF	13.00		
(2) Flexible pavement	do	19.00	7,700	146,300.00
b. 12 feet wide one way				
(1) Gravel to be paved	do	7.75		
(2) Flexible pavement	do	11.50	2,452	28,198.00
Parking areas				
a. Gravel to be paved	SY	6.50		
b. Flexible pavement	do	8.75	5,962	52,167.50
Launching lanes, concrete	EA	27,500	1	27,500.00
Courtesy piers	do	6,750		
Restroom, masonry				
a. Vault	do	17,500		
b. Vault-convertible type	do	25,600		
c. Vault-convert to waterborne	do	20,500		
d. Waterborne	do	30,800	2	61,600.00
e. Waterborne with showers	do	38,000		
Disposal field for waterborne r.	EA	12,000	2	24,000.00
Sewage collection system	Sum Job		1	
Water distribution system	Sum Job			
Water well	EA	8,300		
Picnic unit	do	1,500	17	25,500.00
Camp unit (includes parking spur)	do	2,600	20	52,000.00
Table canopies	do	1,600	7	
Electrical distribution & hookups	Sum Job		1	
Group camp	EA	2,200		
Group picnic shelters	do	13,300	2	26,600.00
Patio and fireplace for p.s.	do	3,000		
Overlook shelters	do	9,200		
Sanitary disposal stations	do	5,600	1	5,600
Fishing berm (30 c.y./100 LF)	LF	5.00		
Concrete benches	EA	200		
Mercury vapor lights	do	550		
Entrance complex	Sum Job			
Trails				
a. Foot bridge	Sum Job			
b. Park circulation	mile	17,500		
c. Trail shelters	EA	2,100		
Playground equipment	Sum Job			
Amphitheater	EA	3,400		
Reforestation	acre	950		
Site preparation	Sum Job			
Landscaping and Beautification	acre	2,800		
Concrete steps	Sum Job			
TOTAL				$ 449,465.50

(1) Electrical hookups at 20 campsites.

TABLE 9 - 15

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

DAM SITE 9 SOUTH PARK

Acres 41 — See Plate 15

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	2,013				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	1,477				
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	1,417				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000	2				
Sewage collection system	Sum Job						
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	11				
Camp unit (includes parking spur)	do	2,600	15				
Table canopies	do	1,600	6				
Electrical distribution & hookups	Sum Job		1	1	(1) 10,350		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1				
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200		3	600		
Mercury vapor lights	do	550		3	1,650		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	3,500		
Amphitheater	EA	3.400					
Reforestation	acre	950				30	28,500
Site preparation	Sum Job				4,100		
Landscaping and Beautification	acre	2,800		1.86	5,200		
Concrete steps	Sum Job				400		
Fence	Sum Job				800		
TOTAL					$26,600		$28,500

(1) Includes electrical hookups at 15 campsites.

TABLE 9 - 16

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

PONTOON PARK

Acres 6 — See Plate 16

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	983				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	2,150				
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500	1				
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300	1				
Picnic unit	do	1,500	10				
Camp unit (includes parking spur)	do	2,600					
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job						
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550					
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL							

TABLE 9 - 17

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

SWEEDEN ISLAND PARK

Acres 91 — See Plate 17

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	8,800			720	13,700
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50	460			1,200	13,800
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	6,730	400	3,500		
Launching lanes, concrete	EA	27,500	1				
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600	3				
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000				1	38,000
Disposal field for waterborne	EA	12,000				1	12,000
Sewage collection system	Sum Job						
Water distribution system	Sum Job			1	(2) 34,700	1	(3) 11,500
Water well	EA	8,300	2				
Picnic unit	do	1,500	25				
Camp unit (includes parking spur)	do	2,600	28			33	85,800
Table canopies	do	1,600					
Electrical distribution & hookups	Sum Job		1	1	(1) 15,200	1	1,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300	2				
Patio and fireplace for p.s.	do	3,000		2	6,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600		1	5,600		
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		5	2,750	1	550
Entrance complex	Sum Job					1	15,000
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
TOTAL					$67,750		$191,350

(1) Includes electrical hookups for 21 camp sites
(2) Includes 7 drinking fountains, 3500 L.F. line, pressurize well and well house.
(3) Includes 5 drinking fountains, 2000 L.F. Line.

TABLE 9 - 18

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

HOLLA BEND FUTURE PARK

Acres 20 — See Plate 18

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00				3,200	60,800
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50				1,011	6,550
b. Flexible pavement	do	8.75				111	950
Launching lanes, concrete	EA	27,500					
Courtesy piers	do	6,750					
Restroom, masonry							
a. Vault	do	17,500				1	17,500
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800					
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job						
Water distribution system	Sum Job						
Water well	EA	8,300				1	8,300
Picnic unit	do	1,500					
Camp unit (includes parking spur)	do	2,600				21	54,600
Table canopies	do	1,600				5	8,000
Electrical distribution & hookups	Sum Job					1	2,000
Group camp	EA	2,200					
Group picnic shelters	do	13,300					
Patio and fireplace for p.s.	do	3,000					
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550				1	550
Entrance complex	Sum Job					1	5,000
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950				10	9,500
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800				1	2,800
TOTAL							$176,550

TABLE 9 - 19

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

DAM SITE 13

Acres 481 — See Plates 19 & 20

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities			
				Initial		Future	
				Quantity	Cost	Quantity	Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00	400	400	5,200	2,200	28,600
(2) Flexible pavement	do	19.00	14,707	85	1,600	25,340	481,450
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50				1,200	13,800
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	11,485	1,400	12,250	9,036	79,050
Launching lanes, concrete	EA	27,500	3			2	55,000
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	4			8	246,400
e. Waterborne with showers	do	38,000	1			1	38,000
Disposal field for waterborne r.	EA	12,000				2	24,000
Sewage collection system	Sum Job		1			1	(2)145,000
Water distribution system	Sum Job		1			2	(3) 62,900
Water well	EA	8,300				1	8,300
Picnic unit	do	1,500	28			63	94,500
Camp unit (includes parking spur)	do	2,600	36			135	351,000
Table canopies	do	1,600		3	4,800		
Electrical distribution & hookups	Sum Job		1	1	(1)18,400	2	(4) 23,100
Group camp	EA	2,200	3				
Group picnic shelters	do	13,300	4			5	66,500
Patio and fireplace for p.s.	do	3,000		4	12,000	5	15,000
Overlook shelters	do	9,200	1				
Sanitary disposal stations	do	5,600	1	Pave	2,000		
Fishing berm (30 c.y./100 LF)	LF	5.00				1,000	5,000
Concrete benches	EA	200					
Mercury vapor lights	do	550		9	4,950	9	4,950
Entrance complex	Sum Job			1	44,300		
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500		1.0	17,500		
c. Trail shelters	EA	2,100		3	6,300		
Playground equipment	Sum Job			2	7,000		
Amphitheater	EA	3,400				1	3,400
Reforestation	acre	950			1,200	1	5,500
Site preparation	Sum Job					3	8,400
Landscaping and Beautification	acre	2,800			1,800		
Delineator post on roads	Sum Job				500		
Concrete steps							
TOTAL					$139,800		$1,759,850

(1) Includes electrical hookups at 20 campsites.
(2) Includes 3500 L.F. 4" force main, 6,550 L.F. of 6" gravity sewer, and 1 lift station.
(3) Includes 13,970 L.F. of waterline and 12 drinking fountains.
(4) Includes 13,570 L.F. of electrical line.

TABLE 9 - 20

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

FORT SMITH PARK

Acres 44 — See Plate 21

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	4,230				
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50					
b. Flexible pavement	do	8.75	6,930	278	2,450		
Launching lanes, concrete	EA	27,500	4				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	3				
e. Waterborne with showers	do	38,000					
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job		1				
Water distribution system	Sum Job		1				
Water well	EA	8,300					
Picnic unit	do	1,500	7				
Camp unit (includes parking spur)	do	2,600	26				
Table canopies	do	1,600	5	5	8,000		
Electrical distribution & hookups	Sum Job		1	1	2,500		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1				
Patio and fireplace for p.s.	do	3,000		1	3,000		
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600					
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		5	2,750		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100		1	3,500		
Playground equipment	Sum Job						
Amphitheater	EA	3,400					
Reforestation	acre	950					
Site preparation	Sum Job						
Landscaping and Beautification	acre	2,800					
Fence	Sum Job				3,750		
TOTAL					$25,950		

TABLE 9 - 21

DETAILED ESTIMATE OF COST FOR ADDITIONAL RECREATIONAL FACILITIES

McClellan-Kerr Arkansas River Navigation System

LEE CREEK PARK

Acres 155 — See Plate 22

Item	Unit	Jan 76 Unit Cost	Existing Facilities Jan 76 Quantity	Proposed Facilities Initial Quantity	Proposed Facilities Initial Cost	Proposed Facilities Future Quantity	Proposed Facilities Future Cost
Roads							
a. 20 feet wide access and circulation							
(1) Gravel to be paved	LF	13.00					
(2) Flexible pavement	do	19.00	12,250	120	2,300	520	9,900
b. 12 feet wide one way							
(1) Gravel to be paved	do	7.75					
(2) Flexible pavement	do	11.50					
Parking areas							
a. Gravel to be paved	SY	6.50		67	450		
b. Flexible pavement	do	8.75	4,570	477	4,150	1,711	14,950
Launching lanes, concrete	EA	27,500	2				
Courtesy piers	do	6,750	1				
Restroom, masonry							
a. Vault	do	17,500					
b. Vault-convertible type	do	25,600					
c. Vault-convert to waterborne	do	20,500					
d. Waterborne	do	30,800	1				
e. Waterborne with showers	do	38,000	1				
Disposal field for waterborne r.	EA	12,000					
Sewage collection system	Sum Job		1				
Water distribution system	Sum Job		1			1	(2) 4,800
Water well	EA	8,300					
Picnic unit	do	1,500	4			18	27,000
Camp unit (includes parking spur)	do	2,600	10	10	26,000	7	18,200
Table canopies	do	1,600	9	15	24,000	8	12,800
Electrical distribution & hookups	Sum Job		1	1	(1) 7,350		
Group camp	EA	2,200					
Group picnic shelters	do	13,300	1			1	13,300
Patio and fireplace for p.s.	do	3,000		1	3,000	1	3,000
Overlook shelters	do	9,200					
Sanitary disposal stations	do	5,600	1	Pave	2,000		
Fishing berm (30 c.y./100 LF)	LF	5.00					
Concrete benches	EA	200					
Mercury vapor lights	do	550		5	2,750		
Entrance complex	Sum Job						
Trails							
a. Foot bridge	Sum Job						
b. Park circulation	mile	17,500					
c. Trail shelters	EA	2,100					
Playground equipment	Sum Job			1	4,400		
Amphitheater	EA	3,400					
Reforestation	acre	950				27	25,650
Site preparation	Sum Job				2,850		2,000
Landscaping and Beautification	acre	2,800		1.89	5,300	1	2,800
TOTAL					$84,550		$134,400

(1) Includes electrical hookups at 10 camp sites.
(2) Includes 650 feet of waterline and 2 drinking fountains.

9.05. Annual operation and maintenance cost. A summary of the operation and maintenance costs for recreational facilities and the cost of Real Estate Management Activities are given in Table 9-22.

TABLE 9-22

SUMMARY OF OPERATION AND MAINTENANCE COSTS FOR RECREATIONAL FACILITIES AND REAL ESTATE MANAGEMENT SERVICES

Item	Public Use	Real Estate Activities
Fiscal Year 1975		
Real Estate		$17,600
Recreational Facilities	$250,000	
S&I Overhead 17.8%	40,000	
Total	290,000	17,600
Fiscal Year 1980		
Real Estate		26,800
Recreational Facilities	280,000	
S&I Overhead 23%	60,000	
Total	340,000	26,800
Ultimate - Fiscal Year 2010		
Real Estate		32,700
Recreational Facilities	480,000	
S&I Overhead 23%	110,000	
TOTAL	$590,000	$32,700

SECTION X

MANAGEMENT PLANS

10.01 Project Resource Management Plan

a. General operational concepts and policies. The Project Resource Management Plan will be prepared in accordance with ER 1130-2-400 dated 28 May 1971. It is currently scheduled for submission in June 1976, and it will be Appendix A to this Design Memorandum. The McClellan-Kerr Arkansas River Navigation System has provided for improvements of the Arkansas River and tributaries in Arkansas and Oklahoma by construction of coordinated developments to serve navigation, produce hydroelectric power, afford additional flood control, and provide related benefits in connection with other activities such as recreation and wildlife propagation. The Project Resource Management Plan will describe the various management functions required for operation of the project in Navigation Pools 7, 8, 9, and 13 in Arkansas.

b. Staffing. The organization chart of the Dardanelle Resident Office personnel responsible for resource management is given in Table 10-1. These personnel are also responsible for resource management of Lake Dardanelle and Ozark Lake. The Ozark Preventive Maintenance Section is responsible for operation and maintenance of the parks on Ozark Lake and Navigation Pool 13. The Toad Suck Ferry Preventive Maintenance Section is responsible for operation and maintenance of the parks on Navigation Pools 7 and 8. The Dardanelle Preventive Maintenance Section is responsible for operation and maintenance of the parks on Lake Dardanelle and Navigation Pool 9.

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

d. Law enforcement. Park Managers and Technicians 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 in Pools 7, 8, 9, and 13 in Arkansas. However, when recreation demand indicates a need for concessions, they will be provided.

TABLE 10-1

STAFFING
DARDANELLE RESIDENT OFFICE

1 Supervisory Civil Engineer GS-13
1 Supervisory Civil Engineer GS-12

Administrative Branch

1 Administrative Officer	GS-9
1 Purchasing Agent	GS-6
1 Clerk-Dictating Machine Transcriber	GS-4
1 Clerk-Typist	GS-3
1 Procurement Clerk (Typing)	
1 Automotive Mechanic	WG-10
1 Sign Painter	WG-09
2 Automotive Worker	WG-08
1 Sign Painting Worker	WG-07
1 Gardener	WG-04

Lakes and Parks Branch

1 Park Manager	GS-11

Ranger and Surveillance Section

1 Park Manager	GS-9
2 Park Manager	GS-7
1 Park Manager	GS-5
1 Student Trainee Park Mgmt (Temp)	GS-5
4 Park Tech (Temp)	GS-4

Toad Suck Ferry PM Section

1 Park Manager	GS-9
1 Facility Maint Supt	GS-7
2 Park Manager	GS-5
2 Park Tech (Temp)	GS-4
1 Electrical Worker	WG-08
1 Const Maint Worker	WG-06
1 Laborer	WG-03
4 Laborer (Temp)	WG-02

Lakes and Parks Branch (con.)

Dardanelle PM Section

1 Facility Maint Supt	GS-9
1 Service Contract Inspector	GS-4
1 Engr Equip Operator	WG-10
1 Carpenter	WG-09
1 Electrical Worker	WG-08
1 Cement Finisher	WG-08
1 Engr Equip Operator	WG-08
1 Painting Worker	WG-07
3 Const Maint Worker	WG-06
1 Motor Vehicle Operator	WG-06
1 Carpenter Helper	WG-05
3 Laborer (Temp)	WG-02

Ozark PM Section

1 Park Manager	GS-9
2 Park Manager	GS-7
1 Facility Maint Supt	GS-7
1 Service Contract Inspector	GS-4
3 Park Tech (Temp)	GS-4
1 General Clerk (Typing)	GS-4
1 Engr Equip Operator	WG-10
1 Electrical Worker	WG-08
1 Automotive Worker	WG-08
1 Motor Vehicle Operator	WG-08
1 Const Maint Worker	WG-05
3 Laborer (Temp)	WG-02

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, fireside programs, and appearances on television and radio stations. A nature trail has been constructed and a "Blockhouse" is to be constructed on Cadron Settlement Park for interpretation of the resources and enjoyment of park visitors. Also, a historical gravesite at Dam Site No. 13 South Park is being preserved. Additional trails and informative signs will be provided in the parks to point out natural features of the area.

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 1976. It is the objective 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", because the only lands owned are narrow strips at park sites and around some dam sites. These woodlands will be retained and managed for aesthetic, ecological, and recreational value. Barren areas in which trees are desired will be reforested.

b. Objective and policy. The objectives of forest management is to protect water quality through the control of soil erosion, restore the forest to a healthy state, provide forest cover required for recreational use and development, improve wildlife and fisheries habitat, and preserve 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, such as silvicultural needs, urgent disease control, and recreational facilities or specific essential uses.

c. Treatments and programs. Reforestation will be with plant species indigenous to the Arkansas River 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 addition of a laborer to the project staff.

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 Fire Protection Plan for Navigation Pools 7, 8, 9, and 13 is scheduled for submission in August 1976. It will be prepared in accordance with ER-1130-2-400 dated 28 May 1971.

b. Training and equipment. Appropriate personnel on 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 in the project, 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, condition 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. Activities of fire prevention, presuppresssion, and suppression 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 for Pools 7, 8, 9, and 13 is scheduled for submission in November 1976. When approved, the plan will be Appendix D to this Master Plan in accordance with ER 1130-2-400 dated 28 May 1971. It will implement 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 resources and wildlife habitat thereon. Lands, waters and interests thereon will be made available 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 will include 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 Fish and Wildlife Management plan will contain 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 will be provided. These recreational 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 Navigation Pools 7, 8, 9, and 13, and it was approved February 1974. This plan discusses design criteria and precautionary measures to prevent, reduce or control hazardous situations. The Project Safety Plan will be Appendix E to this Master Plan.

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. Pleasure boat warnings are issued through local news media for periods of high river flows. Pleasure boaters are warned to stay in the navigation channel because of the dangers presented by underwater dikes.

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 unsanitary, 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.

10.06. Shoreline Management Plan.

a. General. Most lands along the Arkansas River are privately owned, and therefore, land-use planning of these lands is outside the jurisdiction of the Federal Government. Accordingly, such a plan would have to be implemented by the State of Arkansas. In view of the absence of positive action by the State of Arkansas to implement such a plan, none is submitted.

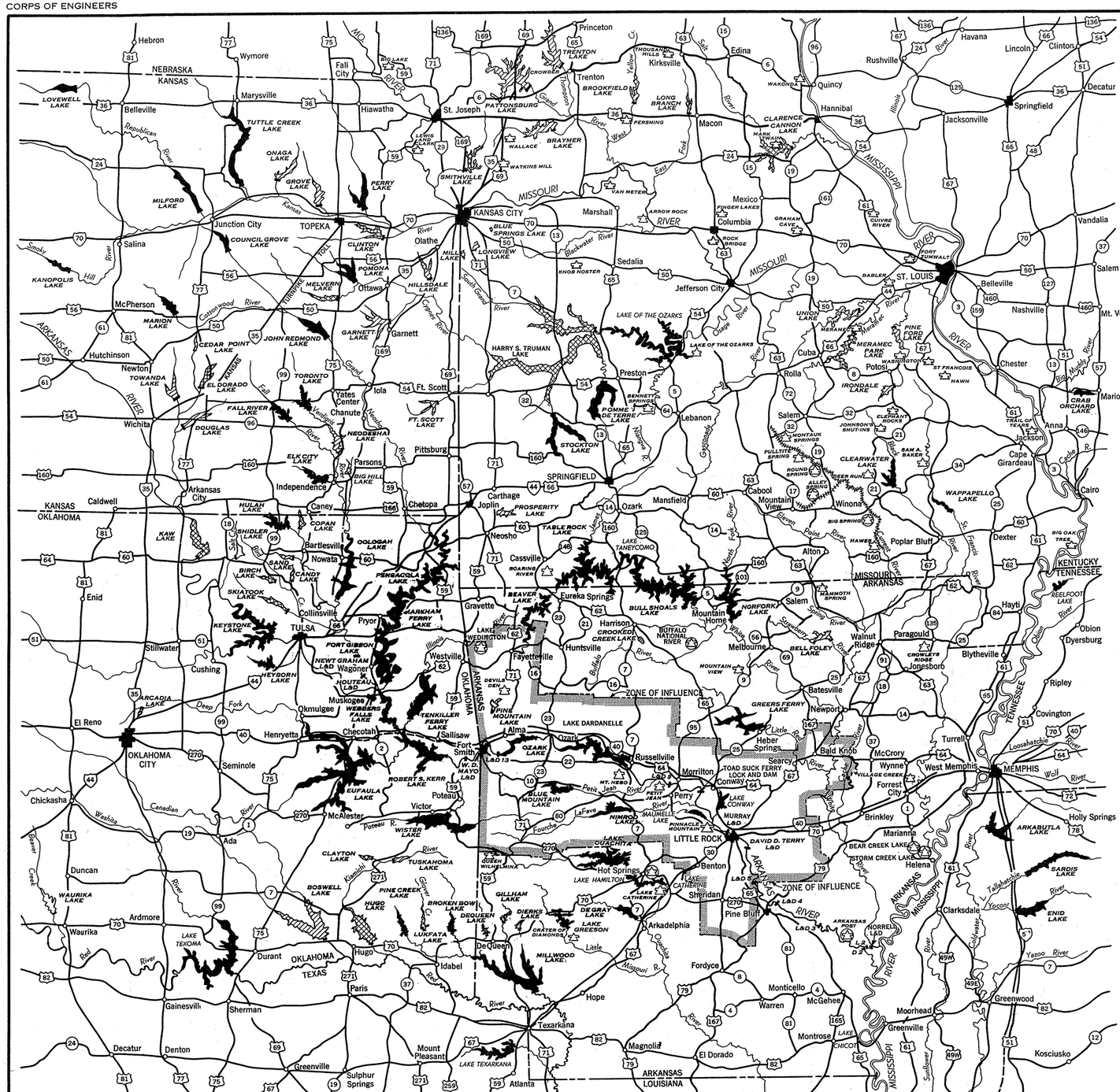
b. Permits. See Section 7.03 for a description of the permit program.

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 2010.

11.02. Recommendation. It is recommended that this master plan be approved in order to provide for the orderly development and management of recreational resources at Murray, Toad Suck Ferry, and Nos. 9, and 13 Locks and Dams.



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

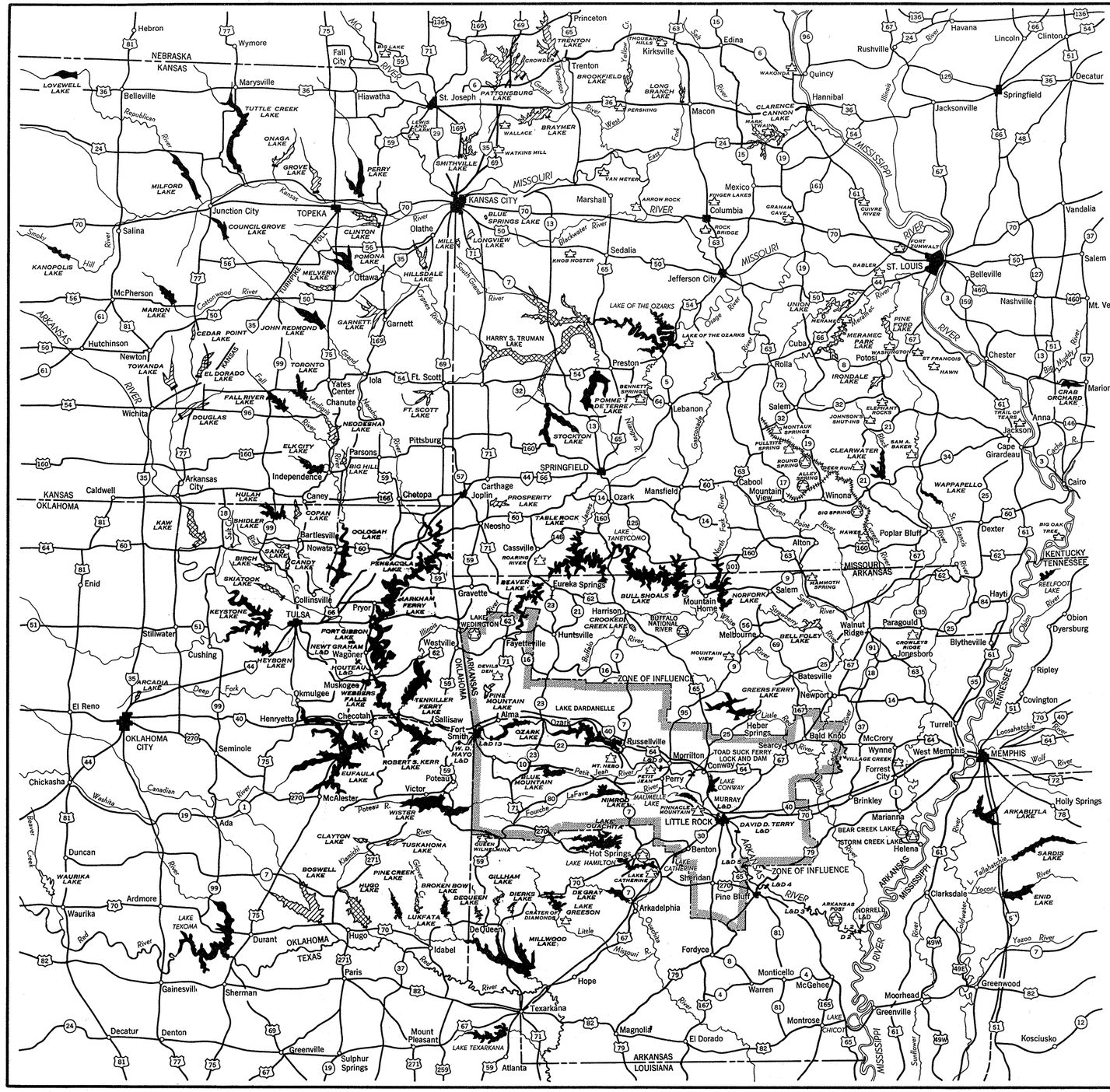
UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

REGIONAL RECREATION AREAS

SCALE OF MILES 0 10 20 30 40 50

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



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

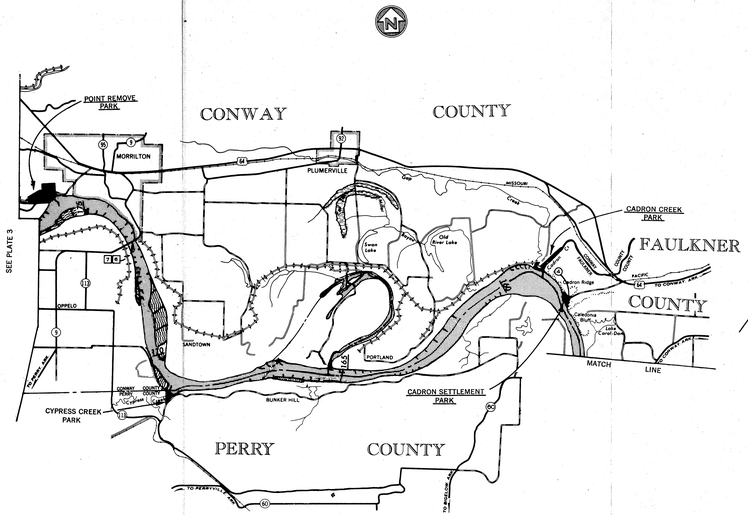
ARKANSAS RIVER
REGIONAL RECREATION AREAS

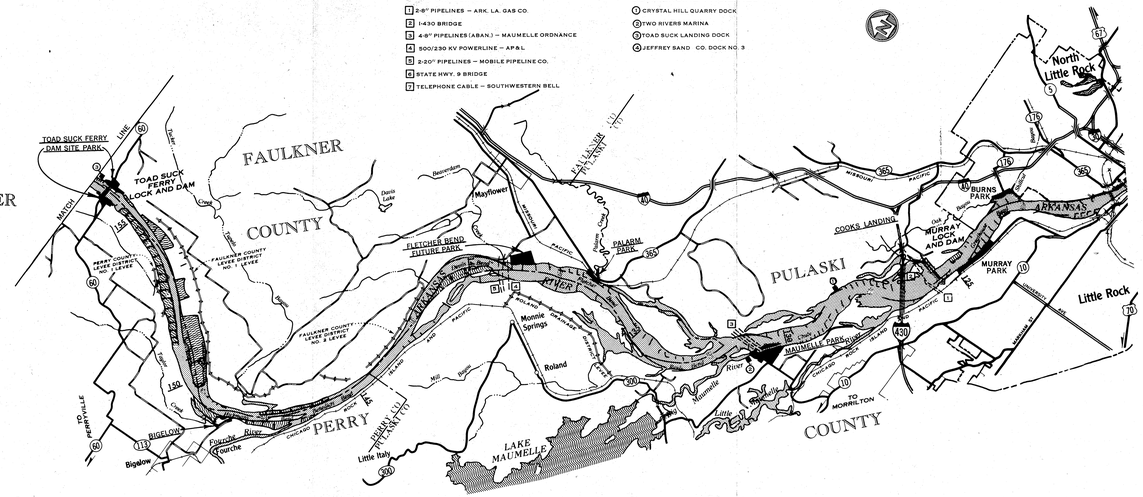
SCALE OF MILES
0 10 20 30 40 50

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 1

CORPS OF ENGINEERS





RIVER CROSSINGS

1. 2-8" PIPELINES – ARK. LA. GAS CO.
2. I-430 BRIDGE
3. 4-8" PIPELINES (ABAN.) – MAUMELLE ORDNANCE
4. 500/230 KV POWERLINE – AP&L
5. 2-20" PIPELINES – MOBILE PIPELINE CO.
6. STATE HWY. 9 BRIDGE
7. TELEPHONE CABLE – SOUTHWESTERN BELL

COMMERCIAL FACILITIES

1. CRYSTAL HILL QUARRY DOCK
2. TWO RIVERS MARINA
3. TOAD SUCK LANDING DOCK
4. JEFFREY SAND CO. DOCK NO. 3

LEGEND

- Project Operations
- Operations : Recreation - Intensive Use
- (65) State Highway
- Levee
- Paved Road
- Gravel Road
- Dirt Road
- 50 Navigation Miles From Mouth Of White River
- 65 U.S. Highway
- 40 Interstate Highway
- Dredged Material Area
- River Control Structure

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

DEVELOPMENT PLAN FOR ARKANSAS RIVER NAVIGATION POOLS 7 & 8

PROJECT RECREATIONAL AREAS

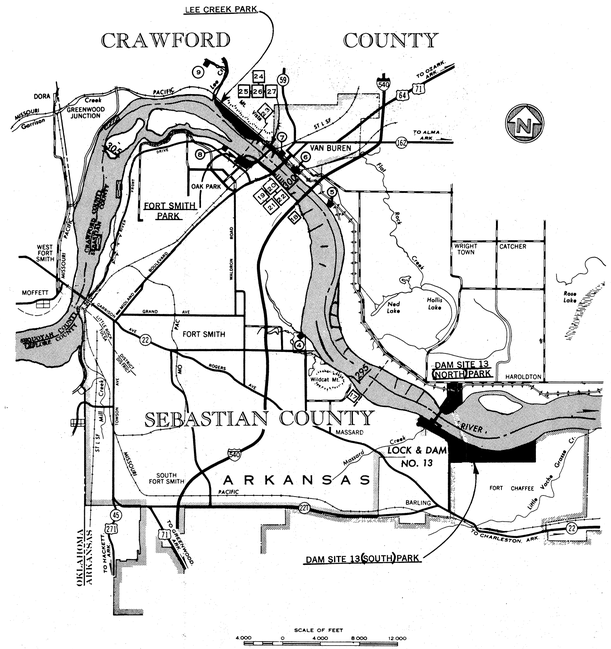
SCALE OF MILES

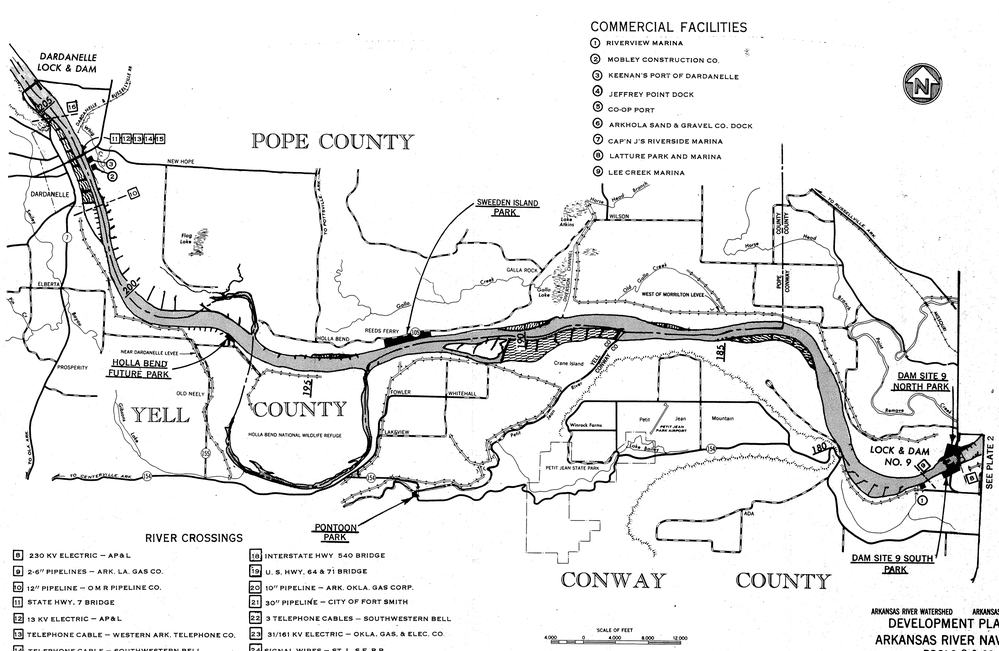
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS MAY 1976

PLATE 2

LEGEND

- Project Operations
- Operations : Recreation - Intensive Use
- 65 — State Highway
- Levee
- Paved Road
- Gravel Road
- Dirt Road
- 50 — Navigation Miles From Mouth Of White River
- 65 — U. S. Highway
- 40 — Interstate Highway
- Dredged Material Area
- River Control Structure





COMMERCIAL FACILITIES

1. RIVERVIEW MARINA
2. MOBLEY CONSTRUCTION CO.
3. KEENAN'S PORT OF DARDANELLE
4. JEFFREY POINT DOCK
5. CO-OP PORT
6. ARKHOLA SAND & GRAVEL CO. DOCK
7. CAP'N J'S RIVERSIDE MARINA
8. LATTURE PARK AND MARINA
9. LEE CREEK MARINA

RIVER CROSSINGS

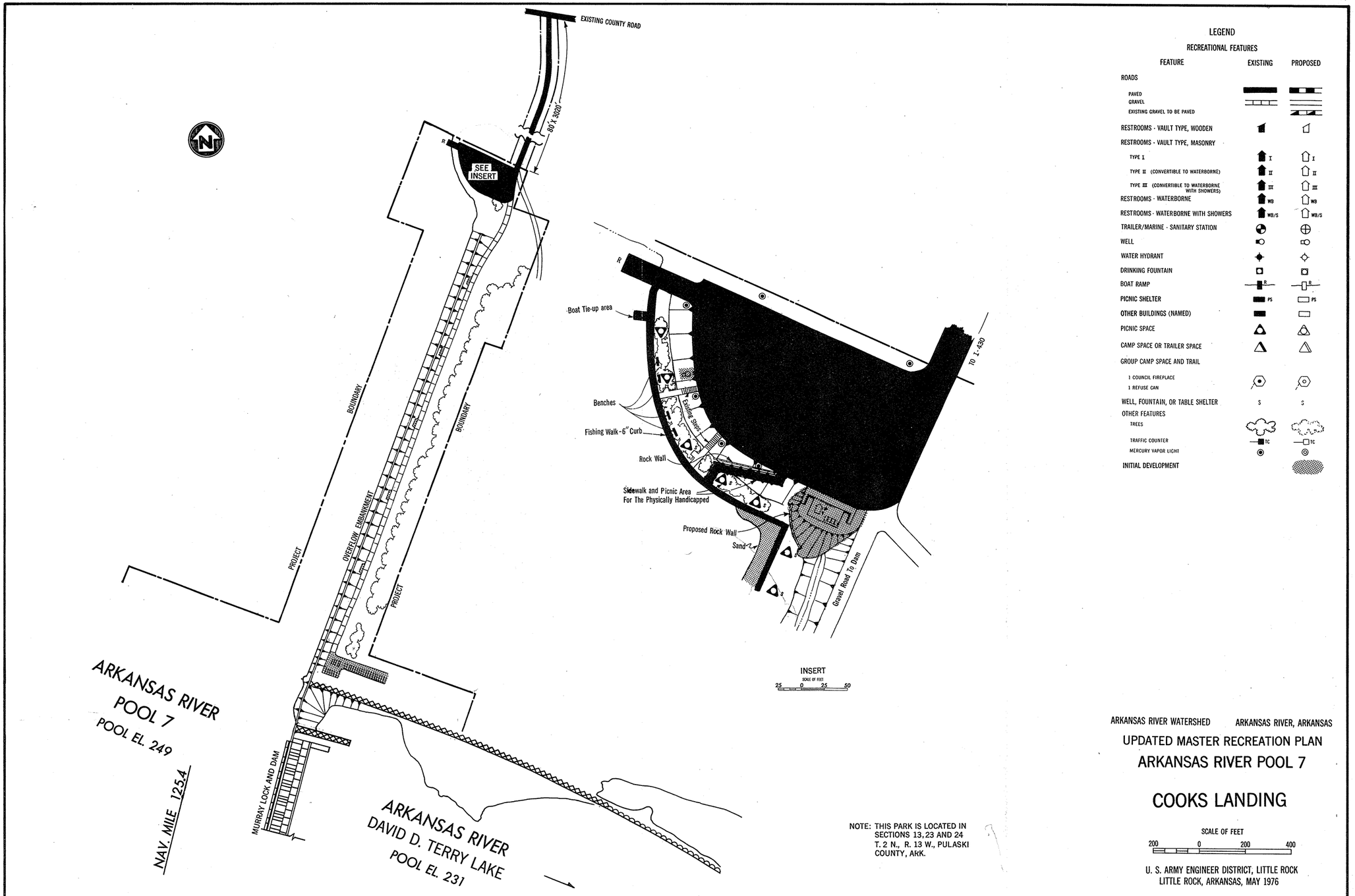
8. 230 KV ELECTRIC – AP&L
9. 2-6" PIPELINES – ARK. LA. GAS CO.
10. 12" PIPELINE – O M R PIPELINE CO.
11. STATE HWY. 7 BRIDGE
12. 13 KV ELECTRIC – AP&L
13. TELEPHONE CABLE – WESTERN ARK. TELEPHONE CO.
14. TELEPHONE CABLE – SOUTHWESTERN BELL
15. 6" PIPELINE – ARK. LA. GAS CO.
16. 115/161 K. V. ELECTRIC – AP&L
17. 161 K.V. ELECTRIC – OKLA. GAS & ELEC. CO.
18. INTERSTATE HWY 540 BRIDGE
19. U. S. HWY. 64 & 71 BRIDGE
20. 10" PIPELINE – ARK. OKLA. GAS CORP.
21. 30" PIPELINE – CITY OF FORT SMITH
22. 3 TELEPHONE CABLES – SOUTHWESTERN BELL
23. 31/161 KV ELECTRIC – OKLA. GAS. & ELEC. CO.
24. SIGNAL WIRES – ST. L. S.F. R.R.
25. ST. LOUIS - SAN FRANCISCO R. R. BRIDGE
26. TELEGRAPH WIRES – WESTERN UNION
27. REINFORCED CONCRETE CONDUIT – CITY OF FT. SMITH

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

DEVELOPMENT PLAN FOR ARKANSAS RIVER NAVIGATION POOLS 9 & 13 PROJECT RECREATIONAL AREA

SCALE: AS SHOWN

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS, MAY 1976



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS PARK IS LOCATED IN SECTIONS 13, 23 AND 24 T. 2 N., R. 13 W., PULASKI COUNTY, ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

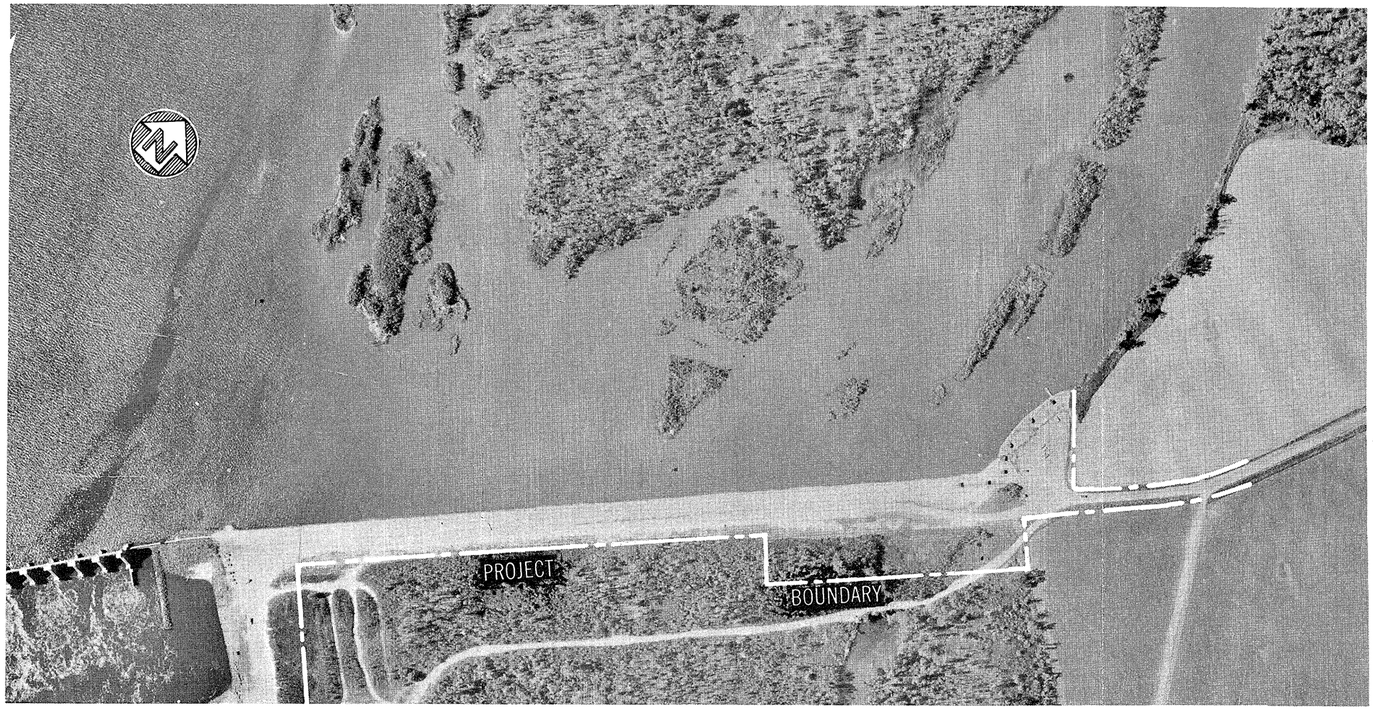
ARKANSAS RIVER POOL 7

COOKS LANDING

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

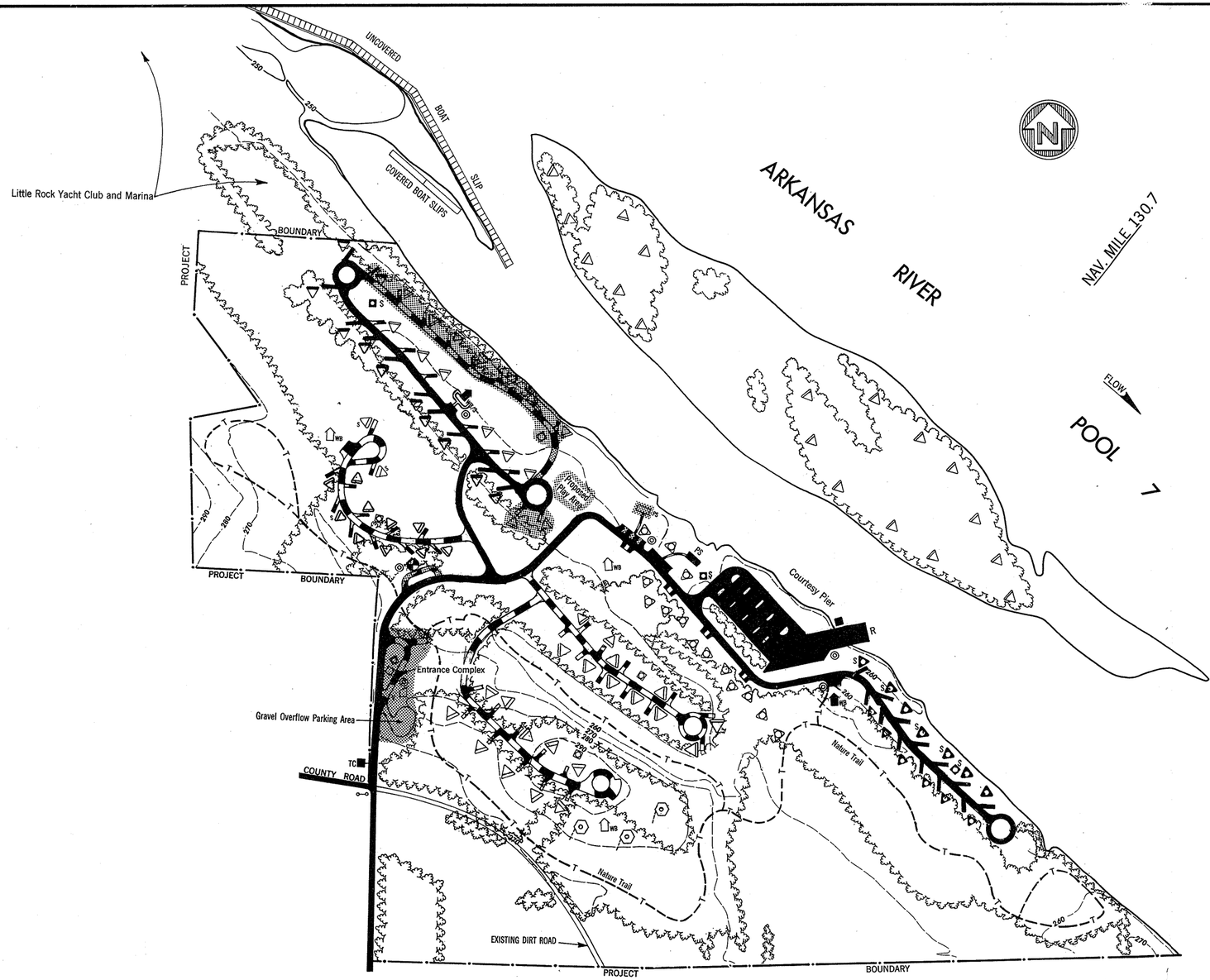
COOKS LANDING

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 4A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 5,6,7, AND 8, T 2 N., R.13 W., PULASKI CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7
MAUMELLE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 5



PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

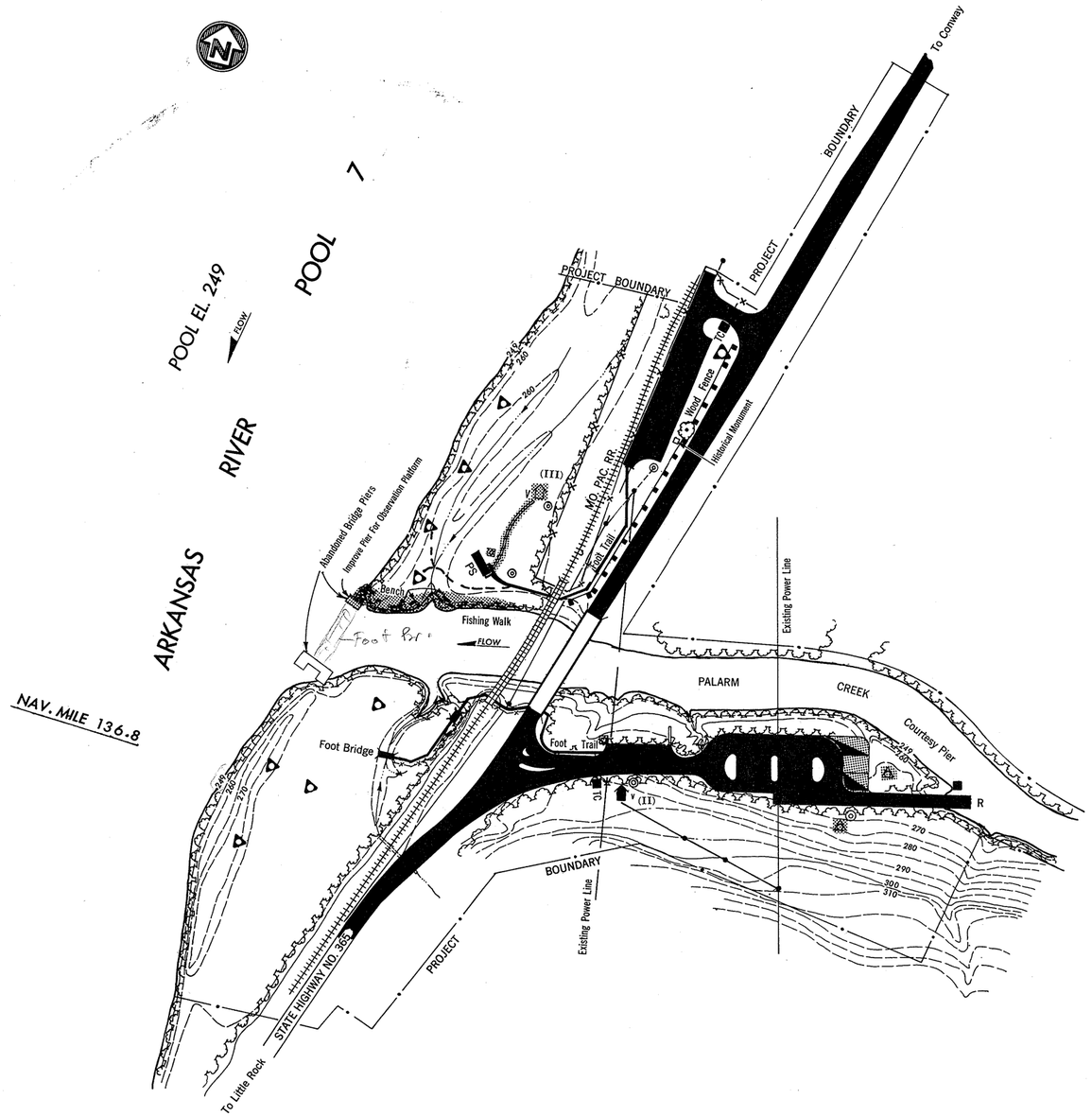
MAUMELLE

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 5A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		

INITIAL DEVELOPMENT

NOTE: THIS AREA IS LOCATED IN SECTIONS 12 AND 13, T. 3 N., R. 14 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

PALARM

PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 6



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

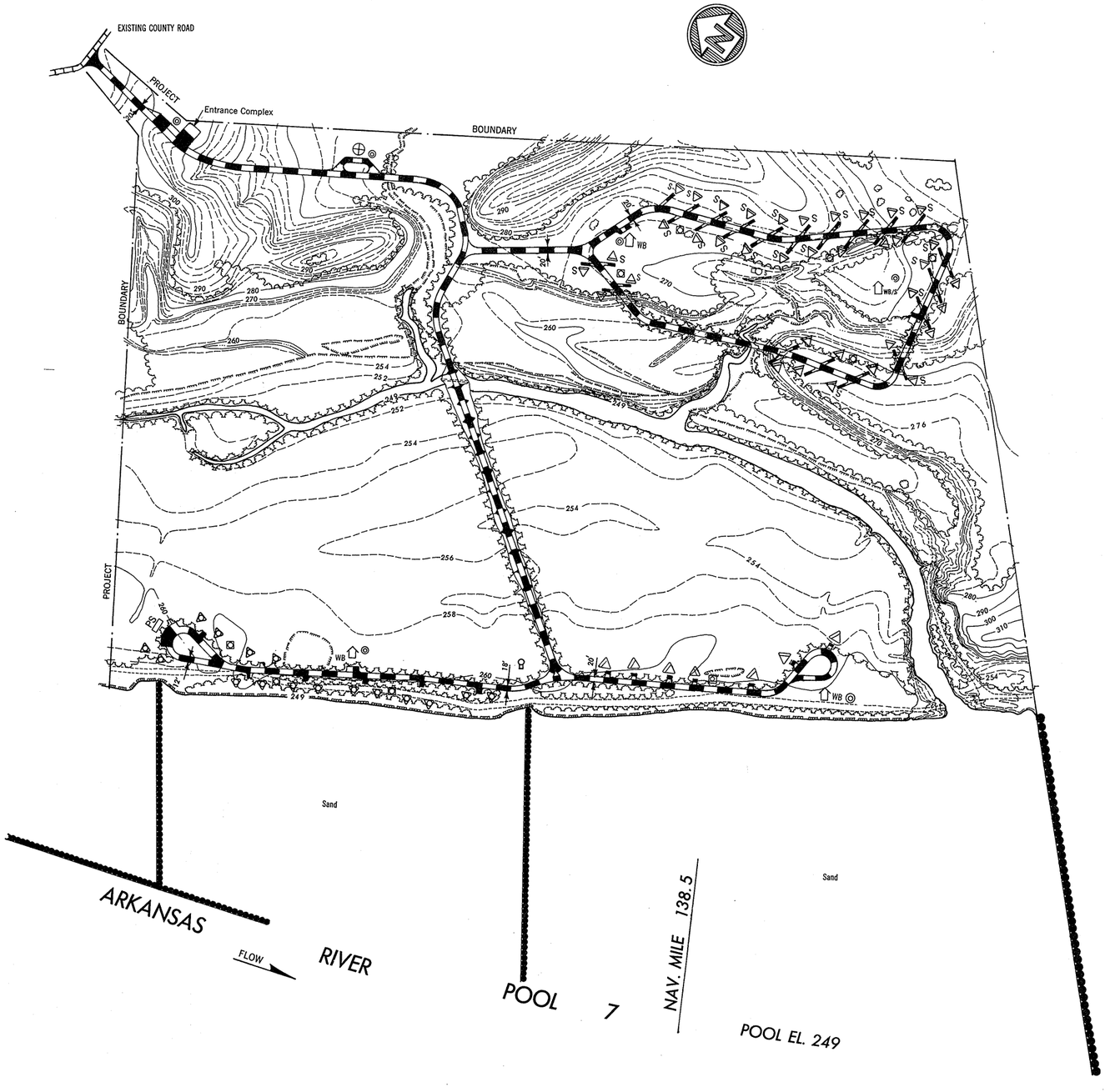
PALARM

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 6A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

137 ACRES

NOTE: THIS AREA IS LOCATED IN SECTIONS 1 AND 2 T. 3 N., R. 14 W., AND SECTIONS 35 AND 36, T. 4 N., R13 W., PULASKI AND FAULKNER CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

FLETCHER BEND FUTURE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

RKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

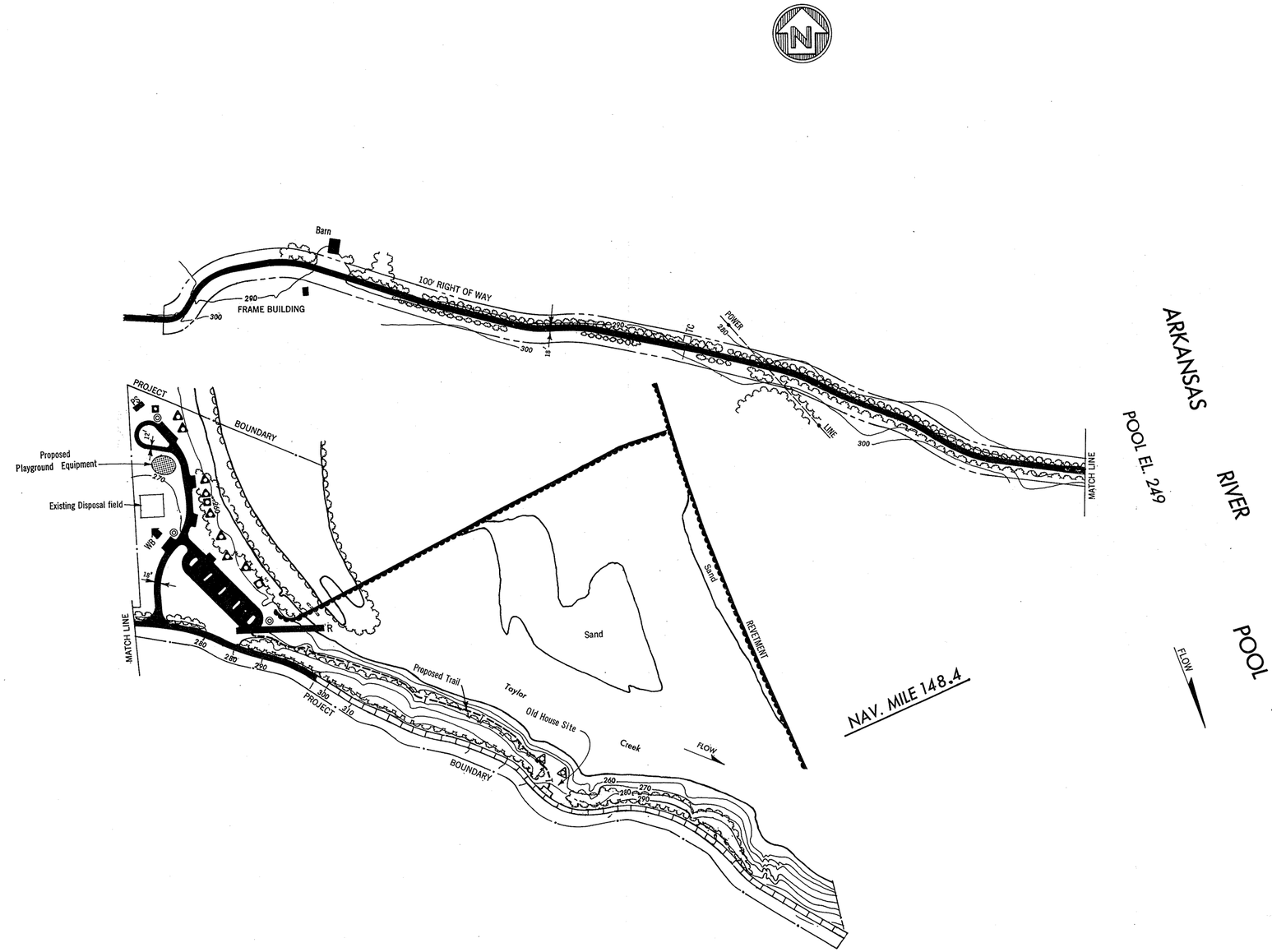
FLETCHER BEND FUTURE

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 7A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 7

BIGELOW PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 8



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

BIGELOW

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 8A

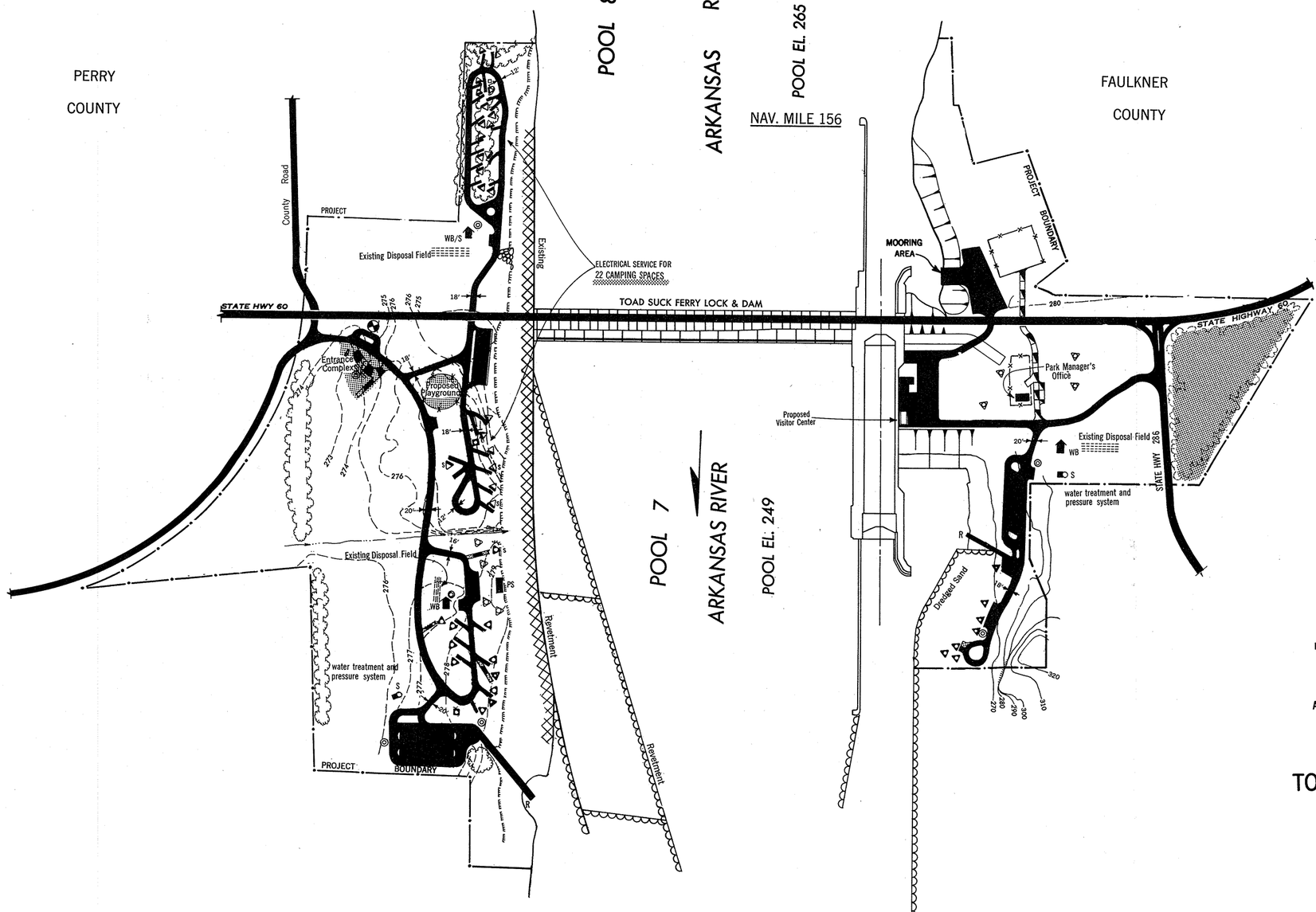
PERRY COUNTY

FAULKNER COUNTY

POOL 8 ARKANSAS RIVER POOL EL. 265

NAV. MILE 156

POOL 7 ARKANSAS RIVER POOL EL. 249



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 7 AND 18, T. 5 N., R. 14 W., AND SECTION 13, T. 5 N., R. 15 W., FAULKNER AND PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

TOAD SUCK FERRY DAM SITE PARK

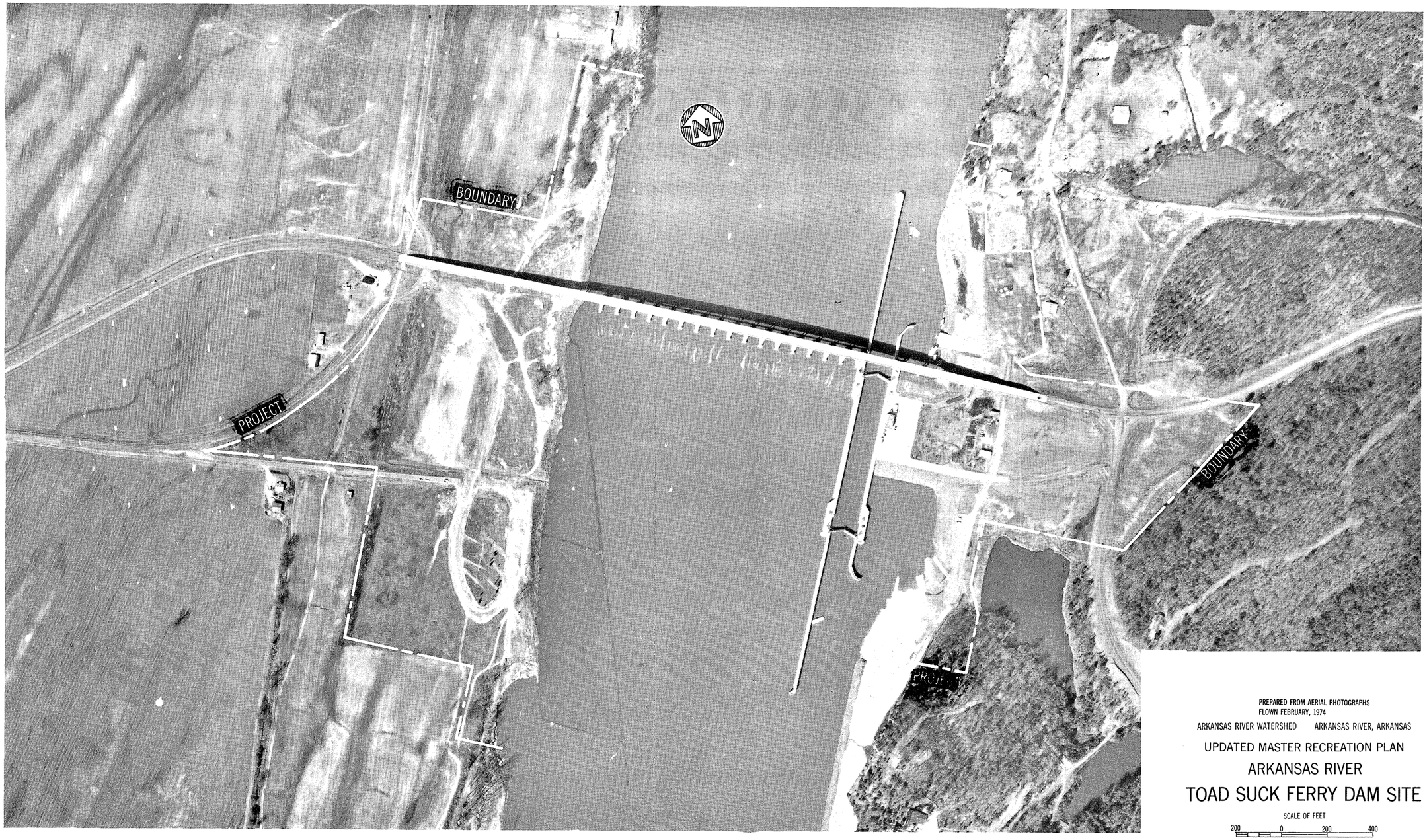
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK

LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 9



PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

TOAD SUCK FERRY DAM SITE

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 9A



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

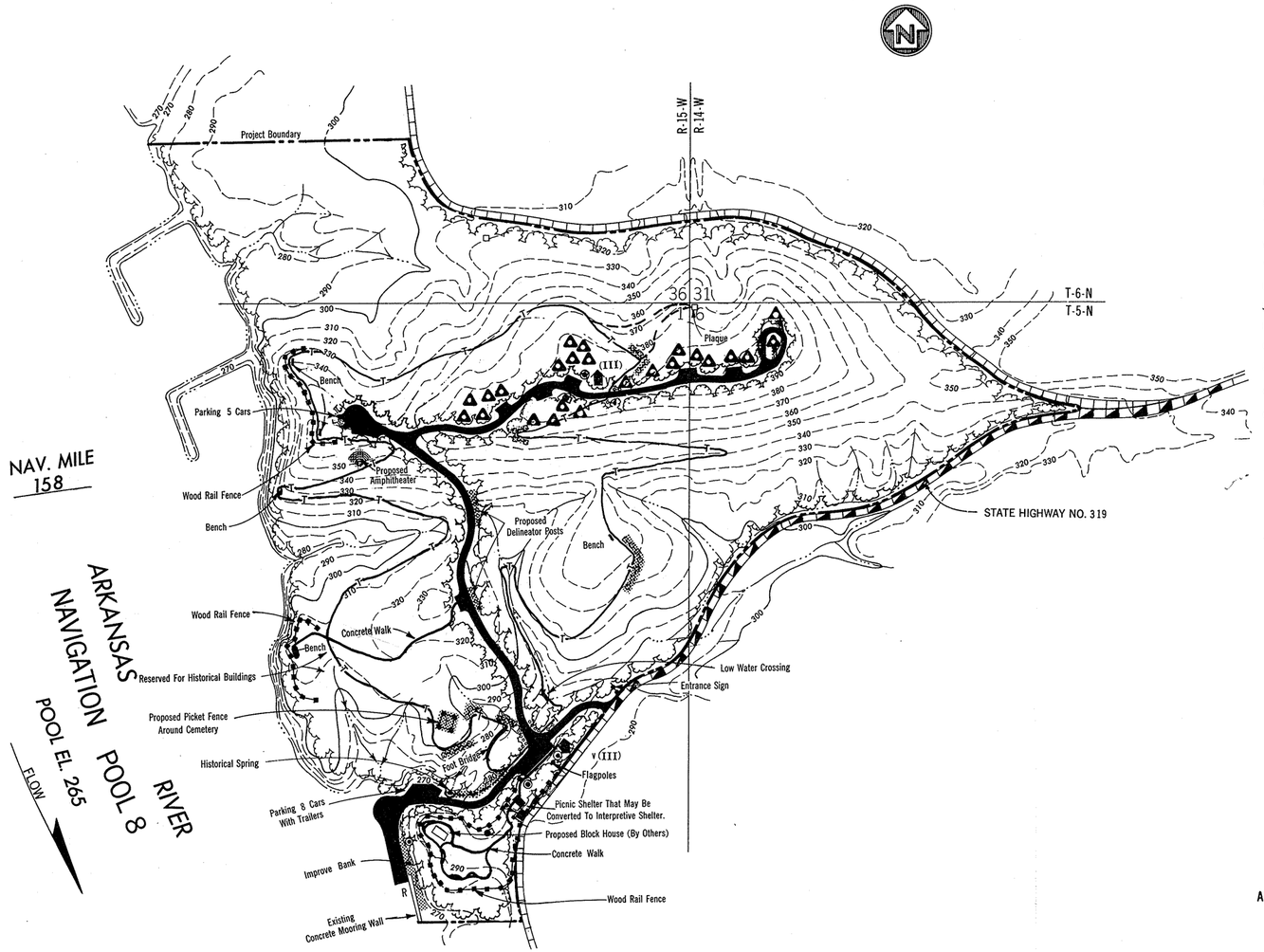
CADRON SETTLEMENT

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE RO.
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 10A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

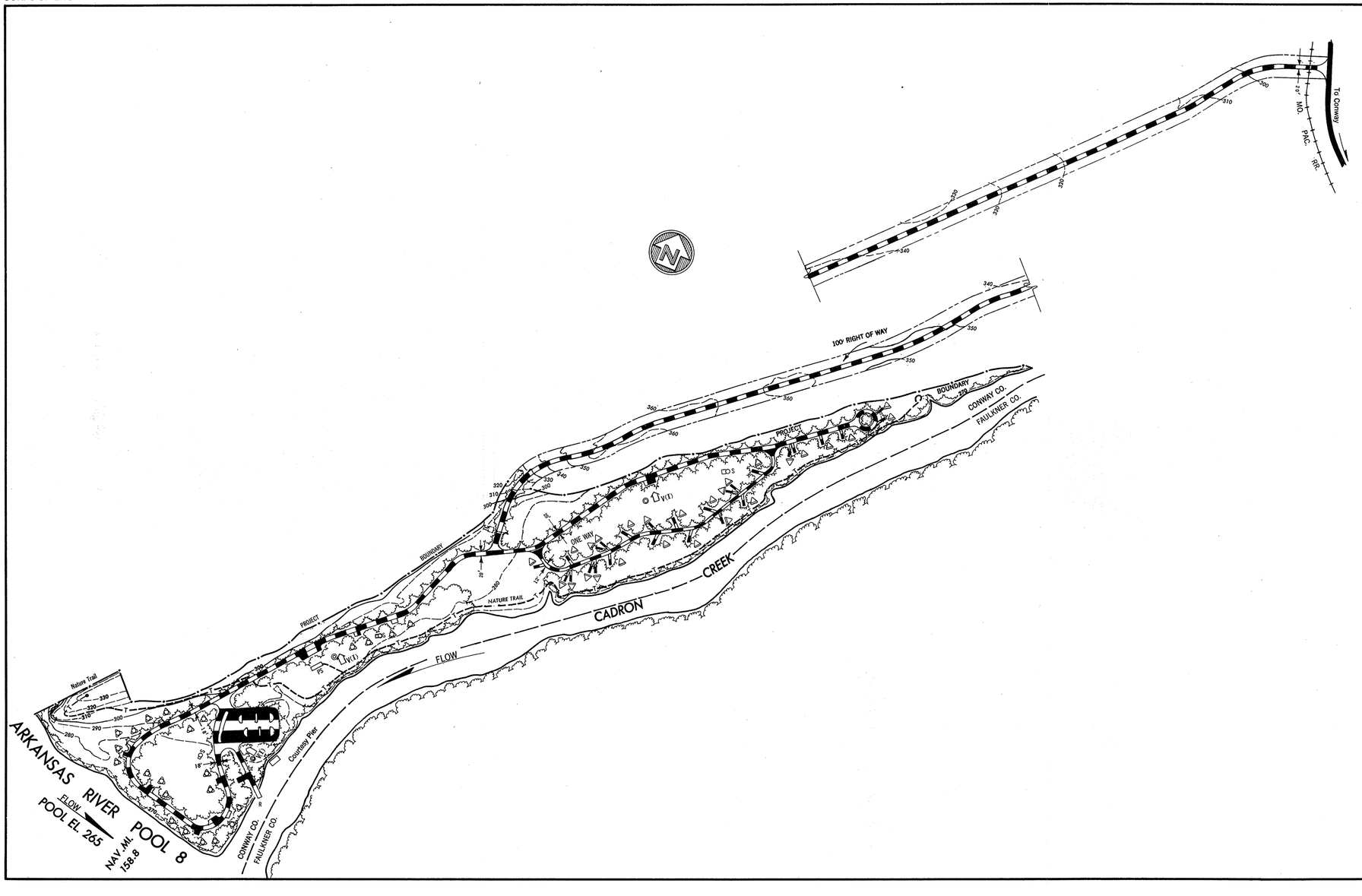
UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8
CADRON SETTLEMENT PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



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		
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 30, T. 6 N., R. 14 W., AND SECTIONS 25 AND 36, T. 6 N., R. 15 W., CONWAY CO. ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 8
CADRON CREEK
FUTURE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

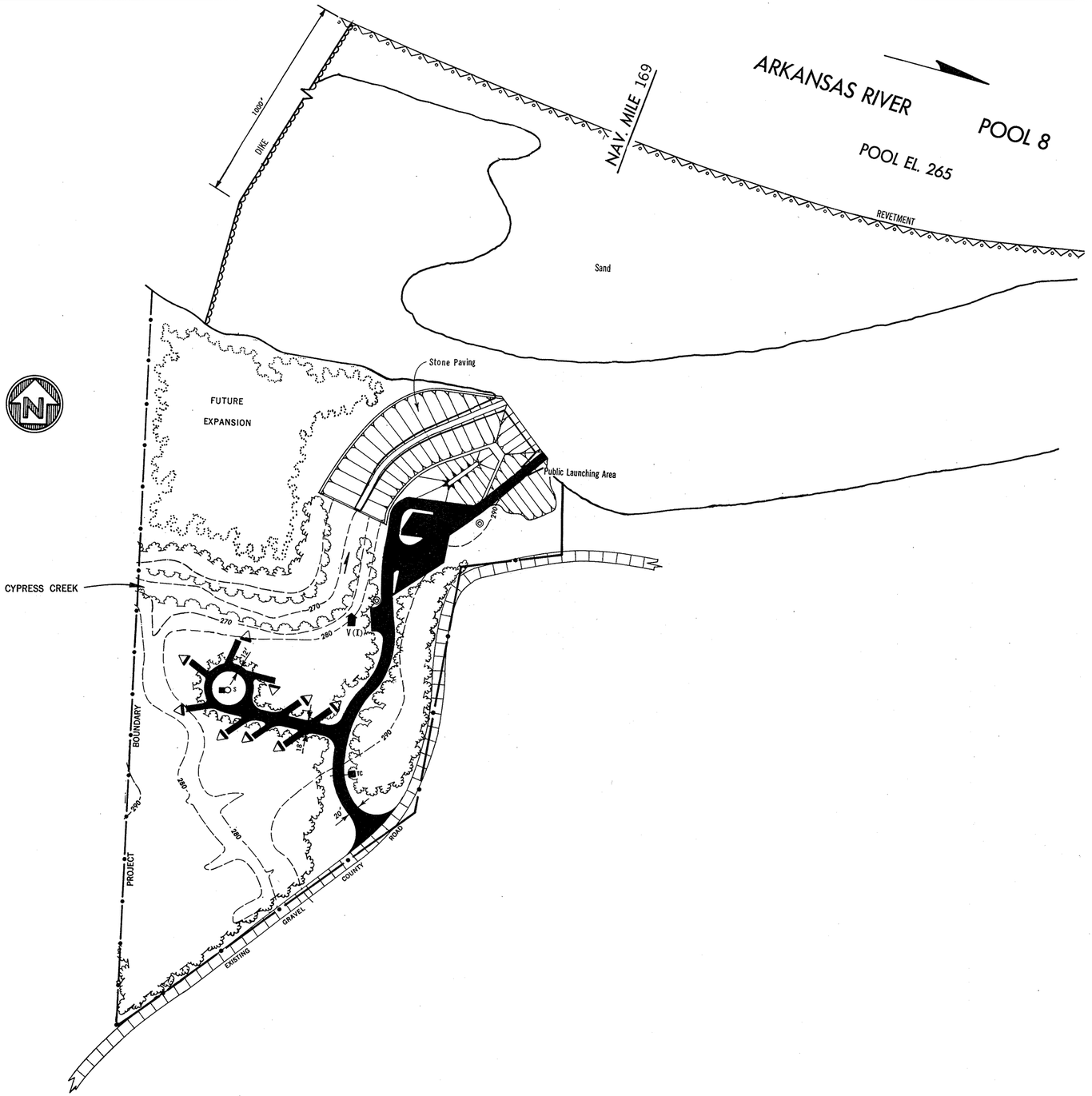
UPDATED MASTER RECREATION PLAN
ARKANSAS RIVER
CADRON CREEK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 11A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 20, T. 5 N., R. 16 W., PERRY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

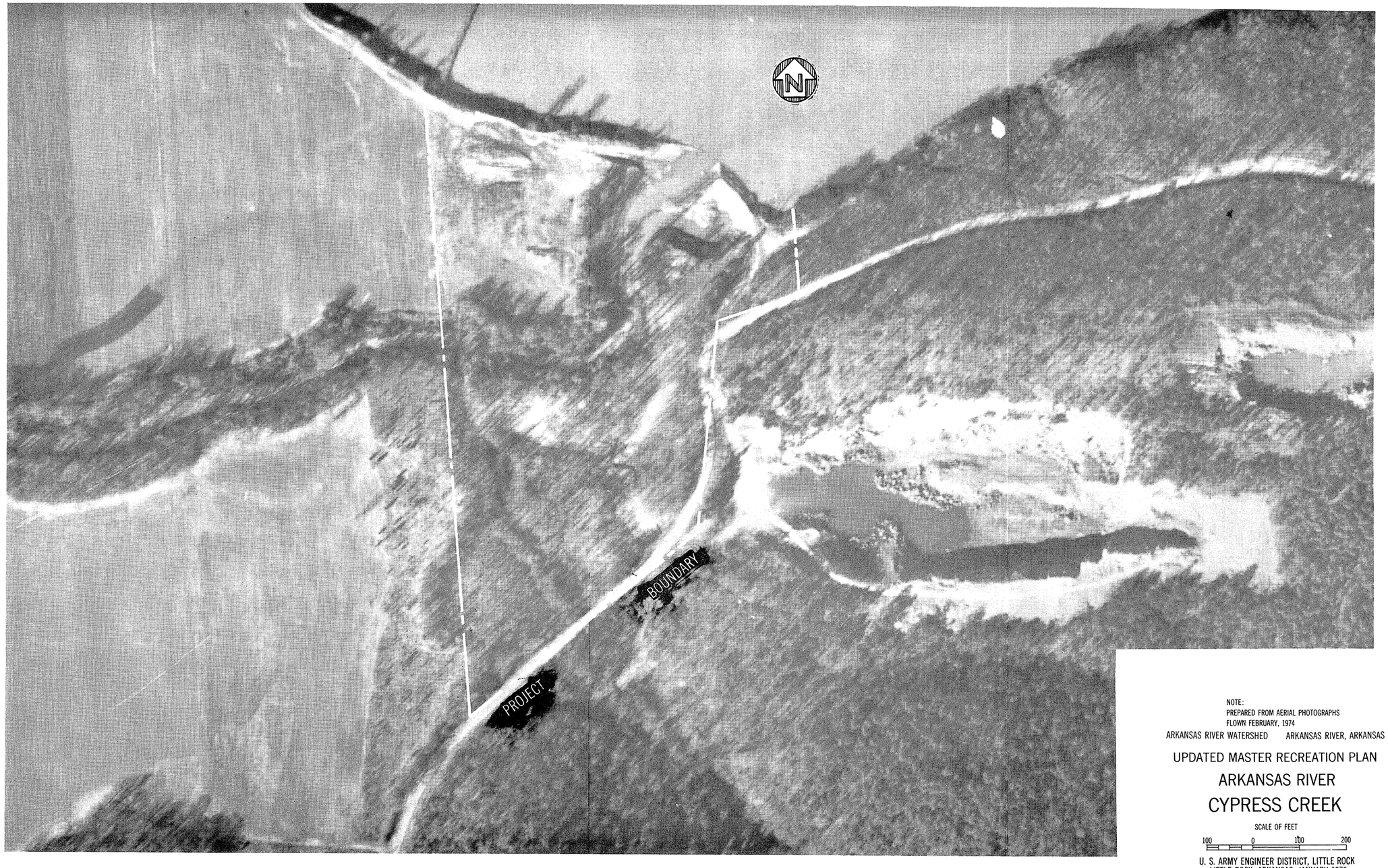
ARKANSAS RIVER POOL 8

CYPRESS CREEK PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

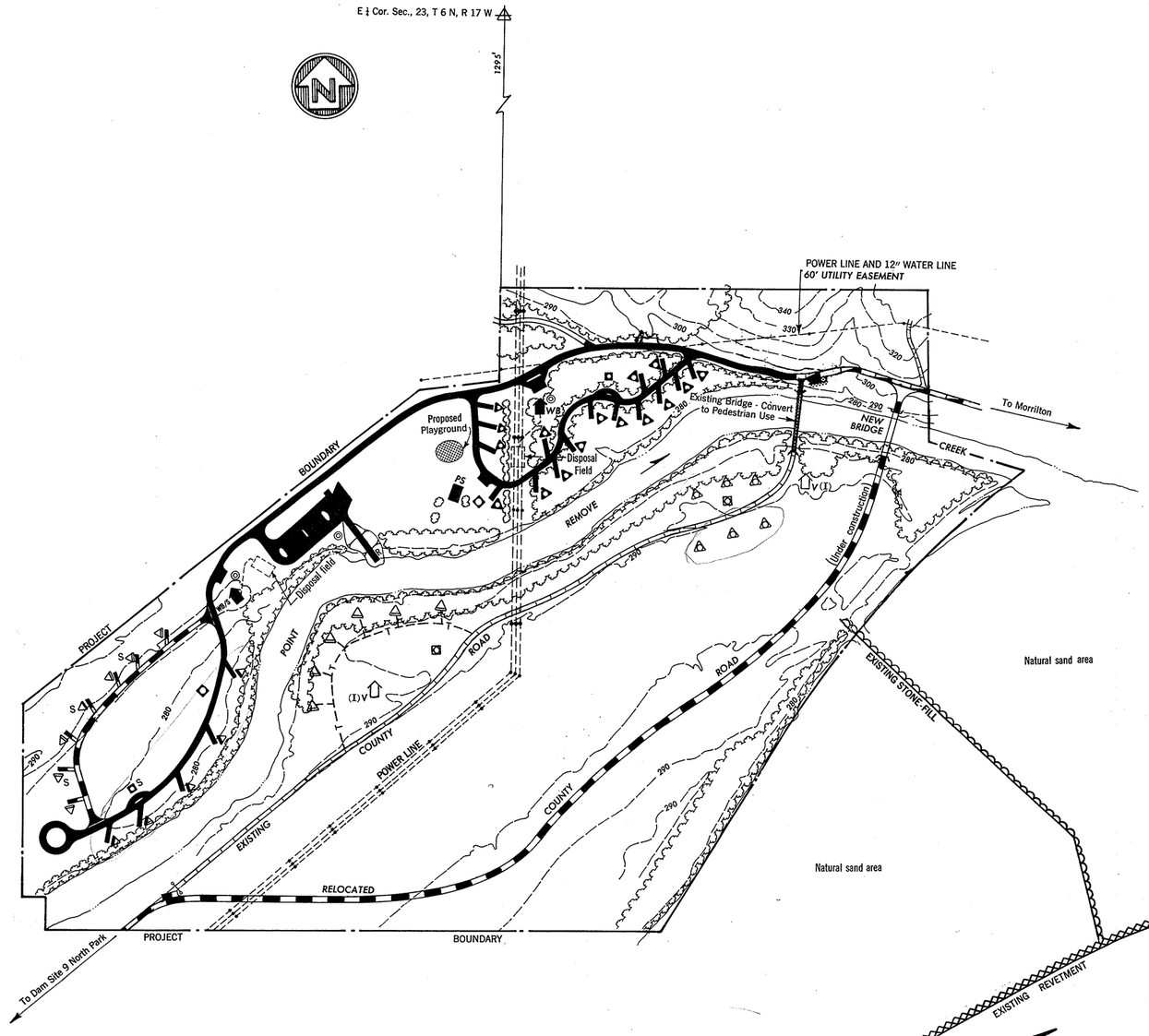
CYPRESS CREEK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 12A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 23, 24, 25, AND 26, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

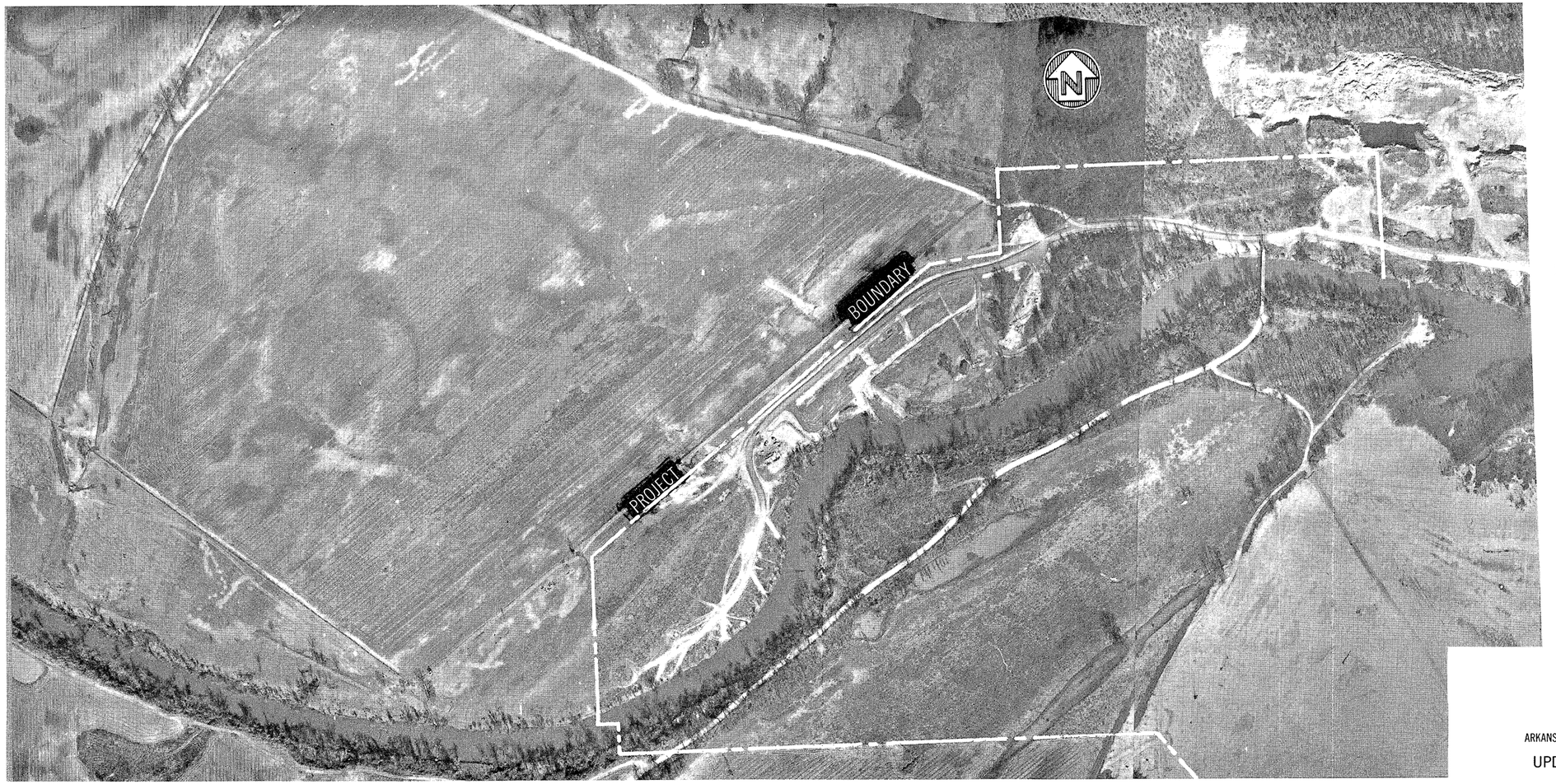
ARKANSAS RIVER POOL 8

POINT REMOVE PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

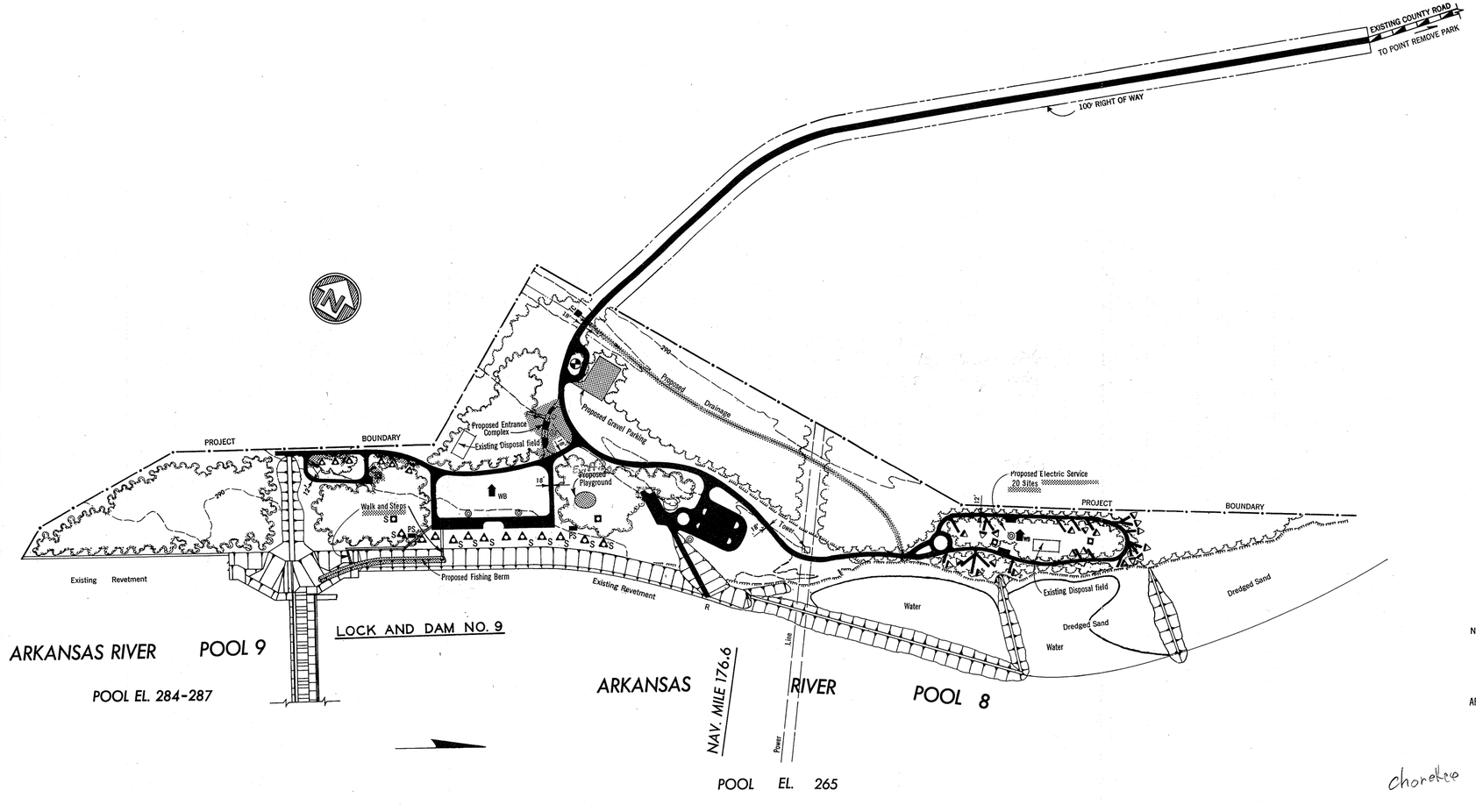
POINT REMOVE

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 26, 34 AND 35, T. 6 N., R. 17 W., CONWAY CO. ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

DAM SITE 9 - NORTH PARK

Chorette

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

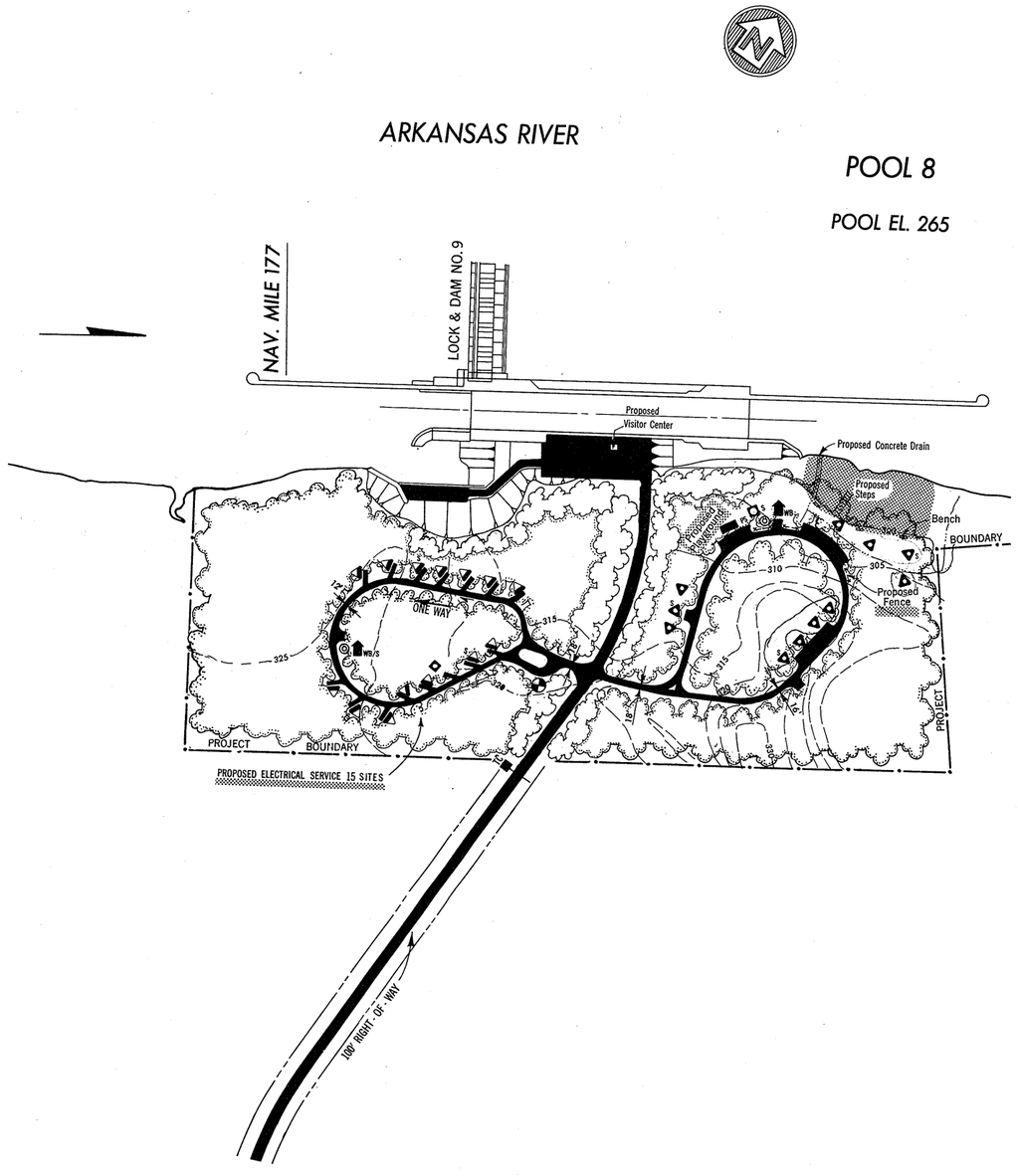
ARKANSAS RIVER

DAM SITE 9-NORTH

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 34 AND 35, T. 6 N., R. 17 W., CONWAY CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

DAM SITE 9 - SOUTH PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 15



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

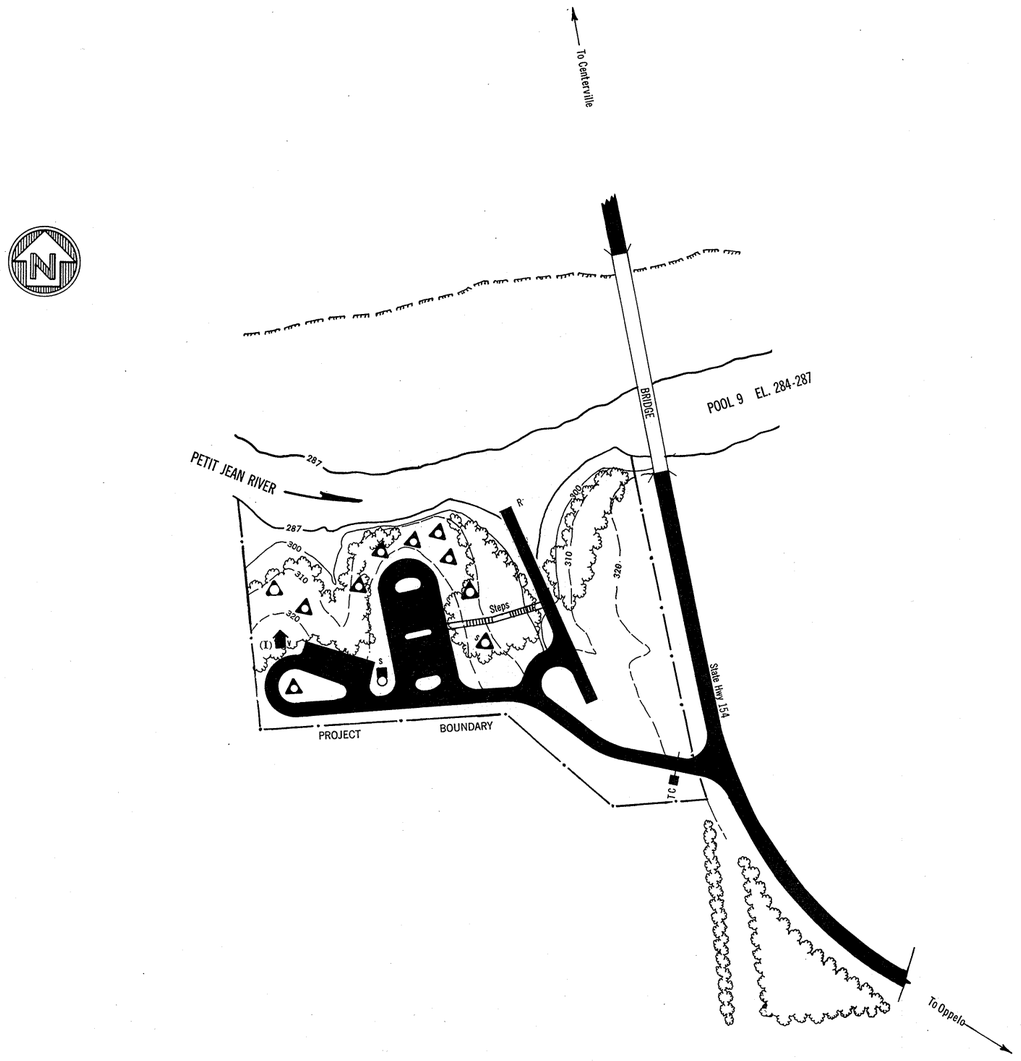
DAM SITE 9-SOUTH

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 3, T. 5 N., R. 19 W., CONWAY CO.

ARKANSAS RIVER WATERSHED — ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9

PONTOON

PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN MARCH, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

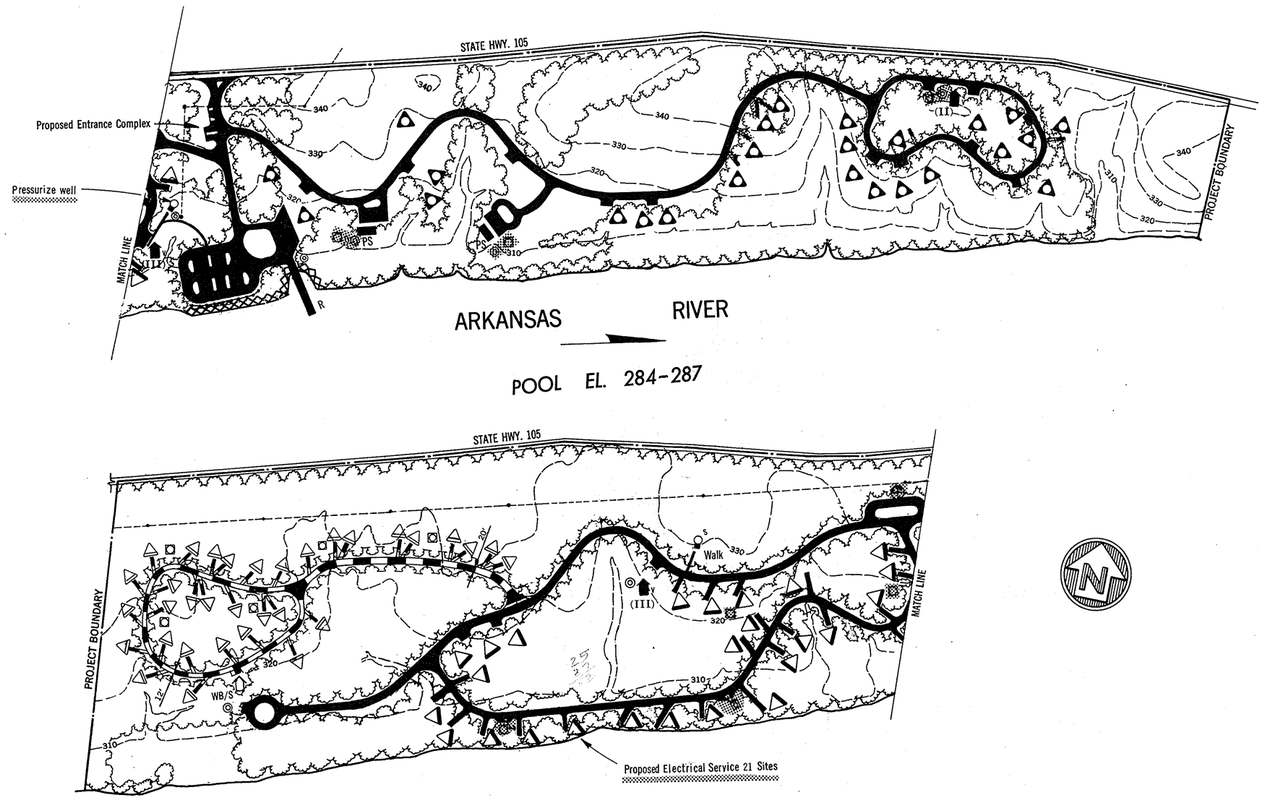
PONTOON

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 15 AND 16, T. 6 N., R. 19 W., POPE CO.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9

SWEEDEN ISLAND PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

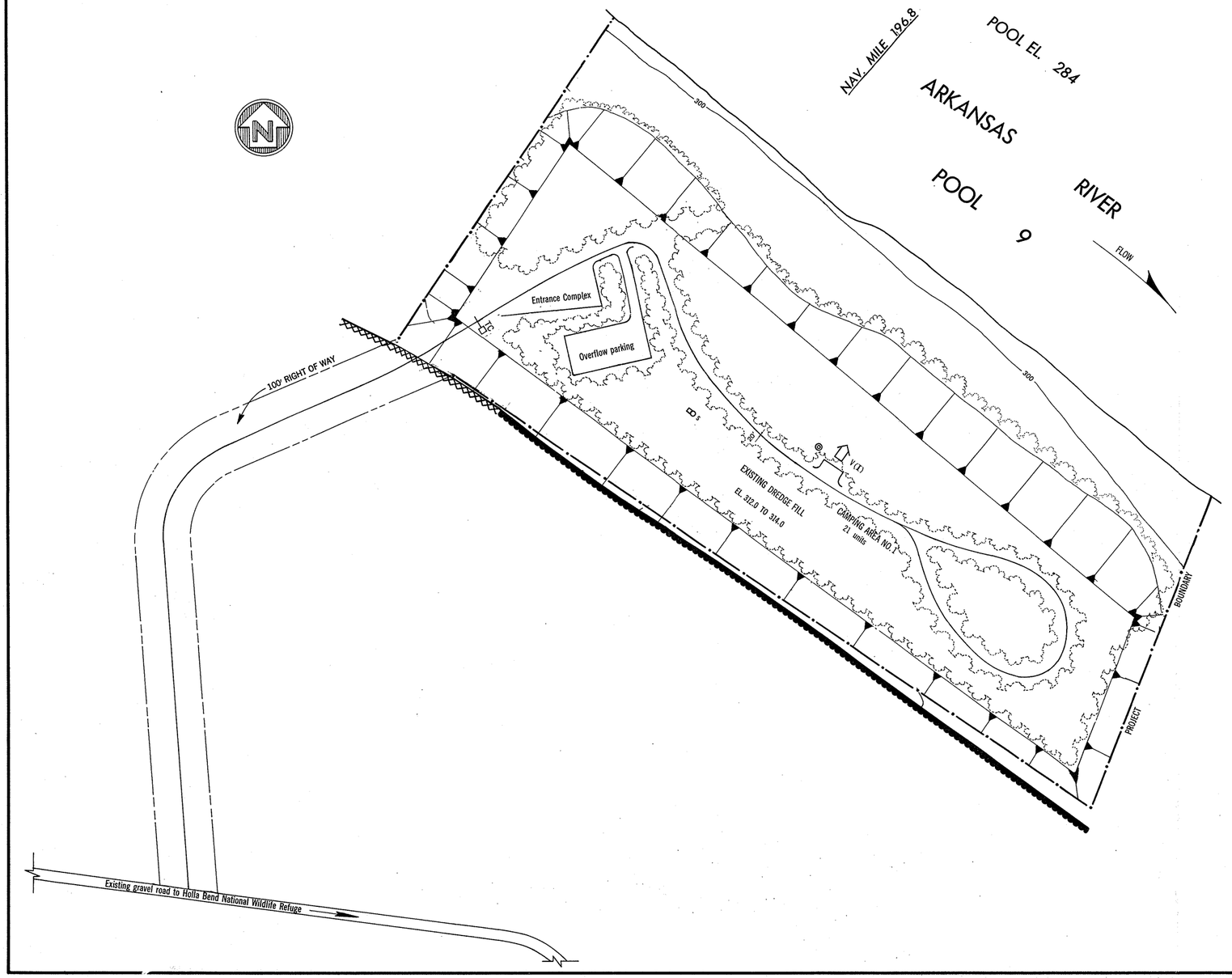
SWEEDEN ISLAND

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 17A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 14 AND 23, T. 6 N., R. 20 W., POPE CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 9

HOLLA BEND

FUTURE PARK

SCALE OF FEET

100 0 100 200

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

HOLLA BEND FUTURE

SCALE OF FEET

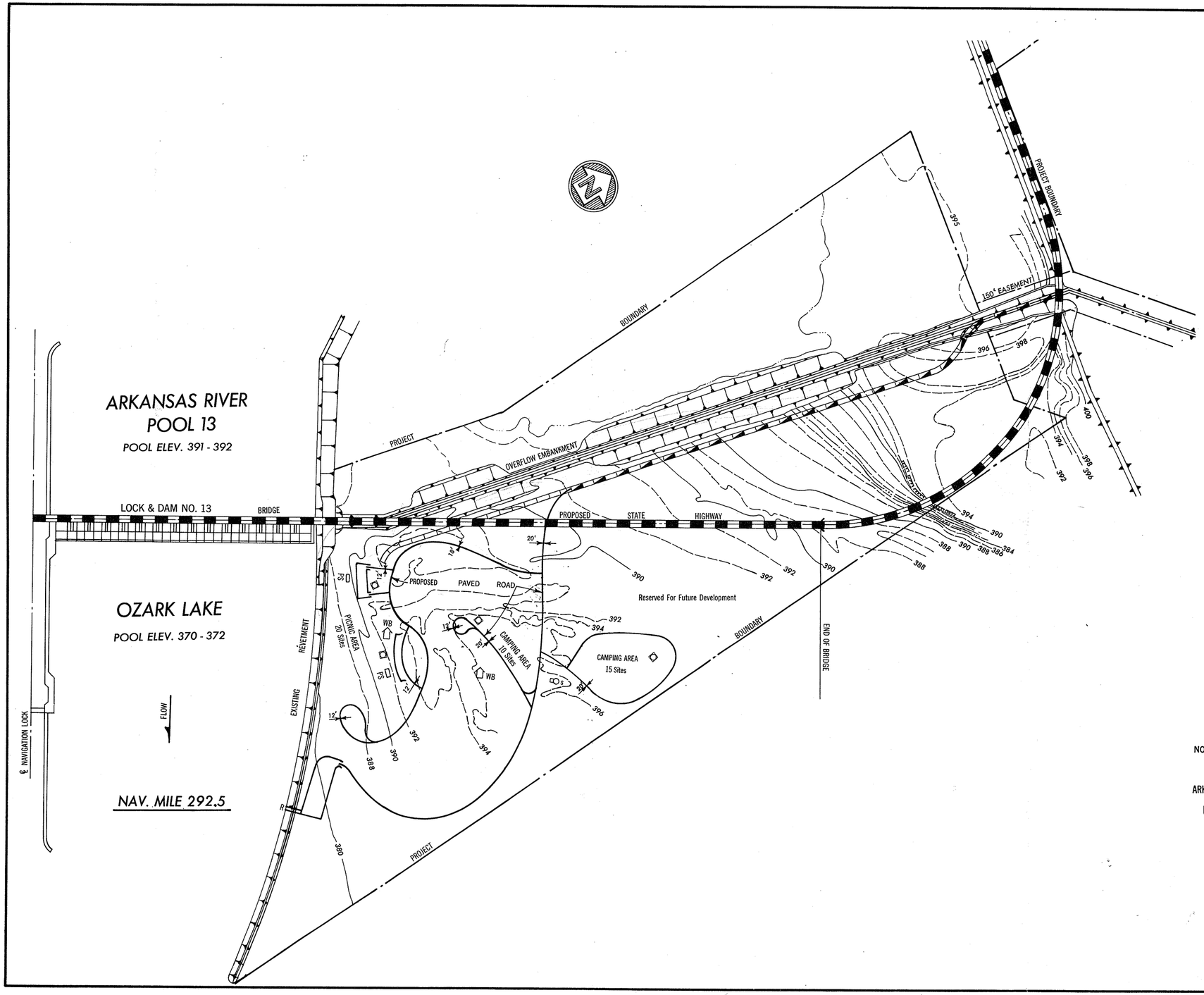
100 0 100 200

U. S. ARMY ENGINEER DISTRICT. LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 18A

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 22
T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
DAM SITE 13
PARK

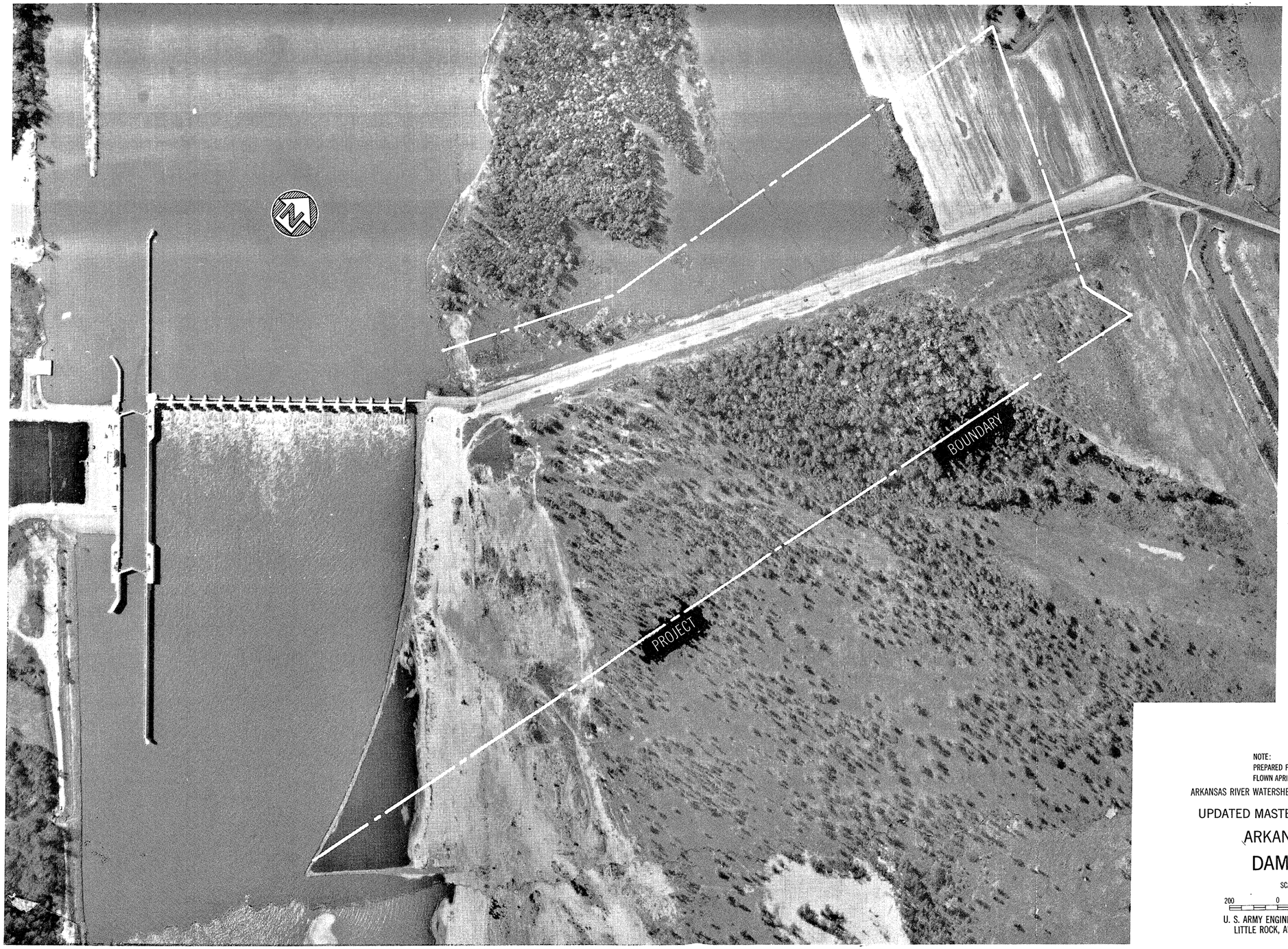
SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

SHEET 1 OF 2

PLATE 10



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN APRIL, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

DAM SITE 13

SCALE OF FEET

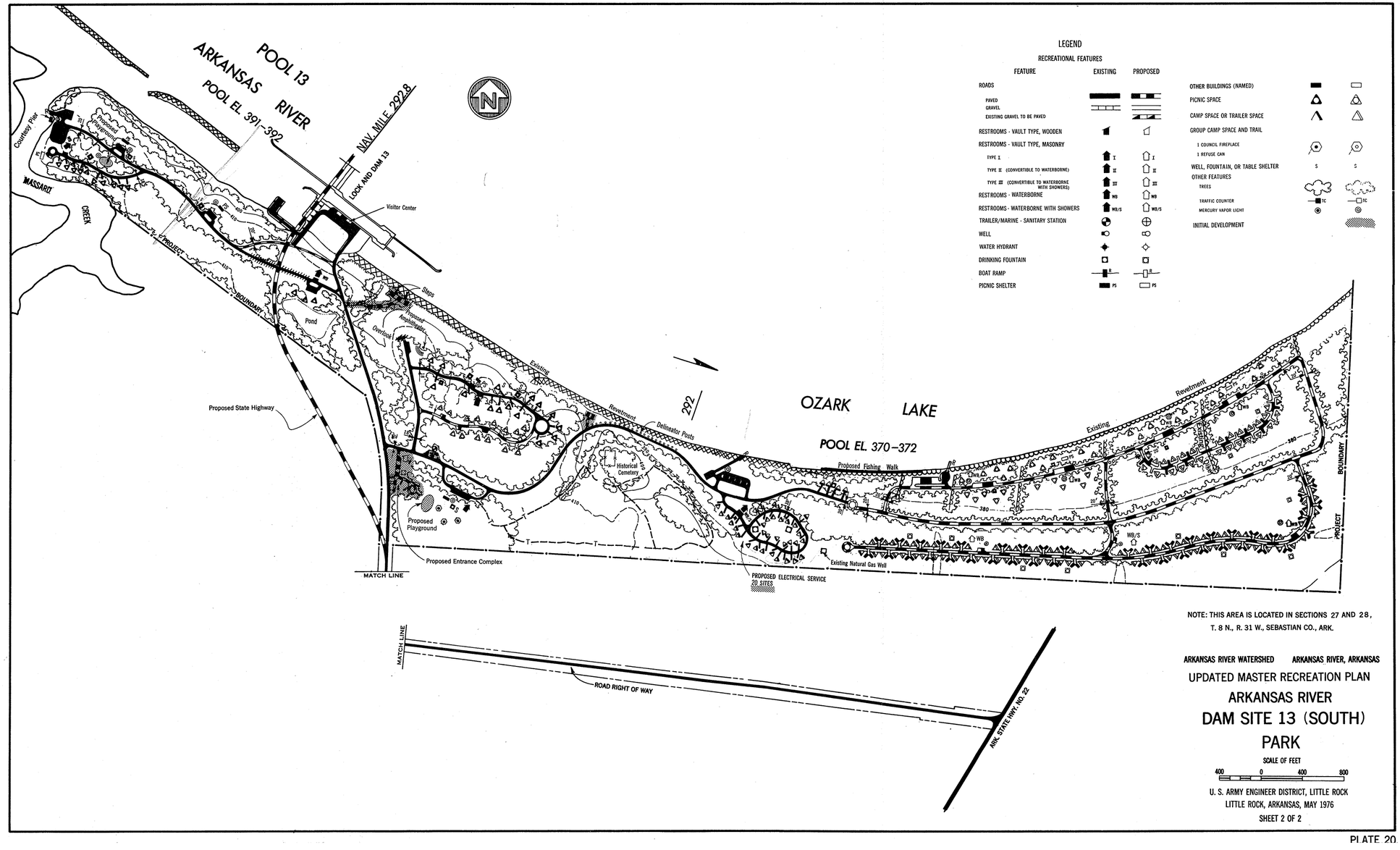
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 19A

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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE		
1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTIONS 27 AND 28, T. 8 N., R. 31 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER
DAM SITE 13 (SOUTH) PARK

SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976
SHEET 2 OF 2

PLATE 20



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN APRIL , 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

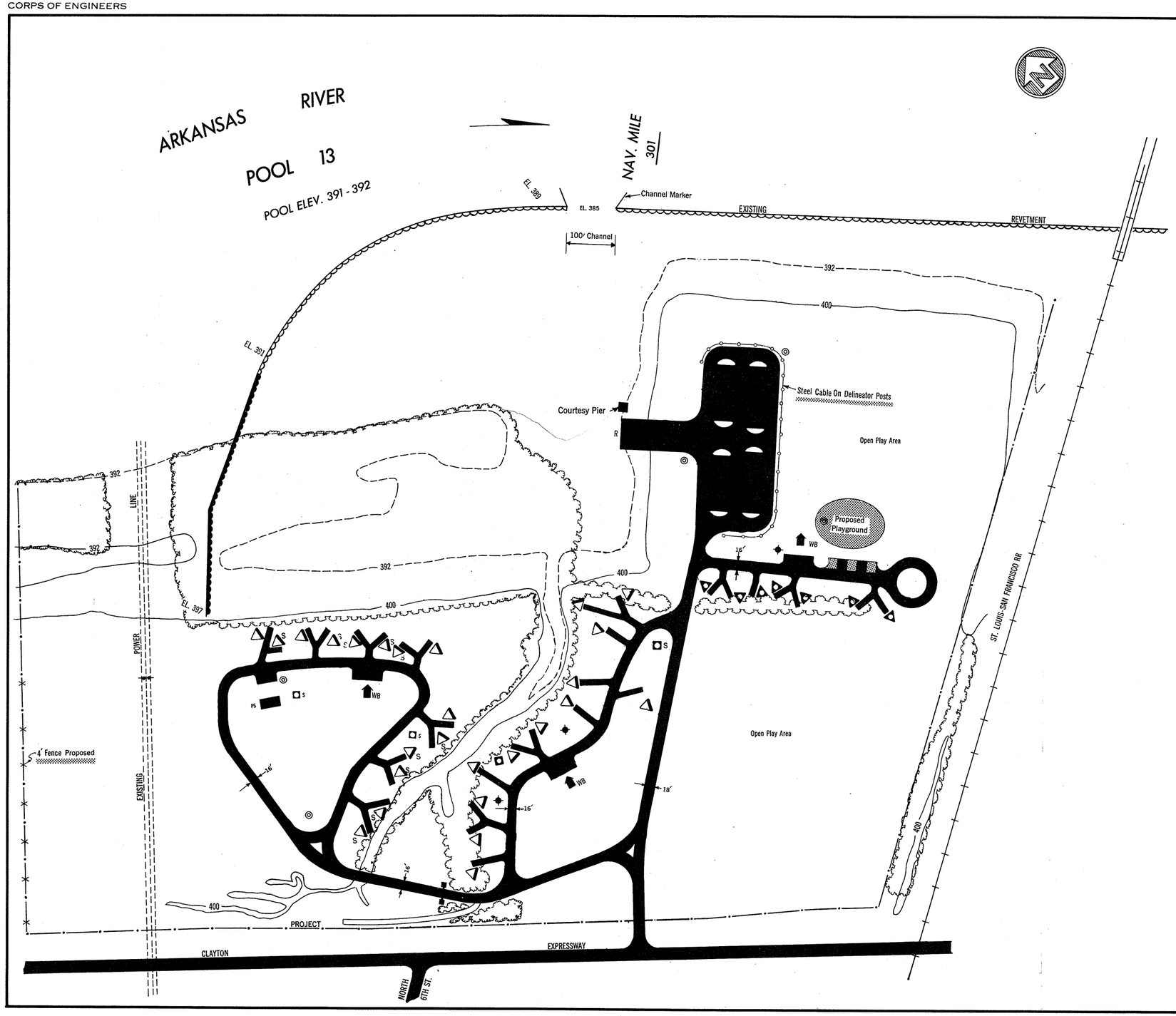
DAM SITE 13

SCALE OF FEET

400 0 400 800

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 20A



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
PICNIC SHELTER	▬ PS	▭ PS
OTHER BUILDINGS (NAMED)	▬	▭
PICNIC SPACE	△	△
CAMP SPACE OR TRAILER SPACE	▲	△
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN	⬡	⬡
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES	☁	☁
TRAFFIC COUNTER	▮TC	▯TC
MERCURY VAPOR LIGHT	◉	◎
INITIAL DEVELOPMENT		▰

NOTE: THIS AREA IS LOCATED IN SECTION 26, T. 9 N., R. 32 W., SEBASTIAN CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

FORT SMITH PARK

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976

PLATE 21



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

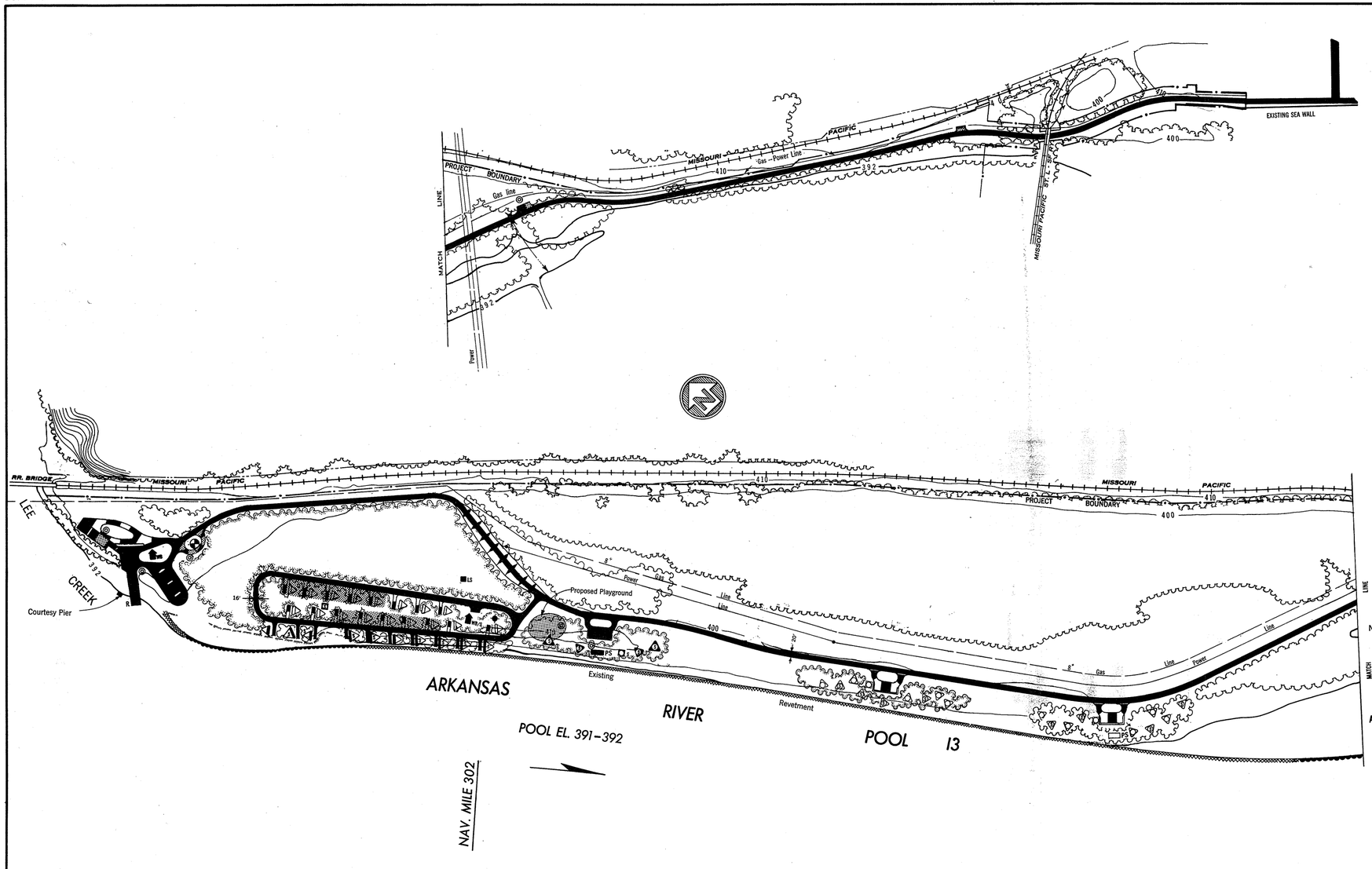
FT. SMITH

SCALE OF FEET

100 0 100 200

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 21A



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
PICNIC SHELTER	PS	PS
OTHER BUILDINGS (NAMED)		
PICNIC SPACE		
CAMP SPACE OR TRAILER SPACE		
GROUP CAMP SPACE AND TRAIL		
1 COUNCIL FIREPLACE 1 REFUSE CAN		
WELL, FOUNTAIN, OR TABLE SHELTER	S	S
OTHER FEATURES		
TREES		
TRAFFIC COUNTER	TC	TC
MERCURY VAPOR LIGHT		
INITIAL DEVELOPMENT		

NOTE: THIS AREA IS LOCATED IN SECTION 23, T. 9 N., R. 32 W., CRAWFORD CO., ARK.

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER POOL 13

LEE CREEK PARK

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, MAY 1976



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

LEE CREEK

SHEET 1 OF 2

SCALE OF FEET

200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 22A



NOTE:
PREPARED FROM AERIAL PHOTOGRAPHS
FLOWN FEBRUARY, 1974

ARKANSAS RIVER WATERSHED ARKANSAS RIVER, ARKANSAS

UPDATED MASTER RECREATION PLAN

ARKANSAS RIVER

LEE CREEK

SHEET 2 OF 2

SCALE OF FEET

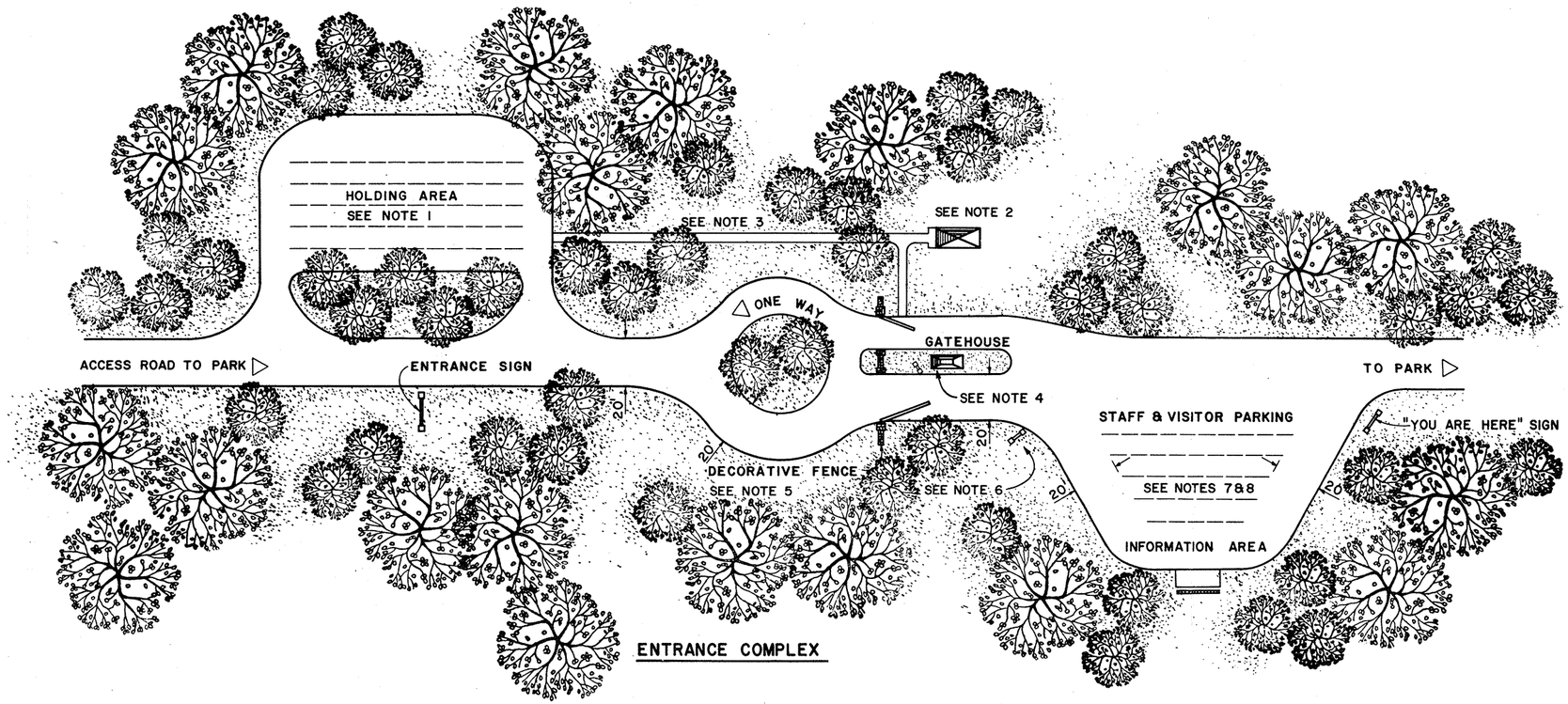
200 0 200 400

U. S. ARMY ENGINEER DISTRICT, LITTLE ROCK
LITTLE ROCK, ARKANSAS, JANUARY 1976

PLATE 22B

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

TYPICAL ENTRANCE COMPLEX