

ROSSAMAN CHANNEL SPOOK HILL SUNSET/SUNNY COVE

UNIVERSITY DRIVE DRAIN VINEYARD DAM QUEEN CREEK

POWELINE TEMPE RITTENHOUSE RIO VERDE

SOSSAMAN CHANNEL

SPOOK HILL

SUNSET/SUNNY COVE

UNIVERSITY DRIVE DRAIN

Property of  
Flood Control District of MC Library  
Please Return to  
2801 W. Durango  
Phoenix, AZ 85009

VINEYARD DAM

QUEEN CREEK

POWELINE

TEMPE

RITTENHOUSE

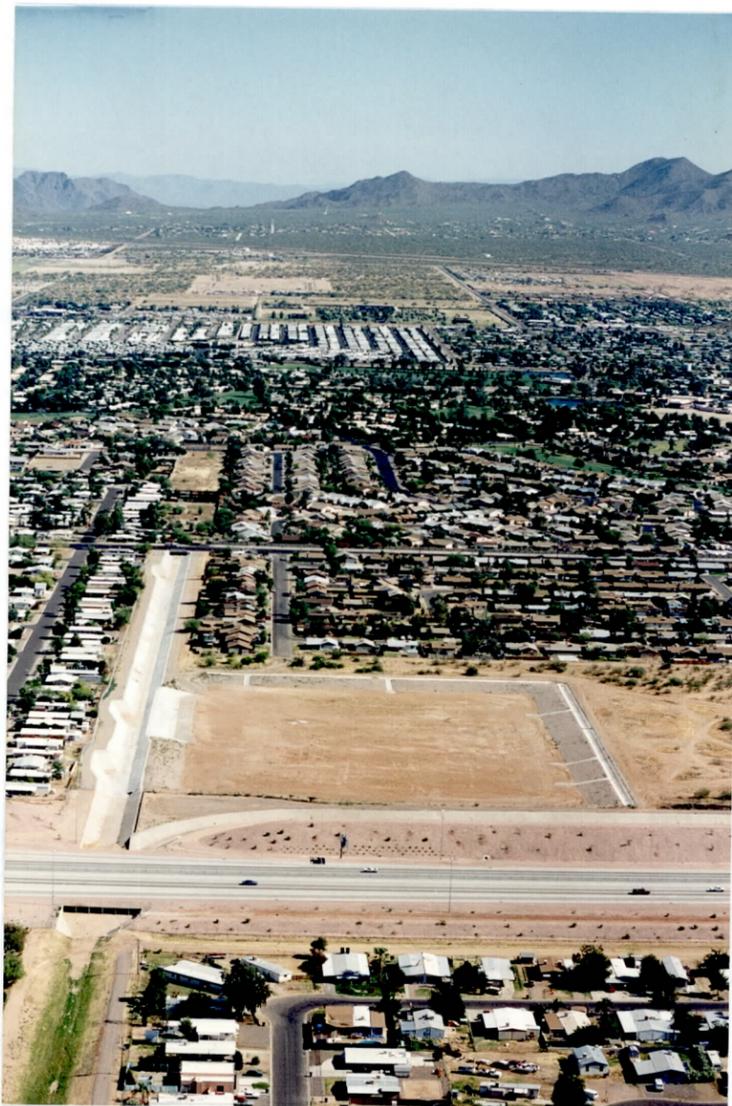
RIO VERDE

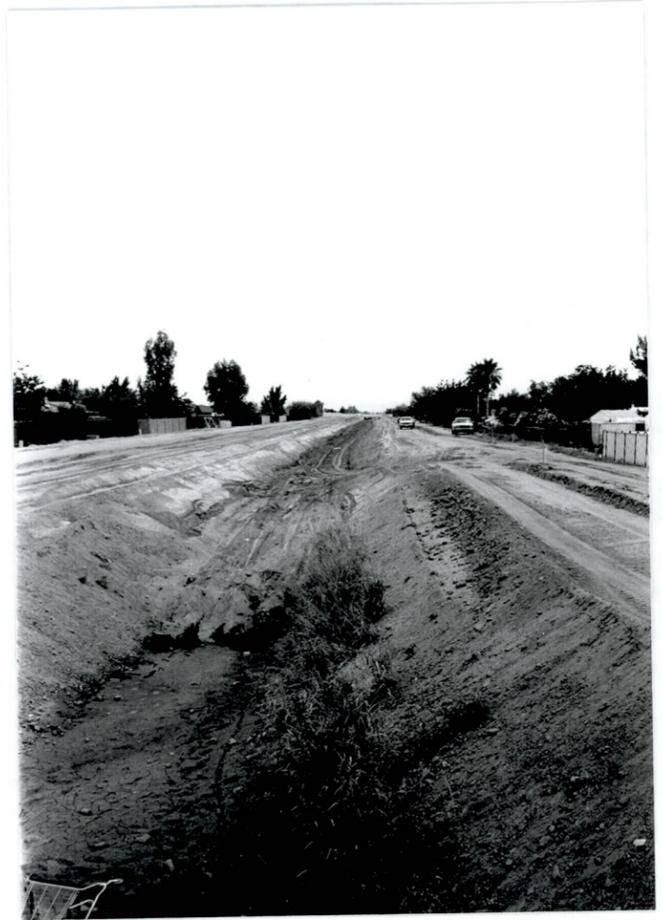
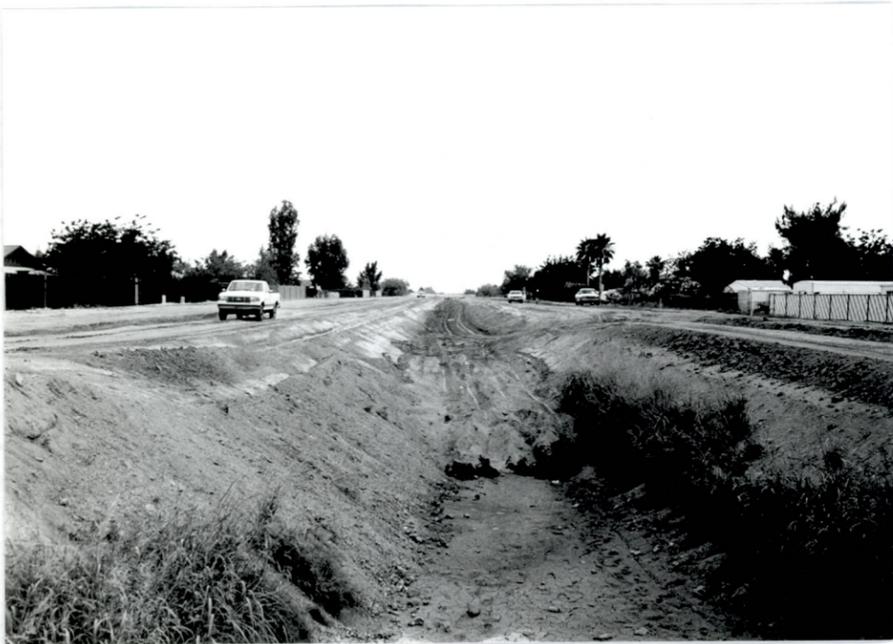
# SOSSAMAN CHANNEL

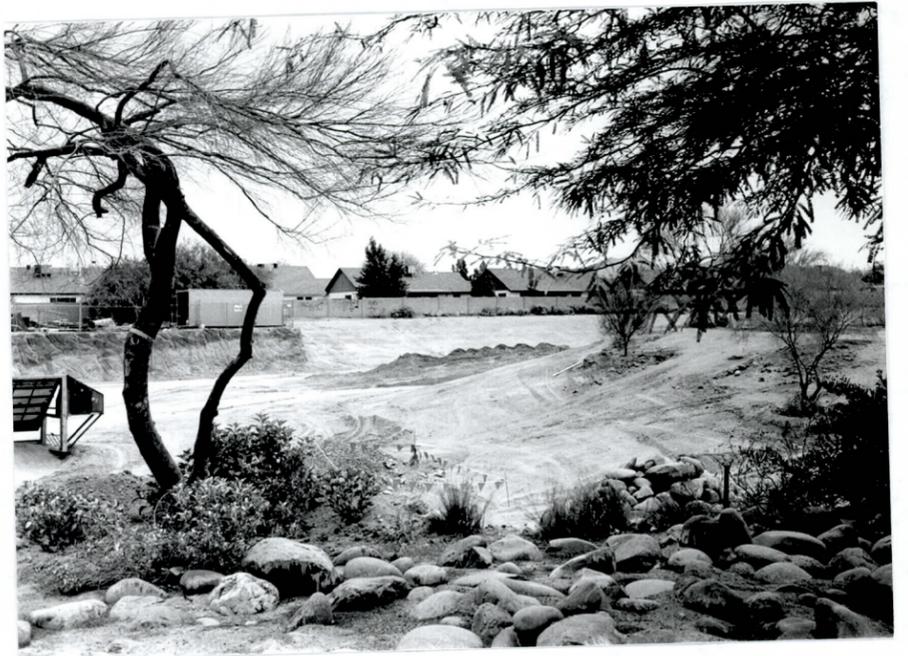










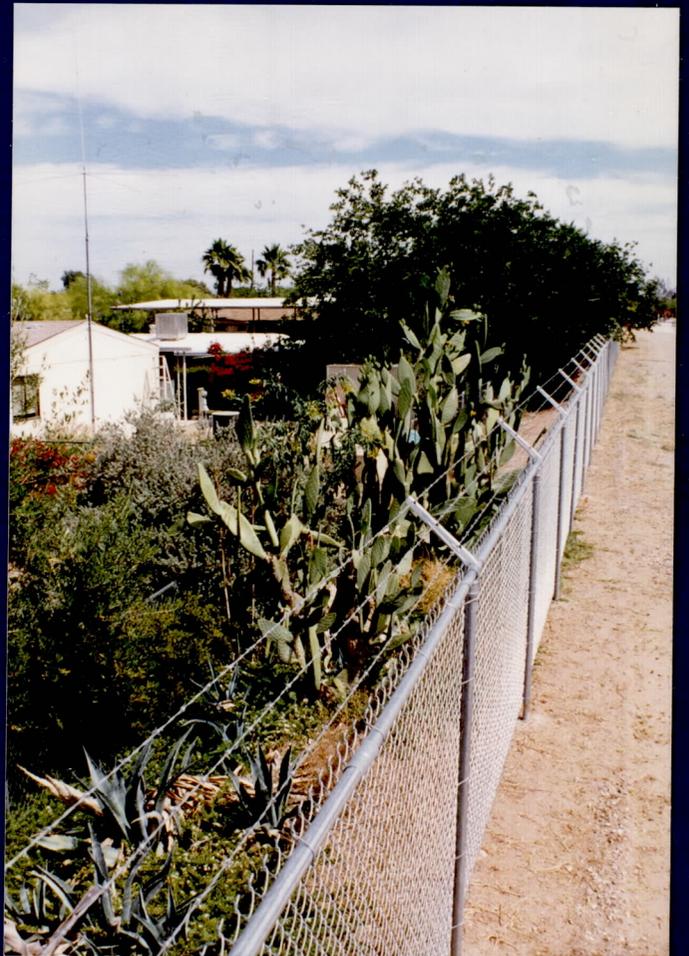








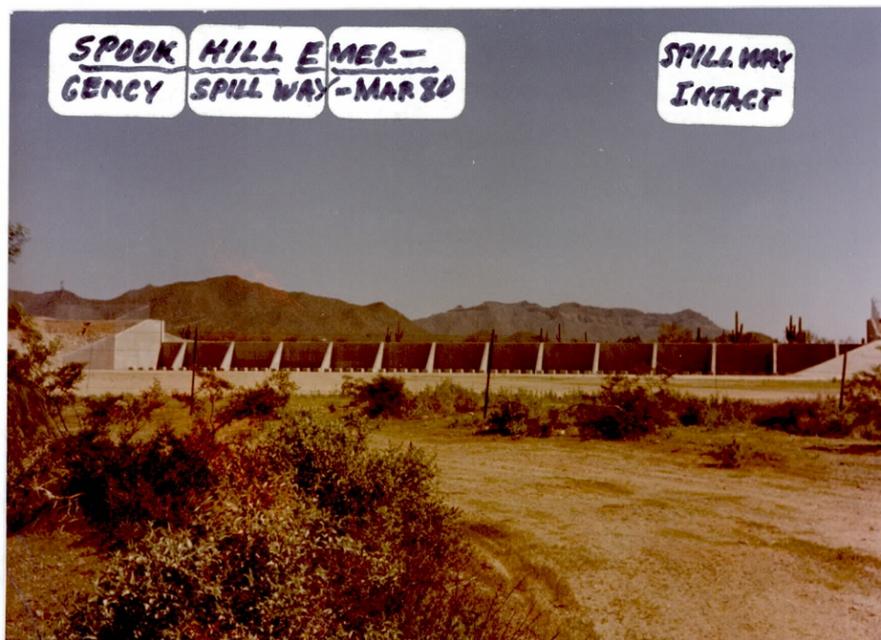
Cardboard Company



SPOOK HILL

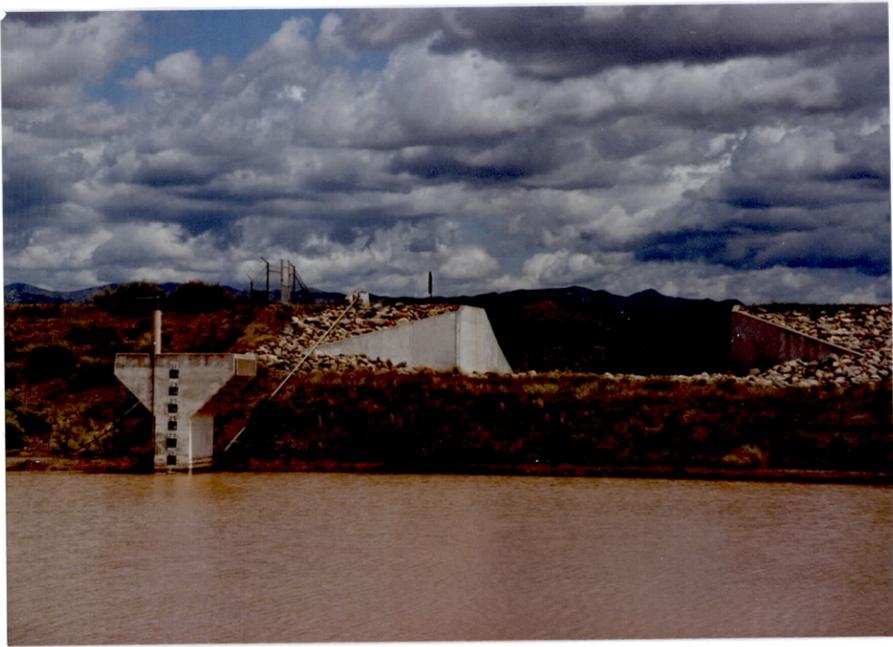






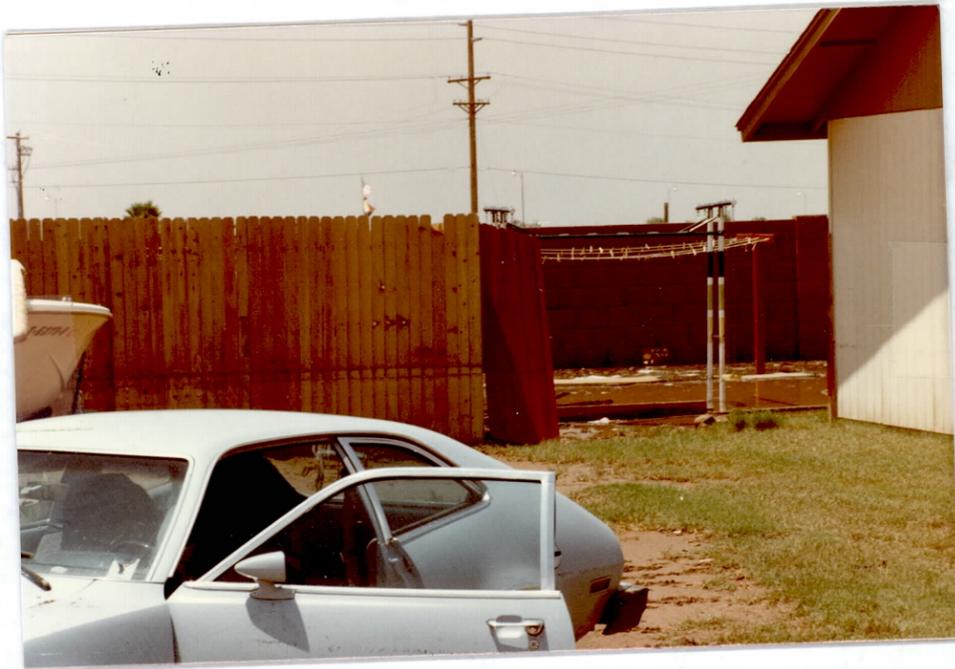
# SUNSET/SUNNY COVE

8/24/92



# UNIVERSITY DRIVE DRAIN

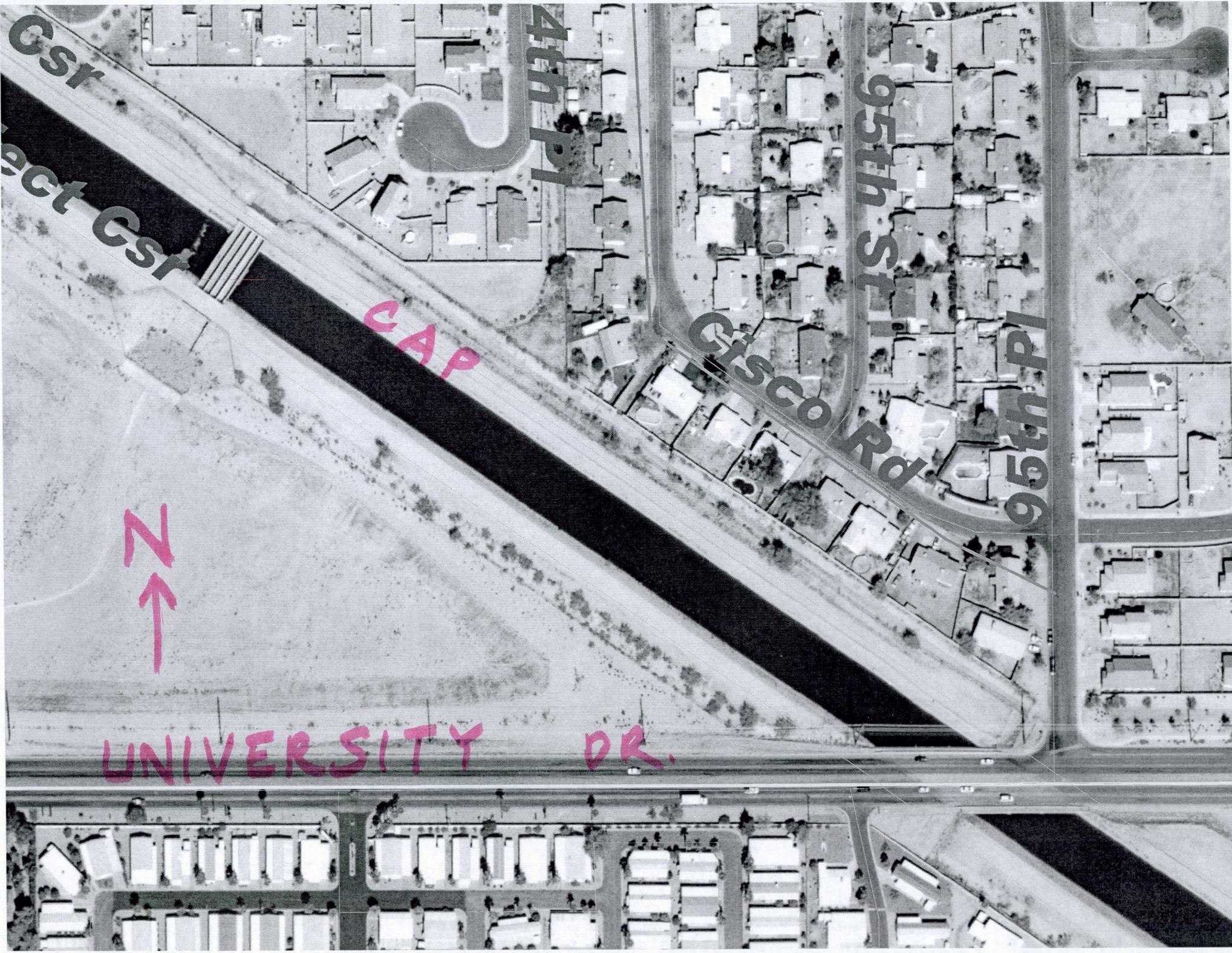
7/7/84











CSR

ect CSR

4th Pl

CAP

Cisco Rd

95th St Pl

95th Pl

UNIVERSITY DR.





CAP &  
University  
96 & University

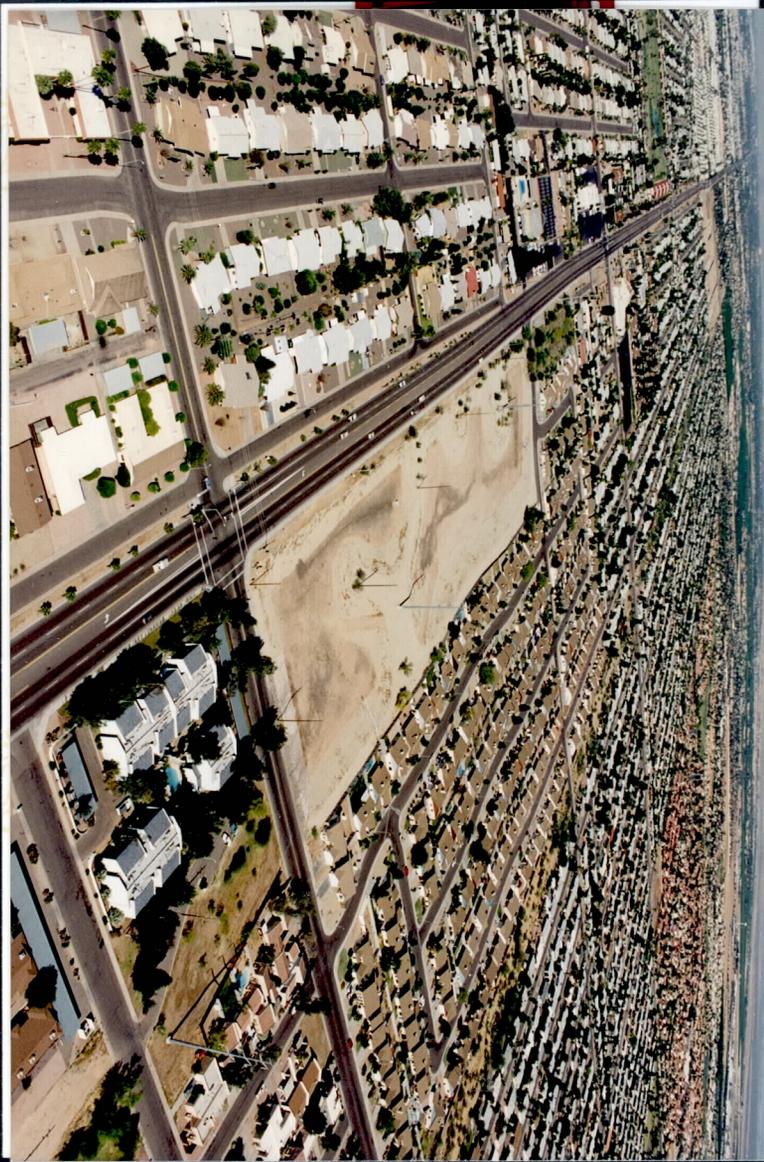
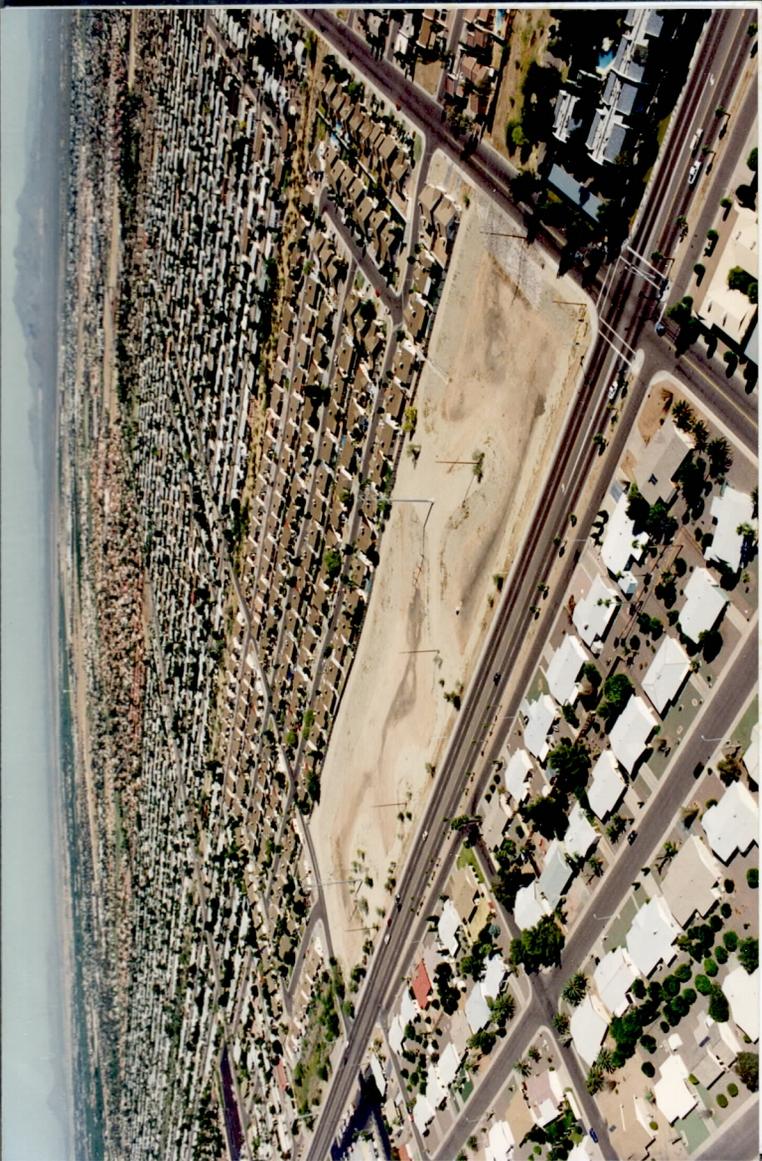








University Drive Blvd









# VINEYARD DAM

1/3/91



Jan 9, 91. VINEYARD PLATING  
STA 320+00 LOOKING NORTH

Vineyard Dam



VINEYARD PLATING.  
Jan 3, 91



VINEYARD PLATING. JAN 3 91  
STA 175+00 LOOKING SOUTH



JAN 9, 91. VINEYARD PLATING  
STA 320+00 LOOKING NORTH



VINEYARD PLATING.  
JAN 3, 91



VINEYARD PLATING. JAN 3, 91  
STA 175+00 LOOKING SOUTH



JAN 3, 90 VINEYARD RD.  
PLATING MATERIAL -  
NOTICE EXCESS ROCKS



VINEYARD PLATING. JAN 3, 91  
STA 145+00 LOOKING SOUTH



VINEYARD PLATING  
JAN 3, 91



VINEYARD PLATING. JAN 3, 91  
STA. 85+00 LOOKING NORTH



VINEYARD PLATING. JAN 3, 91  
NOTE THE BIG SIZE ROCKS



VINEYARD FRS -  
"SAND CONE" COMPACTION TESTING  
OF PLATING - JAN 11, 91.



JAN 9, 91. VINEYARD PLATING -  
STA 340+00 LOOKING SOUTH.



VINEYARD PLATING. JAN. 3, 91.



JAN 9, 91. VINEYARD PLATING -  
STA 215+00 LOOKING NORTH  
MATERIAL WITH LESS ROCK.



Jan 9, 91. VINEYARD PLATING  
WEST RAMP STA 235+00



Jan 9, 91. VINEYARD PLATING.  
WEST RAMP AT STA 291+00



VINEYARD PLATING. 1.10.91.  
ROLLING OF 4" PLATING WITH 8TON  
VIBRATORY ROLLER.



VINEYARD FRS PLATING. 1.8.91.  
BELLY DUMP DEPOSITING PLATING MATERIAL  
ON WEST RAMP STA. 291+00



Jan 9, 91. VINEYARD PLATING  
STA 40+00 LOOKING N.  
NOTICE BIGGER ROLLS at edge.



VINEYARD FRS. PLATING. 1.10.91  
ROLLING OF SERVICE ROAD WITH  
8TON VIBRATORY ROLLER AFTER PLATING



Jan 9, 91. VINEYARD PLATING.  
STA 355+00 LOOKING SOUTH.



Jan 9, 91. VINEYARD PLATING  
STA 45+00 LOOKING EAST



VINEYARD PLATING. 1.8.91.  
BELLY DUMP DEPOSITING MATERIAL ON  
WEST RAMP STA. 291+00



VINEYARD PLATING. Jan 3, 91

Vineyard Rd Dam  
8/8/68  
water in Reservoir

Vineyard Rd Dam  
3-67  
stock Tank

Vineyard Rd Dam  
7/8/68

QUEEN CREEK

Queen Cr  
3/15/67

Queen Creek ADMS

Queen Creek  
12/2/64

Queen Cr  
7/8/68

Queen Cr

3/15/67

Queen Creek

12/2/64

Queen Cr

7/8/68

Queen Creek

2/11/65

Queen Creek

4-68

Queen Cr

7/8/68

POWELINE

NEGATIVES  
All scanned to this  
point. A.M.B. AL. Buarato  
3/30/04

Power Line Floodway  
1-11-67  
Prior to construction

Power Line Floodway  
12/6/67

Power  
6/18  
68-

Power  
8/

Power line Floodway

1-11-67

Prior to construction

Power line Floodway

11/9/67

Power line ~~is~~ Floodway  
11/9/67

Powerline Floodway  
12/6/67

Powerline Floodway  
6/18/68  
68-1 to 68-22

Powerline Floodway  
8/8/68

8/8/68

Powerline Floodway

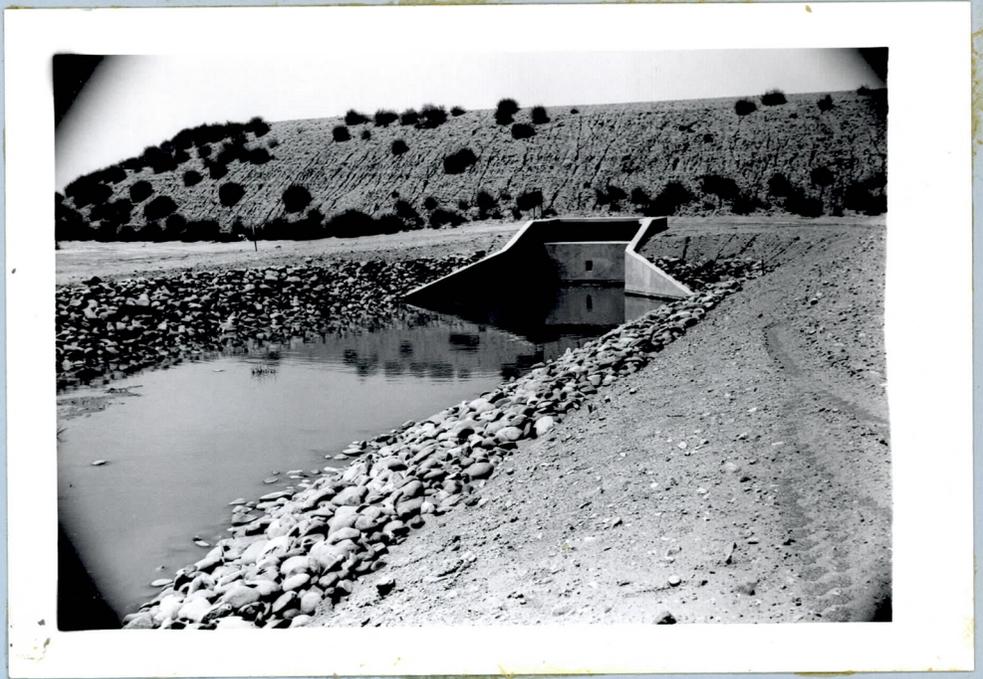


Powerline Floodway



POWERLINE FLOODWAY  
8/8/68

Powerline Outlet



Powerline Outlet  
Channel



8/8/68

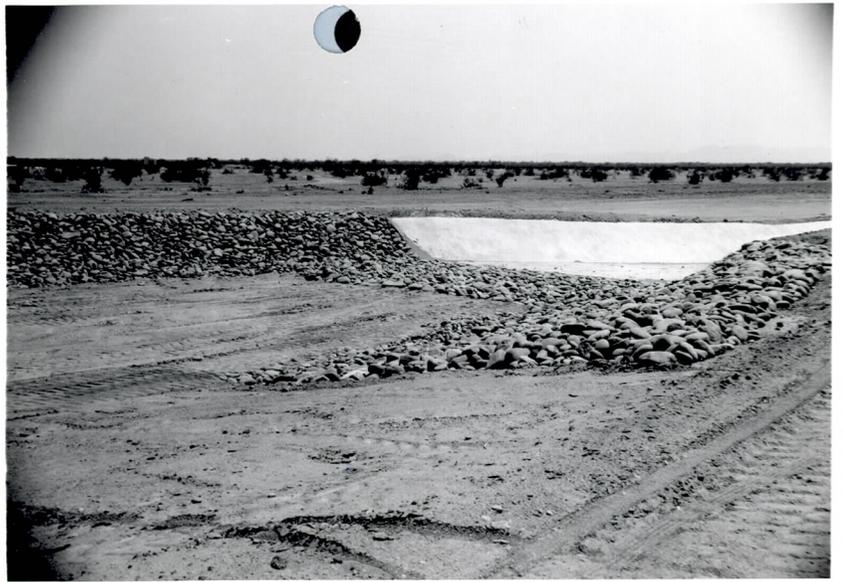
Powerline Dam Reservoir



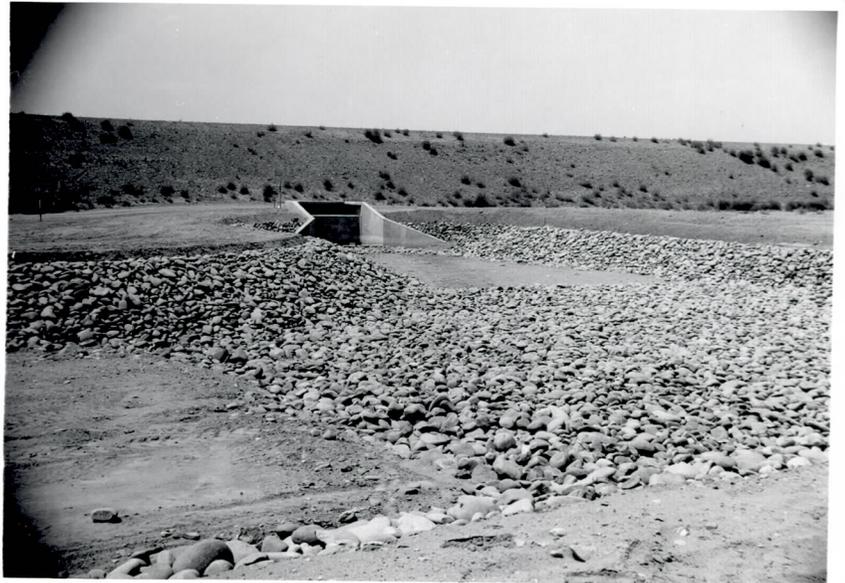
Powerline Dam Reservoir  
Area



68-20 Beginning of concrete Channel



68-21 Upstream from beginning of Concrete Channel.  
Left--Powerline Dam outlet channel, right--  
Vineyard Rd. Dam Outlet



68-22 Outlet of Powerline Dam

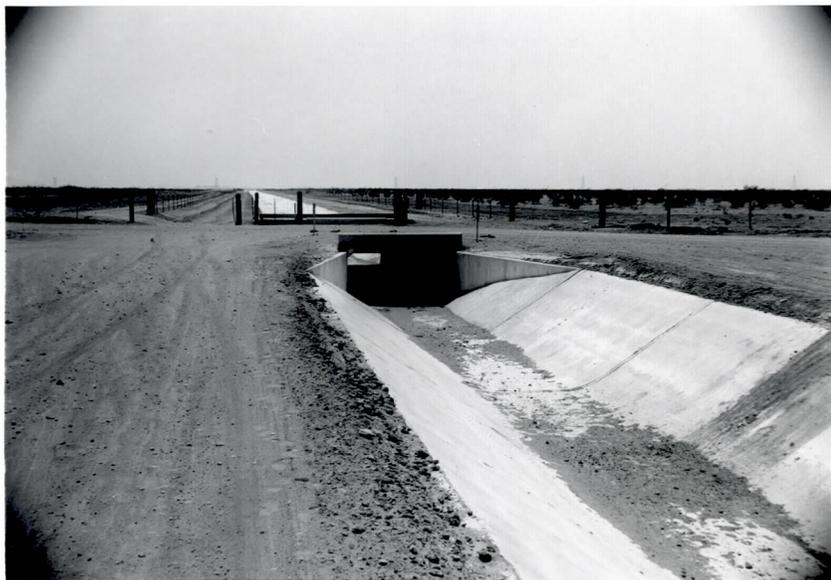


✓  
POWERLINE FLOODWAY 6/18/68

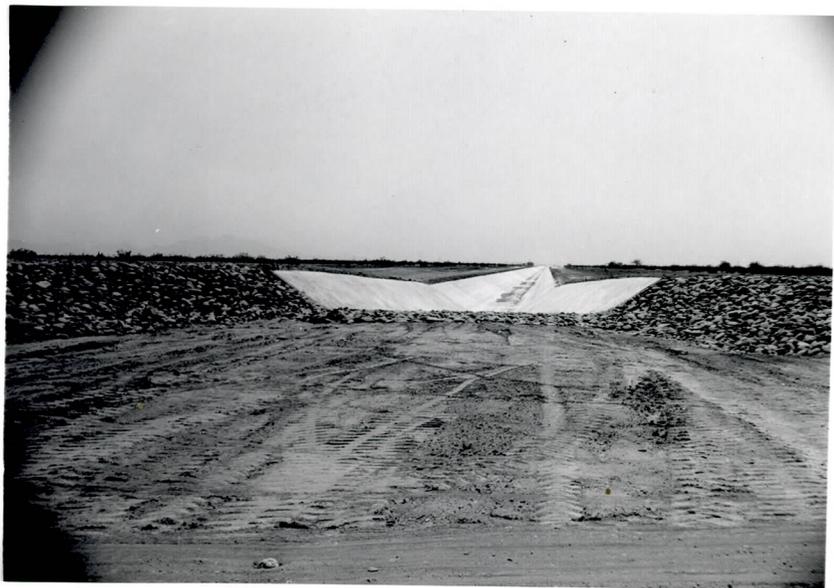
68-17n Wooden bridge and  
culvert at Vineyard Rd.



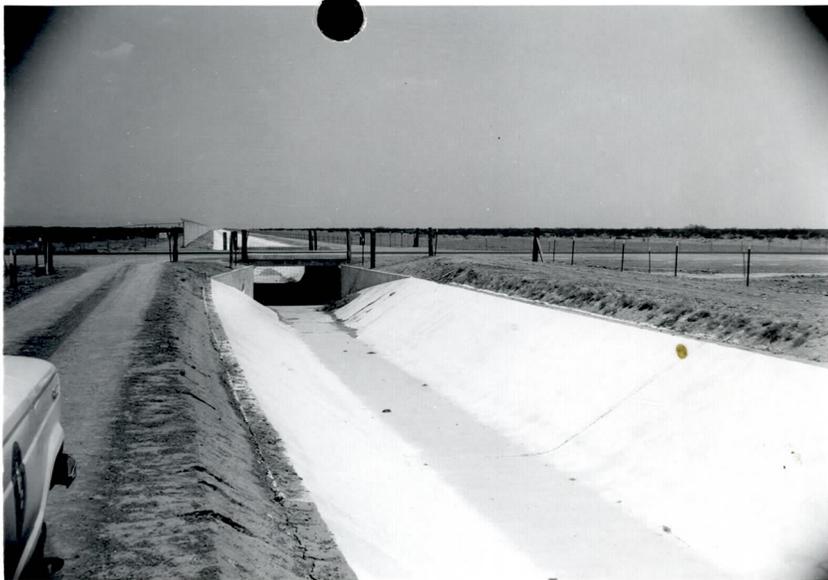
68-18 Upstream side of culvert  
at Vineyard Road



68-19 Downstream from  
beginning of concrete  
channel



68-14 Downstream side of  
culvert at Ellsworth Rd.



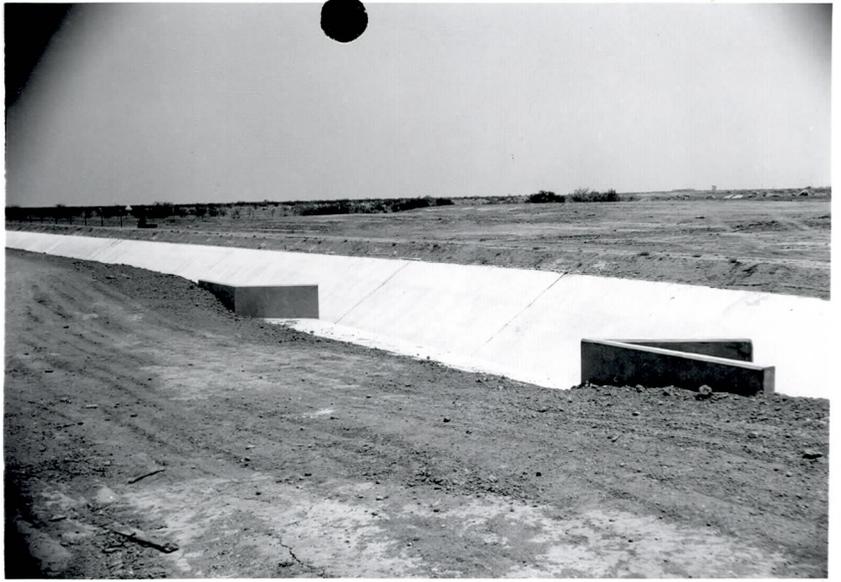
68-15 Upstream side of  
culvert at ellsworth Rd.



68-16 Downstream from East  
of General Motors  
Proving Grounds



68-11 Structure in dip crossing  
in maintenance road to  
allow water to enter  
channel



68-12 Dirt in channel to allow  
cattle to get out of  
channel (Before fencing)



68-13 1st concrete bridge from  
west end of floodway



68-8 Drainage channel from east side of WAFB entering Floodway



68-9 Transition section, Concrete to dirt-riprap. Energy dissipators almost fully covered with silt.



68-10 Transition looking downstream



68-5 Drainage channel entering floodway from WAFB below first drop structure from west end



68-6 1st drop structure from west end of floodway



68-7 Upstream from above 1st drop structure from west end of floodway



68-3 1st WAFB crash truck  
crossing from west end  
of floodway



68-4 1st WAFB crash truck  
crossing from west end  
of floodway



POWERLINE FLOODWAY 68/68

68-1 West at RWCD Canal



68-2 Upstream from west end



68-3

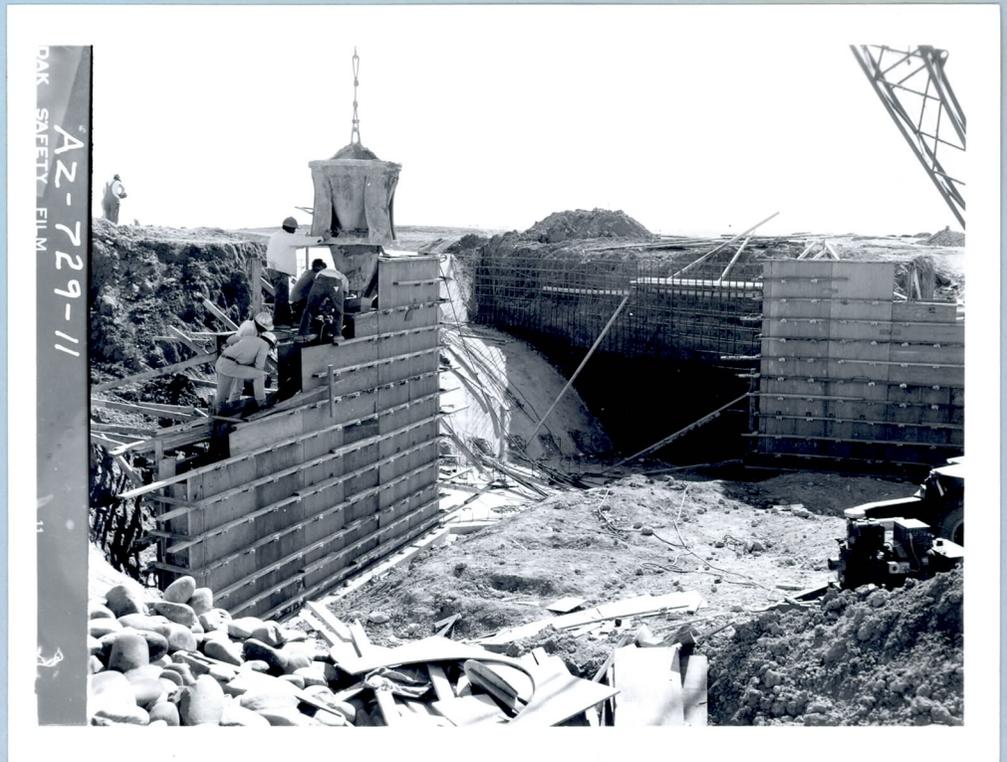
4/5/68

Powerline Floodway

Completed concrete  
section.

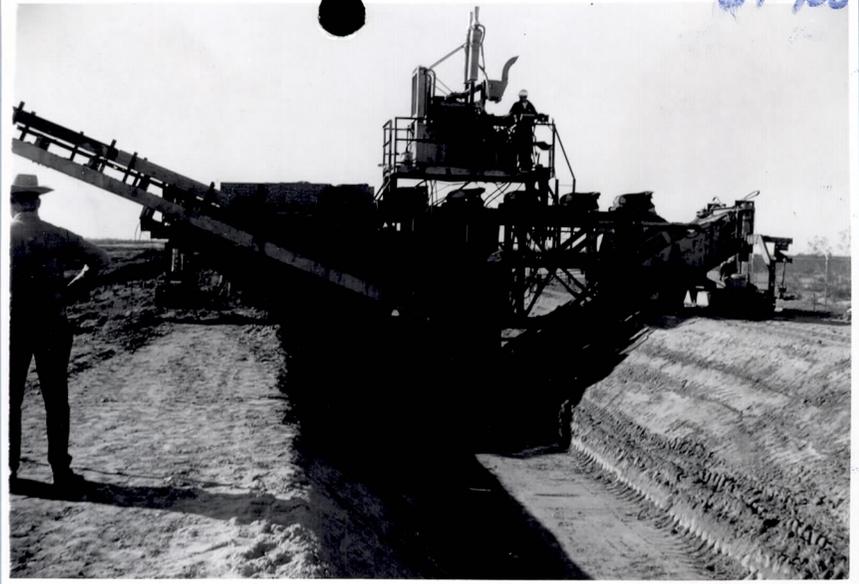


Placing concrete  
wing walls of  
SAF Basin.

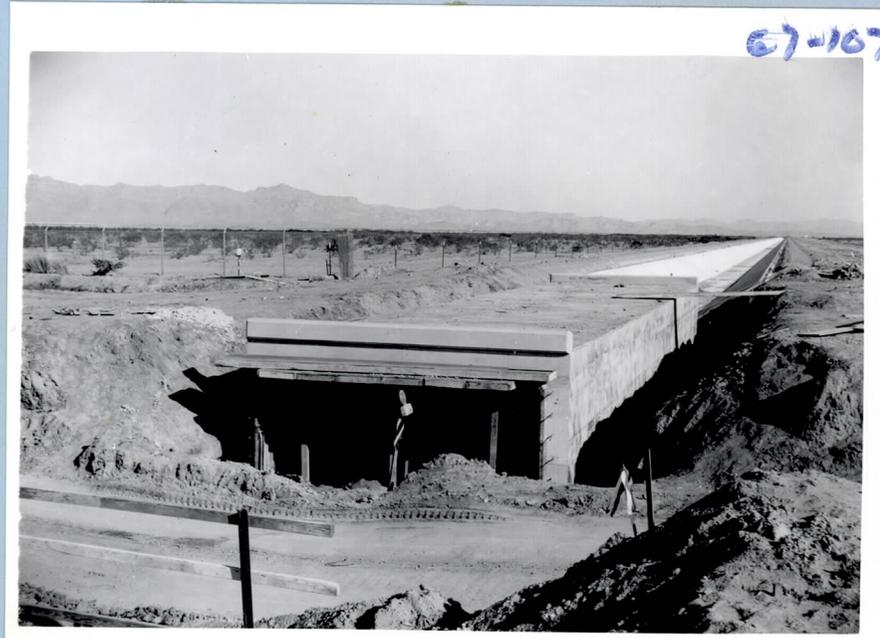


POWERLINE FLOODWAY  
12/6/67

Powerline Floodway trimming  
machine east of GMPG.



Ellsworth Road culvert,  
looking east.



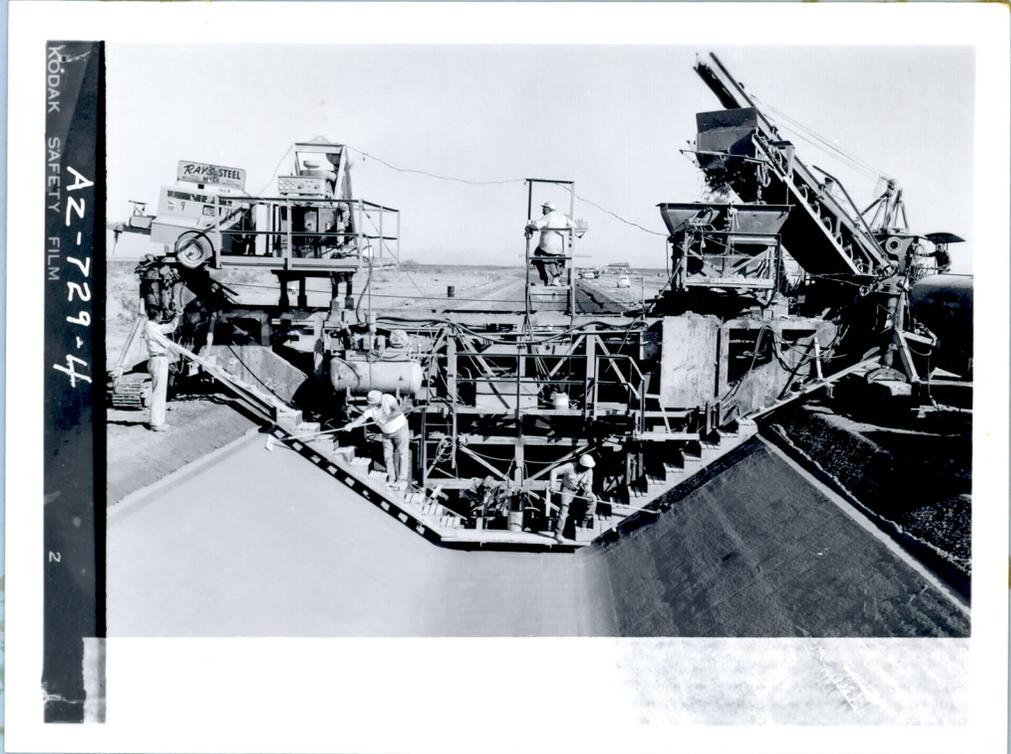
Expansion joints in pavement.



11/10/67

POWERLINE FLOODWAY

Concreting operations placing finishing and protective coating in Powerline Floodway.



Concrete mixing operations.



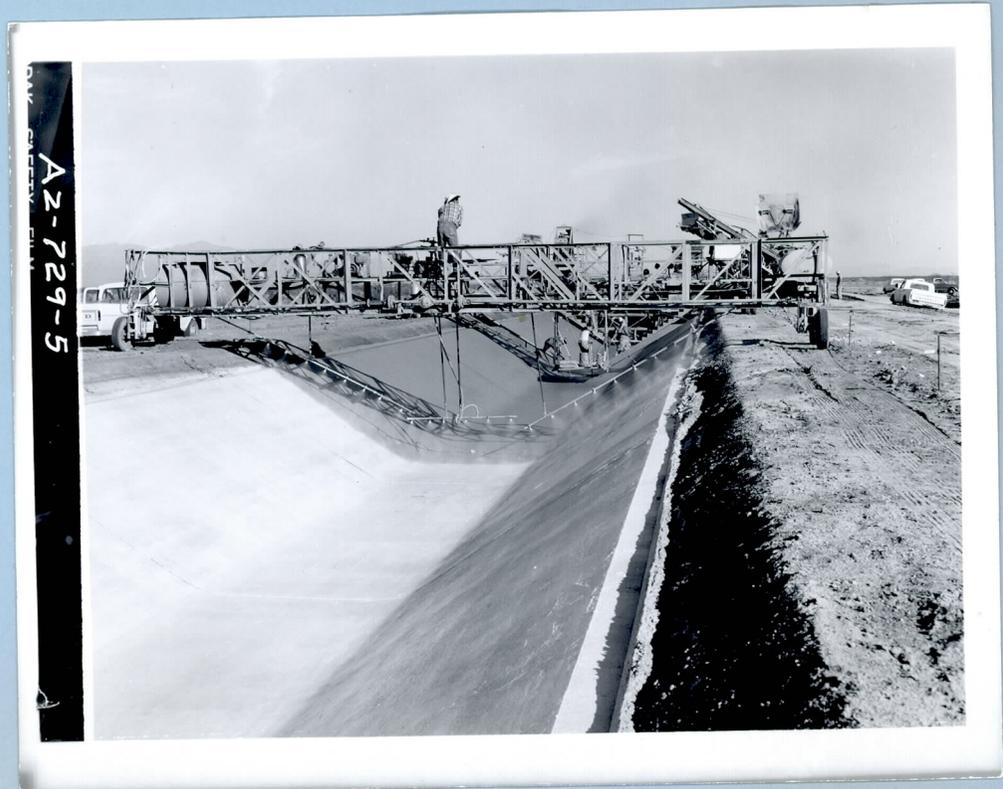
11/10/67

POWERLINE FLOODWAY

Placing wire mesh  
for concrete section of  
Powerline Floodway.

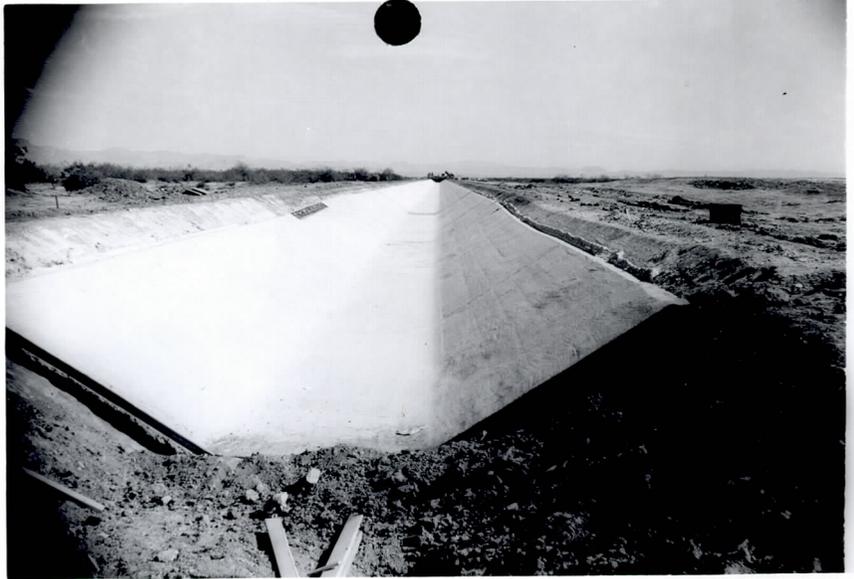


Placing concrete .



POWERLINE FLOODWAY  
11/9/67

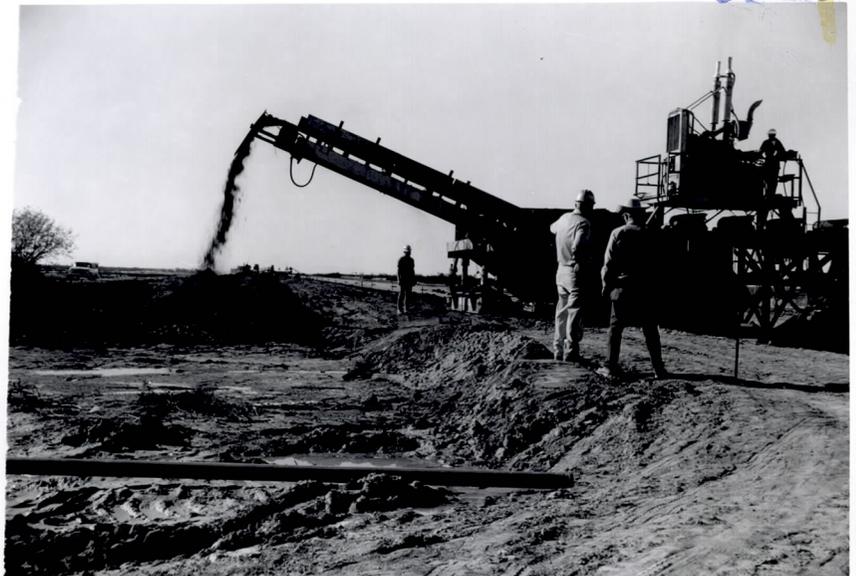
Looking east at completed  
paving from downstream end  
of paved channel.



Ellsworth Road culvert,  
looking west.

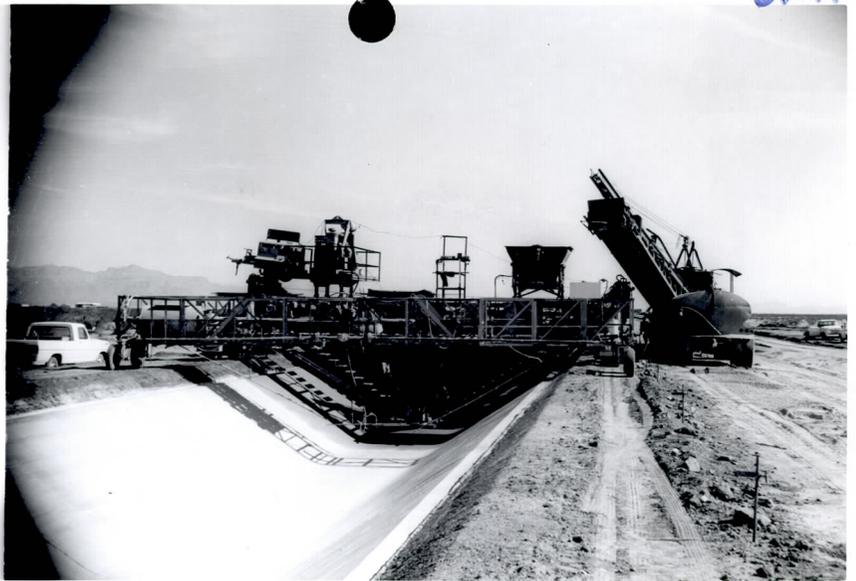


Trimming machine east of  
GMPG.



POWERLINE FLOODWAY  
11/9/67

General view of paver and  
mixer after paving laid.



General view of paver and  
mixer after paving laid.

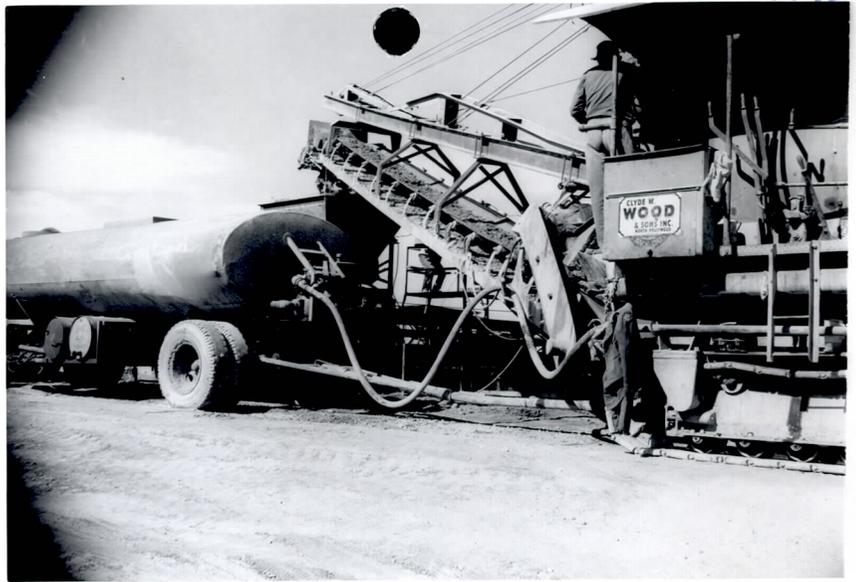


Looking west at completed  
paving from northeast  
corner of WAFB.

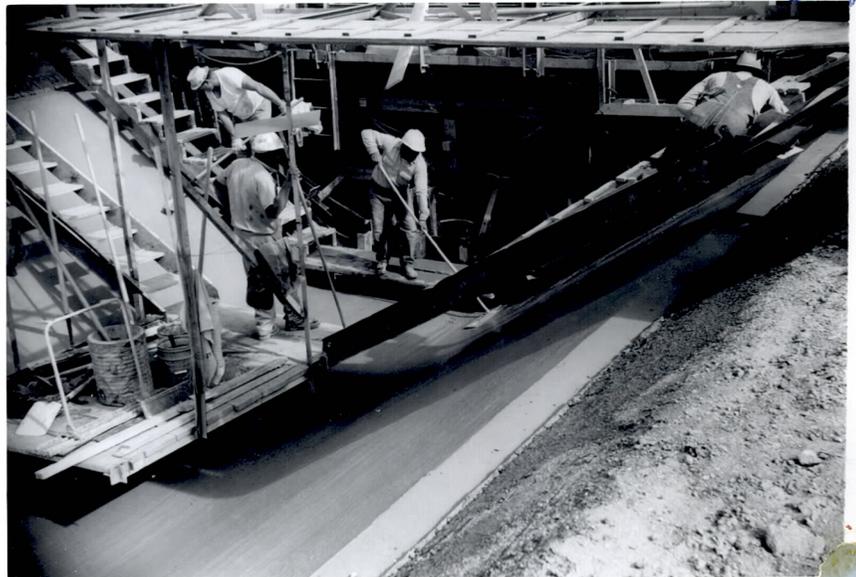


POWERLINE FLOODWAY  
11/9/67

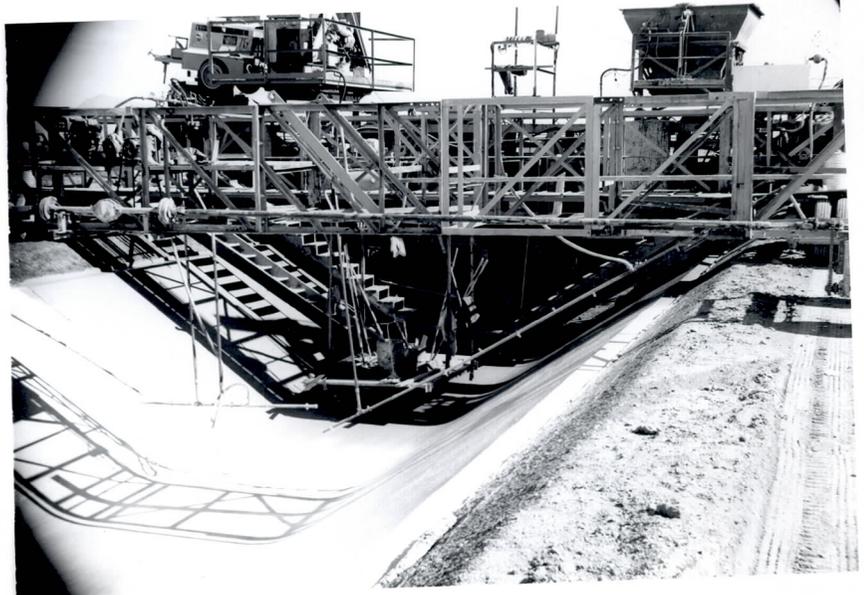
Mixer discharging into  
lapper of paver.



Crew finishing behind paver  
(looking upstream, east).

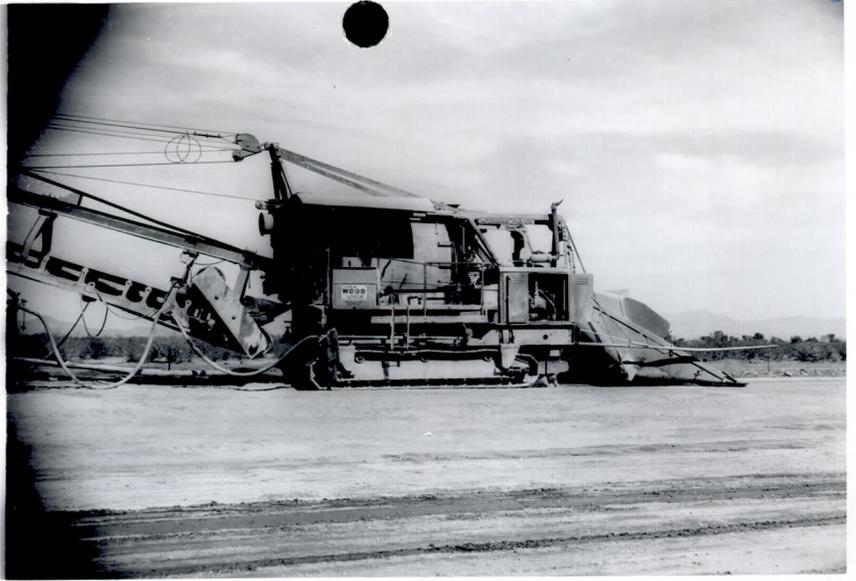


Paver, finished paving in  
foreground. Spray rig  
nearest camera.



POWERLINE FLOODWAY  
11/9/67

Mixer, looking north.



Paver, sprayer, looking  
north.



Mixer discharging into  
lapper of paver.



POWERLINE FLOODWAY  
11/9/67

Mixer and paver, looking west.



Over moving over steel mesh, looking west.



Mixer and paver, looking west (downstream).

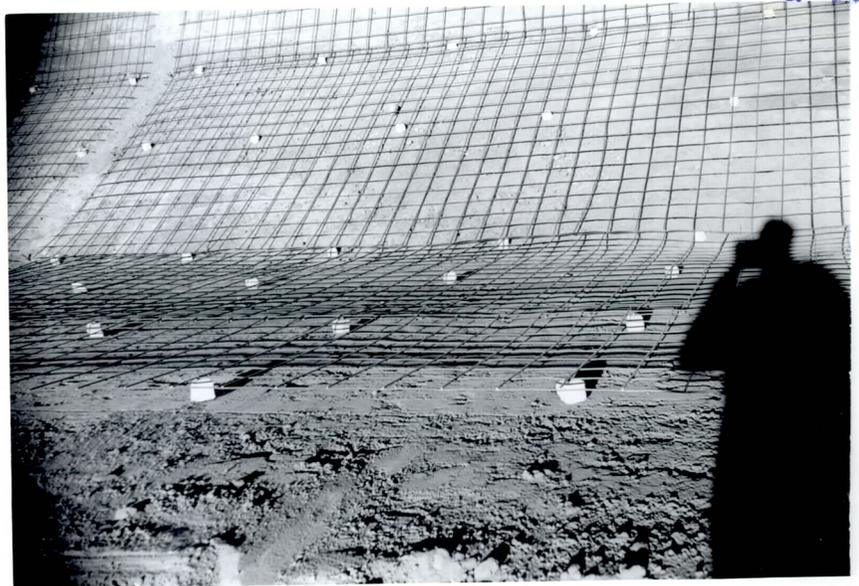


POWERLINE FLOODWAY  
11/9/67

Details of steel mesh in  
trimmed channel. Outline  
for inlet in background.



Details of steel mesh on  
chairs in trimmed channel.

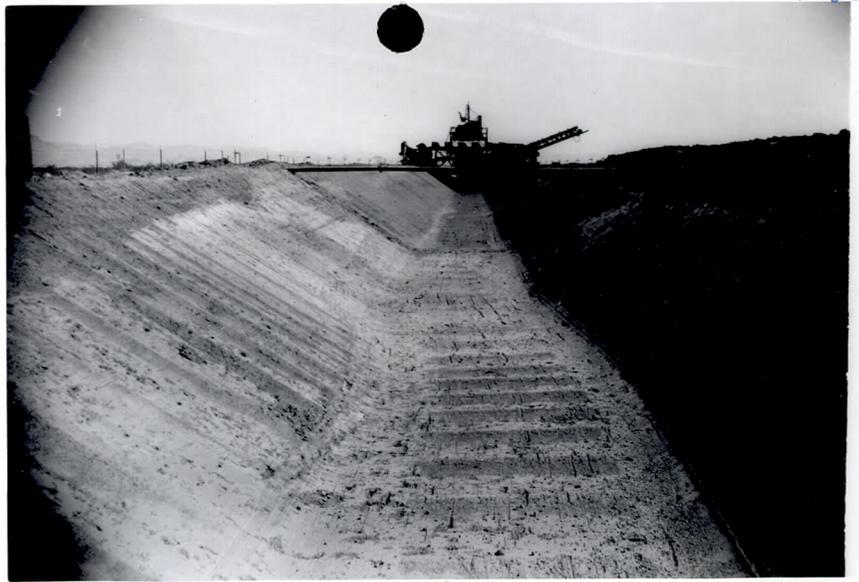


Trucks from batch plant  
lined up to unload into  
mixer, looking east.



POWERLINE FLOODWAY  
11/9/67

Trimmed channel, looking  
east from Ellsworth Road.  
Trimmer about 500' east of  
crossing. Watering pipeline  
crossing in middle distance.



Trimmed channel, looking  
west from Ellsworth Road.



Steel mesh in trimmed chan-  
nel, looking west toward  
paver.



POWERLINE FLOODWAY  
11/9/67

Trimming machine after  
completing trimming channel.  
Looking east.



Looking east. Trimmed  
channel in foreground  
(trimmer just passed).



Trimmed channel, looking  
west at Ellsworth Road  
(near water pipeline  
crossing).



POWERLINE FLOODWAY  
11/9/67

Looking east. Final shape  
of rough excavation for  
channel.



Looking west at trimming  
machine. Roughly excavated  
channel in foreground.



Trimming machine viewed as  
it approaches rough exca-  
vation. (Shut down for  
lunch - not operating.)



POWERLINE FLOODWAY  
11/9/67

Looking west. Rough excavation of channel.



Scraper doing rough excavation of channel.



Final shaping of rough excavation of channel, looking east.



POWERLINE FLOODWAY  
11/9/67

Looking east. Beginning  
of rough excavation of  
channel.



Looking west. Excavation  
of channel in progress.



Looking west. Rough/and  
shaping of channel. excavation



POWERLINE FLOODWAY  
11/9/67

By-pass crossing for Ellsworth  
Road, looking north.



Batch plant.

Stockpiles at Batch plant.



POWERLINE FLOODWAY  
11/9/67

South bank of excavated  
lower channel.



North bank of excavated  
lower channel.



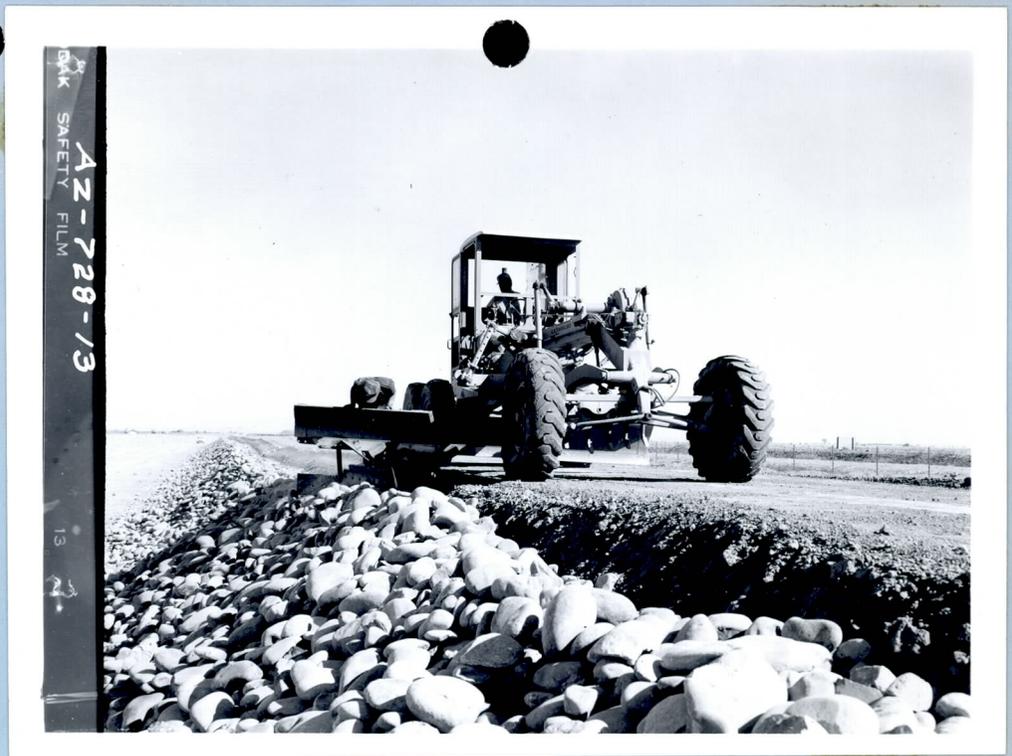
By-pass crossing, general  
view, looking north  
(Ellsworth Road).



10/31/67

Powerline Floodway

Trimming top of rock  
riprapping on slopes  
of Powerline Floodway.



Trimmer shaping concrete  
section.



10/27/67

Powerline Floodway

Placing rock riprapping  
on slopes of Powerline  
Floodway.



Rock riprapped section  
of Powerline Floodway  
along north side of  
W.A.F.B.



POWERLINE FLOODWAY  
10/27/67

Assambling equipment  
for shaping and placing  
of concrete section of  
Powerline Floodway.



Excavation for concrete  
section of Powerline  
Floodway.



7/27/67

Powerline Floodway

Trimming side sbpes of  
Powerline Floodway.

Az-683-1  
DAK SAFETY FILM



Equipment excavating  
Powerline Floodway north  
of W.A.F.B.

Az-683-2



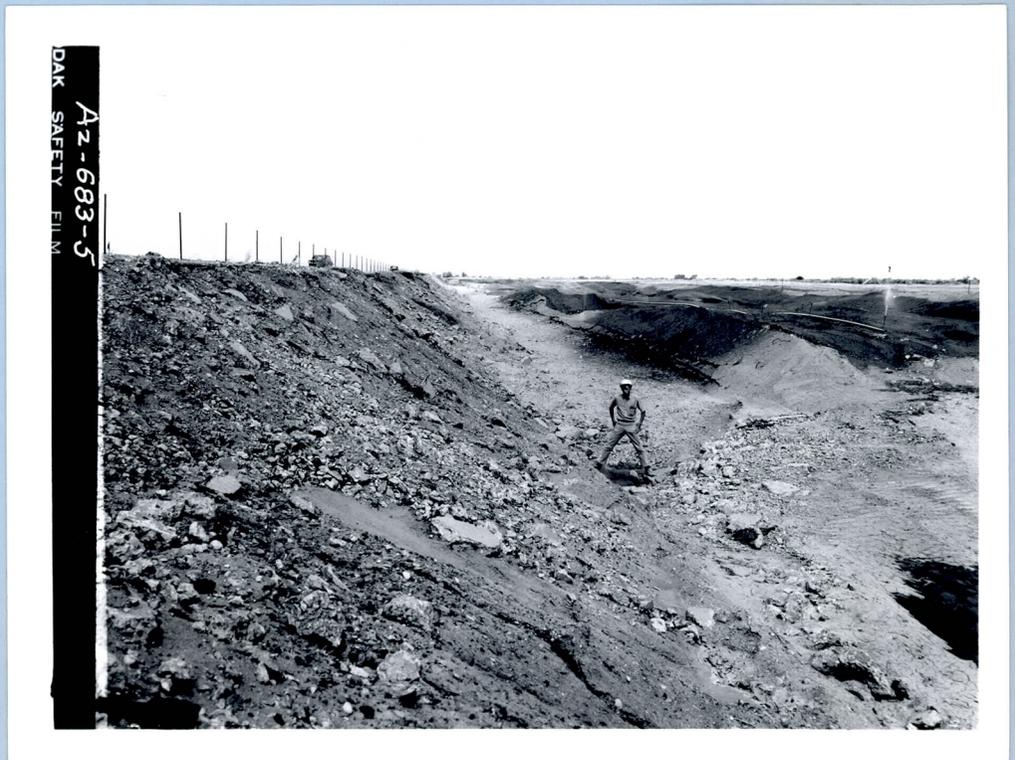
7/27/67

Powerline Floodway

Powerline Floodway after  
clearing and grubbing  
operation and prior to  
excavation north of  
W.A.F.B.



Prior to excavation  
showing rubble bank  
along W.A.F.B. access  
road.



TEMPE

Misc East

Temple

9/15/69

Misc East

Temple Waterway

8/13/68

Misc East

Temple

9/15/69

Misc East

Temple Waterway

8/13/68

RITTENHOUSE



RITTENHOUSE CHANNEL  
CONSTRUCTION  
5/19/95 11:00 ADM JMP

Rittenhouse Dam  
4/29/69



Rittenhouse Dam  
4/29/69

RITTENHOUSE CHANNEL  
CONSTRUCTION  
5/19/95 11:00 ADM JMP

RITTENHOUSE CHANNEL  
CONSTRUCTION  
5/19/95 11:00 ADM JMP

Rittenhouse Flood Retarding Structure - Tuesday, April 26, 1977

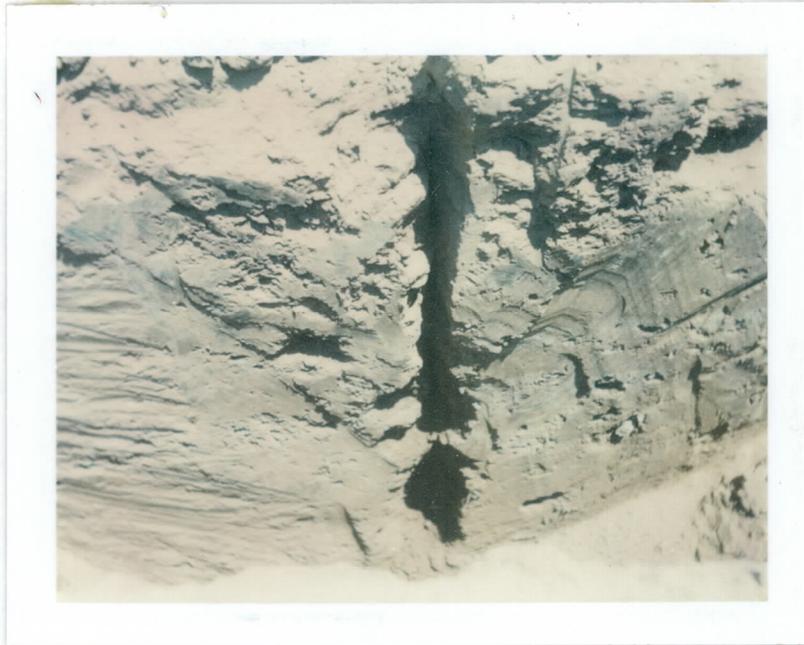
Station 98+38 - Excavation started in the centerline of the dam. The depth of the cut is  $5\frac{1}{2}$ ' , width  $3\frac{1}{2}$ ' , length 11' . We found transverse crack. Determined that the crack goes down 4' below the crest and was about  $\frac{1}{4}$ " wide. There was another transverse crack in this excavation 3' north of the crack just described. This crack we determined goes down 2' below the crest and is about  $\frac{1}{4}$ " wide. A longitudinal crack exists in the north wall of excavation,  $\frac{1}{4}$ " wide. Another cut was made at this same Station, but on the downstream hinge point. This cut is 9' deep, 5' wide and 18' long. Transverse crack was traced down 5' on both ends of the cut. This crack ranged in width from  $\frac{1}{4}$ " to  $\frac{1}{2}$ " . The moisture is still present below the point where we lost evidence of the crack.

In summary, in both excavations at this Station, the transverse crack discontinued at 4' from the cut in the centerline. In the cut on the downstream hinge point the crack discontinued at 5' below the crest. Moisture still present in the bottom of both excavations.

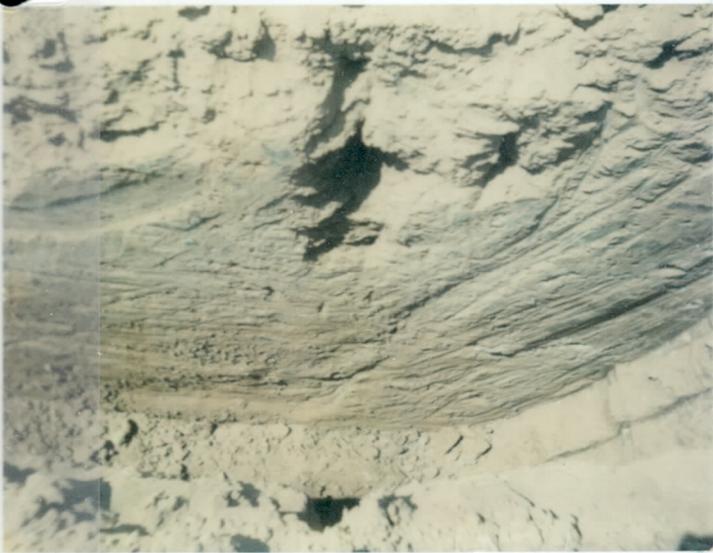




Rittenhouse Flood Retarding Structure - April 26, 1977  
Station 97+20



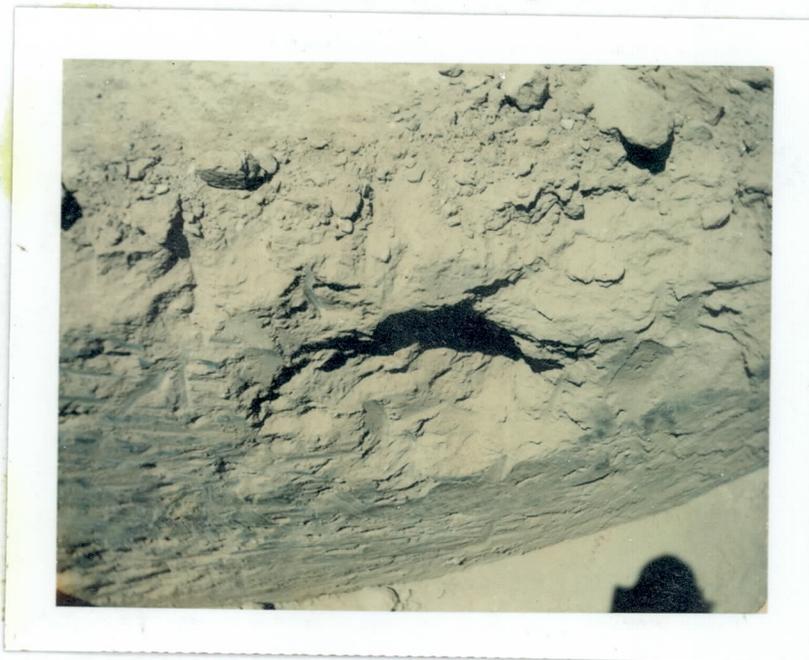
Excavation on centerline of dam crest. The cut is 4' wide, 12' long and 7½' deep. From the top of the crest to 4' below, crack is about ½" wide; below 4' the transverse crack is full of silt but still present and turns into a hairline that I was able to trace down 6' below the crest. Moisture still present in the bottom of excavation.



April 27, 1977  
Station 97+08 - Excavation started on centerline of dam crest. The cut is 3½' wide, 13' long and 7' deep. On the upstream side of the cut, transverse crack traced down 6' below the crest. On the downstream side of the cut, traced crack down 2' below the crest. Again these cracks are filled with silt. Cracks are 1/8" wide. There was moisture still present at the bottom of the excavation.

Station 89+26 - Excavation starts on centerline of dam crest. The cut is 3' wide, 9' long and 6½' deep. Traced transverse crack down 6' below the crest. The crack is a hairline full of silt in places. No moisture in the bottom of this excavation. Both upstream and downstream side of the cut showed that the crack went down 6'.

Rittenhouse Flood Retarding Structure - Thursday, April 28, 1977  
Station 89+93 - Digging started at centerline of the dam. On the downstream side of the cut transverse crack was traced down 2' and then discontinued. This crack is just a hair line. On the upstream side of the cut transverse crack was traced down 5' before it discontinued. At 2' down below the crest crack is  $\frac{1}{4}$ " wide. Below that the crack is just a hair line. The excavation goes as follows: 13' long, 3' wide,  $6\frac{1}{2}$ ' deep.



Downstream side



Upstream side

Rittenhouse Flood Retarding Structure - April 28, 1977

Station 91+67 - Digging started at centerline of the dam. Transverse crack on both upstream and downstream sides of the cut. On the downstream side of the cut crack is a  $\frac{1}{4}$ " wide with voids 3" wide on the upper half. On the lower half transverse crack is a hair line. On the upstream side of the cut transverse crack goes down 10' and is between an  $\frac{1}{8}$ " and  $\frac{1}{16}$ " wide crack which has silt deposits in it in places. One other thing about the downstream side of the cut is that at 4' down, transverse crack changes direction and runs longitudinally. The excavation goes as follows: 14' long, 4' wide and 10' deep. Moisture is present in bottom of this excavation.



Downstream side

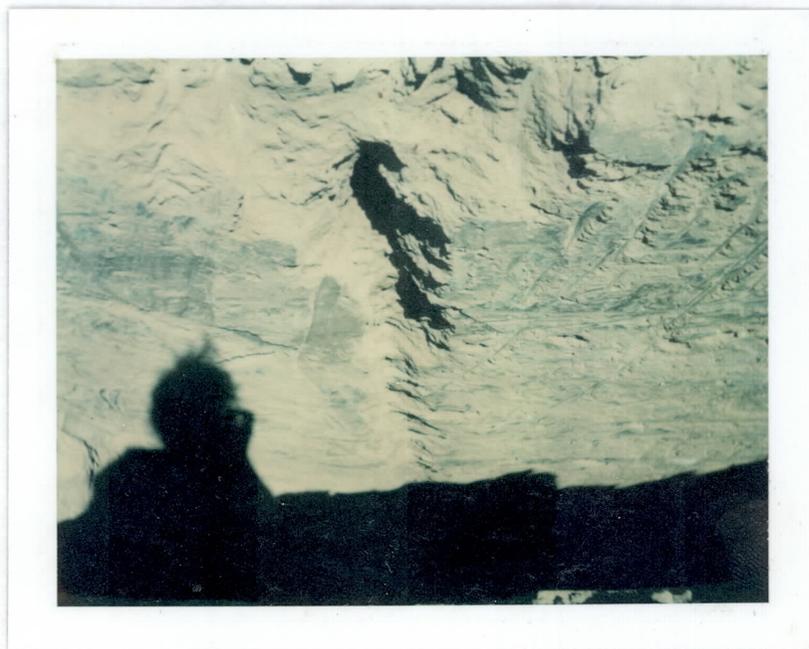


Upstream side

Rittenhouse Flood Retarding Structure - April 28, 1977  
Station 93 + 83 - Digging started at centerline of the dam. Cut is 14' long,  
3½' wide and 10' deep. Transverse crack runs down 9' on both upstream and  
downstream sides of cut before it discontinues. At 2' down from the crest  
crack is ¼" wide; below 2' down crack is a hair line with silt deposits in  
it. Moisture is present in the bottom of the cut.



Downstream side



Upstream side

Rittenhouse Flood Retarding Structure - Friday, April 29, 1977

Station 95+07 - Digging started at the centerline of the dam. From top of crest to 2' below, crack is  $\frac{1}{4}$ " wide; after that level, crack closes into a hair line that runs 7' down on both the upstream and downstream sides of the cut. The excavation is 14' long, 3' wide and 9' deep. Moisture present in the bottom of this cut.



Downstream side

Station 95+50 - Digging started at the centerline of the dam. On the upstream side of the cut transverse crack goes down 6' before it discontinues. On the downstream side of the cut, crack goes down 4' before it discontinues. On both the upstream and downstream sides of the cut, transverse crack is a hair line. Excavation is 14' long, 3' wide. Moisture present in the bottom of this cut - 7' deep.



Upstream side

Station 98+82 - Diggings started at the centerline of the dam. On the upstream side of the cut, transverse crack was traced down 6' before it discontinued. This crack is  $\frac{1}{4}$ " wide in places along its length. On the downstream side of the cut, transverse crack discontinued at 4' down from the top. Moisture present in the bottom of this excavation. Excavation is 13' long,  $7\frac{1}{2}$ ' deep, 3' wide.



Downstream side

WORLD RECORD  
COLLECTION

Rittenhouse FRS, May 18, 1977  
Station 100+21 - Centerline Excavation

Excavated a cut on centerline and parallel to centerline 9 feet deep and 9 feet long. The transverse crack opening to a one inch width on the upstream face of the excavation extended down to a five foot depth from crest elevation. A second transverse crack on the upstream face was observed beginning three feet below crest and extended another three feet and discontinuing in a small sandy-gravelly layer toward bottom of excavation. Both transverse cracks terminated near bottom of hole at  $5\frac{1}{2}$  feet below crest elevation. The transverse crack on the downstream face of the excavation was not definitely defined and appeared to discontinue in sandy-gravelly pockets and layers above and below a  $3\frac{1}{2}$  foot layer of compacted heavy clay. A longitudinal crack in the end of the centerline excavation was observed opened up to a width of  $\frac{1}{2}$ - $\frac{3}{4}$  inch. This crack was evident in starting three feet below crest and extended another three feet in length along the end face of the excavation.



North End



Downstream Face



Upstream Face

Rittenhouse FRS - Station 100 + 21 - 12 feet upstream of centerline

Excavated a cut 8 feet long and 6 feet deep. Found transverse crack extended through to downstream face of this excavation measuring 4 feet in length from surface of slope. Crack observed in the upstream face for a length of 2 feet and continued beyond.

*Downstream face*

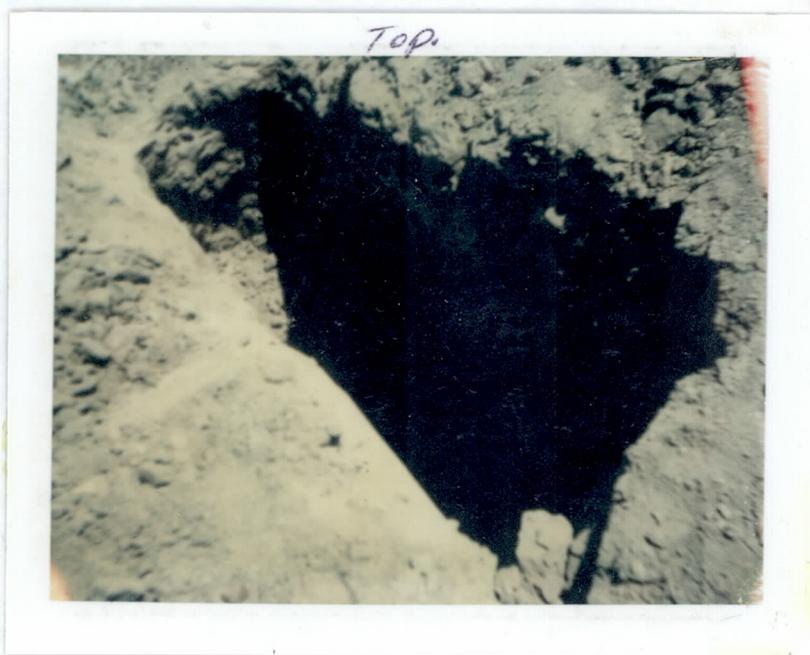


*Upstream face*



Rittenhouse FRS - May 18, 1977  
Station 100 + 51

An excavation 8 feet long and 6 feet deep was made transverse and immediately upstream of centerline on the crest in an attempt to intercept longitudinal crack observed in the end of the excavation. This proved unsuccessful; no crack could be uncovered.

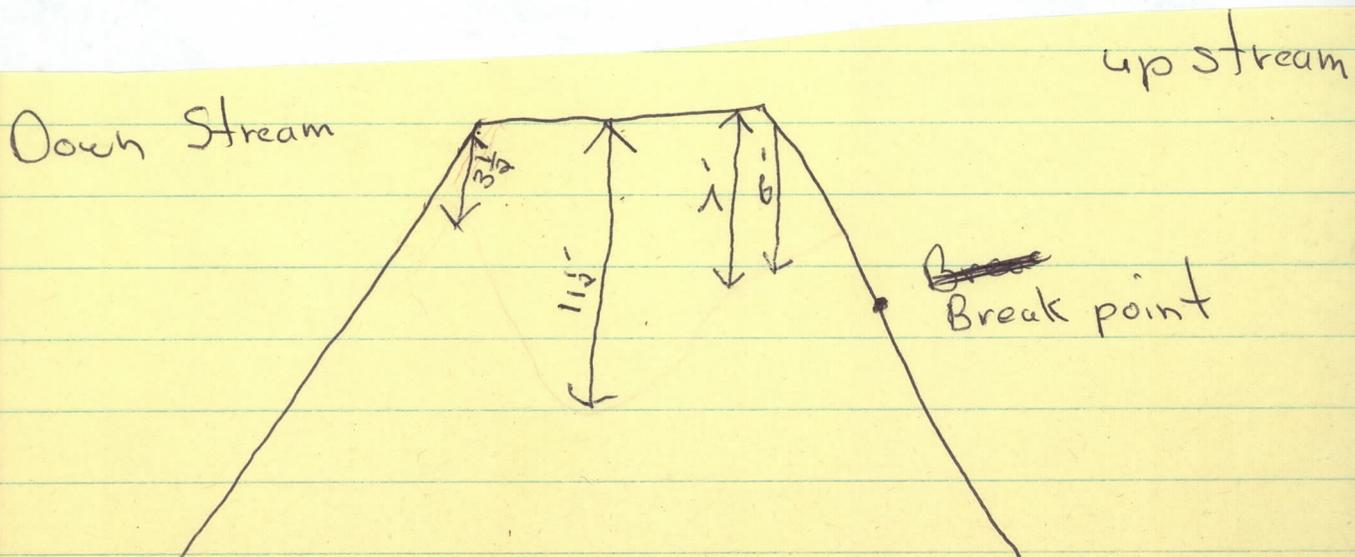


Rittenhouse FRS - May 11, 1977

Station 91 + 67 - Work started on centerline of the dam. Made a cut 13' deep, 14' long and 3½' wide. Found transverse crack on both sides of the cut. Crack goes down 11½' before it ends in a sand pocket. The crack ranges from a hair line to 1/8" wide. In places along its length, crack has material washed down into it.



Cut on the upstream hinge point - upstream side of cut.





Station 91 + 67 - Downstream hinge point. Length of cut 12', width 3', depth 7'. Found transverse crack on the upstream side of the cut. On the downstream side of the cut no crack could be located.



Upstream hinge point. Excavation 12' long, 3½' wide, 10' deep. Found transverse crack on both upstream and downstream sides of the cut going down 7' on the downstream side and 6' on the upstream side. Crack ranged in width from a hairline to 1/8" wide. This crack also had silt and sand deposits in it.

Rittenhouse FRS - May 19, 1977  
Station 105 + 10

Made a cut on the upstream hinge point, found no crack. The cut is 9' long, 5' deep and 3' wide.

Station 105 + 10 - 105 + 22

Also cut made on centerline of the dam between Station 105 + 10 and 105 + 22. Here hair line transverse crack was found. The depth was 4' on the upstream face and 3' down on the downstream face. We also found a longitudinal crack at 2' below crest. There was moisture evident on all sides of this cut.



RIO VERDE



