21/22

MASTER DRAINAGE REPORT

CAMELBACK RANCH

JANUARY 14, 1986

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CAMELBACK RANCH

JANUARY 14, 1986

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4/20/4

MASTER DRAINAGE REPORT

CAMELBACK RANCH

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1.0 INTRODUCTION

1.1 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

Camelback Ranch, a master planned development, consists of a mixed landuse with several amenities including lakes, greenbelts and open space corridor. The prime developer will improve the main infra-structure and the major amenities. The detailed engineering and improvements of the individual parcels will, however, be done by others. This report addresses the detailed hydrology and hydraulics and sets design parameters for the drainage improvements.

For analyzing stormwater the Soil Conservation Service (SCS) TR-20 computer program was utilized. The TR-20 Program was used to model both the on-site and the off-site hydrology.

The results of the computer output were evaluated based on the following criteria:

1. For 10 year storms the street flows should be such that the depth of flow would not be higher than the height of the curb.
2. The internal retention system, consisting of lakes, should be able to retain 100 year-2hour storm runoff from parcels contributing directly to the lakes.

Parcels not contributing storm water runoff to the lakes will drain directly to the Agua Fria River. Since this is an existing major waterway, the retention requirements for these parcels can be foregone. ACCORDING TO WHO?

CONCLUSIONS:

Based on the analysis of this report, the following conclusions are drawn:

a. The off-site flow entering the development combined with the local on-site flow can safely be conveyed through the development. A drainage system comprised of channels, streets, storm drains and lakes is provided.

b. The flood peaks were calculated by the use of SCS TR-20 Computer program.

c. The streets are designed to handle a 10-year storm within the top of the curb. Where the flow value exceeds the street carrying capacity, a supplemental storm drain is provided.

d. No street is allowed to concentrate flow in excess of 100-cfs in the event of a 100-year storm.

e. The grass lined channel sections are designed to a maximum flow velocity of 6 feet per second. Where this velocity is exceeded, erosion protection will be provided.

f. A retention system is built consisting of lakes to contain the 100-year 2-hour storm (with 2 feet of freeboard an estimated 132.3 Acft. of retention can be provided). NOT INDICATED ON PLATE 5

In addition, the retention system is designed for storage-routing purposes to accomplish floodpeak attenuation. Consequently, the post-development flows discharged at the downstream development boundary (Agua Fria River) are generally estimated to be at or below the pre-development levels.

It is recommended that the results of this report be used as the guidelines in implementing local drainage from the individual parcels within the development. It is further recommended that:

1. Finished floor elevations be kept above the 100-year flood elevations.

2. Each individual parcel be required TO SUBMIT a grading and drainage plan conforming to the approved Master Drainage Report prior to its development.

3. As per Master Drainage Report there are some areas where one parcel outlets to the adjoining parcel on the downstream side. In condition such as this, if the downstream parcel is developed

first, it will be the responsibility of its developer to address any problems associated with the upstream undeveloped parcel. AND VICE VERSA

1.2 SCOPE OF WORK

The purpose of this report is to study and set drainage requirements for the proposed Camelback Ranch. (See Plate 1 for Location). The scope of the report is to present comprehensive, detailed hydrologic and hydraulic analyses of the project drainage system in conjunction with the conceptual mass grading and lake design plans of the project. For addressing the floodplains of Agua Fria and New Rivers, a separate report is prepared (Ref. 14).

1.3 BACKGROUND DATA

The New River Floodplain is currently being modified to account for the major changes in hydrologic conditions upstream of the site. In accordance with the Plan 5 as proposed by the Corps of Engineers in 1975, Adobe Dam was built in 1982 on Skunk Creek, a tributary to New River; and the New River Dam was completed on New River in 1984. Consequently, the 100-year flood peak has now been reduced from 54,000 cfs to 39,000 cfs. The COE's floodway delineation accounting for this change and the construction of Camelback Road Bridge is depicted on Plate 2 (designated as 3). This floodway limit also depicts an open-space floodway flowage easement currently being evaluated. The official Flood Hazard Boundary Maps on these rivers are not revised and are based upon much higher flood peaks. Due to the reduced flood peaks the FHBM's are obsolete.

The New River channel which parallels along the North property line of Camelback Ranch has recently been channelized by

the City of Glendale. This channelization has created positive impact on Camelback Ranch. The preliminary floodway limits with channelization are also depicted on Plate 2 (designated as 4). Reference should be made to a report entitled "Floodplain Study for Channelization of New River at Camelback Ranch" (Ref. 14) for more detailed information on the River Floodplains.

1.4 LOCATION

The development comprising 592 acres, is located within Sections 18 and 19, Township 2 North, Range 1 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona as shown on Plate 1. The site is bound to the North by the Bethany Home Road Alignment (Extended) and to the South by Campbell Avenue. The Avenues of 107th and 113th bind the East and West sides of the project, respectively. In addition to the forementioned boundaries, the confluence of New River and the Agua Fria River occurs just Northwest of the site, confining the property on the North and West sides.

The terrain throughout the site is relatively flat, sloping southwesterly at an average slope of 0.33 percent. Presently, the majority of the property is being used for agriculture. Remaining portions are not being used because of its location within the normally dry river channel.

2.0 DESCRIPTION OF WATERSHED

2.1 GENERAL

Typically the upstream land consists of North-South cultivation patterns. The portion of the site south of Camelback

Road is buffered from offsite flows by the Roosevelt Irrigation District (RID) Canal along the east side of 107th Avenue. For the property to the North of Camelback Road, offsite drainage is limited by Bethany Home Road and the RID Canal as shown on Plate 3. It is therefore assumed that only this offsite area (175 ± Acres) will contribute any runoff to the subject development. The offsite flows will be reduced further for the future condition because when the upstream areas are developed retention will be required in accordance with the Agency drainage ordinances.

2.2 RAINFALL SEASONS

There are two separate rainfall seasons. The first occurs during the winter months from November to March when the area is subjected to occasional storms from the Pacific Ocean. While this is classified as a rainfall season, there can be periods of a month or more in this or any other season when practically no precipitation occurs. The second rainfall period occurs during July and August when Arizona is subjected to widespread thunderstorm activity whose moisture supply originates both in the Gulf of Mexico and along Mexico's west coast. These thunderstorms are extremely variable in intensity and location.

2.3 RUNOFF CHARACTERISTICS

Generally, runoff occurs only during and immediately following heavy precipitation because arid climate and drainage characteristics are not condusive to continuous flow. Consequently, all rivers flow intermittently only a few times a year. The soils in the river overbanks are typically highly

permeable silty sand (SCS Type B Soil). Generally, therefore, transmission losses during a runoff event are expected to be high.

3.0 HYDROLOGY

3.1 TR-20 COMPUTER ANALYSIS

The Soil Conservation Service (SCS) Technical Release No. 20 (TR-20) Computer program was used to synthesize flow peaks for the following return frequency storms:

STORM RETURN PERIODS (YEAR)	PRECIPITATION (INCHES)	DURATION (HOURS)	TYPE
10	2.6	24	NOAA DISTRI.
50	3.6	24	NOAA DISTRI.
100	4.0	24	NOAA DISTRI.

The precipitation values were estimated from the U. S. Department of Commerce, "National Oceanic and Atmospheric Agency (NOAA), Atlas 2, volume VIII," Arizona, 1973 (Ref. 9).

As per the SCS Guidelines, antecedent moisture conditions-2 were considered on the watershed before the beginning of a storm. Antecedent Moisture Condition (AMC) 2 is the average moisture condition of the watershed as determined by the total rainfall in the 5-day period preceding a storm.

The TR-20 program computes surface water runoff resulting from any synthetic or natural rainstorm. It will take into account conditions having a bearing on runoff and will route the flow through stream channels, streets, lakes, retention basins and reservoirs. The program then combines the routed hydrograph with the hydrographs from other tributaries and prints the peak discharge, time of occurence and water surface elevation for any

desired cross-section or structure. Input data for generating hydrographs is based on the contributing drainage area, curve number and time of concentration. The drainage areas were delineated from 2,000 scale (off-site) and 200 scale (on-site) mapping. Curve numbers listed in Table 1 were estimated as per the SCS's Technical Release No. 55 entitled "Urban Hydrology for Small Watersheds", (Ref. 5). The concentration times were based upon the overland flow, street flow and channel flow as applicable for the pertinent tributary watershed.

Detailed computer printouts for the pre and post conditions are included in the appendix.

3.2 OFFSITE

Watershed area contributing to the site, lies to the Northeast, and consists of an area of approximately 175 acres. (See Plate 3). The watershed is triangular in shape and is restricted to the North by Bethany Home Road and to the Southeast by the RID Canal. Presently local runoff North of the watershed is intercepted by Bethany Home Road and diverted West, runoff East of the watershed is intecepted by the RID Canal and diverted South. Runoff water from the watershed enters the site generally above Camelback Road. Approximately 219 cfs of runoff will be generated by the watershed for a 100 year storm. (See Appendix TR-20 I.D. #10).

241 on Plate 5

Offsite runoff water generated South of Camelback road is diverted away from the site, again by the RID (Canal lying just East, along 107th Avenue).

A report prepared by Dooley-Jones and Associates, Inc., (Ref. 12) for the Flood Control District of Maricopa County indicates

that in the present condition the RID Canal will be an effective barrier to the upstream runoff generated by the 100-year storm.

The site is influenced by the Floodplains of New and Agua Fria Rivers. Breakout of the New River just below Glendale Avenue has been eliminated by channelization completed in conjunction with the new Glendale Municipal Airport. (Ref. 13). This channelization lowered water surface elevations upstream enough to prevent any future breakouts. Potential of breakout exists along the north property line in the present condition. By completing the channelization (mirroring the half now in place) a breakout within the project site will also be eliminated (See Ref. 14).

The floodplain of New River will be confined within the proposed channelization (See Ref. 14). It should be noted that the entire south half and a portion of the north half of the site are still subject to flooding by Agua Fria River. These areas designated as the Floodway Fringe District of Agua Fria River will be raised enough to remove the site from the floodplain. In accordance with the Agency requirements the entire site will be raised above the baseflood elevation.

3.3 ONSITE

Stormwater runoff generated by the offsite tributary area will be received by Camelback Ranch and directed through a Greenbelt to the lakes. The onsite parcels will also contribute stormwater runoff to the lakes. However, for some parcels, along the west boundary this is not feasible, and will drain directly to the Agua Fria River. Emergency overflow from lakes will be accomodated by dip sections. North of Camelback Road, Lake "B"

will outlet to Lake "A" and Lake "A" will outlet through a greenbelt to the Agua Fria River. South of Camelback road Lake "B" will outlet Lake "A" and Lake "A" will outlet through a street system to the Agua Fria River. (See Plate 5 for Drainage Patterns).

The streets will be designed to handle the 10-year storm at or below the top of curb. In the event of a 100-year storm, no street is allowed to concentrate flow in excess of 100 cfs. In locations where the 10-year storm would exceed the street capacity, catch basins and a storm drain system will be provided where feasible. The storm drain system will outlet into the openspace and lake system. However, this report does not address the detailed engineering of the streets, the specifics will be provided in a subsequent report.

3.4 RETENTION

Retention for Camelback Ranch will be provided for in the lake system as depicted on Plate 4. Stormwater runoff for the 100 year-2 hour storm will be retained on site, (See Appendix for retention calcs).

Runoff entering the site from the offsite watershed will be directed by way of greenbelts to the lakes. Runoff generated by the individual parcels will also drain to the lakes. The lakes will act as a major retention/detention structure.

3.5 PRE AND POST DEVELOPMENT CONDITIONS

Prior to development storm water entering the site combined with runoff generated onsite, exit at two locations, North and South Camelback. Upon the completion of the development, runoff

exiting the site is at or below the predevelopment conditions.

The pre and post development flows leaving the site, are summarized below:

NORTH HALF		SOUTH HALF	
PRE-DEVELOP.	POST-DEVELOPMENT	PRE-DEVELOP.	POST-DEVELOP.
Q_{10} = 145 CFS	Q_{10} = 30 CFS	Q_{10} = 80 CFS	Q_{10} = 50 CFS
Q_{100} = 369 CFS	Q_{100} = 65 CFS	Q_{100} = 204 CFS	Q_{100} = 102 CFS

4.0 REFERENCES

1. Arizona Department of Transportation, "Hydrologic Design for Highway Drainage in Arizona", Phoenix, Arizona, December 1968.

2. Chow Ven Te, "Handbook of Applied Hydrology", McGraw Hills, 1964.

3. Chow Ven Te, "Open Channel Hydraulics", McGraw Hills, 1959.

4. City of Phoenix, "Storm Drain Design Manual, Subdivision Drainage Design." October, 1972.

5. U. S. Department of Agriculture, Soil Conservation Service, Technical Release 55, "Urban Hydrology for Small Watersheds", Washington, D.C., January 1975.

6. U. S. Department of Agriculture, Soil Conservation Service, Technical Release 20, "Computer Program, project Formulation, Hydrology", Washington, D.C., 1965.

7. U. S. Department of Agriculture, Soil Conservation Service, "National Engineering Handbook, Section 4, Hydrology", Washington, D.C., August 1972.

8. U. S. Department of Agriculture, Soil Conservation Service, "Arizona General Soil Map", Portland, Oregon, December 1975.

9. U. S. Department of Commerce, National Weather Service. "Precipitation Frequency Atlas of the Western United States", Volume VIII - Arizona 1973.

10. U. S. Department of Transportation, Federal Highway Administration, Hydraulic Engineering Circulars No. 3, 5, 11, 13, & 15.

11. U. S. Weather Bureau, "Estimated Return Periods for Short-Duration Precipitation in Arizona". Technical Paper 40, Phoenix WBO Station, 1969.

12. Dooley-Jones & Associates, Inc., "Drainage Study and Conceptual Design, Vicinity of 107th Avenue, RID Canal and Bethany Homes Road, FCD 84-32", (For Flood Control District of Maricopa County), August 14, 1985.

13. Bucher, Willis & Ratuff Consulting Engineers, Planners 7 Architects and Z & H Engineering, Inc., "Glendale Municipal Airport," January 22, 1984.

14. Coe & Van Loo Consulting Engineers, Inc., "Flood Plain Study for Channelization of New River at Camelback Ranch," January, 1986.

APPENDIX

JOB #1031-06
CVL #4/20/4

TABLE 1

SCS RUNOFF CURVE NUMBERS

. . . . CN FOR SOIL TYPE . . . .

ZONING OR LANDUSE	VALUES USED FOR CAMELBACK RANCH (TYPE B SOIL)
SF	83
PH	84
TH	85
C/O	92
MF	84
CONDO	84
LAKE	95

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TABLE 2

RETENTION CALCULATIONS

The retention volumes required are based on a 100-year 2-hour storm as follows:

VOLUME REQUIRED = C X P X A

P_{100} Yr/24-hour = 3.79 In.

P_{100} Yr/6-hour = 3.10 In.

P_{100} Yr/2-hour = 2.65 In.

= 2.65 In/12 In. x CA Acft

Precipitation (P) taken from A.D.O.T. Hydrologic Design for Highway Drainage in Arizona (Ref. #1).

The tabulation presented below should be used in conjunction with Plate 4.

CONTRIBUTING AREA "A"

PARCEL NUMBER	AREA (ACRES)	ZONING	RUNOFF COEFFICIENT (C)	CA	RETENTION VOL. REQD. (AC FT)
16B	3.05	C/O	.90	2.75	0.61
15A	4.25	MF	.65	2.76	0.61
15B	5.28	MF	.65	3.43	0.76
13	15.60	TH	.55	8.58	1.89
28	45.05	SF	.45	20.27	4.48
25	10.66	TH	.55	5.86	1.29
24	11.95	SF	.45	5.38	1.19
22B	6.25	SF	.45	2.81	0.62
22A	4.03	SF	.45	1.81	0.40
27	11.11	PH	.55	6.11	1.35
26	7.78	CONDO	.65	5.06	1.12
23	37.95	LAKE	.95	36.05	7.96
				SUBTOTAL	22.28 Acft
				VOLUME AVAILABLE IN LAKE #23	65.90 Acft

CONTRIBUTING AREA "B"

PARCEL NUMBER	AREA (ACRES)	ZONING	RUNOFF COEFFICIENT (C)	CA	RETENTION VOL. REQD. (AC FT)
16A	15.08	C/O	.90	13.57	3.00
17	5.79	LAKE	.95	5.50	1.21
				SUBTOTAL	4.21 Acft
				VOLUME AVAILABLE IN LAKE #17	9.44 Acft

CONTRIBUTING AREA "C"

PARCEL NUMBER	AREA (ACRES)	ZONING	RUNOFF COEFFICIENT (C)	CA	RETENTION VOL. REQD. (AC FT)
2	17.84	C/O	.90	16.06	3.55
8	6.20	LAKE	.95	5.89	1.30
				SUBTOTAL	4.85 Acft
				VOLUME AVAILABLE IN LAKE #8	9.86 Acft

CONTRIBUTING AREA "D"

PARCEL NUMBER	AREA (ACRES)	ZONING	RUNOFF COEFFICIENT (C)	CA	RETENTION VOL. REQD. (AC FT)
3	13.02	TH	.55	7.16	1.58
1 + 2	40.04	PH	.55	22.02	4.86
20	9.14	CONDO	.65	5.94	1.31
21	8.82	MF	.65	5.73	1.27
22	6.44	SF	.45	2.90	0.64
23	14.98	SF	.45	6.74	1.49
12	28.14	LAKE	.95	26.73	5.90
				SUBTOTAL	17.05 Acft
				VOLUME AVAILABLE IN LAKE #12	47.12 Acft

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CVL #4/20/4

CVL
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Sheet No. _____ of _____
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Checked by _____ Date _____

TABLE #3

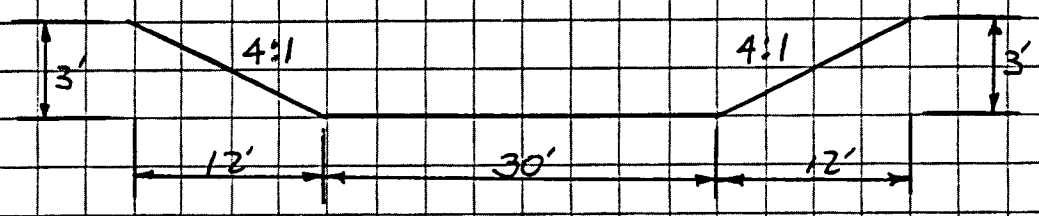
CHANNEL CAPACITIES

CAPACITY OF EACH CHANNEL DERIVED BY APPLICATION OF THE MANNING FORMULA:

$$Q = \frac{1.486}{n} R^{2/3} S^{1/2} A$$

WHERE $n = 0.033$
$R = \frac{A}{P}$
S = SLOPE (ft/ft)
A = AREA (ft^2)
Q = FLOW (ft^3/sec)

SECTION A-A



WITH 1' OF FREEBOARD

$A = 76\ FT^2$
$P = 46\ FT$
$R = 1.65\ FT$
$S = 0.0042\ FT/FT$
$n = 0.033$

$$Q = \frac{1.486}{0.033}(1.65)^{2/3}(0.0042)^{1/2}(76)$$

$$Q = 310.4\ CFS$$

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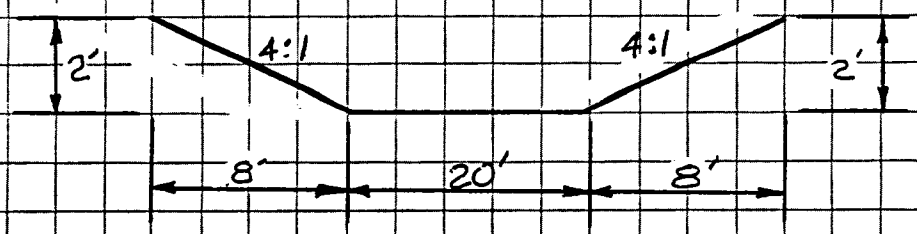
SECTION B-B



WITH 1' OF FREEBOARD

$A = 28\ FT^2$
$P = 28\ FT$
$R = 1.0\ FT$
$S = 0.0032\ FT/FT$
$n = 0.033$

$$Q = \frac{1.486}{0.033}(1.0)^{2/3}(0.0032)^{1/2}(28)$$

$$Q = 70.5\ CFS$$

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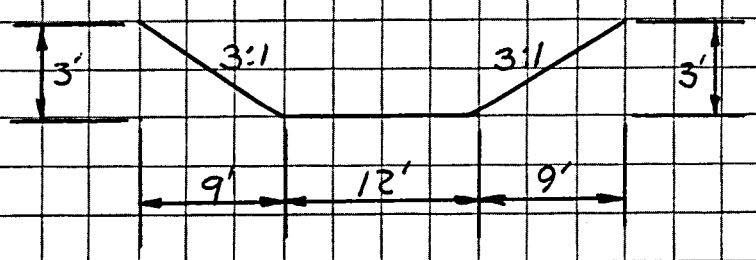
SECTION C-C



$A = 63\ FT^2$
$P = 30\ FT$
$R = 2.1\ FT$
$S = 0.0027\ FT/FT$
$n = 0.033$

$$Q = \frac{1.486}{0.033}(2.1)^{2/3}(0.0027)^{1/2}(63)$$

$$Q = 241.8\ CFS$$

```
13 JAN 86 13:20:20 MONDAY
1        CAMELBACK RANCH                                          NOV 85_C
0         TR-20 HYDROLOGY
1                    PROGRAM DATE - FEB. 14, 1974          S/360
1                                                                          PASS=  1
EXECUTIVE CONTROL CARD          OPERATION  LIST
```

PRE DEVELOPMENT

```
LISTING OF DATA IN CORE


0    0CAMELBACK RANCH
```

INPUT LISTING

```
                    VELOCITY INCREMENT
1 CTABLE                      0.2000

8                 0.0000      0.0800      0.1800      0.2500      0.3200
8                 0.3700      0.4100      0.4500      0.4900      0.5100
8                 0.5400      0.5700      0.5900      0.6100      0.6300
8                 0.6500      0.6600      0.6700      0.6900      0.7000
8                 0.7100      0.7200      0.7300      0.7400      0.7500
8                 0.7600      0.7700      0.7700      0.7800      0.7900
8                 0.7900      0.8000      0.8100      0.8100      0.8200
8                 0.8200      0.8300      0.8300      0.8400      0.8400
8                 0.8400      0.8500      0.8500      0.8600      0.8600
8                 0.8600      0.8600      0.8700      0.8700      0.8700
8                 0.8800      0.8800      0.8800      0.8900      0.8900
8                 0.8900      0.8900      0.8900      0.8900      0.9000
8                 0.9000      0.9000      0.9000      0.9000      0.9100
8                 0.9100      0.9100      0.9100      0.9100      0.9100
8                 0.9200      0.9200      0.9200      0.9200      0.9200
8                 0.9200      0.9200      0.9200      0.9300      0.9300
9 ENDTBL


                    TIME INCREMENT
4 DIMHYD

8                 0.0000      0.0300      0.1000      0.1900      0.3100
8                 0.4700      0.6600      0.8200      0.9300      0.9900
8                 1.0000      0.9900      0.9300      0.8600      0.7800
8                 0.6800      0.5600      0.4600      0.3900      0.3300
8                 0.2800      0.2410      0.2070      0.1740      0.1470
8                 0.1260      0.1070      0.0910      0.0770      0.0660
8                 0.0550      0.0470      0.0400      0.0340      0.0290
8                 0.0250      0.0210      0.0180      0.0150      0.0130
8                 0.0110      0.0090      0.0080      0.0070      0.0060
8                 0.0050      0.0040      0.0030      0.0020      0.0010
8                 0.0000      0.0000      0.0000      0.0000      0.0000
9 ENDTBL

  COMPUTED PEAK K FACTOR =  484.00


                    TIME INCREMENT
5 RAINFL 4                    0.5000
```

```
8                0.0000      0.0040      0.0080      0.0130      0.0180
8                0.0220      0.0260      0.0310      0.0350      0.0400
8                0.0440      0.0480      0.0530      0.0570      0.0620
8                0.0660      0.0710      0.0750      0.0800      0.0930
8                0.1070      0.1200      0.1400      0.1700      0.5000
8                0.8300      0.8600      0.8800      0.8930      0.9070
8                0.9200      0.9240      0.9280      0.9330      0.9370
8                0.9420      0.9470      0.9510      0.9560      0.9600
8                0.9640      0.9690      0.9730      0.9780      0.9820
8                0.9870      0.9910      0.9950      1.0000      1.0000
9 ENDTBL
1                    STANDARD CONTROL INSTRUCTIONS


6 RUNOFF 1  10       5        0.3070     73.5000     0.63000 0 0 0 0 1
6 REACH  3  20   5   6     4000.0000      0.5400     0.00000 0 0 0 0 1
6 RUNOFF 1  30       7        0.3300     72.0000     0.86000 0 0 0 0 1
6 ADDHYD 4  40   6 7 1                                 0 0 0 0 0 1
6 RUNOFF 1  50       1        0.3100     72.0000     0.79000 0 0 0 0 1
  ENDATA

END OF LISTING
1                                                                                                    PASS=  1
EXECUTIVE CONTROL CARD          OPERATION  INCREM,     MAIN TIME INCREMENT=  0.20
EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT  50/  0
        STARTING TIME=  0.00    RAIN DEPTH=  2.60    RAIN DURATION=  1.00    RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1        STORM NO.= 1


  ENDCMP
1                                                                                                    PASS=  2
EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT  50/  0
        STARTING TIME=  0.00    RAIN DEPTH=  3.60    RAIN DURATION=  1.00    RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1        STORM NO.= 2


  ENDCMP
1                                                                                                    PASS=  3
EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT  50/  0
        STARTING TIME=  0.00    RAIN DEPTH=  4.00    RAIN DURATION=  1.00    RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1        STORM NO.= 3


  ENDCMP
```

OUTPUT LISTING

1SUMMARY TABLE 1

10-YR

0 ALT	STORM	ID	DA SQ-MI.	RAIN TBLE	AMC	DELTA-T HRS.	TZERO HRS.	PRECIP IN.	PRECIP DURATION	PEAK-Q CFS	PEAK-TIME	PEAK-ELEV	RUNOFF IN.	CSM
1	1	10	0.31	4	2	0.20	0.00	2.60	24.00	99.94	12.68	0.00	0.64	325.52
1	1	20	0.31	4	2	0.20	0.00	2.60	24.00	77.21	13.17	0.00	0.64	251.49
1	1	30	0.33	4	2	0.20	0.00	2.60	24.00	82.24	12.82	0.00	0.58	249.21
1	1	40	0.64	4	2	0.20	0.00	2.60	24.00	145.10	12.99	0.00	0.61	227.79
1	1	50	0.31	4	2	0.20	0.00	2.60	24.00	80.29	12.78	0.00	0.58	258.99
1	2	10	0.31	4	2	0.20	0.00	3.60	24.00	197.89	12.64	0.00	1.28	644.58
1	2	20	0.31	4	2	0.20	0.00	3.60	24.00	156.58	13.13	0.00	1.27	510.03

1	2	30	0.33	4	2	0.20	0.00	3.60	24.00	170.34	12.79	0.00	1.18	516.19
1	2	40	0.64	4	2	0.20	0.00	3.60	24.00	299.85	12.94	0.00	1.23	470.73
1	2	50	0.31	4	2	0.20	0.00	3.60	24.00	165.92	12.74	0.00	1.19	535.21
1	3	10	0.31	4	2	0.20	0.00	4.00	24.00	240.93	12.63	0.00	1.56	784.78
1	3	20	0.31	4	2	0.20	0.00	4.00	24.00	191.99	13.11	0.00	1.56	625.37
1	3	30	0.33	4	2	0.20	0.00	4.00	24.00	209.72	12.78	0.00	1.46	635.52
1	3	40	0.64	4	2	0.20	0.00	4.00	24.00	369.38	12.93	0.00	1.50	579.87
1	3	50	0.31	4	2	0.20	0.00	4.00	24.00	204.21	12.73	0.00	1.46	658.74

1SUMMARY TABLE 3

	10-YR Q1	50-YR Q2	100-YR Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	DISCHARGE,CFS									
0XSEC/STRUC NO. 10										
ALTERNATE 1	99.94	197.89	240.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO. 20										
ALTERNATE 1	77.21	156.58	191.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO. 30										
ALTERNATE 1	82.24	170.34	209.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO. 40										
ALTERNATE 1	145.10	299.85	369.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO. 50										
ALTERNATE 1	80.29	165.92	204.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00

ENDJOB CARD ENCOUNTERED. END OF JOB.
1END OF 1 JOBS IN THIS RUN

```
13 JAN 86 13:20:52 MONDAY
1         CAMELBACK RANCH                                          NOV 85 C
0          TR-20 HYDROLOGY
1                          PROGRAM DATE - FEB. 14, 1974            S/360
1                                                                                PASS=  1
 EXECUTIVE CONTROL CARD            OPERATION  LIST
```

POST DEVELOPMENT

```
 LISTING OF DATA IN CORE


0    0CAMELBACK RANCH
```

INPUT LISTING

```
                          VELOCITY INCREMENT
 1 CTABLE                      0.2000

 8                 0.0000    0.0800    0.1800    0.2500    0.3200
 8                 0.3700    0.4100    0.4500    0.4900    0.5100
 8                 0.5400    0.5700    0.5900    0.6100    0.6300
 8                 0.6500    0.6600    0.6700    0.6900    0.7000
 8                 0.7100    0.7200    0.7300    0.7400    0.7500
 8                 0.7600    0.7700    0.7700    0.7800    0.7900
 8                 0.7900    0.8000    0.8100    0.8100    0.8200
 8                 0.8200    0.8300    0.8300    0.8400    0.8400
 8                 0.8400    0.8500    0.8500    0.8600    0.8600
 8                 0.8600    0.8600    0.8700    0.8700    0.8700
 8                 0.8800    0.8800    0.8800    0.8900    0.8900
 8                 0.8900    0.8900    0.8900    0.8900    0.9000
 8                 0.9000    0.9000    0.9000    0.9000    0.9100
 8                 0.9100    0.9100    0.9100    0.9100    0.9100
 8                 0.9200    0.9200    0.9200    0.9200    0.9200
 8                 0.9200    0.9200    0.9200    0.9300    0.9300
 9 ENDTBL


          STRUCT NO.
 3 STRUCT      10

                          ELEVATION   DISCHARGE     STORAGE
 8                          0.0000      0.0000      0.0000
 8                          0.5000      0.0020      2.4000
 8                          1.0000      0.0040      4.7000
 8                          1.5000      0.0060      7.0000
 8                          2.0000      0.0080      9.4000
 8                          2.5000     32.0000     11.8000
 8                          3.0000     90.0000     14.1000
 9 ENDTBL


          STRUCT NO.
 3 STRUCT      20

                          ELEVATION   DISCHARGE     STORAGE
 8                          0.0000      0.0000      0.0000
 8                          0.5000      0.0020     16.5000
 8                          1.0000      0.0040     33.0000
 8                          1.5000      0.0060     44.5000
```

```
8                          2.0000      0.0080     66.0000
8                          2.5000     32.0000     82.5000
8                          3.0000     90.0000     99.0000
9 ENDTBL

        STRUCT NO.
3 STRUCT      30

                       ELEVATION   DISCHARGE     STORAGE
8                         0.0000      0.0000      0.0000
8                         0.5000      0.0020      2.5000
8                         1.0000      0.0040      4.9000
8                         1.5000      0.0060      7.4000
8                         2.0000      0.0080      9.8000
8                         2.5000     32.0000     12.3000
8                         3.0000     90.0000     14.7000
9 ENDTBL

        STRUCT NO.
3 STRUCT      40

                       ELEVATION   DISCHARGE     STORAGE
8                         0.0000      0.0000      0.0000
8                         0.5000      0.0020     11.8000
8                         1.0000      0.0040     23.6000
8                         1.5000      0.0060     35.4000
8                         2.0000      0.0080     47.2000
8                         2.5000     32.0000     59.0000
8                         3.0000     90.0000     70.8000
9 ENDTBL

                   TIME INCREMENT
4 DIMHYD

8              0.0000      0.0300      0.1000      0.1900      0.3100
8              0.4700      0.6600      0.8200      0.9300      0.9900
8              1.0000      0.9900      0.9300      0.8600      0.7800
8              0.6800      0.5600      0.4600      0.3900      0.3300
8              0.2800      0.2410      0.2070      0.1740      0.1470
8              0.1260      0.1070      0.0910      0.0770      0.0660
8              0.0550      0.0470      0.0400      0.0340      0.0290
8              0.0250      0.0210      0.0180      0.0150      0.0130
8              0.0110      0.0090      0.0080      0.0070      0.0060
8              0.0050      0.0040      0.0030      0.0020      0.0010
8              0.0000      0.0000      0.0000      0.0000      0.0000
9 ENDTBL

  COMPUTED PEAK K FACTOR =  484.00

                   TIME INCREMENT
5 RAINFL 4                0.5000

8              0.0000      0.0040      0.0080      0.0130      0.0180
8              0.0220      0.0260      0.0310      0.0350      0.0400
8              0.0440      0.0480      0.0530      0.0570      0.0620
```

```
8                 0.0660      0.0710      0.0750      0.0800      0.0930
8                 0.1070      0.1200      0.1400      0.1700      0.5000
8                 0.8300      0.8600      0.8800      0.8930      0.9070
8                 0.9200      0.9240      0.9280      0.9330      0.9370
8                 0.9420      0.9470      0.9510      0.9560      0.9600
8                 0.9640      0.9690      0.9730      0.9780      0.9820
8                 0.9870      0.9910      0.9950      1.0000      1.0000
9 ENDTBL
1                     STANDARD CONTROL INSTRUCTIONS


6 RUNOFF 1  10        7       0.3070     73.5000     0.63000 0 0 0 0 1
6 RUNOFF 1 102        6       0.0048     92.0000     0.26000 0 0 0 0 1
6 ADDHYD 4 104    7 6 5                                     0 0 0 0 0 1
6 REACH  3 106    5   6    1200.0000      0.7100     0.00000 0 0 0 0 1
6 RUNOFF 1 108        5       0.0244     85.0000     0.29000 0 0 0 0 1
6 ADDHYD 4 110    5 6 7                                     0 0 0 0 0 1
6 RUNOFF 1 112        5       0.0073     84.0000     0.20000 0 0 0 0 1
6 ADDHYD 4 114    7 5 6                                     0 0 0 0 0 1
6 RUNOFF 1 116        5       0.0167     85.0000     0.34000 0 0 0 0 1
6 ADDHYD 4 140    6 5 7                                     0 0 0 0 0 1
6 RUNOFF 1 118        5       0.0704     83.0000     0.57000 0 0 0 0 1
6 ADDHYD 4 140    7 5 6                                     0 0 0 0 0 1
6 RUNOFF 1 120        5       0.0122     84.0000     0.29000 0 0 0 0 1
6 ADDHYD 4 140    5 6 7                                     0 0 0 0 0 1
6 RUNOFF 1 122        5       0.0066     84.0000     0.25000 0 0 0 0 1
6 REACH  3 124    5   6     600.0000      0.5400     0.00000 0 0 0 0 1
6 ADDHYD 4 140    7 6 5                                     0 0 0 0 0 1
6 RUNOFF 1 126        6       0.0236     92.0000     0.34000 0 0 0 0 1
6 RUNOFF 1 128        7       0.0090     95.0000     0.08000 0 0 0 0 1
6 ADDHYD 4 130    6 7 4                                     0 0 0 0 0 1
6 RESVOR 2     10 4   6       0.0000                         0 0 0 0 0 1
6 REACH  3 131    6   7     100.0000      0.7600     0.00000 0 0 0 0 1
6 ADDHYD 4 140    5 7 6                                     0 0 0 0 0 1
6 RUNOFF 1 132        5       0.0187     81.0000     0.29000 0 0 0 0 1
6 ADDHYD 4 140    5 6 7                                     0 0 0 0 0 1
6 RUNOFF 1 134        5       0.0098     83.0000     0.23000 0 0 0 0 1
6 ADDHYD 4 140    5 7 6                                     0 0 0 0 0 1
6 RUNOFF 1 135        4       0.0593     95.0000     0.08000 0 0 0 0 1
6 ADDHYD 4 140    6 4 5                                     0 0 0 0 0 1
6 RUNOFF 1 136        6       0.0063     83.0000     0.24000 0 0 0 0 1
6 ADDHYD 4 140    5 6 7                                     0 0 0 0 0 1
6 RUNOFF 1 138        5       0.0174     84.0000     0.34000 0 0 0 0 1
6 ADDHYD 4 140    5 7 6                                     0 0 0 0 0 1
6 RESVOR 2     20 6   7       0.0000                         0 0 0 0 0 1
6 REACH  3 142    7   5     800.0000      0.7600     0.00000 0 0 0 0 1
6 RUNOFF 1 144        6       0.0140     83.0000     0.35000 0 0 0 0 1
6 ADDHYD 4 146    5 6 4                                     0 0 0 0 0 1
6 RUNOFF 1 150        5       0.0148     84.0000     0.33000 0 0 0 0 1
6 REACH  3 152    5   6    1300.0000      0.5400     0.00000 0 0 0 0 1
6 RUNOFF 1 154        5       0.0253     84.0000     0.34000 0 0 0 0 1
6 ADDHYD 4 156    6 5 7                                     0 0 0 0 0 1
6 ADDHYD 4 157    4 7 1                                     0 0 0 0 0 1
6 RUNOFF 1 158        3       0.0098     84.0000     0.27000 0 0 0 0 1
6 RUNOFF 1 160        5       0.0279     92.0000     0.39000 0 0 0 0 1
6 RUNOFF 1 162        6       0.0097     95.0000     0.08000 0 0 0 0 1
6 ADDHYD 4 164    5 6 7                                     0 0 0 0 0 1
6 RESVOR 2     30 7   6       0.0000                         0 0 0 0 0 1
6 REACH  3 166    6   5     100.0000      0.7600     0.00000 0 0 0 0 1
```

```
6 RUNOFF 1 168        6      0.0139     84.0000     0.23000 0 0 0 0 1
6 ADDHYD 4 184   5 6 7                              0 0 0 0 0 1
6 RUNOFF 1 170        5      0.0101     84.0000     0.22000 0 0 0 0 1
6 ADDHYD 4 184   7 5 6                              0 0 0 0 0 1
6 RUNOFF 1 172        5      0.0143     84.0000     0.27000 0 0 0 0 1
6 ADDHYD 4 184   6 5 7                              0 0 0 0 0 1
6 RUNOFF 1 174        5      0.0203     85.0000     0.28000 0 0 0 0 1
6 REACH  3 176   5    6    850.0000      0.5400     0.00000 0 0 0 0 1
6 RUNOFF 1 178        5      0.0630     84.0000     0.50000 0 0 0 0 1
6 ADDHYD 4 180   6 5 4                              0 0 0 0 0 1
6 ADDHYD 4 184   7 4 5                              0 0 0 0 0 1
6 RUNOFF 1 181        6      0.0440     95.0000     0.08000 0 0 0 0 1
6 ADDHYD 4 184   5 6 7                              0 0 0 0 0 1
6 RUNOFF 1 182        5      0.0234     84.0000     0.31000 0 0 0 0 1
6 ADDHYD 4 184   5 7 4                              0 0 0 0 0 1
6 RESVOR 2     40 4   6      0.0000                 0 0 0 0 0 1
6 REACH  3 186   6    7    200.0000      0.7200     0.00000 0 0 0 0 1
6 RUNOFF 1 188        5      0.0180     84.0000     0.31000 0 0 0 0 1
6 ADDHYD 4 190   7 5 6                              0 0 0 0 0 1
6 REACH  3 192   6    7   1100.0000      0.6300     0.00000 0 0 0 0 1
6 RUNOFF 1 193        5      0.0292     84.0000     0.34000 0 0 0 0 1
6 ADDHYD 4 194   7 5 6                              0 0 0 0 0 1
6 RUNOFF 1 195        5      0.0289     84.0000     0.37000 0 0 0 0 1
6 ADDHYD 4 196   6 5 4                              0 0 0 0 0 1
6 ADDHYD 4 198   4 3 1                              0 0 0 0 0 1
  ENDATA


 END OF LISTING
1                                                                                                   PASS=  1
 EXECUTIVE CONTROL CARD          OPERATION  INCREM,     MAIN TIME INCREMENT=  0.20
 EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT 198/  0
        STARTING TIME=  0.00     RAIN DEPTH=  2.30     RAIN DURATION=  1.00     RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1         STORM NO.= 1


  ENDCMP
1                                                                                                   PASS=  2
 EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT 198/  0
        STARTING TIME=  0.00     RAIN DEPTH=  3.20     RAIN DURATION=  1.00     RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1         STORM NO.= 2


  ENDCMP
1                                                                                                   PASS=  3
 EXECUTIVE CONTROL CARD          OPERATION  COMPUT,     FROM XSECTN/STRUCT  10/  0     TO XSECTN/STRUCT 198/  0
        STARTING TIME=  0.00     RAIN DEPTH=  3.80     RAIN DURATION=  1.00     RAIN TABLE NO.= 4     SOIL CONDITION= 2
        ALTERNATE NO.= 1         STORM NO.= 3


  ENDCMP
```

OUTPUT LISTING

```
1SUMMARY TABLE 1
0
```

ALT	STORM	ID	DA SQ-MI.	RAIN TBLE	AMC	DELTA-T HRS.	TZERO HRS.	PRECIP IN.	PRECIP DURATION	PEAK-Q CFS	PEAK-TIME	PEAK-ELEV	RUNOFF IN.	CSM
1	1	10	0.31	4	2	0.20	0.00	2.30	24.00	74.30	12.69	0.00	0.48	242.02
1	1	102	0.00	4	2	0.20	0.00	2.30	24.00	3.90	12.38	0.00	1.53	812.21
1	1	104	0.31	4	2	0.20	0.00	2.30	24.00	76.98	12.68	0.00	0.50	246.90

10-YR 24-HR

1	1	106	0.31	4	2	0.20	0.00	2.30	24.00	73.29	12.75	0.00	0.50	235.07
1	1	108	0.02	4	2	0.20	0.00	2.30	24.00	14.52	12.48	0.00	1.03	595.08
1	1	110	0.34	4	2	0.20	0.00	2.30	24.00	83.26	12.67	0.00	0.53	247.64
1	1	112	0.01	4	2	0.20	0.00	2.30	24.00	4.31	12.39	0.00	0.98	590.75
1	1	114	0.34	4	2	0.20	0.00	2.30	24.00	86.15	12.66	0.00	0.54	250.79
1	1	116	0.02	4	2	0.20	0.00	2.30	24.00	10.27	12.51	0.00	1.03	615.07
1	1	140	0.36	4	2	0.20	0.00	2.30	24.00	95.18	12.63	0.00	0.57	264.25
1	1	118	0.07	4	2	0.20	0.00	2.30	24.00	33.96	12.60	0.00	0.91	482.40
1	1	140	0.43	4	2	0.20	0.00	2.30	24.00	129.05	12.63	0.00	0.62	299.69
1	1	120	0.01	4	2	0.20	0.00	2.30	24.00	6.92	12.49	0.00	0.97	567.34
1	1	140	0.44	4	2	0.20	0.00	2.30	24.00	135.49	12.62	0.00	0.63	305.98
1	1	122	0.01	4	2	0.20	0.00	2.30	24.00	3.81	12.45	0.00	0.98	576.77
1	1	124	0.01	4	2	0.20	0.00	2.30	24.00	3.82	12.50	0.00	0.97	579.33
1	1	140	0.45	4	2	0.20	0.00	2.30	24.00	139.03	12.61	0.00	0.64	309.36
1	1	126	0.02	4	2	0.20	0.00	2.30	24.00	18.69	12.45	0.00	1.52	791.94
1	1	128	0.01	4	2	0.20	0.00	2.30	24.00	8.96	12.31	0.00	1.71	995.31
1	1	130	0.03	4	2	0.20	0.00	2.30	24.00	27.20	12.35	0.00	1.57	834.41
1	1	-10	0.03	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	131	0.03	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	140	0.48	4	2	0.20	0.00	2.30	24.00	139.03	12.61	0.00	0.59	288.43
1	1	132	0.02	4	2	0.20	0.00	2.30	24.00	9.60	12.50	0.00	0.81	513.63
1	1	140	0.50	4	2	0.20	0.00	2.30	24.00	147.88	12.60	0.00	0.60	295.35
1	1	134	0.01	4	2	0.20	0.00	2.30	24.00	5.42	12.43	0.00	0.92	553.48
1	1	140	0.51	4	2	0.20	0.00	2.30	24.00	152.81	12.59	0.00	0.61	299.34
1	1	135	0.06	4	2	0.20	0.00	2.30	24.00	59.02	12.31	0.00	1.71	995.31
1	1	140	0.57	4	2	0.20	0.00	2.30	24.00	179.93	12.45	0.00	0.72	315.78
1	1	136	0.01	4	2	0.20	0.00	2.30	24.00	3.47	12.44	0.00	0.92	551.15
1	1	140	0.58	4	2	0.20	0.00	2.30	24.00	183.40	12.45	0.00	0.72	318.35
1	1	138	0.02	4	2	0.20	0.00	2.30	24.00	10.21	12.51	0.00	0.97	586.54
1	1	140	0.59	4	2	0.20	0.00	2.30	24.00	192.99	12.46	0.00	0.73	325.17
1	1	-20	0.59	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	142	0.59	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	144	0.01	4	2	0.20	0.00	2.30	24.00	7.83	12.52	0.00	0.91	559.15
1	1	146	0.61	4	2	0.20	0.00	2.30	24.00	7.83	12.52	0.00	0.02	12.89
1	1	150	0.01	4	2	0.20	0.00	2.30	24.00	8.77	12.51	0.00	0.97	592.61
1	1	152	0.01	4	2	0.20	0.00	2.30	24.00	7.70	12.60	0.00	0.96	520.57
1	1	154	0.03	4	2	0.20	0.00	2.30	24.00	14.84	12.51	0.00	0.97	586.54
1	1	156	0.04	4	2	0.20	0.00	2.30	24.00	22.38	12.53	0.00	0.97	558.03
1	1	157	0.65	4	2	0.20	0.00	2.30	24.00	30.20	12.53	0.00	0.08	46.63
1	1	158	0.01	4	2	0.20	0.00	2.30	24.00	5.61	12.47	0.00	0.98	572.86
1	1	160	0.03	4	2	0.20	0.00	2.30	24.00	21.81	12.49	0.00	1.52	781.89
1	1	162	0.01	4	2	0.20	0.00	2.30	24.00	9.65	12.31	0.00	1.71	995.31
1	1	164	0.04	4	2	0.20	0.00	2.30	24.00	30.64	12.36	0.00	1.56	814.80
1	1	-30	0.04	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	166	0.04	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	168	0.01	4	2	0.20	0.00	2.30	24.00	8.08	12.43	0.00	0.98	581.34
1	1	184	0.05	4	2	0.20	0.00	2.30	24.00	8.08	12.43	0.00	0.26	156.90
1	1	170	0.01	4	2	0.20	0.00	2.30	24.00	5.90	12.41	0.00	0.98	584.22
1	1	184	0.06	4	2	0.20	0.00	2.30	24.00	13.98	12.42	0.00	0.38	226.95
1	1	172	0.01	4	2	0.20	0.00	2.30	24.00	8.19	12.47	0.00	0.98	572.86
1	1	184	0.08	4	2	0.20	0.00	2.30	24.00	22.13	12.44	0.00	0.49	291.61
1	1	174	0.02	4	2	0.20	0.00	2.30	24.00	12.12	12.47	0.00	1.03	597.16
1	1	176	0.02	4	2	0.20	0.00	2.30	24.00	11.91	12.53	0.00	1.02	586.85
1	1	178	0.06	4	2	0.20	0.00	2.30	24.00	33.73	12.57	0.00	0.96	535.36
1	1	180	0.08	4	2	0.20	0.00	2.30	24.00	45.56	12.56	0.00	0.98	546.92
1	1	184	0.16	4	2	0.20	0.00	2.30	24.00	67.78	12.52	0.00	0.75	425.73
1	1	181	0.04	4	2	0.20	0.00	2.30	24.00	43.79	12.31	0.00	1.71	995.31
1	1	184	0.20	4	2	0.20	0.00	2.30	24.00	102.65	12.37	0.00	0.95	505.15
1	1	182	0.02	4	2	0.20	0.00	2.30	24.00	13.96	12.51	0.00	0.97	596.65
1	1	184	0.23	4	2	0.20	0.00	2.30	24.00	115.30	12.38	0.00	0.96	508.82

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1	1	-40	0.23	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	186	0.23	4	2	0.20	0.00	2.30	24.00	0.00	0.00	0.00	0.00	0.00
1	1	188	0.02	4	2	0.20	0.00	2.30	24.00	10.74	12.51	0.00	0.97	596.65
1	1	190	0.24	4	2	0.20	0.00	2.30	24.00	10.74	12.51	0.00	0.07	43.91
1	1	192	0.24	4	2	0.20	0.00	2.30	24.00	10.09	12.54	0.00	0.07	41.24
1	1	193	0.03	4	2	0.20	0.00	2.30	24.00	17.13	12.51	0.00	0.97	586.54
1	1	194	0.27	4	2	0.20	0.00	2.30	24.00	27.19	12.52	0.00	0.17	99.29
1	1	195	0.03	4	2	0.20	0.00	2.30	24.00	16.76	12.52	0.00	0.97	579.80
1	1	196	0.30	4	2	0.20	0.00	2.30	24.00	43.94	12.52	0.00	0.24	145.16
1	1	198	0.31	4	2	0.20	0.00	2.30	24.00	49.80	12.52	0.00	0.27	159.35
1	2	10	0.31	4	2	0.20	0.00	3.20	24.00	156.79	12.65	0.00	1.01	510.71
1	2	102	0.00	4	2	0.20	0.00	3.20	24.00	5.85	12.36	0.00	2.38	1219.28
1	2	104	0.31	4	2	0.20	0.00	3.20	24.00	161.28	12.64	0.00	1.03	517.24
1	2	106	0.31	4	2	0.20	0.00	3.20	24.00	153.97	12.71	0.00	1.03	493.82
1	2	108	0.02	4	2	0.20	0.00	3.20	24.00	23.91	12.44	0.00	1.78	979.85
1	2	110	0.34	4	2	0.20	0.00	3.20	24.00	172.44	12.65	0.00	1.08	512.92
1	2	112	0.01	4	2	0.20	0.00	3.20	24.00	7.19	12.37	0.00	1.71	985.27
1	2	114	0.34	4	2	0.20	0.00	3.20	24.00	177.50	12.64	0.00	1.10	516.73
1	2	116	0.02	4	2	0.20	0.00	3.20	24.00	16.12	12.49	0.00	1.77	965.26
1	2	140	0.36	4	2	0.20	0.00	3.20	24.00	192.59	12.62	0.00	1.13	534.68
1	2	118	0.07	4	2	0.20	0.00	3.20	24.00	58.90	12.58	0.00	1.61	836.60
1	2	140	0.43	4	2	0.20	0.00	3.20	24.00	251.25	12.61	0.00	1.21	583.49
1	2	120	0.01	4	2	0.20	0.00	3.20	24.00	11.55	12.45	0.00	1.70	947.10
1	2	140	0.44	4	2	0.20	0.00	3.20	24.00	262.08	12.60	0.00	1.22	591.86
1	2	122	0.01	4	2	0.20	0.00	3.20	24.00	6.35	12.42	0.00	1.71	961.92
1	2	124	0.01	4	2	0.20	0.00	3.20	24.00	6.15	12.47	0.00	1.70	932.45
1	2	140	0.45	4	2	0.20	0.00	3.20	24.00	268.00	12.60	0.00	1.23	596.35
1	2	126	0.02	4	2	0.20	0.00	3.20	24.00	28.11	12.41	0.00	2.37	1190.94
1	2	128	0.01	4	2	0.20	0.00	3.20	24.00	12.86	12.30	0.00	2.55	1429.27
1	2	130	0.03	4	2	0.20	0.00	3.20	24.00	40.58	12.33	0.00	2.42	1244.75
1	2	-10	0.03	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	131	0.03	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	140	0.48	4	2	0.20	0.00	3.20	24.00	268.00	12.60	0.00	1.14	556.02
1	2	132	0.02	4	2	0.20	0.00	3.20	24.00	15.90	12.47	0.00	1.48	850.44
1	2	140	0.50	4	2	0.20	0.00	3.20	24.00	283.45	12.59	0.00	1.16	566.10
1	2	134	0.01	4	2	0.20	0.00	3.20	24.00	9.18	12.40	0.00	1.63	936.94
1	2	140	0.51	4	2	0.20	0.00	3.20	24.00	291.77	12.58	0.00	1.17	571.54
1	2	135	0.06	4	2	0.20	0.00	3.20	24.00	84.76	12.30	0.00	2.55	1429.27
1	2	140	0.57	4	2	0.20	0.00	3.20	24.00	330.71	12.46	0.00	1.31	580.40
1	2	136	0.01	4	2	0.20	0.00	3.20	24.00	5.88	12.41	0.00	1.63	932.82
1	2	140	0.58	4	2	0.20	0.00	3.20	24.00	336.55	12.46	0.00	1.31	584.18
1	2	138	0.02	4	2	0.20	0.00	3.20	24.00	16.24	12.50	0.00	1.69	933.18
1	2	140	0.59	4	2	0.20	0.00	3.20	24.00	352.74	12.46	0.00	1.32	594.34
1	2	-20	0.59	4	2	0.20	0.00	3.20	24.00	0.01	0.00	0.00	0.00	0.01
1	2	142	0.59	4	2	0.20	0.00	3.20	24.00	0.01	0.00	0.00	0.00	0.01
1	2	144	0.01	4	2	0.20	0.00	3.20	24.00	13.24	12.51	0.00	1.62	945.38
1	2	146	0.61	4	2	0.20	0.00	3.20	24.00	13.24	12.51	0.00	0.04	21.79
1	2	150	0.01	4	2	0.20	0.00	3.20	24.00	13.88	12.50	0.00	1.70	938.01
1	2	152	0.01	4	2	0.20	0.00	3.20	24.00	13.12	12.57	0.00	1.68	886.82
1	2	154	0.03	4	2	0.20	0.00	3.20	24.00	23.61	12.50	0.00	1.69	933.17
1	2	156	0.04	4	2	0.20	0.00	3.20	24.00	37.63	12.52	0.00	1.69	938.37
1	2	157	0.65	4	2	0.20	0.00	3.20	24.00	50.86	12.51	0.00	0.14	78.53
1	2	158	0.01	4	2	0.20	0.00	3.20	24.00	9.36	12.43	0.00	1.71	955.05
1	2	160	0.03	4	2	0.20	0.00	3.20	24.00	32.81	12.46	0.00	2.36	1175.88
1	2	162	0.01	4	2	0.20	0.00	3.20	24.00	13.86	12.30	0.00	2.55	1429.27
1	2	164	0.04	4	2	0.20	0.00	3.20	24.00	45.88	12.34	0.00	2.41	1220.23
1	2	-30	0.04	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	166	0.04	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	168	0.01	4	2	0.20	0.00	3.20	24.00	13.48	12.40	0.00	1.71	970.01
1	2	184	0.05	4	2	0.20	0.00	3.20	24.00	13.48	12.40	0.00	0.46	261.81

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1	2	170	0.01	4	2	0.20	0.00	3.20	24.00	9.84	12.39	0.00	1.71	974.72
1	2	184	0.06	4	2	0.20	0.00	3.20	24.00	23.33	12.39	0.00	0.67	378.68
1	2	172	0.01	4	2	0.20	0.00	3.20	24.00	13.66	12.43	0.00	1.71	955.05
1	2	184	0.08	4	2	0.20	0.00	3.20	24.00	36.94	12.41	0.00	0.86	486.73
1	2	174	0.02	4	2	0.20	0.00	3.20	24.00	19.96	12.43	0.00	1.78	983.34
1	2	176	0.02	4	2	0.20	0.00	3.20	24.00	19.73	12.51	0.00	1.76	972.08
1	2	178	0.06	4	2	0.20	0.00	3.20	24.00	57.16	12.55	0.00	1.68	907.23
1	2	180	0.08	4	2	0.20	0.00	3.20	24.00	76.77	12.54	0.00	1.70	921.61
1	2	184	0.16	4	2	0.20	0.00	3.20	24.00	113.64	12.51	0.00	1.30	713.80
1	2	181	0.04	4	2	0.20	0.00	3.20	24.00	62.89	12.30	0.00	2.55	1429.28
1	2	184	0.20	4	2	0.20	0.00	3.20	24.00	165.54	12.36	0.00	1.57	814.68
1	2	182	0.02	4	2	0.20	0.00	3.20	24.00	22.06	12.48	0.00	1.70	942.89
1	2	184	0.23	4	2	0.20	0.00	3.20	24.00	187.07	12.37	0.00	1.59	825.56
1	2	-40	0.23	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	186	0.23	4	2	0.20	0.00	3.20	24.00	0.00	0.00	0.00	0.00	0.00
1	2	188	0.02	4	2	0.20	0.00	3.20	24.00	16.97	12.48	0.00	1.70	942.89
1	2	190	0.24	4	2	0.20	0.00	3.20	24.00	16.97	12.48	0.00	0.13	69.39
1	2	192	0.24	4	2	0.20	0.00	3.20	24.00	16.96	12.52	0.00	0.12	69.36
1	2	193	0.03	4	2	0.20	0.00	3.20	24.00	27.25	12.50	0.00	1.69	933.18
1	2	194	0.27	4	2	0.20	0.00	3.20	24.00	45.45	12.51	0.00	0.29	166.00
1	2	195	0.03	4	2	0.20	0.00	3.20	24.00	27.99	12.51	0.00	1.69	968.52
1	2	196	0.30	4	2	0.20	0.00	3.20	24.00	73.44	12.51	0.00	0.42	242.62
1	2	198	0.31	4	2	0.20	0.00	3.20	24.00	83.13	12.50	0.00	0.47	266.02
1	3	10	0.31	4	2	0.20	0.00	3.80	24.00	219.19	12.64	0.00	1.41	713.97
1	3	102	0.00	4	2	0.20	0.00	3.80	24.00	7.15	12.35	0.00	2.96	1490.12
1	3	104	0.31	4	2	0.20	0.00	3.80	24.00	224.88	12.63	0.00	1.44	721.23
1	3	106	0.31	4	2	0.20	0.00	3.80	24.00	215.25	12.69	0.00	1.44	690.33
1	3	108	0.02	4	2	0.20	0.00	3.80	24.00	30.36	12.42	0.00	2.30	1244.32
1	3	110	0.34	4	2	0.20	0.00	3.80	24.00	239.63	12.64	0.00	1.50	712.75
1	3	112	0.01	4	2	0.20	0.00	3.80	24.00	9.17	12.36	0.00	2.23	1256.65
1	3	114	0.34	4	2	0.20	0.00	3.80	24.00	246.22	12.63	0.00	1.52	716.79
1	3	116	0.02	4	2	0.20	0.00	3.80	24.00	20.47	12.47	0.00	2.30	1225.58
1	3	140	0.36	4	2	0.20	0.00	3.80	24.00	265.53	12.61	0.00	1.55	737.17
1	3	118	0.07	4	2	0.20	0.00	3.80	24.00	76.34	12.57	0.00	2.11	1084.41
1	3	140	0.43	4	2	0.20	0.00	3.80	24.00	341.55	12.60	0.00	1.64	793.21
1	3	120	0.01	4	2	0.20	0.00	3.80	24.00	14.76	12.43	0.00	2.22	1209.62
1	3	140	0.44	4	2	0.20	0.00	3.80	24.00	355.43	12.59	0.00	1.66	802.69
1	3	122	0.01	4	2	0.20	0.00	3.80	24.00	8.10	12.40	0.00	2.23	1227.61
1	3	124	0.01	4	2	0.20	0.00	3.80	24.00	7.87	12.45	0.00	2.21	1192.54
1	3	140	0.45	4	2	0.20	0.00	3.80	24.00	363.01	12.59	0.00	1.67	807.78
1	3	126	0.02	4	2	0.20	0.00	3.80	24.00	34.39	12.40	0.00	2.95	1457.00
1	3	128	0.01	4	2	0.20	0.00	3.80	24.00	15.45	12.30	0.00	3.13	1716.16
1	3	130	0.03	4	2	0.20	0.00	3.80	24.00	49.47	12.33	0.00	3.00	1517.56
1	3	-10	0.03	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	131	0.03	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	140	0.48	4	2	0.20	0.00	3.80	24.00	363.01	12.59	0.00	1.56	753.14
1	3	132	0.02	4	2	0.20	0.00	3.80	24.00	20.67	12.45	0.00	1.98	1105.53
1	3	140	0.50	4	2	0.20	0.00	3.80	24.00	383.10	12.58	0.00	1.57	765.14
1	3	134	0.01	4	2	0.20	0.00	3.80	24.00	11.79	12.39	0.00	2.15	1202.76
1	3	140	0.51	4	2	0.20	0.00	3.80	24.00	393.80	12.57	0.00	1.58	771.40
1	3	135	0.06	4	2	0.20	0.00	3.80	24.00	101.77	12.30	0.00	3.13	1716.16
1	3	140	0.57	4	2	0.20	0.00	3.80	24.00	441.64	12.46	0.00	1.74	775.08
1	3	136	0.01	4	2	0.20	0.00	3.80	24.00	7.54	12.40	0.00	2.15	1197.53
1	3	140	0.58	4	2	0.20	0.00	3.80	24.00	449.10	12.46	0.00	1.75	779.56
1	3	138	0.02	4	2	0.20	0.00	3.80	24.00	20.73	12.48	0.00	2.21	1191.44
1	3	140	0.59	4	2	0.20	0.00	3.80	24.00	469.82	12.46	0.00	1.76	791.61
1	3	-20	0.59	4	2	0.20	0.00	3.80	24.00	0.01	0.00	0.00	0.00	0.01
1	3	142	0.59	4	2	0.20	0.00	3.80	24.00	0.01	0.00	0.00	0.00	0.01
1	3	144	0.01	4	2	0.20	0.00	3.80	24.00	16.97	12.50	0.00	2.13	1212.06
1	3	146	0.61	4	2	0.20	0.00	3.80	24.00	16.97	12.50	0.00	0.05	27.93

1	3	150	0.01	4	2	0.20	0.00	3.80	24.00	17.71	12.48	0.00	2.21	1196.86
1	3	152	0.01	4	2	0.20	0.00	3.80	24.00	16.89	12.56	0.00	2.19	1141.29
1	3	154	0.03	4	2	0.20	0.00	3.80	24.00	30.14	12.48	0.00	2.21	1191.44
1	3	156	0.04	4	2	0.20	0.00	3.80	24.00	48.15	12.51	0.00	2.20	1200.75
1	3	157	0.65	4	2	0.20	0.00	3.80	24.00	65.11	12.51	0.00	0.18	100.55
1	3	158	0.01	4	2	0.20	0.00	3.80	24.00	11.95	12.42	0.00	2.23	1218.94
1	3	160	0.03	4	2	0.20	0.00	3.80	24.00	40.14	12.44	0.00	2.94	1438.82
1	3	162	0.01	4	2	0.20	0.00	3.80	24.00	16.65	12.30	0.00	3.13	1716.16
1	3	164	0.04	4	2	0.20	0.00	3.80	24.00	56.03	12.34	0.00	2.99	1490.12
1	3	-30	0.04	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	166	0.04	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	168	0.01	4	2	0.20	0.00	3.80	24.00	17.21	12.38	0.00	2.23	1237.85
1	3	184	0.05	4	2	0.20	0.00	3.80	24.00	17.21	12.38	0.00	0.60	334.10
1	3	170	0.01	4	2	0.20	0.00	3.80	24.00	12.56	12.38	0.00	2.23	1243.67
1	3	184	0.06	4	2	0.20	0.00	3.80	24.00	29.77	12.38	0.00	0.87	483.21
1	3	172	0.01	4	2	0.20	0.00	3.80	24.00	17.43	12.42	0.00	2.23	1218.94
1	3	184	0.08	4	2	0.20	0.00	3.80	24.00	47.16	12.39	0.00	1.12	621.29
1	3	174	0.02	4	2	0.20	0.00	3.80	24.00	25.35	12.41	0.00	2.31	1248.65
1	3	176	0.02	4	2	0.20	0.00	3.80	24.00	25.10	12.50	0.00	2.28	1236.40
1	3	178	0.06	4	2	0.20	0.00	3.80	24.00	73.38	12.54	0.00	2.20	1164.74
1	3	180	0.08	4	2	0.20	0.00	3.80	24.00	98.34	12.53	0.00	2.22	1180.50
1	3	184	0.16	4	2	0.20	0.00	3.80	24.00	140.46	12.50	0.00	1.70	882.27
1	3	181	0.04	4	2	0.20	0.00	3.80	24.00	75.51	12.30	0.00	3.13	1716.16
1	3	184	0.20	4	2	0.20	0.00	3.80	24.00	208.75	12.36	0.00	2.01	1027.29
1	3	182	0.02	4	2	0.20	0.00	3.80	24.00	28.16	12.46	0.00	2.22	1203.35
1	3	184	0.23	4	2	0.20	0.00	3.80	24.00	236.41	12.36	0.00	2.03	1043.31
1	3	-40	0.23	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	186	0.23	4	2	0.20	0.00	3.80	24.00	0.00	0.00	0.00	0.00	0.00
1	3	188	0.02	4	2	0.20	0.00	3.80	24.00	21.66	12.46	0.00	2.22	1203.35
1	3	190	0.24	4	2	0.20	0.00	3.80	24.00	21.66	12.46	0.00	0.16	88.55
1	3	192	0.24	4	2	0.20	0.00	3.80	24.00	21.71	12.52	0.00	0.16	88.76
1	3	193	0.03	4	2	0.20	0.00	3.80	24.00	34.79	12.48	0.00	2.21	1191.44
1	3	194	0.27	4	2	0.20	0.00	3.80	24.00	58.02	12.50	0.00	0.38	211.89
1	3	195	0.03	4	2	0.20	0.00	3.80	24.00	35.71	12.50	0.00	2.21	1235.75
1	3	196	0.30	4	2	0.20	0.00	3.80	24.00	93.73	12.50	0.00	0.55	309.64
1	3	198	0.31	4	2	0.20	0.00	3.80	24.00	101.68	12.49	0.00	0.61	325.38

1SUMMARY TABLE 3

	10-YR Q1	50-YR Q2	100-YR Q3	DISCHARGE,CFS Q4	Q5	Q6	Q7	Q8	Q9	Q10
0XSEC/STRUC NO.-40										
0XSEC/STRUC NO.-30										
0XSEC/STRUC NO.-20										
ALTERNATE 1	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.-10										
0XSEC/STRUC NO. 10										
ALTERNATE 1	74.30	156.79	219.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.102										
ALTERNATE 1	3.90	5.85	7.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.104										
ALTERNATE 1	76.98	161.28	224.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.106										
ALTERNATE 1	73.29	153.97	215.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.108										
ALTERNATE 1	14.52	23.91	30.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.110										
ALTERNATE 1	83.26	172.44	239.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.112										
ALTERNATE 1	4.31	7.19	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0XSEC/STRUC NO.114										
ALTERNATE 1	86.15	177.50	246.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.116										
ALTERNATE 1	10.27	16.12	20.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.118										
ALTERNATE 1	33.96	58.90	76.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.120										
ALTERNATE 1	6.92	11.55	14.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.122										
ALTERNATE 1	3.81	6.35	8.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.124										
ALTERNATE 1	3.82	6.15	7.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.126										
ALTERNATE 1	18.69	28.11	34.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.128										
ALTERNATE 1	8.96	12.86	15.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.130										
ALTERNATE 1	27.20	40.58	49.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.131										
0XSEC/STRUC NO.132										
ALTERNATE 1	9.60	15.90	20.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.134										
ALTERNATE 1	5.42	9.18	11.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.135										
ALTERNATE 1	59.02	84.76	101.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.136										
ALTERNATE 1	3.47	5.88	7.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.138										
ALTERNATE 1	10.21	16.24	20.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.140										
ALTERNATE 1	192.99	352.74	469.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.142										
ALTERNATE 1	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.144										
ALTERNATE 1	7.83	13.24	16.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.146										
ALTERNATE 1	7.83	13.24	16.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.150										
ALTERNATE 1	8.77	13.88	17.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.152										
ALTERNATE 1	7.70	13.12	16.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.154										
ALTERNATE 1	14.84	23.61	30.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.156										
ALTERNATE 1	22.38	37.63	48.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.157										
ALTERNATE 1	30.20	50.86	65.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.158										
ALTERNATE 1	5.61	9.36	11.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.160										
ALTERNATE 1	21.81	32.81	40.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.162										
ALTERNATE 1	9.65	13.86	16.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.164										
ALTERNATE 1	30.64	45.88	56.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.166										
0XSEC/STRUC NO.168										
ALTERNATE 1	8.08	13.48	17.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0XSEC/STRUC NO.170										
ALTERNATE 1	5.90	9.84	12.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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0XSEC/STRUC NO.172
 ALTERNATE    1          8.19     13.66     17.43      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.174
 ALTERNATE    1         12.12     19.96     25.35      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.176
 ALTERNATE    1         11.91     19.73     25.10      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.178
 ALTERNATE    1         33.73     57.16     73.38      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.180
 ALTERNATE    1         45.56     76.77     98.34      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.181
 ALTERNATE    1         43.79     62.89     75.51      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.182
 ALTERNATE    1         13.96     22.06     28.16      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.184
 ALTERNATE    1        115.30    187.07    236.41      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.186
0XSEC/STRUC NO.188
 ALTERNATE    1         10.74     16.97     21.66      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.190
 ALTERNATE    1         10.74     16.97     21.66      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.192
 ALTERNATE    1         10.09     16.96     21.71      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.193
 ALTERNATE    1         17.13     27.25     34.79      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.194
 ALTERNATE    1         27.19     45.45     58.02      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.195
 ALTERNATE    1         16.76     27.99     35.71      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.196
 ALTERNATE    1         43.94     73.44     93.73      0.00      0.00      0.00      0.00      0.00      0.00      0.00
0XSEC/STRUC NO.198
 ALTERNATE    1         49.80     83.13    101.68      0.00      0.00      0.00      0.00      0.00      0.00      0.00


 ENDJOB CARD ENCOUNTERED.  END OF JOB.
1END OF  1 JOBS IN THIS RUN
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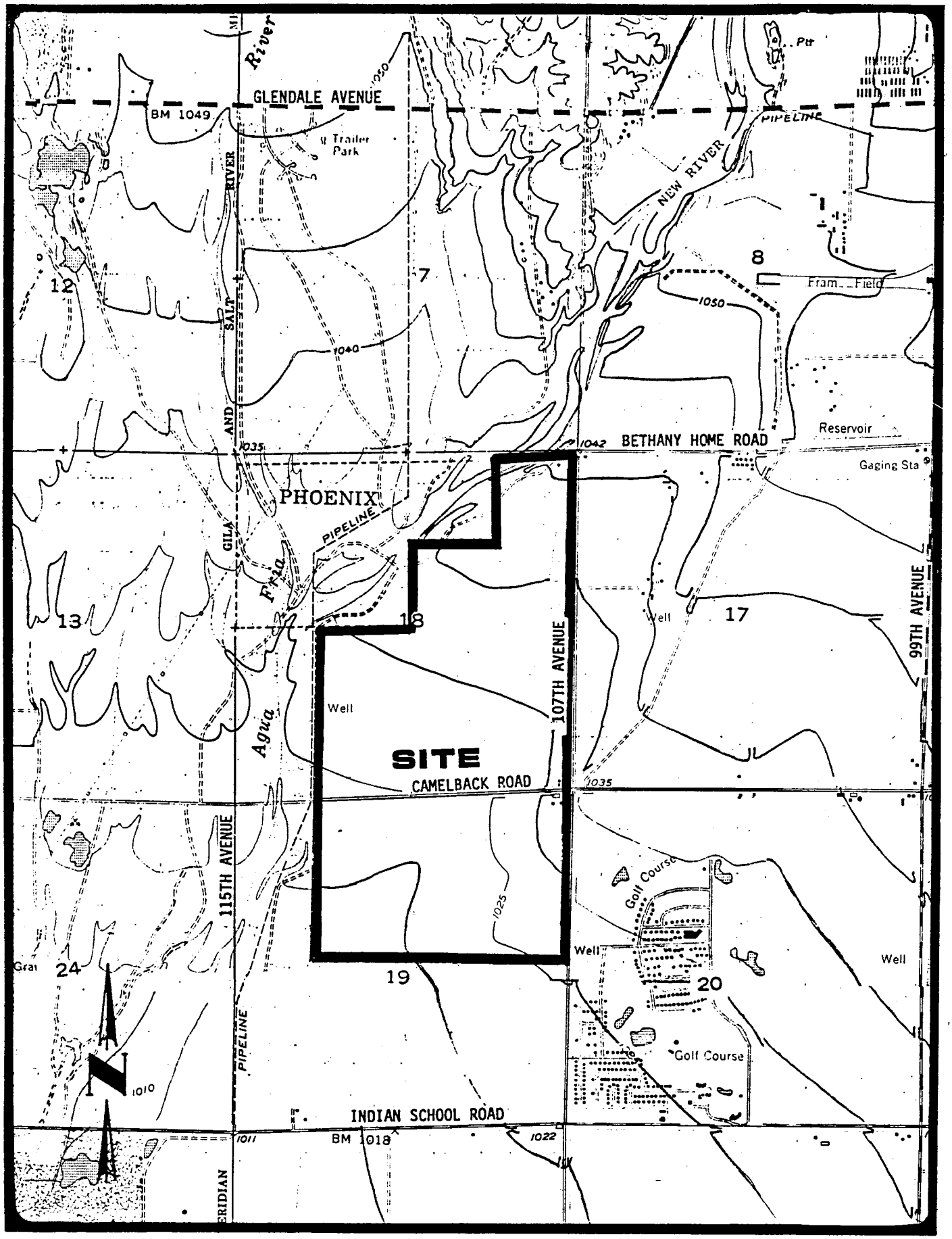
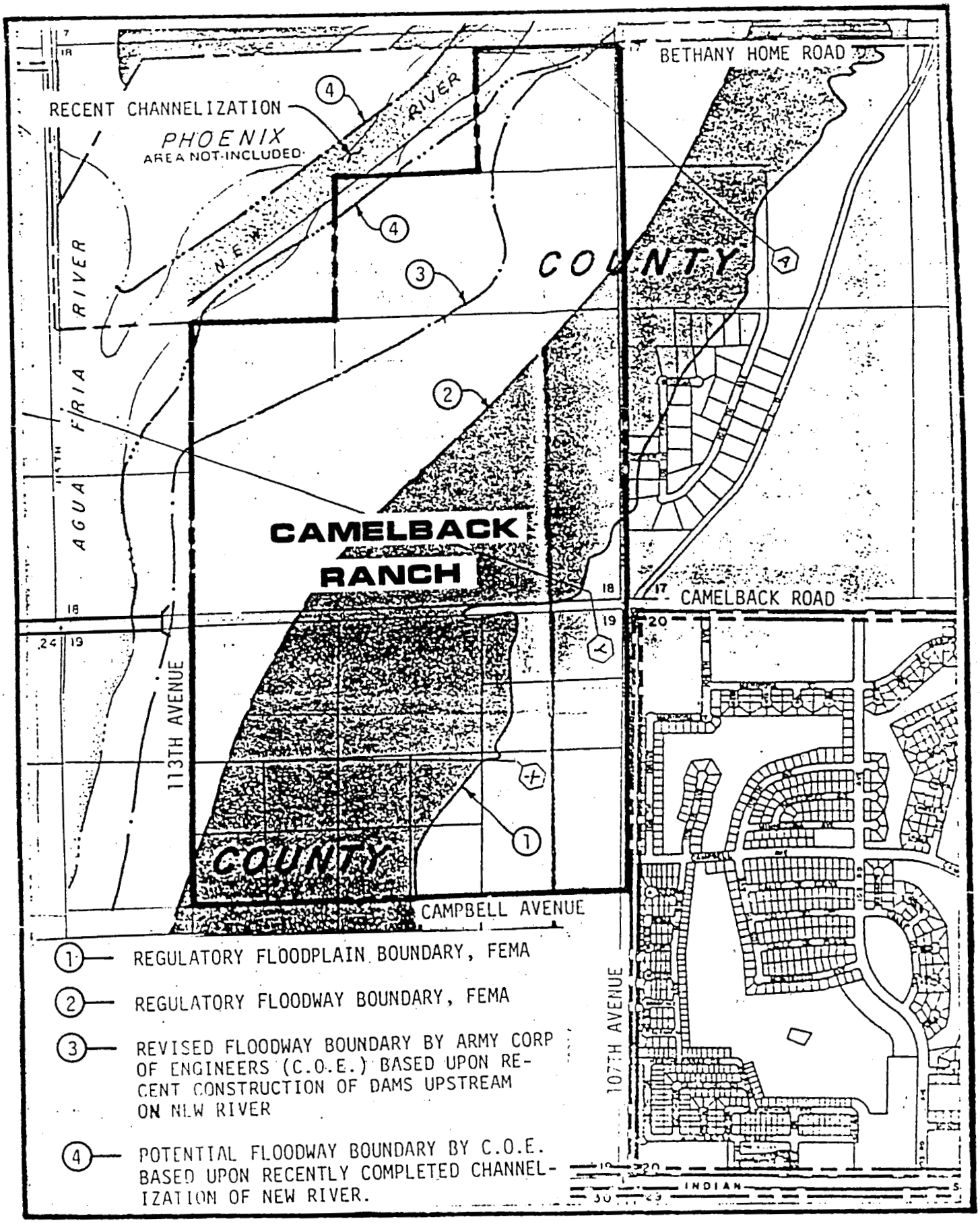


1" = 2000'

CAMELBACK RANCH

LOCATION MAP

PLATE 1



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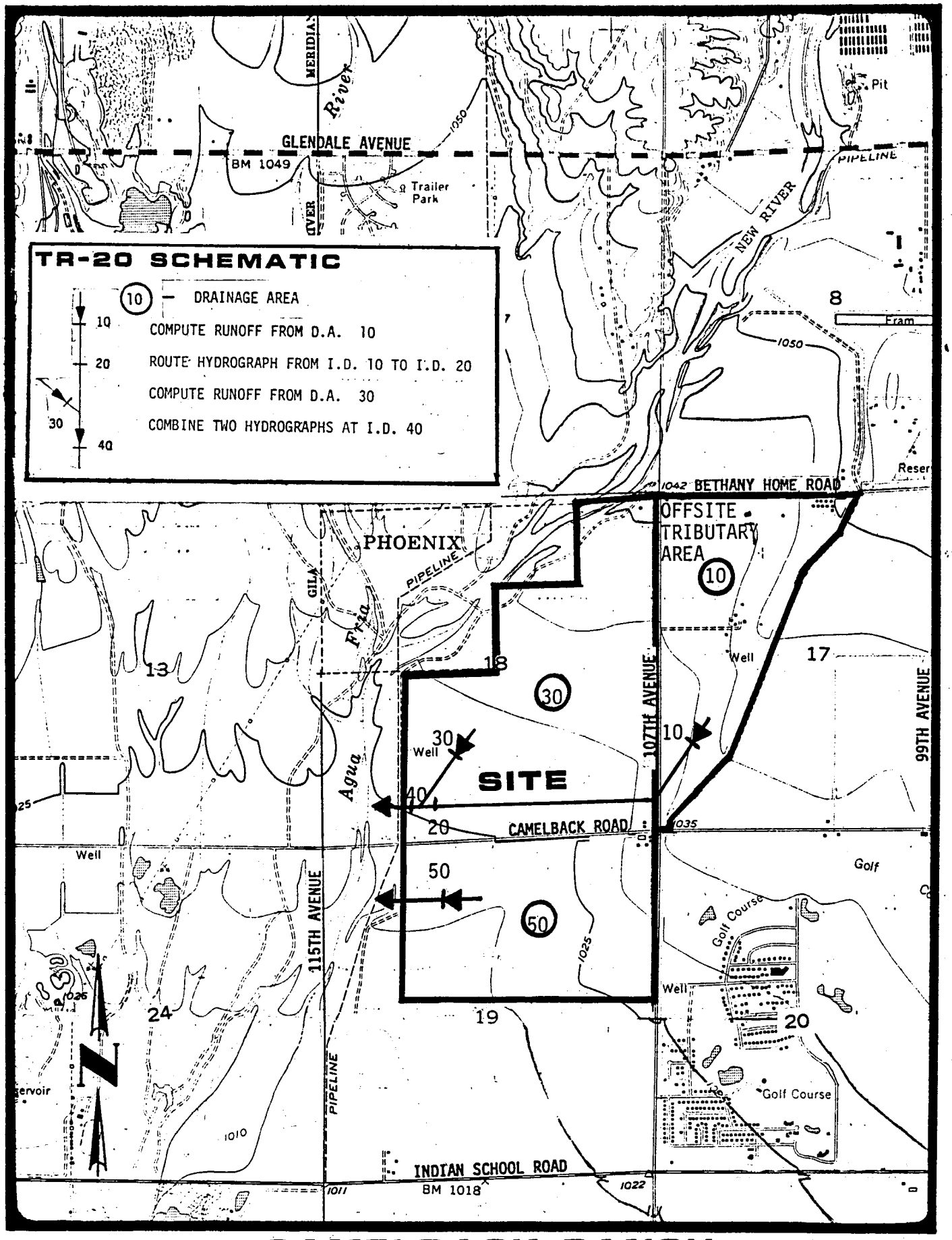
FLOODPLAIN MAP

PLATE 2

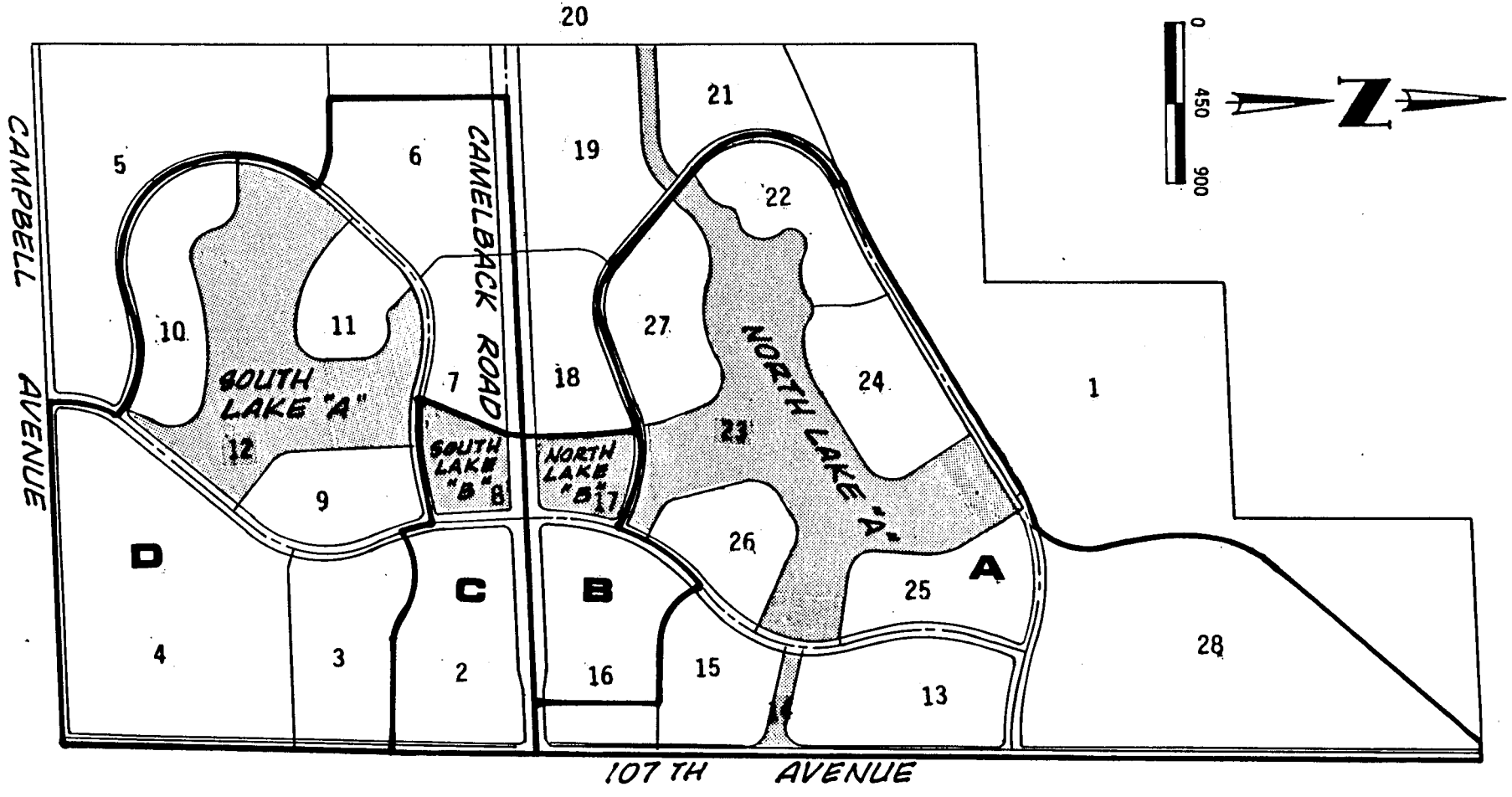


1" = 2000'

CAMELBACK RANCH

TR-20 SCHEMATIC
PREDEVELOPMENT CONDITIONS

PLATE 3



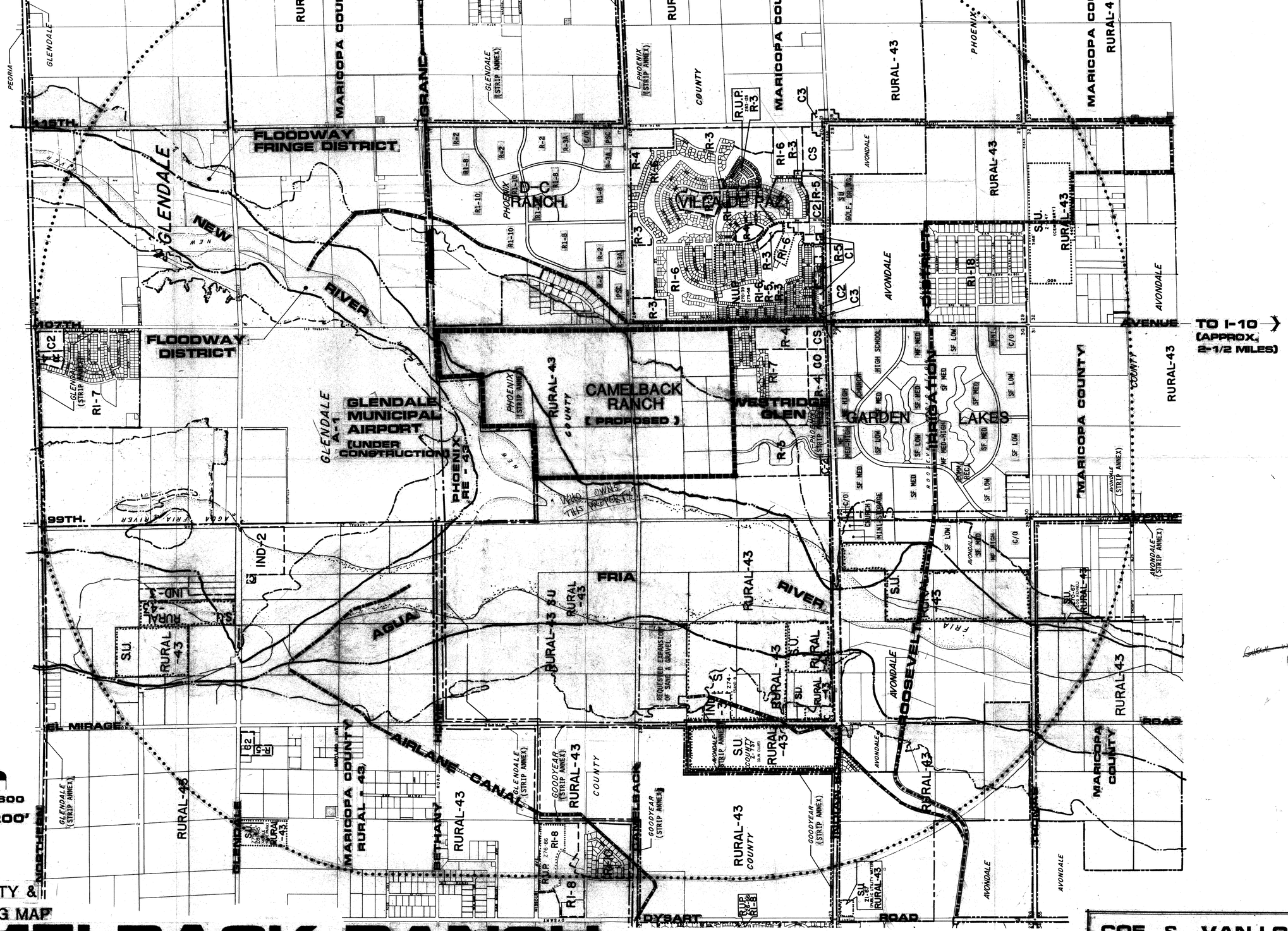
LEGEND

22 PARCEL NUMBER

A DRAINAGE AREA DESIGNATION

RETENTION FACILITIES

PLATE 4



REGIONAL VICINITY & EXISTING ZONING MAP

CAMELBACK RANCH

A DEVELOPMENT MASTER PLAN PREPARED FOR PARAGON HOMES

COE & VAN LOO
PLANNING • ENGINEERING
LANDSCAPE ARCHITECTURE

EXHIBIT "N"

SVL # 1031-86