

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PHOENIX, ARIZONA

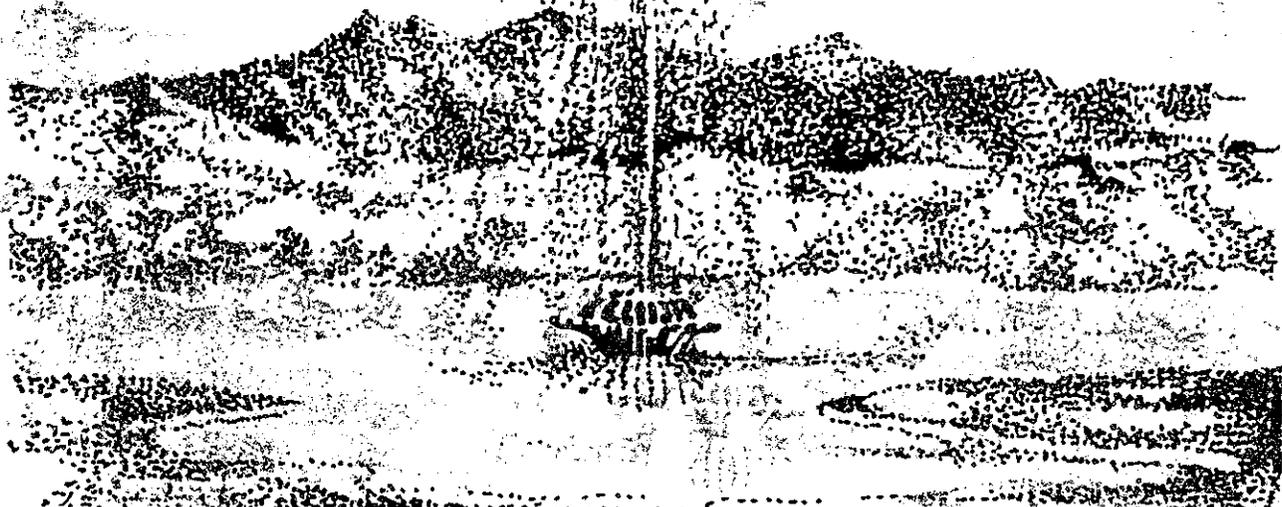
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**FOUNTAIN HILLS NORTH
FLOODPLAIN DELINEATION STUDY**

FL JI FCD 92-04

**TECHNICAL DATA NOTEBOOK
HYDROLOGY
Existing Condition**

Book 3 of 3



George V. Sabol Consulting Engineers, Inc.

George V. Sabol Consulting Engineers, Inc.
Scottsdale, Arizona

OCTOBER 1994

OCTOBER 1994

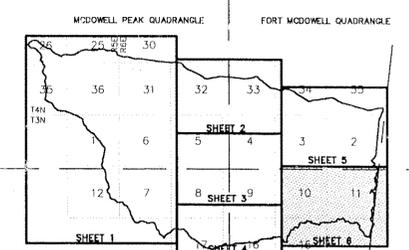
FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

F.C.D. CONTRACT NO. FCD 92-04

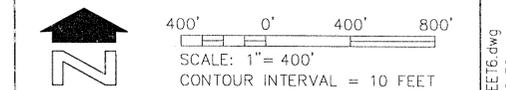
LEGEND

NOTE: ALL FLOW RATES ARE FOR THE 100-YEAR PEAK DISCHARGE.

- DRAINAGE SUB-BASIN IDENTIFIER FOR SUBBASIN 207L
- DRAINAGE SUB-BASIN CONCENTRATION POINT 552
PEAK DISCHARGE IS 1244 cfs
- HEC-1 RESERVOIR ROUTE AT CONCENTRATION POINT 513
INFLOW IS 389 cfs, OUTFLOW IS 369 cfs
- DRAINAGE SUB-BASIN FLOW SPLIT CONCENTRATION POINT 505
PEAK DISCHARGE IS 32 cfs; 18 cfs SPLIT RIGHT, and 14 cfs SPLIT LEFT.
- HEC-1 RESERVOIR ROUTE AND FLOW SPLIT AT CONCENTRATION POINT 523. PEAK INFLOW IS 386 cfs, OUTFLOW IS 286 cfs; 19 cfs SPLIT RIGHT, 266 cfs SPLIT LEFT.
- ELEVATION AT CONCENTRATION POINT OR TOP OF Tc PATH
- VEGETATION COVER DENSITY (FIELD MEASURED)
- DRAINAGE SUB-BASIN CONCENTRATION POINT
- MAJOR DRAINAGE BASIN BOUNDARY
- DRAINAGE SUB-BASIN BOUNDARY
- HEC-1 ROUTING PATH
- Tc FLOW PATH
- FORT MCDOWELL INDIAN RESERVATION BOUNDARY
- CORPORATE BOUNDARY
- RANGE AND TOWNSHIP BOUNDARY
- USGS QUADRANGLE MAP BOUNDARY
- SECTION LINE
- LIMITS OF 200 SCALE MAPPING
- HEC-1 REACH ROUTE CROSS SECTION LOCATION
Ashbrook Wash HEC-2 Section 5.254
- Field Survey Cross Section
- Cross Section From Available Mapping
- NON-CONTRIBUTING DRAINAGE AREA

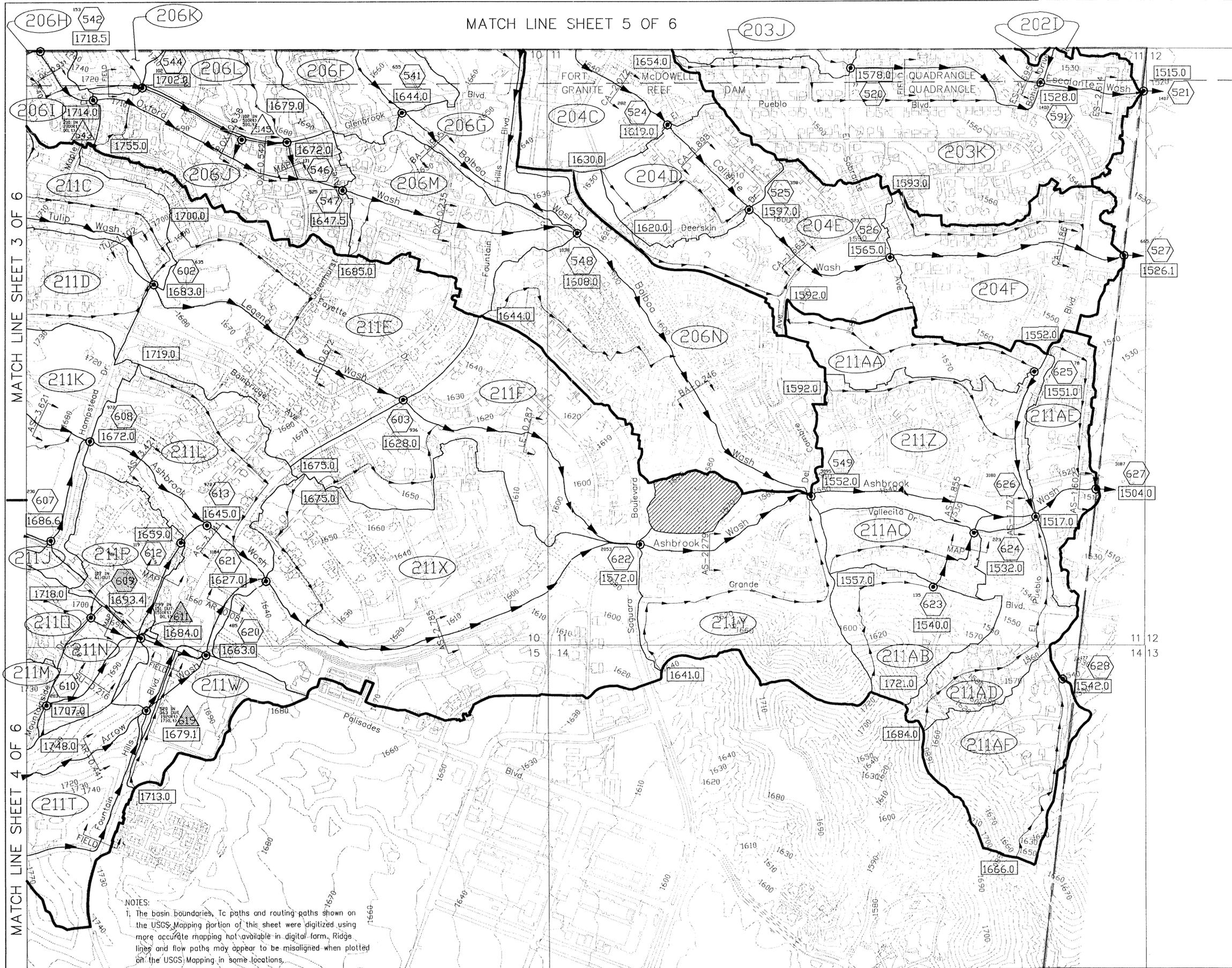


HYDROLOGY EXHIBIT "D"
DRAINAGE SUB-BASIN DELINEATION
TIME OF CONCENTRATION FLOW
PATHS AND FLOOD ROUTING MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY N/A	DATE -	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	8/94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	TRL	8/94	APPROVED BY: _____ DATE _____
SUBMITTED BY:			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 6 OF 6



NOTES:
1. The basin boundaries, Tc paths and routing paths shown on the USGS Mapping portion of this sheet were digitized using more accurate mapping not available in digital form. Ridge lines and flow paths may appear to be misaligned when plotted on the USGS Mapping in some locations.

MATCH LINE SHEET 3 OF 6

MATCH LINE SHEET 4 OF 6

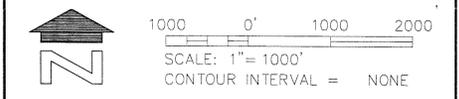
**FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY**
**FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH**

F.C.D. CONTRACT NO. FCD 92-04
LEGEND

MAJOR DRAINAGE BASIN BOUNDARY	_____
DRAINAGE SUB-BASIN BOUNDARY	_____
DRAINAGE SUB-BASIN IDENTIFIER	202A
SCS SOILS MAP UNIT BOUNDARY	_____
SCS SOILS MAP UNIT IDENTIFIER	41
SECTION LINE	_____
TOWNSHIP AND RANGE LINE	_____
USGS QUADRANGLE MAP BOUNDARY	_____
TOWN OF FOUNTAIN HILLS BOUNDARY	_____
FORT McDOWELL INDIAN RESERVATION BOUNDARY	_____



HYDROLOGY EXHIBIT "B"
DRAINAGE SUB-BASIN SOILS MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	10/93	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	TRL	10/93	APPROVED BY: _____ DATE _____
SUBMITTED BY: _____	DATE: _____	CHIEF ENGINEER AND GENERAL MANAGER	
		SHEET 1 OF 1	

SOILS DATA PREPARED BY DIGITIZING SCS SOILS MAP UNIT BOUNDARIES FROM THE "SOIL SURVEY OF AGUILA-CAREFREE AREA, PARTS OF MARICOPA AND PINAL COUNTIES, ARIZONA"

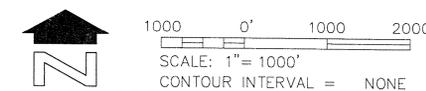
Dwg. Name: P:\F\HILLS\ACAD\EX-B.dwg
Date: REV. AUG. 29, 1994 09:30am

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

F.C.D. CONTRACT NO. FCD 92-04
LEGEND

MAJOR DRAINAGE BASIN BOUNDARY	
DRAINAGE SUB-BASIN BOUNDARY	
DRAINAGE SUB-BASIN IDENTIFIER	203E
LAND USE BOUNDARY	
LAND USE IDENTIFIERS:	
Very Low Density Residential	VLDR
Light Density Residential	LDR
Medium Density Residential	MDR
Multi-Family Residential	MFR
Commercial	C
Industrial	I
Schools	School
Drainage Easement	DE
Street Right-of-Way	RW
Natural Desert	ND
Qualifiers:	
Fully Developed	F
Less Than 50% Developed	P
Undeveloped	N
Value in parenthesis is estimated percent impervious	(##)
Example: VLDR-P(23) indicates a partially developed VLDR land use with an estimated average percent impervious value of 23% for the entire parcel.	
SECTION LINE	
RANGE AND TOWNSHIP BOUNDARY	
USGS QUADRANGLE MAP BOUNDARY	
TOWN OF FOUNTAIN HILLS BOUNDARY	
FORT McDOWELL INDIAN RESERVATION BOUNDARY	

HYDROLOGY EXHIBIT "C"
DRAINAGE SUB-BASIN LAND USE MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	10/93	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	TRL	10/93	APPROVED BY: _____ DATE: _____
SUBMITTED BY: _____			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 1 OF 1

THIS MAP WAS PREPARED USING THE TOWN OF FOUNTAIN HILLS ZONING MAP (in AutoCAD format)
AS A BASE. THE ZONING MAP AUTOCAD FILE IS DATED 11/92.



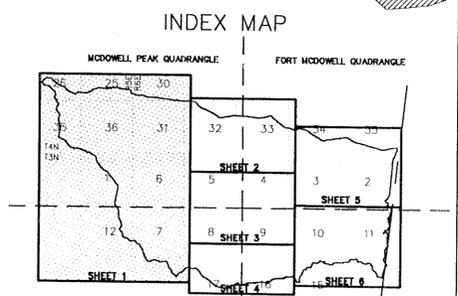
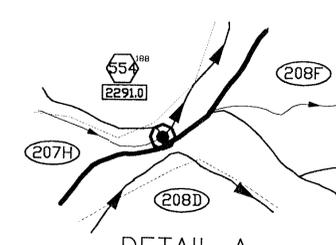
FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

F.C.D. CONTRACT NO. FCD 92-04

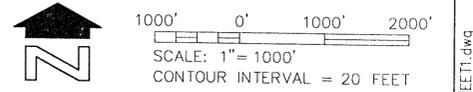
LEGEND

NOTE: ALL FLOW RATES ARE FOR THE 100-YEAR PEAK DISCHARGE.

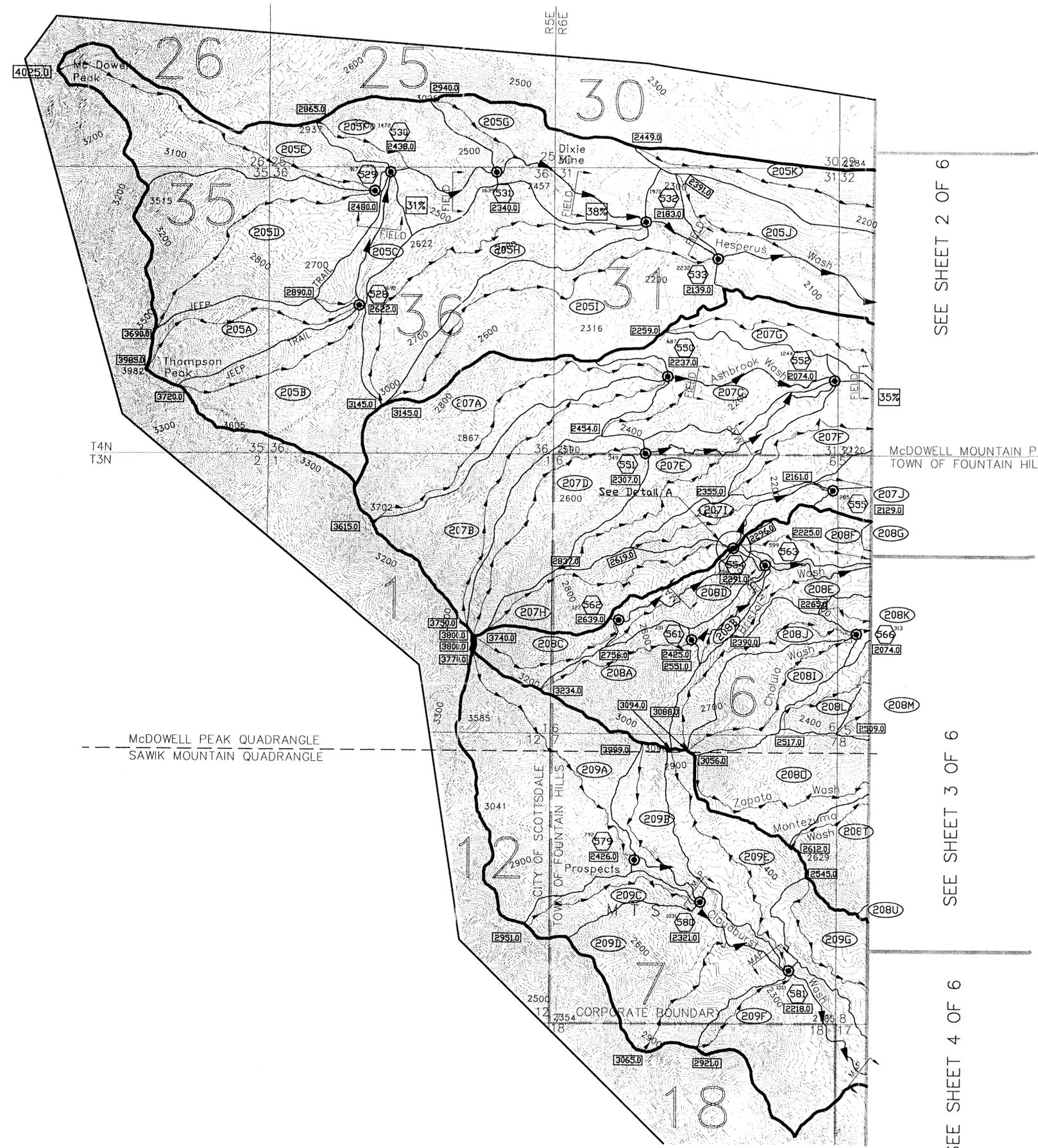
- 
 DRAINAGE SUB-BASIN IDENTIFIER FOR SUBBASIN 207L
- 
 DRAINAGE SUB-BASIN CONCENTRATION POINT 552
PEAK DISCHARGE IS 1244 cfs
- 
 HEC-1 RESERVOIR ROUTE AT CONCENTRATION POINT 513
INFLOW IS 389 cfs, OUTFLOW IS 369 cfs
- 
 DRAINAGE SUB-BASIN FLOW SPLIT CONCENTRATION POINT 505
PEAK DISCHARGE IS 32 cfs; 18 cfs SPLIT RIGHT, and 14 cfs SPLIT LEFT.
- 
 HEC-1 RESERVOIR ROUTE AND FLOW SPLIT AT CONCENTRATION POINT 523. PEAK INFLOW IS 386 cfs, OUTFLOW IS 286 cfs; 19 cfs SPLIT RIGHT, 266 cfs SPLIT LEFT.
- 
 ELEVATION AT CONCENTRATION POINT OR TOP OF Tc PATH
- 
 VEGETATION COVER DENSITY (FIELD MEASURED)
- 
 DRAINAGE SUB-BASIN CONCENTRATION POINT
- 
 MAJOR DRAINAGE BASIN BOUNDARY
- 
 DRAINAGE SUB-BASIN BOUNDARY
- 
 HEC-1 ROUTING PATH
- 
 Tc FLOW PATH
- 
 FORT MCDOWELL INDIAN RESERVATION BOUNDARY
- 
 CORPORATE BOUNDARY
- 
 RANGE AND TOWNSHIP BOUNDARY
- 
 USGS QUADRANGLE MAP BOUNDARY
- 
 SECTION LINE
- 
 LIMITS OF 200 SCALE MAPPING
- 
 HEC-1 REACH ROUTE CROSS SECTION LOCATION
Ashbrook Wash HEC-2 Section 5.254
- 
 Field Survey Cross Section
- 
 Cross Section From Available Mapping
- 
 NON-CONTRIBUTING DRAINAGE AREA



HYDROLOGY EXHIBIT "D"
DRAINAGE SUB-BASIN DELINEATION
TIME OF CONCENTRATION FLOW
PATHS AND FLOOD ROUTING MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.			
DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
	N/A	-	
DESIGN CHK.	N/A	-	RECOMMENDED BY: _____ DATE: _____
PLANS	P.K.	8/94	APPROVED BY: _____ DATE: _____
PLANS CHK.	TRL	8/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: _____	DATE: _____	SHEET 1 OF 6	



SEE SHEET 2 OF 6

SEE SHEET 3 OF 6

SEE SHEET 4 OF 6

THE TOPOGRAPHY ON WHICH THIS MAP IS BASED (USGS MAPPING) CAME FROM THE REFERENCED USGS QUADRANGLE MAPS (7.5 MINUTE, 1"=2000'). ONLY 100-FOOT CONTOURS ARE SHOWN.

Dwg. Name: P:\FTHILLS\ACAD\SHR11.dwg
REV. 17 OCT 1994 8:03am
Dc:z

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

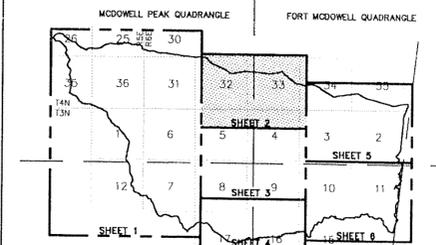
F.C.D. CONTRACT NO. FCD 92-04

LEGEND

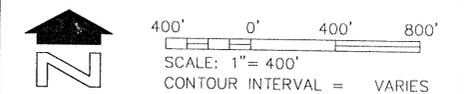
NOTE: ALL FLOW RATES ARE FOR THE 100-YEAR PEAK DISCHARGE.

- DRAINAGE SUB-BASIN IDENTIFIER FOR SUBBASIN 207L 
- DRAINAGE SUB-BASIN CONCENTRATION POINT 552
PEAK DISCHARGE IS 1244 cfs 
- HEC-1 RESERVOIR ROUTE AT CONCENTRATION POINT 513
INFLOW IS 389 cfs, OUTFLOW IS 369 cfs 
- DRAINAGE SUB-BASIN FLOW SPLIT CONCENTRATION POINT 505
PEAK DISCHARGE IS 32 cfs; 18 cfs SPLIT RIGHT, and 14 cfs SPLIT LEFT. 
- HEC-1 RESERVOIR ROUTE AND FLOW SPLIT AT CONCENTRATION POINT 523. PEAK INFLOW IS 386 cfs, OUTFLOW IS 286 cfs; 19 cfs SPLIT RIGHT, 266 cfs SPLIT LEFT. 
- ELEVATION AT CONCENTRATION POINT OR TOP OF Tc PATH 
- VEGETATION COVER DENSITY (FIELD MEASURED) 
- DRAINAGE SUB-BASIN CONCENTRATION POINT 
- MAJOR DRAINAGE BASIN BOUNDARY 
- DRAINAGE SUB-BASIN BOUNDARY 
- HEC-1 ROUTING PATH 
- Tc FLOW PATH 
- FORT McDOWELL INDIAN RESERVATION BOUNDARY 
- CORPORATE BOUNDARY 
- RANGE AND TOWNSHIP BOUNDARY 
- USGS QUADRANGLE MAP BOUNDARY 
- SECTION LINE 
- LIMITS OF 200 SCALE MAPPING 
- HEC-1 REACH ROUTE CROSS SECTION LOCATION
Ashbrook Wash HEC-2 Section 5.254 
- Field Survey Cross Section 
- Cross Section From Available Mapping 
- NON-CONTRIBUTING DRAINAGE AREA 

INDEX MAP

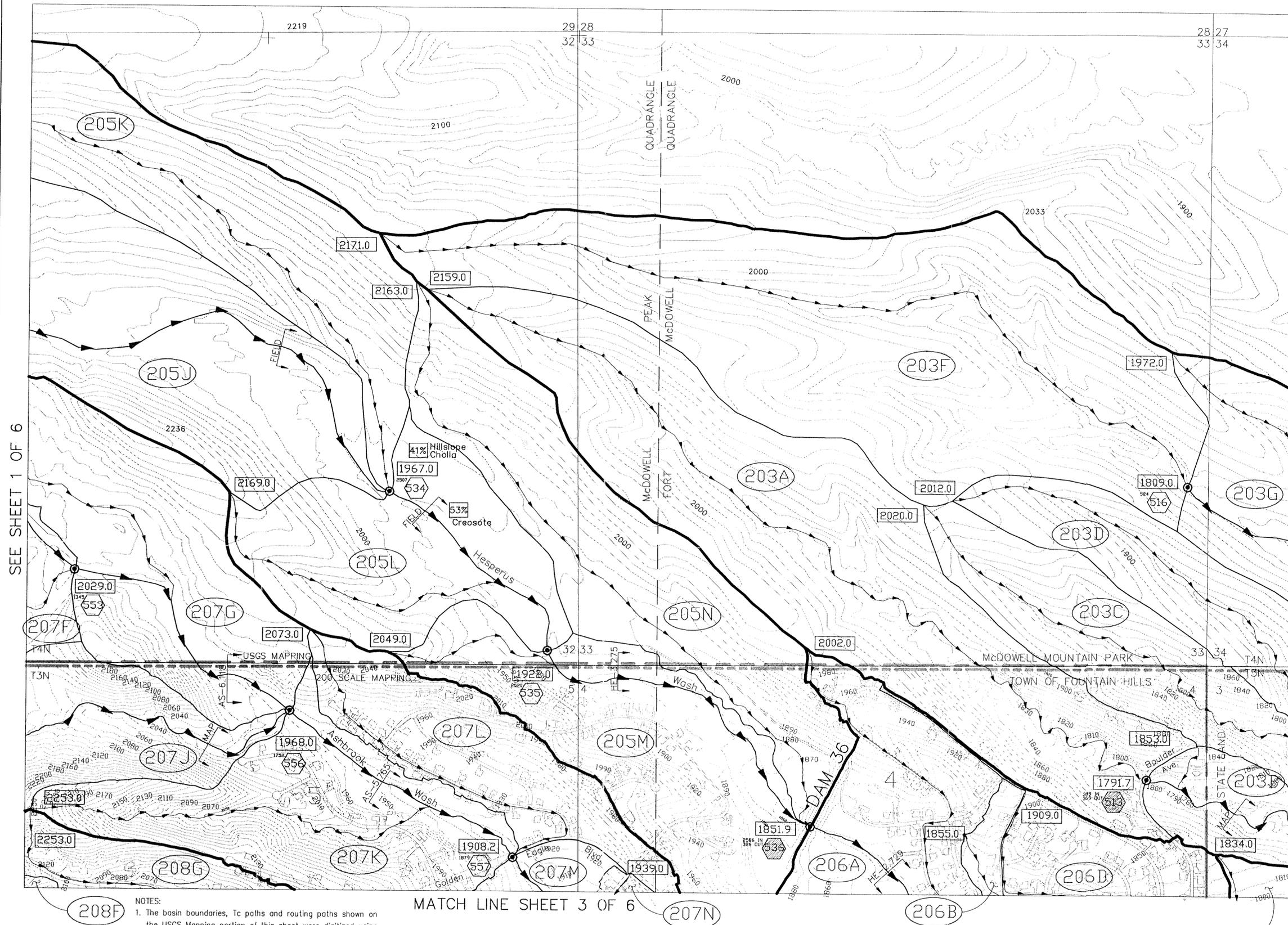


HYDROLOGY EXHIBIT "D"
DRAINAGE SUB-BASIN DELINEATION
TIME OF CONCENTRATION FLOW
PATHS AND FLOOD ROUTING MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	8/94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	TRL	8/94	APPROVED BY: _____ DATE: _____
SUBMITTED BY:			CHEF ENGINEER AND GENERAL MANAGER
			SHEET 2 OF 6



SEE SHEET 1 OF 6

MATCH LINE SHEET 5 OF 6

MATCH LINE SHEET 3 OF 6

NOTES:
1. The basin boundaries, Tc paths and routing paths shown on the USGS Mapping portion of this sheet were digitized using more accurate mapping not available in digital form. Ridge lines and flow paths may appear to be misaligned when plotted on the USGS Mapping in some locations.

200 Scale Mapping: Kenney Aerial Mapping Flight Date = 8/91
USGS Mapping: US Geological Survey Flight Date = 1982

THE CONTOURS AND PLANIMETRICS FOR THE 200 SCALE MAPPING WERE PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS 1"=200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY DATA PROVIDED BY ANDERSON-NELSON, INC. THE CONTOURS FOR THE USGS MAPPING CAME FROM THE USGS QUADRANGLE MAPS (7.5 MINUTE, 1"=20000'). ONLY 10-FOOT CONTOURS ARE SHOWN FOR THE 200 SCALE MAPPING, AND 20-FOOT CONTOURS FOR THE USGS MAPPING.

Dwg. Name: P:\FTHILLS\ACAD\SHEET2.dwg
REV. 17 OCT 1994 8:04am
Date:

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

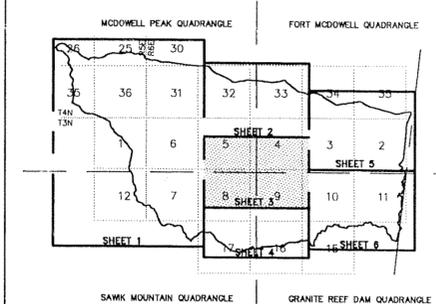
F.C.D. CONTRACT NO. FCD 92-04

LEGEND

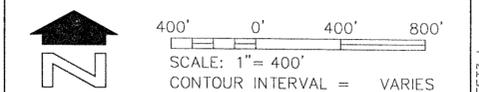
NOTE: ALL FLOW RATES ARE FOR THE 100-YEAR PEAK DISCHARGE.

- 
 DRAINAGE SUB-BASIN IDENTIFIER FOR SUBBASIN 207L
- 
 DRAINAGE SUB-BASIN CONCENTRATION POINT 552
PEAK DISCHARGE IS 1244 cfs
- 
 HEC-1 RESERVOIR ROUTE AT CONCENTRATION POINT 513
INFLOW IS 389 cfs, OUTFLOW IS 369 cfs
- 
 DRAINAGE SUB-BASIN FLOW SPLIT CONCENTRATION POINT 505
PEAK DISCHARGE IS 32 cfs; 18 cfs SPLIT RIGHT, and 14 cfs SPLIT LEFT.
- 
 HEC-1 RESERVOIR ROUTE AND FLOW SPLIT AT CONCENTRATION POINT 523. PEAK INFLOW IS 386 cfs, OUTFLOW IS 286 cfs, 19 cfs SPLIT RIGHT, 266 cfs SPLIT LEFT.
- 
 ELEVATION AT CONCENTRATION POINT OR TOP OF Tc PATH
- 
 VEGETATION COVER DENSITY (FIELD MEASURED)
- 
 DRAINAGE SUB-BASIN CONCENTRATION POINT
- 
 MAJOR DRAINAGE BASIN BOUNDARY
- 
 DRAINAGE SUB-BASIN BOUNDARY
- 
 HEC-1 ROUTING PATH
- 
 Tc FLOW PATH
- 
 FORT MCDOWELL INDIAN RESERVATION BOUNDARY
- 
 CORPORATE BOUNDARY
- 
 RANGE AND TOWNSHIP BOUNDARY
- 
 USGS QUADRANGLE MAP BOUNDARY
- 
 SECTION LINE
- 
 LIMITS OF 200 SCALE MAPPING
- 
 HEC-1 REACH ROUTE CROSS SECTION LOCATION
Ashbrook Wash HEC-2 Section 5.254
- 
 Field Survey Cross Section
- 
 Cross Section From Available Mapping
- 
 NON-CONTRIBUTING DRAINAGE AREA

INDEX MAP



HYDROLOGY EXHIBIT "D"
DRAINAGE SUB-BASIN DELINEATION
TIME OF CONCENTRATION FLOW
PATHS AND FLOOD ROUTING MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

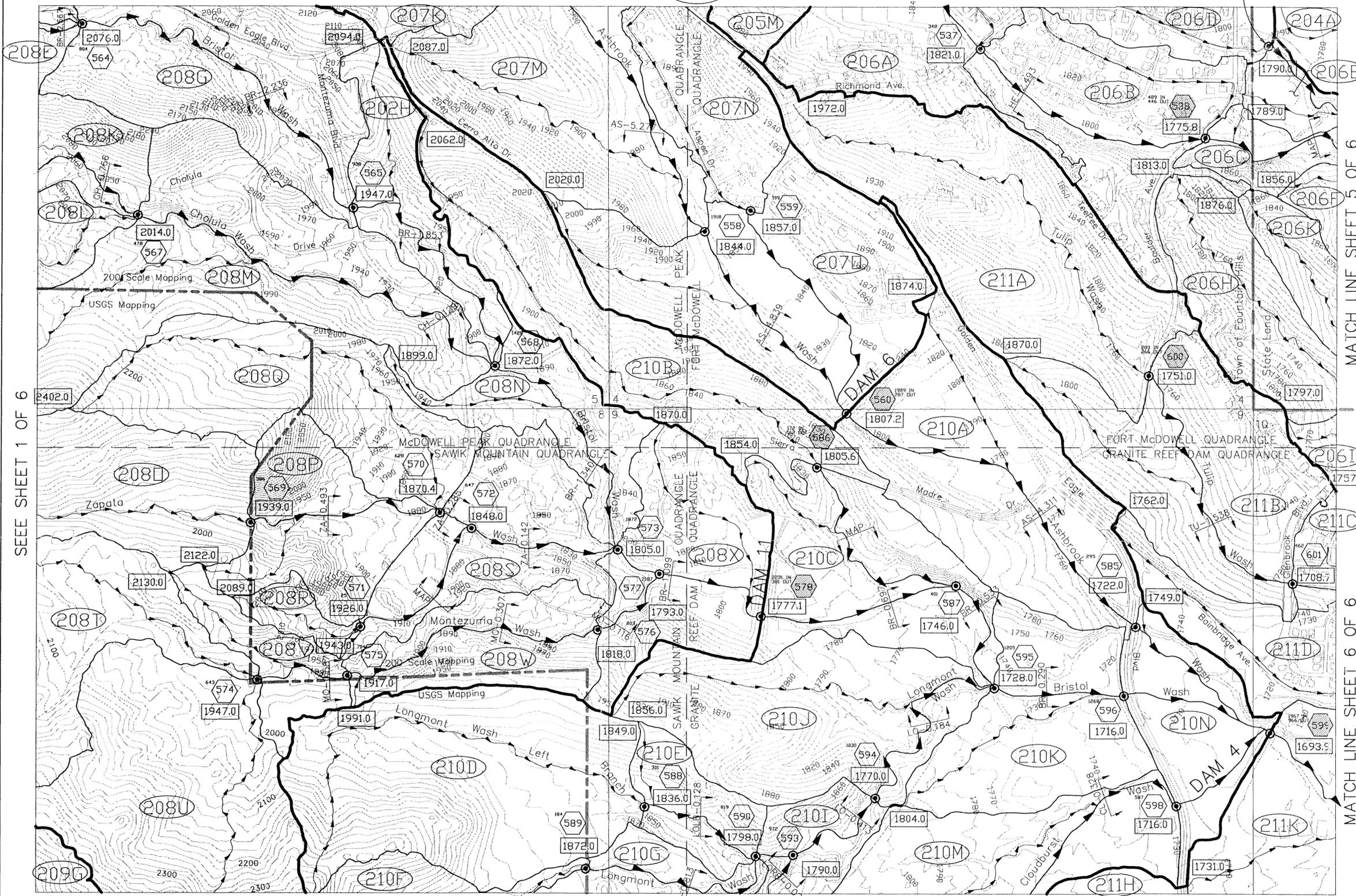
DESIGN	BY N/A	DATE -	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	8/94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	TRL	8/94	APPROVED BY: _____ DATE: _____
SUBMITTED BY: _____	DATE: _____		CHEF ENGINEER AND GENERAL MANAGER
			SHEET 3 OF 6

Dwg. Name: VP\FHILLS\ACAD\SHEET3.dwg
Date: REV. 17 OCT 1994 DE-Diam

MATCH LINE SHEET 2 OF 6

208F

207L



SEE SHEET 1 OF 6

MATCH LINE SHEET 5 OF 6

MATCH LINE SHEET 6 OF 6

MATCH LINE SHEET 4 OF 6

- NOTES:
- The basin boundaries, Tc paths and routing paths shown on the USGS Mapping portion of this sheet were digitized using more accurate mapping not available in digital form. Ridge lines and flow paths may appear to be misaligned when plotted on the USGS Mapping in some locations.

200 Scale Mapping: Kenney Aerial Mapping Flight Date = 8/91
USGS Mapping: US Geological Survey Flight Date = 1962

THE CONTOURS AND PLANIMETRICS FOR THE 200 SCALE MAPPING WERE PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS 1"=200' HORIZONTAL SCALE AND 2" CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY DATA PROVIDED BY ANDERSON-NELSON, INC. THE CONTOURS FOR THE USGS MAPPING CAME FROM THE USGS QUADRANGLE MAPS (7.5 MINUTE, 1"=20000'). ONLY 10-FOOT CONTOURS ARE SHOWN FOR THE 200 SCALE MAPPING, AND 20-FOOT CONTOURS FOR THE USGS MAPPING.

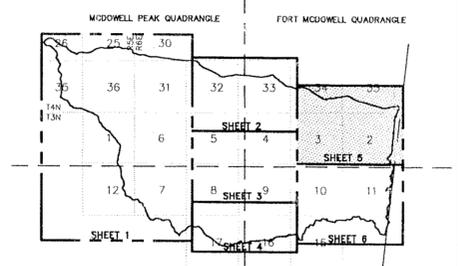
FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

F.C.D. CONTRACT NO. FCD 92-04

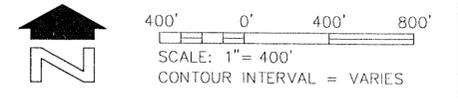
LEGEND

- NOTE: ALL FLOW RATES ARE FOR THE 100-YEAR PEAK DISCHARGE.
- DRAINAGE SUB-BASIN IDENTIFIER FOR SUBBASIN 207L  207L
 - DRAINAGE SUB-BASIN CONCENTRATION POINT 552
PEAK DISCHARGE IS 1244 cfs  552
 - HEC-1 RESERVOIR ROUTE AT CONCENTRATION POINT 513
INFLOW IS 389 cfs, OUTFLOW IS 369 cfs  513
 - DRAINAGE SUB-BASIN FLOW SPLIT CONCENTRATION POINT 505
PEAK DISCHARGE IS 32 cfs; 18 cfs SPLIT RIGHT, and 14 cfs SPLIT LEFT.  505
 - HEC-1 RESERVOIR ROUTE AND FLOW SPLIT AT CONCENTRATION POINT 523.
PEAK INFLOW IS 386 cfs, OUTFLOW IS 286 cfs; 19 cfs SPLIT RIGHT, 266 cfs SPLIT LEFT.  523
 - ELEVATION AT CONCENTRATION POINT OR TOP OF Tc PATH  1972.0
 - VEGETATION COVER DENSITY (FIELD MEASURED)  35%
 - DRAINAGE SUB-BASIN CONCENTRATION POINT 
 - MAJOR DRAINAGE BASIN BOUNDARY 
 - DRAINAGE SUB-BASIN BOUNDARY 
 - HEC-1 ROUTING PATH 
 - Tc FLOW PATH 
 - FORT MCDOWELL INDIAN RESERVATION BOUNDARY 
 - CORPORATE BOUNDARY 
 - RANGE AND TOWNSHIP BOUNDARY 
 - USGS QUADRANGLE MAP BOUNDARY 
 - SECTION LINE 
 - LIMITS OF 200 SCALE MAPPING 
 - HEC-1 REACH ROUTE CROSS SECTION LOCATION
Ashbrook Wash HEC-2 Section 5.254  AS-5.254
 - Field Survey Cross Section  FIELD
 - Cross Section From Available Mapping  MAP
 - NON-CONTRIBUTING DRAINAGE AREA 

INDEX MAP

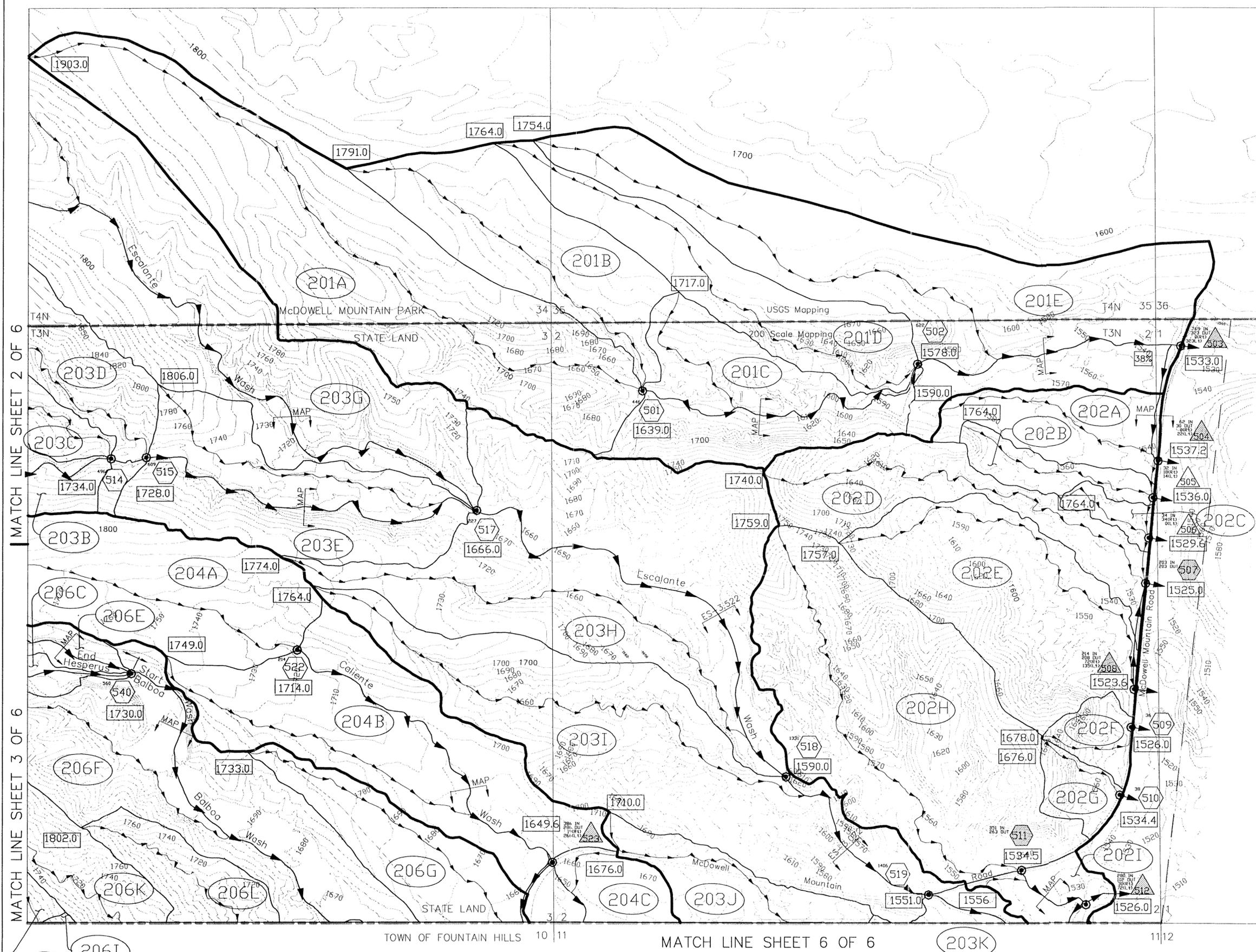


HYDROLOGY EXHIBIT "D"
DRAINAGE SUB-BASIN DELINEATION
TIME OF CONCENTRATION FLOW
PATHS AND FLOOD ROUTING MAP



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY N/A	DATE --	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	--	
PLANS	PK	8/94	RECOMMENDED BY: DATE
PLANS CHK.	TRL	8/94	APPROVED BY: DATE
SUBMITTED BY:			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 5 OF 6



NOTES:
1. The basin boundaries, Tc paths and routing paths shown on the USGS Mapping portion of this sheet were digitized using more accurate mapping not available in digital form. Ridge lines and flow paths may appear to be misaligned when plotted on the USGS Mapping in some locations.

200 Scale Mapping: Kenney Aerial Mapping Flight Date = 8/91
USGS Mapping: US Geological Survey Flight Date = 1962

THE CONTOURS AND PLANIMETRICS FOR THE 200 SCALE MAPPING WERE PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS 1"=200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY DATA PROVIDED BY ANDERSON-NELSON, INC. THE CONTOURS FOR THE USGS MAPPING CAME FROM THE USGS QUADRANGLE MAPS (7.5 MINUTE, 1"=2000'). ONLY 10-FOOT CONTOURS ARE SHOWN FOR THE 200 SCALE MAPPING, AND 20-FOOT CONTOURS FOR THE USGS MAPPING.

Dwg. Name: F:\FTHILLS\ACAD\SHEET5.cwg Date: REV. 17 OCT 1994 09:45am

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

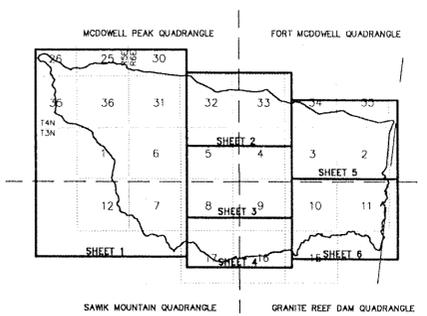
F.C.D. CONTRACT NO. FCD 92-04

LEGEND

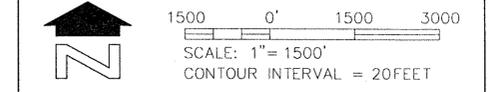
- MAJOR BASIN NUMBER
AREA IN SQUARE MILES 201
0.63
- KEY CONCENTRATION POINT ○
- HEC-1 IDENTIFIER AT KEY CONCENTRATION POINT 584 584
- HEC-1 IDENTIFIER FOR DIVERSION AT KEY CONCENTRATION POINT 523 523
- MAJOR DRAINAGE BASIN BOUNDARY
- HEC-2 STUDY REACH
- WASH FLOW PATH
- FORT MCDOWELL INDIAN RESERVATION BOUNDARY
- FOUNTAIN HILLS CORPORATE BOUNDARY
- RANGE AND TOWNSHIP BOUNDARY
- USGS QUADRANGLE MAP BOUNDARY
- SECTION LINE
- SHEET BOUNDARY FOR EXHIBIT "D"

NOTES

INDEX MAP

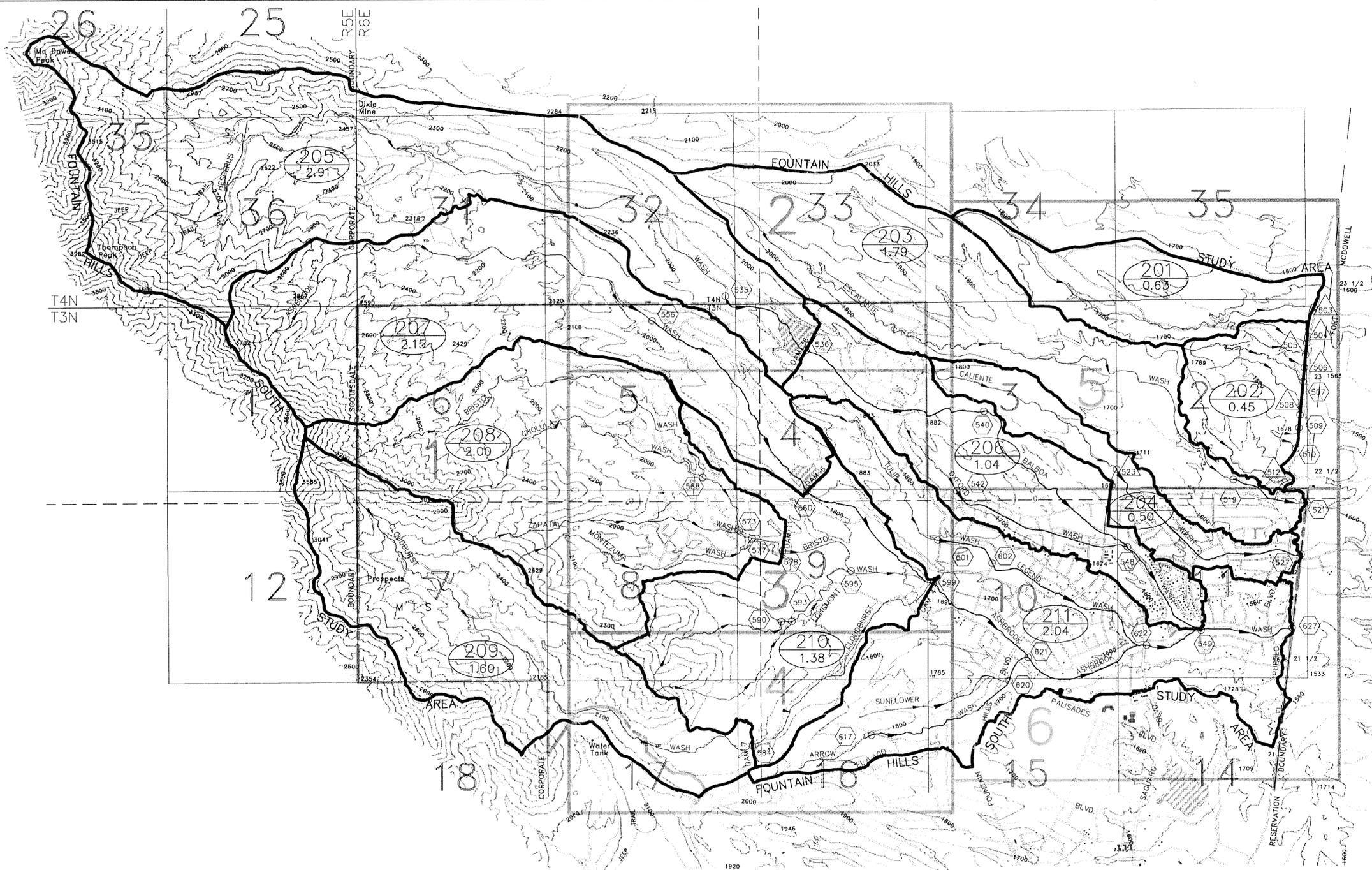


HYDROLOGY EXHIBIT "A"
DRAINAGE BASIN MAP AND
SHEET INDEX FOR EXHIBIT "D"



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	7/94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	TRL	7/94	APPROVED BY: _____ DATE _____
SUBMITTED BY:			CHEF ENGINEER AND GENERAL MANAGER
		DATE: _____	SHEET 1 OF 1



SUMMARY OF 100-YEAR PEAK DISCHARGES FOR DETAILED HYDROLOGIC ANALYSIS STUDY AREA

HEC-1 Identifier	Description	Peak Discharge (cfs)	Area (sm)	HEC-1 Identifier	Description	Peak Discharge (cfs)	Area (sm)	HEC-1 Identifier	Description	Peak Discharge (cfs)	Area (sm)
D503L	Culvert 503 flow into Ft. McDowell Indian Reservation.	323	0.63	C556	Ashbrook Wash, start of Floodplain Delineation.	1752	1.64	C593	Confluence of Right and Main Branches of Longmont Wash.	972	0.49
D504L	Culvert 504 flow into Ft. McDowell Indian Reservation.	72	0.67	C560L	Dam 6, inflow.	1989	2.15	C595L	Bristol Wash U/S of confluence with Longmont Wash.	468	2.19
D505L	Culvert 505 flow into Ft. McDowell Indian Reservation.	14	0.69	C5600	Dam 6, outflow.	287	2.15	C595R	Longmont Wash U/S of confluence with Bristol Wash.	1119	0.64
D506L	Culvert 506 flow into Ft. McDowell Indian Reservation.	0	0.69	C568L	Bristol Wash U/S of confluence with Cholula Wash.	961	0.61	C595	Confluence of Longmont and Bristol Washes.	1205	2.83
C5070	Culvert 507 on McDowell Mountain Road.	203	0.86	C568R	Cholula Wash U/S of confluence with Bristol Wash.	701	0.46	C599L	Dam 4, inflow.	1967	2.13
D508R	Culvert 508 flow into Ft. McDowell Indian Reservation.	72	0.10	C568	Confluence of Cholula and Bristol Washes.	1428	1.07	C5990	Dam 4, outflow.	966	7.13
C509	Culvert 509 flow at Ft. McDowell Indian Reservation.	36	0.01	C573L	Bristol Wash U/S of confluence with Zapata Wash.	1460	1.12	C601	Tulip Wash, start of Floodplain Delineation.	462	0.25
C510	Culvert 510 flow at Ft. McDowell Indian Reservation.	38	0.01	C573R	Zapata Wash U/S of confluence with Bristol Wash.	772	0.46	C602	End Tulip Wash, start Legend Wash.	635	0.37
D512L	Stock Tank flow into Ft. McDowell Indian Reservation.	72	0.20	C573	Confluence of Zapata and Bristol Washes.	1872	1.58	C617	Arrow Wash, start of Floodplain Delineation.	270	0.13
C519	Escalante Wash start of Floodplain Delineation.	1406	1.59	C577L	Bristol Wash U/S of confluence with Montezuma Wash.	1872	1.58	C620L	Sunflower Wash U/S of confluence with Arrow Wash (Culvert 611).	151	0.14
C521	Escalante Wash at Ft. McDowell Indian Reservation.	1407	1.99	C577R	Montezuma Wash U/S of confluence with Bristol Wash.	800	0.34	C620R	Arrow Wash U/S of confluence with Sunflower Wash (Culvert 619).	335	0.28
D523L	Culvert 523 flow in Caliente Wash.	266	0.23	C577	Confluence of Montezuma and Bristol Washes.	2187	1.92	C620	Confluence of Sunflower and Arrow Washes.	485	0.42
C527	Caliente Wash at Ft. McDowell Indian Reservation (Culvert 527).	665	0.50	C578L	Dam 11, inflow.	2231	2.00	C621L	Ashbrook Wash U/S of confluence with Arrow Wash.	975	7.64
C535	Hesperus Wash start of Floodplain Delineation.	2520	2.62	C5780	Dam 11, outflow.	381	2.00	C621R	Arrow Wash U/S of confluence with Ashbrook Wash.	482	0.42
C536L	Dam 36, inflow.	2586	2.91	C584L	Dam 7, inflow.	1999	1.60	C621	Confluence of Arrow and Ashbrook Washes.	1184	7.93
C5360	Dam 36, outflow.	326	2.91	C5840	Dam 7, outflow.	469	1.60	C622L	Legend Wash U/S of confluence with Ashbrook Wash.	1121	0.63
C540	End Hesperus Wash, start Balboa Wash.	560	3.24	C590L	Longmont Wash Left Branch U/S of confluence with Main Branch.	353	0.17	C622R	Ashbrook Wash U/S of confluence with Legend Wash.	1384	8.14
C542	Oxford Wash, start of Floodplain Delineation.	153	0.06	C590R	Longmont Wash Main Branch U/S of confluence with Main Branch.	472	0.25	C622	Confluence of Legend and Ashbrook Washes.	2053	8.78
C548L	Balboa Wash U/S of confluence with Oxford Wash.	721	3.72	C590	Confluence of Left and Main Branches of Longmont Wash.	819	0.42	C627	Ashbrook Wash at Ft. McDowell Indian Reservation.	3187	13.32
C548R	Oxford Wash U/S of confluence with Balboa Wash.	635	0.32	C593L	Longmont Wash Main Branch U/S of confluence with Right Branch.	819	0.42				
C548	Confluence of Oxford and Balboa Washes.	1038	4.04	C593R	Longmont Wash Right Branch U/S of confluence with Main Branch.	158	0.07				
C549L	Balboa Wash U/S of confluence with Ashbrook Wash.	1128	4.19								
C549R	Ashbrook Wash U/S of confluence with Balboa Wash.	2112	8.87								
C549	Confluence of Balboa and Ashbrook Washes.	3095	13.06								

THIS MAP WAS PREPARED USING THE USGS QUADRANGLE MAPS FOR BASE TOPOGRAPHY. REFER TO SECTION 2 OF THE HYDROLOGY REPORT.

Drawing Name: V:\F\HILLS\ACAD\EX-A.dwg
Date: REV. 17 OCT 1994 08:00am

**FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY**
FLOOD DELINEATION STUDY OF
FOUNTAIN HILLS NORTH

F.C.D. CONTRACT NO. 92-04

LEGEND

- MAJOR BASIN BOUNDARY
- DIRECTION OF FLOW
- HYDROGRAPH CALCULATION FOR SUB BASIN 207L 207L
- HYDROGRAPH COMBINATION OPERATION AND/OR CONCENTRATION POINT AT NODE 544 544
- HYDROGRAPH COMBINATION OPERATION AND/OR CONCENTRATION POINT FOR A STORAGE ROUTE OPERATION AT NODE 599 599
- 1 FOR INFLOW TO STORAGE ROUTE OPERATION
- 0 FOR OUTFLOW OF STORAGE ROUTE OPERATION
- HYDROGRAPH ROUTING OPERATION
CR = NORMAL DEPTH CHANNEL ROUTE CR
SR = STORAGE ROUTE
LG = LAG ROUTE
- DIVERSION OPERATION TO SIMULATE FLOW SPLIT AT NODE 543 543
- MAJOR BASIN 202 202

NOTES

FORT MCDOWELL INDIAN RESERVATION

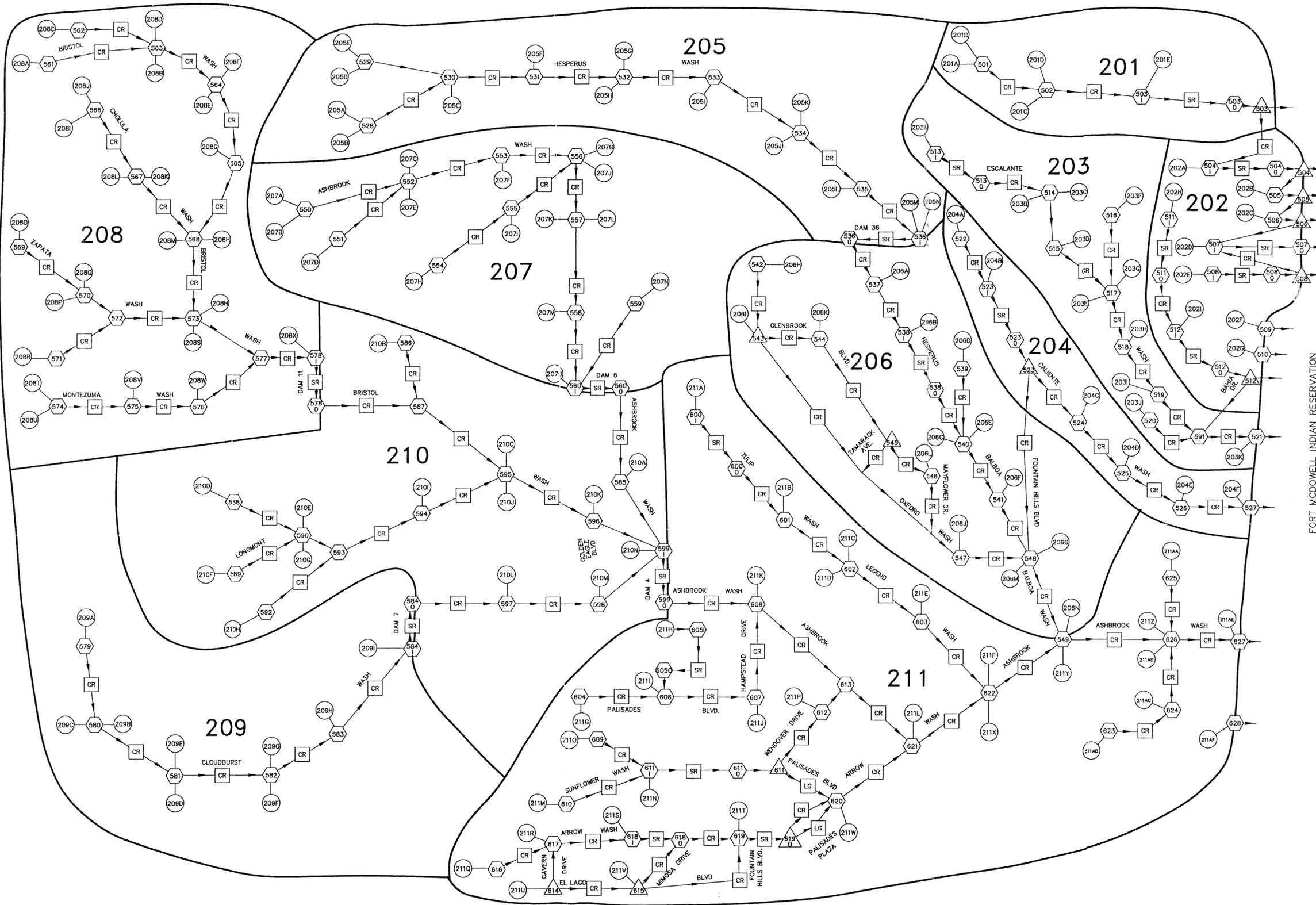


EXHIBIT "E"
HEC-1 FLOOD ROUTING DIAGRAM



GEORGE V. SABOL CONSULTING ENGINEERS, INC.

DESIGN	BY N/A	DATE -	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	N/A	-	
PLANS	PK	3/94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	TRL	3/94	APPROVED BY: _____ DATE: _____
SUBMITTED BY: _____			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 1 OF 1

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Date: REV. JUL. 24, 1994 02:45pm