HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 11 (1986)

Watershed Area (A): 908 acres

Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.047
5600	3800	1800	4000	0.450	0.047
3800	3400	400	2200	0.182	0.047
3400	3200	200	1900	0.105	0.047
3200	2740	460	12500	0.037	0.047
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 21700 ft

Length to Center of Gravity (Lca): 10850 ft

Mean Slope (Sc): 0.0670 ft/ft

Weighted Basin Factor (nb): 0.047

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.69	0%	2.69

Cover Type(s): Mtn./Desert Brush Mix

Cover Density (pervious areas): 30%

Impervious Surfaces: Percent 8%

Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	38	83	87.06	0.55
C	13	82	86.28	0.53
D	49	90	92.52	0.71

Weighted Runoff Coefficient (Cw): 0.652

100-year Peak Discharge (Q100): **2217** **cfs**

Time of Concentration (Tc): 38 min.

Rainfall Intensity (i) at Tc: 3.71 in/hr

Runoff Supply Rate (q) at Tc: 2.42 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 11.1 (1986)

Watershed Area (A): 927 acres

Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.047
5600	3800	1800	4000	0.450	0.047
3800	3400	400	2200	0.182	0.047
3400	3200	200	1900	0.105	0.047
3200	2740	460	12500	0.037	0.047
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 21700 ft

Length to Center of Gravity (Lca): 10850 ft

Mean Slope (Sc): 0.0670 ft/ft

Weighted Basin Factor (nb): 0.047

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.69	0%	2.69

Cover Type(s): Mtn./Desert Brush Mix

Cover Density (pervious areas): 30%/20%

Impervious Surfaces: Percent 8%

Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	38	83	87.06	0.55
C	13	82	86.28	0.53
D	49	90	92.52	0.71

Weighted Runoff Coefficient (Cw): 0.652

100-year Peak Discharge (Q100): **2263** **cfs**

Time of Concentration (Tc): 38 min.

Rainfall Intensity (i) at Tc: 3.71 in/hr

Runoff Supply Rate (q) at Tc: 2.42 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 13 (1986)

Watershed Area (A): 1239 acres

Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.045
5600	3800	1800	4000	0.450	0.045
3800	3400	400	2200	0.182	0.045
3400	3200	200	1900	0.105	0.045
3200	2740	460	12500	0.037	0.045
2740	2580	160	5600	0.029	0.045
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 27300 ft

Length to Center of Gravity (Lca): 13650 ft

Mean Slope (Sc): 0.0545 ft/ft

Weighted Basin Factor (nb): 0.045

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.68	0%	2.68

Cover Type(s): Mtn./Desert Brush Mix

Cover Density (pervious areas): 30%

Impervious Surfaces: Percent 12%

Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	53	83	87.04	0.55
C	10	82	86.26	0.53
D	37	90	92.50	0.71

Weighted Runoff Coefficient (Cw): 0.648

100-year Peak Discharge (Q100): **2512** **cfs**

Time of Concentration (Tc): 49 min.

Rainfall Intensity (i) at Tc: 3.11 in/hr

Runoff Supply Rate (q) at Tc: 2.01 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 18 (1986)

Watershed Area (A): 610 acres

Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.055
5600	3800	1800	4000	0.450	0.055
3800	3400	400	2200	0.182	0.055
3400	3200	200	1900	0.105	0.055
3200	2980	220	4100	0.054	0.055
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 13300 ft

Length to Center of Gravity (Lca): 7000 ft

Mean Slope (Sc): 0.1339 ft/ft

Weighted Basin Factor (nb): 0.055

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.72	0%	2.72

Cover Type(s): Mtn./Desert Brush Mix

Cover Density (pervious areas): 30%/20%

Impervious Surfaces: Percent 3%

Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	8	83	87.12	0.55
C	19	82	86.34	0.53
D	73	90	92.57	0.72

Weighted Runoff Coefficient (Cw): 0.677

100-year Peak Discharge (Q100): **2175** **cfs**

Time of Concentration (Tc): 22 min.

Rainfall Intensity (i) at Tc: 5.22 in/hr

Runoff Supply Rate (q) at Tc: 3.54 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 11.1 (1986 updated)

Watershed Area (A): 927 acres Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.047
5600	3800	1800	4000	0.450	0.047
3800	3400	400	2200	0.182	0.047
3400	3200	200	1900	0.105	0.047
3200	2740	460	12500	0.037	0.047
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 21700 ft Mean Slope (Sc): 0.0670 ft/ft

Length to Center of Gravity (Lca): 10850 ft Weighted Basin Factor (nb): 0.047

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.69	0%	2.69

Cover Type(s): Mtn./Desert Brush Mix Cover Density (pervious areas): 30%/20%

Impervious Surfaces: Percent 9.0% Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	38	83	87.06	0.55
C	13	82	86.28	0.53
D	49	90	92.52	0.71

Weighted Runoff Coefficient (Cw): 0.656

100-year Peak Discharge (Q100): **2279** **cfs**

Time of Concentration (Tc): 38 min.

Rainfall Intensity (i) at Tc: 3.72 in/hr

Runoff Supply Rate (q) at Tc: 2.44 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 13 (1986 updated)

Watershed Area (A): 1239 acres Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.045
5600	3800	1800	4000	0.450	0.045
3800	3400	400	2200	0.182	0.045
3400	3200	200	1900	0.105	0.045
3200	2740	460	12500	0.037	0.045
2740	2580	160	5600	0.029	0.045
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 27300 ft Mean Slope (Sc): 0.0545 ft/ft

Length to Center of Gravity (Lca): 13650 ft Weighted Basin Factor (nb): 0.045

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.68	0%	2.68

Cover Type(s): Mtn./Desert Brush Mix Cover Density (pervious areas): 30%

Impervious Surfaces: Percent 12.8% Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	53	83	87.04	0.55
C	10	82	86.26	0.53
D	37	90	92.50	0.71

Weighted Runoff Coefficient (Cw): 0.650

100-year Peak Discharge (Q100): **2527** **cfs**

Time of Concentration (Tc): 49 min.

Rainfall Intensity (i) at Tc: 3.11 in/hr

Runoff Supply Rate (q) at Tc: 2.02 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 18 (1986 updated)

Watershed Area (A): 610 acres Watershed Type: Mtn (dev)/Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
6080	5600	480	1100	0.436	0.055
5600	3800	1800	4000	0.450	0.055
3800	3400	400	2200	0.182	0.055
3400	3200	200	1900	0.105	0.055
3200	2980	220	4100	0.054	0.055
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 13300 ft Mean Slope (Sc): 0.1339 ft/ft

Length to Center of Gravity (Lca): 7000 ft Weighted Basin Factor (nb): 0.055

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.25	0%	3.25
2-hour	n/a	3.03	0%	3.03
1-hour	n/a	2.72	0%	2.72

Cover Type(s): Mtn./Desert Brush Mix Cover Density (pervious areas): 30%/20%

Impervious Surfaces: Percent 4.5% Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	8	83	87.12	0.55
C	19	82	86.34	0.53
D	73	90	92.57	0.72

Weighted Runoff Coefficient (Cw): 0.681

100-year Peak Discharge (Q100): **2192** **cfs**

Time of Concentration (Tc): 22 min.

Rainfall Intensity (i) at Tc: 5.23 in/hr

Runoff Supply Rate (q) at Tc: 3.57 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs

HYDROLOGIC DATA SHEET

Watercourse or Project Name: Flecha Caida Flood Improvement Study

Drainage Concentration Point: 14 (1986 duplicate effective)

Watershed Area (A): 239 acres Watershed Type: Foothills(dev)

Incremental Changes along Primary Watercourse by Reach					
Reach Elevations		Height	Length	Slope	Basin
u/s limit	d/s limit	Hi (ft)	Li (ft)	Si (ft/ft)	Factor nb
3000	2800	200	4200	0.048	0.035
2800	2610	190	6600	0.029	0.035
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000
0	0	0	0	0.000	0.000

Length of Watercourse (Lc): 10800 ft Mean Slope (Sc): 0.0345 ft/ft

Length to Center of Gravity (Lca): 5000 ft Weighted Basin Factor (nb): 0.035

Rainfall Data				
Storm Event	Mapped Values (in)	Computed Values (in)	Areal Reduction %	Reduced Values (in)
3-hour	n/a	3.17	0%	3.17
2-hour	n/a	2.96	0%	2.96
1-hour	n/a	2.63	0%	2.63

Cover Type(s): Mtn./Desert Brush Mix Cover Density (pervious areas): 20%

Impervious Surfaces: Percent 15.0% Runoff Coefficient: 0.96 (CN constant at 99)

Soils Data				
Hydrologic Group	Group %	Curve Number Normal	Curve Number Adjusted	Runoff Coefficient
A				
B	100	83	86.93	0.54
C		82		
D		90		

Weighted Runoff Coefficient (Cw): 0.601

100-year Peak Discharge (Q100): **737** **cfs**

Time of Concentration (Tc): 21 min.

Rainfall Intensity (i) at Tc: 5.09 in/hr

Runoff Supply Rate (q) at Tc: 3.06 in/hr

For Return Intervals Other Than Q100		
25-year =	n/c	cfs
10-year =	n/c	cfs
5-year =	n/c	cfs
2-year =	n/c	cfs