

CREEKSIDE AT ROCKRIMMON FILING NO.1

CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

FINAL DRAINAGE PLAN

JULY 2008

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE ENGINEERING AGENCIES, JR. ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
HOUSING PARTNERS, INC.
1880 OFFICE CLUB POINT
SUITE 2000
COLORADO SPRINGS, CO. 80920
719-665-6920
www.housingpartners.com

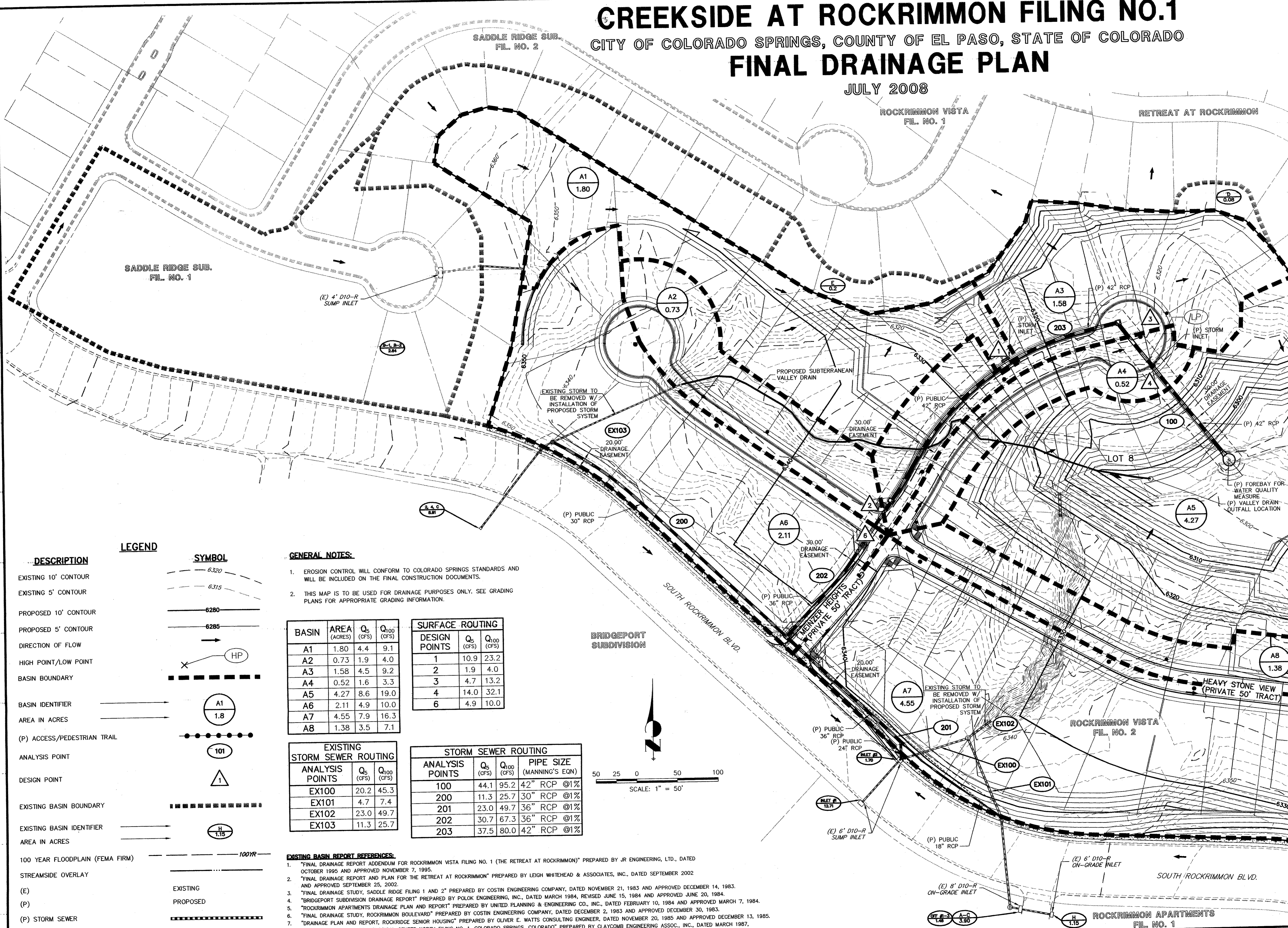
J.R. ENGINEERING
A Western Company
430 ArrowsWest Drive • Colorado Springs, CO 80907
719-593-2559 • Fax: 719-528-6613
www.jrengineering.com



NO.	REVISION	BY	DATE
1	PER CITY COMMENTS	ACS	9/10/08
2	PER CITY COMMENTS	JAM	12/11/08

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=50'	N/A	7/9/08	ACS	TLM	

SHEET	OF	JOB NO.
1	3	29760.00



LEGEND

DESCRIPTION	SYMBOL
EXISTING 10' CONTOUR	
EXISTING 5' CONTOUR	
PROPOSED 10' CONTOUR	
PROPOSED 5' CONTOUR	
DIRECTION OF FLOW	
HIGH POINT/LOW POINT	
BASIN BOUNDARY	
BASIN IDENTIFIER	
AREA IN ACRES	
(P) ACCESS/PEDESTRIAN TRAIL	
ANALYSIS POINT	
DESIGN POINT	
EXISTING BASIN BOUNDARY	
EXISTING BASIN IDENTIFIER	
AREA IN ACRES	
100 YEAR FLOODPLAIN (FEMA FIRM)	
STREAMSIDE OVERLAY	
(E) EXISTING	
(P) PROPOSED	
(P) STORM SEWER	
(E) STORM SEWER	

GENERAL NOTES:

- EROSION CONTROL WILL CONFORM TO COLORADO SPRINGS STANDARDS AND WILL BE INCLUDED ON THE FINAL CONSTRUCTION DOCUMENTS.
- THIS MAP IS TO BE USED FOR DRAINAGE PURPOSES ONLY. SEE GRADING PLANS FOR APPROPRIATE GRADING INFORMATION.

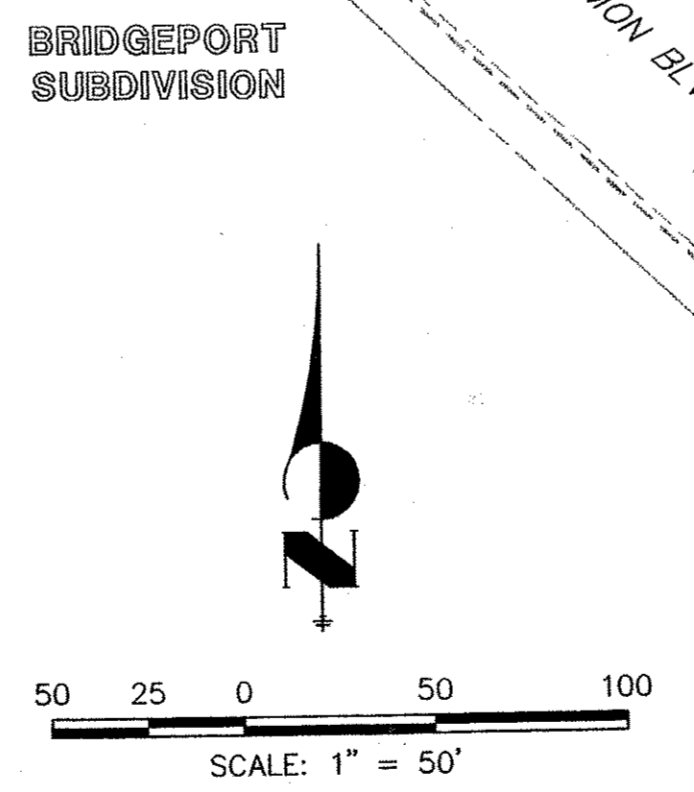
BASIN	AREA (ACRES)	Q ₅ (CFS)	Q ₁₀₀ (CFS)
A1	1.80	4.4	9.1
A2	0.73	1.9	4.0
A3	1.58	4.5	9.2
A4	0.52	1.6	3.3
A5	4.27	8.6	19.0
A6	2.11	4.9	10.0
A7	4.55	7.9	16.3
A8	1.38	3.5	7.1

SURFACE ROUTING		
DESIGN POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)
1	10.9	23.2
2	1.9	4.0
3	4.7	13.2
4	14.0	32.1
6	4.9	10.0

STORM SEWER ROUTING			
ANALYSIS POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)	PIPE SIZE (MANNING'S EQN)
100	44.1	95.2	42" RCP @1%
200	11.3	25.7	30" RCP @1%
201	23.0	49.7	36" RCP @1%
202	30.7	67.3	36" RCP @1%
203	37.5	80.0	42" RCP @1%

EXISTING BASIN REFERENCES:

- "FINAL DRAINAGE REPORT ADDENDUM FOR ROCKRIMMON VISTA FILING NO. 1 (THE RETREAT AT ROCKRIMMON)" PREPARED BY JR ENGINEERING, LTD., DATED OCTOBER 1995 AND APPROVED NOVEMBER 7, 1995.
- "FINAL DRAINAGE REPORT AND PLAN FOR THE RETREAT AT ROCKRIMMON" PREPARED BY LEIGH WHITEHEAD & ASSOCIATES, INC., DATED SEPTEMBER 2002 AND APPROVED SEPTEMBER 25, 2002.
- "FINAL DRAINAGE STUDY, SADDLE RIDGE FILING 1 AND 2" PREPARED BY COSTIN ENGINEERING COMPANY, DATED NOVEMBER 21, 1983 AND APPROVED DECEMBER 14, 1983.
- "FINAL DRAINAGE STUDY, SADDLE RIDGE FILING 1 AND 2" PREPARED BY COSTIN ENGINEERING COMPANY, DATED NOVEMBER 21, 1983 AND APPROVED DECEMBER 14, 1983.
- "BRIDGEPORT SUBDIVISION DRAINAGE REPORT" PREPARED BY POLK ENGINEERING, INC., DATED MARCH 1984, REVISED JUNE 15, 1984 AND APPROVED JUNE 20, 1984.
- "ROCKRIMMON APARTMENTS DRAINAGE PLAN AND REPORT" PREPARED BY UNITED PLANNING & ENGINEERING CO., INC., DATED FEBRUARY 10, 1984 AND APPROVED MARCH 7, 1984.
- "FINAL DRAINAGE STUDY, ROCKRIMMON BOULEVARD" PREPARED BY COSTIN ENGINEERING COMPANY, DATED DECEMBER 2, 1983 AND APPROVED DECEMBER 30, 1983.
- "DRAINAGE PLAN AND REPORT, ROCKRIDGE SENIOR HOUSING" PREPARED BY OLIVER E. WATTS CONSULTING ENGINEER, DATED NOVEMBER 20, 1985 AND APPROVED DECEMBER 13, 1985.
- "COLORADO SPRINGS TECHNOLOGICAL CENTER NORTH FILING NO. 1, COLORADO SPRINGS, COLORADO" PREPARED BY CLAYCOMB ENGINEERING ASSOC., INC., DATED MARCH 1987, AS REVISED JULY 24, 1987, AND APPROVED AUGUST 3, 1987.



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DESCRIPTION

- EXISTING 10' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 5' CONTOUR
- DIRECTION OF FLOW
- HIGH POINT/LOW POINT
- BASIN BOUNDARY
- BASIN IDENTIFIER
- AREA IN ACRES
- (P) ACCESS/PEDESTRIAN TRAIL

LEGEND

SYMBOL

- 6.320
- 6.315
- 6.280
- 6.285
- HP
- A1
- 1.8

ANALYSIS POINT

DESIGN POINT

EXISTING BASIN BOUNDARY

EXISTING BASIN IDENTIFIER

AREA IN ACRES

100 YEAR FLOODPLAIN (FEMA FIRM)

STREAMSIDE OVERLAY

(E) EXISTING

(P) PROPOSED

(P) STORM SEWER

(E) STORM SEWER

101

1

H
1.15

100YR

EXISTING

PROPOSED

(P) STORM SEWER

(E) STORM SEWER

STORM SEWER ROUTING

ANALYSIS POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)	PIPE SIZE (MANNING'S EON)
101	16.5	29.8	30" RCP @1%
102	19.2	35.2	30" RCP @1%
103	6.4	12.2	24" RCP @1%

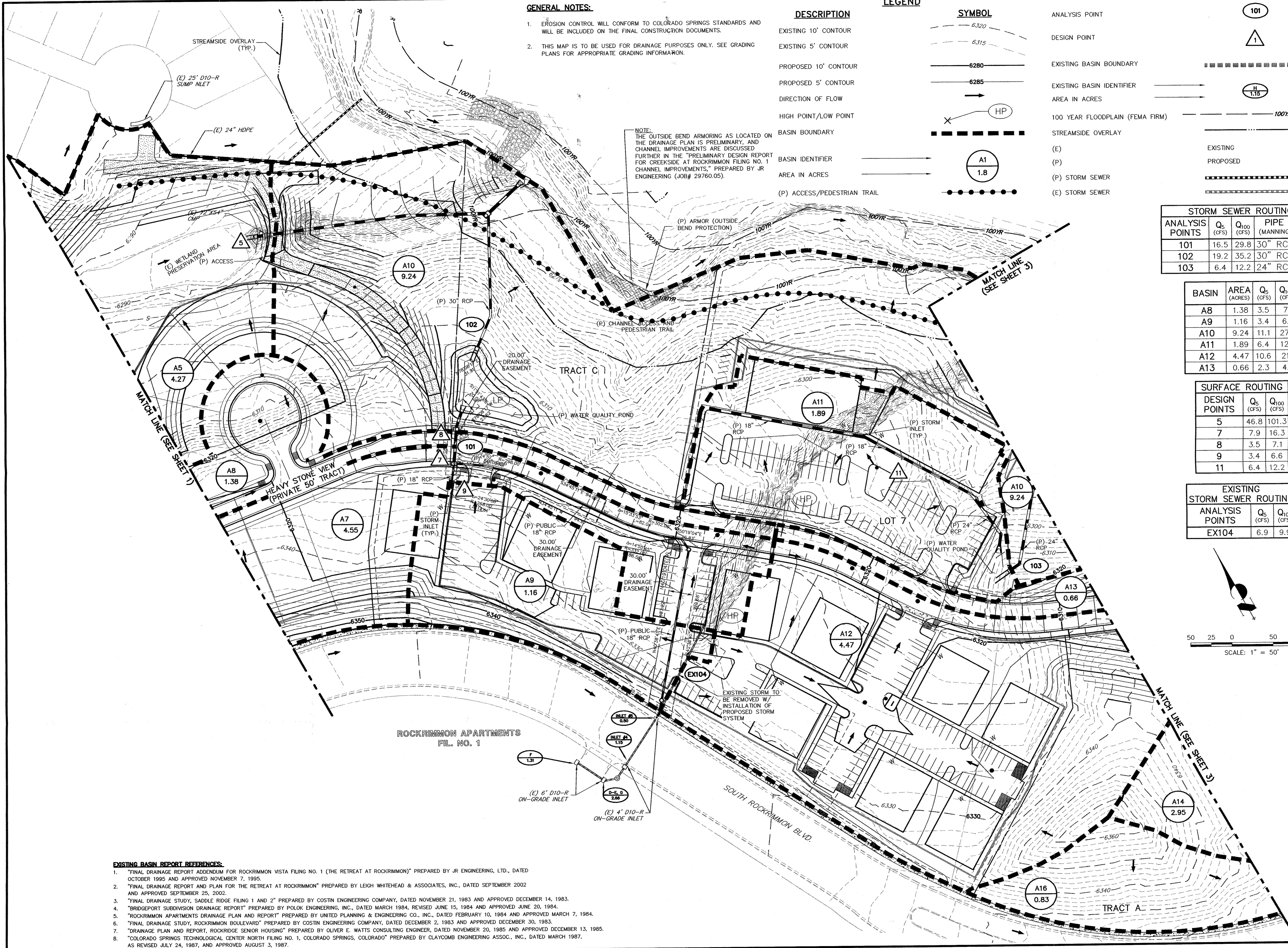
BASIN	AREA (ACRES)	Q ₅ (CFS)	Q ₁₀₀ (CFS)
A8	1.38	3.5	7.1
A9	1.16	3.4	6.6
A10	9.24	11.1	27.2
A11	1.89	6.4	12.2
A12	4.47	10.6	21.1
A13	0.66	2.3	4.5

SURFACE ROUTING

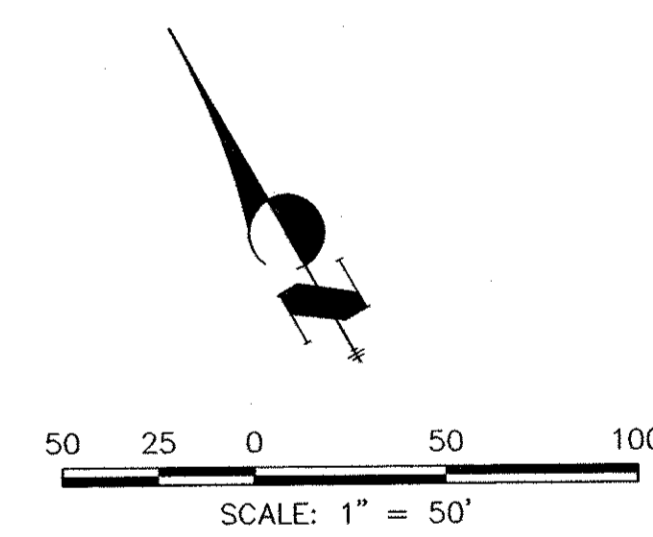
DESIGN POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)
5	46.8	101.3
7	7.9	16.3
8	3.5	7.1
9	3.4	6.6
11	6.4	12.2

EXISTING STORM SEWER ROUTING

ANALYSIS POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)
EX104	6.9	9.9



NOTE: THE OUTSIDE BEND ARMORING AS LOCATED ON THE DRAINAGE PLAN IS PRELIMINARY, AND CHANNEL IMPROVEMENTS ARE DISCUSSED FURTHER IN THE "PRELIMINARY DESIGN REPORT FOR CREEKSIDE AT ROCKRIMMON FILING NO. 1 CHANNEL IMPROVEMENTS," PREPARED BY JR ENGINEERING (JOB# 29760.05).



EXISTING BASIN REPORT REFERENCES:

1. "FINAL DRAINAGE REPORT ADDENDUM FOR ROCKRIMMON VISTA FILING NO. 1 (THE RETREAT AT ROCKRIMMON)" PREPARED BY JR ENGINEERING, LTD., DATED OCTOBER 1995 AND APPROVED NOVEMBER 7, 1995.
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8. "COLORADO SPRINGS TECHNOLOGICAL CENTER NORTH FILING NO. 1, COLORADO SPRINGS, COLORADO" PREPARED BY CLAYCOMB ENGINEERING ASSOC., INC., DATED MARCH 1987, AS REVISED JULY 24, 1987, AND APPROVED AUGUST 3, 1987.

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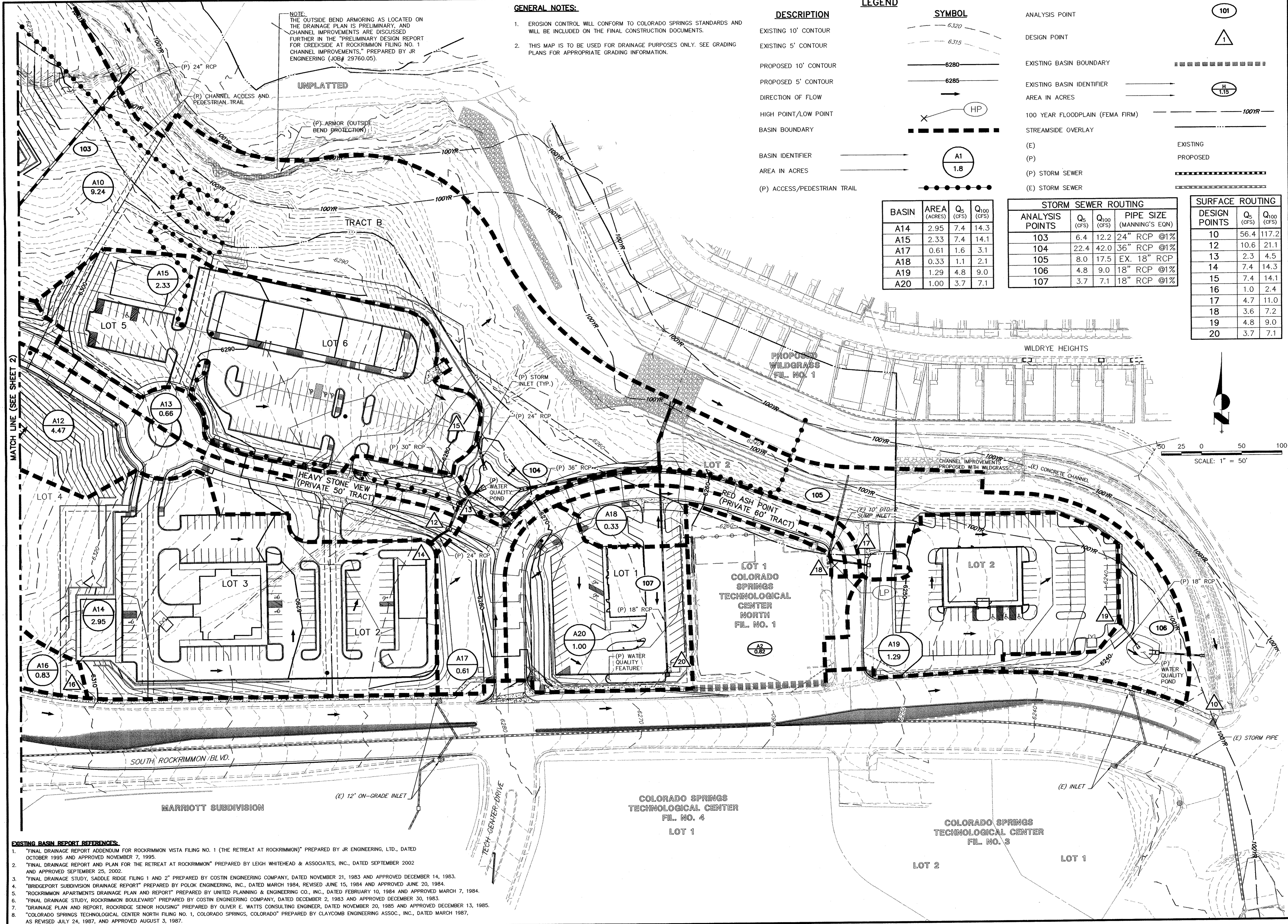
NO.	REVISION	DATE	BY	DATE
1	PER CITY COMMENTS	ACS 19/10/08		
2	PER CITY COMMENTS	JAM 12/11/08		

H-SCALE: 1" = 50'
V-SCALE: N/A
DATE: 7/9/08
DESIGNED BY: ACS
DRAWN BY: TLM
CHECKED BY:

CREEKSIDE AT ROCKRIMMON FILING NO.1

FINAL DRAINAGE PLAN

SHEET 2 OF 3
JOB NO. 29760.00



NOTE:
THE OUTSIDE BEND ARMORING AS LOCATED ON THE DRAINAGE PLAN IS PRELIMINARY, AND CHANNEL IMPROVEMENTS ARE DISCUSSED FURTHER IN THE "PRELIMINARY DESIGN REPORT FOR CREEKSIDE AT ROCKRIMMON FILING NO. 1 CHANNEL IMPROVEMENTS," PREPARED BY JR ENGINEERING (JOB# 29760.05).

GENERAL NOTES:

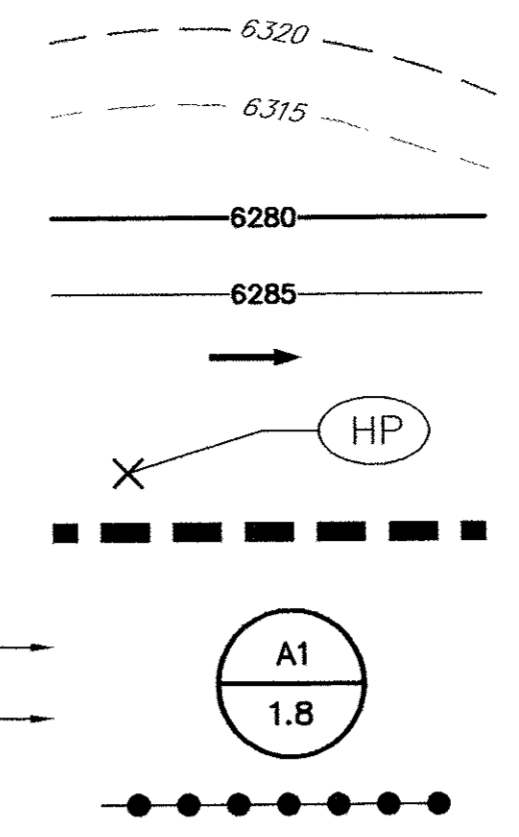
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DESCRIPTION

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- PROPOSED 10' CONTOUR
- PROPOSED 5' CONTOUR
- DIRECTION OF FLOW
- HIGH POINT/LOW POINT
- BASIN BOUNDARY
- BASIN IDENTIFIER
- AREA IN ACRES
- (P) ACCESS/PEDESTRIAN TRAIL

LEGEND

SYMBOL



ANALYSIS POINT

- DESIGN POINT
- EXISTING BASIN BOUNDARY
- EXISTING BASIN IDENTIFIER
- AREA IN ACRES
- 100 YEAR FLOODPLAIN (FEMA FIRM)
- STREAMSIDE OVERLAY
- (E) EXISTING
- (P) PROPOSED
- (P) STORM SEWER
- (E) STORM SEWER

BASIN	AREA (ACRES)	Q ₅ (CFS)	Q ₁₀₀ (CFS)
A14	2.95	7.4	14.3
A15	2.33	7.4	14.1
A17	0.61	1.6	3.1
A18	0.33	1.1	2.1
A19	1.29	4.8	9.0
A20	1.00	3.7	7.1

STORM SEWER ROUTING			
ANALYSIS POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)	PIPE SIZE (MANNING'S EQN)
103	6.4	12.2	24" RCP @1%
104	22.4	42.0	36" RCP @1%
105	8.0	17.5	EX. 18" RCP
106	4.8	9.0	18" RCP @1%
107	3.7	7.1	18" RCP @1%

SURFACE ROUTING		
DESIGN POINTS	Q ₅ (CFS)	Q ₁₀₀ (CFS)
10	56.4	117.2
12	10.6	21.1
13	2.3	4.5
14	7.4	14.3
15	7.4	14.1
16	1.0	2.4
17	4.7	11.0
18	3.6	7.2
19	4.8	9.0
20	3.7	7.1

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE DIVISION OF PUBLIC WORKS, ENGINEERING, THE ENGINEER ASSUMES NO LIABILITY FOR THEIR USE. APPROVALS FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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MATCH LINE (SEE SHEET 2)

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ACS	9/10/08	1	PER CITY COMMENTS	N/A		7/9/08	ACS		TLM	
JAM	12/11/08	2	PER CITY COMMENTS							

CREEKSIDE AT ROCKRIMMON FILING NO. 1

FINAL DRAINAGE PLAN

SHEET 3 OF 3
JOB NO. 29760.00