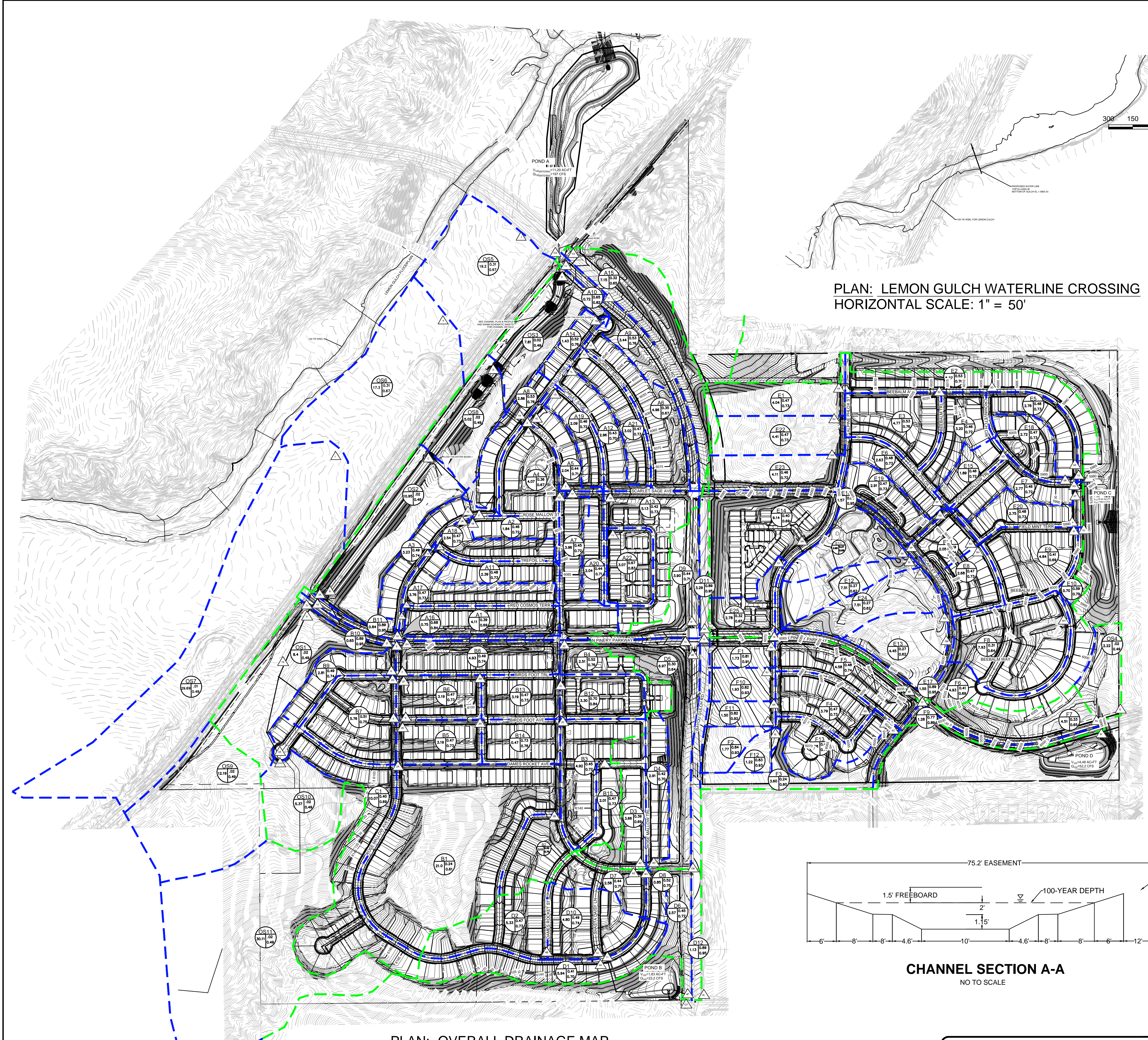
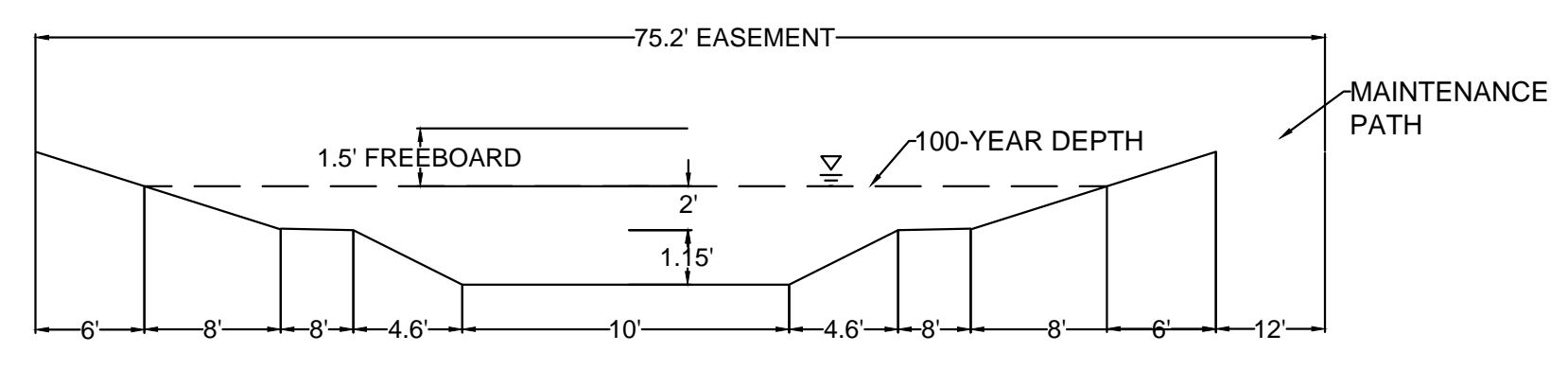


N:\PROJECTS\SSR\BENCH\ENGINEERING\DRAINAGE\FINAL\DRAINAGE STUDIES\DRAINAGE MAPS\FINAL OVERALL DRAINAGE MAP.DWG, A5E1NDK, 4/10/2018 8:23 AM

CALL 811  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
UNCC 1-800-922-1987  
UTILITY NOTIFICATION  
CENTER OF COLORADO



**PLAN: OVERALL DRAINAGE MAP**  
HORIZONTAL SCALE: 1" = 50'

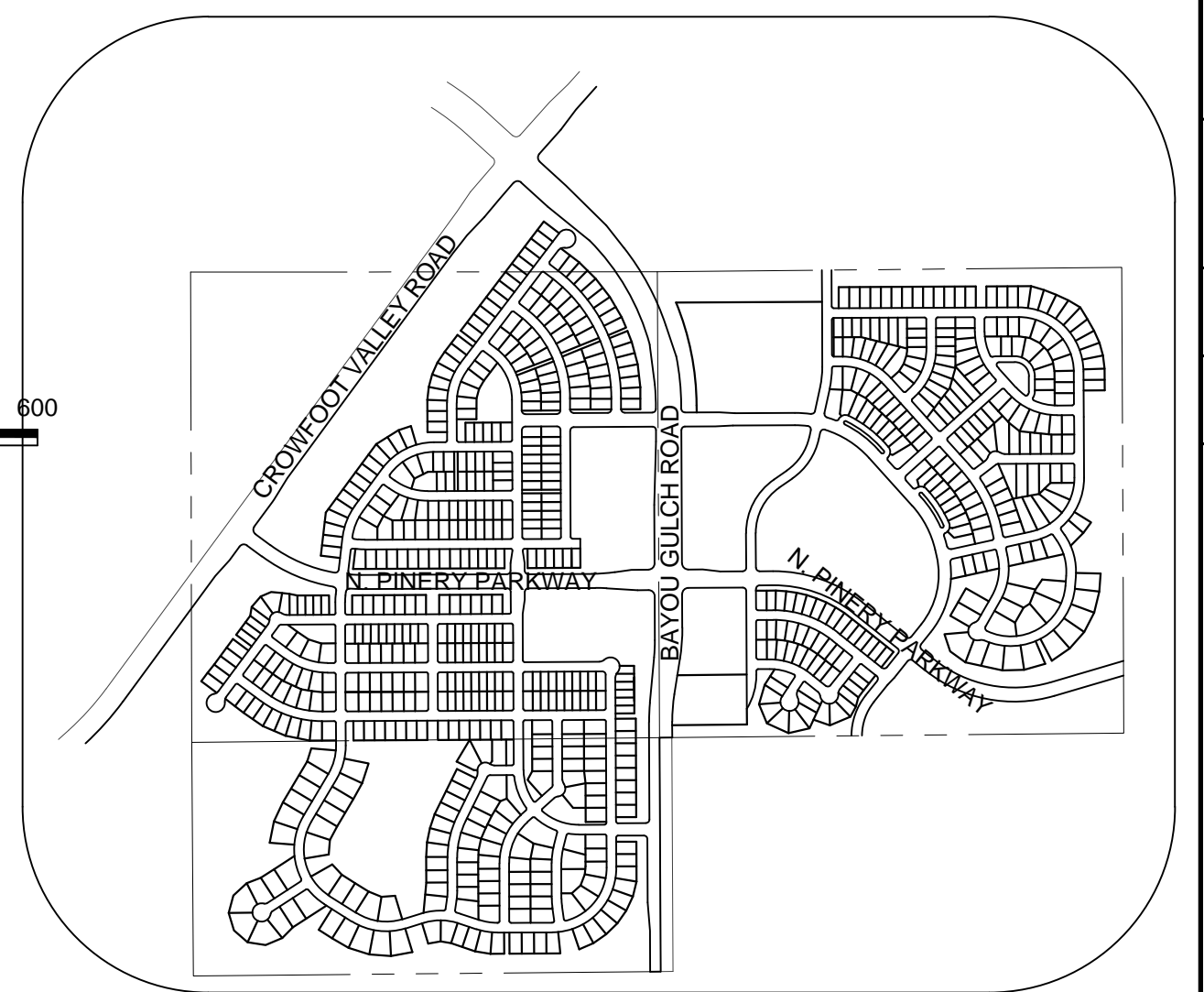
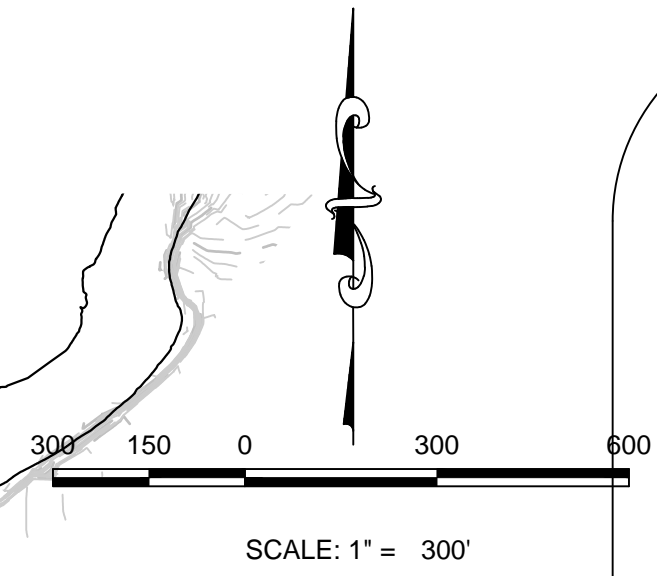


**CHANNEL SECTION A-A**  
NO TO SCALE

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 69355 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

**PLAN: LEMON GULCH WATERLINE CROSSING**  
HORIZONTAL SCALE: 1" = 50'



**KEYMAP**  
N.T.S.

**LEGEND**

	DESIGN POINT
	XX = BASIN ID    A= AREA R2= 2 YR RUNOFF CO-EFF R100= 100 YR RUNOFF CO-EFF
	DETENTION POND
	CHANNEL DROP STRUCTURE
	BASIN LINE
	MAJOR BASIN LINE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED FLOW ARROW

- NOTE:**
- THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.
  - PONDS ARE MAINTAINED BY METRO DISTRICT.
  - OUTLET STRUCTURE AND OVERFLOW WEIR DETAILS ARE PROVIDED WITH CIVIL PLANS.
  - DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED, AND ON FILE WITH THE TOWN OF PARKER.

TOWN OF PARKER, PUBLIC WORKS DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_  
TOWN OF PARKER, PUBLIC WORKS MANAGER - STORMWATER \_\_\_\_\_ DATE \_\_\_\_\_  
TOWN OF PARKER, PUBLIC WORKS MANAGER - TRANSPORTATION \_\_\_\_\_ DATE \_\_\_\_\_

PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER  
COLORADO P.E. 48988

SHEET NUMBER	DRAWN BY: AYK	CHECKED BY: JJ	DATE: MAY 2017	SCALE:	AS SHOWN	FILE NO:	8130283701												
				1A															
TRAILS AT CROWFOOT FINAL DRAINAGE MAP OVERALL DRAINAGE MAP																			
ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112																			
10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9548																			
<table border="1"> <tr> <th>No.</th> <th>Revisions</th> <th>Date</th> <th>Init.</th> <th>Appr.</th> <th>Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>								No.	Revisions	Date	Init.	Appr.	Date						
No.	Revisions	Date	Init.	Appr.	Date														

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	2.54	52.87	2.95	11.99	Local	2.00
A19	2.09	58.47	2.51	10.32	Local	4.00
A20	2.04	49.08	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.62	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.16	12.02	Local	5.00
B5	3.19	53.20	3.68	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.68	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
E1	4.04	52.65	4.95	20.19	Local	2.70
E2	5.27	52.02	4.71	19.36	Local	0.00
E3	4.77	52.31	5.64	23.07	Local	3.00
E4	3.20	52.07	3.78	14.69	Local	4.00
E5	2.76	53.77	3.09	12.43	Local	0.00
E6	2.63	53.59	3.06	12.34	Local	1.00
E7	2.77	51.99	3.21	13.17	Local	0.00
E8	2.68	53.33	3.13	12.64	Local	2.00
E9	4.84	39.52	3.92	19.46	Local	2.00
E10	0.70	56.03	0.85	3.31	Local	1.00
E11	3.99	30.00	2.48	14.96	Local	1.00
E12	3.28	30.00	2.04	12.33	Local	6.00
E13	4.45	30.00	2.76	16.67	Local	1.00
E14	9.14	44.35	8.62	39.37	Local	0.00
E15	1.80	51.97	2.08	8.65	Local	2.00
E16	1.57	73.60	2.68	8.89	Local	6.00
E17	1.55	73.60	2.64	8.78	Local	1.00
E18	2.72	52.96	3.45	14.00	Local	1.50
E19	2.91	53.40	3.58	14.46	Local	1.20
E20	2.75	53.49	3.12	12.57	Local	2.00
E21	2.05	54.72	2.56	10.18	Local	2.00
E22	4.41	53.09	5.39	21.86	Local	2.70
E23	4.11	51.69	4.81	19.86	Local	2.70
E24	4.23	30.00	2.63	15.87	Local	2.00
E25	2.78	35.90	2.16	11.51	Local	2.00

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
F1	1.71	90.64	4.59	13.55	Local	2.50
F2	1.77	93.50	4.96	14.53	Local	2.50
F3	3.60	19.77	1.47	12.47	Local	1.00
F4	3.79	53.06	4.56	18.47	Local	4.00
F5	4.58	46.86	4.46	19.66	Res. Blvd	4.00
F6	4.93	38.37	3.70	18.75	Local	0.00
F7	4.51	18.05	1.68	15.41	Res. Blvd	0.00
F8	7.93	34.99	5.57	30.18	Local	0.00
F9	1.28	66.27	1.75	6.18	Res. Blvd	0.00
F10	1.93	92.20	5.30	15.64	Local	2.50
F11	1.50	91.79	4.07	12.03	Local	2.50
F12	1.22	93.17	3.39	9.95	Local	2.50
F13	3.58	52.91	4.36	17.70	Local	4.00

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
1A	3.84	17.73	
1B	5.04	60.61	
1C	18.94	72.95	
1D	22.01	88.25	
1E	4.69	74.09	
1F	9.74	45.15	
1G	4.44	61.21	
1H	24.90	99.54	
1I	3.75	15.73	
1J	7.60	40.45	
1K	2.92	11.75	
1L	3.22	13.95	
1M	9.77	37.49	
1N	11.20	49.77	
1O	3.58	23.96	
1P	5.05	21.53	
1Q	6.90	27.93	
1R	2.95	11.99	
1S	2.51	10.32	
1T	6.64	44.92	
1U	6.71	27.72	
1	11.54	45.92	
2	15.83	42.02	
3	15.88	(Not Relavant for 100 year)	
4	19.35	41.99	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
2A	13.11	74.41	
2B	6.15	15.75	
2C	5.58	33.21	
2D	13.83	60.55	
2E	3.88	76.36	
2F	3.88	29.09	
2G	5.79	24.54	
2H	4.95	21.81	
2I	2.94	35.69	
2J	26.73	169.56	
2K	27.76	172.83	
2L	10.97	50.07	
2M	3.88	15.72	
2N	3.88	15.72	
2O	2.50	10.13	
5	18.73	76.25	
6	7.44	(Not Relavant for 100 year)	
7	7.40	(Not Relavant for 100 year)	
9	19.80	84.75	
10	32.55	84.62	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
3A	8.95	54.35	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
4A	18.01	80.94	
4B	5.58	24.83	
4C	3.28	15.11	
4D	5.63	26.26	
4E	8.32	42.18	
4F	5.19	24.34	
4G	2.48	11.76	
4H	1.06	4.38	
4I	4.06	17.30	
4J	10.66	45.70	
4K	6.19	19.00	
4L	2.94	10.02	
11	12.69	56.80	
12	11.38	55.22	
13	15.66	68.43	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
14	32.04	124.18	
15	36.95	142.09	
5A	14.28	56.31	
5B	9.56	77.69	
5C	18.85	70.87	
5D	21.89	79.97	
5E	23.45	83.44	
5F	3.06	12.34	
5G	6.16	142.25	
5H	29.48	81.28	
5I	3.92	19.46	
5J	0.85	3.31	
5K	2.48	14.96	
5L	4.60	27.74	
5M	2.76	16.67	
5N	10.74	49.99	
5O	2.08	8.55	
5P	19.53	49.94	
5Q	5.06	23.96	
5R	4.86	14.00	
5S	24.94	67.90	
5T	3.12	12.57	
5U	2.56	10.18	
5V	9.85	39.52	
5W	4.81	19.86	
5X	2.63	15.87	
5Y	2.16	11.51	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
6A	21.41	56.88	
6B	8.28	23.93	
6C	9.45	44.87	
6D	4.56	18.47	
6E	29.25	58.80	
6F	13.68	59.19	
6G	3.39	22.24	
6H	10.08	42.10	
6I	1.75	36.44	
6Ia	-	78.50	
6J	17.19	46.79	
6K	12.18	34.01	
6L	3.39	9.95	
6M	8.80	35.37	
16	27.15	55.27	
17	36.01	97.22	

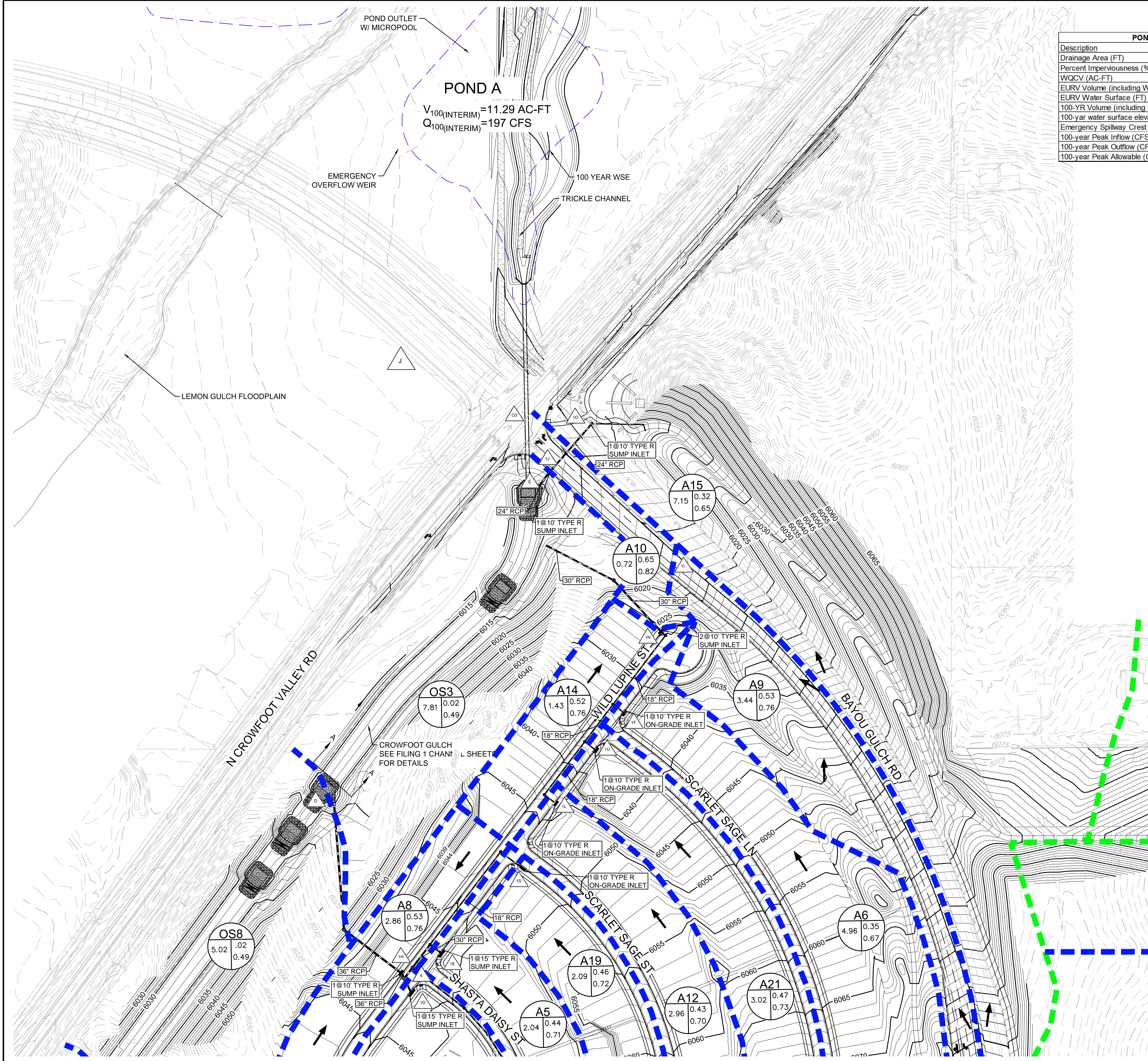
CHANNEL DESIGN POINT SUMMARY			
Design Point ID	Q5 (CFS)	Q100 (CFS)	
A	25.55	76.45	
B	49.11	150.81	
C	58.29	188.03	
D	73.01	240.76	
E	83.23	280.45	

NOTE: Flows are from SWMM analysis. See drainage report for more details.

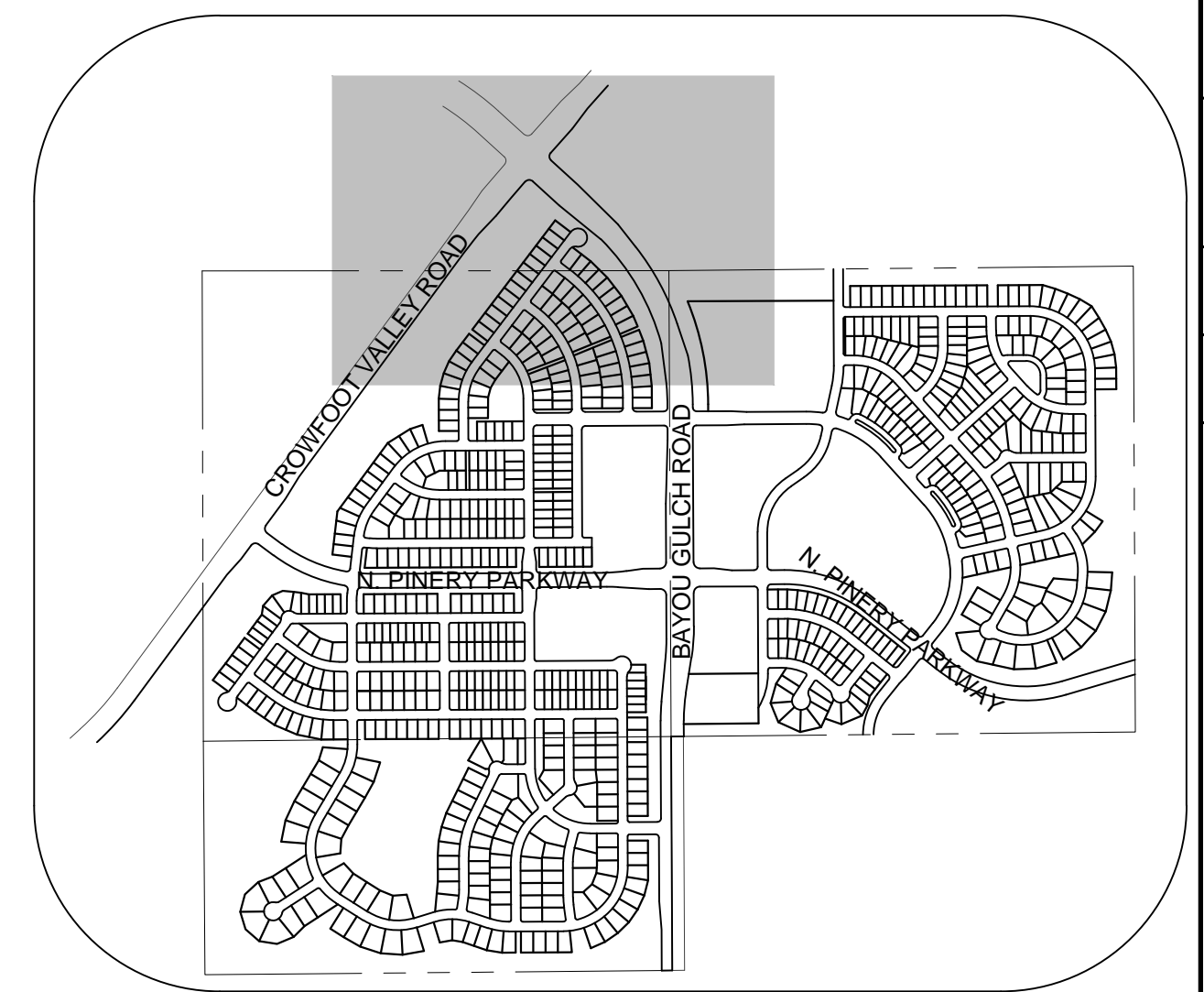
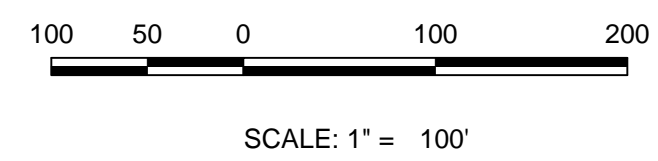
SWMM BASIN SUMMARY			
Design Point ID	Q5 (CFS)	Q100 (CFS)	
A-1	11.86	32.59	
A-2	19.60	53.08	
A-3	7.60	21.76	
A-4	5.01	16.11	
B-1	20.87	66.84	
B-2	26.81	74.30	
C-1	14.00	39.86	
OS-1	1.82	9.80	
OS-2	1.62	8.90	
OS-3	1.02	5.59	
OS-4	0.31	1.87	
OS-5	1.55	7.82	

POND A	
Description	
Drainage Area (FT)	174.49
Percent Imperviousness (%)	37.55
WQCV (AC-FT)	2.314
EURV Volume (including WQVC) (AC-FT)	6.12
EURV Water Surface (FT)	5995.39
100-YR Volume (including EURV) (AC-FT)	11.29
100-yr water surface elevation (FT)	5997.19
Emergency Spillway Crest Elevation (FT)	5997.19
100-year Peak Inflow (CFS)	278.84
100-year Peak Outflow (CFS)	197.00
100-year Peak Allowable (CFS)	204.47

POND B	
Description	
Drainage Area (FT)	23.2
Percent Imperviousness (%)	47.36
WQCV (AC-FT)	0.36
EURV Volume (including WQVC) (AC-FT)	1.05
EURV Water Surface (FT)	6092.88
100-YR Volume (including EURV) (AC-FT)	1.83
100-	



POND A	
Description	
Drainage Area (FT)	174.49
Percent Imperviousness (%)	37.55
WQCV (AC-FT)	2.314
EURV Volume (including WQVC) (AC-FT)	6.12
EURV Water Surface (FT)	5995.39
100-YR Volume (including EURV) (AC-FT)	11.29
100-yr water surface elevation (FT)	5997.19
Emergency Spillway Crest Elevation (FT)	5997.19
100-year Peak Inflow (CFS)	278.84
100-year Peak Outflow (CFS)	197.00
100-year Peak Allowable (CFS)	204.47



**KEYMAP**  
N.T.S.

Note:

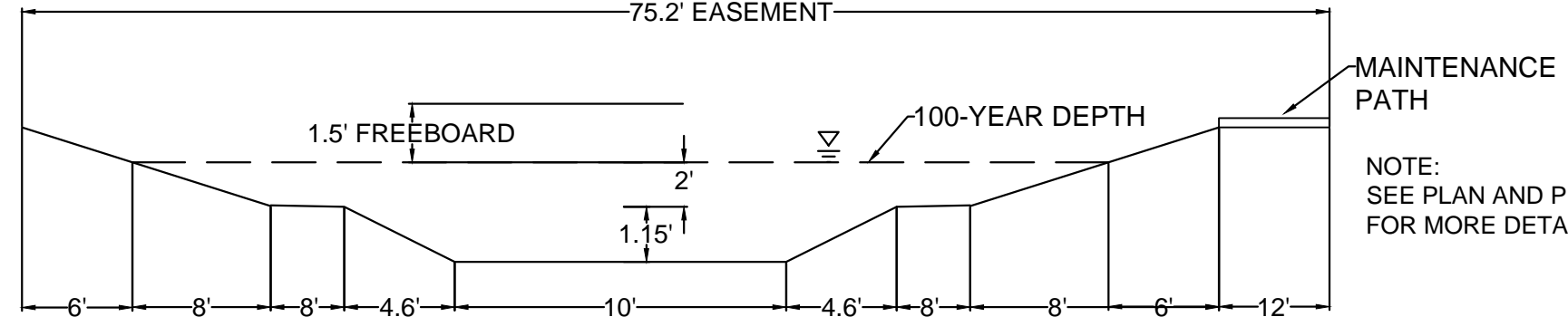
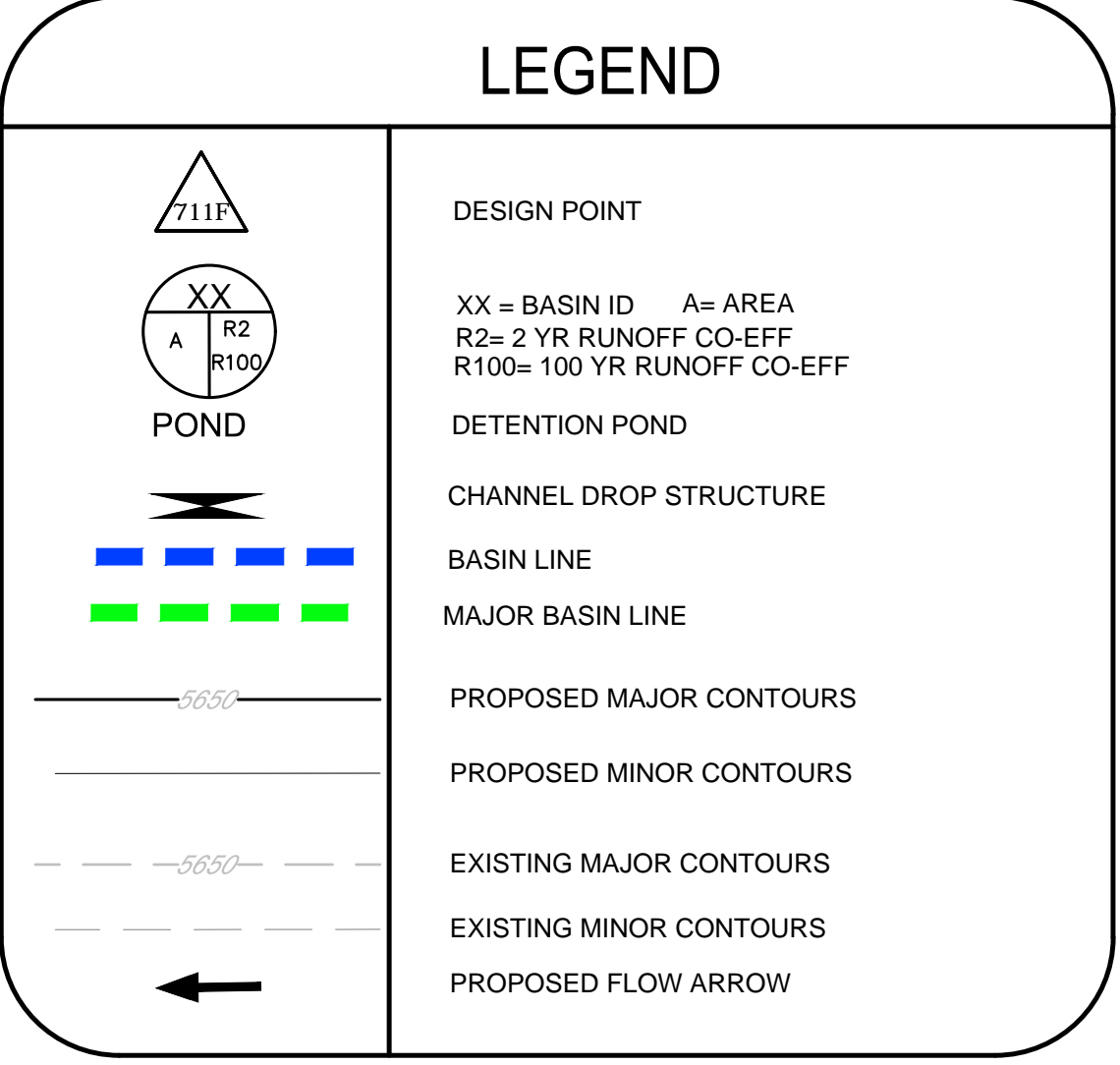
1) 0% slope indicates sump inlet.

BASIN ID	AREA (AC)	Imperviousness %	DIRECT FLOW		Street Type	Slope %
			Q2 (CFS)	Q100 (CFS)		
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	2.54	52.87	2.95	11.99	Local	2.00
A19	2.09	51.95	2.51	10.32	Local	4.00
A20	2.04	49.09	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Design Point ID	CUMULATIVE FLOW	
	Q2 (CFS)	Q100 (CFS)
1A	3.84	17.73
1B	5.04	60.61
1C	18.94	72.95
1D	22.01	88.25
1E	4.69	74.09
1F	9.74	45.15
1G	4.44	61.21
1H	24.90	99.54
1I	3.75	15.73
1J	7.60	40.45
1K	2.92	11.75
1L	3.22	13.95
1M	9.77	37.49
1N	11.20	49.77
1O	3.58	23.96
1P	5.05	21.53
1Q	6.90	27.93
1R	2.95	11.99
1S	2.51	10.32
1T	6.64	44.92
1U	6.71	27.72
1	11.54	45.92
2	15.83	42.02
3	15.88	(Not Relevant for 100 year)
4	19.35	41.99

NOTE:

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**CHANNEL SECTION A-A**  
NO TO SCALE

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

CALL 811  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
UNCCC 1-800-922-1987

PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER  
COLORADO P.E. 48988

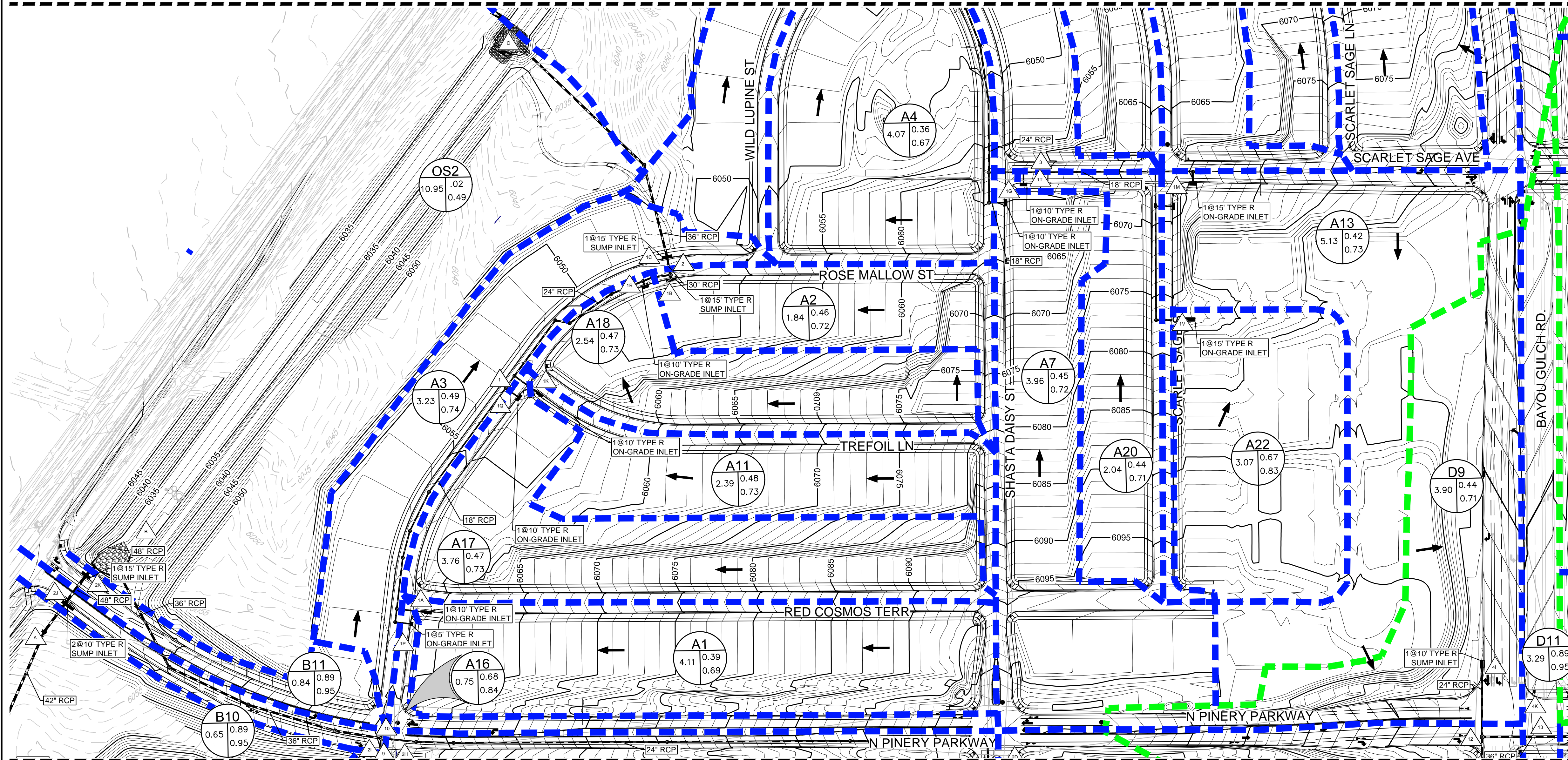
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				TRAILS AT CROWFOOT FINAL DRAINAGE MAP	DRAINAGE MAP		
2	REVISIONS			NO.			
	Date			Date			
Appr.			Date				
Date			Date				

10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80152 Tel: (720) 482-9526 Fax: (720) 482-9546

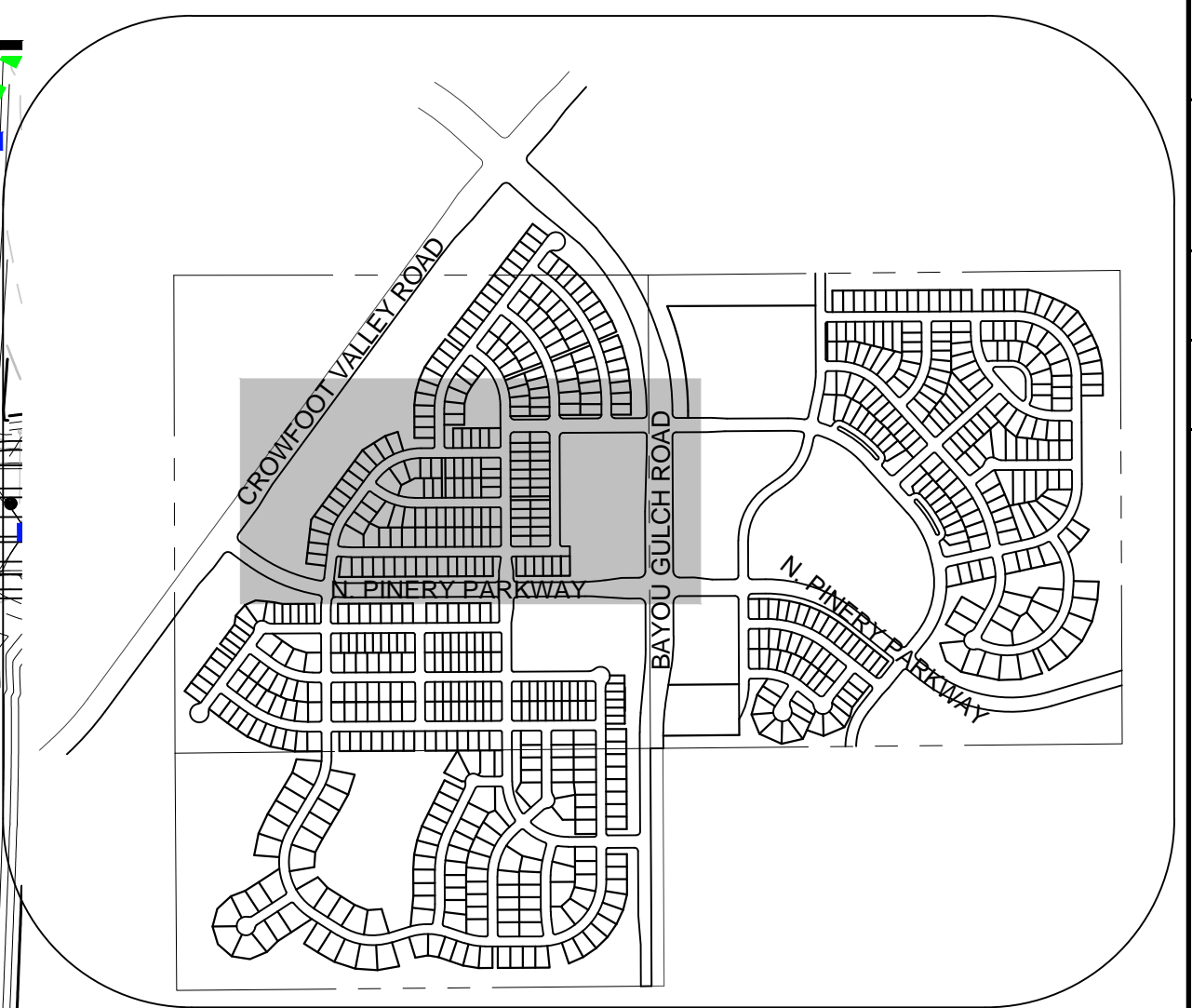
**CVL CONSULTANTS**

ESX MANAGEMENT  
7253 South Alton Way  
CENTENNIAL, CO 80112

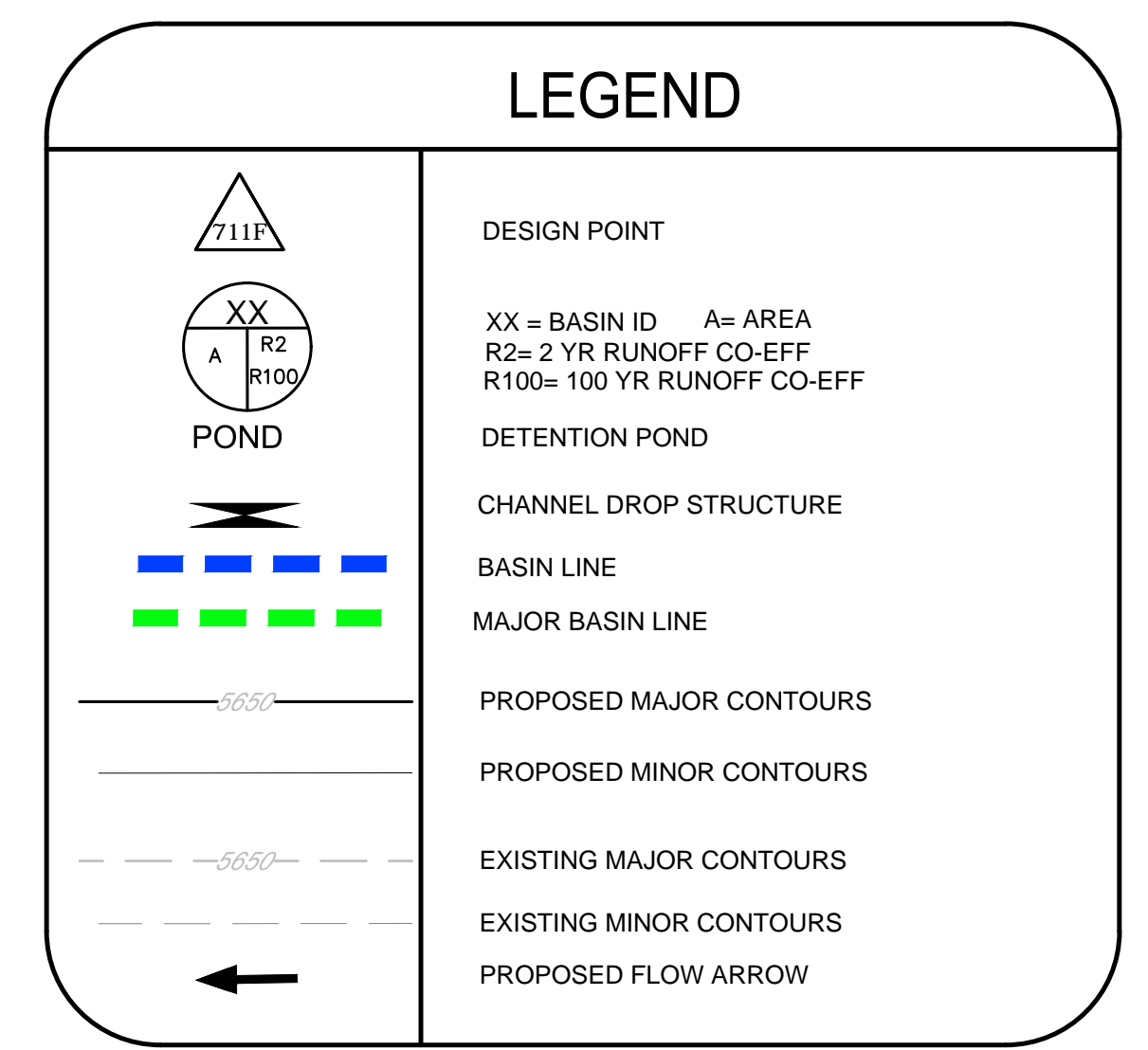
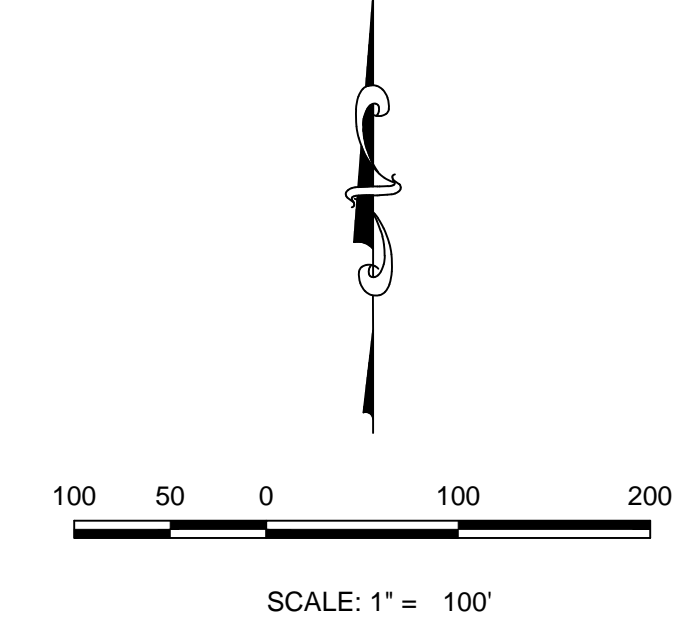
MATCHLINE - SHEET 2



MATCHLINE - SHEET 4



KEYMAP  
N.T.S.



- NOTE:
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Note:  
1) 0% slope indicates sump inlet.

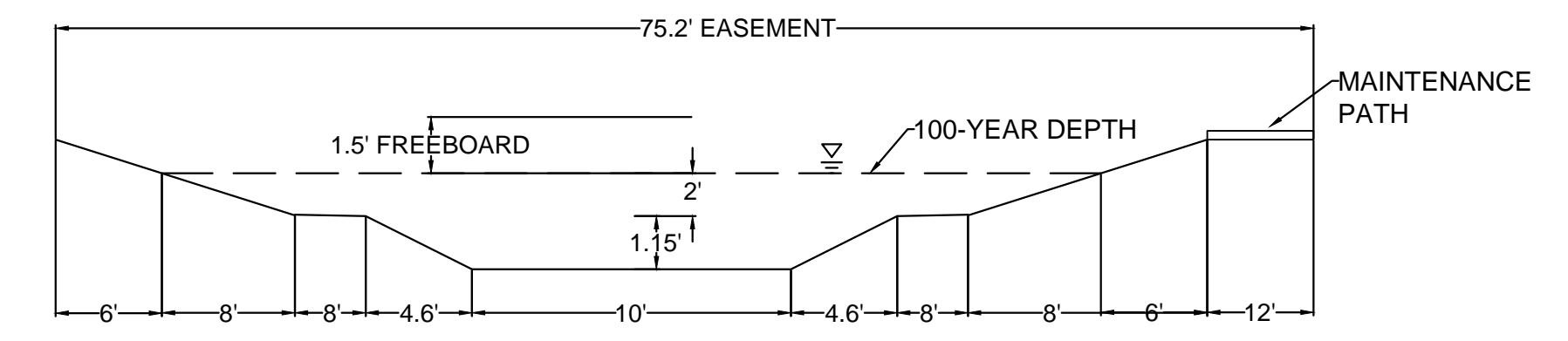
DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	2.54	52.87	2.95	11.99	Local	2.00
A19	2.09	51.95	2.51	10.32	Local	4.00
A20	2.04	49.09	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Note:  
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
1A	3.84	17.73
1B	5.04	60.61
1C	18.94	72.95
1D	22.01	88.25
1E	4.69	74.09
1F	9.74	45.15
1G	4.44	61.21
1H	24.90	99.54
1I	3.75	15.73
1J	7.60	40.45
1K	2.92	11.75
1L	3.22	13.95
1M	9.77	37.49
1N	11.20	49.77
1O	3.58	23.96
1P	5.05	21.53
1Q	6.90	27.93
1R	2.95	11.99
1S	2.51	10.32
1T	6.64	44.92
1U	6.71	27.72
1	11.54	45.92
2	15.83	42.02
3	15.88	(Not Relavant for 100 year)
4	19.35	41.99

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43



CHANNEL SECTION A-A  
NO TO SCALE

CALL 811  
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UNCC 1-800-922-1987

BENCHMARK  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-3/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF  
MARK SCHEURER  
COLORADO P.E. 48988

10333 E. Dry Creek Rd., Suite 240  
Englewood, CO 80152  
Tel: (720) 482-9526  
Fax: (720) 482-9546

**CVL CONSULTANTS**

ESX MANAGEMENT  
7353 South Alton Way  
CENTENNIAL, CO 80112

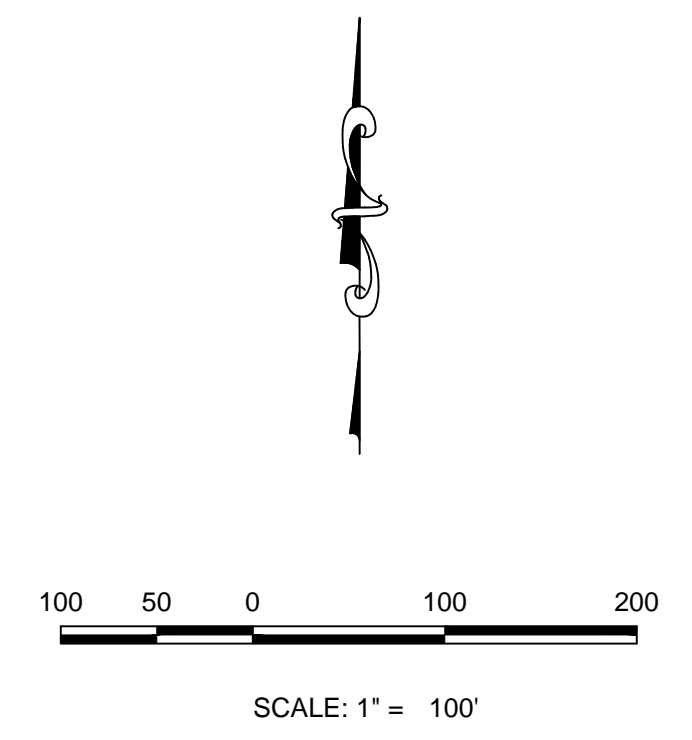
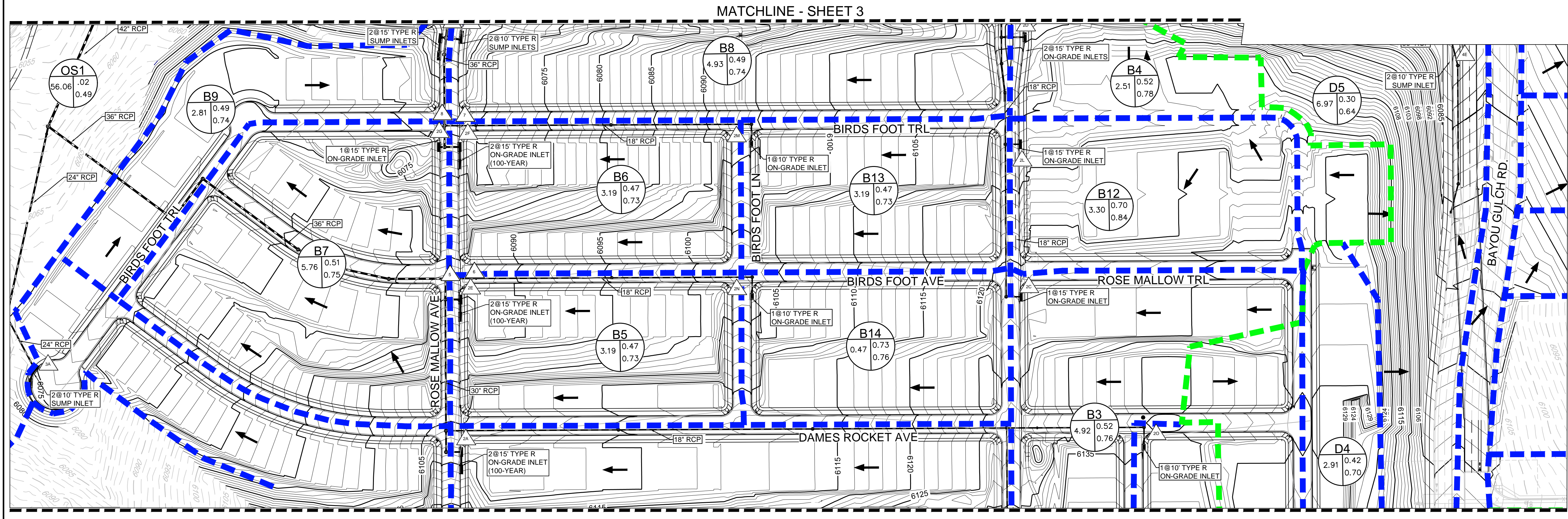
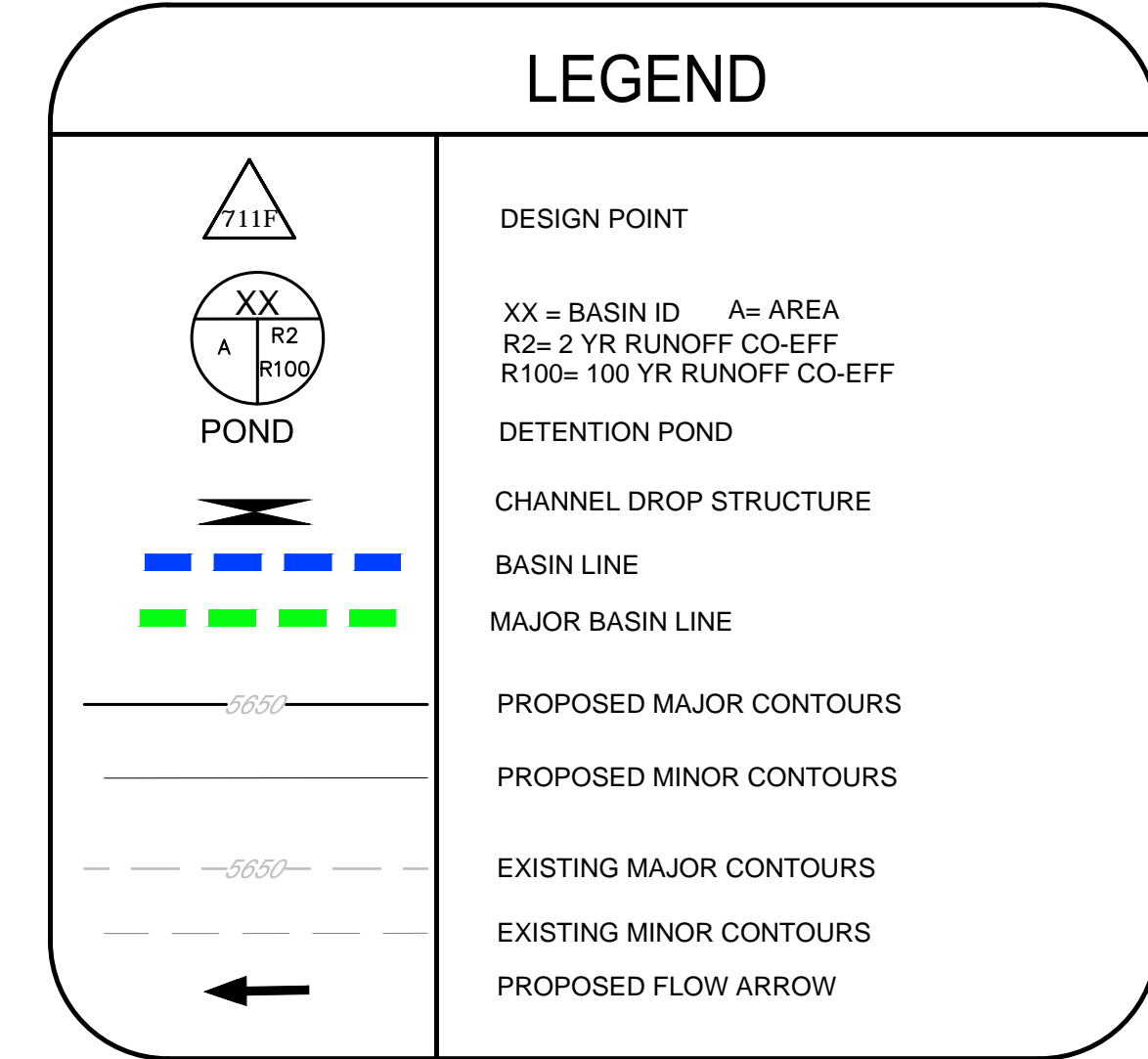
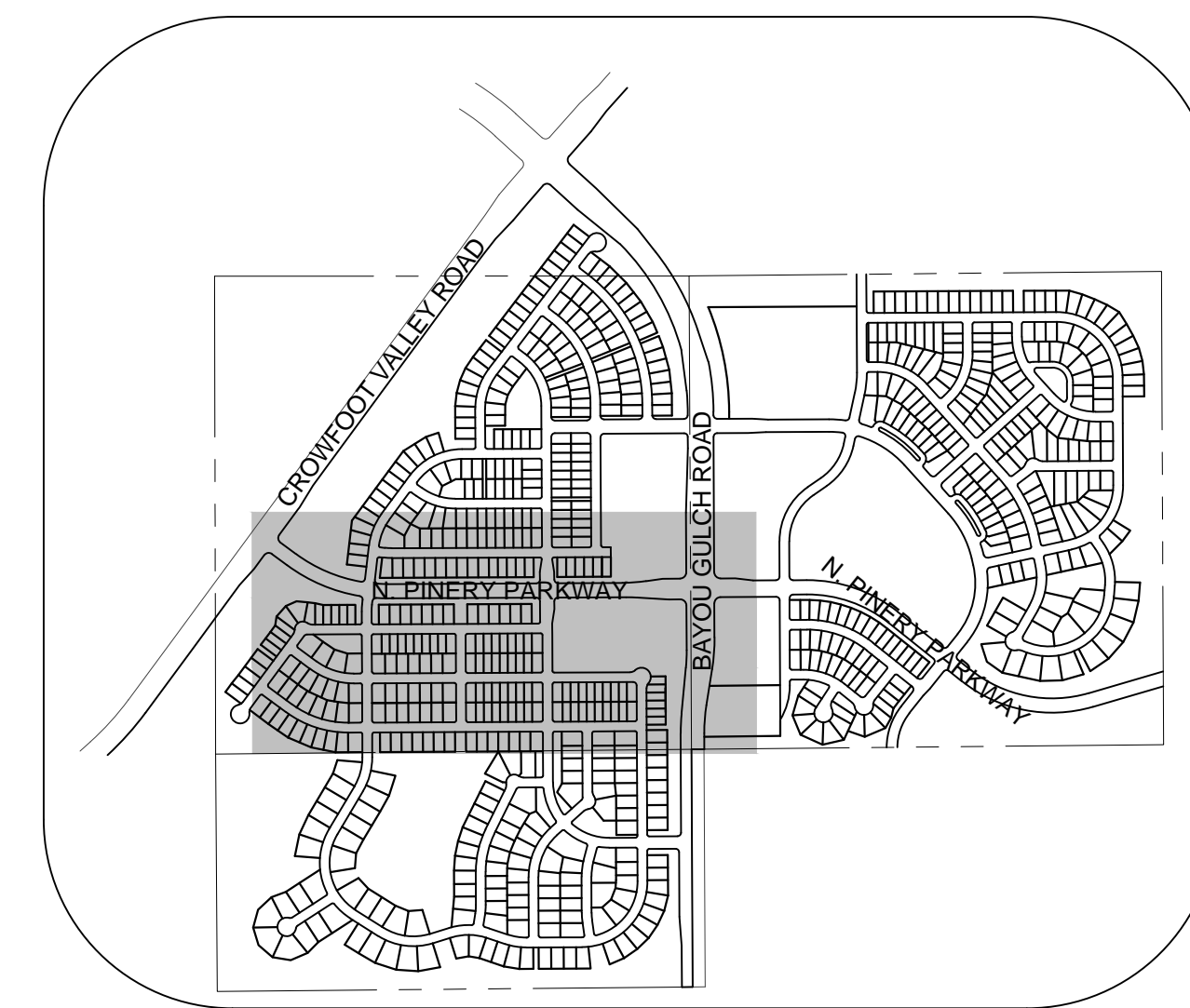
TRAILS AT CROWFOOT  
FINAL DRAINAGE MAP  
DRAINAGE MAP

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: AVK  
CHECKED BY: JJJ  
DATE: MAY 2017

SHEET NUMBER: 3

No.	Revisions	Date	Init.	Appr.	Date



MATCHLINE - SHEET 3

MATCHLINE - SHEET 5

Note: 1) 0% slope indicates sump inlet.

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %	
		Imperviousness %	Q2 (CFS)			Q100 (CFS)
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.82	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.16	12.02	Local	5.00
B5	3.19	53.20	3.88	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

Note: 1) 0% slope indicates sump inlet.

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %	
		Imperviousness %	Q2 (CFS)			Q100 (CFS)
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW		
Design Point	Q2 (CFS)	Q100 (CFS)
2A	13.11	74.41
2B	6.15	15.75
2C	5.58	33.21
2D	13.83	60.55
2E	3.88	76.36
2F	3.88	29.09
2G	5.79	24.54
2H	4.95	21.81
2I	2.94	35.69
2J	26.73	169.56
2K	27.76	172.83
2L	10.97	50.07
2M	3.88	15.72
2N	3.88	15.72
2O	2.50	10.13
5	18.73	76.25
6	7.44	(Not Relavant for 100 year)
7	7.40	(Not Relavant for 100 year)
9	19.80	84.75
10	32.55	84.62

CUMULATIVE FLOW		
Design Point	Q2 (CFS)	Q100 (CFS)
3A	8.95	54.35
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43

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TWO WORKING DAYS  
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UNCC 1-800-922-1987

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

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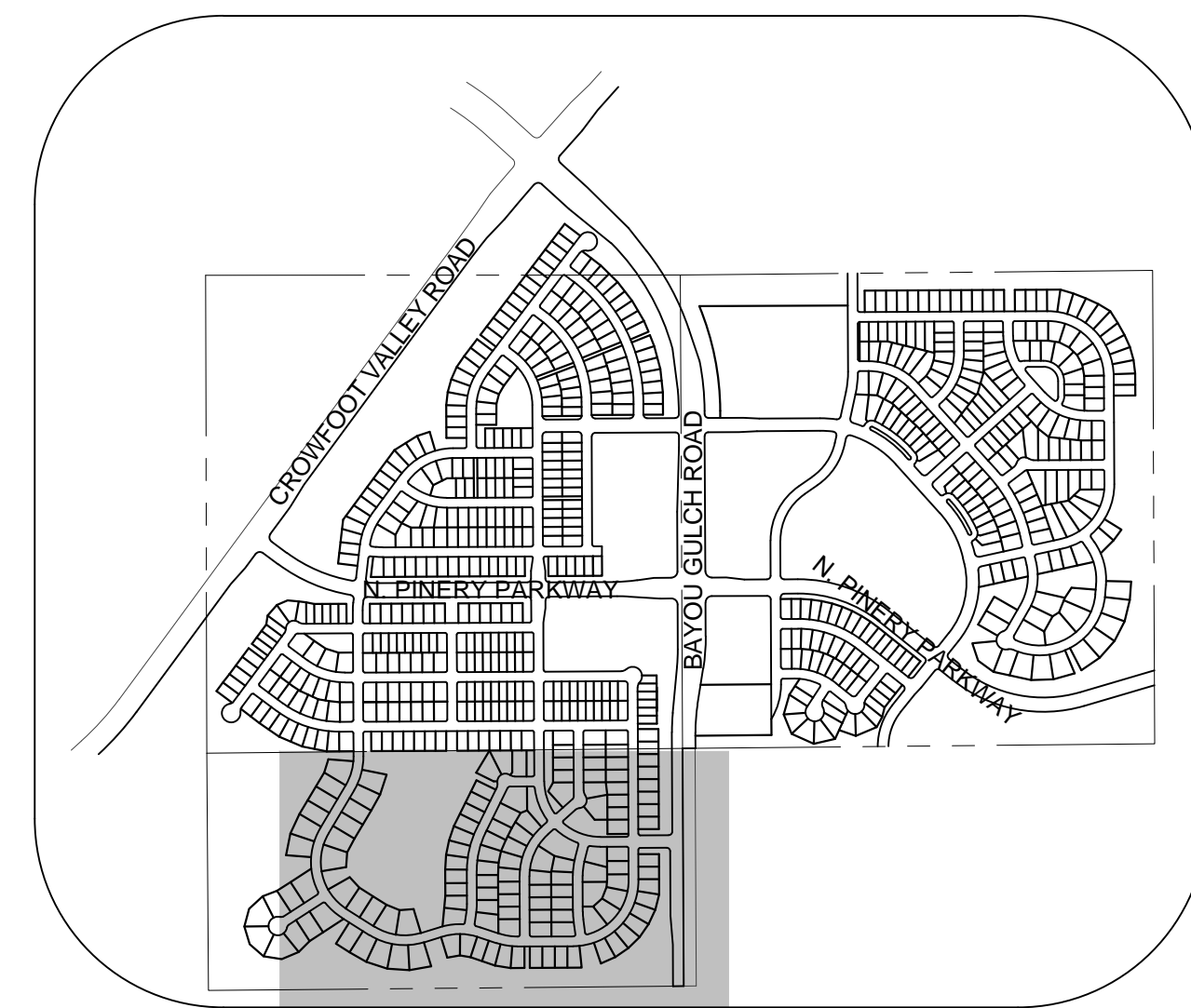
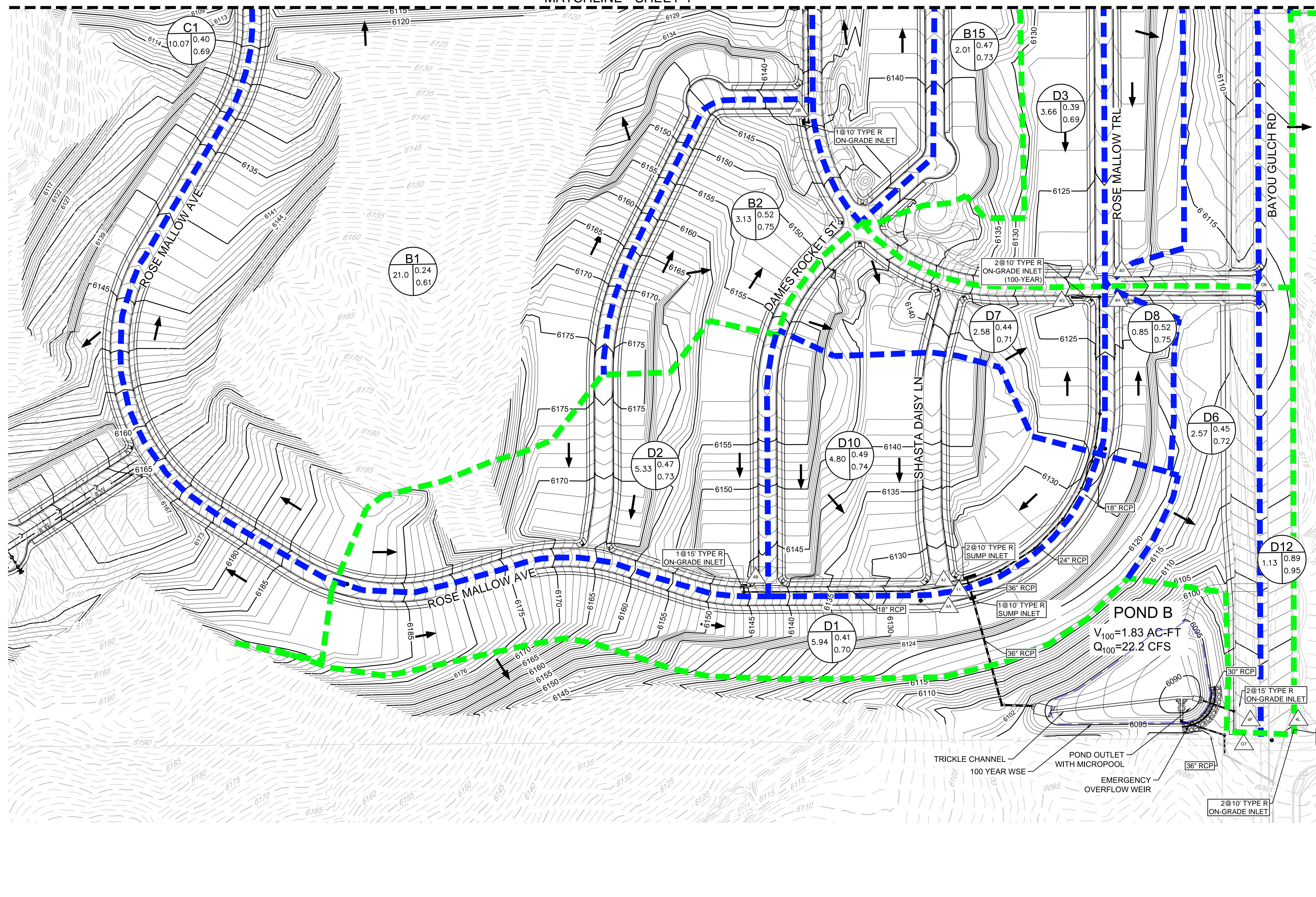
TRAILS AT CROWFOOT  
FINAL DRAINAGE MAP  
DRAINAGE MAP

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: AVK  
CHECKED BY: JJ  
DATE: MAY 2017

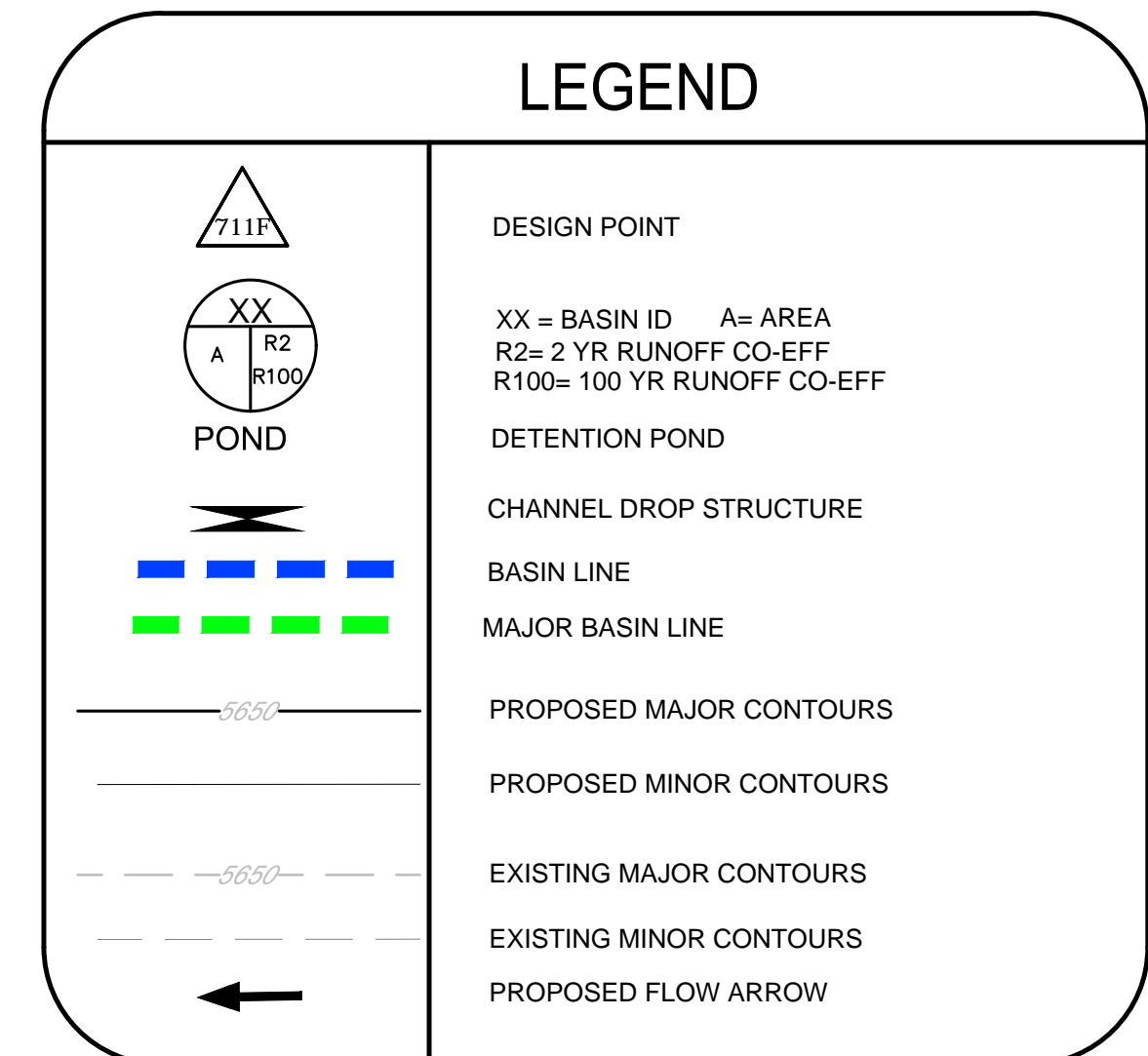
SHEET NUMBER: 4

Revisions: No. Date Init. Appr. Date



KEYMAP  
N.T.S.

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Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.82	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.16	12.02	Local	5.00
B5	3.19	53.20	3.88	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW

Design Point	Q2 (CFS)	Q100 (CFS)
2A	13.11	74.41
2B	6.15	15.75
2C	5.58	33.21
2D	13.83	60.55
2E	3.88	76.36
2F	3.98	29.09
2G	5.79	24.54
2H	4.95	21.81
2I	2.94	35.69
2J	26.73	169.56
2K	27.76	172.83
2L	10.97	50.07
2M	3.88	15.72
2N	3.88	15.72
2O	2.50	10.13
3	18.73	76.25
6	7.44	(Not Retained for 100 year)
7	7.40	(Not Retained for 100 year)
9	19.80	84.75
10	32.55	84.62

CUMULATIVE FLOW

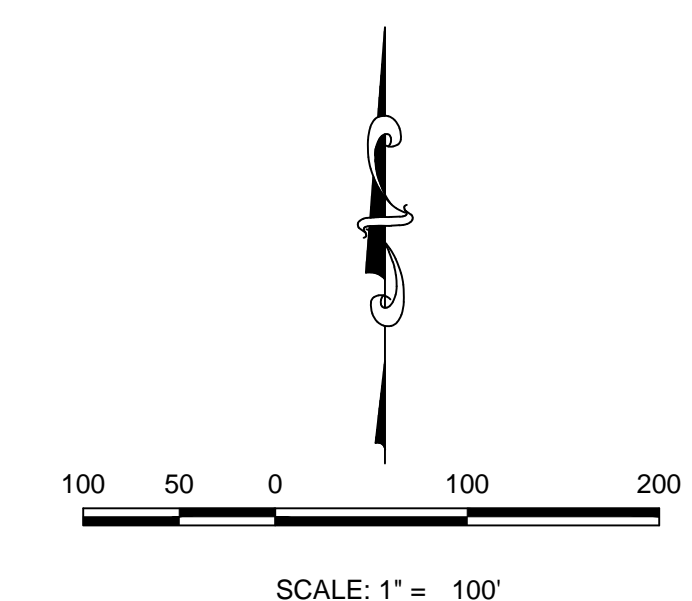
Design Point	Q2 (CFS)	Q100 (CFS)
3A	8.95	54.35
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43

POND B

Description	Value
Drainage Area (FT)	23.2
Percent Imperviousness (%)	47.36
WQCV (AC-FT)	0.36
EURV Volume (including WQVC) (AC-FT)	1.05
EURV Water Surface (FT)	6092.88
100-YR Volume (including EURV) (AC-FT)	1.83
100-year water surface elevation (FT)	6093.98
Emergency Spillway Crest Elevation (FT)	6094.38
100-year Peak Inflow (CFS)	39.83
100-year Peak Outflow (CFS)	22.20
100-year Peak Allowable (CFS)	31.53

BENCHMARK  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-3/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.



PREPARED UNDER THE SUPERVISION OF  
  
MARK SCHEURER  
COLORADO P.E. 48988

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10333 E. Dry Creek Rd., Suite 240, Englewood, CO 80150  
Tel: (720) 482-9526 Fax: (720) 482-9546

**CVL CONSULTANTS**

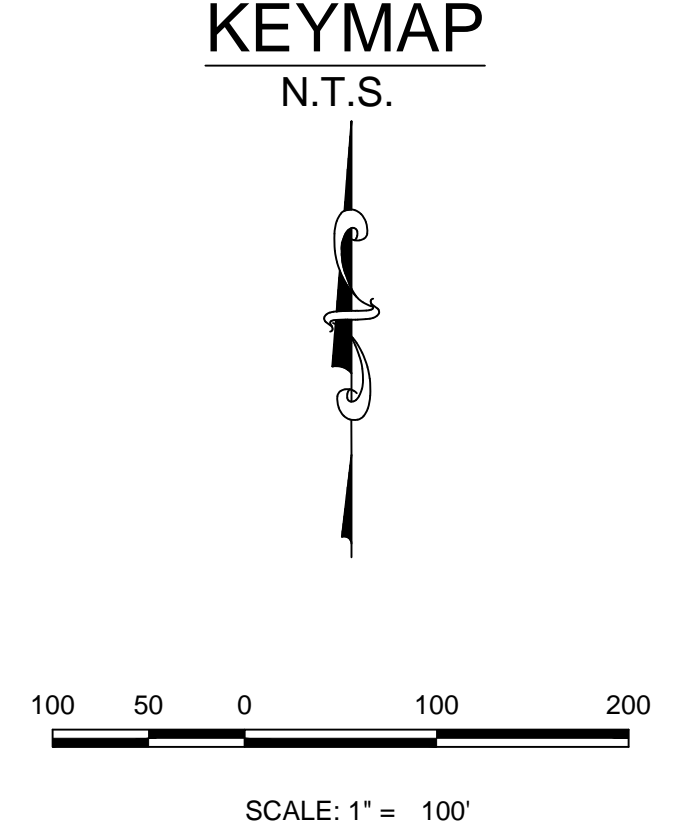
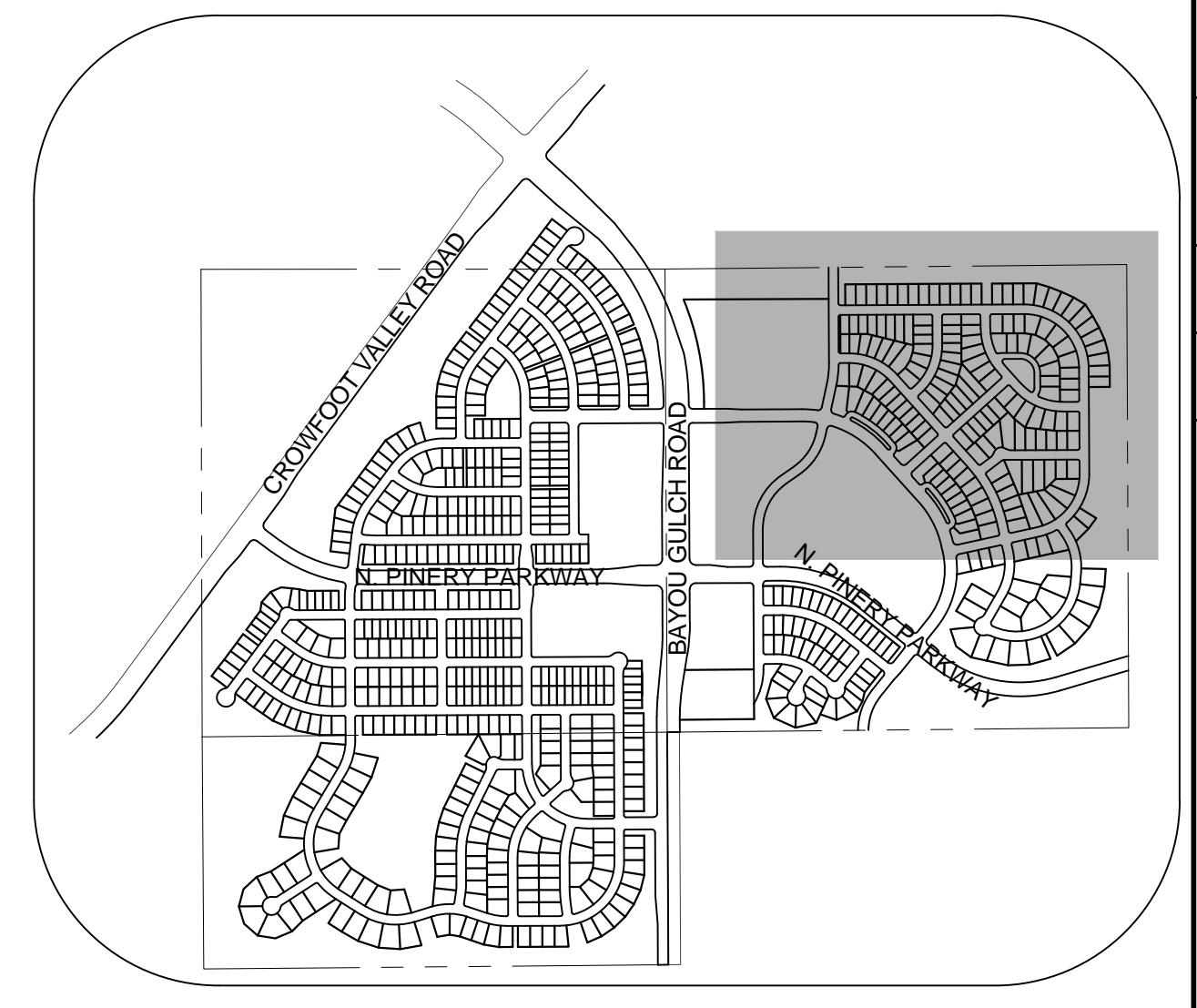
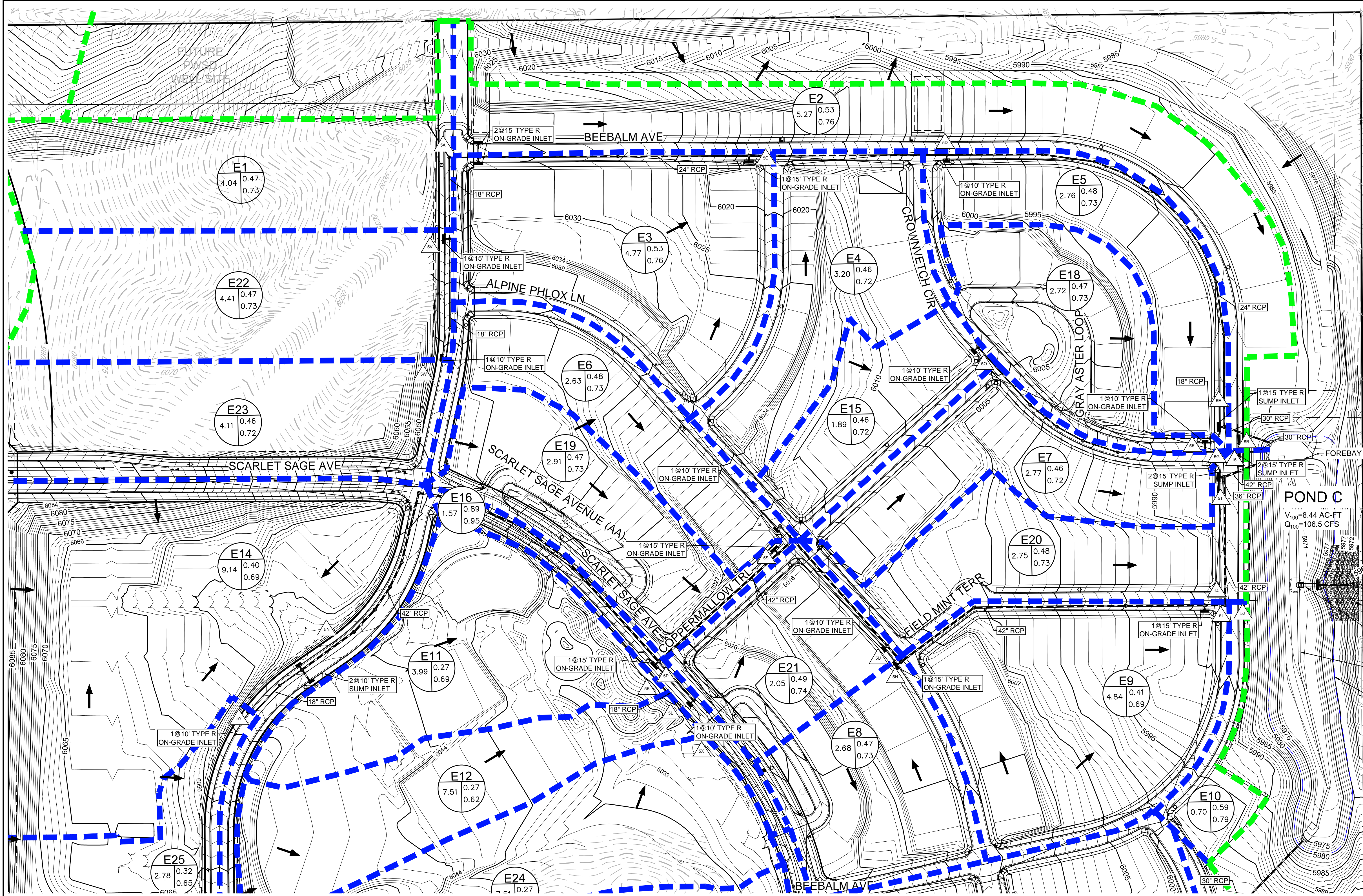
ESX MANAGEMENT  
7253 South Alton Way, CENTENNIAL, CO 80112

TRAILS AT CROWFOOT  
FINAL DRAINAGE MAP  
DRAINAGE MAP

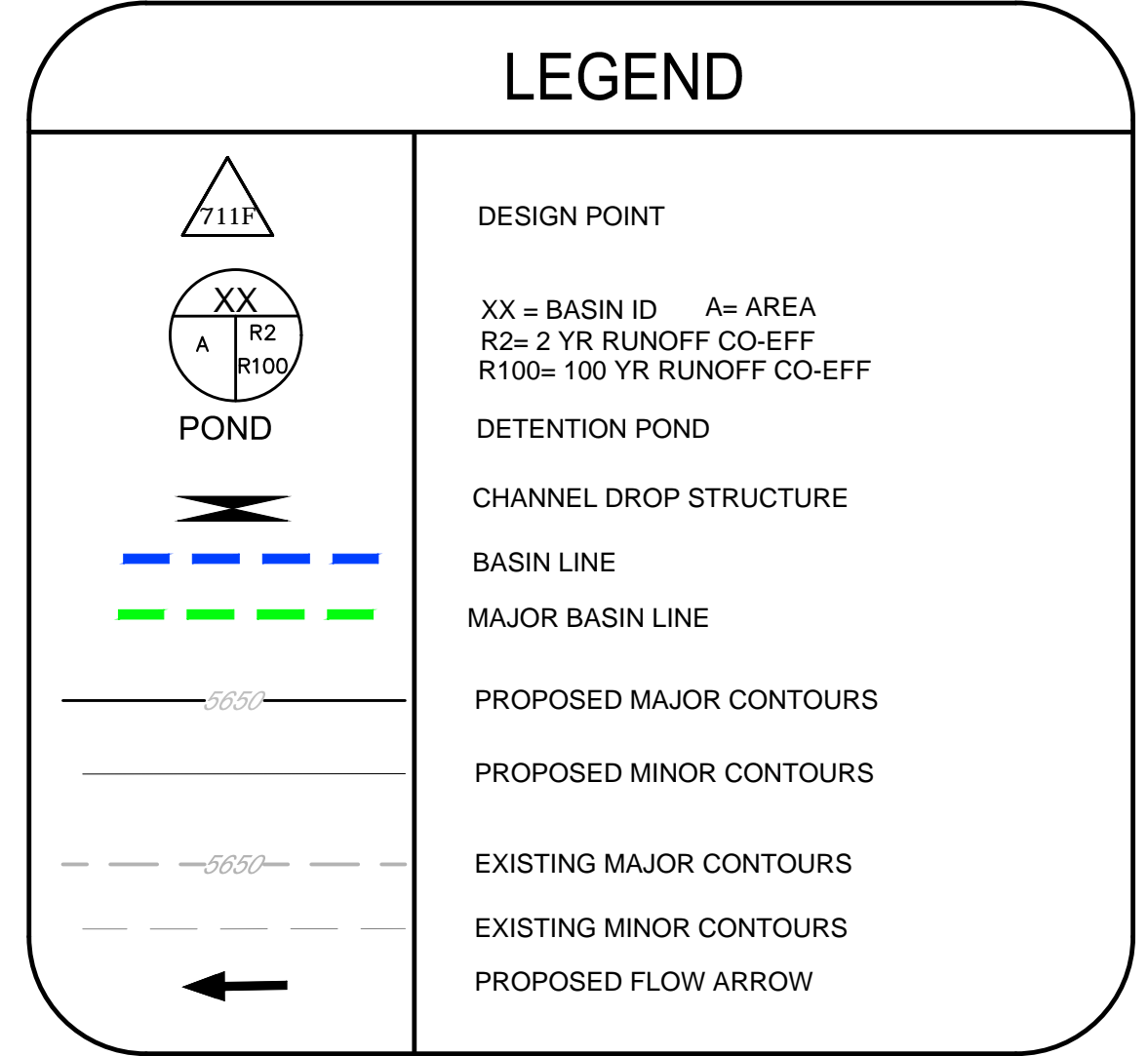
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CHECKED BY: AVK  
DATE: MAY 2017  
FILE NO: 8130283701

SHEET NUMBER 5

No.	Revisions	Date	Appr.	Date



EMERGENCY OVERFLOW WEIR  
POND OUTLET W/ MICROPOND  
TRICKLE CHANNEL  
100 YEAR WSE



MATCHLINE - SHEET 7

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %
		Q2 (CFS)	Q100 (CFS)		
E1	4.04	52.65	20.19	Local	2.70
E2	5.27	52.02	4.71	Local	0.00
E3	4.77	52.31	5.64	Local	3.00
E4	3.20	52.07	3.78	Local	4.00
E5	2.76	53.77	3.09	Local	0.00
E6	2.63	53.59	3.06	Local	1.00
E7	2.77	51.99	3.21	Local	0.00
E8	2.68	53.33	3.13	Local	2.00
E9	4.84	39.52	3.92	Local	2.00
E10	0.70	56.03	0.85	Local	1.00
E11	3.99	30.00	2.48	Local	1.00
E12	3.28	30.00	2.04	Local	6.00
E13	4.45	30.00	2.76	Local	1.00
E14	9.14	44.35	8.62	Local	0.00
E15	1.89	51.97	2.08	Local	2.00
E16	1.57	73.60	2.68	Local	6.00
E17	1.55	73.60	2.64	Local	1.00
E18	2.72	52.96	3.45	Local	1.50
E19	2.91	53.40	3.58	Local	1.20
E20	2.75	53.49	3.12	Local	2.00
E21	2.05	54.72	2.56	Local	2.00
E22	4.41	53.09	5.39	Local	2.70
E23	4.11	51.69	4.81	Local	2.70
E24	4.23	30.00	2.63	Local	2.00
E25	2.78	35.90	2.16	Local	2.00

Design Point ID	CUMULATIVE FLOW (CFS)	
	Q2	Q100
I4	32.04	124.18
I5	36.95	142.09
5A	14.28	56.31
5B	9.56	77.69
5C	18.85	70.87
5D	21.89	79.97
5E	23.45	83.44
5F	3.06	12.34
5G	6.16	142.25
5H	29.48	81.28
5I	3.92	19.46
5J	0.85	3.31
5K	2.48	14.96
5L	4.60	27.74
5M	2.76	16.67
5N	10.74	49.99
5O	2.08	8.55
5P	19.53	49.94
5Q	5.06	23.96
5R	4.86	14.00
5S	24.94	67.90
5T	3.12	12.57
5U	2.56	10.18
5V	9.85	39.52
5W	4.81	19.86
5X	2.63	15.87
5Y	2.16	11.51

POND C	
Description	
Drainage Area (FT)	101.09
Percent Imperviousness (%)	44.49
WQCV (AC-FT)	1.50
EURV Volume (including WQCV) (AC-FT)	4.26
EURV Water Surface (FT)	5975.55
100-YR Volume (including EURV) (AC-FT)	8.44
100-yr water surface elevation (FT)	5977.94
Emergency Spillway Crest Elevation (FT)	5978.15
100-year Peak Inflow (CFS)	204.80
100-year Peak Outflow (CFS)	106.50
100-year Peak Allowable (CFS)	111.36

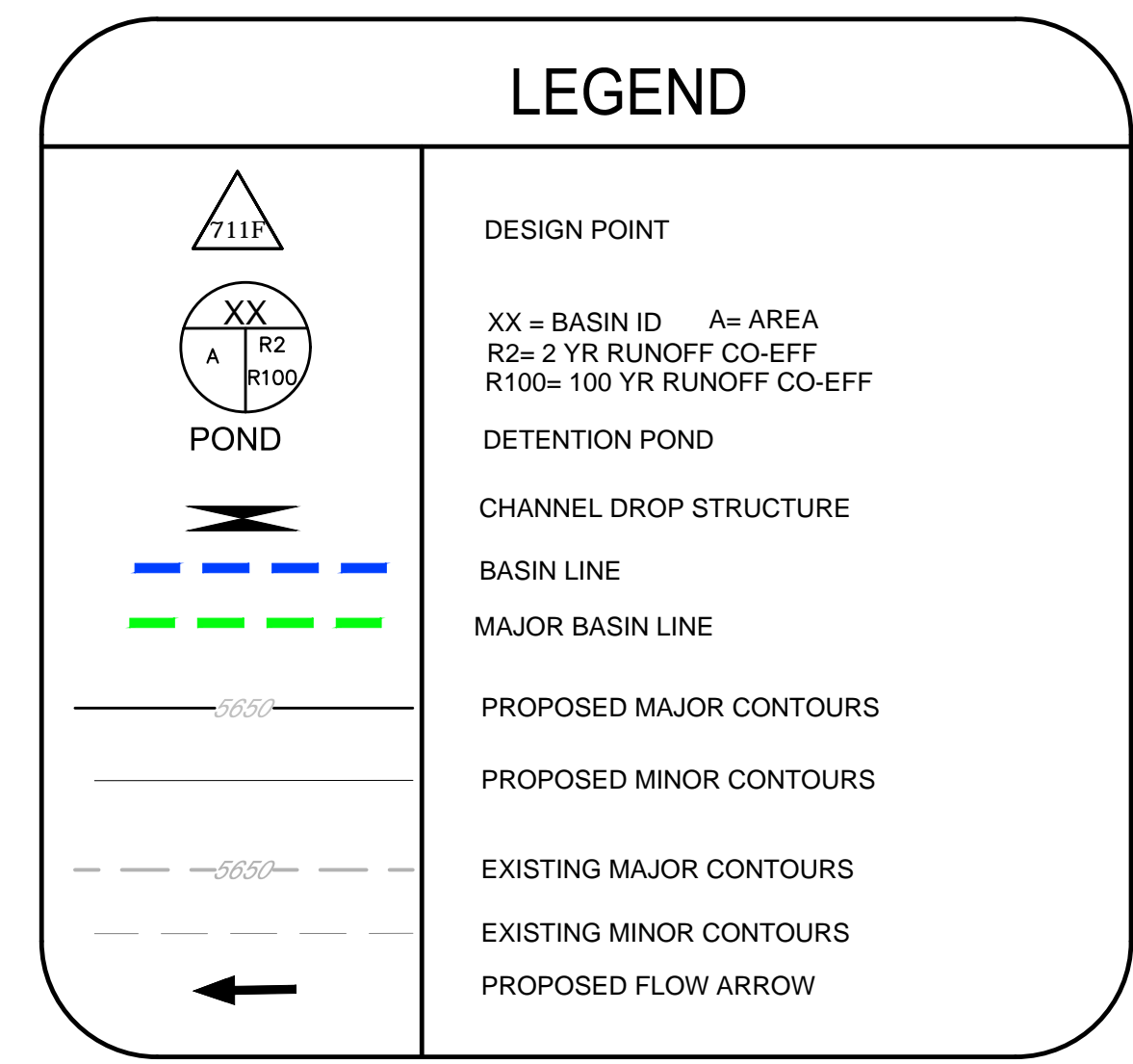
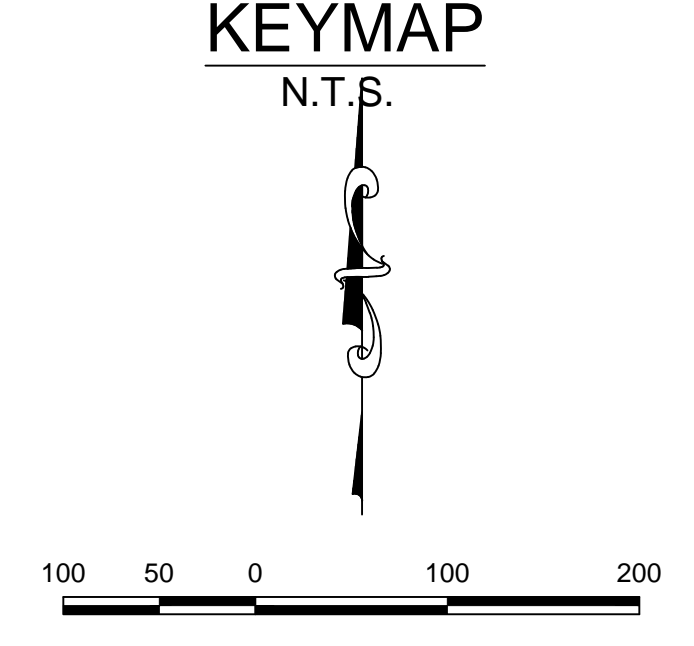
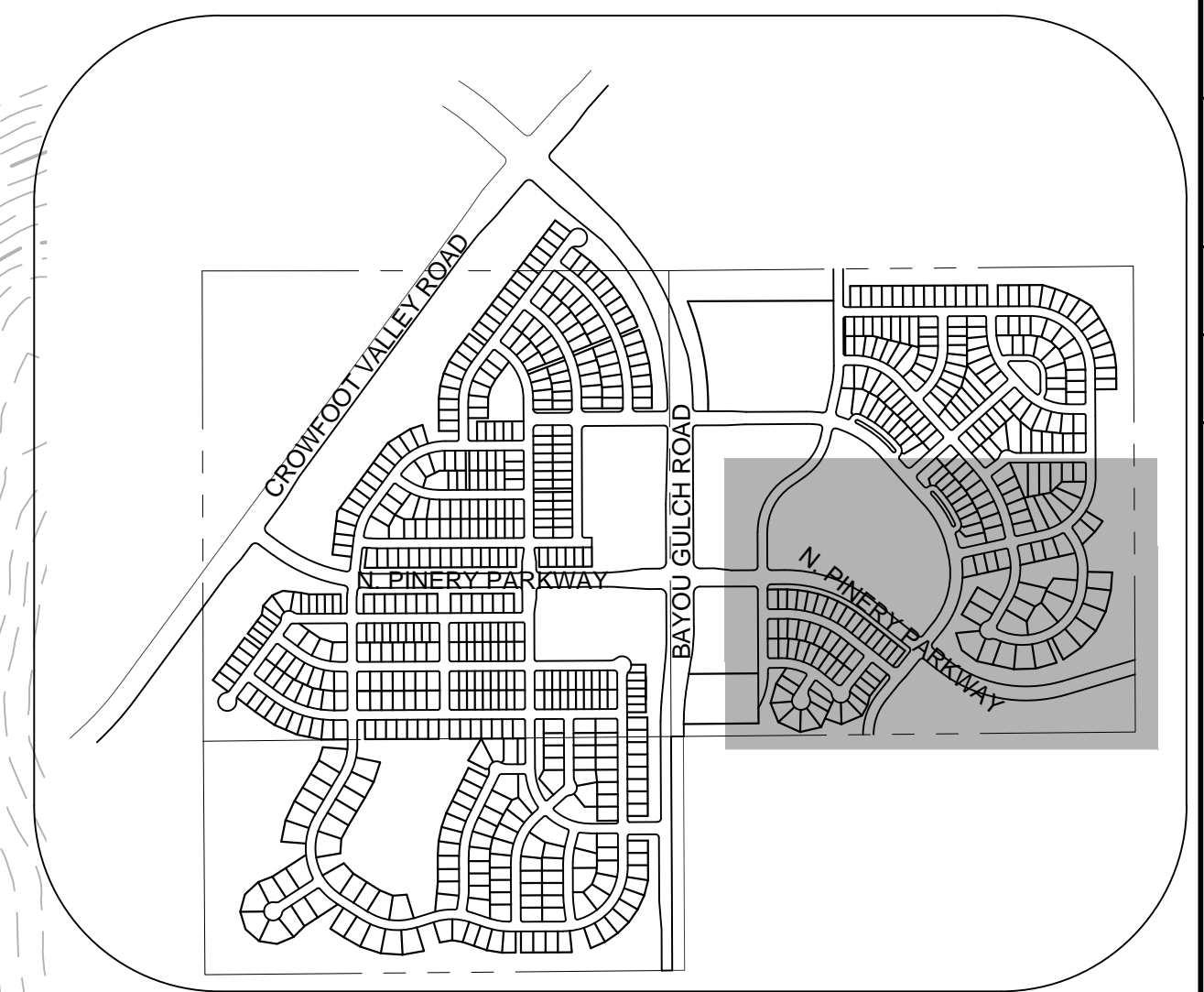
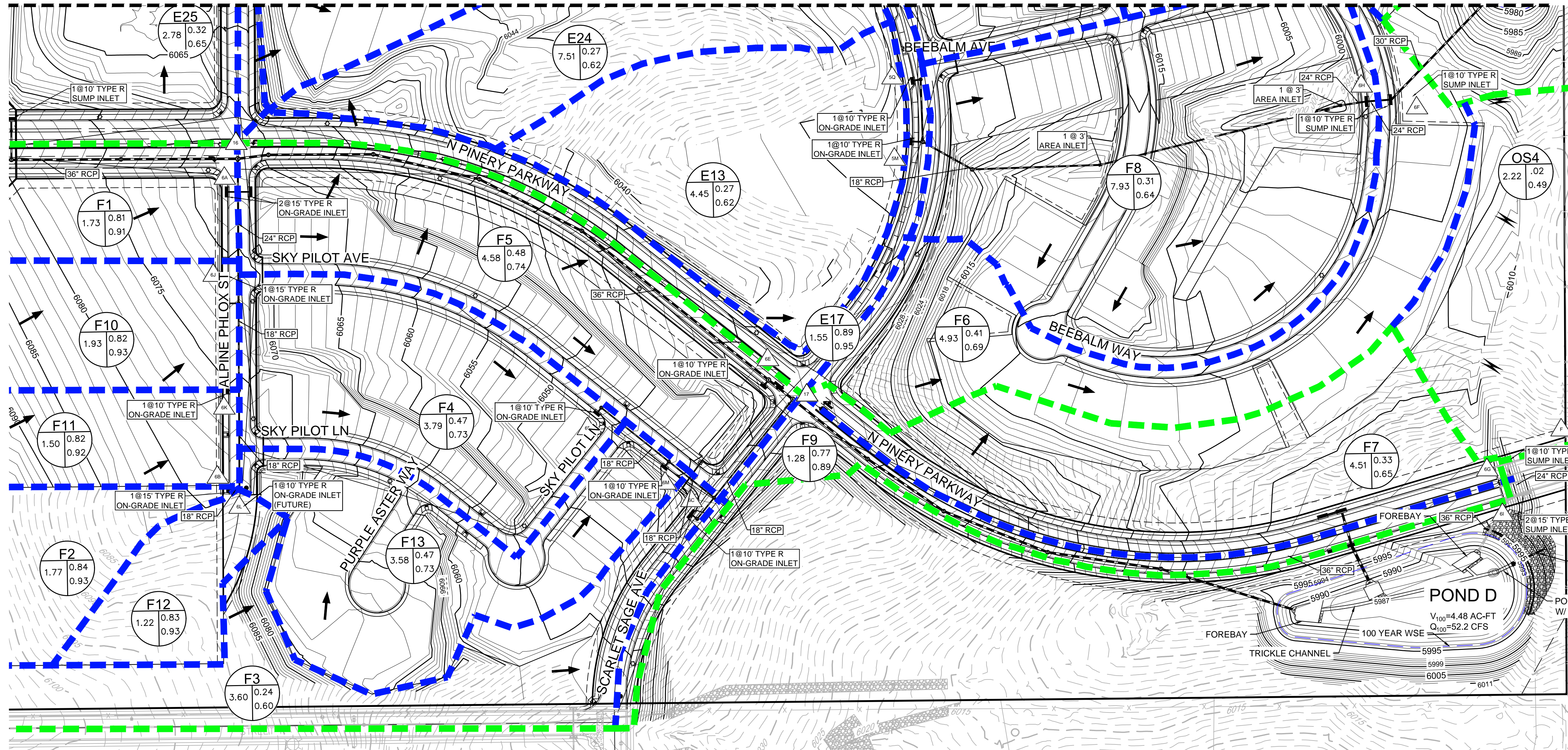
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**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

CALL 811  
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UNCC 1-800-922-1987

10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	Date	Appr.	Date
	No.			
<b>ESX MANAGEMENT</b> 7253 South Alton Way CENTENNIAL, CO 80112	<b>TRAILS AT CROWFOOT</b> FINAL DRAINAGE MAP DRAINAGE MAP			
SCALE: AS SHOWN DRAWN BY: AYK CHECKED BY: JJJ DATE: MAY 2017	FILE NO: 8130283701	PREPARED UNDER THE SUPERVISION OF  MARK SCHEURER COLORADO P.E. 48988		
SHEET NUMBER	6			



Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness (%)	Q2 (CFS)	Q100 (CFS)	Street Type	Slope (%)
E1	4.04	52.65	4.95	20.19	Local	2.70
E2	5.27	52.02	4.71	19.36	Local	0.00
E3	4.77	52.31	5.64	23.07	Local	3.00
E4	3.20	52.07	3.78	14.69	Local	4.00
E5	2.76	53.77	3.09	12.43	Local	0.00
E6	2.63	53.59	3.06	12.34	Local	1.00
E7	2.77	51.99	3.21	13.17	Local	0.00
E8	2.68	53.33	3.13	12.64	Local	2.00
E9	4.84	39.52	3.92	19.46	Local	2.00
E10	0.70	56.03	0.85	3.31	Local	1.00
E11	3.99	30.00	2.48	14.96	Local	1.00
E12	3.28	30.00	2.04	12.33	Local	6.00
E13	4.45	30.00	2.76	16.67	Local	1.00
E14	9.14	44.35	8.62	39.37	Local	0.00
E15	1.89	51.97	2.08	8.55	Local	2.00
E16	1.57	73.60	2.68	8.89	Local	6.00
E17	1.55	73.60	2.64	8.76	Local	1.00
E18	2.72	52.96	3.45	14.00	Local	1.50
E19	2.91	53.40	3.58	14.46	Local	1.20
E20	2.75	53.49	3.12	12.57	Local	2.00
E21	2.05	54.72	2.56	10.18	Local	2.00
E22	4.41	53.09	5.39	21.86	Local	2.70
E23	4.11	51.69	4.81	19.86	Local	2.70
E24	4.23	30.00	2.63	15.87	Local	2.00
E25	2.78	35.90	2.16	11.51	Local	2.00

Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness (%)	Q2 (CFS)	Q100 (CFS)	Street Type	Slope (%)
F1	1.71	90.64	4.59	13.55	Local	2.50
F2	1.77	93.50	4.96	14.53	Local	2.50
F3	3.60	19.77	1.47	12.47	Local	1.00
F4	3.79	53.06	4.56	18.47	Local	4.00
F5	4.58	46.86	4.46	19.66	Res. Blvd	4.00
F6	4.93	38.37	3.70	18.75	Local	0.00
F7	4.51	18.05	1.68	15.41	Res. Blvd	0.00
F8	7.93	34.99	5.57	30.18	Local	0.00
F9	1.28	66.27	1.75	6.18	Res. Blvd	0.00
F10	1.93	92.20	5.30	15.64	Local	2.50
F11	1.50	91.79	4.07	12.03	Local	2.50
F12	1.22	93.17	3.39	9.95	Local	2.50
F13	3.58	52.91	4.36	17.70	Local	4.00

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
14	32.04	124.18	
15	36.95	142.09	
5A	14.28	56.31	
5B	9.56	40.76	
5C	18.85	70.87	
5D	21.89	79.97	
5E	23.45	83.44	
5F	3.06	12.34	
5G	6.16	142.25	
5H	29.48	81.28	
5I	3.92	19.46	
5J	0.85	3.31	
5K	2.48	14.96	
5L	4.60	27.74	
5M	2.76	16.67	
5N	10.74	49.99	
5O	2.08	8.55	
5P	19.53	49.94	
5Q	5.06	23.96	
5R	4.86	14.00	
5S	24.94	67.90	
5T	3.12	12.57	
5U	2.56	10.18	
5V	9.85	39.52	
5W	4.81	19.86	
5X	2.63	15.87	
5Y	2.16	11.51	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	
6A	21.41	56.86	
6B	8.28	23.93	
6C	9.45	44.87	
6D	4.56	18.47	
6E	29.25	58.80	
6F	13.68	69.19	
6G	3.39	22.24	
6H	10.08	42.10	
6I	1.75	36.44	
6Ia	-	78.50	
6J	17.19	46.79	
6K	12.18	34.01	
6L	3.39	9.95	
6M	8.80	35.37	
16	27.15	55.27	
17	36.01	97.22	

POND D	
Description	
Drainage Area (FT)	50.18
Percent Imperviousness (%)	51.42
WQCV (AC-FT)	0.81
EURV Volume (including WQCV) (AC-FT)	2.45
EURV Water Surface (FT)	5991.2
100-YR Volume (including EURV) (AC-FT)	4.48
100-yr water surface elevation (FT)	5993.16
Emergency Spillway Crest Elevation (FT)	5993.48
100-year Peak Inflow (CFS)	97.30
100-year Peak Outflow (CFS)	52.20
100-year Peak Allowable (CFS)	55.28

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**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

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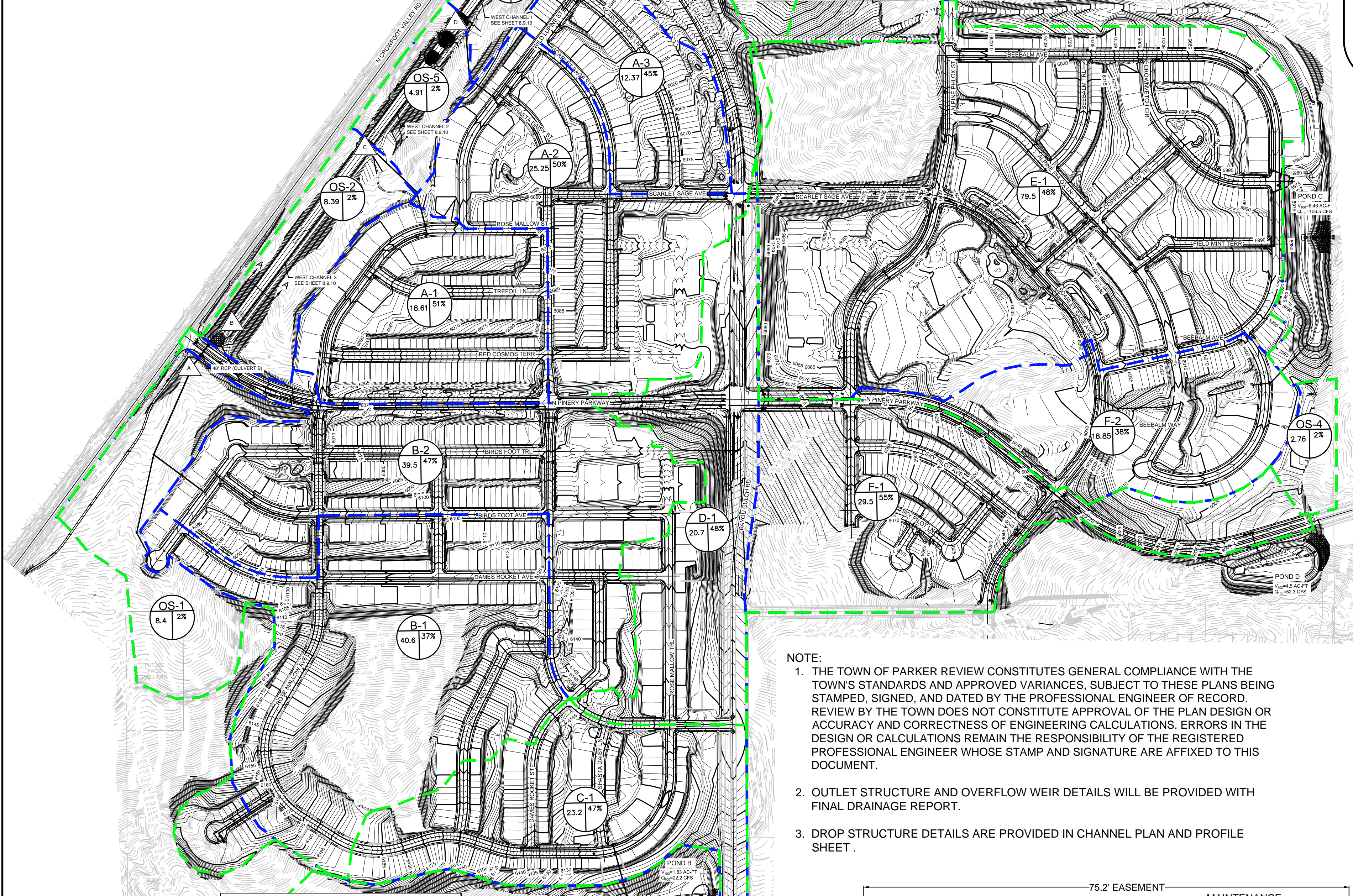
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UTILITY NOTIFICATION CENTER OF COLORADO

SCALE:	AS SHOWN	FILE NO:	8130283701
DRAWN BY:	AVK	CHECKED BY:	JLU
DATE:	MAY 2017		
SHEET NUMBER	7		
TRAILS AT CROWFOOT FINAL DRAINAGE MAP DRAINAGE MAP	ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112		
10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546			
Revisions	No.	Date	Appr.

PREPARED UNDER THE SUPERVISION OF  
MARK SCHEURER  
COLORADO P.E. 48988

POND A		POND C	
Description		Description	
Drainage Area (ACRES)	174.49	Drainage Area (ACRES)	101.09
Percent Impervious (%)	37.55	Percent Impervious (%)	44.49
WQCV Volume (AC-FT)	2,314	WQCV Volume (AC-FT)	1,495
EURV Volume (including WQCV) (AC-FT)	6.12	EURV Volume (including WQCV) (AC-FT)	4.262
EURV water surface (FT)	5995.39	EURV water surface (FT)	5975.55
100-YR Volume (including EURV) (AC-FT)	11,287	100-YR Volume (including EURV) (AC-FT)	8,444
100-YR water surface (FT)	5997.19	100-YR water surface (FT)	5977.94
Emergency Spillway Elevation (FT)	5997.19	Emergency Spillway Elevation (FT)	5978.15
100-YR Peak Inflow (CFS)	278.8	100-YR Peak Inflow (CFS)	204.8
100-YR Peak Outflow (CFS)	197	100-YR Peak Outflow (CFS)	106.5
100-YR Peak Allowable (CFS)	204.47	100-YR Peak Allowable (CFS)	111.36

POND B		POND D	
Description		Description	
Drainage Area (ACRES)	23.2	Drainage Area (ACRES)	50.18
Percent Impervious (%)	47.36	Percent Impervious (%)	51.42
WQCV Volume (AC-FT)	0.361	WQCV Volume (AC-FT)	0.805
EURV Volume (including WQCV) (AC-FT)	1.051	EURV Volume (including WQCV) (AC-FT)	2.447
EURV water surface (FT)	6092.88	EURV water surface (FT)	5991.2
100-YR Volume (including EURV) (AC-FT)	1.832	100-YR Volume (including EURV) (AC-FT)	4.475
100-YR water surface (FT)	6093.98	100-YR water surface (FT)	5993.16
Emergency Spillway Elevation (FT)	6094.38	Emergency Spillway Elevation (FT)	5993.48
100-YR Peak Inflow (CFS)	39.8	100-YR Peak Inflow (CFS)	97.3
100-YR Peak Outflow (CFS)	22.2	100-YR Peak Outflow (CFS)	52.2
100-YR Peak Allowable (CFS)	31.53	100-YR Peak Allowable (CFS)	55.28



**NOTE:**

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2. OUTLET STRUCTURE AND OVERFLOW WEIR DETAILS WILL BE PROVIDED WITH FINAL DRAINAGE REPORT.
3. DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.

Design Point	Q5 (CFS)	Q100 (CFS)
A	25.55	76.45
B	49.11	150.81
C	58.29	188.03
D	73.01	240.76
E	83.23	280.45

NOTE: Flows are from SWMM analysis. See drainage report for more details.

Design Point	Q5 (CFS)	Q100 (CFS)
A-1	11.86	32.59
A-2	19.60	53.08
A-3	7.60	21.76
A-4	5.01	16.11
B-1	20.87	68.84
B-2	26.81	74.30
C-1	14.00	39.86
OS-1	1.82	9.80
OS-2	1.82	8.90
OS-3	1.02	5.59
OS-4	0.31	1.87
OS-5	1.55	7.82

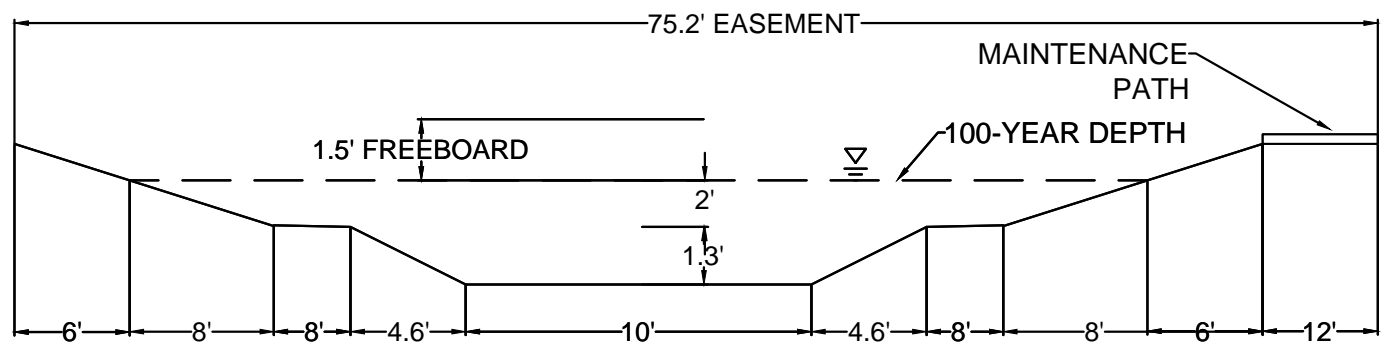
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THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED, AND ON FILE WITH THE TOWN OF PARKER.

TOWN OF PARKER, PUBLIC WORKS DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

TOWN OF PARKER, PUBLIC WORKS MANAGER - STORMWATER \_\_\_\_\_ DATE \_\_\_\_\_

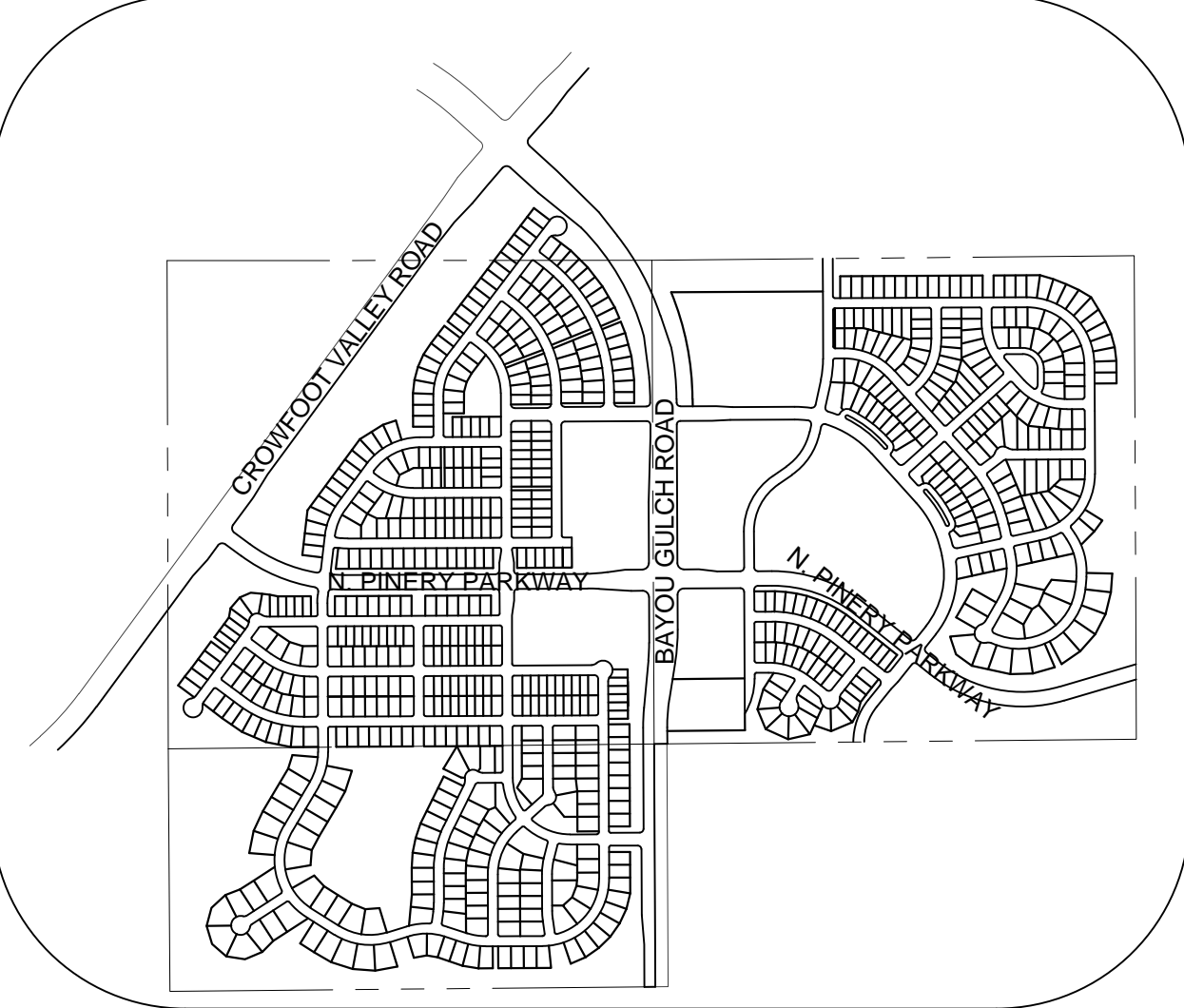
TOWN OF PARKER, PUBLIC WORKS MANAGER - TRANSPORTATION \_\_\_\_\_ DATE \_\_\_\_\_



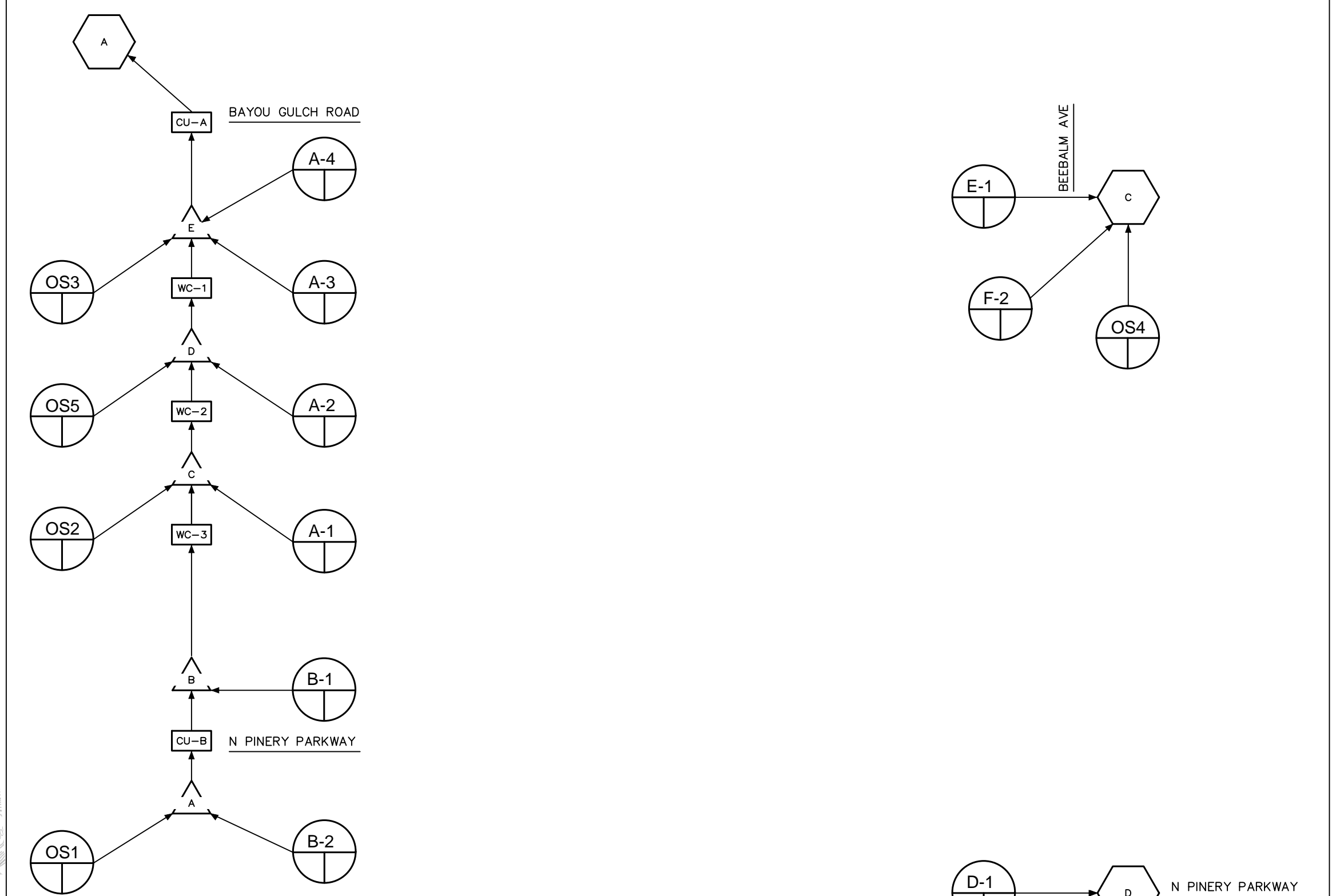
**CHANNEL SECTION A-A**  
NO TO SCALE

### LEGEND

	DESIGN POINT
	XX = BASIN ID    A = AREA R2 = 2 YR RUNOFF CO-EFF R100 = 100 YR RUNOFF CO-EFF
	DETENTION POND
	CHANNEL DROP STRUCTURE
	BASIN LINE
	MAJOR BASIN LINE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED FLOW ARROW



**KEYMAP**  
N.T.S.



**SCHEMATIC LEGEND**

	SUB-CATCHMENT
	DETENTION ELEMENT
	DESIGN POINT/DESIGN FLOW
	CONVEYANCE ELEMENT
	OUTFALL ELEMENT

**SWMM SCHEMATIC**

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**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF  
**MARK SCHEURER**  
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**ESX MANAGEMENT**  
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CENTENNIAL, CO 80112

**TRAILS AT CROWFOOT FINAL DRAINAGE MAP**  
SWMM DRAINAGE MAP

SCALE: AS SHOWN  
DRAWN BY: AYK  
CHECKED BY: JLU  
DATE: MAY 2017  
FILE NO: 8130283701

SHEET NUMBER **8**

No.	Revisions	Date	Appr.	Date