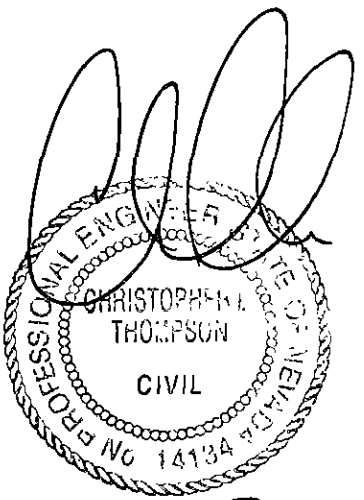
MASTER
HYDROLOGY AND HYDRAULICS REPORT

DOUBLE DIAMOND RANCH
VILLAGE 14



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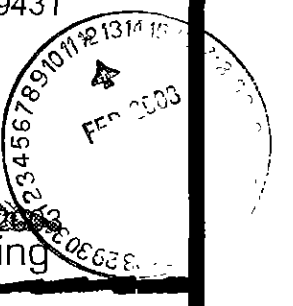
3/3/03

PREPARED FOR:

Reynen & Bardis Development, LLC
1380 Greg Street, Suite 230
Sparks, Nevada 89431



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INTRODUCTION

Damonte Ranch Village 14, a 29.68 acre residential subdivision, consists of 125 single family lots, which will be developed in two (2) phases. The subject site is located within the Damonte Ranch Development within the south ½ of Section 15, Township 18 Range 20 East, Mount Diablo Meridian. Exhibit "A" Vicinity Map has been included for a graphical representation of the project site.

The existing site is currently being filled as part of the mass grading operation associated with the construction of major drainage and public utility facilities.

According to FEMA's Flood Insurance Rate Maps (FIRM) the site is located within a flood Zone X. Zone X flood areas are defined as areas determined to be outside the 500-year floodplain.

The project will be developed in two construction phases. The first phase will consist of 64 lots located within the northern half of the village. The second phase will consist of the final 61 lots located within the southern half of the village. This development schedule is from the hydraulically most downstream point upward, resulting in a logical phased construction of storm drainage infrastructure. Since the need to analyze the built out subdivision was necessitated with the phase 1 design it was determined that a master hydrology report was necessary.

The final development plan for this village is in direct conformance with the tentatively approved development plan and the September 16, 2002 Damonte Ranch Village 14 Subdivision Preliminary Hydrology Report prepared by Odyssey Engineers.

METHODOLOGY

The Rational Method of Urban Hydrology was utilized for all hydrologic calculations in this report. This methodology was used based upon the small sizes of the analyzed basins. All times of concentration associated with this development were calculated using the standard form 2 located within the appendix of this report. The City of Reno Intensity Duration Frequency Curve was used for all modeling, and is presented in the Appendix.

The storm drainage infrastructure that will be constructed with Villages 14 was analyzed using StormCad version 4.1 by Haestad Methods.

All methods used are in accordance with the City of Reno Development Standards. Calculations and supporting materials are presented in the Appendix of this report.

PRE-DEVELOPMENT HYDROLOGY

The existing site generally drains overland in a northerly direction until it is intercepted in the existing regional detention pond facility currently under construction. Since the development of this site, from a regional as well as project impact perspective, was addressed in the Nimbus Engineers Hydrology Study for the Damonte Ranch Regional Flood Control the mitigation of increased developed flows will not be addressed with this investigation.

POST DEVELOPMENT HYDROLOGY

With the development of Damonte Ranch Village 14, the site is divided into 28 sub-basins, which are defined by inlets located within this village which will collect the sub-basin runoff (ref. Appendix for Developed Drainage Basin Maps) or are defined as by-pass areas which will pass directly to the detention facility to the north of the project site. Table 1, contained within the appendix of this report outlines all basin areas runoff coefficients time of concentration and five (5) and 100-year storm flows.

Storm drainage infrastructure, shown on the Developed Drainage Basins Maps, has been designed to capture and perpetuate 5-year storm flows from the developed basins and deliver them to the Regional detention Facility located north of the subject site. This is the developed discharge point for flows generated within this village in accordance with the Damonte Ranch Storm Water Management plan, as outlined by Nimbus Engineers in the Hydrology Study for the Damonte Ranch Regional Flood Control. Based upon this there has been no further investigation of these existing downstream detention facility improvements.

Based upon the Nimbus storm water management plan the flows from Village 14 will have 3 defined discharge points, all having ultimate discharge to the Detention Facility located north of the site. These points are as follows:

The western portion of Village 14, Discharge Point O-1 will be collected by a storm sewer system which will collect flows from within the right of way and deposit them directly into the detention facility north of the project site. This development area was represented as Basin A in the Odyssey Engineering September 16, 2002 Preliminary Hydrology Report. The results of the modeling of the on site pipe system are outlined in the StormCad sections of this report.

The eastern half of the Village 14 site, denoted as Basin B in the Odyssey Engineers Preliminary Hydrology report will be collected by two separate pipe systems, both of which discharge to the detention facility located north of the project site. The first system defined by outlet O-2 will collect flows and discharge them via the piped system through the common area access gap, hedge row, between lots 11 and 12. This discharge point is not located at a low point therefore an overland discharge path is not warranted. The second pipe system collecting flows from this basin area is defined by outlet O-3, which will collect by passed flows from the outlet O-2 pipe system and discharge them into the detention facility at the end of Baton Court. This point is defined by a low point at the back of the cul-de-sac and will provide for overland flow directly into the detention facility. The results of the modeling of these on site pipe systems are outlined in the StormCad sections of this report.

P BATON DRIVE CUL-DE-SAC ✓

CONCLUSION

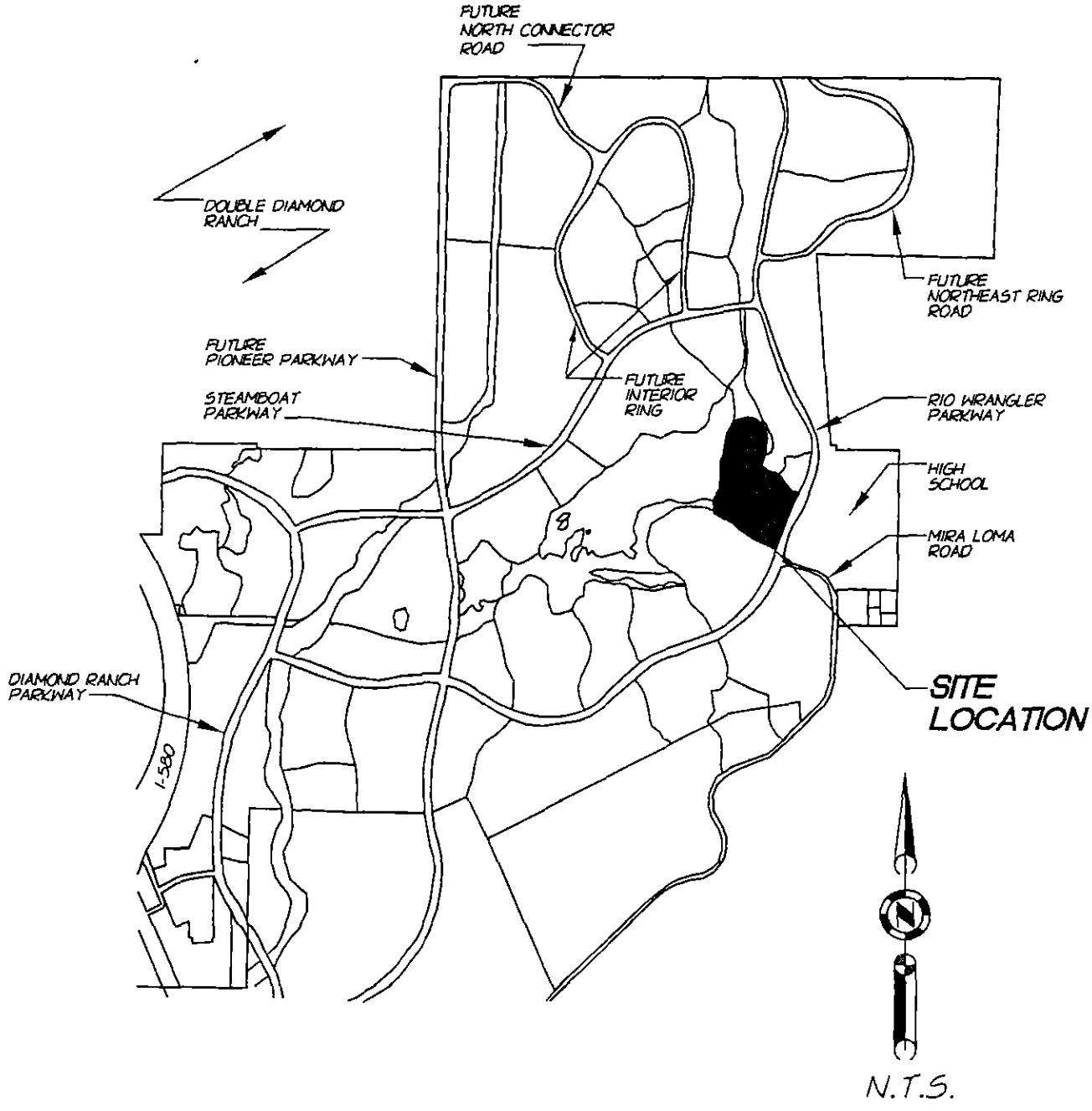
The drainage facilities that will be constructed with Damonte Ranch Village 14 have been designed to perpetuate the 5-year and 100-year storm flows within the site to offsite detention facilities using proposed drainage infrastructure. This conveyance of flows is in conformance with the City of Reno Design Handbook and in conformance with the Odyssey Engineering September 16, 2002 Preliminary Hydrology Report as well as

the Nimbus Engineers in the Hydrology Study for the Damonte Ranch Regional Flood Control.

With the final design of the second phase of Village 14 a letter of verification will be needed to verify the design information contained within this report has not changed.

All analysis was performed in accordance with the City of Reno Design Handbook. Supporting calculations and exhibits are contained within the Appendix of this report for reference.

APPENDIX



BY	REVISION	DATE	NO.

mountain west consulting

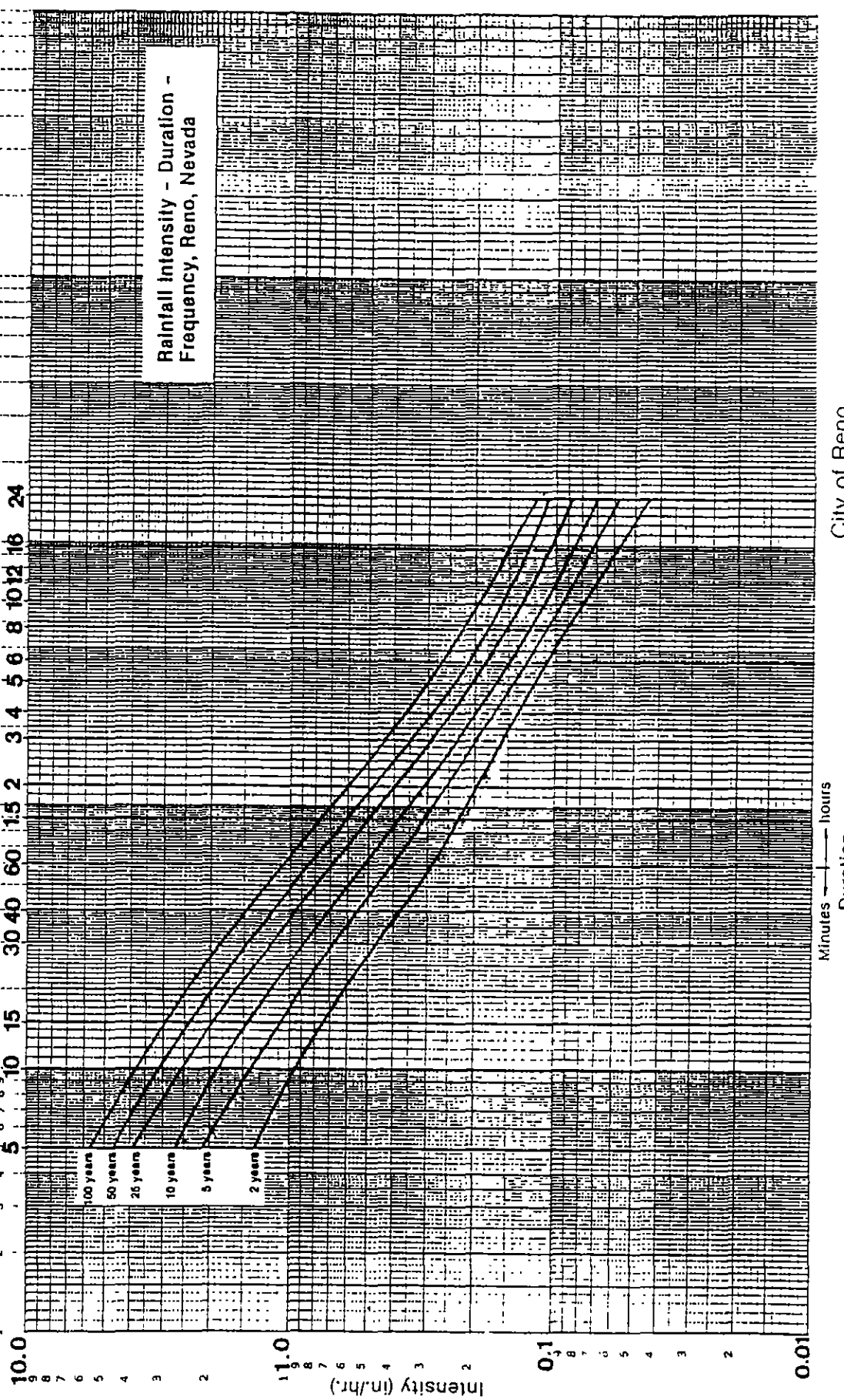
Civil Engineering ~ Planning ~ Project Management

P.O. Box 21450 ~ Reno, Nevada 89515-1450 ~ (775) 332-0778

EXHIBIT "A" - VICINITY MAP

Owner for
Designed for
Date
DRAWING
SHEET OF

RAINFALL INTENSITY CHART



City of Reno

Rainfall Intensity - Duration - Frequency Curves for General Reno Area

Based on Rainfall Data from Cannon Airport Gauging Station

Figure 1

Form 2 Modified

Sub-Basin Data			Initial Overland Time (Ti)			Travel Time (Tt)				Tc (Ti+Tt)	Tc Urbanized Basin Check		Final Tc
Basin	R10	Area	Length	Slope	Ti	Length	Slope	Vel.	Ti	Tc	Total	Tc	Min
		(Ac)	(ft)	(%)	(min)	(ft)	(%)	(fps)	(min)	(min)	Length	(min)	
18A	0.6	0.42	60	1.25	6.48	235	0.60	1.73	2.26	8.74	295.00	11.64	8.74
18B	0.6	1.14	120	1.25	9.16	215	0.60	1.73	2.07	11.23	335.00	11.86	11.23
19	0.6	0.87	100	1.25	8.36	305	0.60	1.73	2.94	11.30	405.00	12.25	11.30
20A	0.6	0.99	760	0.6	29.37	236	1.32	2.55	1.54	30.91	996.00	15.53	15.53
20B	0.6	0.79	100	1.25	8.36	285	0.65	1.78	2.67	11.03	385.00	12.14	11.03
21	0.6	1.18	100	1.25	8.36	450	0.65	1.78	4.21	12.57	550.00	13.06	12.57
22	0.6	1.28	100	1.25	8.36	440	0.65	1.78	4.12	12.48	540.00	13.00	12.48
23	0.6	0.2	13	1.25	3.01	0	0.00	0.00	#DIV/0!	#DIV/0!	13.00	10.07	10.00
24	0.6	0.1	5	2	1.60	75	0.54	1.64	0.76	2.36	80.00	10.44	2.36
25	0.6	0.07	13	1.25	3.01	0	0.00	0.00	#DIV/0!	#DIV/0!	13.00	10.07	10.00
26	0.6	0.1	35	1.25	4.95	0	0.00	0.00	#DIV/0!	#DIV/0!	35.00	10.19	10.00
27	0.6	0.12	100	4.5	5.48	0	0.00	0.00	#DIV/0!	#DIV/0!	100.00	10 56	10 00
28	0.6	0.34	35	1 25	4.95	0	0.00	0.00	#DIV/0!	#DIV/0!	35.00	10.19	10.00

Form 2 Modified

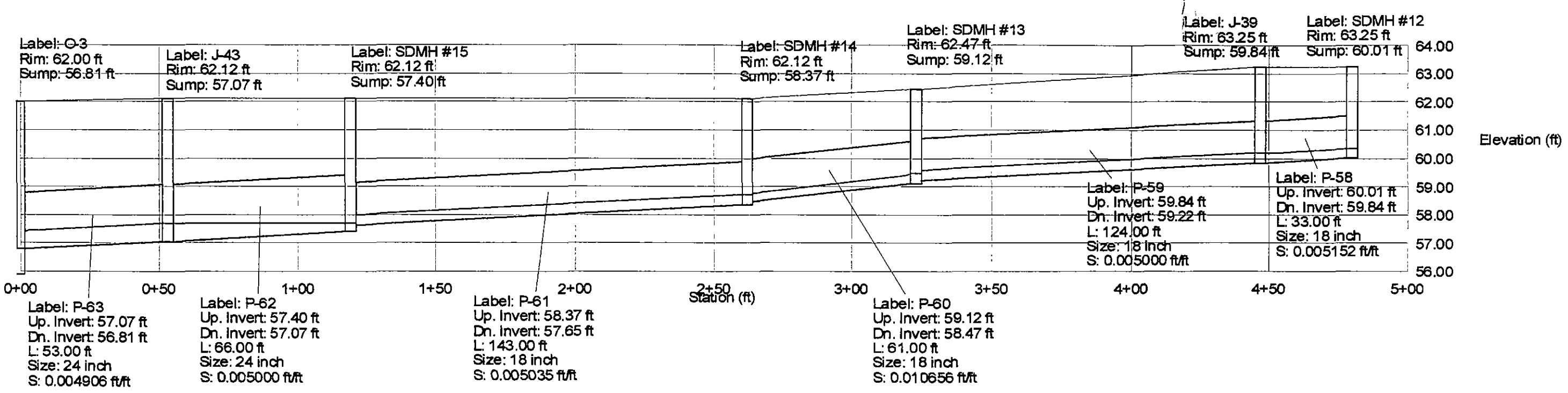
DAMONTE RANCH VILLAGE 14

STANDARD FORM 2

PREPARED BY MJC

Sub-Basin Data			Initial Overland Time (Ti)			Travel Time (Tt)				Tc (Ti+Tt)	Tc Urbanized Basin Check		Final Tc
Basin	R10	Area (Ac)	Length (ft)	Slope (%)	Ti (min)	Length (ft)	Slope (%)	Vel. (fps)	Ti (min)	Tc (min)	Total Length	Tc (min)	Min
1	0.6	1.69	90	1.25	7.93	575	0.60	1.73	5.54	13.47	665.00	13.69	13.47
2	0.6	0.52	90	1.25	7.93	350	0.60	1.73	3.37	11.30	440.00	12.44	11.30
3	0.6	1.57	95	1.25	8.15	440	1.14	2.39	3.07	11.22	535.00	12.97	11.22
4	0.6	1.42	95	1.25	8.15	460	1.14	2.39	3.21	11.36	555.00	13.08	11.36
5A	0.6	0.34	70	1.25	7.00	215	0.60	1.73	2.07	9.07	285.00	11.58	9.07
5B	0.6	1.45	120	1.25	9.16	395	0.88	2.12	3.11	12.26	515.00	12.86	12.26
6	0.6	1.57	120	1 25	9.16	410	0 88	2.12	3.22	12.38	530.00	12.94	12.38
7	0.6	2.32	100	1.25	8.36	1200	0.60	1.73	11.56	19.92	1300.00	17.22	17.22
8	0.6	1.15	100	1.25	8.36	380	0.60	1.73	3.66	12.02	480.00	12.67	12.02
9A	0.6	0.37	100	1.25	8.36	170	0.60	1.73	1.64	10.00	270.00	11.50	10.00
9B	0.6	0.32	100	1.25	8.36	145	1.62	2.82	0.86	9.22	245.00	11.36	9 22
10	0.4	0.16	10	2	3.17	145	1.62	2.82	0 86	4.03	155.00	10.86	4.03
11A	0.6	1.12	100	1.25	8.36	520	1.08	2.34	3.70	12.06	620 00	13.44	12.06
11B	0.6	1.44	100	1.25	8.36	405	1.08	2 34	2.88	11.25	505.00	12.81	11.25
12A	0.6	1.88	100	1 25	8.36	650	0 92	2.12	5.11	13.47	750.00	14.17	13.47
12B	0.6	2.72	100	1.25	8.36	820	0.92	2.12	6.45	14.81	920.00	15.11	14.81
13	0.4	0.07	10	2	3.17	50	0.60	1.73	0.48	3.65	60.00	10.33	3.65
14	0.6	1.3	100	1.25	8.36	445	0.60	1.73	4.29	12.65	545.00	13.03	12.65
15	0.6	1.27	100	1.25	8.36	460	0.60	1.73	4.43	12.79	560.00	13.11	12.79
16	0.6	1.13	100	1.25	8.36	500	0.60	1 73	4 82	13.18	600.00	13.33	13.18
17	0.6	0.96	120	1.25	9.16	210	0.60	1.73	2.02	11.18	330.00	11.83	11.18

Profile
Scenario: 5-YEAR



5-YEAR STORMCAD CALCULATIONS

Scenario: 5-YEAR

inlet reprt modified

Label	Local Rational Flow (cfs)	Total Flow To Inlet (cfs)	Intercepted Rational Flow (cfs)
CB #1	1 20	1.20	0 87
CB #2	0.41	0.41	0.38
CB #3	1.26	1.62	1.62
CB #4	1.13	1 13	1 13
CB #5	1.52	1.52	1.52
CB #6	1.18	1.18	1 18
CB #7	1.43	1 43	0.99
CB #8	0 88	0.88	0.69
CB #9	0.58	0.80	0.80
CB #10	0 14	0.14	0.14
CB #11	2 04	2.61	2.61
CB #12	3.28	3.49	3 49
CB #13	0 06	0.06	0 06
CB #14	0 97	0 97	0 97
CB #15	0 94	0 94	0 72
CB #16	0 82	0 82	0 82
CB #17	0.77	0.77	0.77
CB #18	1 32	1.32	1 32
CB #19	0.69	0.90	0 90
CB #20	1.44	1 70	1 70
CB #21	0.88	0 88	0 69
CB #22	0.96	1.00	0 76

Scenario: 5-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-1	CB #21	SDMH #29	1.18	0.60	0.71	0.55	1.24	0.69	18.00	0.074444	12 inch	0.014	9.03	68.19	66.85	71.19	70.82	2.00	2.97	68.54	67.32	
P-2	SDMH #2	J-2	N/A	N/A	N/A	1.16	1.23	1.43	279.00	0.006523	15 inch	0.014	4.84	66.85	65.03	70.82	70.82	2.72	4.54	67.32	65.82	
P-3	J-2	SDMH #28	N/A	N/A	N/A	3.09	1.11	3.47	54.00	0.006296	15 inch	0.014	4.76	65.03	64.69	70.82	70.82	4.54	4.88	65.82	65.44	
P-4	SDMH #2	SDMH #27	N/A	N/A	N/A	3.09	1.10	3.42	95.00	0.005053	18 inch	0.014	6.93	64.19	63.71	70.82	69.11	5.13	3.90	64.93	64.42	
P-5	SDMH #2	SDMH #26	N/A	N/A	N/A	3.09	1.08	3.36	82.00	0.004878	18 inch	0.014	6.81	63.61	63.21	69.11	68.61	4.00	3.90	64.35	63.91	
P-6	SDMH #2	J-6	N/A	N/A	N/A	3.09	1.07	3.33	44.00	0.005000	24 inch	0.014	14.85	63.11	62.89	68.61	69.11	3.50	4.22	63.75	63.65	
P-7	J-6	J-7	N/A	N/A	N/A	3.77	1.06	4.04	10.00	0.005000	24 inch	0.014	14.85	62.89	62.84	69.11	69.11	4.22	4.27	63.65	63.65	
P-8	J-7	J-8	N/A	N/A	N/A	4.71	1.06	5.03	33.00	0.004848	24 inch	0.014	14.63	62.84	62.68	69.11	69.11	4.27	4.43	63.65	63.53	
P-9	J-8	SDMH #25	N/A	N/A	N/A	5.28	1.06	5.63	39.00	0.005128	24 inch	0.014	15.04	62.68	62.48	69.11	67.83	4.43	3.35	63.53	63.32	
P-10	SDMH #2	SDMH #24	N/A	N/A	N/A	5.28	1.05	5.61	72.00	0.005000	24 inch	0.014	14.85	62.38	62.02	67.83	67.39	3.45	3.37	63.23	62.86	
P-11	SDMH #2	SDMH #23	N/A	N/A	N/A	5.28	1.05	5.57	193.00	0.005026	24 inch	0.014	14.89	61.92	60.95	67.39	66.17	3.47	3.22	62.77	61.78	
P-12	SDMH #2	SDMH #22	N/A	N/A	N/A	5.28	1.03	5.47	112.00	0.005893	24 inch	0.014	16.12	60.85	60.19	66.17	65.52	3.32	3.33	61.68	60.99	
P-13	SDMH #2	J-13	N/A	N/A	N/A	5.87	1.02	6.01	27.00	0.004815	24 inch	0.014	14.58	59.69	59.56	65.52	65.52	3.83	3.96	60.59	60.50	
P-14	J-13	J-14	N/A	N/A	N/A	6.65	1.01	6.79	33.00	0.005152	24 inch	0.014	15.08	59.56	59.39	65.52	65.00	3.96	3.61	60.50	60.32	
P-15	J-14	SDMH #21	N/A	N/A	N/A	6.69	1.01	6.81	42.00	0.007143	24 inch	0.014	17.75	59.39	59.09	65.00	64.92	3.61	3.83	60.32	60.04	
P-16	SDMH #2	SDMH #20	N/A	N/A	N/A	6.69	1.01	6.79	132.00	0.005000	24 inch	0.014	14.85	59.09	58.43	64.92	64.16	3.83	3.73	60.04	59.35	
P-17	SDMH #2	SDMH #19	N/A	N/A	N/A	6.69	0.99	6.70	122.00	0.005000	24 inch	0.014	14.85	58.33	57.72	64.16	63.44	3.83	3.72	59.27	58.64	
P-18	SDMH #1	SDMH #18	N/A	N/A	N/A	6.69	0.98	6.62	183.00	0.004973	24 inch	0.014	14.81	57.62	56.71	63.44	62.38	3.82	3.67	58.56	57.62	
P-19	SDMH #1	SDMH #17	N/A	N/A	N/A	6.69	0.96	6.51	73.00	0.005068	24 inch	0.014	14.95	56.61	56.24	62.38	61.95	3.77	3.71	57.53	57.14	
P-20	SDMH #1	SDMH #16	N/A	N/A	N/A	6.69	0.96	6.46	73.00	0.006301	24 inch	0.014	16.67	56.14	55.68	61.95	61.95	3.81	4.27	57.04	56.54	
P-21	SDMH #1	J-21	N/A	N/A	N/A	6.69	0.95	6.41	63.00	0.004921	24 inch	0.014	14.73	55.18	54.87	61.95	61.95	4.77	5.08	56.11	56.02	
P-22	J-21	O-1	N/A	N/A	N/A	9.63	0.94	9.16	61.00	0.005082	24 inch	0.014	14.97	54.87	54.56	61.95	61.00	5.08	4.44	56.02	55.88	
P-23	CB #12	J-21	4.60	0.60	2.76	2.94	1.18	3.49	14.00	0.217857	12 inch	0.014	15.44	57.92	54.87	60.92	61.95	2.00	6.08	58.72	56.02	
P-24	CB #13	J-14	0.07	0.60	0.04	0.04	1.40	0.06	51.00	0.047059	12 inch	0.014	7.18	61.79	59.39	64.79	65.00	2.00	4.61	61.89	60.32	
P-25	CB #14	J-13	1.30	0.60	0.78	0.78	1.23	0.97	55.00	0.040000	12 inch	0.014	6.62	61.76	59.56	64.76	65.52	2.00	4.96	62.17	60.50	
P-26	CB #17	J-8	0.96	0.60	0.58	0.58	1.32	0.77	52.00	0.038077	12 inch	0.014	6.46	64.66	62.68	67.66	69.11	2.00	5.43	65.03	63.53	
P-27	CB #18	J-7	1.56	0.60	0.94	0.94	1.40	1.32	52.00	0.035000	12 inch	0.014	6.19	64.66	62.84	67.66	69.11	2.00	5.27	65.15	63.65	
P-28	CB #16	J-6	1.13	0.60	0.68	0.68	1.20	0.82	5.00	0.534000	12 inch	0.014	24.17	65.56	62.89	68.56	69.11	2.00	5.22	65.94	63.65	
P-29	CB #19	J-2	0.87	0.60	0.52	0.68	1.32	0.90	6.00	0.200000	12 inch	0.014	14.79	66.23	65.03	69.23	70.82	2.00	4.79	66.63	65.82	
P-30	CB #20	J-2	1.78	0.60	1.07	1.26	1.33	1.70	26.00	0.046154	12 inch	0.014	7.11	66.23	65.03	69.23	70.82	2.00	4.79	66.78	65.82	
P-31	CB #22	SDMH #29	1.28	0.60	0.77	0.60	1.24	0.76	25.00	0.053600	12 inch	0.014	7.66	68.19	66.85	71.19	70.82	2.00	2.97	68.55	67.32	
P-32	CB #15	SDMH #22	1.27	0.60	0.76	0.58	1.22	0.72	8.00	0.391250	12 inch	0.014	20.69	62.82	59.69	65.82	65.52	2.00	4.83	63.17	60.59	
P-33	CB #2	SDMH #1	0.52	0.60	0.31	0.28	1.32	0.38	33.00	0.059091	12 inch	0.014	8.04	70.88	68.93	73.88	74.36	2.00	4.43	71.13	69.08	
P-34	SDMH #1	J-23	N/A	N/A	N/A	0.28	1.31	0.37	28.00	0.016786	12 inch	0.014	4.29	68.93	68.46	74.36	74.86	4.43	5.40	69.18	68.94	
P-35	J-23	SDMH #2	N/A	N/A	N/A	1.02	1.17	1.20	80.00	0.006125	12 inch	0.014	2.59	68.46	67.97	74.86	73.28	5.40	4.31	68.94	68.43	
P-36	SDMH #2	SDMH #3	N/A	N/A	N/A	1.02	1.14	1.17	347.00	0.008300	15 inch	0.014	5.46	67.72	64.84	73.28	69.32	4.31	3.23	68.15	65.23	
P-37	SDMH #3	J-26	N/A	N/A	N/A	1.02	1.06	1.09	46.00	0.005000	18 inch	0.014	6.90	64.59	64.36	69.32	68.42	3.23	2.56	65.04	65.02	
P-38	J-26	J-27	N/A	N/A	N/A	2.24	1.05	2.37	18.00	0.005000	18 inch	0.014	6.90	64.36	64.27	68.42	68.42	2.56	2.65	65.02	65.00	
P-39	J-27	SDMH #4	N/A	N/A	N/A	3.09	1.05	3.26	28.00	0.005000	18 inch	0.014	6.90	64.27	64.13	68.42	68.42	2.65	2.79	65.00	64.82	
P-40	SDMH #4	J-29	N/A	N/A	N/A	3.09	1.04	3.25	222.00	0.004955	24 inch	0.014	14.79	64.03	62.93	68.42	66.47	2.39	1.54	64.67	63.67	
P-41	J-29	J-30	N/A	N/A	N/A	4.17	1.01	4.26	33.00	0.004848	24 inch	0.014	14.63	62.93	62.77	66.47	66.47	1.54	1.70	63.67	63.58	
P-42	J-30	SDMH #5	N/A	N/A	N/A	5.11	1.01	5.20	57.00	0.005088	24 inch	0.014	14.98	62.77	62.48	66.47	66.47	1.70	1.99	63.58	63.28	
P-43	SDMH #5	SDMH #6	N/A	N/A	N/A	5.11	1.01	5.17	70.00	0.005143	24 inch	0.014	15.06	62.38	62.02	66.47	66.02	2.09	2.00	63.19	62.82	
P-44	SDMH #6	SDMH #7	N/A	N/A	N/A	5.11	1.00	5.14	172.00	0.007849	24 inch	0.014	18.61	61.92	60.57	66.02	64.92	2.10	2.35	62.72	61.29	
P-45	SDMH #7	SDMH #8	N/A	N/A	N/A	5.11	0.98	5.05	45.00	0.005111	24 inch	0.014	15.02	60.47	60.24	64.92	64.66	2.45	2.42	61.27	61.03	
P-46	SDMH #8	SDMH #9	N/A	N/A	N/A	5.11	0.98	5.03	71.00	0.005070	24 inch	0.014	14.96	60.14	59.78	64.66	64.25	2.52	2.47	60.94	60.57	
P-47	SDMH #9	SDMH #10	N/A	N/A	N/A	5.64	0.97	5.52	48.00	0.005000	24 inch	0.014	14.85	59.68	59.44	64.25	64.02	2.57	2.58	60.52	60.27	
P-48	SDMH #1	SDMH #11	N/A	N/A	N/A	5.64	0.97	5.49	26.00	0.010000	24 inch	0.014	21.01	59.34	59.08	64.02	64.00	2.68	2.92	60.17	59.79	
P-49	SDMH #1	O-2	N/A	N/A	N/A	6.61	0.96	6.41	153.00	0.019477	24 inch	0.014	29.32	58.98	56.00	64.00	62.00	3.02	4.00	59.88	56.64	
P-50	CB #7	SDMH #11	2.32	0.60	1.39	0.96	1.02	0.99	13.00	0.180000	12 inch	0.014	14.04	61.32	58.98	64.32	64.00	2.00	4.02	61.74	59.88	
P-51	CB #1	J-23	1.69	0.60	1.01	0.74	1.18	0.87	27.00	0.113333	12 inch	0.014	11.14	71.52	68.46	74.52	74.86	2.00	5.40	71.91	68.94	

Scenario: 5-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Manning's n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-52	CB #3	J-26	1.57	0.60	0.94	1.22	1.32	1.62	25.00	0.067200	12 inch	0.014	8.58	66.04	64.36	69.04	68.42	2.00	3.06	66.58	65.02	
P-53	CB #4	J-27	1.42	0.60	0.85	0.85	1.31	1.13	7.00	0.228571	12 inch	0.014	15.82	65.87	64.27	68.87	68.42	2.00	3.15	66.32	65.00	
P-54	CB #5	J-29	1.79	0.60	1.07	1.07	1.40	1.52	32.00	0.014063	12 inch	0.014	3.92	63.38	62.93	66.38	66.47	2.00	2.54	63.90	63.67	
P-55	CB #6	J-30	1.57	0.60	0.94	0.94	1.25	1.18	32.00	0.019062	12 inch	0.014	4.57	63.38	62.77	66.38	66.47	2.00	2.70	63.84	63.58	
P-56	CB #8	SDMH #9	1.15	0.60	0.69	0.54	1.27	0.69	6.00	0.311667	12 inch	0.014	18.47	61.55	59.68	64.55	64.25	2.00	3.57	61.90	60.52	
P-57	CB #9	SDMH #12	0.69	0.60	0.41	0.57	1.40	0.80	30.00	-0.005000	12 inch	0.014	-2.34	59.86	60.01	62.86	63.25	2.00	2.24	60.55	60.38	
P-58	SDMH #12	J-39	N/A	N/A	N/A	0.57	1.39	0.79	33.00	0.005152	18 inch	0.014	7.00	60.01	59.84	63.25	63.25	1.74	1.91	60.35	60.20	
P-59	J-39	SDMH #13	N/A	N/A	N/A	0.66	1.34	0.89	124.00	0.005000	18 inch	0.014	6.90	59.84	59.22	63.25	62.47	1.91	1.75	60.20	59.57	
P-60	SDMH #13	SDMH #14	N/A	N/A	N/A	0.66	1.29	0.86	61.00	0.010656	18 inch	0.014	10.07	59.12	58.47	62.47	62.12	1.85	2.15	59.47	58.77	
P-61	SDMH #14	SDMH #15	N/A	N/A	N/A	0.66	1.27	0.85	143.00	0.005035	18 inch	0.014	6.92	58.37	57.65	62.12	62.12	2.25	2.97	58.72	57.99	
P-62	SDMH #15	J-43	N/A	N/A	N/A	0.66	1.21	0.81	66.00	0.005000	24 inch	0.014	14.85	57.40	57.07	62.12	62.12	2.72	3.05	57.72	57.69	
P-63	J-43	O-3	N/A	N/A	N/A	2.63	1.17	3.11	53.00	0.004906	24 inch	0.014	14.71	57.07	56.81	62.12	62.00	3.05	3.19	57.69	57.43	
P-64	CB #11	J-43	2.56	0.60	1.54	1.96	1.32	2.61	26.00	0.032692	12 inch	0.014	5.98	57.92	57.07	60 92	62.12	2.00	4.05	58.61	57.55	
P-65	CB #10	J-39	0.16	0.60	0.10	0.10	1.40	0.14	31.00	0.000645	12 inch	0.014	0.84	59.86	59.84	62.86	63.25	2.00	2.41	60.21	60.20	

Detailed Report for Inlet: CB #1

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,228.00 ft	Calculated Station	14+43 ft
Y	703,422.00 ft		

Elevations			
Ground Elevation	74.52 ft	Hydraulic Grade Line In	71.91 ft
Rim Elevation	74.52 ft	Hydraulic Grade Line Out	71.91 ft
Sump Elevation	71.52 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.39 ft
Headloss Method	Absolute	Velocity Out	3.07 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.15 ft

System Flow Summary			
Total System Flow	0.87 cfs	System Rational Flow	0.87 cfs
System Flow Time	13 47 min	System Additional Flow	0.00 cfs
System Intensity	1 18 in/hr	System Known Flow	0 00 cfs
System CA	0.74 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.69 acres	Composite Rational C	0 60
Inlet CA	1.01 acres	Carryover CA	0.00 acres
Total Inlet CA	1.01 acres	Total Inlet Intensity	1.18 in/hr
Total Inlet Rational Flow	1.20 cfs	Total Inlet Time of Concentration	13.47 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	1.20 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #3
Longitudinal Slope	0 008000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #1

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.87 cfs	Intercepted CA	0.74 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.18 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13 47 min
Total Intercepted Flow	0.87 cfs	Capture Efficiency	72.7 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0 00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.69	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #2

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	80,161.60	ft	Calculated Station	14+77	ft
Y	703,422.00	ft			

Elevations					
Ground Elevation	73 88	ft	Hydraulic Grade Line In	71.13	ft
Rim Elevation	73.88	ft	Hydraulic Grade Line Out	71.13	ft
Sump Elevation	70.88	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.25	ft
Headloss Method	Absolute		Velocity Out	2 41	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0 09	ft

System Flow Summary					
Total System Flow	0.38	cfs	System Rational Flow	0.38	cfs
System Flow Time	11.30	min	System Additional Flow	0 00	cfs
System Intensity	1.32	in/hr	System Known Flow	0.00	cfs
System CA	0.28	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0.00	cfs	Global Diverted Flow In	0 00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	0.52	acres	Composite Rational C	0.60	
Inlet CA	0 31	acres	Carryover CA	0.00	acres
Total Inlet CA	0.31	acres	Total Inlet Intensity	1.32	in/hr
Total Inlet Rational Flow	0.41	cfs	Total Inlet Time of Concentration	11.30	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	0.41	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #22	
Longitudinal Slope	0.006500	ft/ft	Mannings n	0.015	

Detailed Report for Inlet: CB #2

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0 38	cfs	Intercepted CA	0.28	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.32	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	11.30	min
Total Intercepted Flow	0 38	cfs	Capture Efficiency	90.9	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.52	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #3

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,411.85 ft	Calculated Station	9+68 ft
Y	703,851.39 ft		

Elevations			
Ground Elevation	69.04 ft	Hydraulic Grade Line In	66 58 ft
Rim Elevation	69 04 ft	Hydraulic Grade Line Out	66.58 ft
Sump Elevation	66.04 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.54 ft
Headloss Method	Absolute	Velocity Out	3.74 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.22 ft

System Flow Summary			
Total System Flow	1 62 cfs	System Rational Flow	1.62 cfs
System Flow Time	11 22 min	System Additional Flow	0.00 cfs
System Intensity	1.32 in/hr	System Known Flow	0.00 cfs
System CA	1.22 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.57 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.28 acres
Total Inlet CA	1.22 acres	Total Inlet Intensity	1.32 in/hr
Total Inlet Rational Flow	1.62 cfs	Total Inlet Time of Concentration	11.22 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.62 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #3

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.62	cfs	Intercepted CA	1.22	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.32	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	11.22	min
Total Intercepted Flow	1 62	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary				
Pipe Matching	Inverts		Allow Drop Structure?	true
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true		Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.57	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #4

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,396.81 ft	Calculated Station	9+32 ft
Y	703,884.59 ft		

Elevations			
Ground Elevation	68 87 ft	Hydraulic Grade Line In	66.32 ft
Rim Elevation	68.87 ft	Hydraulic Grade Line Out	66.32 ft
Sump Elevation	65.87 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.45 ft
Headloss Method	Absolute	Velocity Out	3.32 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.17 ft

System Flow Summary			
Total System Flow	1.13 cfs	System Rational Flow	1.13 cfs
System Flow Time	11 36 min	System Additional Flow	0 00 cfs
System Intensity	1.31 in/hr	System Known Flow	0.00 cfs
System CA	0.85 acres	Total Diverted Flow In	0 00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.42 acres	Composite Rational C	0.60
Inlet CA	0.85 acres	Carryover CA	0 00 acres
Total Inlet CA	0.85 acres	Total Inlet Intensity	1.31 in/hr
Total Inlet Rational Flow	1.13 cfs	Total Inlet Time of Concentration	11.36 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.13 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #4

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.13 cfs	Intercepted CA	0.85 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1.31 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.36 min
Total Intercepted Flow	1 13 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.42	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #5

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,267.78 ft	Calculated Station	7+07 ft
Y	704,068.12 ft		

Elevations			
Ground Elevation	66.38 ft	Hydraulic Grade Line In	63.90 ft
Rim Elevation	66.38 ft	Hydraulic Grade Line Out	63.90 ft
Sump Elevation	63.38 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.52 ft
Headloss Method	Absolute	Velocity Out	3.65 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.21 ft

System Flow Summary			
Total System Flow	1.52 cfs	System Rational Flow	1.52 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	1.07 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.79 acres	Composite Rational C	0.60
Inlet CA	1.07 acres	Carryover CA	0 00 acres
Total Inlet CA	1.07 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.52 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.52 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #5

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.52	cfs	Intercepted CA	1.07	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 40	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.52	cfs	Capture Efficiency	100 0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.79	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #6

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,249 30 ft	Calculated Station	6+74 ft
Y	704,095 37 ft		

Elevations			
Ground Elevation	66.38 ft	Hydraulic Grade Line In	63.84 ft
Rim Elevation	66.38 ft	Hydraulic Grade Line Out	63.84 ft
Sump Elevation	63.38 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.46 ft
Headloss Method	Absolute	Velocity Out	3.37 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.18 ft

System Flow Summary			
Total System Flow	1.18 cfs	System Rational Flow	1 18 cfs
System Flow Time	12.38 min	System Additional Flow	0.00 cfs
System Intensity	1 25 in/hr	System Known Flow	0 00 cfs
System CA	0.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.57 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.00 acres
Total Inlet CA	0.94 acres	Total Inlet Intensity	1.25 in/hr
Total Inlet Rational Flow	1.18 cfs	Total Inlet Time of Concentration	12.38 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.18 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #6

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.18	cfs	Intercepted CA	0.94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1 25	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	12.38	min
Total Intercepted Flow	1 18	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.57	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #7

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,951.76	ft	Calculated Station	1+66	ft
Y	704,376.31	ft			

Elevations					
Ground Elevation	64.32	ft	Hydraulic Grade Line In	61.74	ft
Rim Elevation	64.32	ft	Hydraulic Grade Line Out	61.74	ft
Sump Elevation	61.32	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.42	ft
Headloss Method	Absolute		Velocity Out	3.19	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.16	ft

System Flow Summary					
Total System Flow	0.99	cfs	System Rational Flow	0.99	cfs
System Flow Time	17.22	min	System Additional Flow	0.00	cfs
System Intensity	1.02	in/hr	System Known Flow	0.00	cfs
System CA	0.96	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0 00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	2.32	acres	Composite Rational C	0.60	
Inlet CA	1.39	acres	Carryover CA	0.00	acres
Total Inlet CA	1.39	acres	Total Inlet Intensity	1.02	in/hr
Total Inlet Rational Flow	1.43	cfs	Total Inlet Time of Concentration	17.22	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	1 43	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3 00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0 083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #11	
Longitudinal Slope	0.006000	ft/ft	Mannings n	0.015	

Detailed Report for Inlet: CB #7

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.99 cfs	Intercepted CA	0.96 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.02 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	17.22 min
Total Intercepted Flow	0.99 cfs	Capture Efficiency	69.3 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0 00 ft

Subwatershed Information

Area (acres)	Inlet C
2.32	0.60

User Data
Date Installed

Message List

Message List
Warning: Inlet fails maximum gutter spread constraint.

Detailed Report for Inlet: CB #8

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,937.36 ft	Calculated Station	2+33 ft
Y	704,328.08 ft		

Elevations			
Ground Elevation	64 55 ft	Hydraulic Grade Line In	61 90 ft
Rim Elevation	64.55 ft	Hydraulic Grade Line Out	61.90 ft
Sump Elevation	61.55 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.35 ft
Headloss Method	Absolute	Velocity Out	2.85 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 13 ft

System Flow Summary			
Total System Flow	0.69 cfs	System Rational Flow	0.69 cfs
System Flow Time	12.02 min	System Additional Flow	0.00 cfs
System Intensity	1.27 in/hr	System Known Flow	0.00 cfs
System CA	0.54 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.15 acres	Composite Rational C	0.60
Inlet CA	0.69 acres	Carryover CA	0.00 acres
Total Inlet CA	0.69 acres	Total Inlet Intensity	1.27 in/hr
Total Inlet Rational Flow	0.88 cfs	Total Inlet Time of Concentration	12.02 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.88 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #9
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #8

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.69 cfs	Intercepted CA	0.54 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.27 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	12 02 min
Total Intercepted Flow	0.69 cfs	Capture Efficiency	77.8 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.15	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #9

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,890 18 ft	Calculated Station	5+10 ft
Y	704,486.67 ft		

Elevations			
Ground Elevation	62.86 ft	Hydraulic Grade Line In	60.55 ft
Rim Elevation	62.86 ft	Hydraulic Grade Line Out	60.55 ft
Sump Elevation	59.86 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.69 ft
Headloss Method	Absolute	Velocity Out	1.38 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.03 ft

System Flow Summary			
Total System Flow	0.80 cfs	System Rational Flow	0.80 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.57 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.69 acres	Composite Rational C	0.60
Inlet CA	0.41 acres	Carryover CA	0 15 acres
Total Inlet CA	0 57 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.80 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	0 80 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #9

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.80	cfs	Intercepted CA	0.57	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.80	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0 00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.69	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #10

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,897 38 ft	Calculated Station	4+78 ft
Y	704,518 62 ft		

Elevations			
Ground Elevation	62.86 ft	Hydraulic Grade Line In	60 21 ft
Rim Elevation	62.86 ft	Hydraulic Grade Line Out	60.21 ft
Sump Elevation	59.86 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.35 ft
Headloss Method	Absolute	Velocity Out	0.55 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	4.71e-3 ft

System Flow Summary			
Total System Flow	0 14 cfs	System Rational Flow	0.14 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	1 40 in/hr	System Known Flow	0.00 cfs
System CA	0.10 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	0.16 acres	Composite Rational C	0.60
Inlet CA	0.10 acres	Carryover CA	0.00 acres
Total Inlet CA	0 10 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0 14 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0 14 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3 00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #10

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.14	cfs	Intercepted CA	0.10	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	0.14	cfs	Capture Efficiency	100 0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.16	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #11

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,156.40 ft	Calculated Station	0+79 ft
Y	704,777.32 ft		

Elevations			
Ground Elevation	60 92 ft	Hydraulic Grade Line In	58.61 ft
Rim Elevation	60.92 ft	Hydraulic Grade Line Out	58 61 ft
Sump Elevation	57.92 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.69 ft
Headloss Method	Absolute	Velocity Out	4.50 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	0.31 ft

System Flow Summary			
Total System Flow	2.61 cfs	System Rational Flow	2.61 cfs
System Flow Time	11.25 min	System Additional Flow	0.00 cfs
System Intensity	1.32 in/hr	System Known Flow	0.00 cfs
System CA	1.96 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.56 acres	Composite Rational C	0 60
Inlet CA	1.54 acres	Carryover CA	0.43 acres
Total Inlet CA	1.96 acres	Total Inlet Intensity	1.32 in/hr
Total Inlet Rational Flow	2.61 cfs	Total Inlet Time of Concentration	11.25 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.61 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #11

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.61	cfs	Intercepted CA	1.96	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.32	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	11.25	min
Total Intercepted Flow	2.61	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
2.56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #12

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,991.25 ft	Calculated Station	0+75 ft
Y	705,139.72 ft		

Elevations			
Ground Elevation	60.92 ft	Hydraulic Grade Line In	58.72 ft
Rim Elevation	60.92 ft	Hydraulic Grade Line Out	58.72 ft
Sump Elevation	57 92 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.80 ft
Headloss Method	Absolute	Velocity Out	5.19 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.42 ft

System Flow Summary			
Total System Flow	3.49 cfs	System Rational Flow	3.49 cfs
System Flow Time	13.47 min	System Additional Flow	0 00 cfs
System Intensity	1.18 in/hr	System Known Flow	0.00 cfs
System CA	2.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	4.60 acres	Composite Rational C	0.60
Inlet CA	2.76 acres	Carryover CA	0.18 acres
Total Inlet CA	2.94 acres	Total Inlet Intensity	1.18 in/hr
Total Inlet Rational Flow	3.49 cfs	Total Inlet Time of Concentration	13.47 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	3.49 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	2.99 ft
Combination Inlet Grate Opening L	2.50 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #12

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.49 cfs	Intercepted CA	2.94 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.18 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13.47 min
Total Intercepted Flow	3.49 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
4.60	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #13

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,714.43 ft	Calculated Station	8+00 ft
Y	704,559.86 ft		

Elevations			
Ground Elevation	64.79 ft	Hydraulic Grade Line In	61.89 ft
Rim Elevation	64.79 ft	Hydraulic Grade Line Out	61.89 ft
Sump Elevation	61.79 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.10 ft
Headloss Method	Absolute	Velocity Out	1.48 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.03 ft

System Flow Summary			
Total System Flow	0 06 cfs	System Rational Flow	0.06 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.04 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.07 acres	Composite Rational C	0.60
Inlet CA	0.04 acres	Carryover CA	0.00 acres
Total Inlet CA	0.04 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	0.06 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	0.06 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #13

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.06	cfs	Intercepted CA	0.04	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.06	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.07	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #14

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,712.67 ft	Calculated Station	8+37 ft
Y	704,526 30 ft		

Elevations			
Ground Elevation	64.76 ft	Hydraulic Grade Line In	62.17 ft
Rim Elevation	64.76 ft	Hydraulic Grade Line Out	62.17 ft
Sump Elevation	61.76 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.41 ft
Headloss Method	Absolute	Velocity Out	3.16 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 16 ft

System Flow Summary			
Total System Flow	0.97 cfs	System Rational Flow	0.97 cfs
System Flow Time	12.65 min	System Additional Flow	0.00 cfs
System Intensity	1.23 in/hr	System Known Flow	0.00 cfs
System CA	0.78 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.30 acres	Composite Rational C	0.60
Inlet CA	0.78 acres	Carryover CA	0.00 acres
Total Inlet CA	0 78 acres	Total Inlet Intensity	1.23 in/hr
Total Inlet Rational Flow	0 97 cfs	Total Inlet Time of Concentration	12.65 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0 97 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0 083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #14

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0 97 cfs	Intercepted CA	0.78 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.23 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	12.65 min
Total Intercepted Flow	0.97 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.30	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #15

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,648.35 ft	Calculated Station	8+17 ft
Y	704,503.13 ft		

Elevations			
Ground Elevation	65.82 ft	Hydraulic Grade Line In	63.17 ft
Rim Elevation	65.82 ft	Hydraulic Grade Line Out	63.17 ft
Sump Elevation	62 82 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.35 ft
Headloss Method	Absolute	Velocity Out	2.89 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.13 ft

System Flow Summary			
Total System Flow	0.72 cfs	System Rational Flow	0.72 cfs
System Flow Time	12.79 min	System Additional Flow	0.00 cfs
System Intensity	1.22 in/hr	System Known Flow	0.00 cfs
System CA	0.58 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.27 acres	Composite Rational C	0.60
Inlet CA	0.76 acres	Carryover CA	0.00 acres
Total Inlet CA	0.76 acres	Total Inlet Intensity	1.22 in/hr
Total Inlet Rational Flow	0.94 cfs	Total Inlet Time of Concentration	12.79 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	0.94 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3 00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #12
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #15

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.72	cfs	Intercepted CA	0.58	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.22	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	12.79	min
Total Intercepted Flow	0.72	cfs	Capture Efficiency	76 8	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.27	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #16

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,638.83 ft	Calculated Station	12+73 ft
Y	704,056.08 ft		

Elevations			
Ground Elevation	68.56 ft	Hydraulic Grade Line In	65.94 ft
Rim Elevation	68.56 ft	Hydraulic Grade Line Out	65.94 ft
Sump Elevation	65.56 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.38 ft
Headloss Method	Absolute	Velocity Out	3.00 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.82 cfs	System Rational Flow	0 82 cfs
System Flow Time	13.18 min	System Additional Flow	0.00 cfs
System Intensity	1.20 in/hr	System Known Flow	0.00 cfs
System CA	0.68 acres	Total Diverted Flow In	0 00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.13 acres	Composite Rational C	0.60
Inlet CA	0.68 acres	Carryover CA	0.00 acres
Total Inlet CA	0.68 acres	Total Inlet Intensity	1.20 in/hr
Total Inlet Rational Flow	0.82 cfs	Total Inlet Time of Concentration	13.18 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	0.82 cfs		

Inlet Characteristics			
Inlet Type	Generic Inlet	Inlet Location	On Grade
Inlet	Generic Default 100%	Inlet Section Properties	Gutter Section
Road Cross Slope	0 020 ft/ft	Depressed Gutter?	true
Gutter Cross Slope	0.020 ft/ft	Gutter Width	0.00 ft
Bypass Target	CB #15	Longitudinal Slope	0.006000 ft/ft
Mannings n	0.015		

Detailed Report for Inlet: CB #16

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.82 cfs	Intercepted CA	0.68 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	1.20 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13.18 min
Total Intercepted Flow	0.82 cfs	Capture Efficiency	100 0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0 00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.13	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #17

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,703 88 ft	Calculated Station	12+77 ft
Y	704,084.21 ft		

Elevations			
Ground Elevation	67.66 ft	Hydraulic Grade Line In	65.03 ft
Rim Elevation	67.66 ft	Hydraulic Grade Line Out	65.03 ft
Sump Elevation	64 66 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.37 ft
Headloss Method	Absolute	Velocity Out	2.95 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.77 cfs	System Rational Flow	0.77 cfs
System Flow Time	11.18 min	System Additional Flow	0.00 cfs
System Intensity	1.32 in/hr	System Known Flow	0.00 cfs
System CA	0 58 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.96 acres	Composite Rational C	0.60
Inlet CA	0.58 acres	Carryover CA	0.00 acres
Total Inlet CA	0 58 acres	Total Inlet Intensity	1.32 in/hr
Total Inlet Rational Flow	0.77 cfs	Total Inlet Time of Concentration	11.18 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0 00 cfs
Total Flow To Inlet	0.77 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #17

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.77 cfs	Intercepted CA	0.58 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.32 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.18 min
Total Intercepted Flow	0.77 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0 00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.96	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #18

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,697.01 ft	Calculated Station	13+10 ft
Y	704,052.09 ft		

Elevations			
Ground Elevation	67.66 ft	Hydraulic Grade Line In	65.15 ft
Rim Elevation	67.66 ft	Hydraulic Grade Line Out	65 15 ft
Sump Elevation	64.66 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.49 ft
Headloss Method	Absolute	Velocity Out	3 49 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.19 ft

System Flow Summary			
Total System Flow	1.32 cfs	System Rational Flow	1.32 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	1.40 in/hr	System Known Flow	0.00 cfs
System CA	0.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1 56 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.00 acres
Total Inlet CA	0.94 acres	Total Inlet Intensity	1.40 in/hr
Total Inlet Rational Flow	1.32 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.32 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #18

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1 32	cfs	Intercepted CA	0.94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	1.40	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	1.32	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #19

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,587.04	ft	Calculated Station	15+49	ft
Y	703,834.24	ft			

Elevations					
Ground Elevation	69.23	ft	Hydraulic Grade Line In	66.63	ft
Rim Elevation	69.23	ft	Hydraulic Grade Line Out	66.63	ft
Sump Elevation	66.23	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.40	ft
Headloss Method	Absolute		Velocity Out	3.09	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.15	ft

System Flow Summary					
Total System Flow	0.90	cfs	System Rational Flow	0.90	cfs
System Flow Time	11.30	min	System Additional Flow	0.00	cfs
System Intensity	1.32	in/hr	System Known Flow	0.00	cfs
System CA	0.68	acres	Total Diverted Flow In	0 00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0.00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	0.87	acres	Composite Rational C	0.60	
Inlet CA	0.52	acres	Carryover CA	0.16	acres
Total Inlet CA	0.68	acres	Total Inlet Intensity	1.32	in/hr
Total Inlet Rational Flow	0.90	cfs	Total Inlet Time of Concentration	11.30	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	0 90	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	In Sag	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3 00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1 50	ft			

Detailed Report for Inlet: CB #19

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.90 cfs	Intercepted CA	0.68 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.32 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.30 min
Total Intercepted Flow	0.90 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.87	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #20

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,567.55 ft	Calculated Station	15+69 ft
Y	703,809.15 ft		

Elevations			
Ground Elevation	69.23 ft	Hydraulic Grade Line In	66.78 ft
Rim Elevation	69.23 ft	Hydraulic Grade Line Out	66.78 ft
Sump Elevation	66 23 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.55 ft
Headloss Method	Absolute	Velocity Out	3.80 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.22 ft

System Flow Summary			
Total System Flow	1.70 cfs	System Rational Flow	1.70 cfs
System Flow Time	11.03 min	System Additional Flow	0.00 cfs
System Intensity	1.33 in/hr	System Known Flow	0.00 cfs
System CA	1.26 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.78 acres	Composite Rational C	0.60
Inlet CA	1.07 acres	Carryover CA	0.19 acres
Total Inlet CA	1.26 acres	Total Inlet Intensity	1 33 in/hr
Total Inlet Rational Flow	1.70 cfs	Total Inlet Time of Concentration	11.03 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.70 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #20

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1 70 cfs	Intercepted CA	1 26 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.33 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.03 min
Total Intercepted Flow	1.70 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.78	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #21

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,821.99 ft	Calculated Station	18+40 ft
Y	703,652 83 ft		

Elevations			
Ground Elevation	71.19 ft	Hydraulic Grade Line In	68.54 ft
Rim Elevation	71.19 ft	Hydraulic Grade Line Out	68.54 ft
Sump Elevation	68.19 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.35 ft
Headloss Method	Absolute	Velocity Out	2.85 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.13 ft

System Flow Summary			
Total System Flow	0.69 cfs	System Rational Flow	0.69 cfs
System Flow Time	12 57 min	System Additional Flow	0 00 cfs
System Intensity	1 24 in/hr	System Known Flow	0.00 cfs
System CA	0.55 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.18 acres	Composite Rational C	0.60
Inlet CA	0.71 acres	Carryover CA	0.00 acres
Total Inlet CA	0.71 acres	Total Inlet Intensity	1.24 in/hr
Total Inlet Rational Flow	0.88 cfs	Total Inlet Time of Concentration	12.57 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.88 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #19
Longitudinal Slope	0.006500 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #21

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.69 cfs	Intercepted CA	0.55 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.24 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	12.57 min
Total Intercepted Flow	0.69 cfs	Capture Efficiency	78.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0 00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1 18	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #22

Scenario Summary	
Label	5-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,789.07	ft	Calculated Station	18+47	ft
Y	703,638 93	ft			

Elevations					
Ground Elevation	71.19	ft	Hydraulic Grade Line In	68.55	ft
Rim Elevation	71.19	ft	Hydraulic Grade Line Out	68.55	ft
Sump Elevation	68.19	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.36	ft
Headloss Method	Absolute		Velocity Out	2.93	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.13	ft

System Flow Summary					
Total System Flow	0.76	cfs	System Rational Flow	0.76	cfs
System Flow Time	12.48	min	System Additional Flow	0 00	cfs
System Intensity	1.24	in/hr	System Known Flow	0.00	cfs
System CA	0.60	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0.00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	1.28	acres	Composite Rational C	0 60	
Inlet CA	0.77	acres	Carryover CA	0.03	acres
Total Inlet CA	0.80	acres	Total Inlet Intensity	1.24	in/hr
Total Inlet Rational Flow	1.00	cfs	Total Inlet Time of Concentration	12.48	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	1.00	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3 00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0 083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #20	
Longitudinal Slope	0.006500	ft/ft	Mannings n	0.015	

Detailed Report for Inlet: CB #22

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.76 cfs	Intercepted CA	0.60 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	1.24 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	12.48 min
Total Intercepted Flow	0.76 cfs	Capture Efficiency	75.8 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

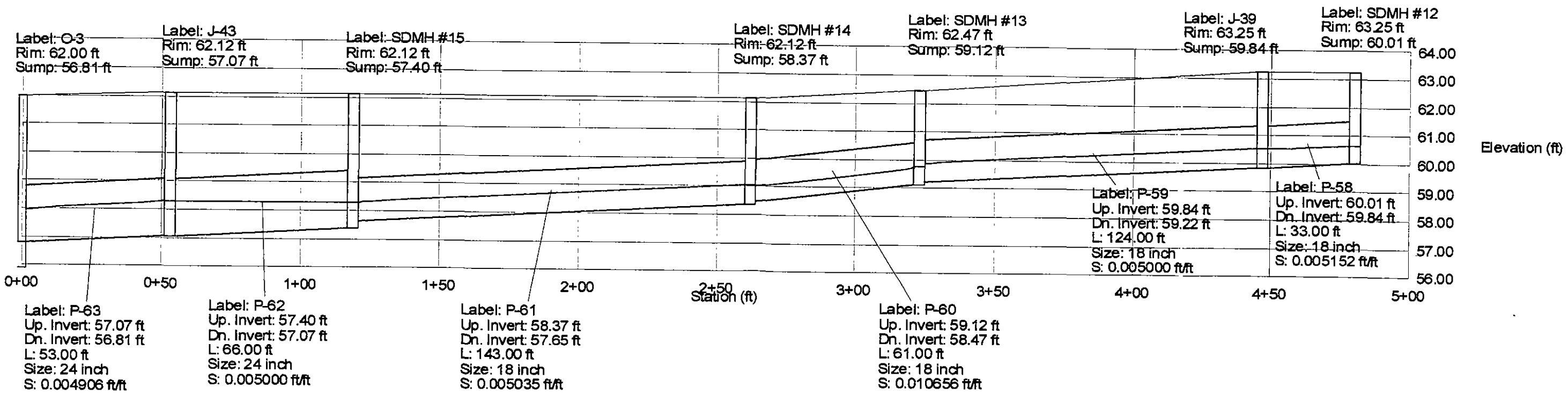
Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1 28	0.60

User Data
Date Installed

Profile
Scenario: 100-YEAR



100-YEAR STORMCAD CALCULATIONS

Scenario: 100-YEAR

inlet reprt modified

Label	Local Rational Flow (cfs)	Total Flow To Inlet (cfs)	Intercepted Rational Flow (cfs)
CB #1	3.25	3.25	1.78
CB #2	1.12	1 12	0 83
CB #3	3.40	5 06	5 06
CB #4	3.05	3.05	3.05
CB #5	4.11	4.11	4 11
CB #6	3.20	3 20	3 20
CB #7	3.85	3.85	2.02
CB #8	2.39	2 39	1.44
CB #9	1.59	2.63	2 63
CB #10	0.37	0 37	0 37
CB #11	5.54	7 92	7 92
CB #12	8.83	9 83	9 83
CB #13	0.16	0 16	0 16
CB #14	2.61	2.61	2.61
CB #15	2.53	2.53	1.50
CB #16	2.21	2 21	2.21
CB #17	2.08	2.08	2.08
CB #18	3.59	3.59	3.59
CB #19	1.88	2.89	2.89
CB #20	3.89	5.22	5.22
CB #21	2.38	2.38	1.44
CB #22	2.60	2.87	1.64

Scenario: 100-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Mannings n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-1	CB #21	SDMH #29	1.18	0.60	0.71	0.43	3.34	1.44	18.00	0.074444	12 inch	0.014	9.03	68.19	66.85	71.19	70.82	2.00	2.97	68.80	68.84	
P-2	SDMH #2	J-2	N/A	N/A	N/A	0.91	3.31	3.05	279.00	0.006523	15 inch	0.014	4.84	66.85	65.03	70.82	70.82	2.72	4.54	68.84	68.12	
P-3	J-2	SDMH #28	N/A	N/A	N/A	3.15	2.98	9.45	54.00	0.006296	15 inch	0.014	4.76	65.03	64.69	70.82	70.82	4.54	4.88	68.12	66.78	
P-4	SDMH #2	SDMH #27	N/A	N/A	N/A	3.15	2.96	9.38	95.00	0.005053	18 inch	0.014	6.93	64.19	63.71	70.82	69.11	5.13	3.90	66.78	65.90	
P-5	SDMH #2	SDMH #26	N/A	N/A	N/A	3.15	2.90	9.21	82.00	0.004878	18 inch	0.014	6.81	63.61	63.21	69.11	68.61	4.00	3.90	65.90	65.16	
P-6	SDMH #2	J-6	N/A	N/A	N/A	3.15	2.88	9.15	44.00	0.005000	24 inch	0.014	14.85	63.11	62.89	68.61	69.11	3.50	4.22	65.16	65.08	
P-7	J-6	J-7	N/A	N/A	N/A	3.83	2.87	11.05	10.00	0.005000	24 inch	0.014	14.85	62.89	62.84	69.11	69.11	4.22	4.27	65.08	65.05	
P-8	J-7	J-8	N/A	N/A	N/A	4.76	2.86	13.74	33.00	0.004848	24 inch	0.014	14.63	62.84	62.68	69.11	69.11	4.27	4.43	65.05	64.91	
P-9	J-8	SDMH #25	N/A	N/A	N/A	5.34	2.85	15.35	39.00	0.005128	24 inch	0.014	15.04	62.68	62.48	69.11	67.83	4.43	3.35	64.91	64.70	
P-10	SDMH #2	SDMH #24	N/A	N/A	N/A	5.34	2.84	15.30	72.00	0.005000	24 inch	0.014	14.85	62.38	62.02	67.83	67.39	3.45	3.37	64.70	64.32	
P-11	SDMH #2	SDMH #23	N/A	N/A	N/A	5.34	2.83	15.21	193.00	0.005026	24 inch	0.014	14.89	61.92	60.95	67.39	66.17	3.47	3.22	64.32	63.31	
P-12	SDMH #2	SDMH #22	N/A	N/A	N/A	5.34	2.78	14.96	112.00	0.005893	24 inch	0.014	16.12	60.85	60.19	66.17	65.52	3.32	3.33	63.31	62.74	
P-13	SDMH #2	J-13	N/A	N/A	N/A	5.79	2.75	16.07	27.00	0.004815	24 inch	0.014	14.58	59.69	59.56	65.52	65.52	3.83	3.96	62.74	62.58	
P-14	J-13	J-14	N/A	N/A	N/A	6.57	2.75	18.19	33.00	0.005152	24 inch	0.014	15.08	59.56	59.39	65.52	65.00	3.96	3.61	62.58	62.33	
P-15	J-14	SDMH #21	N/A	N/A	N/A	6.61	2.74	18.26	42.00	0.007143	24 inch	0.014	17.75	59.39	59.09	65.00	64.92	3.61	3.83	62.33	62.02	
P-16	SDMH #2	SDMH #20	N/A	N/A	N/A	6.61	2.73	18.21	132.00	0.005000	24 inch	0.014	14.85	59.09	58.43	64.92	64.16	3.83	3.73	62.02	61.02	
P-17	SDMH #2	SDMH #19	N/A	N/A	N/A	6.61	2.70	18.03	122.00	0.005000	24 inch	0.014	14.85	58.33	57.72	64.16	63.44	3.83	3.72	61.02	60.12	
P-18	SDMH #1	SDMH #18	N/A	N/A	N/A	6.61	2.68	17.86	183.00	0.004973	24 inch	0.014	14.81	57.62	56.71	63.44	62.38	3.82	3.67	60.12	58.80	
P-19	SDMH #1	SDMH #17	N/A	N/A	N/A	6.61	2.64	17.61	73.00	0.005068	24 inch	0.014	14.95	56.61	56.24	62.38	61.95	3.77	3.71	58.80	58.29	
P-20	SDMH #1	SDMH #16	N/A	N/A	N/A	6.61	2.63	17.51	73.00	0.006301	24 inch	0.014	16.67	56.14	55.68	61.95	61.95	3.81	4.27	58.29	57.78	
P-21	SDMH #1	J-21	N/A	N/A	N/A	6.61	2.61	17.41	63.00	0.004921	24 inch	0.014	14.73	55.18	54.87	61.95	61.95	4.77	5.08	57.78	57.35	
P-22	J-21	O-1	N/A	N/A	N/A	9.68	2.60	25.36	61.00	0.005082	24 inch	0.014	14.97	54.87	54.56	61.95	61.00	5.08	4.44	57.35	56.33	
P-23	CB #12	J-21	4.60	0.60	2.76	3.07	3.18	9.83	14.00	0.217857	12 inch	0.014	15.44	57.92	54.87	60.92	61.95	2.00	6.08	58.91	57.35	
P-24	CB #13	J-14	0.07	0.60	0.04	0.04	3.80	0.16	51.00	0.047059	12 inch	0.014	7.18	61.79	59.39	64.79	65.00	2.00	4.61	62.33	62.33	
P-25	CB #14	J-13	1.30	0.60	0.78	0.78	3.32	2.61	55.00	0.040000	12 inch	0.014	6.62	61.76	59.56	64.76	65.52	2.00	4.96	62.92	62.58	
P-26	CB #17	J-8	0.96	0.60	0.58	0.58	3.59	2.08	52.00	0.038077	12 inch	0.014	6.46	64.66	62.68	67.66	69.11	2.00	5.43	65.28	64.91	
P-27	CB #18	J-7	1.56	0.60	0.94	0.94	3.80	3.59	52.00	0.035000	12 inch	0.014	6.19	64.66	62.84	67.66	69.11	2.00	5.27	65.66	65.05	
P-28	CB #16	J-6	1.13	0.60	0.68	0.68	3.23	2.21	5.00	0.534000	12 inch	0.014	24.17	65.56	62.89	68.56	69.11	2.00	5.22	66.19	65.08	
P-29	CB #19	J-2	0.87	0.60	0.52	0.80	3.57	2.89	6.00	0.200000	12 inch	0.014	14.79	66.23	65.03	69.23	70.82	2.00	4.79	68.16	68.12	
P-30	CB #20	J-2	1.78	0.60	1.07	1.43	3.61	5.22	26.00	0.046154	12 inch	0.014	7.11	66.23	65.03	69.23	70.82	2.00	4.79	68.77	68.12	
P-31	CB #22	SDMH #29	1.28	0.60	0.77	0.49	3.35	1.64	25.00	0.053600	12 inch	0.014	7.66	68.19	66.85	71.19	70.82	2.00	2.97	68.81	68.84	
P-32	CB #15	SDMH #22	1.27	0.60	0.76	0.45	3.30	1.50	8.00	0.391250	12 inch	0.014	20.69	62.82	59.69	65.82	65.52	2.00	4.83	63.34	62.74	
P-33	CB #2	SDMH #1	0.52	0.60	0.31	0.23	3.57	0.83	33.00	0.059091	12 inch	0.014	8.04	70.88	68.93	73.88	74.36	2.00	4.43	71.26	69.15	
P-34	SDMH #1	J-23	N/A	N/A	N/A	0.23	3.55	0.82	28.00	0.016786	12 inch	0.014	4.29	68.93	68.46	74.36	74.86	4.43	5.40	69.31	69.25	
P-35	J-23	SDMH #2	N/A	N/A	N/A	0.78	3.15	2.49	80.00	0.006125	12 inch	0.014	2.59	68.46	67.97	74.86	73.28	5.40	4.31	69.25	68.65	
P-36	SDMH #2	SDMH #3	N/A	N/A	N/A	0.78	3.09	2.45	347.00	0.008300	15 inch	0.014	5.46	67.72	64.84	73.28	69.32	4.31	3.23	68.35	65.69	
P-37	SDMH #3	J-26	N/A	N/A	N/A	0.78	2.85	2.26	46.00	0.005000	18 inch	0.014	6.90	64.59	64.36	69.32	68.42	3.23	2.56	65.69	65.68	
P-38	J-26	J-27	N/A	N/A	N/A	2.19	2.82	6.21	18.00	0.005000	18 inch	0.014	6.90	64.36	64.27	68.42	68.42	2.56	2.65	65.68	65.62	
P-39	J-27	SDMH #4	N/A	N/A	N/A	3.04	2.81	8.61	28.00	0.005000	18 inch	0.014	6.90	64.27	64.13	68.42	68.42	2.65	2.79	65.62	65.27	
P-40	SDMH #4	J-29	N/A	N/A	N/A	3.04	2.81	8.59	222.00	0.004955	24 inch	0.014	14.79	64.03	62.93	68.42	66.47	2.39	1.54	65.12	64.36	
P-41	J-29	J-30	N/A	N/A	N/A	4.11	2.75	11.38	33.00	0.004848	24 inch	0.014	14.63	62.93	62.77	66.47	66.47	1.54	1.70	64.36	64.27	
P-42	J-30	SDMH #5	N/A	N/A	N/A	5.05	2.74	13.94	57.00	0.005088	24 inch	0.014	14.98	62.77	62.48	66.47	66.47	1.70	1.99	64.27	63.88	
P-43	SDMH #5	SDMH #6	N/A	N/A	N/A	5.05	2.73	13.88	70.00	0.005143	24 inch	0.014	15.06	62.38	62.02	66.47	66.02	2.09	2.00	63.88	63.36	
P-44	SDMH #6	SDMH #7	N/A	N/A	N/A	5.05	2.71	13.81	172.00	0.007849	24 inch	0.014	18.61	61.92	60.57	66.02	64.92	2.10	2.35	63.26	61.94	
P-45	SDMH #7	SDMH #8	N/A	N/A	N/A	5.05	2.68	13.64	45.00	0.005111	24 inch	0.014	15.02	60.47	60.24	64.92	64.66	2.45	2.42	61.94	61.63	
P-46	SDMH #8	SDMH #9	N/A	N/A	N/A	5.05	2.67	13.60	71.00	0.005070	24 inch	0.014	14.96	60.14	59.78	64.66	64.25	2.52	2.47	61.63	61.24	
P-47	SDMH #9	SDMH #10	N/A	N/A	N/A	5.47	2.65	14.63	48.00	0.005000	24 inch	0.014	14.85	59.68	59.44	64.25	64.02	2.57	2.58	61.24	60.82	
P-48	SDMH #1	SDMH #11	N/A	N/A	N/A	5.47	2.64	14.58	26.00	0.010000	24 inch	0.014	21.01	59.34	59.08	64.02	64.00	2.68	2.92	60.72	60.33	
P-49	SDMH #1	O-2	N/A	N/A	N/A	6.20	2.64	16.50	153.00	0.019477	24 inch	0.014	29.32	58.98	56.00	64.00	62.00	3.02	4.00	60.44	57.07	
P-50	CB #7	SDMH #11	2.32	0.60	1.39	0.73	2.74	2.02	13.00	0.180000	12 inch	0.014	14.04	61.32	58.98	64.32	64.00	2.00	4.02	61.93	60.44	
P-51	CB #1	J-23	1.69	0.60	1.01	0.55	3.18	1.78	27.00	0.113333	12 inch	0.014	11.14	71.52	68.46	74.52	74.86	2.00	5.40	72.09	69.25	

Scenario: 100-YEAR

Pipe Report

Label	Upstream Node	Downstream Node	Upstream Inlet Area (acres)	Upstream Inlet Rational Coefficient	Upstream Inlet CA (acres)	Upstream Calculated System CA (acres)	System Intensity (in/hr)	Total System Flow (cfs)	Length (ft)	Constructed Slope (ft/ft)	Section Size	Manning's n	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Description
P-52	CB #3	J-26	1.57	0.60	0.94	1.40	3.58	5.06	25.00	0.067200	12 inch	0.014	8.58	66.04	64.36	69.04	68.42	2.00	3.06	66.96	65.68	
P-53	CB #4	J-27	1.42	0.60	0.85	0.85	3.56	3.05	7.00	0.228571	12 inch	0.014	15.82	65.87	64.27	68.87	68.42	2.00	3.15	66.62	65.62	
P-54	CB #5	J-29	1.79	0.60	1.07	1.07	3.80	4.11	32.00	0.014063	12 inch	0.014	3.92	63.38	62.93	66.38	66.47	2.00	2.54	64.86	64.36	
P-55	CB #6	J-30	1.57	0.60	0.94	0.94	3.37	3.20	32.00	0.019062	12 inch	0.014	4.57	63.38	62.77	66.38	66.47	2.00	2.70	64.57	64.27	
P-56	CB #8	SDMH #9	1.15	0.60	0.69	0.42	3.44	1.44	6.00	0.311667	12 inch	0.014	18.47	61.55	59.68	64.55	64.25	2.00	3.57	62.06	61.24	
P-57	CB #9	SDMH #12	0.69	0.60	0.41	0.69	3.80	2.63	30.00	-0.005000	12 inch	0.014	-2.34	59.86	60.01	62.86	63.25	2.00	2.24	61.03	60.71	
P-58	SDMH #12	J-39	N/A	N/A	N/A	0.69	3.78	2.62	33.00	0.005152	18 inch	0.014	7.00	60.01	59.84	63.25	63.25	1.74	1.91	60.65	60.52	
P-59	J-39	SDMH #13	N/A	N/A	N/A	0.78	3.66	2.89	124.00	0.005000	18 inch	0.014	6.90	59.84	59.22	63.25	62.47	1.91	1.75	60.52	59.87	
P-60	SDMH #13	SDMH #14	N/A	N/A	N/A	0.78	3.56	2.81	61.00	0.010656	18 inch	0.014	10.07	59.12	58.47	62.47	62.12	1.85	2.15	59.76	59.01	
P-61	SDMH #14	SDMH #15	N/A	N/A	N/A	0.78	3.52	2.78	143.00	0.005035	18 inch	0.014	6.92	58.37	57.65	62.12	62.12	2.25	2.97	59.03	58.28	
P-62	SDMH #15	J-43	N/A	N/A	N/A	0.78	3.41	2.69	66.00	0.005000	24 inch	0.014	14.85	57.40	57.07	62.12	62.12	2.72	3.05	58.28	58.27	
P-63	J-43	O-3	N/A	N/A	N/A	2.98	3.29	9.89	53.00	0.004906	24 inch	0.014	14.71	57.07	56.81	62.12	62.00	3.05	3.19	58.27	57.93	
P-64	CB #11	J-43	2.56	0.60	1.54	2.20	3.57	7.92	26.00	0.032692	12 inch	0.014	5.98	57.92	57.07	60.92	62.12	2.00	4.05	59.76	58.27	
P-65	CB #10	J-39	0.16	0.60	0.10	0.10	3.80	0.37	31.00	0.000645	12 inch	0.014	0.84	59.86	59.84	62.86	63.25	2.00	2.41	60.52	60.52	

Detailed Report for Inlet: CB #1

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,228.00 ft	Calculated Station	14+43 ft
Y	703,422.00 ft		

Elevations			
Ground Elevation	74.52 ft	Hydraulic Grade Line In	72.09 ft
Rim Elevation	74.52 ft	Hydraulic Grade Line Out	72.09 ft
Sump Elevation	71.52 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.57 ft
Headloss Method	Absolute	Velocity Out	3.86 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.23 ft

System Flow Summary			
Total System Flow	1.78 cfs	System Rational Flow	1.78 cfs
System Flow Time	13.47 min	System Additional Flow	0.00 cfs
System Intensity	3.18 in/hr	System Known Flow	0.00 cfs
System CA	0.55 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.69 acres	Composite Rational C	0.60
Inlet CA	1.01 acres	Carryover CA	0.00 acres
Total Inlet CA	1.01 acres	Total Inlet Intensity	3.18 in/hr
Total Inlet Rational Flow	3.25 cfs	Total Inlet Time of Concentration	13.47 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.25 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #3
Longitudinal Slope	0.008000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #1

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1.78 cfs	Intercepted CA	0.55 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.18 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13 47 min
Total Intercepted Flow	1.78 cfs	Capture Efficiency	54.7 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.69	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #2

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,161.60 ft	Calculated Station	14+77 ft
Y	703,422.00 ft		

Elevations			
Ground Elevation	73.88 ft	Hydraulic Grade Line In	71.26 ft
Rim Elevation	73.88 ft	Hydraulic Grade Line Out	71.26 ft
Sump Elevation	70.88 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.38 ft
Headloss Method	Absolute	Velocity Out	3 01 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.14 ft

System Flow Summary			
Total System Flow	0.83 cfs	System Rational Flow	0 83 cfs
System Flow Time	11.30 min	System Additional Flow	0.00 cfs
System Intensity	3.57 in/hr	System Known Flow	0.00 cfs
System CA	0 23 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	0.52 acres	Composite Rational C	0.60
Inlet CA	0.31 acres	Carryover CA	0 00 acres
Total Inlet CA	0.31 acres	Total Inlet Intensity	3.57 in/hr
Total Inlet Rational Flow	1.12 cfs	Total Inlet Time of Concentration	11.30 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	1.12 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #22
Longitudinal Slope	0.006500 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #2

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	0.83 cfs	Intercepted CA	0.23 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.57 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.30 min
Total Intercepted Flow	0.83 cfs	Capture Efficiency	73.7 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
0.52	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #3

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,411.85 ft	Calculated Station	9+68 ft
Y	703,851.39 ft		

Elevations			
Ground Elevation	69.04 ft	Hydraulic Grade Line In	66.96 ft
Rim Elevation	69.04 ft	Hydraulic Grade Line Out	66.96 ft
Sump Elevation	66.04 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 92 ft
Headloss Method	Absolute	Velocity Out	6.69 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.70 ft

System Flow Summary			
Total System Flow	5 06 cfs	System Rational Flow	5.06 cfs
System Flow Time	11.22 min	System Additional Flow	0 00 cfs
System Intensity	3.58 in/hr	System Known Flow	0.00 cfs
System CA	1.40 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.57 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.46 acres
Total Inlet CA	1.40 acres	Total Inlet Intensity	3.58 in/hr
Total Inlet Rational Flow	5.06 cfs	Total Inlet Time of Concentration	11.22 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	5.06 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #3

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	5.06 cfs	Intercepted CA	1 40 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	3.58 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11 22 min
Total Intercepted Flow	5.06 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0 00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.57	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #4

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,396 81 ft	Calculated Station	9+32 ft
Y	703,884.59 ft		

Elevations			
Ground Elevation	68.87 ft	Hydraulic Grade Line In	66.62 ft
Rim Elevation	68.87 ft	Hydraulic Grade Line Out	66.62 ft
Sump Elevation	65 87 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.75 ft
Headloss Method	Absolute	Velocity Out	4 84 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.36 ft

System Flow Summary			
Total System Flow	3.05 cfs	System Rational Flow	3.05 cfs
System Flow Time	11.36 min	System Additional Flow	0.00 cfs
System Intensity	3.56 in/hr	System Known Flow	0.00 cfs
System CA	0.85 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.42 acres	Composite Rational C	0.60
Inlet CA	0.85 acres	Carryover CA	0.00 acres
Total Inlet CA	0.85 acres	Total Inlet Intensity	3.56 in/hr
Total Inlet Rational Flow	3.05 cfs	Total Inlet Time of Concentration	11.36 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3 05 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #4

External Pipe Flow			
External CA	0 00 acres	External Time of Concentration	0 00 min

Intercepted Flow Summary			
Intercepted Rational Flow	3.05 cfs	Intercepted CA	0 85 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.56 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11.36 min
Total Intercepted Flow	3.05 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0 00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.42	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #5

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,267.78 ft	Calculated Station	7+07 ft
Y	704,068.12 ft		

Elevations			
Ground Elevation	66.38 ft	Hydraulic Grade Line In	64.86 ft
Rim Elevation	66.38 ft	Hydraulic Grade Line Out	64 86 ft
Sump Elevation	63.38 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.48 ft
Headloss Method	Absolute	Velocity Out	5.24 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.43 ft

System Flow Summary			
Total System Flow	4.11 cfs	System Rational Flow	4.11 cfs
System Flow Time	10 00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	1.07 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0 00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.79 acres	Composite Rational C	0.60
Inlet CA	1.07 acres	Carryover CA	0.00 acres
Total Inlet CA	1.07 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	4.11 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	4.11 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #5

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	4.11	cfs	Intercepted CA	1.07	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	4.11	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0 00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1 79	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #6

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,249 30 ft	Calculated Station	6+74 ft
Y	704,095.37 ft		

Elevations			
Ground Elevation	66.38 ft	Hydraulic Grade Line In	64.57 ft
Rim Elevation	66.38 ft	Hydraulic Grade Line Out	64 57 ft
Sump Elevation	63.38 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.19 ft
Headloss Method	Absolute	Velocity Out	4.08 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.26 ft

System Flow Summary			
Total System Flow	3 20 cfs	System Rational Flow	3.20 cfs
System Flow Time	12.38 min	System Additional Flow	0.00 cfs
System Intensity	3.37 in/hr	System Known Flow	0.00 cfs
System CA	0 94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.57 acres	Composite Rational C	0.60
Inlet CA	0.94 acres	Carryover CA	0.00 acres
Total Inlet CA	0.94 acres	Total Inlet Intensity	3.37 in/hr
Total Inlet Rational Flow	3.20 cfs	Total Inlet Time of Concentration	12.38 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.20 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #6

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	3.20	cfs	Intercepted CA	0.94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.37	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	12.38	min
Total Intercepted Flow	3.20	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0 00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
1.57	0 60

User Data
Date Installed

Detailed Report for Inlet: CB #7

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,951.76 ft	Calculated Station	1+66 ft
Y	704,376.31 ft		

Elevations			
Ground Elevation	64.32 ft	Hydraulic Grade Line In	61.93 ft
Rim Elevation	64 32 ft	Hydraulic Grade Line Out	61.93 ft
Sump Elevation	61.32 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.61 ft
Headloss Method	Absolute	Velocity Out	4.05 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.26 ft

System Flow Summary			
Total System Flow	2.02 cfs	System Rational Flow	2.02 cfs
System Flow Time	17 22 min	System Additional Flow	0.00 cfs
System Intensity	2.74 in/hr	System Known Flow	0.00 cfs
System CA	0.73 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.32 acres	Composite Rational C	0.60
Inlet CA	1.39 acres	Carryover CA	0.00 acres
Total Inlet CA	1.39 acres	Total Inlet Intensity	2.74 in/hr
Total Inlet Rational Flow	3.85 cfs	Total Inlet Time of Concentration	17.22 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.85 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #11
Longitudinal Slope	0 006000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #7

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2 02	cfs	Intercepted CA	0.73	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	2.74	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	17.22	min
Total Intercepted Flow	2.02	cfs	Capture Efficiency	52.5	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
2.32	0.60

User Data
Date Installed

Message List

Message List
Warning: Inlet fails maximum gutter spread constraint.

Detailed Report for Inlet: CB #8

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,937.36 ft	Calculated Station	2+33 ft
Y	704,328.08 ft		

Elevations			
Ground Elevation	64.55 ft	Hydraulic Grade Line In	62 06 ft
Rim Elevation	64.55 ft	Hydraulic Grade Line Out	62.06 ft
Sump Elevation	61.55 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.51 ft
Headloss Method	Absolute	Velocity Out	3.59 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.20 ft

System Flow Summary			
Total System Flow	1.44 cfs	System Rational Flow	1.44 cfs
System Flow Time	12.02 min	System Additional Flow	0.00 cfs
System Intensity	3.44 in/hr	System Known Flow	0.00 cfs
System CA	0.42 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.15 acres	Composite Rational C	0 60
Inlet CA	0 69 acres	Carryover CA	0.00 acres
Total Inlet CA	0.69 acres	Total Inlet Intensity	3.44 in/hr
Total Inlet Rational Flow	2.39 cfs	Total Inlet Time of Concentration	12.02 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.39 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #9
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #8

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	1 44 cfs	Intercepted CA	0.42 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.44 in/hr
Intercepted Known Flow	0 00 cfs	Intercepted Tc	12 02 min
Total Intercepted Flow	1.44 cfs	Capture Efficiency	60.3 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0 00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.15	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #9

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,890.18 ft	Calculated Station	5+10 ft
Y	704,486.67 ft		

Elevations			
Ground Elevation	62.86 ft	Hydraulic Grade Line In	61.03 ft
Rim Elevation	62.86 ft	Hydraulic Grade Line Out	61.03 ft
Sump Elevation	59.86 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.17 ft
Headloss Method	Absolute	Velocity Out	3 35 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.17 ft

System Flow Summary			
Total System Flow	2.63 cfs	System Rational Flow	2.63 cfs
System Flow Time	10.00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.69 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.69 acres	Composite Rational C	0.60
Inlet CA	0 41 acres	Carryover CA	0.27 acres
Total Inlet CA	0.69 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	2.63 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2 63 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #9

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.63	cfs	Intercepted CA	0.69	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	2.63	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0 00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.69	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #10

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,897.38 ft	Calculated Station	4+78 ft
Y	704,518.62 ft		

Elevations			
Ground Elevation	62.86 ft	Hydraulic Grade Line In	60.52 ft
Rim Elevation	62.86 ft	Hydraulic Grade Line Out	60.52 ft
Sump Elevation	59.86 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0 66 ft
Headloss Method	Absolute	Velocity Out	0.67 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.01 ft

System Flow Summary			
Total System Flow	0.37 cfs	System Rational Flow	0.37 cfs
System Flow Time	10.00 min	System Additional Flow	0.00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.10 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.16 acres	Composite Rational C	0.60
Inlet CA	0.10 acres	Carryover CA	0.00 acres
Total Inlet CA	0 10 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.37 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.37 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #10

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.37	cfs	Intercepted CA	0.10	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10 00	min
Total Intercepted Flow	0.37	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.16	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #11

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	80,156.40 ft	Calculated Station	0+79 ft
Y	704,777.32 ft		

Elevations			
Ground Elevation	60.92 ft	Hydraulic Grade Line In	59.76 ft
Rim Elevation	60 92 ft	Hydraulic Grade Line Out	59.76 ft
Sump Elevation	57 92 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	1.84 ft
Headloss Method	Absolute	Velocity Out	10.08 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	1.58 ft

System Flow Summary			
Total System Flow	7 92 cfs	System Rational Flow	7.92 cfs
System Flow Time	11 25 min	System Additional Flow	0.00 cfs
System Intensity	3.57 in/hr	System Known Flow	0.00 cfs
System CA	2.20 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	2.56 acres	Composite Rational C	0.60
Inlet CA	1.54 acres	Carryover CA	0.66 acres
Total Inlet CA	2.20 acres	Total Inlet Intensity	3.57 in/hr
Total Inlet Rational Flow	7.92 cfs	Total Inlet Time of Concentration	11.25 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	7.92 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening Li	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #11

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	7.92 cfs	Intercepted CA	2.20 acres
Intercepted Additional Flow	0 00 cfs	Intercepted Intensity	3.57 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	11 25 min
Total Intercepted Flow	7.92 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0 00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0 00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0 00 ft

Subwatershed Information

Area (acres)	Inlet C
2.56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #12

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,991 25 ft	Calculated Station	0+75 ft
Y	705,139.72 ft		

Elevations			
Ground Elevation	60 92 ft	Hydraulic Grade Line In	58.91 ft
Rim Elevation	60.92 ft	Hydraulic Grade Line Out	58 91 ft
Sump Elevation	57.92 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.99 ft
Headloss Method	Absolute	Velocity Out	12.52 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	2.44 ft

System Flow Summary			
Total System Flow	9.83 cfs	System Rational Flow	9.83 cfs
System Flow Time	13 47 min	System Additional Flow	0.00 cfs
System Intensity	3.18 in/hr	System Known Flow	0.00 cfs
System CA	3.07 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	4.60 acres	Composite Rational C	0.60
Inlet CA	2.76 acres	Carryover CA	0 31 acres
Total Inlet CA	3.07 acres	Total Inlet Intensity	3.18 in/hr
Total Inlet Rational Flow	9.83 cfs	Total Inlet Time of Concentration	13.47 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	9.83 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	2.99 ft
Combination Inlet Grate Opening L	2 50 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #12

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	9.83 cfs	Intercepted CA	3.07 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.18 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13.47 min
Total Intercepted Flow	9.83 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0 00 in/hr
Upstream Known Flow	0 00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0 00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
4.60	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #13

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,714.43 ft	Calculated Station	8+00 ft
Y	704,559.86 ft		

Elevations			
Ground Elevation	64.79 ft	Hydraulic Grade Line In	62.33 ft
Rim Elevation	64.79 ft	Hydraulic Grade Line Out	62.33 ft
Sump Elevation	61.79 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.54 ft
Headloss Method	Absolute	Velocity Out	0.37 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	2.12e-3 ft

System Flow Summary			
Total System Flow	0 16 cfs	System Rational Flow	0.16 cfs
System Flow Time	10 00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.04 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.07 acres	Composite Rational C	0.60
Inlet CA	0.04 acres	Carryover CA	0.00 acres
Total Inlet CA	0.04 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	0.16 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	0.16 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1 50 ft		

Detailed Report for Inlet: CB #13

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	0.16	cfs	Intercepted CA	0.04	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	0.16	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.07	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #14

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,712 67 ft	Calculated Station	8+37 ft
Y	704,526.30 ft		

Elevations			
Ground Elevation	64.76 ft	Hydraulic Grade Line In	62.92 ft
Rim Elevation	64.76 ft	Hydraulic Grade Line Out	62.92 ft
Sump Elevation	61 76 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1 16 ft
Headloss Method	Absolute	Velocity Out	3.33 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 17 ft

System Flow Summary			
Total System Flow	2.61 cfs	System Rational Flow	2.61 cfs
System Flow Time	12 65 min	System Additional Flow	0.00 cfs
System Intensity	3.32 in/hr	System Known Flow	0.00 cfs
System CA	0 78 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.30 acres	Composite Rational C	0.60
Inlet CA	0.78 acres	Carryover CA	0.00 acres
Total Inlet CA	0.78 acres	Total Inlet Intensity	3.32 in/hr
Total Inlet Rational Flow	2.61 cfs	Total Inlet Time of Concentration	12.65 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.61 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0 020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #14

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.61	cfs	Intercepted CA	0.78	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.32	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	12.65	min
Total Intercepted Flow	2.61	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.30	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #15

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,648 35 ft	Calculated Station	8+17 ft
Y	704,503.13 ft		

Elevations			
Ground Elevation	65.82 ft	Hydraulic Grade Line In	63 34 ft
Rim Elevation	65.82 ft	Hydraulic Grade Line Out	63.34 ft
Sump Elevation	62.82 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.52 ft
Headloss Method	Absolute	Velocity Out	3.64 ft/s
Absolute Headloss	0 00 ft	Velocity Head Out	0.21 ft

System Flow Summary			
Total System Flow	1.50 cfs	System Rational Flow	1.50 cfs
System Flow Time	12.79 min	System Additional Flow	0.00 cfs
System Intensity	3 30 in/hr	System Known Flow	0.00 cfs
System CA	0.45 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.27 acres	Composite Rational C	0.60
Inlet CA	0 76 acres	Carryover CA	0.00 acres
Total Inlet CA	0.76 acres	Total Inlet Intensity	3.30 in/hr
Total Inlet Rational Flow	2.53 cfs	Total Inlet Time of Concentration	12.79 min
Total Inlet Additional Flow	0 00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.53 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	On Grade
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft	Bypass Target	CB #12
Longitudinal Slope	0.006000 ft/ft	Mannings n	0.015

Detailed Report for Inlet: CB #15

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.50	cfs	Intercepted CA	0.45	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.30	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	12.79	min
Total Intercepted Flow	1.50	cfs	Capture Efficiency	59.4	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
1.27	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #16

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,638.83 ft	Calculated Station	12+73 ft
Y	704,056.08 ft		

Elevations			
Ground Elevation	68.56 ft	Hydraulic Grade Line In	66 19 ft
Rim Elevation	68.56 ft	Hydraulic Grade Line Out	66.19 ft
Sump Elevation	65.56 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	0.63 ft
Headloss Method	Absolute	Velocity Out	4.19 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0 27 ft

System Flow Summary			
Total System Flow	2.21 cfs	System Rational Flow	2.21 cfs
System Flow Time	13 18 min	System Additional Flow	0.00 cfs
System Intensity	3.23 in/hr	System Known Flow	0.00 cfs
System CA	0.68 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	1.13 acres	Composite Rational C	0.60
Inlet CA	0.68 acres	Carryover CA	0.00 acres
Total Inlet CA	0.68 acres	Total Inlet Intensity	3.23 in/hr
Total Inlet Rational Flow	2.21 cfs	Total Inlet Time of Concentration	13.18 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.21 cfs		

Inlet Characteristics			
Inlet Type	Generic Inlet	Inlet Location	On Grade
Inlet	Generic Default 100%	Inlet Section Properties	Gutter Section
Road Cross Slope	0.020 ft/ft	Depressed Gutter?	true
Gutter Cross Slope	0.020 ft/ft	Gutter Width	0.00 ft
Bypass Target	CB #15	Longitudinal Slope	0.006000 ft/ft
Mannings n	0.015		

Detailed Report for Inlet: CB #16

External Pipe Flow			
External CA	0.00 acres	External Time of Concentration	0.00 min

Intercepted Flow Summary			
Intercepted Rational Flow	2.21 cfs	Intercepted CA	0.68 acres
Intercepted Additional Flow	0.00 cfs	Intercepted Intensity	3.23 in/hr
Intercepted Known Flow	0.00 cfs	Intercepted Tc	13.18 min
Total Intercepted Flow	2.21 cfs	Capture Efficiency	100.0 %

Upstream Piped Flow Summary			
Upstream Rational Flow	0.00 cfs	Upstream CA	0.00 acres
Upstream Additional Flow	0.00 cfs	Upstream Intensity	0.00 in/hr
Upstream Known Flow	0.00 cfs	Upstream Time Of Concentration	0.00 min
Total Upstream Flow	0.00 cfs		

Design Constraints Summary			
Pipe Matching	Inverts	Allow Drop Structure?	true
Matchline Offset	0.00 ft	Local Pipe Matching Constraints?	false
Design Structure Elevation?	true	Desired Sump Depth	0.00 ft

Subwatershed Information

Area (acres)	Inlet C
1.13	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #17

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,703.88 ft	Calculated Station	12+77 ft
Y	704,084.21 ft		

Elevations			
Ground Elevation	67.66 ft	Hydraulic Grade Line In	65.28 ft
Rim Elevation	67.66 ft	Hydraulic Grade Line Out	65.28 ft
Sump Elevation	64 66 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	0.62 ft
Headloss Method	Absolute	Velocity Out	4.10 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.26 ft

System Flow Summary			
Total System Flow	2.08 cfs	System Rational Flow	2.08 cfs
System Flow Time	11.18 min	System Additional Flow	0 00 cfs
System Intensity	3.59 in/hr	System Known Flow	0.00 cfs
System CA	0.58 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	0.96 acres	Composite Rational C	0.60
Inlet CA	0.58 acres	Carryover CA	0.00 acres
Total Inlet CA	0.58 acres	Total Inlet Intensity	3 59 in/hr
Total Inlet Rational Flow	2.08 cfs	Total Inlet Time of Concentration	11 18 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.08 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3 00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	*Gutter Section*	*Road Cross Slope*	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #17

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.08	cfs	Intercepted CA	0.58	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.59	in/hr
Intercepted Known Flow	0 00	cfs	Intercepted Tc	11.18	min
Total Intercepted Flow	2.08	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0 00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0.96	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #18

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,697 01 ft	Calculated Station	13+10 ft
Y	704,052.09 ft		

Elevations			
Ground Elevation	67.66 ft	Hydraulic Grade Line In	65 66 ft
Rim Elevation	67.66 ft	Hydraulic Grade Line Out	65.66 ft
Sump Elevation	64.66 ft		

Headlosses			
Gravity Element Headloss	0.00 ft	Depth Out	1.00 ft
Headloss Method	Absolute	Velocity Out	4.56 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.32 ft

System Flow Summary			
Total System Flow	3.59 cfs	System Rational Flow	3 59 cfs
System Flow Time	10 00 min	System Additional Flow	0 00 cfs
System Intensity	3.80 in/hr	System Known Flow	0.00 cfs
System CA	0.94 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0.00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0 00 cfs		

Inlet Flow Summary			
Area	1.56 acres	Composite Rational C	0.60
Inlet CA	0 94 acres	Carryover CA	0.00 acres
Total Inlet CA	0.94 acres	Total Inlet Intensity	3.80 in/hr
Total Inlet Rational Flow	3.59 cfs	Total Inlet Time of Concentration	10.00 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	3.59 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3 00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0 0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #18

External Pipe Flow					
External CA	0 00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	3.59	cfs	Intercepted CA	0 94	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.80	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	10.00	min
Total Intercepted Flow	3.59	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0 00	ft

Subwatershed Information

Area (acres)	Inlet C
1 56	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #19

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary			
X	79,587.04 ft	Calculated Station	15+49 ft
Y	703,834.24 ft		

Elevations			
Ground Elevation	69.23 ft	Hydraulic Grade Line In	68.16 ft
Rim Elevation	69.23 ft	Hydraulic Grade Line Out	68.16 ft
Sump Elevation	66.23 ft		

Headlosses			
Gravity Element Headloss	0 00 ft	Depth Out	1.93 ft
Headloss Method	Absolute	Velocity Out	3 68 ft/s
Absolute Headloss	0.00 ft	Velocity Head Out	0.21 ft

System Flow Summary			
Total System Flow	2.89 cfs	System Rational Flow	2.89 cfs
System Flow Time	11.30 min	System Additional Flow	0.00 cfs
System Intensity	3.57 in/hr	System Known Flow	0.00 cfs
System CA	0.80 acres	Total Diverted Flow In	0.00 cfs

Incoming Diverted Flow			
Local Diverted Flow In	0 00 cfs	Global Diverted Flow In	0.00 cfs
Total Diverted Flow In	0.00 cfs		

Inlet Flow Summary			
Area	0.87 acres	Composite Rational C	0 60
Inlet CA	0.52 acres	Carryover CA	0.28 acres
Total Inlet CA	0.80 acres	Total Inlet Intensity	3 57 in/hr
Total Inlet Rational Flow	2.89 cfs	Total Inlet Time of Concentration	11.30 min
Total Inlet Additional Flow	0.00 cfs	Total Inlet Known Flow	0.00 cfs
Total Flow To Inlet	2.89 cfs		

Inlet Characteristics			
Inlet Type	Combination Inlet	Inlet Location	In Sag
Inlet	Combination type 4r	Combination Inlet Curb Opening L	3.00 ft
Combination Inlet Grate Opening L	3.00 ft	Combination Inlet Clogging Factor	0.0 %
Inlet Section Properties	Gutter Section	Road Cross Slope	0.020 ft/ft
Depressed Gutter?	true	Gutter Cross Slope	0.083 ft/ft
Gutter Width	1.50 ft		

Detailed Report for Inlet: CB #19

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	2.89	cfs	Intercepted CA	0 80	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.57	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	11.30	min
Total Intercepted Flow	2 89	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0 00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
0 87	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #20

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,567.55	ft	Calculated Station	15+69	ft
Y	703,809.15	ft			

Elevations					
Ground Elevation	69.23	ft	Hydraulic Grade Line In	68.77	ft
Rim Elevation	69.23	ft	Hydraulic Grade Line Out	68.77	ft
Sump Elevation	66.23	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	2.54	ft
Headloss Method	Absolute		Velocity Out	6.65	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.69	ft

System Flow Summary					
Total System Flow	5.22	cfs	System Rational Flow	5.22	cfs
System Flow Time	11.03	min	System Additional Flow	0.00	cfs
System Intensity	3.61	in/hr	System Known Flow	0.00	cfs
System CA	1.43	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0.00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	1.78	acres	Composite Rational C	0 60	
Inlet CA	1.07	acres	Carryover CA	0.37	acres
Total Inlet CA	1.43	acres	Total Inlet Intensity	3.61	in/hr
Total Inlet Rational Flow	5 22	cfs	Total Inlet Time of Concentration	11.03	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	5.22	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	In Sag	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1.50	ft			

Detailed Report for Inlet: CB #20

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	5.22	cfs	Intercepted CA	1.43	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.61	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	11.03	min
Total Intercepted Flow	5.22	cfs	Capture Efficiency	100.0	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0 00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary				
Pipe Matching	Inverts	Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true	Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.78	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #21

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,821 99	ft	Calculated Station	18+40	ft
Y	703,652.83	ft			

Elevations					
Ground Elevation	71.19	ft	Hydraulic Grade Line In	68.80	ft
Rim Elevation	71.19	ft	Hydraulic Grade Line Out	68.80	ft
Sump Elevation	68.19	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.61	ft
Headloss Method	Absolute		Velocity Out	2.88	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.13	ft

System Flow Summary					
Total System Flow	1 44	cfs	System Rational Flow	1.44	cfs
System Flow Time	12.57	min	System Additional Flow	0 00	cfs
System Intensity	3.34	in/hr	System Known Flow	0.00	cfs
System CA	0.43	acres	Total Diverted Flow In	0 00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0 00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	1 18	acres	Composite Rational C	0.60	
Inlet CA	0.71	acres	Carryover CA	0 00	acres
Total Inlet CA	0.71	acres	Total Inlet Intensity	3 34	in/hr
Total Inlet Rational Flow	2.38	cfs	Total Inlet Time of Concentration	12.57	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0 00	cfs
Total Flow To Inlet	2.38	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #19	
Longitudinal Slope	0.006500	ft/ft	Mannings n	0.015	

Detailed Report for Inlet: CB #21

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.44	cfs	Intercepted CA	0.43	acres
Intercepted Additional Flow	0 00	cfs	Intercepted Intensity	3.34	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	12.57	min
Total Intercepted Flow	1.44	cfs	Capture Efficiency	60.3	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0.00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0.00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0.00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1 18	0.60

User Data
Date Installed

Detailed Report for Inlet: CB #22

Scenario Summary	
Label	100-YEAR
Physical Properties Alternative	Base-Physical Properties
Catchments Alternative	Base-Catchments
System Flows Alternative	Base-System Flows
Structure Headlosses Alternative	Base-Structure Headlosses
Boundary Conditions Alternative	Base-Boundary Conditions
Design Constraints Alternative	Base-Design Constraints
Cost Alternative	Base-Cost
User Data Alternative	Base-User Data

Geometric Summary					
X	79,789.07	ft	Calculated Station	18+47	ft
Y	703,638.93	ft			

Elevations					
Ground Elevation	71.19	ft	Hydraulic Grade Line In	68.81	ft
Rim Elevation	71.19	ft	Hydraulic Grade Line Out	68.81	ft
Sump Elevation	68.19	ft			

Headlosses					
Gravity Element Headloss	0.00	ft	Depth Out	0.62	ft
Headloss Method	Absolute		Velocity Out	3.21	ft/s
Absolute Headloss	0.00	ft	Velocity Head Out	0.16	ft

System Flow Summary					
Total System Flow	1.64	cfs	System Rational Flow	1.64	cfs
System Flow Time	12.48	min	System Additional Flow	0 00	cfs
System Intensity	3.35	in/hr	System Known Flow	0 00	cfs
System CA	0.49	acres	Total Diverted Flow In	0.00	cfs

Incoming Diverted Flow					
Local Diverted Flow In	0 00	cfs	Global Diverted Flow In	0.00	cfs
Total Diverted Flow In	0.00	cfs			

Inlet Flow Summary					
Area	1.28	acres	Composite Rational C	0 60	
Inlet CA	0.77	acres	Carryover CA	0 08	acres
Total Inlet CA	0.85	acres	Total Inlet Intensity	3.35	in/hr
Total Inlet Rational Flow	2.87	cfs	Total Inlet Time of Concentration	12.48	min
Total Inlet Additional Flow	0.00	cfs	Total Inlet Known Flow	0.00	cfs
Total Flow To Inlet	2.87	cfs			

Inlet Characteristics					
Inlet Type	Combination Inlet		Inlet Location	On Grade	
Inlet	Combination type 4r		Combination Inlet Curb Opening L	3.00	ft
Combination Inlet Grate Opening L	3.00	ft	Combination Inlet Clogging Factor	0.0	%
Inlet Section Properties	Gutter Section		Road Cross Slope	0.020	ft/ft
Depressed Gutter?	true		Gutter Cross Slope	0.083	ft/ft
Gutter Width	1.50	ft	Bypass Target	CB #20	
Longitudinal Slope	0.006500	ft/ft	Mannings n	0.015	

Detailed Report for Inlet: CB #22

External Pipe Flow					
External CA	0.00	acres	External Time of Concentration	0.00	min

Intercepted Flow Summary					
Intercepted Rational Flow	1.64	cfs	Intercepted CA	0.49	acres
Intercepted Additional Flow	0.00	cfs	Intercepted Intensity	3.35	in/hr
Intercepted Known Flow	0.00	cfs	Intercepted Tc	12.48	min
Total Intercepted Flow	1.64	cfs	Capture Efficiency	57.1	%

Upstream Piped Flow Summary					
Upstream Rational Flow	0 00	cfs	Upstream CA	0.00	acres
Upstream Additional Flow	0 00	cfs	Upstream Intensity	0.00	in/hr
Upstream Known Flow	0.00	cfs	Upstream Time Of Concentration	0.00	min
Total Upstream Flow	0 00	cfs			

Design Constraints Summary					
Pipe Matching	Inverts		Allow Drop Structure?	true	
Matchline Offset	0.00	ft	Local Pipe Matching Constraints?	false	
Design Structure Elevation?	true		Desired Sump Depth	0.00	ft

Subwatershed Information

Area (acres)	Inlet C
1.28	0.60

User Data
Date Installed

5-YEAR MAXIMUM ALLOWABLE STREET SPREAD CALCULATIONS

SCALE 1"=60'

REFERENCE SHEET Q-2

BASIN	AREA ACRES	CN	Q5 CFS	Q100 CFS
1	1.69	0.6	1.20	3.25
2	0.52	0.6	0.41	1.12
3	1.57	0.6	1.26	3.40
4	1.42	0.6	1.13	3.05
5A	0.34	0.6	1.52	4.11
5B	1.45	0.6		
6	1.57	0.6	1.18	3.20
7	2.32	0.6	1.43	3.85
8	1.15	0.6	0.88	2.39
9A	0.37	0.6	0.58	1.59
9B	0.32	0.6		
10	0.16	0.4	0.14	0.37
11A	1.12	0.6	2.04	5.54
11B	1.44	0.6		
12A	1.88	0.6	3.28	8.83
12B	2.72	0.6		
13	0.07	0.4	0.06	0.16
14	1.3	0.6	0.97	2.61
15	1.27	0.6	0.94	2.53
16	1.13	0.6	0.82	2.21
17	0.96	0.6	0.77	2.08
18A	0.42	0.6	1.32	3.59
18B	1.14	0.6		
19	0.87	0.6	0.69	1.88
20A	0.99	0.6	1.44	3.89
20B	0.79	0.6		
21	1.18	0.6	0.88	2.38
22	1.28	0.6	0.96	2.60
23	0.2	0.6	0.17	0.46
24	0.1	0.6	0.08	0.23
25	0.07	0.6	0.06	0.16
26	0.1	0.6	0.08	0.23
27	0.12	0.6	0.10	0.27
28	0.34	0.6	0.29	0.78

ENGINEER-STATE OF NEVADA
CHRISTOPHER L. THOMPSON
EXP. 6-30-04
CIVIL
No. 9184
PROFESSIONAL

Mountain West Consulting
Civil Engineering ~ Planning ~ Project Management
P.O. Box 21450 ~ Reno, Nevada 89515-1450 ~ (775) 337-0770

NO.	DATE	REVISION	BY

CIVIL IMPROVEMENT PLANS FOR:
DAMONTE RANCH VILLAGE 14A
DEVELOPED BASINS MAP

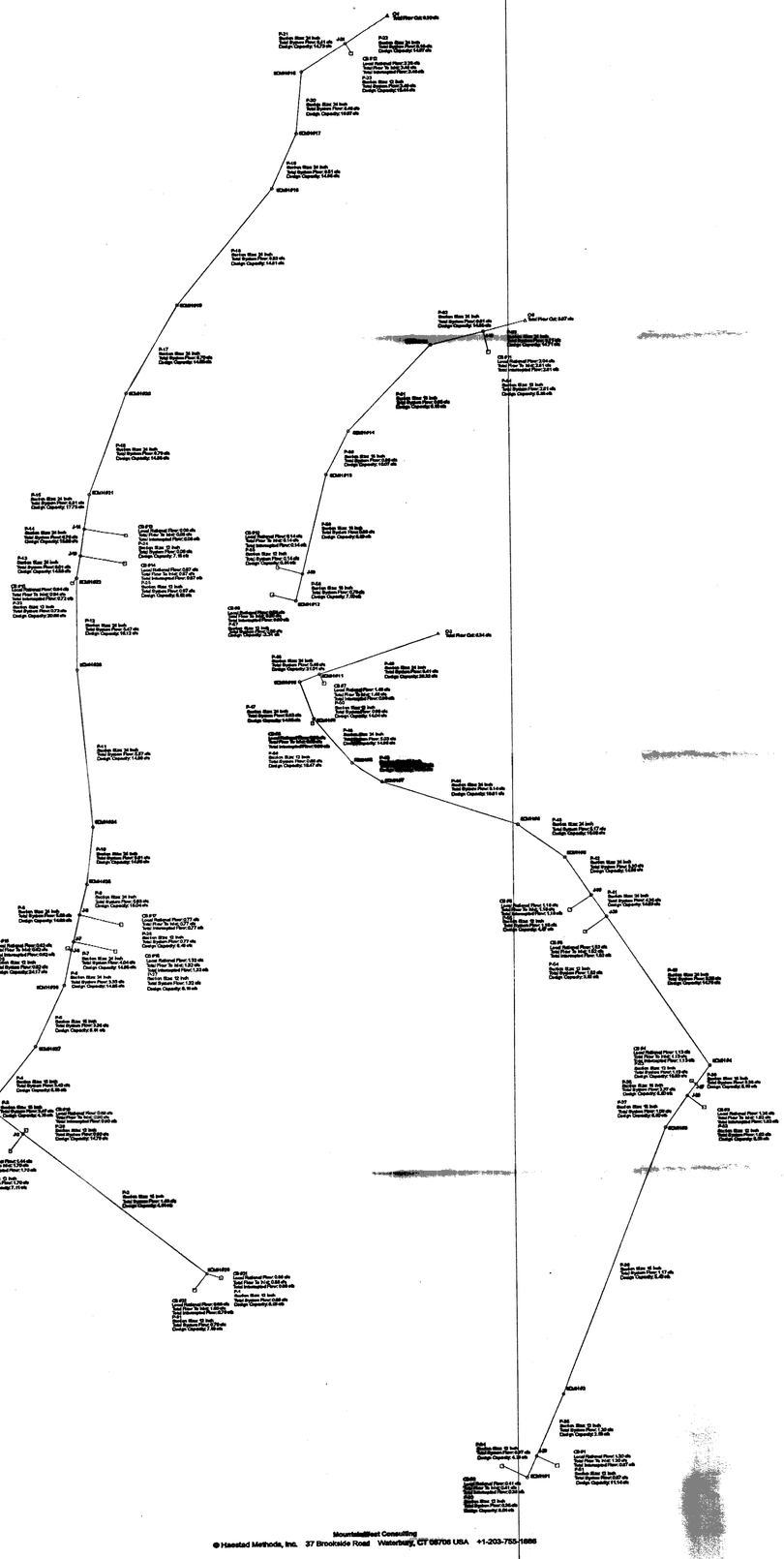
WASHOE
RENO

Date: 2-11-03
Designed by: MJC
Checked by: CLT

DRAWING
Q-1

SHEET 26 OF 27

Scenario: 5-YEAR



Profile
Scenario: 5-YEAR

Title: Damonte Ranch Village 14
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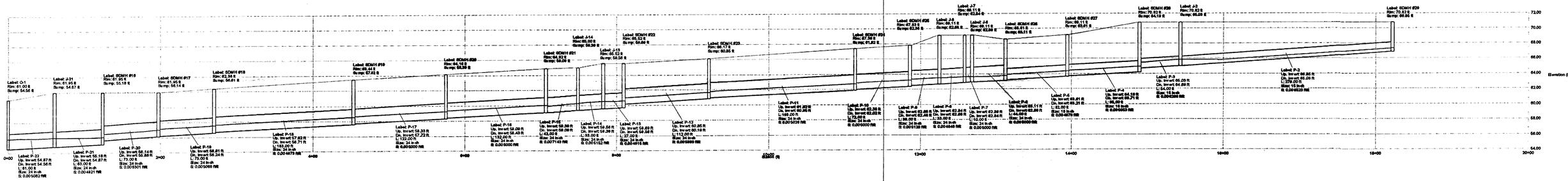
Mountain West Consulting

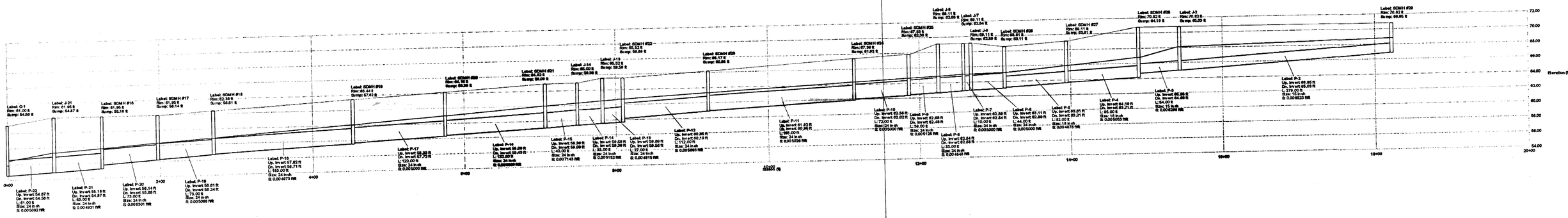
Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014a]

Profile
Scenario: 5-YEAR



5

Profile
Scenario: 100-YEAR



Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014e]
Page 1 of 1

Title: Damonte Ranch Village 14
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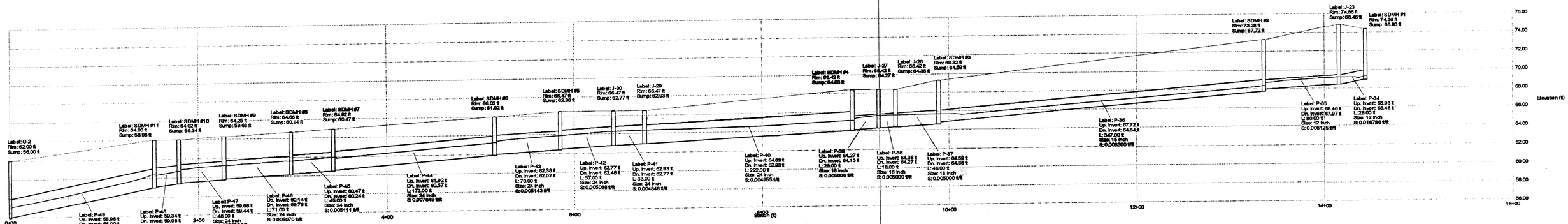
02/11/03 12:03:24 PM

Mountain West Consulting
 37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

Profile
Scenario: 100-YEAR



100

100 yr.

Title: Demonte Ranch Village 14
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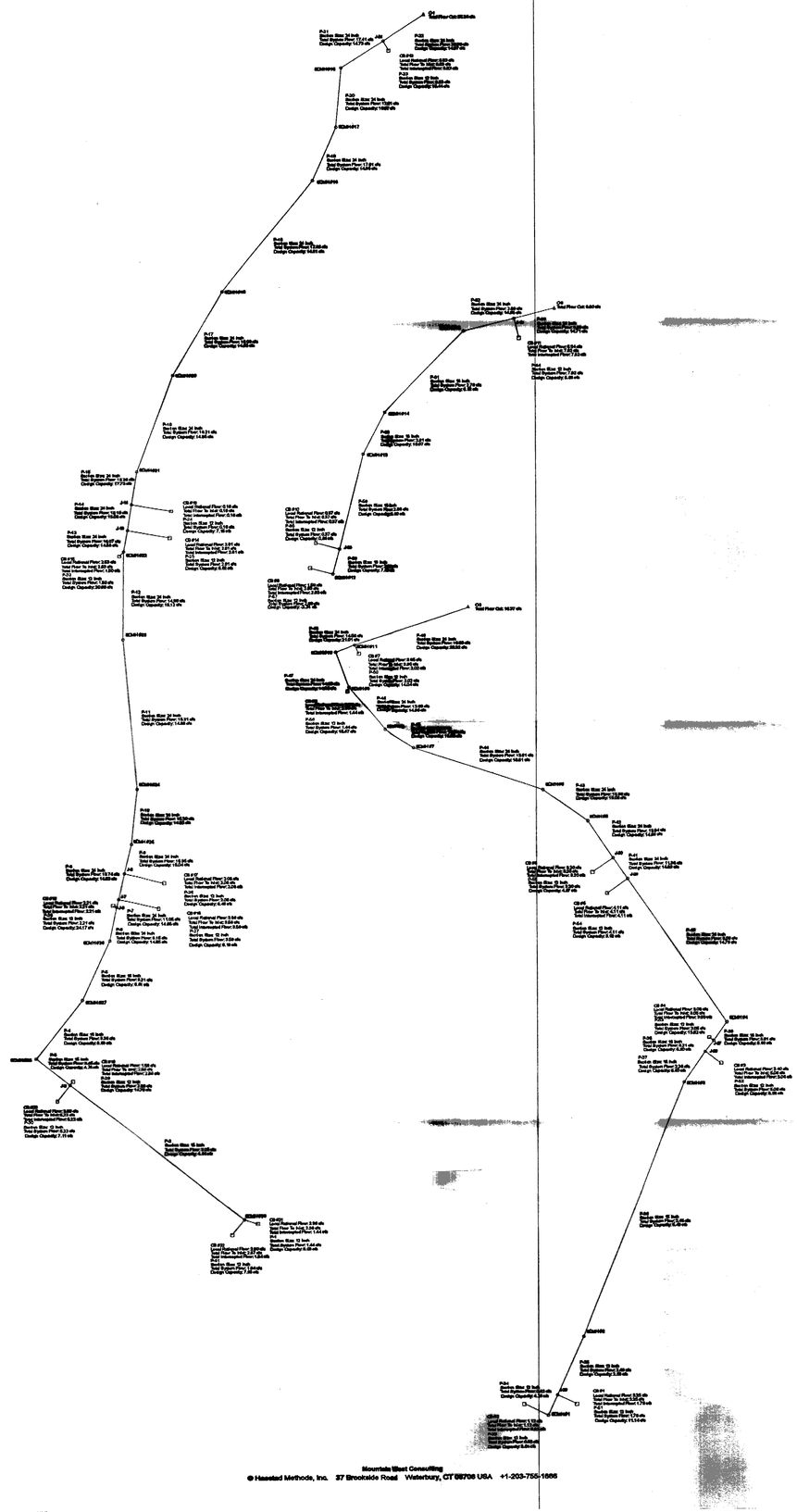
100 yr.

Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014e]
Page 1 of 1

Scenario: 100-YEAR



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02/11/03 11:16:58 AM

Project Engineer: Mountain West Consulting
StormCAD v4.1.1 [4.2014a]
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