DRAFT ENVIRONMENTAL IMPACT REPORT

AIDLIN HILLS PROJECT

LOS ANGELES COUNTY, CALIFORNIA

STATE CLEARINGHOUSE NO: 2014091027

COUNTY PROJECT NO. 00-136
VESTING TENTATIVE TRACT MAP 52796
CONDITIONAL USE PERMIT 00-136
OAK TREE PERMIT 00-136

VOLUME III OF III
(APPENDICES H THROUGH L)

December 2015

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County Project No. 00-136
Vesting Tentative Tract Map 52796
Conditional Use Permit 00-136
Oak Tree Permit 00-136

Volume III of III
(Appendices H through L)

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Appendix H

Drainage Concept Plan/Hydrology Report

HYDROLOGY REPORT

County of Los Angeles

Aidlin Hills
Tentative Tract No. 52796
Job No. 1352

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- 50-Yr Single Basin Burned Flow

Appendix B - LAR04 Model Input

- Length, Slope, Elevation Summary
- 85th Percentile Depth
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- Model Output for 2-, 5-, 10-, 25-, 50-Yr Exist. and Prop. for Clear and Burned

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- Bulking Calculation Example - LA Sedimentation Manual
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- Undeveloped Condition Drainage Map - Sheet 1
- Developed Condition Drainage Map - Sheet 1
- Developed Condition Drainage Map - Sheet 2

ATTACHED: Low Impact Development (LID) Report

AIDLIN HILLS HYDROLOGY STUDY

SITE INFORMATION

The Stevenson Ranch project is a 230 acre development located along Pico Canyon Road in the community of Stevenson Ranch. The Stevenson Ranch project, VTTM No. 52796, proposes to develop approximately 52 acres of the overall project area. VTTM 52796 will construct 102 single family lots and keep approximately 178 acres of open space as undisturbed.

In its existing condition, the project site is primarily composed of natural hills and valleys. All existing storm flows drain through the natural drainage courses of Wickham Creek and Pico Canyon Creek. Both courses meet and continue easterly within a series of open channel and closed conduit systems paralleling Pico Canyon Road.

The proposed condition will provide storm drain systems within the proposed streets and outlet into the Pico Canyon drainage course where a box culvert will be constructed under Pico Canyon Road.

As designed, the developed condition storm flows drain by closed pipe to a large Bio-Infiltration Basin or directly to storm drain inlets for high flow events. All water quality flows go to the large Bio-Infiltration Basin prior to entering the public storm drain system and being outlet to Pico Canyon Road drainage system. The Water Quality basin will be designed with high flow bypasses to insure no damage to adjacent homes or slopes. The proposed condition will maintain the existing drainage course and will outlet all storm flows to Pico Canyon Road drainage system. The County of LA will be the entity in charge of maintenance for this structure.

METHODOLOGY

Three (3) major basins have been delineated for this hydrologic study; A, B, and C. The majority of Basin and Basin B remain unchanged between the undeveloped and developed condition models. All development occurs in Basin C of this model. Basins A and Basin B are only affected along their boundary with Basin C.

The time of concentrations (TC) were calculated using County of Los Angeles “HydroCalc” software. Flow rates were calculated using the Modified Rational method (depth method) for the County of Los Angeles. The 50-year, 24-hour rainfall isohyets vary through the site, but range from 7.4 through 8.4 (see maps within report), soil classification areas are 091 and 093. The Debris Production Area is DPA-3. A 50-year storm event design criteria was used for undeveloped area, sumps and debris inlets. A 25-year storm event design criteria was used for developed non-sump areas.

RESULTS

The flowrates summarized in Tables 1 - 4 have been rounded per USGS standards. Tables 1 and 2 compare clear flowrates between the undeveloped and the developed conditions. Respectively, Tables 3 and 4 compare burned flowrates.

Table 1: Undeveloped Condition Clear Flows (cfs)

BASIN	AREA (ac)	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B, & C	2,149.0	74	390	890	1,910	2,950

Table 2: Developed Condition Clear Flows (cfs)

BASIN	AREA (ac)	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B & C	2,149.3	80	400	890	1,910	2,950

Table 3: Undeveloped Condition Burned Flows (cfs)

BASIN	AREA (ac)	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B & C	2,149.0	170	660	1,310	2,500	3,660

Table 4: Developed Condition Burned Flows (cfs)

BASIN	AREA (ac)	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B & C	2,149.3	170	670	1,310	2,490	3,640

Per Table 5, 6, and 7, the developed condition storm volumes are marginally greater than the existing condition. Percent increases range between 8.8% for the 2-Yr event to 1.9% for the 50-yr event.

Table 5: Undeveloped Condition Clear Volumes (ac-ft)

BASIN	AREA	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B & C	2149.0	23.92	73.67	129.39	242.73	367.34

Table 6: Developed Condition Clear Volumes (ac-ft)

BASIN	AREA	2-YEAR	5-YEAR	10-YEAR	25-YEAR	50-YEAR
A, B & C	2149.1	26.25	77.61	133.71	248.21	374.48

Table 7: Mitigated Volumes, Clear

BASIN A,B, & C	2-YEAR (ac-ft)	5-YEAR (ac-ft)	10-YEAR (ac-ft)	25-YEAR (ac-ft)	50-YEAR (ac-ft)
EXISTING	23.92	73.67	129.39	242.73	367.34
DEVELOPED	26.25	77.61	133.71	248.21	374.48
INCREASED VOLUME	2.33	3.94	4.32	5.48	7.14

In the developed condition 50-year clear flow storm event, the storm volume is increased by 7.14 ac ft. The increase in storm volume will be mitigated by using a combination of water quality basins which will filter (on-lot BMPs; see LID/Water Quality section of report) and infiltrate (see LID/Water Quality section of report) the LID storm event and provide a total of 2.25 ac-ft of storage. Debris basins will provide an additional 1.86 ac-ft of volume storage. Subtracting the mitigated volume, the developed condition proposes to increase the overall project runoff volume by 3.03 ac-ft. This increased volume will flow through the site down to the regional basin located on the northeast corner of Stevenson Ranch Parkway and Pico Canyon Road.

Table 8: Burned and Bulked 50-Yr Flowrates (cfs)

BASIN A			BASIN B			BASIN C		
EXIST	**PROP**	**Δ**	**EXIST**	**PROP**	**Δ**	**EXIST**	**PROP**	**Δ**
5230	5190	-40	1320	1410	90	1580	1510	-70

Of the three major basins have been delineated for this hydrologic study. Basin A contains the ultimate outlet which will feed the downstream regional detention basin. The point reported above correspond with the outlet at subarea 97A for Basin A. The points reported above for Basin's B and C are at the corresponding downstream limits of each basin.

CONCLUSION

With developed and existing condition flowrates being effectively equal, bulked flows being effectively less, and only marginal increase in volume, the downstream existing infrastructure is considered to be adequate and not require additional mitigation due to this project. Hydromodification effects are also considered negligible for this project.

INFILTRATION

Percolation testing has been completed at the site and the native soils infiltrate at a rate 1.92 in/hr. This is more than 0.3 in/hr County minimum. Infiltration is being proposed for the LID Water Quality treatment at the basin located at the southeast corner of Pico Canyon Road and 'A' Street. An overflow device will be used at this basin to bypass any flows beyond the water quality volume. A geotechnical report by R.T. Frankian and Assoc. detailing the above infiltration data has been included as an attachment behind the Low Impact Development (LID) portion of this report. This geotechnical report is currently under review with the GMED of LACDPW. As of this time, no concerns regarding the 1.92 in/hr infiltration rate have been specifically mentioned.

RAINFALL RE-USE

The proposed Project does not propose rainwater harvesting, it has been deemed infeasible by the Project team. A combination of low regional rainfall and low water usage ordinances on Landscape Planting, would result in large subsurface tanks that would remain empty most of the year, and would not receive the turnover necessary to not stagnate.

AIDLIN HILLS

HYDROLOGY STUDY

APPENDIX A

SUMMARY SHEETS

Basin A - ΣQ CLEAR FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	32.5	32.5	0.0	3.27	3.27	0	21.3	21.3	0	42.01	42.01	0	78.17	78.17	0	116.51	116.51	0
2A	34.8	34.8	0.0	6.03	6.03	0	40.19	40.19	0	79.78	79.78	0	152.99	152.99	0	224.81	224.81	0
3A	33.3	33.3	0.0	8.21	8.21	0	55.77	55.77	0	112.44	112.44	0	217.09	217.09	0	318.69	318.69	0
4A	37.9	37.9	0.0	10.96	10.96	0	74.92	74.92	0	151.29	151.29	0	295.39	295.39	0	435.8	435.8	0
6B	28.8	28.8	0.0	2.9	2.9	0	17.5	17.5	0	34.85	34.85	0	69.27	69.27	0	103.25	103.25	0
7B	12.2	12.2	0.0	4.17	4.17	0	25.32	25.32	0	50.27	50.27	0	98.34	98.34	0	146.98	146.98	0
8B	22.3	22.3	0.0	5.89	5.89	0	37.28	37.28	0	74.01	74.01	0	144.89	144.89	0	214.94	214.94	0
9B	24.6	24.6	0.0	7.52	7.52	0	48.9	48.9	0	98.69	98.69	0	193.56	193.56	0	283.32	283.32	0
13A	24.0	24.0	0.0	20.28	20.28	0	136.32	136.32	0	274.97	274.97	0	533.64	533.64	0	787.81	787.81	0
15C	37.0	37.0	0.0	2.61	2.61	0	17.86	17.86	0	37.14	37.14	0	73.32	73.32	0	106.14	106.14	0
16C	40.2	40.2	0.0	5.38	5.38	0	37.97	37.97	0	79.81	79.81	0	155.44	155.44	0	227.01	227.01	0
17C	31.9	31.9	0.0	7.72	7.72	0	54.13	54.13	0	113.23	113.23	0	218.55	218.55	0	320.52	320.52	0
21A	39.2	39.2	0.0	29.81	29.81	0	205.96	205.96	0	420.6	420.6	0	816.37	816.37	0	1201.79	1201.79	0
23D	30.8	30.8	0.0	2.64	2.64	0	17.57	17.57	0	35.14	35.14	0	68.58	68.58	0	100.96	100.96	0
24D	39.3	39.3	0.0	5.96	5.96	0	39.16	39.16	0	77.59	77.59	0	153.44	153.44	0	226.32	226.32	0
25D	42.3	42.3	0.0	7.98	7.98	0	55.13	55.13	0	113.95	113.95	0	225.62	225.62	0	332.48	332.48	0
26D	30.9	30.9	0.0	9.97	9.97	0	69.58	69.58	0	142.3	142.3	0	275.34	275.34	0	410.52	410.52	0
27D	26.9	26.9	0.0	11.58	11.58	0	81.15	81.15	0	167.37	167.37	0	326.77	326.77	0	478.96	478.96	0
31A	29.2	29.2	0.0	42.45	42.45	0	296.34	296.34	0	606.96	606.96	0	1190.24	1190.24	0	1734.36	1734.36	0
32A	22.2	22.2	0.0	43.16	43.16	0	304.03	304.03	0	623.68	623.68	0	1215.89	1215.89	0	1787.4	1787.4	0
33A	23.1	23.1	0.0	43.47	43.47	0	307.13	307.13	0	631.71	631.71	0	1240.25	1240.25	0	1815.75	1815.75	0
34A	35.7	35.7	0.0	44.36	44.36	0	317.45	317.45	0	655.89	655.89	0	1280.8	1280.8	0	1880.52	1880.52	0
35A	29.2	29.2	0.0	44.97	44.97	0	322.71	322.71	0	671.3	671.3	0	1318.31	1318.31	0	1924.92	1924.92	0
36A	25.6	25.6	0.0	45.21	45.21	0	326.6	326.6	0	676.77	676.77	0	1329.91	1329.91	0	1948.49	1948.49	0
38A	23.7	23.7	0.0	45.28	45.28	0	326	326	0	679.12	679.12	0	1343.77	1343.77	0	1975.79	1975.79	0
39A	32.5	32.5	0.0	45.68	45.68	0	329.16	329.16	0	687.79	687.79	0	1367.67	1367.67	0	2013.01	2013.01	0
40A	20.2	20.2	0.0	45.56	45.56	0	327.09	327.09	0	686.34	686.34	0	1363.04	1363.04	0	2007.78	2007.78	0
41A	22.5	22.5	0.0	45.79	45.79	0	327.88	327.88	0	689.19	689.19	0	1370.35	1370.35	0	2021.49	2021.49	0
42A	28.5	28.5	0.0	46.24	46.24	0	331.79	331.79	0	699.54	699.54	0	1393.43	1393.43	0	2058.37	2058.37	0
44A	20.2	20.2	0.0	46.12	46.12	0	330	330	0	697.89	697.89	0	1397.68	1397.68	0	2073.9	2073.9	0
45A	24.8	24.8	0.0	46.48	46.48	0	332.87	332.87	0	705.22	705.22	0	1416.1	1416.1	0	2102.61	2102.61	0
46A	15.1	15.1	0.0	46.38	46.38	0	331.4	331.4	0	702.5	702.5	0	1412.68	1412.68	0	2094.31	2094.31	0
47A	24.6	24.6	0.0	45.43	45.43	0	327.68	327.68	0	700.24	700.24	0	1411.82	1411.82	0	2095.9	2095.9	0
48A	24.9	24.9	0.0	45.66	45.66	0	328.37	328.37	0	703.08	703.08	0	1419.79	1419.79	0	2108.57	2108.57	0
49A	20.9	20.9	0.0	45.57	45.57	0	327.44	327.44	0	701.33	701.33	0	1416.88	1416.88	0	2112.15	2112.15	0
50A	19.2	19.2	0.0	45.36	45.36	0	325.84	325.84	0	699.07	699.07	0	1412.06	1412.06	0	2107.1	2107.1	0
52E	28.8	28.8	0.0	2.27	2.27	0	15.33	15.33	0	31.7	31.7	0	64.57	64.57	0	86.43	86.43	0
53E	24.8	24.8	0.0	3.62	3.62	0	27.01	27.01	0	55.82	55.82	0	112.22	112.22	0	158.41	158.41	0
54E	33.4	33.4	0.0	5.22	5.22	0	40.92	40.92	0	86.41	86.41	0	171.21	171.21	0	244.63	244.63	0
55E	23.1	23.1	0.0	6.12	6.12	0	49.16	49.16	0	105.08	105.08	0	209.13	209.13	0	299.28	299.28	0
59A	28.2	28.2	0.0	46.66	46.66	0	331.22	331.22	0	718.99	718.99	0	1468.45	1468.45	0	2202.89	2202.89	0
60A	27.2	27.2	0.0	46.16	46.16	0	329.04	329.04	0	715.58	715.58	0	1464.68	1464.68	0	2202.54	2202.54	0
61A	17.9	17.9	0.0	45.88	45.88	0	328.04	328.04	0	713.45	713.45	0	1462.88	1462.88	0	2202.54	2202.54	0

Basin A - ΣQ CLEAR FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
63F	27.0	27.0	0.0	2.01	2.01	0	14.4	14.4	0	29.33	29.33	0	56.1	56.1	0	83.59	83.59	0
64F	40.8	40.8	0.0	3.42	3.42	0	29.86	29.86	0	62.53	62.53	0	123.95	123.95	0	184.47	184.47	0
65F	37.4	37.4	0.0	4.85	4.85	0	43.78	43.78	0	93.51	93.51	0	184.34	184.34	0	275.44	275.44	0
66F	32.6	32.6	0.0	6.78	6.78	0	59.13	59.13	0	125.6	125.6	0	248.19	248.19	0	371.2	371.2	0
67F	18.8	18.8	0.0	7.74	7.74	0	67.73	67.73	0	143.24	143.24	0	282.85	282.85	0	420.93	420.93	0
68F	9.2	9.2	0.0	8.16	8.16	0	71.22	71.22	0	151.22	151.22	0	298.07	298.07	0	443.35	443.35	0
72A	6.4	6.4	0.0	47.15	47.15	0	332.62	332.62	0	730.8	730.8	0	1519.23	1519.23	0	2311.5	2311.5	0
73A	20.0	20.0	0.0	47.29	47.29	0	333.29	333.29	0	733.68	733.68	0	1526.32	1526.32	0	2322.71	2322.71	0
74A	21.9	21.9	0.0	47.34	47.34	0	332.9	332.9	0	735.7	735.7	0	1532.46	1532.46	0	2328.39	2328.39	0
75A	42.0	42.0	0.0	47.47	47.47	0	332.8	332.8	0	738.87	738.87	0	1543.49	1543.49	0	2350.05	2350.05	0
76A	26.1	26.1	0.0	46.91	46.91	0	330.58	330.58	0	738.4	738.4	0	1545.22	1545.22	0	2356.6	2356.6	0
77A	12.2	12.2	0.0	46.93	46.93	0	330.27	330.27	0	738.65	738.65	0	1548.4	1548.4	0	2361.41	2361.41	0
79A	14.2	14.2	0.0	47.02	47.02	0	330.57	330.57	0	740.28	740.28	0	1552.4	1552.4	0	2367.91	2367.91	0
80A	18.2	18.2	0.0	46.82	46.82	0	329.6	329.6	0	740.12	740.12	0	1553.69	1553.69	0	2370.8	2370.8	0
81A	23.3	23.3	0.0	46.65	46.65	0	328.3	328.3	0	740.47	740.47	0	1557.89	1557.89	0	2378.71	2378.71	0
82A	22.2	22.2	0.0	46.5	46.5	0	327.76	327.76	0	740.62	740.62	0	1561.67	1561.67	0	2385.59	2385.59	0
84B	26.2	26.2	0.0	3.12	3.12	0	14.4	14.4	0	24.36	24.36	0	46.96	46.96	0	65.63	65.63	0
85B	33.5	33.5	0.0	6.08	6.08	0	30.91	30.91	0	52.9	52.9	0	99.37	99.37	0	139.43	139.43	0
88A	2.8	2.8	0.0	46.78	46.78	0	328.62	328.62	0	746.26	746.26	0	1579.96	1579.96	0	2418.5	2418.5	0
89C	21.6	21.6	0.0	3.82	3.82	0	16.46	16.46	0	28.36	28.36	0	51.32	51.32	0	69.04	69.04	0
90C	23.5	23.5	0.0	6.39	6.39	0	28.05	28.05	0	49.35	49.35	0	90.58	90.58	0	125.78	125.78	0
92A	30.8	30.8	0.0	47.79	47.79	0	328.6	328.6	0	752.77	752.77	0	1599.1	1599.1	0	2453.74	2453.74	0
93A	42.1	37.7	-4.4	47.61	47.56	-0.05	326.12	326.04	-0.08	753.37	752.99	-0.38	1606.44	1605.41	-1.03	2468.89	2467.16	-1.73
94A	16.0	11.0	-5.0	47.7	47.6	-0.1	325.73	325.57	-0.16	753.12	752.39	-0.73	1609.58	1607.52	-2.06	2474.51	2470.75	-3.76
97A	14.4	13.4	-1.0	74.18	79.71	5.53	394.14	402.97	8.83	885.15	885.76	0.61	1911.99	1907.05	-4.94	2945.84	2953.11	7.27

Basin B - ΣQ CLEAR FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	19.2	19.2	0	1.6	1.6	0	10.94	10.94	0	22.15	22.15	0	44.61	44.61	0	61.27	61.27	0
2A	36.3	36.3	0	3.82	3.82	0	27.76	27.76	0	58.38	58.38	0	115.95	115.95	0	166.1	166.1	0
3A	11.1	11.1	0	4.76	4.76	0	34.31	34.31	0	70.89	70.89	0	141.35	141.35	0	202.47	202.47	0
4A	25.5	25.5	0	6.62	6.62	0	47.16	47.16	0	97.99	97.99	0	194.59	194.59	0	280.18	280.18	0
5A	18.9	18.9	0	8.05	8.05	0	57.37	57.37	0	119.35	119.35	0	235.83	235.83	0	336.4	336.4	0
6A	19.2	19.2	0	9.55	9.55	0	68.04	68.04	0	138.55	138.55	0	273.08	273.08	0	388.3	388.3	0
7A	24.7	24.7	0	10.77	10.77	0	77.84	77.84	0	160.64	160.64	0	318.15	318.15	0	456.21	456.21	0
8A	20.4	20.4	0	11.75	11.75	0	86.04	86.04	0	176.81	176.81	0	346.57	346.57	0	500.18	500.18	0
9B	25.7	25.7	0	4.55	4.55	0	19.58	19.58	0	33.74	33.74	0	61.06	61.06	0	82.15	82.15	0
10B	39.8	39.8	0	8.76	8.76	0	41.83	41.83	0	74.97	74.97	0	136.77	136.77	0	188.93	188.93	0
12A	15.7	15.7	0	20.18	20.18	0	130.37	130.37	0	261.19	261.19	0	501.61	501.61	0	717.81	717.81	0
13A	31.9	31.9	0	23.32	23.32	0	143.21	143.21	0	284.83	284.83	0	547.44	545.62	-1.82	779.86	779.86	0
14C	-	21.3	-	-	3.01	-	-	13.17	-	-	23.8	-	-	42.55	-	-	60.24	-
16A	-	0	-	-	25.59	-	-	154.05	-	-	305.43	-	-	583.34	-	-	834.65	-

Basin C - ΣQ CLEAR FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	18.6	-	-	2.63	-	-	12.01	-	-	21.9	-	-	38.98	-	-	54.03	-	-
2A	26.9	-	-	5.87	-	-	27.48	-	-	49.97	-	-	88.85	-	-	124.66	-	-
5A	37.5	-	-	31.11	-	-	182.15	-	-	359.4	-	-	679.6	-	-	968.23	-	-
1A	-	0.9	-	-	0.31	-	-	1.04	-	-	1.59	-	-	2.52	-	-	3.39	-
4B	-	2.5	-	-	0.75	-	-	2.86	-	-	4.39	-	-	6.98	-	-	9.38	-
5B	-	7.2	-	-	2.14	-	-	8.23	-	-	14.06	-	-	24.14	-	-	34.37	-
6B	-	1.6	-	-	2.3	-	-	9.05	-	-	15.44	-	-	26.18	-	-	36.65	-
7B	-	1.5	-	-	2.77	-	-	10.36	-	-	17.63	-	-	29.67	-	-	41.46	-
8B	-	0.4	-	-	2.9	-	-	10.76	-	-	18.13	-	-	30.59	-	-	42.69	-
11A	-	4.6	-	-	4.26	-	-	14.75	-	-	24.79	-	-	41.54	-	-	57.31	-
12A	-	3.7	-	-	5.27	-	-	17.62	-	-	29.53	-	-	49.48	-	-	68.01	-
14A	-	2.6	-	-	6.05	-	-	19.79	-	-	33.31	-	-	55.04	-	-	76.24	-
15C	-	2.1	-	-	0.63	-	-	2.4	-	-	3.69	-	-	5.86	-	-	7.88	-
16C	-	2.9	-	-	1.31	-	-	4.44	-	-	7.43	-	-	12.58	-	-	16.92	-
17C	-	5.8	-	-	2.93	-	-	9.16	-	-	14.97	-	-	25.56	-	-	34.22	-
18C	-	1.0	-	-	3.14	-	-	9.9	-	-	16.38	-	-	28.05	-	-	37.56	-
21A	-	1.7	-	-	9.31	-	-	30.15	-	-	51.01	-	-	85.82	-	-	117.65	-
22A	-	3.1	-	-	10.19	-	-	32.55	-	-	54.93	-	-	92.26	-	-	126.22	-
23A	-	4.4	-	-	11.43	-	-	35.97	-	-	60.6	-	-	101.91	-	-	139.01	-
24A	-	4.0	-	-	12.49	-	-	38.9	-	-	65.07	-	-	109.51	-	-	149.11	-
25A	-	2.1	-	-	12.97	-	-	40.4	-	-	67.75	-	-	113.98	-	-	155.08	-
27D	-	20.3	-	-	27.98	-	-	164.79	-	-	324.74	-	-	618.68	-	-	885.95	-

Basin A - ΣQ BURNED FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	32.5	32.5	0.0	6.31	6.31	0	28.1	28.1	0	51.01	51.01	0	89.56	89.56	0	129.86	129.86	0
2A	34.8	34.8	0.0	12.09	12.09	0	53.89	53.89	0	97.99	97.99	0	176.19	176.19	0	252.06	252.06	0
3A	33.3	33.3	0.0	16.9	16.9	0	75.78	75.78	0	138.95	138.95	0	251.1	251.1	0	357.99	357.99	0
4A	37.9	37.9	0.0	22.99	22.99	0	102.61	102.61	0	188.04	188.04	0	342.02	342.02	0	490.89	490.89	0
6B	28.8	28.8	0.0	5.59	5.59	0	23.35	23.35	0	42.61	42.61	0	79.36	79.36	0	115.07	115.07	0
7B	12.2	12.2	0.0	8.03	8.03	0	33.7	33.7	0	61.46	61.46	0	112.74	112.74	0	163.82	163.82	0
8B	22.3	22.3	0.0	11.62	11.62	0	49.98	49.98	0	90.89	90.89	0	166.66	166.66	0	240.36	240.36	0
9B	24.6	24.6	0.0	15.29	15.29	0	66.38	66.38	0	121.72	121.72	0	223.55	223.55	0	317.88	317.88	0
13A	24.0	24.0	0.0	42.19	42.19	0	185.9	185.9	0	340.92	340.92	0	619.41	619.41	0	887.85	887.85	0
15C	37.0	37.0	0.0	5.58	5.58	0	24.76	24.76	0	46.38	46.38	0	85.3	85.3	0	120.05	120.05	0
16C	40.2	40.2	0.0	11.57	11.57	0	52.49	52.49	0	99.39	99.39	0	180.62	180.62	0	256.53	256.53	0
17C	31.9	31.9	0.0	16.64	16.64	0	74.89	74.89	0	141.16	141.16	0	254.63	254.63	0	362.34	362.34	0
21A	39.2	39.2	0.0	63.82	63.82	0	283.75	283.75	0	524.34	524.34	0	952.24	952.24	0	1355.29	1355.29	0
23D	30.8	30.8	0.0	5.32	5.32	0	23.67	23.67	0	43.23	43.23	0	79.03	79.03	0	113.15	113.15	0
24D	39.3	39.3	0.0	12.11	12.11	0	53.1	53.1	0	96.06	96.06	0	177.23	177.23	0	254.01	254.01	0
25D	42.3	42.3	0.0	17.63	17.63	0	77.44	77.44	0	143.65	143.65	0	263.99	263.99	0	377.85	377.85	0
26D	30.9	30.9	0.0	22.35	22.35	0	98.37	98.37	0	181.01	181.01	0	325.07	325.07	0	467.95	467.95	0
27D	26.9	26.9	0.0	26.24	26.24	0	114.92	114.92	0	212.76	212.76	0	386.15	386.15	0	547.28	547.28	0
31A	29.2	29.2	0.0	93.08	93.08	0	413.64	413.64	0	765.54	765.54	0	1391.88	1391.88	0	1972.54	1972.54	0
32A	22.2	22.2	0.0	95.6	95.6	0	424.64	424.64	0	784.43	784.43	0	1429.11	1429.11	0	2025.67	2025.67	0
33A	23.1	23.1	0.0	97.95	97.95	0	433.3	433.3	0	800.84	800.84	0	1457.06	1457.06	0	2070.48	2070.48	0
34A	35.7	35.7	0.0	101.32	101.32	0	450.37	450.37	0	834.45	834.45	0	1515.65	1515.65	0	2141.85	2141.85	0
35A	29.2	29.2	0.0	103.83	103.83	0	461.51	461.51	0	855.1	855.1	0	1555.18	1555.18	0	2204.41	2204.41	0
36A	25.6	25.6	0.0	105.86	105.86	0	470.46	470.46	0	871.06	871.06	0	1581.91	1581.91	0	2243.48	2243.48	0
38A	23.7	23.7	0.0	106.68	106.68	0	471.98	471.98	0	874.82	874.82	0	1593.48	1593.48	0	2261.94	2261.94	0
39A	32.5	32.5	0.0	109.27	109.27	0	482.37	482.37	0	892.08	892.08	0	1630.91	1630.91	0	2315.65	2315.65	0
40A	20.2	20.2	0.0	109.67	109.67	0	482.45	482.45	0	892.7	892.7	0	1630.75	1630.75	0	2315.9	2315.9	0
41A	22.5	22.5	0.0	110.54	110.54	0	485.12	485.12	0	898.99	898.99	0	1643.73	1643.73	0	2343.78	2343.78	0
42A	28.5	28.5	0.0	112.82	112.82	0	494	494	0	917.86	917.86	0	1680.72	1680.72	0	2397.36	2397.36	0
44A	20.2	20.2	0.0	113.33	113.33	0	494.42	494.42	0	922.2	922.2	0	1686.78	1686.78	0	2405.45	2405.45	0
45A	24.8	24.8	0.0	115.15	115.15	0	501.22	501.22	0	936.03	936.03	0	1710.7	1710.7	0	2440.72	2440.72	0
46A	15.1	15.1	0.0	115.28	115.28	0	500.81	500.81	0	934.53	934.53	0	1716.82	1716.82	0	2452.34	2452.34	0
47A	24.6	24.6	0.0	115.28	115.28	0	502.08	502.08	0	938.66	938.66	0	1719.49	1719.49	0	2460.98	2460.98	0
48A	24.9	24.9	0.0	116.13	116.13	0	504.61	504.61	0	944.65	944.65	0	1733.44	1733.44	0	2481.52	2481.52	0
49A	20.9	20.9	0.0	116.29	116.29	0	504.08	504.08	0	944.19	944.19	0	1737.28	1737.28	0	2480.45	2480.45	0
50A	19.2	19.2	0.0	116.5	116.5	0	503.41	503.41	0	943.19	943.19	0	1735.88	1735.88	0	2482.83	2482.83	0
52E	28.8	28.8	0.0	4.69	4.69	0	20.88	20.88	0	39.16	39.16	0	74.37	74.37	0	97.45	97.45	0
53E	24.8	24.8	0.0	7.91	7.91	0	37.29	37.29	0	69.62	69.62	0	130.1	130.1	0	178.9	178.9	0
54E	33.4	33.4	0.0	11.96	11.96	0	57.23	57.23	0	108.42	108.42	0	199.93	199.93	0	277.6	277.6	0
55E	23.1	23.1	0.0	14.51	14.51	0	69.65	69.65	0	132.74	132.74	0	245.12	245.12	0	340.36	340.36	0
59A	28.2	28.2	0.0	121.51	121.51	0	521.02	521.02	0	983.12	983.12	0	1825.12	1825.12	0	2629.39	2629.39	0
60A	27.2	27.2	0.0	121.42	121.42	0	520.87	520.87	0	983.83	983.83	0	1826.78	1826.78	0	2632.24	2632.24	0
61A	17.9	17.9	0.0	121.44	121.44	0	519.49	519.49	0	983.27	983.27	0	1829.32	1829.32	0	2630.04	2630.04	0

Basin A - ΣQ BURNED FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
63F	27.0	27.0	0.0	4.23	4.23	0	19.62	19.62	0	36.28	36.28	0	65.01	65.01	0	94.04	94.04	0
64F	40.8	40.8	0.0	8.26	8.26	0	41.93	41.93	0	78.92	78.92	0	145.22	145.22	0	209.53	209.53	0
65F	37.4	37.4	0.0	12.24	12.24	0	62.28	62.28	0	118.83	118.83	0	217.35	217.35	0	313.92	313.92	0
66F	32.6	32.6	0.0	16.68	16.68	0	83.87	83.87	0	159	159	0	291.71	291.71	0	422.05	422.05	0
67F	18.8	18.8	0.0	19.02	19.02	0	95.96	95.96	0	181.25	181.25	0	332.29	332.29	0	478.65	478.65	0
68F	9.2	9.2	0.0	20.16	20.16	0	100.98	100.98	0	191.59	191.59	0	350.43	350.43	0	505.08	505.08	0
72A	6.4	6.4	0.0	127.01	127.01	0	538.28	538.28	0	1027.97	1027.97	0	1930.35	1930.35	0	2799.95	2799.95	0
73A	20.0	20.0	0.0	127.46	127.46	0	539.98	539.98	0	1032.48	1032.48	0	1939.97	1939.97	0	2814.54	2814.54	0
74A	21.9	21.9	0.0	127.69	127.69	0	540.52	540.52	0	1034.83	1034.83	0	1948.33	1948.33	0	2826.5	2826.5	0
75A	42.0	42.0	0.0	128.38	128.38	0	543.21	543.21	0	1043.38	1043.38	0	1966.01	1966.01	0	2853.21	2853.21	0
76A	26.1	26.1	0.0	128.03	128.03	0	542.98	542.98	0	1045.4	1045.4	0	1973.88	1973.88	0	2866.11	2866.11	0
77A	12.2	12.2	0.0	128.24	128.24	0	543.02	543.02	0	1046.42	1046.42	0	1977.89	1977.89	0	2872.26	2872.26	0
79A	14.2	14.2	0.0	128.53	128.53	0	544.04	544.04	0	1049.25	1049.25	0	1983.61	1983.61	0	2881.34	2881.34	0
80A	18.2	18.2	0.0	128.56	128.56	0	543.94	543.94	0	1050.9	1050.9	0	1989.76	1989.76	0	2891.01	2891.01	0
81A	23.3	23.3	0.0	128.68	128.68	0	544.35	544.35	0	1053.5	1053.5	0	1996.9	1996.9	0	2901.81	2901.81	0
82A	22.2	22.2	0.0	128.81	128.81	0	544.67	544.67	0	1056.07	1056.07	0	2004.37	2004.37	0	2914.7	2914.7	0
84B	26.2	26.2	0.0	4.42	4.42	0	17.39	17.39	0	28.27	28.27	0	52.57	52.57	0	72.44	72.44	0
85B	33.5	33.5	0.0	9.01	9.01	0	37.74	37.74	0	61.83	61.83	0	111.96	111.96	0	154.85	154.85	0
88A	2.8	2.8	0.0	129.88	129.88	0	548.7	548.7	0	1068.34	1068.34	0	2035.96	2035.96	0	2964.36	2964.09	-0.27
89C	21.6	21.6	0.0	5.17	5.17	0	19.37	19.37	0	32.26	32.26	0	56.77	56.77	0	75.53	75.53	0
90C	23.5	23.5	0.0	8.94	8.94	0	33.62	33.62	0	56.86	56.86	0	101.15	101.15	0	138.5	138.5	0
92A	30.8	30.8	0.0	130.85	130.85	0	552.36	552.36	0	1081.35	1081.35	0	2069.53	2069.53	0	3017.26	3016.86	-0.4
93A	42.1	37.7	-4.4	130.79	130.71	-0.08	552.37	552.15	-0.22	1087.14	1086.46	-0.68	2083.6	2081.97	-1.63	3038.95	3036.02	-2.93
94A	16.0	11.0	-5.0	130.95	130.78	-0.17	552.8	552.33	-0.47	1088.91	1087.48	-1.43	2088.49	2085.25	-3.24	3047.31	3041.19	-6.12
97A	14.4	13.4	-1.0	166.13	168.66	2.53	660.51	665.89	5.38	1309.54	1305.61	-3.93	2496.15	2487.64	-8.51	3656.2	3644.95	-11.25

Basin B - ΣQ BURNED FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	19.2	19.2	0	3.25	3.25	0	14.74	14.74	0	27.21	27.21	0	51.24	51.24	0	68.78	68.78	0
2A	36.3	36.3	0	8.28	8.28	0	38.3	38.3	0	72.62	72.62	0	134.37	134.37	0	187.54	187.54	0
3A	11.1	11.1	0	10.2	10.2	0	47.2	47.2	0	88.08	88.08	0	164.04	164.04	0	228.52	228.52	0
4A	25.5	25.5	0	14.15	14.15	0	64.87	64.87	0	121.83	121.83	0	225.7	225.7	0	316.04	316.04	0
5A	18.9	18.9	0	17.23	17.23	0	78.84	78.84	0	148.24	148.24	0	273.18	273.18	0	380.29	380.29	0
6A	19.2	19.2	0	20.58	20.58	0	93.71	93.71	0	172.83	172.83	0	317.58	317.58	0	439.21	439.21	0
7A	24.7	24.7	0	23.82	23.82	0	108.47	108.47	0	201.54	201.54	0	371.08	371.08	0	518.2	518.2	0
8A	20.4	20.4	0	26.5	26.5	0	121.07	121.07	0	223.48	223.48	0	407.89	407.89	0	567.38	567.38	0
9B	25.7	25.7	0	6.15	6.15	0	23.04	23.04	0	38.38	38.38	0	67.55	67.55	0	89.86	89.86	0
10B	39.8	39.8	0	12.27	12.27	0	49.95	49.95	0	86.05	86.05	0	152.27	152.27	0	207.58	207.58	0
12A	15.7	15.7	0	39.76	39.76	0	175.95	175.95	0	322.08	322.08	0	580.2	580.2	0	810.5	810.5	0
13A	31.9	31.9	0	44.46	44.46	0	193.8	191.73	-2.07	353.02	353.02	0	634.93	632.99	-1.94	882.88	882.88	0
14C	-	21.3	-	-	4.58	-	-	15.76	-	-	27.33	-	-	47.4	-	-	66.18	-
16A	-	0	-	-	48.21	-	-	205.12	-	-	376.61	-	-	675.52	-	-	943.55	-

Basin C - ΣQ BURNED FLOW SUMMARY

Subarea	AREA			2-YR			5-YR			10-YR			25-YR			50-YR		
	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)	EXIST	PROP	Δ (PR - EX)
	ac	ac	ac	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs	cfs
1A	18.6	-	-	3.64	-	-	14.32	-	-	25.07	-	-	43.33	-	-	59.3	-	-
2A	26.9	-	-	8.27	-	-	33.02	-	-	57.47	-	-	99.18	-	-	137.2	-	-
5A	37.5	-	-	56.12	-	-	241.83	-	-	439.03	-	-	786.14	-	-	1093.77	-	-
1A	-	0.9	-	-	0.39	-	-	1.19	-	-	1.78	-	-	2.76	-	-	3.68	-
4B	-	2.5	-	-	0.96	-	-	3.28	-	-	4.92	-	-	7.67	-	-	10.21	-
5B	-	7.2	-	-	2.84	-	-	9.62	-	-	15.95	-	-	26.69	-	-	37.54	-
6B	-	1.6	-	-	3.11	-	-	10.68	-	-	17.58	-	-	29.08	-	-	40.27	-
7B	-	1.5	-	-	3.62	-	-	12.08	-	-	19.86	-	-	32.72	-	-	45.08	-
8B	-	0.4	-	-	3.75	-	-	12.49	-	-	20.36	-	-	33.65	-	-	46.39	-
11A	-	4.6	-	-	5.27	-	-	16.7	-	-	27.49	-	-	45.12	-	-	61.62	-
12A	-	3.7	-	-	6.36	-	-	19.73	-	-	32.48	-	-	53.35	-	-	72.69	-
14A	-	2.6	-	-	7.19	-	-	22.02	-	-	36.42	-	-	59.12	-	-	81.17	-
15C	-	2.1	-	-	0.81	-	-	2.75	-	-	4.14	-	-	6.44	-	-	8.58	-
16C	-	2.9	-	-	1.62	-	-	5.06	-	-	8.25	-	-	13.7	-	-	18.26	-
17C	-	5.8	-	-	3.4	-	-	10.08	-	-	16.19	-	-	27.23	-	-	36.21	-
18C	-	1.0	-	-	3.68	-	-	10.95	-	-	17.78	-	-	29.96	-	-	39.85	-
21A	-	1.7	-	-	11.06	-	-	33.51	-	-	55.71	-	-	92.12	-	-	125.21	-
22A	-	3.1	-	-	11.98	-	-	36.04	-	-	59.82	-	-	98.77	-	-	134	-
23A	-	4.4	-	-	13.33	-	-	39.64	-	-	65.75	-	-	108.77	-	-	147.21	-
24A	-	4.0	-	-	14.46	-	-	42.69	-	-	70.3	-	-	116.54	-	-	157.51	-
25A	-	2.1	-	-	15.01	-	-	44.35	-	-	73.19	-	-	121.3	-	-	163.82	-
27D	-	20.3	-	-	51.51	-	-	218.05	-	-	399.64	-	-	714.98	-	-	999.96	-

AIDLIN HILLS

HYDROLOGY STUDY

50-YR

BULKED FLOW SUMMARY

SINGLE BASIN BURNED FLOW SUMMARY

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN A

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	*ac*	*min*	*cfs*			*cfs*
1A	32.5	32.5	6	129.9		3	
2A	34.8	67.3	7	127.8		3	
3A	33.3	100.6	9	108.0		3	
4A	37.9	138.4	7	139.2		3	
6B	28.8	28.8	6	115.1		3	
7B	12.2	41.0	6	48.8		3	
8B	22.3	63.3	8	76.5		3	
9B	24.6	87.9	8	84.4		3	
11AB	-	226.4			808.7		1221.1
13A	24.0	250.4	7	88.2		3	
15C	37.0	37.0	9	120.1		3	
16C	40.2	77.1	8	138.0		3	
17C	31.9	109.1	8	109.5		3	
19AC	-	359.5			1250.1		1862.6
21A	39.2	398.7	9	127.2		3	
23D	30.8	30.8	7	113.2		3	
24D	39.3	70.1	7	144.4		3	
25D	42.3	112.4	8	145.2		3	
26D	30.9	143.3	7	113.5		3	
27D	26.9	170.1	7	98.8		3	
29AD	-	568.9			1902.5		2806.2
31A	29.2	598.1	9	92.3		3	
32A	22.2	620.3	8	74.3		3	
33A	23.1	643.4	7	80.5		3	
34A	35.7	679.1	9	109.6		3	
35A	29.2	708.3	8	94.9		3	
36A	25.6	733.9	8	83.2		3	
38A	23.7	757.6	7	80.2		3	
39A	32.5	790.1	8	99.8		3	
40A	20.2	810.3	6	72.3		3	
41A	22.5	832.8	7	67.4		3	
42A	28.5	861.3	9	80.2		3	
44A	20.2	881.5	8	58.4		3	
45A	24.8	906.3	9	65.5		3	
46A	15.1	921.3	7	48.2		3	
47A	24.6	946.0	10	63.9		3	
48A	24.9	970.9	8	74.1		3	
49A	20.9	991.8	7	64.7		3	
50A	19.2	1011.0	7	61.3		3	
52E	28.8	28.8	7	97.5		3	
53E	24.8	53.5	7	83.9		3	

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN A

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	*ac*	*min*	*cfs*			*cfs*
54E	33.4	86.9	8	102.5		3	
55E	23.1	110.0	8	68.7		3	
57AE	-	1121.1			2607.9		3794.4
59A	28.2	1149.3	9	81.7		3	
60A	27.2	1176.5	6	94.5		3	
61A	17.9	1194.4	9	50.4		3	
63F	27.0	27.0	7	94.0		3	
64F	40.8	67.8	10	116.1		3	
65F	37.4	105.2	9	108.4		3	
66F	32.6	137.8	7	110.3		3	
67F	18.8	156.6	8	57.7		3	
68F	9.2	165.9	7	30.2		3	
70AF	-	1360.2			2798.0		4065.5
72A	6.4	1366.6	6	22.2		3	
73A	20.0	1386.6	8	61.9		3	
74A	21.9	1408.5	8	65.9		3	
75A	42.0	1450.5	9	119.9		3	
76A	26.1	1476.6	9	74.5		3	
77A	12.2	1488.8	7	39.2		3	
79A	14.2	1503.0	7	47.0		3	
80A	18.2	1521.2	8	54.8		3	
81A	23.3	1544.5	8	72.1		3	
82A	22.2	1566.6	10	60.4		5	
84B	26.2	26.2	9	72.4		5	
85B	33.5	59.8	10	91.2		5	
87AB		1626.4			2963.6		4270.8
88A	2.8	1629.2	5	11.1		5	
89C	21.6	21.6	7	75.5		3	
90C	23.5	45.2	10	67.7		3	
91AC	-	1674.3			3000.7		4315.5
92A	30.8	1705.1	8	95.4		5	
93A	42.1	1747.2	8	130.3		5	
94A	16.0	1763.2	7	54.4		5	
95D *		371.4			1093.8		1576.8
96AD	-	2134.6			3652.4	5	5231.9
97A	14.4	2149.0	7	48.9	3656.2	5	5231.1

* Import point of Basin C flows

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN B

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	*ac*	*min*	*cfs*			*cfs*
1A	19.2	19.2	7	68.8		3	
2A	36.3	55.5	8	121.4		3	
3A	11.1	66.6	6	43.2		3	
4A	25.5	92.1	8	87.5		3	
5A	18.9	111.0	6	73.5		3	
6A	19.2	130.2	5	83.1		3	
7A	24.7	154.9	7	88.5		3	
8A	20.4	175.3	6	77.4		3	
9B	25.7	25.7	7	89.9		3	
10B	39.8	65.5	10	121.3		3	
11AB	-	240.8			772.1		1163.6
12A	15.7	256.5	5	67.7		3	
13A	31.9	288.4	8	104.7	882.9	3	1324.3

** Imports into Basin C model at Point 3B

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN C

SUBAREA	A	ΣA	Tc	QB	ΣQB	DPA	ΣQBB
	ac	*ac*	*min*	*cfs*			*cfs*
1A	18.6	18.6	8	59.3	-	3	-
2A	26.9	45.5	10	79.8	-	3	-
4AB **	-	333.9	-	-	1014.3	-	1508.2
5A	37.5	371.4	12	98.1	1093.8	3	1576.1

** Import Point of Basin B Flows

DEVELOPED 50-YR SUBAREA FLOWS
BASIN A

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	*ac*	*min*	*cfs*			*cfs*
1A	32.5	32.5	6	129.9	-	3	-
2A	34.8	67.3	7	127.8	-	3	-
3A	33.3	100.6	9	108.0	-	3	-
4A	37.9	138.4	7	139.2	-	3	-
6B	28.8	28.8	6	115.1	-	3	-
7B	12.2	41.0	6	48.8	-	3	-
8B	22.3	63.3	8	76.5	-	3	-
9B	24.6	87.9	8	84.4	-	3	-
11AB	-	226.4	-	-	808.7	3	1221.1
13A	24.0	250.4	7	88.2	-	3	-
15C	37.0	37.0	9	120.1	-	3	-
16C	40.2	77.1	8	138.0	-	3	-
17C	31.9	109.1	8	109.5	-	3	-
19AC	-	359.5	-	-	1250.1	3	1862.6
21A	39.2	398.7	9	127.2	-	3	-
23D	30.8	30.8	7	113.2	-	3	-
24D	39.3	70.1	7	144.4	-	3	-
25D	42.3	112.4	8	145.2	-	3	-
26D	30.9	143.3	7	113.5	-	3	-
27D	26.9	170.1	7	98.8	-	3	-
29AD	-	568.9	-	-	1902.5		2806.2
31A	29.2	598.1	9	92.3	-	3	-
32A	22.2	620.3	8	74.3	-	3	-
33A	23.1	643.4	7	80.5	-	3	-
34A	35.7	679.1	9	109.6	-	3	-
35A	29.2	708.3	8	94.9	-	3	-
36A	25.6	733.9	8	83.2	-	3	-
38A	23.7	757.6	7	80.2	-	3	-
39A	32.5	790.1	8	99.8	-	3	-
40A	20.2	810.3	6	72.3	-	3	-
41A	22.5	832.8	7	67.4	-	3	-
42A	28.5	861.3	9	80.2	-	3	-
44A	20.2	881.5	8	58.4	-	3	-
45A	24.8	906.3	9	65.5	-	3	-
46A	15.1	921.3	7	48.2	-	3	-
47A	24.6	946.0	10	63.9	-	3	-
48A	24.9	970.9	8	74.1	-	3	-
49A	20.9	991.8	7	64.7	-	3	-
50A	19.2	1011.0	7	61.3	-	3	-
52E	28.8	28.8	7	97.5	-	3	-
53E	24.8	53.5	7	83.9	-	3	-

DEVELOPED 50-YR SUBAREA FLOWS
BASIN A

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	*ac*	*min*	*cfs*			*cfs*
54E	33.4	86.9	8	102.5	-	3	-
55E	23.1	110.0	8	68.7	-	3	-
57AE	-	1121.1	-	-	2607.9	3	3794.4
59A	28.2	1149.3	9	81.7	-	3	-
60A	27.2	1176.5	6	94.5	-	3	-
61A	17.9	1194.4	9	50.4	-	3	-
63F	27.0	27.0	7	94.0	-	3	-
64F	40.8	67.8	10	116.1	-	3	-
65F	37.4	105.2	9	108.4	-	3	-
66F	32.6	137.8	7	110.3	-	3	-
67F	18.8	156.6	8	57.7	-	3	-
68F	9.2	165.9	7	30.2	-	3	-
70AF	-	1360.2	-	-	2798.0	3	4065.5
72A	6.4	1366.6	6	22.2	-	3	-
73A	20.0	1386.6	8	61.9	-	3	-
74A	21.9	1408.5	8	65.9	-	3	-
75A	42.0	1450.5	9	119.9	-	3	-
76A	26.1	1476.6	9	74.5	-	3	-
77A	12.2	1488.8	7	39.2	-	3	-
79A	14.2	1503.0	7	47.0	-	3	-
80A	18.2	1521.2	8	54.8	-	3	-
81A	23.3	1544.5	8	72.1	-	3	-
82A	22.2	1566.6	10	60.4	-	5	-
84B	26.2	26.2	9	72.4	-	5	-
85B	33.5	59.8	10	91.2	-	5	-
87AB	-	1626.4	-	-	2963.6	5	4270.8
88A	2.8	1629.2	5	11.1	-	5	-
89C	21.6	21.6	7	75.5	-	3	-
90C	23.5	45.2	10	67.7	-	3	-
91AC	-	1674.3	-	-	3000.5	5	4315.1
92A	30.8	1705.1	8	95.4	-	5	-
93A	37.7	1742.8	8	116.7	-	5	-
94A	11.0	1753.8	7	37.4	-	5	-
95D *	-	382.1	-	-	1140.2	3	1509.5
96AD	-	2135.9	-	-	3637.6	-	5186.7
97A	13.4	2149.3	7	45.6	3645.0	5	5191.7

* Import point of Basin C flows

DEVELOPED 50-YR SUBAREA FLOWS BASIN B							
SUBAREA	**A**	**ΣA**	**Tc**	**Q_B**	**$ΣQ_B$**	**DPA**	**$ΣQ_{BB}$**
	ac	*ac*	*min*	*cfs*			*cfs*
1A	19.2	19.2	7	68.8	-	3	-
2A	36.3	55.5	8	121.4	-	3	-
3A	11.1	66.6	6	43.2	-	3	-
4A	25.5	92.1	8	87.5	-	3	-
5A	18.9	111.0	6	73.5	-	3	-
6A	19.2	130.2	5	83.1	-	3	-
7A	24.7	154.9	7	88.5	-	3	-
8A	20.4	175.3	6	77.4	-	3	-
9B	25.7	25.7	7	89.9	-	3	-
10B	39.8	65.5	10	121.3	-	3	-
11AB	-	240.8	-	-	772.1		1163.6
12A	15.7	256.5	5	67.7	-	3	-
13A	31.9	288.4	9	104.7	-	3	-
14C	21.3	21.3	9	66.2	-	3	-
15AC **	-	309.7	-	-	944.5		1412.0

** Imports into Basin C model at Point 26D

DEVELOPED 50-YR SUBAREA FLOWS
BASIN C

SUBAREA	A	ΣA	Tc	Q_B	ΣQ_B	DPA	ΣQ_{BB}
	ac	*ac*	*min*	*cfs*			*cfs*
1A	0.9	0.9	5	3.7	-	3	-
4B	2.5	2.5	5	10.2	-	3	-
5B	7.2	9.7	5	29.4	-	3	-
6B	1.6	11.3	5	6.5	-	3	-
7B	1.5	12.8	7	5.1	-	3	-
8B	0.4	13.2	5	1.6	-	3	-
10AB *	-	14.1	-	-	49.6	-	49.6
11A	4.6	18.7	10	13.4	-	3	-
12A	3.7	22.4	9	11.3	-	3	-
14A	2.6	25.0	7	8.9	-	3	-
15C	2.1	2.1	5	8.6	-	3	-
16C	2.9	5.0	7	9.9	-	3	-
17C	5.8	10.8	8	18.7	-	3	-
18C	1.0	11.8	6	3.7	-	3	-
19AC *	-	36.8	-	-	120.2		120.2
21A	1.7	38.5	7	5.8	-	3	-
22A	3.1	41.6	9	9.5	-	3	-
23A	4.4	46.0	9	13.4	-	3	-
24A	4.0	50.0	9	12.2	-	3	-
25A	2.1	52.1	9	6.6	-	3	-
26D **	-	309.7	-	-	943.5	-	1412.0
27D	20.3	330.0	10	60.3	1000.0	3	1509.5

* Debris Basin U/S of collection point

** Import Point of Basin B Flows

AIDLIN HILLS

HYDROLOGY STUDY

APPENDIX B

LAR04 MODEL INPUT AND OUTPUT

BASIN A - Slope/Length Calculations

SUB-BASIN	LONGEST PATH	FLOW PATH	ELEVATION (per Topo, ft)			SLOPE	
#	*FT*	*FT*	*HIGH*	*UPSTREAM*	*LOW*	*LONG*	*FLOW*
1A	1507.38	1507.38	3610	3610	2983	0.416	0.416
2A	1870.62	1173.18	3505	2983	2747	0.405	0.201
3A	2288.35	368.55	3447	2747	2675	0.337	0.195
4A	1861.75	1353.29	3170	2675	2350	0.440	0.240
6B	1663.90	1663.90	3605	3605	2760	0.508	0.508
7B	1488.43	494.12	3420	2860	2735	0.460	0.253
8B	2064.01	2064.01	3475	3475	2735	0.359	0.359
9B	2207.67	1342.39	3180	2735	2350	0.376	0.287
13A	1692.65	654.60	2980	2350	2255	0.428	0.145
15C	2219.23	2219.23	3470	3470	2790	0.306	0.306
16C	2159.34	825.92	3280	2790	2585	0.322	0.248
17C	1933.90	1267.33	2900	2585	2255	0.334	0.260
21A	2213.09	1160.88	2825	2255	2150	0.305	0.090
23D	1772.68	1772.68	3270	3270	2715	0.313	0.313
24D	1628.29	1241.66	2900	2715	2430	0.289	0.230
25D	1711.67	1307.51	2750	2430	2380	0.216	0.038
26D	1708.96	723.22	3020	2380	2215	0.471	0.228
27D	1778.85	720.37	2790	2215	2150	0.360	0.090
31A	2175.86	668.17	2830	2150	2118	0.327	0.048
32A	1894.22	405.66	2825	2118	2100	0.383	0.044
33A	1599.89	635.37	2760	2100	2075	0.428	0.039
34A	2285.73	593.45	2830	2075	2050	0.341	0.042
35A	2013.72	571.57	2645	2050	2030	0.305	0.035
36A	1738.01	485.35	2580	2030	2010	0.328	0.041
38A	1496.89	531.53	2540	2010	1990	0.367	0.038
39A	1852.14	395.99	2540	1990	1970	0.308	0.051
40A	1366.71	837.82	2470	1970	1923	0.400	0.056
41A	1306.81	1306.81	2595	2595	2060	0.409	0.409
42A	1919.43	1016.04	2505	2060	1925	0.302	0.133
44A	1582.27	839.51	2395	1923	1875	0.329	0.057
45A	1956.88	1956.88	2530	2530	1875	0.335	0.335
46A	1406.18	575.38	2445	1875	1855	0.420	0.035
47A	2075.64	1318.79	2295	1855	1810	0.234	0.034
48A	1739.27	1739.27	2520	2520	1810	0.408	0.408
49A	1541.24	722.11	2310	1810	1782	0.343	0.039
50A	1393.67	845.75	2195	1782	1742	0.325	0.047
52E	1432.45	1432.45	2830	2830	2355	0.332	0.332
53E	1534.33	939.57	2690	2355	2220	0.306	0.144
54E	1783.17	971.26	2545	2220	1950	0.334	0.278
55E	1853.40	1110.15	2500	1950	1742	0.409	0.187
59A	2259.40	179.73	2705	1742	1735	0.429	0.039
60A	1233.57	814.69	2220	1735	1720	0.405	0.018
61A	1532.73	1136.05	1835	1720	1655	0.117	0.057
63F	1616.02	1616.02	2495	2495	1890	0.374	0.374
64F	2620.38	586.47	2805	1890	1775	0.393	0.196
65F	1979.72	726.76	2290	1775	1710	0.293	0.089
66F	1732.11	1732.11	2730	2730	1840	0.514	0.514
67F	1684.14	920.53	2220	1840	1710	0.303	0.141
68F	1319.36	676.93	1985	1710	1655	0.250	0.081

BASIN A - Slope/Length Calculations

SUB-BASIN	LONGEST PATH	FLOW PATH	ELEVATION (per Topo, ft)			SLOPE	
#	*FT*	*FT*	*HIGH*	*UPSTREAM*	*LOW*	*LONG*	*FLOW*
72A	1153.17	561.33	1940	1655	1635	0.264	0.036
73A	1765.90	1765.90	2185	2185	1635	0.311	0.311
74A	1506.88	434.43	1975	1635	1622	0.234	0.030
75A	1789.27	419.61	1895	1622	1610	0.159	0.029
76A	1672.28	1019.27	1830	1610	1590	0.144	0.020
77A	1302.80	249.06	1795	1590	1580	0.165	0.040
79A	1659.09	1659.09	2105	2105	1580	0.316	0.316
80A	1622.46	642.51	2040	1580	1568	0.291	0.019
81A	1645.05	750.66	2010	1568	1550	0.280	0.024
82A	2121.93	708.86	1875	1550	1533	0.161	0.024
84B	1696.81	1696.81	1905	1905	1625	0.165	0.165
85B	2039.86	1438.01	1875	1625	1533	0.168	0.064
88A	466.52	354.92	1570	1533	1525	0.096	0.023
89C	1492.19	1492.19	2205	2205	1650	0.372	0.372
90C	2245.52	1328.45	2020	1650	1525	0.220	0.094
92A	1640.63	927.07	1800	1525	1503	0.181	0.024
93A	1872.95	998.68	1925	1503	1490	0.232	0.013
94A	1377.35	448.06	1880	1490	1480	0.290	0.022
97A	1487.07	891.79	1865	1480	1465	0.269	0.017

BASIN B - Slope/Length Calculations

SUB-BASIN	LONGEST PATH	FLOW PATH	ELEVATION (per Topo, ft)			SLOPE	
#	*FT*	*FT*	*HIGH*	*UPSTREAM*	*LOW*	*LONG*	*FLOW*
1A	1503.47	1503.47	2805	2805	2295	0.339	0.339
2A	2007.90	958.78	2805	2295	2095	0.354	0.209
3A	1303.33	366.75	2620	2095	2050	0.437	0.123
4A	2133.86	2133.86	2805	2805	2050	0.354	0.354
5A	1413.71	662.35	2500	2050	1970	0.375	0.121
6A	1220.87	545.88	2500	1970	1910	0.483	0.110
7A	1706.45	1339.81	2370	1910	1695	0.396	0.160
8A	1411.76	592.31	2140	1695	1657	0.342	0.064
9B	1439.89	1439.89	2205	2205	1750	0.316	0.316
10B	2531.15	979.67	2405	1750	1657	0.296	0.095
12A	1111.26	760.82	2000	1657	1595	0.364	0.081
13A	1822.50	1227.77	1885	1595	1535	0.192	0.049

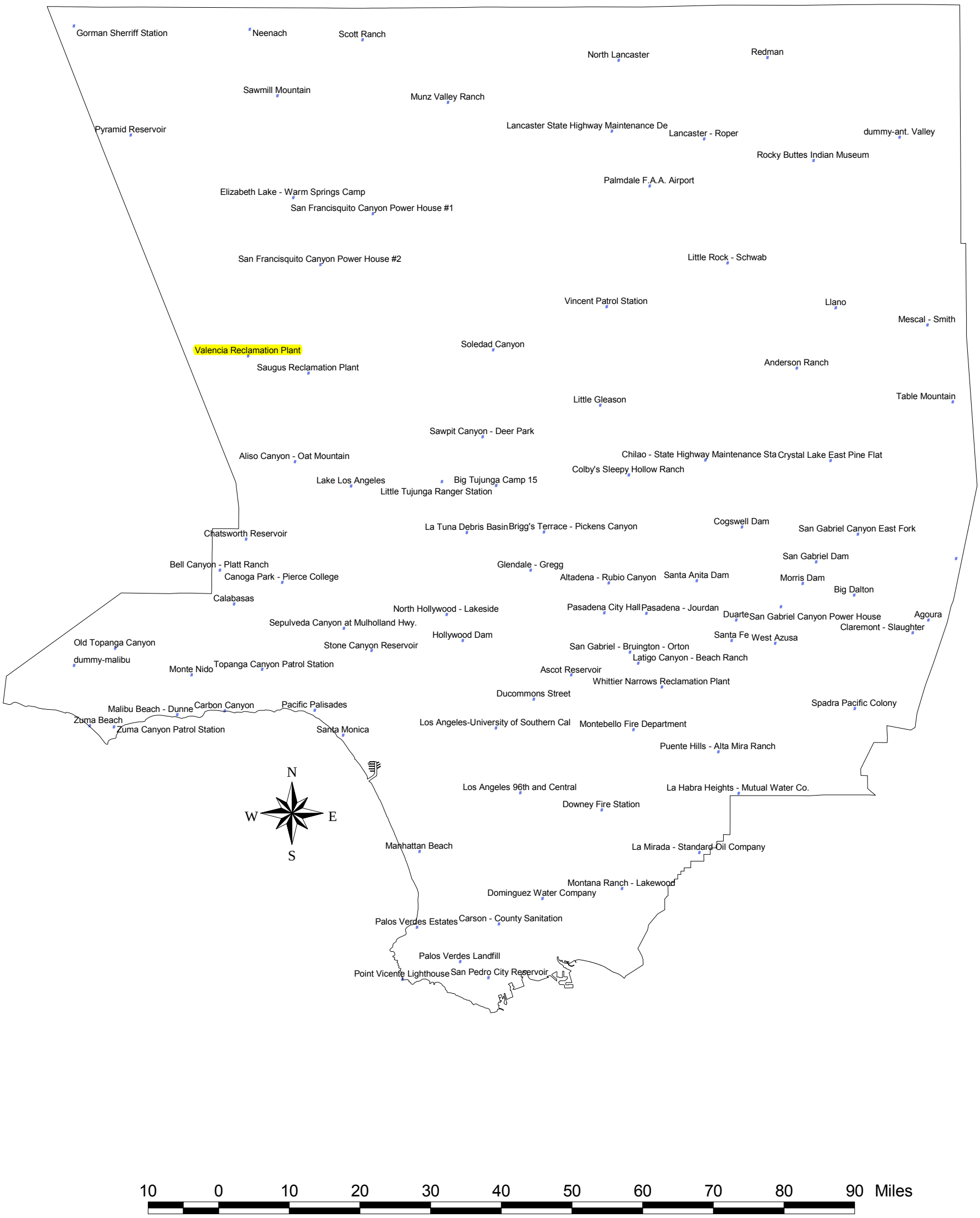
BASIN C - Slope/Length Calculations

SUB-BASIN	LONGEST PATH	FLOW PATH	ELEVATION (per Topo, ft)			SLOPE	
#	*FT*	*FT*	*HIGH*	*UPSTREAM*	*LOW*	*LONG*	*FLOW*
1A	2004.46	2004.46	2140	2140	1590	0.274	0.274
2A	2489.59	703.93	2145	1590	1535	0.245	0.078
5A	2765.79	1164.12	1785	1535	1480	0.110	0.047

Summary of Rain Gage Data

24-hour Rainfall Total								
Gage No.	Gage Name	Mean	50th Percentile	75th Percentile	85th Percentile	90th Percentile	95th Percentile	99th Percentile
5	Calabasas	0.57	0.24	0.74	1.10	1.41	2.07	4.23
6	Topanga Canyon Patrol Station	0.54	0.20	0.69	1.11	1.44	2.10	4.05
13	North Hollywood - Lakeside	0.53	0.23	0.66	1.06	1.40	2.02	3.69
17	Sepulveda Canyon at Mulholland Hwy.	0.44	0.24	0.77	1.26	1.64	2.31	4.31
23	Chatsworth Reservoir	0.47	0.20	0.60	0.94	1.23	1.82	3.34
43	Palos Verdes Estates	0.26	0.13	0.34	0.52	0.67	0.94	1.67
44	Point Vicente Lighthouse	0.28	0.10	0.34	0.55	0.75	1.07	2.00
53	Colby's Sleepy Hollow Ranch	0.70	0.26	0.80	1.36	1.85	2.74	5.63
63	Santa Anita Dam	0.55	0.20	0.69	1.12	1.53	2.20	4.16
82	Table Mountain	0.51	0.23	0.57	0.96	1.26	1.91	4.11
107	Downey Fire Station	0.50	0.28	0.66	0.97	1.25	1.77	3.00
120	Vincent Patrol Station	0.30	0.16	0.39	0.60	0.79	1.13	1.67
125	San Francisquito Canyon Power House #1	0.44	0.20	0.59	0.91	1.20	1.69	3.02
128	Elizabeth Lake - Warm Springs Camp	0.66	0.34	0.90	1.35	1.63	2.32	4.16
156	La Mirada - Standard Oil Company	0.43	0.17	0.45	0.72	0.95	1.43	2.84
172	Duarte	0.66	0.35	0.88	1.32	1.67	2.34	3.77
176	Altadena - Rubio Canyon	0.60	0.25	0.76	1.20	1.61	2.28	3.95
201	Puente Hills - Alta Mira Ranch	0.58	0.30	0.78	1.12	1.40	2.03	3.38
223	Big Dalton	0.50	0.14	0.59	1.00	1.38	2.11	3.82
225	Montana Ranch - Lakewood	0.44	0.24	0.60	0.88	1.10	1.57	2.69
227	San Gabriel - Bruington - Orton	0.56	0.27	0.75	1.15	1.45	2.03	3.58
237	Stone Canyon Reservoir	0.58	0.22	0.77	1.20	1.66	2.35	3.95
238	Hollywood Dam	0.48	0.21	0.63	0.96	1.27	1.92	2.93
277	Sawmill Mountain	0.65	0.27	0.89	1.38	1.77	2.32	4.39
283	Crystal Lake East Pine Flat	0.70	0.24	0.77	1.32	1.90	2.89	5.89
291	Los Angeles 96th and Central	0.49	0.30	0.65	0.92	1.18	1.60	2.96
293	Lake Los Angeles	0.49	0.23	0.69	1.01	1.31	1.87	3.10
298	Gorman Sherriff Station	0.39	0.12	0.37	0.60	0.82	1.25	2.29
299	Little Rock - Schwab	0.29	0.09	0.29	0.48	0.65	0.95	1.65
304	Sawpit Canyon - Deer Park	0.60	0.19	0.73	1.20	1.76	2.45	4.88
306	Zuma Beach	0.31	0.16	0.40	0.60	0.78	1.10	2.07
322	Munz Valley Ranch	0.47	0.26	0.60	0.90	1.15	1.67	2.99
334	Cogswell Dam	0.77	0.22	0.86	1.52	2.23	3.41	6.27
356	Spadra Pacific Colony	0.49	0.25	0.62	0.98	1.27	1.78	3.01
372	San Francisquito Canyon Power House #2	0.45	0.21	0.60	0.90	1.15	1.68	3.00
373	Brigg's Terrace - Pickens Canyon	0.65	0.16	0.63	1.13	1.56	2.33	4.20
379	San Gabriel Canyon East Fork	0.65	0.23	0.76	1.30	1.70	2.60	5.18
390	Morris Dam	0.55	0.19	0.67	1.12	1.52	2.26	4.31
391	Montebello Fire Department	0.51	0.17	0.54	0.87	1.13	1.56	3.05
405	Soledad Canyon	0.48	0.20	0.56	0.90	1.18	1.73	3.20
406	West Azusa	0.51	0.26	0.68	1.03	1.36	1.85	2.93
409	Pyramid Reservoir	0.54	0.17	0.63	1.07	1.50	2.29	4.41
425	San Gabriel Dam	0.63	0.20	0.75	1.28	1.79	2.61	4.83
434	Agoura	0.41	0.13	0.44	0.75	1.03	1.58	3.46
435	Monte Nido	0.47	0.20	0.60	0.96	1.28	1.79	3.46
438	Los Angeles-University of Southern Cal	0.60	0.32	0.75	1.10	1.43	2.05	4.22
443	Latigo Canyon - Beach Ranch	0.47	0.16	0.57	0.95	1.33	1.96	3.66
446	Aliso Canyon - Oat Mountain	0.57	0.27	0.74	1.13	1.45	2.10	3.57
447	Carbon Canyon	0.35	0.17	0.46	0.70	0.89	1.26	2.19
455	Lancaster State Highway Maintenance De	0.32	0.16	0.38	0.59	0.79	1.18	2.08
458	Zuma Canyon Patrol Station	0.48	0.22	0.60	0.90	1.20	1.80	3.17
491	Pacific Palisades	0.40	0.27	0.60	0.85	1.05	1.41	2.24
492	Chilao - State Highway Maintenance Sta	0.66	0.28	0.76	1.30	1.73	2.54	4.94
497	Claremont - Slaughter	0.47	0.21	0.61	0.96	1.27	1.85	3.07
517	Anderson Ranch	0.50	0.18	0.56	0.98	1.35	2.08	3.84
564	Llano	0.31	0.18	0.40	0.61	0.78	1.01	1.75
598	Neenach	0.36	0.14	0.45	0.69	0.93	1.35	2.75
610	Pasadena City Hall	0.48	0.18	0.60	1.00	1.35	2.00	3.54
619	San Antonio Canyon - Sierra Power Hous	0.44	0.11	0.40	0.70	1.00	1.71	4.29
627	San Gabriel Canyon Power House	0.48	0.17	0.59	1.00	1.37	2.04	3.56
634	Santa Monica	0.50	0.25	0.67	1.02	1.32	1.78	3.08
694	Big Tujunga Camp 15	0.58	0.29	0.71	1.10	1.50	2.05	4.29
716	Ducommons Street	0.47	0.24	0.62	0.94	1.24	1.74	3.33
735	Bell Canyon - Platt Ranch	0.37	0.13	0.43	0.74	0.98	1.55	2.99
750	Palmdale F.A.A. Airport	0.24	0.12	0.30	0.48	0.61	0.90	1.54
795	Pasadena - Jourdan	0.49	0.19	0.63	1.02	1.41	2.00	3.44
807	Ascot Reservoir	0.48	0.23	0.63	0.98	1.30	1.80	3.10
1006	San Pedro City Reservoir	0.27	0.14	0.36	0.53	0.69	1.02	1.60
1025	Malibu Beach - Dunne	0.33	0.16	0.43	0.64	0.84	1.17	2.20
1041	Santa Fe	0.53	0.27	0.71	1.09	1.40	1.93	3.18
1050	Old Topanga Canyon	0.50	0.18	0.60	1.01	1.38	2.04	3.67
1051	Canoga Park - Pierce College	0.50	0.20	0.65	1.00	1.33	1.95	3.56
1070	Manhattan Beach	0.41	0.22	0.54	0.82	1.05	1.39	2.39
1072	Little Tujunga Ranger Station	0.57	0.31	0.77	1.10	1.39	1.95	3.56
1074	Little Gleason	0.69	0.31	0.79	1.28	1.71	2.59	5.91
1081	Glendale - Gregg	0.55	0.24	0.71	1.11	1.45	2.09	3.79
1088	La Habra Heights - Mutual Water Co.	0.52	0.28	0.68	1.05	1.32	1.94	3.12
1107	La Tuna Debris Basin	0.55	0.30	0.70	1.07	1.40	1.89	3.49
1113	Dominguez Water Company	0.35	0.15	0.42	0.73	0.95	1.42	2.63
1242	Rocky Buttes Indian Museum	0.14	0.05	0.16	0.24	0.32	0.50	0.97
1243	Redman	0.26	0.10	0.29	0.44	0.60	0.88	2.65
1244	Lancaster - Roper	0.15	0.04	0.16	0.27	0.41	0.55	1.47
1246	Scott Ranch	0.14	0.08	0.20	0.40	0.60	0.96	1.51
1247	North Lancaster	0.13	0.04	0.12	0.24	0.32	0.50	0.80
1248	Mescal - Smith	0.22	0.08	0.20	0.36	0.60	1.20	2.32
1252	Palos Verdes Landfill	0.55	0.31	0.73	1.09	1.49	2.01	3.20
1253	Carson - County Sanitation	0.44	0.20	0.55	0.89	1.22	1.65	2.47
1259	Whittier Narrows Reclamation Plant	0.49	0.26	0.60	0.90	1.25	1.80	3.01
1262	Saugus Reclamation Plant	0.51	0.28	0.62	0.94	1.29	1.81	3.49
1263	Valencia Reclamation Plant	0.49	0.28	0.62	1.01	1.31	1.80	2.78
	Discarded Gages							
1248	Mescal - Smith	0.22	0.08	0.20	0.36	0.60	1.20	2.32
1249	Relay	0.32	0.08	0.20	0.30	0.46	0.60	1.15
1252	Palos Verdes Landfill	0.55	0.31	0.73	1.09	1.49	2.01	3.20
1253	Carson - County Sanitation	0.44	0.20	0.55	0.89	1.22	1.65	2.47
1259	Whittier Narrows Reclamation Plant	0.49	0.26	0.60	0.90	1.25	1.80	3.01
1262	Saugus Reclamation Plant	0.51	0.28	0.62	0.94	1.29	1.81	3.49
1263	Valencia Reclamation Plant	0.49	0.28	0.62	1.01	1.31	1.80	2.78

85th Percentile 24-hr Isohyetal Map Gages



10 0 10 20 30 40 50 60 70 80 90 Miles

Rain Gage Name

File: final_85th-no_analyst-raingages.apr
Date: 02/10/2004

STEVENSON RANCH

2-YEAR CLEAR

EXISTING CONDITION

Basin A - 02 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	3.3	17	1.09	0.47	0.47
2A	34.8	0.01	93	1871	0.405	3.3	20	1.01	0.45	0.45
3A	33.3	0.01	93	2288	0.337	3.3	25	0.91	0.42	0.42
4A	37.9	0.01	93	1862	0.440	3.3	20	1.01	0.45	0.45
6B	28.8	0.01	93	1664	0.508	3.3	17	1.09	0.47	0.47
7B	12.2	0.01	93	1488	0.460	3.3	16	1.12	0.47	0.48
8B	22.3	0.01	93	2064	0.359	3.3	22	0.97	0.44	0.44
9B	24.6	0.01	93	2208	0.376	3.3	23	0.95	0.43	0.43
13A	24.0	0.01	93	1693	0.428	3.3	18	1.06	0.46	0.47
15C	37.0	0.01	93	2219	0.306	3.3	24	0.93	0.42	0.43
16C	40.2	0.01	93	2159	0.322	3.3	24	0.93	0.42	0.43
17C	31.9	0.01	93	1934	0.334	3.3	21	0.99	0.44	0.45
21A	39.2	0.01	93	2213	0.305	3.2	25	0.90	0.41	0.42
23D	30.8	0.01	93	1773	0.313	3.3	20	1.01	0.45	0.45
24D	39.3	0.01	93	1628	0.289	3.3	19	1.04	0.46	0.46
25D	42.3	0.01	93	1712	0.216	3.3	21	0.99	0.44	0.45
26D	30.9	0.01	93	1709	0.471	3.2	18	1.05	0.46	0.46
27D	26.9	0.01	93	1779	0.360	3.2	20	1.00	0.45	0.45
31A	29.2	0.01	93	2176	0.327	3.1	25	0.88	0.41	0.41
32A	22.2	0.01	93	1894	0.383	3.1	22	0.93	0.42	0.43
33A	23.1	0.01	93	1600	0.428	3.1	19	0.99	0.44	0.45
34A	35.7	0.01	93	2286	0.341	3.1	26	0.85	0.40	0.40
35A	29.2	0.01	93	2014	0.305	3.1	25	0.86	0.40	0.40
36A	25.6	0.01	93	1738	0.328	3.1	22	0.91	0.42	0.42
38A	23.7	0.01	93	1497	0.367	3.0	19	0.95	0.43	0.43
39A	32.5	0.01	93	1852	0.308	2.9	25	0.82	0.39	0.39
40A	20.2	0.01	93	1367	0.400	2.9	18	0.95	0.43	0.43
41A	22.5	0.01	93	1307	0.409	2.7	20	0.84	0.39	0.40
42A	28.5	0.01	93	1919	0.302	2.8	27	0.76	0.37	0.37
44A	20.2	0.01	93	1582	0.329	2.8	23	0.81	0.38	0.39
45A	24.8	0.01	93	1957	0.335	2.7	29	0.71	0.34	0.35
46A	15.1	0.01	93	1406	0.420	2.8	19	0.90	0.41	0.42
47A	24.6	0.01	93	2076	0.234	2.8	30	0.72	0.35	0.35
48A	24.9	0.01	93	1739	0.408	2.9	23	0.83	0.39	0.40
49A	20.9	0.01	93	1541	0.343	2.8	22	0.83	0.39	0.39
50A	19.2	0.01	93	1394	0.325	2.8	20	0.88	0.41	0.41
52E	28.8	0.01	93	1432	0.332	3.0	19	0.96	0.43	0.44
53E	24.8	0.01	93	1534	0.306	3.0	21	0.91	0.42	0.42
54E	33.4	0.01	93	1783	0.334	2.9	23	0.86	0.40	0.40
55E	23.1	0.01	93	1853	0.409	2.9	24	0.82	0.39	0.39
59A	28.2	0.01	93	2259	0.429	2.9	27	0.78	0.37	0.38
60A	27.2	0.01	93	1234	0.405	2.9	17	0.96	0.43	0.44
61A	17.9	0.01	93	1533	0.117	2.9	27	0.77	0.37	0.38
63F	27.0	0.01	93	1616	0.374	3.1	20	0.95	0.43	0.44
64F	40.8	0.01	93	2620	0.393	3.0	30	0.77	0.37	0.37

Basin A - 02 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	2.9	27	0.78	0.37	0.38
66F	32.6	0.01	93	1732	0.514	3.0	20	0.93	0.42	0.43
67F	18.8	0.01	93	1684	0.303	2.9	23	0.86	0.40	0.40
68F	9.2	0.01	93	1319	0.250	2.9	20	0.90	0.41	0.42
72A	6.4	0.01	93	1153	0.264	2.8	18	0.92	0.42	0.43
73A	20.0	0.01	91	1766	0.311	2.9	18	0.94	0.61	0.61
74A	21.9	0.01	91	1507	0.234	2.8	17	0.94	0.61	0.61
75A	42.0	0.01	91	1789	0.159	2.7	22	0.82	0.58	0.59
76A	26.1	0.01	91	1672	0.144	2.7	21	0.84	0.59	0.59
77A	12.2	0.01	91	1303	0.165	2.7	17	0.92	0.61	0.61
79A	14.2	0.01	91	1659	0.316	2.8	17	0.95	0.61	0.62
80A	18.2	0.01	91	1622	0.291	2.8	18	0.91	0.61	0.61
81A	23.3	0.01	91	1645	0.280	2.8	18	0.92	0.61	0.61
82A	22.2	0.01	91	2122	0.161	2.8	24	0.80	0.58	0.58
84B	26.2	0.01	91	1697	0.165	2.7	21	0.82	0.58	0.59
85B	33.5	0.01	91	2040	0.168	2.8	23	0.81	0.58	0.58
88A	2.8	0.01	91	467	0.096	2.8	9	1.28	0.67	0.67
89C	21.6	0.01	91	1492	0.372	3.0	15	1.06	0.64	0.64
90C	23.5	0.01	91	2246	0.220	2.9	22	0.86	0.59	0.60
92A	30.8	0.01	91	1641	0.181	2.9	19	0.91	0.61	0.61
93A	42.1	0.01	91	1873	0.232	2.9	20	0.89	0.60	0.60
94A	16.0	0.01	91	1377	0.290	2.9	15	1.03	0.63	0.63
97A	14.4	0.01	91	1487	0.269	2.9	16	1.00	0.63	0.63

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

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1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	3.27	32.5	3.27	2	1173.	.20100	.00	.00	0.	93	17	A17	.01
1352 2A	34.8	2.99	67.3	6.03	2	369.	.19500	.00	.00	0.	93	20	A17	.01
1352 3A	33.3	2.23	100.6	8.21	2	1353.	.24000	.00	.00	0.	93	25	A17	.01
1352 4A	37.9	3.25	138.5	10.96	2	1.	.24000	.00	.00	0.	93	20	A17	.01
1352 5A	.0	.00	138.5	10.96	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 6B	28.8	2.90	28.8	2.90	2	494.	.25300	.00	.00	0.	93	17	A17	.01
1352 7B	12.2	1.30	41.0	4.17	2	1.	.25300	.00	.00	0.	93	16	A17	.01
1352 8B	22.3	1.73	63.3	5.89	2	1342.	.28700	.00	.00	0.	93	22	A17	.01
1352 9B	24.6	1.82	87.9	7.52	2	1.	.28700	.00	.00	0.	93	23	A17	.01
1352 10B	.0	.00	87.9	7.52	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1162 QA    10.96 QAB    18.27 QB     7.31    1352   11B  TB 1160 QB     7.52 QBA    18.36 QA    10.84   *
*                              1352   11AB TAB 1161 QAB    18.38 QA    10.94 QB     7.44                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	7.52	226.4	18.38	2	655.	.14500	.00	.00	0.	93	0	A16	.00
1352 12A	.0	.00	226.4	18.32	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 13A	24.0	2.29	250.4	20.28	2	1.	.14500	.00	.00	0.	93	18	A17	.01
1352 14A	.0	.00	250.4	20.28	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 15C	37.0	2.61	37.0	2.61	2	826.	.24800	.00	.00	0.	93	24	A17	.01
1352 16C	40.2	2.84	77.2	5.38	2	1267.	.26000	.00	.00	0.	93	24	A17	.01
1352 17C	31.9	2.60	109.1	7.72	2	1.	.26000	.00	.00	0.	93	21	A17	.01
1352 18C	.0	.00	109.1	7.72	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1162 QA    20.28 QAC    27.94 QC     7.65    1352   19C  TC 1161 QC     7.72 QCA    27.91 QA    20.19   *
*                              1352   19AC TAC 1162 QAC    27.94 QA    20.28 QC     7.65                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	7.72	359.5	27.94	2	1161.	.09000	.00	.00	0.	93	0	A16	.00
1352 20A	.0	.00	359.5	27.48	4	1.	.01000	2.25	.00	0.	93	99	A16	.00
1352 21A	39.2	2.63	398.7	29.81	2	1.	.09000	.00	.00	0.	93	25	A17	.01
1352 22A	.0	.00	398.7	29.81	4	1.	.01000	2.25	.00	0.	93	99	A16	.00
1352 23D	30.8	2.64	30.8	2.64	2	1242.	.23000	.00	.00	0.	93	20	A17	.01
1352 24D	39.3	3.56	70.1	5.96	2	1308.	.03800	.00	.00	0.	93	19	A17	.01
1352 25D	42.3	3.45	112.4	7.98	2	723.	.22800	.00	.00	0.	93	21	A17	.01
1352 26D	30.9	2.95	143.3	9.97	2	720.	.09000	.00	.00	0.	93	18	A17	.01
1352 27D	26.9	2.31	170.2	11.58	2	1.	.09000	.00	.00	0.	93	20	A17	.01
1352 28D	.0	.00	170.2	11.58	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1164 QA    29.81 QAD    41.38 QD    11.57    1352   29D  TD 1165 QD    11.58 QDA    41.32 QA    29.74   *
*                                 1352   29AD TAD 1164 QAD    41.38 QA    29.81 QD    11.57                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	11.58	568.9	41.38	2	668.	.04800	.00	.00	0.	93	0	A16	.00
1352	30A	.0	.00	568.9	41.12	4	1.	.01000	2.50	.00	0.	93	99	A16	.00
1352	31A	29.2	1.68	598.1	42.45	2	506.	.04400	.00	.00	0.	93	25	A16	.01
1352	32A	22.2	1.49	620.3	43.16	2	635.	.03900	.00	.00	0.	93	22	A16	.01
1352	33A	23.1	1.82	643.4	43.47	2	593.	.04200	.00	.00	0.	93	19	A16	.01
1352	34A	35.7	1.94	679.1	44.36	2	572.	.03500	.00	.00	0.	93	26	A16	.01
1352	35A	29.2	1.68	708.3	44.97	2	485.	.04100	.00	.00	0.	93	25	A16	.01
1352	36A	25.6	1.72	733.9	45.21	2	532.	.03800	.00	.00	0.	93	22	A16	.01
1352	37A	.0	.00	733.9	45.00	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	38A	23.7	1.60	757.6	45.28	2	396.	.05100	.00	.00	0.	93	19	A15	.01
1352	39A	32.5	1.54	790.1	45.68	2	838.	.05600	.00	.00	0.	93	25	A15	.01
1352	40A	20.2	1.45	810.3	45.56	2	1.	.05600	.00	.00	0.	93	18	A15	.01
1352	41A	22.5	1.19	832.8	45.79	2	1.	.13300	.00	.00	0.	93	20	A14	.01
1352	42A	28.5	1.19	861.3	46.24	2	840.	.05700	.00	.00	0.	93	27	A15	.01
1352	43A	.0	.00	861.3	45.92	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	44A	20.2	.86	881.5	46.12	2	1.	.05700	.00	.00	0.	93	23	A14	.01
1352	45A	24.8	.76	906.3	46.48	2	575.	.03500	.00	.00	0.	93	29	A14	.01
1352	46A	15.1	1.02	921.4	46.38	2	1319.	.03400	.00	.00	0.	93	19	A15	.01
1352	47A	24.6	.74	946.0	45.43	2	1.	.03400	.00	.00	0.	93	30	A14	.01
1352	48A	24.9	1.32	970.9	45.66	2	722.	.03900	.00	.00	0.	93	23	A15	.01
1352	49A	20.9	.96	991.8	45.57	2	846.	.04700	.00	.00	0.	93	22	A14	.01
1352	50A	19.2	1.23	1011.0	45.36	2	1.	.04700	.00	.00	0.	93	20	A15	.01
1352	51A	.0	.00	1011.0	45.36	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	52E	28.8	2.27	28.8	2.27	2	940.	.14400	.00	.00	0.	93	19	A16	.01
1352	53E	24.8	1.49	53.6	3.62	2	971.	.27800	.00	.00	0.	93	21	A15	.01
1352	54E	33.4	1.77	87.0	5.22	2	1110.	.18700	.00	.00	0.	93	23	A15	.01
1352	55E	23.1	1.16	110.1	6.12	2	1.	.18700	.00	.00	0.	93	24	A15	.01
1352	56E	.0	.00	110.1	6.12	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1192 QA    45.36 QAE    46.45 QE     1.09    1352   57E  TE 1163 QE     6.12 QEA    24.81 QA    18.70   *
*                                 1352   57AE TAE 1192 QAE    46.45 QA    45.36 QE     1.09                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	6.12	1121.1	46.45	2	180.	.03900	.00	.00	0.	93	0	A16	.00
1352	58A	.0	.00	1121.1	46.42	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	59A	28.2	1.18	1149.3	46.66	2	815.	.01800	.00	.00	0.	93	27	A15	.01
1352	60A	27.2	2.07	1176.5	46.16	2	1136.	.05700	.00	.00	0.	93	17	A15	.01

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1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	.75	1194.4	45.88	2	1.	.05700	.00	.00	0.	93	27	A15	.01
1352	62A	.0	.00	1194.4	45.88	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	63F	27.0	2.01	27.0	2.01	2	586.	.19600	.00	.00	0.	93	20	A16	.01
1352	64F	40.8	1.42	67.8	3.42	2	727.	.08900	.00	.00	0.	93	30	A15	.01
1352	65F	37.4	1.57	105.2	4.85	2	1.	.08900	.00	.00	0.	93	27	A15	.01
1352	66F	32.6	2.08	137.8	6.78	2	1.	.14100	.00	.00	0.	93	20	A15	.01
1352	67F	18.8	1.00	156.6	7.74	2	677.	.08100	.00	.00	0.	93	23	A15	.01
1352	68F	9.2	.59	165.8	8.16	2	1.	.08100	.00	.00	0.	93	20	A15	.01
1352	69F	.0	.00	165.8	8.16	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   70A  TA 1200 QA    45.88 QAF    47.28 QF     1.40    1352   70F  TF 1162 QF     8.16 QFA    29.69 QA    21.53   *
*                                1352   70AF TAF 1200 QAF    47.28 QA    45.88 QF     1.40                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF   165.8       8.16    1360.2     47.28   2     561.   .03600      .00   .00        0.   93   0   A16   .00
    1352   71A      .0        .00    1360.2     47.11   4       1.   .01000     2.75   .00        0.   93  99   A16   .00
    1352   72A     6.4        .46    1366.6     47.15   2       1.   .03600      .00   .00        0.   93  18   A15   .01
    1352   73A    20.0       3.06    1386.6     47.29   2     434.   .03000      .00   .00        0.   91  18   A15   .01
    1352   74A    21.9       3.13    1408.5     47.34   2     420.   .02900      .00   .00        0.   91  17   A14   .01
    1352   75A    42.0       4.81    1450.5     47.47   2    1019.   .02000      .00   .00        0.   91  22   A14   .01
    1352   76A    26.1       3.10    1476.6     46.91   2     249.   .04000      .00   .00        0.   91  21   A14   .01
    1352   77A    12.2       1.74    1488.8     46.93   2       1.   .04000      .00   .00        0.   91  17   A14   .01
    1352   78A      .0        .00    1488.8     46.93   4       1.   .01000     2.75   .00        0.   91  99   A16   .00
    1352   79A    14.2       2.27    1503.0     47.02   2     643.   .01900      .00   .00        0.   91  17   A15   .01
    1352   80A    18.2       2.48    1521.2     46.82   2     751.   .02400      .00   .00        0.   91  18   A14   .01
    1352   81A    23.3       3.56    1544.5     46.65   2     709.   .02400      .00   .00        0.   91  18   A15   .01
    1352   82A    22.2       2.34    1566.7     46.50   2       1.   .02400      .00   .00        0.   91  24   A14   .01
    1352   83A      .0        .00    1566.7     46.50   4       1.   .01000     2.75   .00        0.   91  99   A16   .00
    1352   84B    26.2       3.12      26.2      3.12   2    1438.   .06400      .00   .00        0.   91  21   A14   .01
    1352   85B    33.5       3.68      59.7      6.08   2       1.   .06400      .00   .00        0.   91  23   A14   .01
    1352   86B      .0        .00      59.7      6.08   4       1.   .01000     2.00   .00        0.   91  99   A16   .00
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   87A  TA 1219 QA    46.50 QAB    46.86 QB      .36    1352   87B  TB 1162 QB     6.07 QBA    37.80 QA    31.73   *
*                                1352   87AB TAB 1219 QAB    46.86 QA    46.50 QB      .36                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB    59.7       6.07    1626.4     46.86   2     405.   .02300      .00   .00        0.   91   0   A16   .00
    1352   88A      2.8        .71    1629.2     46.78   2       1.   .02300      .00   .00        0.   91   9   A15   .01
    1352   89C    21.6       3.82      21.6      3.82   2    1328.   .09400      .00   .00        0.   91  15   A15   .01
    1352   90C    23.5       3.06      45.1      6.39   2       1.   .09400      .00   .00        0.   91  22   A15   .01
```


Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN A STORM DAY 4

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                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   91A  TA 1220 QA    46.78 QAC    47.06 QC      .28    1352   91C  TC 1161 QC     6.39 QCA    40.54 QA    34.16   *
*                                1352   91AC TAC 1170 QAC    47.92 QA    44.05 QC     3.86                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC    45.1       6.39    1674.3     47.92   2     977.   .02400      .00   .00        0.   91   0   A16   .00
    1352   92A     30.8       4.52    1705.1     47.79   2     999.   .01300      .00   .00        0.   91  19   A15   .01
    1352   93A     42.1       5.95    1747.2     47.61   2     448.   .02200      .00   .00        0.   91  20   A15   .01
    1352   94A     16.0       2.83    1763.2     47.70   2       1.   .02200      .00   .00        0.   91  15   A15   .01
    1352   95D    371.4      31.10     371.4     31.10   2       1.   .02200      .00   .00        0.   91   0   A16   .00
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   96A  TA 1179 QA    47.70 QAD    67.61 QD     19.91    1352   96D  TD 1168 QD    31.10 QDA    72.75 QA    41.65   *
*                                1352   96AD TAD 1170 QAD    74.87 QA    43.97 QD    30.90                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
```

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	31.10	2134.6	74.87	2	892.	.01700	.00	.00	0.	91	0	A16	.00
1352	97A	14.4	2.42	2149.0	74.18	2	1.	.01700	.00	.00	0.	91	16	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	4.96	200	5.11	300	5.38	400	5.98
500	6.74	600	7.39	700	8.17	800	9.14	900	10.36
1000	12.40	1050	14.01	1100	16.77	1110	17.54	1120	18.53
1130	19.90	1131	20.06	1132	20.22	1133	20.38	1134	20.53
1135	20.69	1136	20.87	1137	21.04	1138	21.21	1139	21.39
1140	21.57	1141	21.76	1142	21.99	1143	22.23	1144	22.51
1145	22.84	1146	23.19	1147	23.56	1148	24.00	1149	24.75
1150	25.59	1151	26.63	1152	27.94	1153	29.54	1154	31.23
1155	33.26	1156	35.61	1157	38.08	1158	40.63	1159	43.25
1160	45.86	1161	48.44	1162	51.05	1163	53.72	1164	56.44
1165	58.93	1166	61.37	1167	63.64	1168	65.74	1169	67.82
1170	69.78	1171	71.49	1172	72.87	1173	73.77	1174	74.18
1175	74.18	1176	73.88	1177	73.35	1178	72.66	1179	71.82
1180	70.88	1181	69.75	1182	68.46	1183	67.13	1184	65.80
1185	64.47	1186	63.14	1187	61.80	1188	60.47	1189	59.17
1190	57.90	1191	56.68	1192	55.50	1193	54.38	1194	53.29
1195	52.23	1196	51.22	1197	50.23	1198	49.26	1199	48.35
1200	47.45	1201	46.61	1202	45.82	1203	45.07	1204	44.38
1205	43.76	1206	43.19	1207	42.66	1208	42.17	1209	41.73
1210	41.34	1211	40.98	1212	40.66	1213	40.39	1214	40.14
1215	39.93	1216	39.76	1217	39.63	1218	39.56	1219	39.57
1220	39.68	1221	39.88	1222	40.22	1223	40.69	1224	41.29
1225	42.02	1226	42.85	1227	43.76	1228	44.69	1229	45.60
1230	46.43	1231	47.16	1232	47.78	1233	48.23	1234	48.52
1235	48.67	1236	48.64	1237	48.47	1238	48.18	1239	47.79
1240	47.28	1241	46.68	1242	46.03	1243	45.33	1244	44.59
1245	43.80	1246	42.98	1247	42.16	1248	41.33	1249	40.51
1250	39.68	1251	38.85	1252	38.02	1253	37.20	1254	36.40
1255	35.63	1256	34.87	1257	34.11	1258	33.35	1259	32.63
1260	31.92	1261	31.24	1262	30.58	1263	29.94	1264	29.31
1265	28.68	1266	28.07	1267	27.49	1268	26.93	1269	26.39
1270	25.86	1271	25.35	1272	24.83	1273	24.34	1274	23.87
1275	23.40	1276	22.94	1277	22.50	1278	22.08	1279	21.68
1280	21.29	1281	20.92	1282	20.56	1283	20.22	1284	19.88
1285	19.54	1286	19.21	1287	18.89	1288	18.59	1289	18.31
1290	18.03	1291	17.76	1292	17.51	1293	17.26	1294	17.03
1295	16.80	1296	16.58	1297	16.37	1298	16.16	1299	15.96
1300	15.75	1310	14.00	1320	12.78	1330	11.78	1340	10.96
1350	10.26	1360	9.66	1370	9.20	1380	8.84	1390	8.51
1400	8.17	1420	7.59	1440	7.17	1460	6.56	1500	5.46

TOTAL VOLUME THIS HYDROGRAPH = 23.92(Ac.Ft)

Basin B - 02 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	3.1	18	1.02	0.45	0.46
2A	36.3	0.01	93	2008	0.354	3.1	23	0.91	0.42	0.42
3A	11.1	0.01	93	1303	0.437	3.1	16	1.08	0.47	0.47
4A	25.5	0.01	93	2134	0.354	3.2	23	0.94	0.43	0.43
5A	18.9	0.01	93	1414	0.375	3.1	17	1.05	0.46	0.46
6A	19.2	0.01	93	1221	0.483	3.1	14	1.15	0.48	0.49
7A	24.7	0.01	93	1706	0.396	3.1	20	0.97	0.44	0.44
8A	20.4	0.01	93	1412	0.342	3.1	18	1.01	0.45	0.45
9B	25.7	0.01	91	1440	0.316	3.0	15	1.06	0.64	0.64
10B	39.8	0.01	93	2531	0.296	3.1	30	0.79	0.37	0.38
12A	15.7	0.01	91	1111	0.364	3.1	12	1.21	0.66	0.66
13A	31.9	0.01	91	1823	0.192	3.0	19	0.96	0.62	0.62

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	1.60	19.2	1.60	2	959.	.20900	.00	.00	0.	93	18	A16	.01
1352 2A	36.3	2.31	55.5	3.82	2	367.	.12300	.00	.00	0.	93	23	A16	.01
1352 3A	11.1	1.04	66.6	4.76	2	1.	.12300	.00	.00	0.	93	16	A16	.01
1352 4A	25.5	1.88	92.1	6.62	2	662.	.12100	.00	.00	0.	93	23	A17	.01
1352 5A	18.9	1.68	111.0	8.05	2	546.	.11000	.00	.00	0.	93	17	A16	.01
1352 6A	19.2	2.05	130.2	9.55	2	1340.	.16000	.00	.00	0.	93	14	A16	.01
1352 7A	24.7	1.84	154.9	10.77	2	592.	.06400	.00	.00	0.	93	20	A16	.01
1352 8A	20.4	1.70	175.3	11.75	2	1.	.06400	.00	.00	0.	93	18	A16	.01
1352 9B	25.7	4.55	25.7	4.55	2	980.	.09500	.00	.00	0.	91	15	A15	.01
1352 10B	39.8	4.43	65.5	8.76	2	1.	.09500	.00	.00	0.	91	30	A16	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1165 QA    11.75 QAB    19.68 QB     7.94    1352   11B  TB 1160 QB     8.76 QBA    18.33 QA     9.56   *
*                                 1352   11AB TAB 1164 QAB    19.84 QA    11.65 QB     8.19                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	8.76	240.8	19.84	2	761.	.08100	.00	.00	0.	91	0	A16	.00
1352 12A	15.7	3.57	256.5	20.18	2	1228.	.04900	.00	.00	0.	91	12	A16	.01
1352 13A	31.9	5.21	288.4	23.32	2	1.	.04900	.00	.00	0.	91	19	A16	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.74	200	.76	300	.80	400	.85
500	.90	600	.97	700	1.14	800	1.29	900	1.52
1000	1.89	1050	2.23	1100	2.84	1110	3.05	1120	3.35
1130	3.77	1131	3.82	1132	3.87	1133	3.93	1134	3.98
1135	4.04	1136	4.10	1137	4.16	1138	4.23	1139	4.30
1140	4.38	1141	4.54	1142	4.72	1143	4.90	1144	5.10
1145	5.39	1146	5.69	1147	6.03	1148	6.35	1149	7.17
1150	7.98	1151	8.90	1152	9.88	1153	11.05	1154	11.92
1155	12.90	1156	14.04	1157	15.33	1158	16.65	1159	18.02
1160	19.30	1161	20.46	1162	21.51	1163	22.34	1164	22.88
1165	23.21	1166	23.32	1167	23.28	1168	22.63	1169	21.97
1170	21.16	1171	20.17	1172	19.47	1173	18.78	1174	17.99
1175	17.13	1176	16.24	1177	15.36	1178	14.50	1179	13.69
1180	12.90	1181	12.15	1182	11.43	1183	10.73	1184	10.02
1185	9.31	1186	8.62	1187	7.97	1188	7.38	1189	6.85
1190	6.37	1191	5.96	1192	5.58	1193	5.25	1194	4.95
1195	4.68	1196	4.43	1197	4.21	1198	4.01	1199	3.84
1200	3.67	1201	3.53	1202	3.40	1203	3.27	1204	3.16
1205	3.07	1206	2.98	1207	2.89	1208	2.82	1209	2.75
1210	2.69	1211	2.63	1212	2.58	1213	2.53	1214	2.48
1215	2.44	1216	2.39	1217	2.36	1218	2.32	1219	2.28
1220	2.25	1221	2.22	1222	2.19	1223	2.17	1224	2.14
1225	2.11	1226	2.09	1227	2.07	1228	2.04	1229	2.02
1230	2.00	1231	1.98	1232	1.96	1233	1.94	1234	1.92
1235	1.91	1236	1.89	1237	1.87	1238	1.86	1239	1.84
1240	1.82	1241	1.81	1242	1.80	1243	1.78	1244	1.77
1245	1.76	1246	1.74	1247	1.73	1248	1.72	1249	1.70
1250	1.69	1251	1.68	1252	1.67	1253	1.66	1254	1.65
1255	1.64	1256	1.63	1257	1.62	1258	1.61	1259	1.60
1260	1.59	1261	1.57	1262	1.56	1263	1.55	1264	1.55
1265	1.54	1266	1.53	1267	1.52	1268	1.52	1269	1.51
1270	1.50	1271	1.49	1272	1.48	1273	1.47	1274	1.47
1275	1.46	1276	1.45	1277	1.44	1278	1.44	1279	1.43
1280	1.42	1281	1.42	1282	1.41	1283	1.41	1284	1.40
1285	1.39	1286	1.39	1287	1.38	1288	1.37	1289	1.37
1290	1.36	1291	1.36	1292	1.35	1293	1.34	1294	1.34
1295	1.34	1296	1.33	1297	1.32	1298	1.31	1299	1.31
1300	1.30	1310	1.21	1320	1.14	1330	1.08	1340	1.01
1350	.95	1360	.91	1370	.89	1380	.86	1390	.84
1400	.82	1420	.80	1440	.77	1460	.64	1500	.64

TOTAL VOLUME THIS HYDROGRAPH = 3.36(Ac.Ft)

Basin C - 02 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	18.6	0.01	91	2004	0.274	2.9	20	0.91	0.61	0.61
2A	26.9	0.01	91	2490	0.245	3.0	23	0.87	0.59	0.60
5A	37.5	0.01	91	2766	0.110	2.9	30	0.76	0.57	0.57

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	2.63	18.6	2.63	2	704.	.07800	.00	.00	0.	91	20	A15	.01
1352	2A	26.9	3.36	45.5	5.87	2	1.	.07800	.00	.00	0.	91	23	A15	.01
1352	3B	288.4	23.30	288.4	23.30	2	1.	.04700	.00	.00	0.	91	0	A15	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352    4A  TA 1159 QA     5.87 QAB    23.86 QB    17.99    1352    4B  TB 1166 QB    23.30 QBA    28.42 QA     5.12   *
*                               1352    4AB TAB 1165 QAB    28.48 QA     5.28 QB    23.20                                *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	23.30	333.9	28.48	2	1164.	.04700	.00	.00	0.	91	0	A15	.00
1352	5A	37.5	3.67	371.4	31.11	2	1.	.04700	.00	.00	0.	91	30	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.81	200	.90	300	.92	400	.92
500	1.02	600	1.22	700	1.36	800	1.57	900	1.83
1000	2.36	1050	2.80	1100	3.51	1110	3.75	1120	4.13
1130	4.68	1131	4.74	1132	4.80	1133	4.85	1134	4.91
1135	4.96	1136	5.03	1137	5.09	1138	5.16	1139	5.24
1140	5.32	1141	5.40	1142	5.49	1143	5.59	1144	5.70
1145	5.85	1146	6.07	1147	6.39	1148	6.79	1149	7.56
1150	8.36	1151	9.28	1152	10.45	1153	11.88	1154	13.21
1155	14.72	1156	16.35	1157	17.96	1158	19.54	1159	21.14
1160	22.71	1161	24.27	1162	25.76	1163	27.13	1164	28.36
1165	29.42	1166	30.24	1167	30.77	1168	31.07	1169	31.11
1170	30.85	1171	30.24	1172	29.44	1173	28.43	1174	27.22
1175	25.86	1176	24.43	1177	22.97	1178	21.57	1179	19.94
1180	18.41	1181	17.33	1182	16.33	1183	15.39	1184	14.55
1185	13.74	1186	12.98	1187	12.24	1188	11.53	1189	10.85
1190	10.19	1191	9.58	1192	8.99	1193	8.46	1194	7.95
1195	7.49	1196	7.06	1197	6.66	1198	6.31	1199	6.00
1200	5.70	1201	5.43	1202	5.19	1203	4.97	1204	4.77
1205	4.59	1206	4.42	1207	4.27	1208	4.14	1209	4.01
1210	3.89	1211	3.77	1212	3.66	1213	3.57	1214	3.48
1215	3.40	1216	3.33	1217	3.26	1218	3.20	1219	3.13
1220	3.08	1221	3.03	1222	2.98	1223	2.94	1224	2.90
1225	2.85	1226	2.81	1227	2.77	1228	2.73	1229	2.69
1230	2.67	1231	2.64	1232	2.60	1233	2.57	1234	2.55
1235	2.52	1236	2.50	1237	2.47	1238	2.44	1239	2.42
1240	2.40	1241	2.39	1242	2.37	1243	2.34	1244	2.32
1245	2.30	1246	2.28	1247	2.27	1248	2.26	1249	2.25
1250	2.22	1251	2.20	1252	2.18	1253	2.16	1254	2.15
1255	2.14	1256	2.14	1257	2.12	1258	2.10	1259	2.08
1260	2.07	1261	2.05	1262	2.04	1263	2.03	1264	2.03
1265	2.02	1266	2.01	1267	2.00	1268	1.98	1269	1.95
1270	1.91	1271	1.89	1272	1.86	1273	1.85	1274	1.83
1275	1.82	1276	1.81	1277	1.81	1278	1.80	1279	1.79
1280	1.77	1281	1.75	1282	1.74	1283	1.72	1284	1.71
1285	1.70	1286	1.70	1287	1.69	1288	1.69	1289	1.68
1290	1.68	1291	1.67	1292	1.67	1293	1.67	1294	1.67
1295	1.67	1296	1.66	1297	1.65	1298	1.63	1299	1.61
1300	1.60	1310	1.51	1320	1.39	1330	1.27	1340	1.20
1350	1.12	1360	1.04	1370	1.02	1380	1.02	1390	.99
1400	.93	1420	.91	1440	.91	1460	.78	1500	.70

TOTAL VOLUME THIS HYDROGRAPH = 4.20(Ac.Ft)

STEVENSON RANCH

5-YEAR CLEAR

EXISTING CONDITION

Basin A - 05 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	4.9	10	2.11	0.64	0.65
2A	34.8	0.01	93	1871	0.405	4.9	12	1.94	0.62	0.63
3A	33.3	0.01	93	2288	0.337	4.9	15	1.75	0.60	0.60
4A	37.9	0.01	93	1862	0.440	4.9	12	1.94	0.62	0.63
6B	28.8	0.01	93	1664	0.508	4.9	11	2.02	0.64	0.64
7B	12.2	0.01	93	1488	0.460	4.9	10	2.11	0.64	0.65
8B	22.3	0.01	93	2064	0.359	4.9	13	1.87	0.61	0.62
9B	24.6	0.01	93	2208	0.376	4.9	14	1.80	0.60	0.61
13A	24.0	0.01	93	1693	0.428	4.9	11	2.02	0.64	0.64
15C	37.0	0.01	93	2219	0.306	4.9	15	1.75	0.60	0.60
16C	40.2	0.01	93	2159	0.322	4.9	14	1.80	0.60	0.61
17C	31.9	0.01	93	1934	0.334	4.9	13	1.87	0.61	0.62
21A	39.2	0.01	93	2213	0.305	4.8	15	1.73	0.59	0.60
23D	30.8	0.01	93	1773	0.313	4.9	12	1.94	0.62	0.63
24D	39.3	0.01	93	1628	0.289	4.9	12	1.94	0.62	0.63
25D	42.3	0.01	93	1712	0.216	4.9	13	1.87	0.61	0.62
26D	30.9	0.01	93	1709	0.471	4.8	11	2.00	0.63	0.64
27D	26.9	0.01	93	1779	0.360	4.8	12	1.92	0.62	0.62
31A	29.2	0.01	93	2176	0.327	4.7	15	1.68	0.59	0.59
32A	22.2	0.01	93	1894	0.383	4.7	13	1.80	0.60	0.61
33A	23.1	0.01	93	1600	0.428	4.7	11	1.92	0.62	0.62
34A	35.7	0.01	93	2286	0.341	4.7	15	1.66	0.58	0.59
35A	29.2	0.01	93	2014	0.305	4.6	14	1.70	0.59	0.59
36A	25.6	0.01	93	1738	0.328	4.6	13	1.76	0.59	0.60
38A	23.7	0.01	93	1497	0.367	4.5	11	1.85	0.61	0.61
39A	32.5	0.01	93	1852	0.308	4.4	14	1.63	0.58	0.58
40A	20.2	0.01	93	1367	0.400	4.4	11	1.80	0.60	0.61
41A	22.5	0.01	93	1307	0.409	4.1	11	1.68	0.59	0.59
42A	28.5	0.01	93	1919	0.302	4.3	15	1.52	0.56	0.57
44A	20.2	0.01	93	1582	0.329	4.2	13	1.60	0.58	0.58
45A	24.8	0.01	93	1957	0.335	4.1	16	1.41	0.54	0.54
46A	15.1	0.01	93	1406	0.420	4.3	11	1.76	0.59	0.60
47A	24.6	0.01	93	2076	0.234	4.2	18	1.37	0.53	0.54
48A	24.9	0.01	93	1739	0.408	4.3	13	1.65	0.58	0.59
49A	20.9	0.01	93	1541	0.343	4.2	13	1.60	0.58	0.58
50A	19.2	0.01	93	1394	0.325	4.3	12	1.69	0.59	0.59
52E	28.8	0.01	93	1432	0.332	4.6	11	1.88	0.62	0.62
53E	24.8	0.01	93	1534	0.306	4.5	12	1.78	0.60	0.60
54E	33.4	0.01	93	1783	0.334	4.4	14	1.63	0.58	0.58
55E	23.1	0.01	93	1853	0.409	4.3	14	1.59	0.57	0.58
59A	28.2	0.01	93	2259	0.429	4.4	16	1.51	0.56	0.57
60A	27.2	0.01	93	1234	0.405	4.3	10	1.86	0.61	0.62
61A	17.9	0.01	93	1533	0.117	4.3	15	1.54	0.57	0.57
63F	27.0	0.01	93	1616	0.374	4.6	12	1.82	0.61	0.61
64F	40.8	0.01	93	2620	0.393	4.5	17	1.51	0.56	0.57

Basin A - 05 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	4.4	15	1.56	0.57	0.57
66F	32.6	0.01	93	1732	0.514	4.5	12	1.78	0.60	0.60
67F	18.8	0.01	93	1684	0.303	4.4	13	1.69	0.59	0.59
68F	9.2	0.01	93	1319	0.250	4.4	12	1.73	0.59	0.59
72A	6.4	0.01	93	1153	0.264	4.3	11	1.76	0.59	0.60
73A	20.0	0.01	91	1766	0.311	4.3	12	1.71	0.72	0.72
74A	21.9	0.01	91	1507	0.234	4.2	12	1.66	0.71	0.72
75A	42.0	0.01	91	1789	0.159	4.1	14	1.52	0.70	0.70
76A	26.1	0.01	91	1672	0.144	4.1	14	1.52	0.70	0.70
77A	12.2	0.01	91	1303	0.165	4.1	12	1.64	0.71	0.71
79A	14.2	0.01	91	1659	0.316	4.3	12	1.69	0.72	0.72
80A	18.2	0.01	91	1622	0.291	4.2	12	1.66	0.71	0.72
81A	23.3	0.01	91	1645	0.280	4.3	12	1.69	0.72	0.72
82A	22.2	0.01	91	2122	0.161	4.2	16	1.45	0.69	0.69
84B	26.2	0.01	91	1697	0.165	4.1	14	1.50	0.70	0.70
85B	33.5	0.01	91	2040	0.168	4.2	15	1.50	0.70	0.70
88A	2.8	0.01	91	467	0.096	4.3	6	2.33	0.76	0.76
89C	21.6	0.01	91	1492	0.372	4.5	10	1.94	0.74	0.74
90C	23.5	0.01	91	2246	0.220	4.4	15	1.56	0.70	0.71
92A	30.8	0.01	91	1641	0.181	4.3	13	1.65	0.71	0.71
93A	42.1	0.01	91	1873	0.232	4.3	13	1.65	0.71	0.71
94A	16.0	0.01	91	1377	0.290	4.4	10	1.89	0.73	0.73
97A	14.4	0.01	91	1487	0.269	4.4	11	1.80	0.73	0.73

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

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1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	21.30	32.5	21.30	2	1173.	.20100	.00	.00	0.	93	10	A25	.01
1352 2A	34.8	19.85	67.3	40.19	2	369.	.19500	.00	.00	0.	93	12	A25	.01
1352 3A	33.3	16.08	100.6	55.77	2	1353.	.24000	.00	.00	0.	93	15	A25	.01
1352 4A	37.9	21.62	138.5	74.92	2	1.	.24000	.00	.00	0.	93	12	A25	.01
1352 5A	.0	.00	138.5	74.91	4	1.	.01000	3.25	.00	0.	93	99	A25	.00
1352 6B	28.8	17.50	28.8	17.50	2	494.	.25300	.00	.00	0.	93	11	A25	.01
1352 7B	12.2	7.99	41.0	25.32	2	1.	.25300	.00	.00	0.	93	10	A25	.01
1352 8B	22.3	11.97	63.3	37.28	2	1342.	.28700	.00	.00	0.	93	13	A25	.01
1352 9B	24.6	12.49	87.9	48.90	2	1.	.28700	.00	.00	0.	93	14	A25	.01
1352 10B	.0	.00	87.9	48.90	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1157 QA    74.91 QAB   123.80 QB    48.90    1352   11B  TB 1157 QB    48.90 QBA   123.80 QA    74.91   *
*                                 1352   11AB TAB 1157 QAB   123.80 QA    74.91 QB    48.90                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	48.90	226.4	123.80	2	655.	.14500	.00	.00	0.	93	0	A25	.00
1352 12A	.0	.00	226.4	123.31	4	1.	.01000	3.75	.00	0.	93	99	A25	.00
1352 13A	24.0	14.59	250.4	136.32	2	1.	.14500	.00	.00	0.	93	11	A25	.01
1352 14A	.0	.00	250.4	136.32	4	1.	.01000	4.00	.00	0.	93	99	A25	.00
1352 15C	37.0	17.86	37.0	17.86	2	826.	.24800	.00	.00	0.	93	15	A25	.01
1352 16C	40.2	20.41	77.2	37.97	2	1267.	.26000	.00	.00	0.	93	14	A25	.01
1352 17C	31.9	17.12	109.1	54.13	2	1.	.26000	.00	.00	0.	93	13	A25	.01
1352 18C	.0	.00	109.1	54.13	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1158 QA   136.32 QAC   189.91 QC    53.59    1352   19C  TC 1157 QC    54.12 QCA   189.56 QA   135.44   *
*                                 1352   19AC TAC 1158 QAC   189.91 QA   136.32 QC    53.59                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	54.12	359.5	189.91	2	1161.	.09000	.00	.00	0.	93	0	A25	.00
1352 20A	.0	.00	359.5	188.40	4	1.	.01000	4.50	.00	0.	93	99	A25	.00
1352 21A	39.2	18.92	398.7	205.96	2	1.	.09000	.00	.00	0.	93	15	A25	.01
1352 22A	.0	.00	398.7	205.96	4	1.	.01000	4.50	.00	0.	93	99	A25	.00
1352 23D	30.8	17.57	30.8	17.57	2	1242.	.23000	.00	.00	0.	93	12	A25	.01
1352 24D	39.3	22.42	70.1	39.16	2	1308.	.03800	.00	.00	0.	93	12	A25	.01
1352 25D	42.3	22.70	112.4	55.13	2	723.	.22800	.00	.00	0.	93	13	A25	.01
1352 26D	30.9	18.78	143.3	69.58	2	720.	.09000	.00	.00	0.	93	11	A25	.01
1352 27D	26.9	15.34	170.2	81.15	2	1.	.09000	.00	.00	0.	93	12	A25	.01
1352 28D	.0	.00	170.2	81.15	4	1.	.01000	3.25	.00	0.	93	99	A25	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1159 QA   205.95 QAD   286.36 QD    80.41    1352   29D  TD 1160 QD    81.15 QDA   285.26 QA   204.12   *
*                                1352   29AD TAD 1159 QAD   286.36 QA   205.95 QD    80.41                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	81.15	568.9	286.36	2	668.	.04800	.00	.00	0.	93	0	A25	.00
1352	30A	.0	.00	568.9	284.60	4	1.	.01000	5.25	.00	0.	93	99	A25	.00
1352	31A	29.2	13.13	598.1	296.34	2	506.	.04400	.00	.00	0.	93	15	A24	.01
1352	32A	22.2	11.11	620.3	304.03	2	635.	.03900	.00	.00	0.	93	13	A24	.01
1352	33A	23.1	13.17	643.4	307.13	2	593.	.04200	.00	.00	0.	93	11	A24	.01
1352	34A	35.7	16.06	679.1	317.45	2	572.	.03500	.00	.00	0.	93	15	A24	.01
1352	35A	29.2	13.85	708.3	322.71	2	485.	.04100	.00	.00	0.	93	14	A24	.01
1352	36A	25.6	12.81	733.9	326.60	2	532.	.03800	.00	.00	0.	93	13	A24	.01
1352	37A	.0	.00	733.9	324.53	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	38A	23.7	12.61	757.6	326.00	2	396.	.05100	.00	.00	0.	93	11	A23	.01
1352	39A	32.5	14.36	790.1	329.16	2	838.	.05600	.00	.00	0.	93	14	A23	.01
1352	40A	20.2	9.99	810.3	327.09	2	1.	.05600	.00	.00	0.	93	11	A22	.01
1352	41A	22.5	10.28	832.8	327.88	2	1.	.13300	.00	.00	0.	93	11	A21	.01
1352	42A	28.5	11.14	861.3	331.79	2	840.	.05700	.00	.00	0.	93	15	A22	.01
1352	43A	.0	.00	861.3	329.11	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	44A	20.2	8.74	881.5	330.00	2	1.	.05700	.00	.00	0.	93	13	A22	.01
1352	45A	24.8	8.51	906.3	332.87	2	575.	.03500	.00	.00	0.	93	16	A21	.01
1352	46A	15.1	7.47	921.4	331.40	2	1319.	.03400	.00	.00	0.	93	11	A22	.01
1352	47A	24.6	8.30	946.0	327.68	2	1.	.03400	.00	.00	0.	93	18	A22	.01
1352	48A	24.9	10.77	970.9	328.37	2	722.	.03900	.00	.00	0.	93	13	A22	.01
1352	49A	20.9	9.04	991.8	327.44	2	846.	.04700	.00	.00	0.	93	13	A22	.01
1352	50A	19.2	8.83	1011.0	325.84	2	1.	.04700	.00	.00	0.	93	12	A22	.01
1352	51A	.0	.00	1011.0	325.83	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	52E	28.8	15.33	28.8	15.33	2	940.	.14400	.00	.00	0.	93	11	A23	.01
1352	53E	24.8	12.32	53.6	27.01	2	971.	.27800	.00	.00	0.	93	12	A23	.01
1352	54E	33.4	14.76	87.0	40.92	2	1110.	.18700	.00	.00	0.	93	14	A23	.01
1352	55E	23.1	9.48	110.1	49.16	2	1.	.18700	.00	.00	0.	93	14	A22	.01
1352	56E	.0	.00	110.1	49.16	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1173 QA   325.82 QAE   331.36 QE     5.54    1352   57E  TE 1159 QE    49.16 QEA   179.81 QA   130.65   *
*                                1352   57AE TAE 1173 QAE   331.36 QA   325.82 QE     5.54                                  *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	49.16	1121.1	331.36	2	180.	.03900	.00	.00	0.	93	0	A25	.00
1352	58A	.0	.00	1121.1	330.45	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	59A	28.2	10.46	1149.3	331.22	2	815.	.01800	.00	.00	0.	93	16	A22	.01
1352	60A	27.2	14.59	1176.5	329.04	2	1136.	.05700	.00	.00	0.	93	10	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	7.00	1194.4	328.04	2	1.	.05700	.00	.00	0.	93	15	A22	.01
1352	62A	.0	.00	1194.4	328.03	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	63F	27.0	14.40	27.0	14.40	2	586.	.19600	.00	.00	0.	93	12	A24	.01
1352	64F	40.8	15.52	67.8	29.86	2	727.	.08900	.00	.00	0.	93	17	A23	.01
1352	65F	37.4	14.62	105.2	43.78	2	1.	.08900	.00	.00	0.	93	15	A22	.01
1352	66F	32.6	16.19	137.8	59.13	2	1.	.14100	.00	.00	0.	93	12	A23	.01
1352	67F	18.8	8.77	156.6	67.73	2	677.	.08100	.00	.00	0.	93	13	A23	.01
1352	68F	9.2	4.23	165.8	71.22	2	1.	.08100	.00	.00	0.	93	12	A22	.01
1352	69F	.0	.00	165.8	71.22	4	1.	.01000	3.00	.00	0.	93	99	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1177 QA   328.03 QAF   333.62 QF     5.60    1352   70F  TF 1158 QF    71.22 QFA   204.40 QA   133.18   *
*                                1352   70AF TAF 1177 QAF   333.62 QA   328.03 QF     5.60                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	71.22	1360.2	333.62	2	561.	.03600	.00	.00	0.	93	0	A25	.00
1352	71A	.0	.00	1360.2	332.49	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	72A	6.4	3.16	1366.6	332.62	2	1.	.03600	.00	.00	0.	93	11	A22	.01
1352	73A	20.0	12.77	1386.6	333.29	2	434.	.03000	.00	.00	0.	91	12	A22	.01
1352	74A	21.9	13.98	1408.5	332.90	2	420.	.02900	.00	.00	0.	91	12	A22	.01
1352	75A	42.0	23.08	1450.5	332.80	2	1019.	.02000	.00	.00	0.	91	14	A21	.01
1352	76A	26.1	14.34	1476.6	330.58	2	249.	.04000	.00	.00	0.	91	14	A21	.01
1352	77A	12.2	7.35	1488.8	330.27	2	1.	.04000	.00	.00	0.	91	12	A21	.01
1352	78A	.0	.00	1488.8	330.26	4	1.	.01000	5.50	.00	0.	91	99	A25	.00
1352	79A	14.2	9.07	1503.0	330.57	2	643.	.01900	.00	.00	0.	91	12	A22	.01
1352	80A	18.2	11.62	1521.2	329.60	2	751.	.02400	.00	.00	0.	91	12	A22	.01
1352	81A	23.3	14.88	1544.5	328.30	2	709.	.02400	.00	.00	0.	91	12	A22	.01
1352	82A	22.2	11.91	1566.7	327.76	2	1.	.02400	.00	.00	0.	91	16	A22	.01
1352	83A	.0	.00	1566.7	327.76	4	1.	.01000	5.50	.00	0.	91	99	A25	.00
1352	84B	26.2	14.40	26.2	14.40	2	1438.	.06400	.00	.00	0.	91	14	A21	.01
1352	85B	33.5	18.74	59.7	30.91	2	1.	.06400	.00	.00	0.	91	15	A22	.01
1352	86B	.0	.00	59.7	30.91	4	1.	.01000	2.25	.00	0.	91	99	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1187 QA   327.75 QAB   329.33 QB     1.57    1352   87B  TB 1159 QB    30.90 QBA   183.47 QA   152.57   *
*                                1352   87AB TAB 1187 QAB   329.33 QA   327.75 QB     1.57                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	30.90	1626.4	329.33	2	405.	.02300	.00	.00	0.	91	0	A25	.00
1352	88A	2.8	2.69	1629.2	328.62	2	1.	.02300	.00	.00	0.	91	6	A22	.01
1352	89C	21.6	16.46	21.6	16.46	2	1328.	.09400	.00	.00	0.	91	10	A23	.01
1352	90C	23.5	13.15	45.1	28.05	2	1.	.09400	.00	.00	0.	91	15	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN A STORM DAY 4

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*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1188 QA   328.62 QAC   329.70 QC     1.08    1352   91C  TC 1158 QC    28.05 QCA   191.06 QA   163.01   *
*                                1352   91AC TAC 1188 QAC   329.70 QA   328.62 QC     1.08                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	28.05	1674.3	329.70	2	977.	.02400	.00	.00	0.	91	0	A25	.00
1352	92A	30.8	18.72	1705.1	328.60	2	999.	.01300	.00	.00	0.	91	13	A22	.01
1352	93A	42.1	25.59	1747.2	326.12	2	448.	.02200	.00	.00	0.	91	13	A22	.01
1352	94A	16.0	11.53	1763.2	325.73	2	1.	.02200	.00	.00	0.	91	10	A22	.01
1352	95D	371.4	182.10	371.4	182.10	2	1.	.02200	.00	.00	0.	91	0	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1194 QA   325.72 QAD   338.23 QD    12.50    1352   96D  TD 1163 QD   182.09 QDA   387.99 QA   205.90   *
*                                1352   96AD TAD 1165 QAD   395.13 QA   219.52 QD   175.61                                 *
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SUBAREA SUBAREA TOTAL TOTAL CONV CONV CONV CONV CONV CONTROL SOIL RAIN PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	182.09	2134.6	395.13	2	892.	.01700	.00	.00	0.	91	0	A25	.00
1352	97A	14.4	9.73	2149.0	394.14	2	1.	.01700	.00	.00	0.	91	11	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	14.24	200	14.52	300	15.12	400	15.95
500	16.93	600	18.08	700	19.56	800	21.41	900	24.19
1000	28.46	1050	32.63	1100	45.73	1110	51.90	1120	62.26
1130	78.19	1131	80.06	1132	81.86	1133	83.78	1134	85.79
1135	87.95	1136	90.19	1137	92.57	1138	95.05	1139	97.64
1140	100.37	1141	103.32	1142	106.38	1143	109.66	1144	113.10
1145	116.96	1146	121.06	1147	125.64	1148	130.58	1149	136.88
1150	144.04	1151	152.91	1152	163.75	1153	176.87	1154	191.54
1155	208.19	1156	225.89	1157	244.57	1158	264.14	1159	284.85
1160	305.20	1161	325.36	1162	344.61	1163	361.79	1164	375.67
1165	386.15	1166	392.31	1167	394.14	1168	392.42	1169	388.60
1170	383.56	1171	377.94	1172	372.51	1173	367.40	1174	362.45
1175	357.93	1176	353.75	1177	349.66	1178	345.41	1179	340.93
1180	336.22	1181	331.40	1182	326.59	1183	322.11	1184	318.16
1185	314.91	1186	312.59	1187	311.52	1188	311.89	1189	313.81
1190	317.17	1191	321.69	1192	326.82	1193	331.68	1194	335.42
1195	337.40	1196	337.27	1197	334.93	1198	330.51	1199	324.32
1200	316.79	1201	308.12	1202	298.73	1203	288.90	1204	278.76
1205	268.63	1206	258.44	1207	248.49	1208	238.65	1209	229.15
1210	219.86	1211	210.99	1212	202.38	1213	194.20	1214	186.24
1215	178.75	1216	171.50	1217	164.69	1218	158.14	1219	151.94
1220	145.99	1221	140.33	1222	134.97	1223	129.86	1224	124.99
1225	120.37	1226	115.96	1227	111.76	1228	107.78	1229	103.99
1230	100.39	1231	96.96	1232	93.71	1233	90.63	1234	87.68
1235	84.88	1236	82.22	1237	79.71	1238	77.30	1239	74.97
1240	72.75	1241	70.62	1242	68.58	1243	66.63	1244	64.78
1245	63.07	1246	61.47	1247	59.90	1248	58.37	1249	56.88
1250	55.46	1251	54.11	1252	52.79	1253	51.59	1254	50.46
1255	49.34	1256	48.26	1257	47.23	1258	46.22	1259	45.31
1260	44.44	1261	43.60	1262	42.77	1263	42.00	1264	41.25
1265	40.56	1266	39.89	1267	39.25	1268	38.63	1269	38.05
1270	37.47	1271	36.91	1272	36.37	1273	35.87	1274	35.37
1275	34.91	1276	34.45	1277	34.00	1278	33.56	1279	33.16
1280	32.77	1281	32.42	1282	32.05	1283	31.72	1284	31.39
1285	31.09	1286	30.80	1287	30.50	1288	30.23	1289	29.97
1290	29.72	1291	29.48	1292	29.23	1293	28.99	1294	28.75
1295	28.53	1296	28.32	1297	28.12	1298	27.92	1299	27.70
1300	27.50	1310	25.79	1320	24.41	1330	23.29	1340	22.34
1350	21.41	1360	20.57	1370	19.89	1380	19.29	1390	18.72
1400	18.21	1420	17.28	1440	16.51	1460	15.37	1500	14.19

TOTAL VOLUME THIS HYDROGRAPH = 73.67(Ac.Ft)

Basin B - 05 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	4.7	11	1.95	0.63	0.63
2A	36.3	0.01	93	2008	0.354	4.7	14	1.74	0.60	0.60
3A	11.1	0.01	93	1303	0.437	4.7	9	2.14	0.65	0.65
4A	25.5	0.01	93	2134	0.354	4.8	14	1.78	0.60	0.60
5A	18.9	0.01	93	1414	0.375	4.7	10	2.04	0.64	0.64
6A	19.2	0.01	93	1221	0.483	4.7	9	2.14	0.65	0.65
7A	24.7	0.01	93	1706	0.396	4.7	12	1.87	0.61	0.62
8A	20.4	0.01	93	1412	0.342	4.7	11	1.92	0.62	0.62
9B	25.7	0.01	91	1440	0.316	4.5	10	1.94	0.74	0.74
10B	39.8	0.01	93	2531	0.296	4.6	17	1.55	0.57	0.57
12A	15.7	0.01	91	1111	0.364	4.6	8	2.21	0.75	0.75
13A	31.9	0.01	91	1823	0.192	4.6	13	1.73	0.72	0.72

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	10.94	19.2	10.94	2	959.	.20900	.00	.00	0.	93	11	A24	.01
1352 2A	36.3	17.21	55.5	27.76	2	367.	.12300	.00	.00	0.	93	14	A24	.01
1352 3A	11.1	7.30	66.6	34.31	2	1.	.12300	.00	.00	0.	93	9	A24	.01
1352 4A	25.5	12.95	92.1	47.16	2	662.	.12100	.00	.00	0.	93	14	A25	.01
1352 5A	18.9	11.65	111.0	57.37	2	546.	.11000	.00	.00	0.	93	10	A24	.01
1352 6A	19.2	12.64	130.2	68.04	2	1340.	.16000	.00	.00	0.	93	9	A24	.01
1352 7A	24.7	13.18	154.9	77.84	2	592.	.06400	.00	.00	0.	93	12	A24	.01
1352 8A	20.4	11.63	175.3	86.04	2	1.	.06400	.00	.00	0.	93	11	A24	.01
1352 9B	25.7	19.58	25.7	19.58	2	980.	.09500	.00	.00	0.	91	10	A23	.01
1352 10B	39.8	23.12	65.5	41.83	2	1.	.09500	.00	.00	0.	91	17	A24	.01

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*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1159 QA    86.04 QAB   126.52 QB    40.49    1352   11B  TB 1157 QB    41.82 QBA   119.18 QA    77.36   *
*                                 1352   11AB TAB 1159 QAB   126.52 QA    86.04 QB    40.49                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	41.82	240.8	126.52	2	761.	.08100	.00	.00	0.	91	0	A24	.00
1352 12A	15.7	14.18	256.5	130.37	2	1228.	.04900	.00	.00	0.	91	8	A24	.01
1352 13A	31.9	20.60	288.4	143.21	2	1.	.04900	.00	.00	0.	91	13	A23	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	1.96	200	2.03	300	2.14	400	2.25
500	2.40	600	2.57	700	2.80	800	3.10	900	3.53
1000	4.24	1050	5.10	1100	8.49	1110	10.70	1120	14.07
1130	19.27	1131	19.91	1132	20.56	1133	21.27	1134	21.93
1135	22.62	1136	23.37	1137	24.22	1138	25.18	1139	26.13
1140	27.16	1141	28.42	1142	29.74	1143	31.14	1144	32.58
1145	34.40	1146	36.35	1147	38.56	1148	40.96	1149	45.33
1150	50.04	1151	55.57	1152	62.59	1153	71.37	1154	80.16
1155	90.49	1156	101.72	1157	113.24	1158	123.75	1159	132.54
1160	139.16	1161	143.21	1162	142.30	1163	138.42	1164	132.02
1165	123.27	1166	113.17	1167	103.82	1168	94.52	1169	85.43
1170	76.77	1171	68.71	1172	61.25	1173	54.36	1174	48.17
1175	42.82	1176	38.13	1177	33.94	1178	30.30	1179	27.10
1180	24.28	1181	21.88	1182	19.72	1183	17.84	1184	16.26
1185	14.84	1186	13.56	1187	12.49	1188	11.59	1189	10.77
1190	10.05	1191	9.43	1192	8.89	1193	8.40	1194	7.97
1195	7.62	1196	7.29	1197	7.00	1198	6.74	1199	6.52
1200	6.32	1201	6.14	1202	5.99	1203	5.86	1204	5.72
1205	5.61	1206	5.51	1207	5.41	1208	5.32	1209	5.24
1210	5.16	1211	5.09	1212	5.03	1213	4.97	1214	4.91
1215	4.85	1216	4.80	1217	4.75	1218	4.69	1219	4.65
1220	4.59	1221	4.55	1222	4.50	1223	4.46	1224	4.42
1225	4.37	1226	4.34	1227	4.29	1228	4.26	1229	4.21
1230	4.18	1231	4.16	1232	4.12	1233	4.09	1234	4.06
1235	4.02	1236	3.99	1237	3.96	1238	3.94	1239	3.90
1240	3.87	1241	3.85	1242	3.82	1243	3.80	1244	3.76
1245	3.73	1246	3.71	1247	3.69	1248	3.66	1249	3.64
1250	3.62	1251	3.59	1252	3.57	1253	3.55	1254	3.53
1255	3.50	1256	3.48	1257	3.47	1258	3.46	1259	3.43
1260	3.41	1261	3.40	1262	3.37	1263	3.35	1264	3.35
1265	3.32	1266	3.31	1267	3.29	1268	3.28	1269	3.27
1270	3.24	1271	3.23	1272	3.21	1273	3.20	1274	3.19
1275	3.17	1276	3.16	1277	3.14	1278	3.13	1279	3.11
1280	3.10	1281	3.09	1282	3.07	1283	3.06	1284	3.04
1285	3.04	1286	3.02	1287	3.00	1288	2.99	1289	2.98
1290	2.97	1291	2.95	1292	2.95	1293	2.93	1294	2.91
1295	2.90	1296	2.89	1297	2.88	1298	2.87	1299	2.86
1300	2.84	1310	2.75	1320	2.65	1330	2.57	1340	2.51
1350	2.45	1360	2.38	1370	2.32	1380	2.26	1390	2.22
1400	2.17	1420	2.09	1440	2.01	1460	1.75	1500	1.75

TOTAL VOLUME THIS HYDROGRAPH = 10.55(Ac.Ft)

Basin C - 05 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	18.6	0.01	91	2004	0.274	4.4	13	1.69	0.72	0.72
2A	26.9	0.01	91	2490	0.245	4.5	15	1.60	0.71	0.71
5A	37.5	0.01	91	2766	0.110	4.4	20	1.38	0.68	0.68

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	12.01	18.6	12.01	2	704.	.07800	.00	.00	0.	91	13	A23	.01
1352	2A	26.9	16.02	45.5	27.48	2	1.	.07800	.00	.00	0.	91	15	A23	.01
1352	3B	288.4	143.20	288.4	143.20	2	1.	.04700	.00	.00	0.	91	0	A23	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352    4A  TA 1156 QA    27.47 QAB   129.15 QB   101.68    1352    4B  TB 1161 QB   143.19 QBA   168.24 QA    25.05   *
*                                 1352    4AB TAB 1161 QAB   168.24 QA    25.05 QB   143.19                                *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	143.19	333.9	168.24	2	1164.	.04700	.00	.00	0.	91	0	A23	.00
1352	5A	37.5	18.57	371.4	182.15	2	1.	.04700	.00	.00	0.	91	20	A23	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:
HYDROGRAPH AT POINT 5A
HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	2.54	200	2.57	300	2.69	400	2.91
500	3.06	600	3.30	700	3.58	800	3.94	900	4.47
1000	5.35	1050	6.46	1100	11.35	1110	14.22	1120	19.28
1130	26.31	1131	27.10	1132	27.89	1133	28.76	1134	29.68
1135	30.69	1136	31.73	1137	32.83	1138	34.01	1139	35.21
1140	36.48	1141	37.89	1142	39.38	1143	41.02	1144	42.81
1145	44.93	1146	47.23	1147	49.83	1148	52.69	1149	57.17
1150	62.28	1151	68.57	1152	76.39	1153	85.78	1154	95.61
1155	106.64	1156	118.22	1157	130.22	1158	142.36	1159	154.21
1160	164.91	1161	173.48	1162	179.53	1163	182.15	1164	180.88
1165	175.65	1166	167.14	1167	156.26	1168	144.34	1169	130.94
1170	118.04	1171	106.06	1172	94.95	1173	84.55	1174	76.05
1175	68.42	1176	61.57	1177	55.36	1178	49.85	1179	44.96
1180	40.59	1181	36.76	1182	33.30	1183	30.26	1184	27.52
1185	25.12	1186	22.97	1187	21.06	1188	19.29	1189	17.72
1190	16.36	1191	15.23	1192	14.19	1193	13.27	1194	12.50
1195	11.80	1196	11.17	1197	10.62	1198	10.16	1199	9.73
1200	9.34	1201	8.97	1202	8.65	1203	8.36	1204	8.09
1205	7.86	1206	7.67	1207	7.48	1208	7.29	1209	7.14
1210	7.00	1211	6.87	1212	6.75	1213	6.64	1214	6.54
1215	6.44	1216	6.37	1217	6.29	1218	6.21	1219	6.14
1220	6.08	1221	6.01	1222	5.95	1223	5.88	1224	5.81
1225	5.75	1226	5.70	1227	5.65	1228	5.60	1229	5.54
1230	5.49	1231	5.45	1232	5.40	1233	5.36	1234	5.32
1235	5.28	1236	5.23	1237	5.20	1238	5.16	1239	5.12
1240	5.08	1241	5.05	1242	5.00	1243	4.97	1244	4.92
1245	4.88	1246	4.85	1247	4.82	1248	4.79	1249	4.75
1250	4.72	1251	4.69	1252	4.65	1253	4.62	1254	4.59
1255	4.56	1256	4.53	1257	4.50	1258	4.47	1259	4.45
1260	4.43	1261	4.42	1262	4.39	1263	4.36	1264	4.35
1265	4.32	1266	4.31	1267	4.28	1268	4.25	1269	4.22
1270	4.20	1271	4.19	1272	4.17	1273	4.15	1274	4.12
1275	4.10	1276	4.08	1277	4.06	1278	4.05	1279	4.05
1280	4.03	1281	3.99	1282	3.98	1283	3.96	1284	3.94
1285	3.93	1286	3.92	1287	3.90	1288	3.87	1289	3.85
1290	3.84	1291	3.82	1292	3.82	1293	3.80	1294	3.77
1295	3.76	1296	3.73	1297	3.71	1298	3.70	1299	3.69
1300	3.67	1310	3.53	1320	3.42	1330	3.36	1340	3.25
1350	3.12	1360	3.04	1370	2.99	1380	2.93	1390	2.86
1400	2.80	1420	2.70	1440	2.58	1460	2.30	1500	2.30

TOTAL VOLUME THIS HYDROGRAPH = 13.93(Ac.Ft)

STEVENSON RANCH

10-YEAR CLEAR

EXISTING CONDITION

Basin A - 10 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	6.0	8	2.87	0.71	0.71
2A	34.8	0.01	93	1871	0.405	6.0	10	2.58	0.69	0.69
3A	33.3	0.01	93	2288	0.337	6.0	12	2.37	0.67	0.67
4A	37.9	0.01	93	1862	0.440	6.0	10	2.58	0.69	0.69
6B	28.8	0.01	93	1664	0.508	6.0	9	2.71	0.70	0.70
7B	12.2	0.01	93	1488	0.460	6.0	8	2.87	0.71	0.71
8B	22.3	0.01	93	2064	0.359	6.0	11	2.47	0.68	0.68
9B	24.6	0.01	93	2208	0.376	6.0	11	2.47	0.68	0.68
13A	24.0	0.01	93	1693	0.428	6.0	9	2.71	0.70	0.70
15C	37.0	0.01	93	2219	0.306	6.0	12	2.37	0.67	0.67
16C	40.2	0.01	93	2159	0.322	6.0	11	2.47	0.68	0.68
17C	31.9	0.01	93	1934	0.334	6.0	10	2.58	0.69	0.69
21A	39.2	0.01	93	2213	0.305	5.9	12	2.34	0.67	0.67
23D	30.8	0.01	93	1773	0.313	6.0	10	2.58	0.69	0.69
24D	39.3	0.01	93	1628	0.289	6.0	10	2.58	0.69	0.69
25D	42.3	0.01	93	1712	0.216	6.0	10	2.58	0.69	0.69
26D	30.9	0.01	93	1709	0.471	5.9	9	2.68	0.69	0.70
27D	26.9	0.01	93	1779	0.360	5.9	10	2.55	0.69	0.69
31A	29.2	0.01	93	2176	0.327	5.8	12	2.29	0.66	0.66
32A	22.2	0.01	93	1894	0.383	5.8	10	2.49	0.68	0.68
33A	23.1	0.01	93	1600	0.428	5.7	9	2.59	0.69	0.69
34A	35.7	0.01	93	2286	0.341	5.7	12	2.26	0.66	0.66
35A	29.2	0.01	93	2014	0.305	5.6	12	2.23	0.66	0.66
36A	25.6	0.01	93	1738	0.328	5.6	10	2.43	0.68	0.68
38A	23.7	0.01	93	1497	0.367	5.5	9	2.49	0.68	0.68
39A	32.5	0.01	93	1852	0.308	5.4	11	2.23	0.66	0.66
40A	20.2	0.01	93	1367	0.400	5.4	9	2.42	0.68	0.68
41A	22.5	0.01	93	1307	0.409	5.0	9	2.26	0.66	0.66
42A	28.5	0.01	93	1919	0.302	5.2	12	2.06	0.64	0.64
44A	20.2	0.01	93	1582	0.329	5.1	11	2.12	0.64	0.65
45A	24.8	0.01	93	1957	0.335	5.0	13	1.90	0.62	0.62
46A	15.1	0.01	93	1406	0.420	5.2	9	2.36	0.67	0.67
47A	24.6	0.01	93	2076	0.234	5.1	14	1.89	0.62	0.62
48A	24.9	0.01	93	1739	0.408	5.3	11	2.18	0.65	0.65
49A	20.9	0.01	93	1541	0.343	5.1	10	2.21	0.65	0.66
50A	19.2	0.01	93	1394	0.325	5.2	10	2.25	0.66	0.66
52E	28.8	0.01	93	1432	0.332	5.6	9	2.52	0.68	0.69
53E	24.8	0.01	93	1534	0.306	5.5	10	2.37	0.67	0.67
54E	33.4	0.01	93	1783	0.334	5.4	11	2.23	0.66	0.66
55E	23.1	0.01	93	1853	0.409	5.3	11	2.18	0.65	0.65
59A	28.2	0.01	93	2259	0.429	5.4	12	2.12	0.64	0.65
60A	27.2	0.01	93	1234	0.405	5.3	8	2.53	0.68	0.69
61A	17.9	0.01	93	1533	0.117	5.3	12	2.09	0.64	0.64
63F	27.0	0.01	93	1616	0.374	5.6	10	2.43	0.68	0.68
64F	40.8	0.01	93	2620	0.393	5.5	14	2.02	0.64	0.64

Basin A - 10 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	5.4	12	2.12	0.64	0.65
66F	32.6	0.01	93	1732	0.514	5.5	10	2.37	0.67	0.67
67F	18.8	0.01	93	1684	0.303	5.4	11	2.23	0.66	0.66
68F	9.2	0.01	93	1319	0.250	5.4	9	2.42	0.68	0.68
72A	6.4	0.01	93	1153	0.264	5.2	9	2.36	0.67	0.67
73A	20.0	0.01	91	1766	0.311	5.3	10	2.28	0.76	0.76
74A	21.9	0.01	91	1507	0.234	5.1	10	2.21	0.75	0.75
75A	42.0	0.01	91	1789	0.159	5.1	12	2.00	0.74	0.74
76A	26.1	0.01	91	1672	0.144	5.1	12	2.00	0.74	0.74
77A	12.2	0.01	91	1303	0.165	5.1	10	2.18	0.75	0.75
79A	14.2	0.01	91	1659	0.316	5.2	10	2.25	0.75	0.76
80A	18.2	0.01	91	1622	0.291	5.1	10	2.21	0.75	0.75
81A	23.3	0.01	91	1645	0.280	5.2	10	2.25	0.75	0.76
82A	22.2	0.01	91	2122	0.161	5.1	13	1.96	0.74	0.74
84B	26.2	0.01	91	1697	0.165	5.0	12	1.92	0.74	0.74
85B	33.5	0.01	91	2040	0.168	5.1	13	1.96	0.74	0.74
88A	2.8	0.01	91	467	0.096	5.2	5	3.11	0.79	0.79
89C	21.6	0.01	91	1492	0.372	5.5	9	2.49	0.77	0.77
90C	23.5	0.01	91	2246	0.220	5.4	13	2.04	0.74	0.75
92A	30.8	0.01	91	1641	0.181	5.3	11	2.18	0.75	0.75
93A	42.1	0.01	91	1873	0.232	5.3	11	2.18	0.75	0.75
94A	16.0	0.01	91	1377	0.290	5.4	9	2.42	0.76	0.76
97A	14.4	0.01	91	1487	0.269	5.4	9	2.42	0.76	0.76

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	42.01	32.5	42.01	2	1173.	.20100	.00	.00	0.	93	8	A30	.01
1352 2A	34.8	39.70	67.3	79.78	2	369.	.19500	.00	.00	0.	93	10	A30	.01
1352 3A	33.3	33.43	100.6	112.44	2	1353.	.24000	.00	.00	0.	93	12	A30	.01
1352 4A	37.9	43.24	138.5	151.29	2	1.	.24000	.00	.00	0.	93	10	A30	.01
1352 5A	.0	.00	138.5	151.28	4	1.	.01000	4.00	.00	0.	93	99	A30	.00
1352 6B	28.8	34.85	28.8	34.85	2	494.	.25300	.00	.00	0.	93	9	A30	.01
1352 7B	12.2	15.77	41.0	50.27	2	1.	.25300	.00	.00	0.	93	8	A30	.01
1352 8B	22.3	23.81	63.3	74.01	2	1342.	.28700	.00	.00	0.	93	11	A30	.01
1352 9B	24.6	26.27	87.9	98.69	2	1.	.28700	.00	.00	0.	93	11	A30	.01
1352 10B	.0	.00	87.9	98.69	4	1.	.01000	3.50	.00	0.	93	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1157 QA   151.28 QAB   247.81 QB    96.53    1352   11B  TB 1156 QB    98.69 QBA   249.96 QA   151.27   *
*                                1352   11AB TAB 1156 QAB   249.96 QA   151.27 QB    98.69                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	98.69	226.4	249.96	2	655.	.14500	.00	.00	0.	93	0	A30	.00
1352 12A	.0	.00	226.4	248.46	4	1.	.01000	5.00	.00	0.	93	99	A30	.00
1352 13A	24.0	29.04	250.4	274.97	2	1.	.14500	.00	.00	0.	93	9	A30	.01
1352 14A	.0	.00	250.4	274.97	4	1.	.01000	5.00	.00	0.	93	99	A30	.00
1352 15C	37.0	37.14	37.0	37.14	2	826.	.24800	.00	.00	0.	93	12	A30	.01
1352 16C	40.2	42.92	77.2	79.81	2	1267.	.26000	.00	.00	0.	93	11	A30	.01
1352 17C	31.9	36.39	109.1	113.23	2	1.	.26000	.00	.00	0.	93	10	A30	.01
1352 18C	.0	.00	109.1	113.23	4	1.	.01000	3.75	.00	0.	93	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   19A  TA 1157 QA   274.97 QAC   387.01 QC   112.04    1352   19C  TC 1156 QC   113.22 QCA   386.83 QA   273.61   *
*                                1352   19AC TAC 1157 QAC   387.01 QA   274.97 QC   112.04                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	113.22	359.5	387.01	2	1161.	.09000	.00	.00	0.	93	0	A30	.00
1352 20A	.0	.00	359.5	384.34	4	1.	.01000	5.75	.00	0.	93	99	A30	.00
1352 21A	39.2	39.35	398.7	420.60	2	1.	.09000	.00	.00	0.	93	12	A30	.01
1352 22A	.0	.00	398.7	420.60	4	1.	.01000	6.00	.00	0.	93	99	A30	.00
1352 23D	30.8	35.14	30.8	35.14	2	1242.	.23000	.00	.00	0.	93	10	A30	.01
1352 24D	39.3	44.84	70.1	77.59	2	1308.	.03800	.00	.00	0.	93	10	A30	.01
1352 25D	42.3	48.26	112.4	113.95	2	723.	.22800	.00	.00	0.	93	10	A30	.01
1352 26D	30.9	37.39	143.3	142.30	2	720.	.09000	.00	.00	0.	93	9	A30	.01
1352 27D	26.9	30.69	170.2	167.37	2	1.	.09000	.00	.00	0.	93	10	A30	.01
1352 28D	.0	.00	170.2	167.37	4	1.	.01000	4.25	.00	0.	93	99	A30	.00

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1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                 *
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*   1352   29A  TA 1158 QA   420.59 QAD   587.96 QD   167.36    1352   29D  TD 1158 QD   167.36 QDA   587.96 QA   420.59   *
*                                 1352   29AD TAD 1158 QAD   587.96 QA   420.59 QD   167.36                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	167.36	568.9	587.96	2	668.	.04800	.00	.00	0.	93	0	A30	.00
1352	30A	.0	.00	568.9	582.34	4	1.	.01000	6.75	.00	0.	93	99	A30	.00
1352	31A	29.2	27.89	598.1	606.96	2	506.	.04400	.00	.00	0.	93	12	A29	.01
1352	32A	22.2	24.12	620.3	623.68	2	635.	.03900	.00	.00	0.	93	10	A29	.01
1352	33A	23.1	26.64	643.4	631.71	2	593.	.04200	.00	.00	0.	93	9	A29	.01
1352	34A	35.7	34.10	679.1	655.89	2	572.	.03500	.00	.00	0.	93	12	A29	.01
1352	35A	29.2	27.89	708.3	671.30	2	485.	.04100	.00	.00	0.	93	12	A29	.01
1352	36A	25.6	27.81	733.9	676.77	2	532.	.03800	.00	.00	0.	93	10	A29	.01
1352	37A	.0	.00	733.9	674.24	4	1.	.01000	7.00	.00	0.	93	99	A30	.00
1352	38A	23.7	26.09	757.6	679.12	2	396.	.05100	.00	.00	0.	93	9	A28	.01
1352	39A	32.5	31.48	790.1	687.79	2	838.	.05600	.00	.00	0.	93	11	A28	.01
1352	40A	20.2	21.09	810.3	686.34	2	1.	.05600	.00	.00	0.	93	9	A27	.01
1352	41A	22.5	21.04	832.8	689.19	2	1.	.13300	.00	.00	0.	93	9	A25	.01
1352	42A	28.5	24.55	861.3	699.54	2	840.	.05700	.00	.00	0.	93	12	A27	.01
1352	43A	.0	.00	861.3	694.73	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	44A	20.2	17.56	881.5	697.89	2	1.	.05700	.00	.00	0.	93	11	A26	.01
1352	45A	24.8	18.14	906.3	705.22	2	575.	.03500	.00	.00	0.	93	13	A25	.01
1352	46A	15.1	15.77	921.4	702.50	2	1319.	.03400	.00	.00	0.	93	9	A27	.01
1352	47A	24.6	18.14	946.0	700.24	2	1.	.03400	.00	.00	0.	93	14	A26	.01
1352	48A	24.9	22.88	970.9	703.08	2	722.	.03900	.00	.00	0.	93	11	A27	.01
1352	49A	20.9	19.51	991.8	701.33	2	846.	.04700	.00	.00	0.	93	10	A26	.01
1352	50A	19.2	18.90	1011.0	699.07	2	1.	.04700	.00	.00	0.	93	10	A27	.01
1352	51A	.0	.00	1011.0	699.06	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	52E	28.8	31.70	28.8	31.70	2	940.	.14400	.00	.00	0.	93	9	A28	.01
1352	53E	24.8	25.68	53.6	55.82	2	971.	.27800	.00	.00	0.	93	10	A28	.01
1352	54E	33.4	32.35	87.0	86.41	2	1110.	.18700	.00	.00	0.	93	11	A28	.01
1352	55E	23.1	21.23	110.1	105.08	2	1.	.18700	.00	.00	0.	93	11	A27	.01
1352	56E	.0	.00	110.1	105.08	4	1.	.01000	3.50	.00	0.	93	99	A30	.00

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*****************************************************************************************************************************
*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1168 QA   699.05 QAE   717.49 QE    18.44    1352   57E  TE 1157 QE   105.07 QEA   439.14 QA   334.07   *
*                                 1352   57AE TAE 1168 QAE   717.49 QA   699.05 QE    18.44                                 *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	105.07	1121.1	717.49	2	180.	.03900	.00	.00	0.	93	0	A30	.00
1352	58A	.0	.00	1121.1	716.28	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	59A	28.2	24.29	1149.3	718.99	2	815.	.01800	.00	.00	0.	93	12	A27	.01
1352	60A	27.2	30.44	1176.5	715.58	2	1136.	.05700	.00	.00	0.	93	8	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	15.42	1194.4	713.45	2	1.	.05700	.00	.00	0.	93	12	A27	.01
1352	62A	.0	.00	1194.4	713.45	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	63F	27.0	29.33	27.0	29.33	2	586.	.19600	.00	.00	0.	93	10	A29	.01
1352	64F	40.8	33.44	67.8	62.53	2	727.	.08900	.00	.00	0.	93	14	A28	.01
1352	65F	37.4	32.21	105.2	93.51	2	1.	.08900	.00	.00	0.	93	12	A27	.01
1352	66F	32.6	33.75	137.8	125.60	2	1.	.14100	.00	.00	0.	93	10	A28	.01
1352	67F	18.8	18.21	156.6	143.24	2	677.	.08100	.00	.00	0.	93	11	A28	.01
1352	68F	9.2	9.61	165.8	151.22	2	1.	.08100	.00	.00	0.	93	9	A27	.01
1352	69F	.0	.00	165.8	151.21	4	1.	.01000	4.00	.00	0.	93	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1171 QA   713.44 QAF   732.97 QF    19.53    1352   70F  TF 1157 QF   151.21 QFA   532.35 QA   381.13   *
*                              1352   70AF TAF 1171 QAF   732.97 QA   713.44 QF    19.53                                 *
*****************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	151.21	1360.2	732.97	2	561.	.03600	.00	.00	0.	93	0	A30	.00
1352	71A	.0	.00	1360.2	730.43	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	72A	6.4	6.68	1366.6	730.80	2	1.	.03600	.00	.00	0.	93	9	A27	.01
1352	73A	20.0	22.54	1386.6	733.68	2	434.	.03000	.00	.00	0.	91	11	A27	.01
1352	74A	21.9	23.57	1408.5	735.70	2	420.	.02900	.00	.00	0.	91	11	A26	.01
1352	75A	42.0	40.92	1450.5	738.87	2	1019.	.02000	.00	.00	0.	91	13	A26	.01
1352	76A	26.1	25.43	1476.6	738.40	2	249.	.04000	.00	.00	0.	91	13	A26	.01
1352	77A	12.2	13.93	1488.8	738.65	2	1.	.04000	.00	.00	0.	91	10	A26	.01
1352	78A	.0	.00	1488.8	738.65	4	1.	.01000	7.25	.00	0.	91	99	A30	.00
1352	79A	14.2	16.00	1503.0	740.28	2	643.	.01900	.00	.00	0.	91	11	A27	.01
1352	80A	18.2	19.59	1521.2	740.12	2	751.	.02400	.00	.00	0.	91	11	A26	.01
1352	81A	23.3	26.26	1544.5	740.47	2	709.	.02400	.00	.00	0.	91	11	A27	.01
1352	82A	22.2	20.78	1566.7	740.62	2	1.	.02400	.00	.00	0.	91	14	A26	.01
1352	83A	.0	.00	1566.7	740.62	4	1.	.01000	7.25	.00	0.	91	99	A30	.00
1352	84B	26.2	24.36	26.2	24.36	2	1438.	.06400	.00	.00	0.	91	13	A25	.01
1352	85B	33.5	31.35	59.7	52.90	2	1.	.06400	.00	.00	0.	91	14	A26	.01
1352	86B	.0	.00	59.7	52.90	4	1.	.01000	2.75	.00	0.	91	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1178 QA   740.61 QAB   747.90 QB     7.29    1352   87B  TB 1158 QB    52.90 QBA   458.89 QA   405.99   *
*                              1352   87AB TAB 1178 QAB   747.90 QA   740.61 QB     7.29                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	52.90	1626.4	747.90	2	405.	.02300	.00	.00	0.	91	0	A30	.00
1352	88A	2.8	4.39	1629.2	746.26	2	1.	.02300	.00	.00	0.	91	6	A27	.01
1352	89C	21.6	28.36	21.6	28.36	2	1328.	.09400	.00	.00	0.	91	9	A28	.01
1352	90C	23.5	23.03	45.1	49.35	2	1.	.09400	.00	.00	0.	91	14	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN A STORM DAY 4

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1179 QA   746.25 QAC   751.42 QC     5.16    1352   91C  TC 1157 QC    49.34 QCA   452.21 QA   402.86   *
*                              1352   91AC TAC 1178 QAC   751.72 QA   746.25 QC     5.47                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	49.34	1674.3	751.72	2	977.	.02400	.00	.00	0.	91	0	A30	.00
1352	92A	30.8	34.71	1705.1	752.77	2	999.	.01300	.00	.00	0.	91	11	A27	.01
1352	93A	42.1	44.96	1747.2	753.37	2	448.	.02200	.00	.00	0.	91	12	A27	.01
1352	94A	16.0	20.08	1763.2	753.12	2	1.	.02200	.00	.00	0.	91	9	A27	.01
1352	95D	371.4	359.40	371.4	359.40	2	1.	.02200	.00	.00	0.	91	0	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1183 QA   753.11 QAD   798.52 QD    45.41    1352   96D  TD 1161 QD   359.39 QDA   847.27 QA   487.88   *
*                              1352   96AD TAD 1167 QAD   883.26 QA   651.19 QD   232.07                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	359.39	2134.6	883.26	2	892.	.01700	.00	.00	0.	91	0	A30	.00
1352	97A	14.4	17.19	2149.0	885.15	2	1.	.01700	.00	.00	0.	91	10	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	21.09	200	21.47	300	22.50	400	23.60
500	25.03	600	26.88	700	28.95	800	31.98	900	36.02
1000	46.55	1050	64.23	1100	101.76	1110	116.50	1120	140.73
1130	177.00	1131	181.14	1132	185.30	1133	189.77	1134	194.54
1135	199.54	1136	204.76	1137	210.30	1138	216.08	1139	222.17
1140	228.67	1141	235.63	1142	243.13	1143	251.15	1144	259.87
1145	269.46	1146	279.95	1147	291.38	1148	304.02	1149	319.41
1150	337.57	1151	360.08	1152	387.69	1153	421.06	1154	458.96
1155	501.30	1156	547.07	1157	596.29	1158	648.43	1159	699.82
1160	749.12	1161	793.62	1162	829.81	1163	855.13	1164	871.64
1165	880.69	1166	884.13	1167	884.84	1168	885.15	1169	885.04
1170	883.10	1171	878.93	1172	872.16	1173	862.75	1174	851.43
1175	839.32	1176	827.30	1177	816.47	1178	807.82	1179	801.97
1180	799.26	1181	799.20	1182	800.67	1183	801.73	1184	800.56
1185	795.50	1186	785.63	1187	770.87	1188	751.61	1189	728.60
1190	702.97	1191	675.32	1192	646.78	1193	617.80	1194	589.00
1195	560.76	1196	533.29	1197	506.99	1198	481.42	1199	457.26
1200	434.15	1201	412.30	1202	391.66	1203	372.04	1204	353.70
1205	336.31	1206	319.98	1207	304.61	1208	290.15	1209	276.64
1210	263.84	1211	251.86	1212	240.50	1213	229.86	1214	219.85
1215	210.42	1216	201.49	1217	193.15	1218	185.32	1219	178.00
1220	171.02	1221	164.36	1222	158.03	1223	152.03	1224	146.39
1225	141.19	1226	136.46	1227	131.88	1228	127.46	1229	123.18
1230	119.05	1231	115.21	1232	111.59	1233	108.12	1234	104.83
1235	101.72	1236	98.89	1237	96.13	1238	93.46	1239	90.93
1240	88.50	1241	86.20	1242	84.02	1243	81.99	1244	80.06
1245	78.21	1246	76.46	1247	74.77	1248	73.15	1249	71.59
1250	70.08	1251	68.62	1252	67.23	1253	65.88	1254	64.57
1255	63.42	1256	62.26	1257	61.12	1258	59.99	1259	58.90
1260	57.84	1261	56.82	1262	55.87	1263	54.97	1264	54.12
1265	53.31	1266	52.53	1267	51.76	1268	51.02	1269	50.30
1270	49.62	1271	48.96	1272	48.32	1273	47.71	1274	47.14
1275	46.59	1276	46.09	1277	45.60	1278	45.14	1279	44.68
1280	44.23	1281	43.80	1282	43.40	1283	43.02	1284	42.65
1285	42.31	1286	41.97	1287	41.64	1288	41.34	1289	41.05
1290	40.77	1291	40.49	1292	40.22	1293	39.95	1294	39.69
1295	39.43	1296	39.17	1297	38.92	1298	38.68	1299	38.46
1300	38.23	1310	36.13	1320	34.46	1330	32.96	1340	31.70
1350	30.52	1360	29.47	1370	28.55	1380	27.69	1390	26.85
1400	26.15	1420	25.02	1440	23.90	1460	22.22	1500	20.95

TOTAL VOLUME THIS HYDROGRAPH = 129.39(Ac.Ft)

Basin B - 10 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	5.8	9	2.62	0.69	0.69
2A	36.3	0.01	93	2008	0.354	5.8	11	2.38	0.67	0.67
3A	11.1	0.01	93	1303	0.437	5.8	8	2.77	0.70	0.70
4A	25.5	0.01	93	2134	0.354	5.9	11	2.44	0.68	0.68
5A	18.9	0.01	93	1414	0.375	5.8	8	2.77	0.70	0.70
6A	19.2	0.01	93	1221	0.483	5.8	7	2.95	0.71	0.71
7A	24.7	0.01	93	1706	0.396	5.8	10	2.49	0.68	0.68
8A	20.4	0.01	93	1412	0.342	5.7	9	2.59	0.69	0.69
9B	25.7	0.01	91	1440	0.316	5.5	9	2.49	0.77	0.77
10B	39.8	0.01	93	2531	0.296	5.6	14	2.07	0.64	0.64
12A	15.7	0.01	91	1111	0.364	5.6	7	2.87	0.78	0.78
13A	31.9	0.01	91	1823	0.192	5.6	11	2.29	0.76	0.76

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	22.15	19.2	22.15	2	959.	.20900	.00	.00	0.	93	9	A29	.01
1352 2A	36.3	36.84	55.5	58.38	2	367.	.12300	.00	.00	0.	93	11	A29	.01
1352 3A	11.1	13.73	66.6	70.89	2	1.	.12300	.00	.00	0.	93	8	A29	.01
1352 4A	25.5	27.23	92.1	97.99	2	662.	.12100	.00	.00	0.	93	11	A30	.01
1352 5A	18.9	23.38	111.0	119.35	2	546.	.11000	.00	.00	0.	93	8	A29	.01
1352 6A	19.2	25.78	130.2	138.55	2	1340.	.16000	.00	.00	0.	93	7	A29	.01
1352 7A	24.7	26.83	154.9	160.64	2	592.	.06400	.00	.00	0.	93	10	A29	.01
1352 8A	20.4	23.53	175.3	176.81	2	1.	.06400	.00	.00	0.	93	9	A29	.01
1352 9B	25.7	33.74	25.7	33.74	2	980.	.09500	.00	.00	0.	91	9	A28	.01
1352 10B	39.8	42.52	65.5	74.97	2	1.	.09500	.00	.00	0.	91	14	A29	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1158 QA   176.81 QAB   249.96 QB    73.15    1352   11B  TB 1156 QB    74.97 QBA   239.93 QA   164.97   *
*                                 1352   11AB TAB 1157 QAB   250.13 QA   175.76 QB    74.38                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	74.97	240.8	250.13	2	761.	.08100	.00	.00	0.	91	0	A29	.00
1352 12A	15.7	24.47	256.5	261.19	2	1228.	.04900	.00	.00	0.	91	7	A29	.01
1352 13A	31.9	37.57	288.4	284.83	2	1.	.04900	.00	.00	0.	91	11	A28	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	2.90	200	3.00	300	3.16	400	3.33
500	3.54	600	3.81	700	4.14	800	4.59	900	5.23
1000	7.70	1050	11.76	1100	20.08	1110	25.54	1120	33.76
1130	44.88	1131	46.14	1132	47.23	1133	48.55	1134	49.86
1135	51.35	1136	52.93	1137	54.67	1138	56.49	1139	58.50
1140	60.54	1141	63.12	1142	65.72	1143	68.57	1144	71.53
1145	75.48	1146	79.67	1147	84.30	1148	89.31	1149	98.19
1150	108.26	1151	120.84	1152	136.78	1153	157.27	1154	179.08
1155	204.44	1156	230.31	1157	254.13	1158	272.62	1159	284.54
1160	284.83	1161	276.09	1162	260.49	1163	240.05	1164	217.03
1165	195.50	1166	174.08	1167	153.88	1168	135.26	1169	118.44
1170	103.58	1171	90.65	1172	79.86	1173	70.70	1174	62.99
1175	56.24	1176	50.66	1177	45.91	1178	41.90	1179	38.45
1180	35.48	1181	32.78	1182	30.59	1183	28.63	1184	26.78
1185	25.10	1186	23.76	1187	22.52	1188	21.28	1189	20.20
1190	19.30	1191	18.34	1192	17.53	1193	16.85	1194	16.13
1195	15.43	1196	14.85	1197	14.23	1198	13.64	1199	13.18
1200	12.66	1201	12.19	1202	11.84	1203	11.44	1204	11.07
1205	10.82	1206	10.49	1207	10.26	1208	9.95	1209	9.74
1210	9.45	1211	9.25	1212	9.07	1213	8.82	1214	8.65
1215	8.40	1216	8.24	1217	8.08	1218	7.85	1219	7.70
1220	7.49	1221	7.36	1222	7.24	1223	7.12	1224	7.01
1225	6.90	1226	6.79	1227	6.66	1228	6.55	1229	6.44
1230	6.32	1231	6.23	1232	6.15	1233	6.07	1234	6.00
1235	5.91	1236	5.85	1237	5.79	1238	5.73	1239	5.68
1240	5.62	1241	5.59	1242	5.56	1243	5.51	1244	5.47
1245	5.42	1246	5.40	1247	5.36	1248	5.33	1249	5.30
1250	5.27	1251	5.24	1252	5.20	1253	5.17	1254	5.15
1255	5.11	1256	5.09	1257	5.06	1258	5.03	1259	5.01
1260	4.98	1261	4.94	1262	4.92	1263	4.91	1264	4.87
1265	4.85	1266	4.83	1267	4.80	1268	4.78	1269	4.76
1270	4.72	1271	4.70	1272	4.68	1273	4.66	1274	4.63
1275	4.61	1276	4.60	1277	4.59	1278	4.55	1279	4.54
1280	4.52	1281	4.50	1282	4.49	1283	4.47	1284	4.45
1285	4.44	1286	4.42	1287	4.39	1288	4.37	1289	4.34
1290	4.33	1291	4.31	1292	4.29	1293	4.28	1294	4.26
1295	4.25	1296	4.23	1297	4.21	1298	4.19	1299	4.17
1300	4.17	1310	4.03	1320	3.92	1330	3.80	1340	3.68
1350	3.57	1360	3.49	1370	3.40	1380	3.35	1390	3.25
1400	3.19	1420	3.09	1440	2.98	1460	2.59	1500	2.59

TOTAL VOLUME THIS HYDROGRAPH = 18.64(Ac.Ft)

Basin C - 10 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	18.6	0.01	91	2004	0.274	5.4	11	2.23	0.75	0.75
2A	26.9	0.01	91	2490	0.245	5.5	13	2.09	0.75	0.75
5A	37.5	0.01	91	2766	0.110	5.4	16	1.87	0.73	0.73

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	21.90	18.6	21.90	2	704.	.07800	.00	.00	0.	91	11	A28	.01
1352	2A	26.9	28.70	45.5	49.97	2	1.	.07800	.00	.00	0.	91	13	A28	.01
1352	3B	288.4	284.80	288.4	284.80	2	1.	.04700	.00	.00	0.	91	0	A28	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352    4A  TA 1156 QA    49.96 QAB   280.23 QB   230.27    1352    4B  TB 1160 QB   284.80 QBA   329.97 QA    45.17   *
*                                1352    4AB TAB 1159 QAB   331.34 QA    46.87 QB   284.47                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	284.80	333.9	331.34	2	1164.	.04700	.00	.00	0.	91	0	A28	.00
1352	5A	37.5	35.64	371.4	359.40	2	1.	.04700	.00	.00	0.	91	16	A28	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
HYDROGRAPH AT POINT 5A
HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	3.71	200	3.83	300	4.07	400	4.23
500	4.48	600	4.85	700	5.24	800	5.86	900	6.65
1000	10.25	1050	16.57	1100	28.45	1110	34.97	1120	45.76
1130	59.92	1131	61.49	1132	63.08	1133	64.88	1134	66.69
1135	68.66	1136	70.69	1137	72.71	1138	74.84	1139	77.22
1140	79.70	1141	82.64	1142	85.76	1143	89.23	1144	93.02
1145	97.52	1146	102.44	1147	108.00	1148	114.10	1149	123.17
1150	134.20	1151	148.40	1152	165.94	1153	187.14	1154	210.17
1155	235.94	1156	262.97	1157	290.60	1158	316.78	1159	338.66
1160	353.89	1161	359.40	1162	354.77	1163	340.51	1164	319.04
1165	290.59	1166	261.06	1167	232.03	1168	204.77	1169	179.91
1170	159.78	1171	141.98	1172	126.39	1173	112.77	1174	100.99
1175	90.77	1176	81.93	1177	74.35	1178	67.64	1179	61.93
1180	57.03	1181	52.72	1182	48.84	1183	45.42	1184	42.49
1185	39.83	1186	37.45	1187	35.33	1188	33.37	1189	31.58
1190	30.03	1191	28.58	1192	27.17	1193	26.02	1194	24.91
1195	23.90	1196	22.87	1197	21.94	1198	21.07	1199	20.25
1200	19.38	1201	18.71	1202	18.02	1203	17.28	1204	16.71
1205	16.18	1206	15.59	1207	15.18	1208	14.73	1209	14.28
1210	13.86	1211	13.44	1212	13.09	1213	12.69	1214	12.33
1215	11.98	1216	11.77	1217	11.44	1218	11.11	1219	10.86
1220	10.55	1221	10.24	1222	10.00	1223	9.74	1224	9.55
1225	9.35	1226	9.17	1227	9.01	1228	8.85	1229	8.71
1230	8.57	1231	8.43	1232	8.28	1233	8.15	1234	8.03
1235	7.91	1236	7.81	1237	7.72	1238	7.62	1239	7.55
1240	7.46	1241	7.38	1242	7.31	1243	7.23	1244	7.17
1245	7.11	1246	7.07	1247	7.01	1248	6.96	1249	6.90
1250	6.86	1251	6.82	1252	6.76	1253	6.73	1254	6.69
1255	6.64	1256	6.61	1257	6.57	1258	6.52	1259	6.50
1260	6.46	1261	6.43	1262	6.38	1263	6.37	1264	6.32
1265	6.28	1266	6.24	1267	6.23	1268	6.20	1269	6.15
1270	6.12	1271	6.11	1272	6.08	1273	6.05	1274	6.02
1275	5.98	1276	5.97	1277	5.94	1278	5.91	1279	5.87
1280	5.86	1281	5.84	1282	5.81	1283	5.77	1284	5.75
1285	5.73	1286	5.72	1287	5.71	1288	5.68	1289	5.65
1290	5.63	1291	5.61	1292	5.57	1293	5.53	1294	5.51
1295	5.49	1296	5.47	1297	5.46	1298	5.42	1299	5.39
1300	5.37	1310	5.19	1320	5.03	1330	4.89	1340	4.75
1350	4.63	1360	4.52	1370	4.39	1380	4.28	1390	4.15
1400	4.08	1420	3.97	1440	3.84	1460	3.38	1500	3.34

TOTAL VOLUME THIS HYDROGRAPH = 24.83(Ac.Ft)

STEVENSON RANCH

25-YEAR CLEAR

EXISTING CONDITION

Basin A - 25 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	7.4	7	3.76	0.76	0.76
2A	34.8	0.01	93	1871	0.405	7.4	8	3.53	0.75	0.75
3A	33.3	0.01	93	2288	0.337	7.4	10	3.18	0.73	0.73
4A	37.9	0.01	93	1862	0.440	7.4	8	3.53	0.75	0.75
6B	28.8	0.01	93	1664	0.508	7.4	7	3.76	0.76	0.76
7B	12.2	0.01	93	1488	0.460	7.4	7	3.76	0.76	0.76
8B	22.3	0.01	93	2064	0.359	7.4	9	3.34	0.74	0.74
9B	24.6	0.01	93	2208	0.376	7.4	9	3.34	0.74	0.74
13A	24.0	0.01	93	1693	0.428	7.4	7	3.76	0.76	0.76
15C	37.0	0.01	93	2219	0.306	7.4	10	3.18	0.73	0.73
16C	40.2	0.01	93	2159	0.322	7.4	9	3.34	0.74	0.74
17C	31.9	0.01	93	1934	0.334	7.4	9	3.34	0.74	0.74
21A	39.2	0.01	93	2213	0.305	7.3	10	3.14	0.72	0.73
23D	30.8	0.01	93	1773	0.313	7.4	8	3.53	0.75	0.75
24D	39.3	0.01	93	1628	0.289	7.4	8	3.53	0.75	0.75
25D	42.3	0.01	93	1712	0.216	7.4	9	3.34	0.74	0.74
26D	30.9	0.01	93	1709	0.471	7.3	7	3.71	0.75	0.76
27D	26.9	0.01	93	1779	0.360	7.3	8	3.49	0.75	0.75
31A	29.2	0.01	93	2176	0.327	7.1	10	3.06	0.72	0.72
32A	22.2	0.01	93	1894	0.383	7.1	9	3.22	0.73	0.73
33A	23.1	0.01	93	1600	0.428	7.0	7	3.58	0.75	0.75
34A	35.7	0.01	93	2286	0.341	7.0	10	3.03	0.72	0.72
35A	29.2	0.01	93	2014	0.305	6.9	10	2.99	0.71	0.72
36A	25.6	0.01	93	1738	0.328	6.9	8	3.32	0.73	0.74
38A	23.7	0.01	93	1497	0.367	6.8	8	3.23	0.73	0.73
39A	32.5	0.01	93	1852	0.308	6.7	9	3.02	0.72	0.72
40A	20.2	0.01	93	1367	0.400	6.6	7	3.35	0.74	0.74
41A	22.5	0.01	93	1307	0.409	6.1	7	3.13	0.72	0.72
42A	28.5	0.01	93	1919	0.302	6.4	10	2.76	0.70	0.70
44A	20.2	0.01	93	1582	0.329	6.3	9	2.86	0.71	0.71
45A	24.8	0.01	93	1957	0.335	6.1	10	2.65	0.69	0.69
46A	15.1	0.01	93	1406	0.420	6.4	8	3.07	0.72	0.72
47A	24.6	0.01	93	2076	0.234	6.3	11	2.60	0.69	0.69
48A	24.9	0.01	93	1739	0.408	6.5	9	2.94	0.71	0.71
49A	20.9	0.01	93	1541	0.343	6.3	8	3.02	0.72	0.72
50A	19.2	0.01	93	1394	0.325	6.4	8	3.07	0.72	0.72
52E	28.8	0.01	93	1432	0.332	6.8	7	3.49	0.75	0.75
53E	24.8	0.01	93	1534	0.306	6.8	8	3.23	0.73	0.73
54E	33.4	0.01	93	1783	0.334	6.7	9	3.02	0.72	0.72
55E	23.1	0.01	93	1853	0.409	6.5	9	2.94	0.71	0.71
59A	28.2	0.01	93	2259	0.429	6.6	10	2.84	0.70	0.71
60A	27.2	0.01	93	1234	0.405	6.5	7	3.31	0.73	0.74
61A	17.9	0.01	93	1533	0.117	6.5	10	2.80	0.70	0.70
63F	27.0	0.01	93	1616	0.374	6.9	8	3.32	0.73	0.74
64F	40.8	0.01	93	2620	0.393	6.8	11	2.78	0.70	0.70

Basin A - 25 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	6.6	10	2.84	0.70	0.71
66F	32.6	0.01	93	1732	0.514	6.8	8	3.23	0.73	0.73
67F	18.8	0.01	93	1684	0.303	6.7	9	3.02	0.72	0.72
68F	9.2	0.01	93	1319	0.250	6.6	8	3.15	0.72	0.73
72A	6.4	0.01	93	1153	0.264	6.4	7	3.26	0.73	0.73
73A	20.0	0.01	91	1766	0.311	6.5	9	2.94	0.79	0.79
74A	21.9	0.01	91	1507	0.234	6.3	8	3.02	0.79	0.79
75A	42.0	0.01	91	1789	0.159	6.2	10	2.69	0.77	0.78
76A	26.1	0.01	91	1672	0.144	6.2	10	2.69	0.77	0.78
77A	12.2	0.01	91	1303	0.165	6.2	8	2.98	0.79	0.79
79A	14.2	0.01	91	1659	0.316	6.4	8	3.07	0.79	0.79
80A	18.2	0.01	91	1622	0.291	6.3	8	3.02	0.79	0.79
81A	23.3	0.01	91	1645	0.280	6.4	8	3.07	0.79	0.79
82A	22.2	0.01	91	2122	0.161	6.3	11	2.60	0.77	0.77
84B	26.2	0.01	91	1697	0.165	6.1	10	2.65	0.77	0.77
85B	33.5	0.01	91	2040	0.168	6.3	11	2.60	0.77	0.77
88A	2.8	0.01	91	467	0.096	6.4	5	3.82	0.81	0.81
89C	21.6	0.01	91	1492	0.372	6.8	7	3.44	0.80	0.80
90C	23.5	0.01	91	2246	0.220	6.6	11	2.71	0.78	0.78
92A	30.8	0.01	91	1641	0.181	6.5	9	2.94	0.79	0.79
93A	42.1	0.01	91	1873	0.232	6.5	9	2.94	0.79	0.79
94A	16.0	0.01	91	1377	0.290	6.6	7	3.35	0.80	0.80
97A	14.4	0.01	91	1487	0.269	6.6	8	3.15	0.79	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	78.17	32.5	78.17	2	1173.	.20100	.00	.00	0.	93	7	A37	.01
1352 2A	34.8	77.49	67.3	152.99	2	369.	.19500	.00	.00	0.	93	8	A37	.01
1352 3A	33.3	65.99	100.6	217.09	2	1353.	.24000	.00	.00	0.	93	10	A37	.01
1352 4A	37.9	84.39	138.5	295.39	2	1.	.24000	.00	.00	0.	93	8	A37	.01
1352 5A	.0	.00	138.5	295.39	4	1.	.01000	5.25	.00	0.	93	99	A37	.00
1352 6B	28.8	69.27	28.8	69.27	2	494.	.25300	.00	.00	0.	93	7	A37	.01
1352 7B	12.2	29.34	41.0	98.34	2	1.	.25300	.00	.00	0.	93	7	A37	.01
1352 8B	22.3	46.68	63.3	144.89	2	1342.	.28700	.00	.00	0.	93	9	A37	.01
1352 9B	24.6	51.49	87.9	193.56	2	1.	.28700	.00	.00	0.	93	9	A37	.01
1352 10B	.0	.00	87.9	193.55	4	1.	.01000	4.50	.00	0.	93	99	A37	.00

****
* CONFLUENCE Q'S *
* 1352 11A TA 1156 QA 295.39 QAB 485.40 QB 190.01 1352 11B TB 1155 QB 193.52 QBA 486.69 QA 293.16 *
* 1352 11AB TAB 1155 QAB 486.69 QA 293.16 QB 193.52 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	193.52	226.4	486.69	2	655.	.14500	.00	.00	0.	93	0	A37	.00
1352 12A	.0	.00	226.4	485.71	4	1.	.01000	6.25	.00	0.	93	99	A37	.00
1352 13A	24.0	57.72	250.4	533.64	2	1.	.14500	.00	.00	0.	93	7	A37	.01
1352 14A	.0	.00	250.4	533.64	4	1.	.01000	6.50	.00	0.	93	99	A37	.00
1352 15C	37.0	73.32	37.0	73.32	2	826.	.24800	.00	.00	0.	93	10	A37	.01
1352 16C	40.2	84.14	77.2	155.44	2	1267.	.26000	.00	.00	0.	93	9	A37	.01
1352 17C	31.9	66.77	109.1	218.55	2	1.	.26000	.00	.00	0.	93	9	A37	.01
1352 18C	.0	.00	109.1	218.54	4	1.	.01000	4.75	.00	0.	93	99	A37	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1156 QA 533.64 QAC 751.58 QC 217.95 1352 19C TC 1155 QC 218.51 QCA 751.15 QA 532.64 *
* 1352 19AC TAC 1156 QAC 751.58 QA 533.64 QC 217.95 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	218.51	359.5	751.58	2	1161.	.09000	.00	.00	0.	93	0	A37	.00
1352 20A	.0	.00	359.5	744.44	4	1.	.01000	7.25	.00	0.	93	99	A37	.00
1352 21A	39.2	77.68	398.7	816.37	2	1.	.09000	.00	.00	0.	93	10	A37	.01
1352 22A	.0	.00	398.7	816.35	4	1.	.01000	7.50	.00	0.	93	99	A37	.00
1352 23D	30.8	68.58	30.8	68.58	2	1242.	.23000	.00	.00	0.	93	8	A37	.01
1352 24D	39.3	87.51	70.1	153.44	2	1308.	.03800	.00	.00	0.	93	8	A37	.01
1352 25D	42.3	88.54	112.4	225.62	2	723.	.22800	.00	.00	0.	93	9	A37	.01
1352 26D	30.9	74.32	143.3	275.34	2	720.	.09000	.00	.00	0.	93	7	A37	.01
1352 27D	26.9	59.90	170.2	326.77	2	1.	.09000	.00	.00	0.	93	8	A37	.01
1352 28D	.0	.00	170.2	326.77	4	1.	.01000	5.50	.00	0.	93	99	A37	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

****
* CONFLUENCE Q'S *

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*   1352   29A  TA 1157 QA   816.34 QAD  1138.68 QD   322.35    1352   29D  TD 1156 QD   326.75 QDA  1143.06 QA   816.31   *
*                                 1352   29AD TAD 1156 QAD  1143.06 QA   816.31 QD   326.75                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	326.75	568.9	1143.06	2	668.	.04800	.00	.00	0.	93	0	A37	.00
1352	30A	.0	.00	568.9	1138.66	5	1.	.01000	11.00	.00	0.	93	99	A37	.00
1352	31A	29.2	55.92	598.1	1190.24	2	506.	.04400	.00	.00	0.	93	10	A36	.01
1352	32A	22.2	44.94	620.3	1215.89	2	635.	.03900	.00	.00	0.	93	9	A36	.01
1352	33A	23.1	53.67	643.4	1240.25	2	593.	.04200	.00	.00	0.	93	7	A36	.01
1352	34A	35.7	68.36	679.1	1280.80	2	572.	.03500	.00	.00	0.	93	10	A36	.01
1352	35A	29.2	53.97	708.3	1318.31	2	485.	.04100	.00	.00	0.	93	10	A35	.01
1352	36A	25.6	53.19	733.9	1329.91	2	532.	.03800	.00	.00	0.	93	8	A35	.01
1352	37A	.0	.00	733.9	1326.66	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	38A	23.7	47.55	757.6	1343.77	2	396.	.05100	.00	.00	0.	93	8	A34	.01
1352	39A	32.5	61.15	790.1	1367.67	2	838.	.05600	.00	.00	0.	93	9	A34	.01
1352	40A	20.2	42.13	810.3	1363.04	2	1.	.05600	.00	.00	0.	93	7	A33	.01
1352	41A	22.5	43.25	832.8	1370.35	2	1.	.13300	.00	.00	0.	93	7	A31	.01
1352	42A	28.5	48.74	861.3	1393.43	2	840.	.05700	.00	.00	0.	93	10	A33	.01
1352	43A	.0	.00	861.3	1385.49	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	44A	20.2	35.12	881.5	1397.68	2	1.	.05700	.00	.00	0.	93	9	A32	.01
1352	45A	24.8	39.07	906.3	1416.10	2	575.	.03500	.00	.00	0.	93	10	A31	.01
1352	46A	15.1	29.13	921.4	1412.68	2	1319.	.03400	.00	.00	0.	93	8	A33	.01
1352	47A	24.6	37.97	946.0	1411.82	2	1.	.03400	.00	.00	0.	93	11	A32	.01
1352	48A	24.9	45.01	970.9	1419.79	2	722.	.03900	.00	.00	0.	93	9	A33	.01
1352	49A	20.9	38.70	991.8	1416.88	2	846.	.04700	.00	.00	0.	93	8	A32	.01
1352	50A	19.2	37.04	1011.0	1412.06	2	1.	.04700	.00	.00	0.	93	8	A33	.01
1352	51A	.0	.00	1011.0	1412.06	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	52E	28.8	64.57	28.8	64.57	2	940.	.14400	.00	.00	0.	93	7	A35	.01
1352	53E	24.8	49.76	53.6	112.22	2	971.	.27800	.00	.00	0.	93	8	A34	.01
1352	54E	33.4	62.84	87.0	171.21	2	1110.	.18700	.00	.00	0.	93	9	A34	.01
1352	55E	23.1	41.75	110.1	209.13	2	1.	.18700	.00	.00	0.	93	9	A33	.01
1352	56E	.0	.00	110.1	209.13	4	1.	.01000	4.50	.00	0.	93	99	A37	.00

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*                                                   CONFLUENCE Q'S                                                          *
*   1352   57A  TA 1165 QA  1412.06 QAE  1455.03 QE    42.97    1352   57E  TE 1156 QE   209.12 QEA  1011.65 QA   802.53   *
*                                 1352   57AE TAE 1164 QAE  1462.85 QA  1410.20 QE    52.65                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	209.12	1121.1	1462.85	2	180.	.03900	.00	.00	0.	93	0	A37	.00
1352	58A	.0	.00	1121.1	1459.88	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	59A	28.2	48.23	1149.3	1468.45	2	815.	.01800	.00	.00	0.	93	10	A33	.01
1352	60A	27.2	56.73	1176.5	1464.68	2	1136.	.05700	.00	.00	0.	93	7	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	30.61	1194.4	1462.88	2	1.	.05700	.00	.00	0.	93	10	A33	.01
1352	62A	.0	.00	1194.4	1462.86	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	63F	27.0	56.10	27.0	56.10	2	586.	.19600	.00	.00	0.	93	8	A35	.01
1352	64F	40.8	68.16	67.8	123.95	2	727.	.08900	.00	.00	0.	93	11	A34	.01
1352	65F	37.4	63.97	105.2	184.34	2	1.	.08900	.00	.00	0.	93	10	A33	.01
1352	66F	32.6	65.41	137.8	248.19	2	1.	.14100	.00	.00	0.	93	8	A34	.01
1352	67F	18.8	35.37	156.6	282.85	2	677.	.08100	.00	.00	0.	93	9	A34	.01
1352	68F	9.2	17.75	165.8	298.07	2	1.	.08100	.00	.00	0.	93	8	A33	.01
1352	69F	.0	.00	165.8	298.06	4	1.	.01000	5.25	.00	0.	93	99	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1166 QA  1462.84 QAF  1523.10 QF    60.26    1352   70F  TF 1156 QF   298.06 QFA  1194.01 QA   895.95   *
*                                1352   70AF TAF 1166 QAF  1523.10 QA  1462.84 QF    60.26                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	298.06	1360.2	1523.10	2	561.	.03600	.00	.00	0.	93	0	A37	.00
1352	71A	.0	.00	1360.2	1517.99	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	72A	6.4	13.35	1366.6	1519.23	2	1.	.03600	.00	.00	0.	93	7	A33	.01
1352	73A	20.0	40.46	1386.6	1526.32	2	434.	.03000	.00	.00	0.	91	9	A33	.01
1352	74A	21.9	45.26	1408.5	1532.46	2	420.	.02900	.00	.00	0.	91	8	A32	.01
1352	75A	42.0	78.21	1450.5	1543.49	2	1019.	.02000	.00	.00	0.	91	10	A32	.01
1352	76A	26.1	48.60	1476.6	1545.22	2	249.	.04000	.00	.00	0.	91	10	A32	.01
1352	77A	12.2	25.21	1488.8	1548.40	2	1.	.04000	.00	.00	0.	91	8	A32	.01
1352	78A	.0	.00	1488.8	1548.40	5	1.	.01000	12.00	.00	0.	91	99	A37	.00
1352	79A	14.2	30.42	1503.0	1552.40	2	643.	.01900	.00	.00	0.	91	8	A33	.01
1352	80A	18.2	37.61	1521.2	1553.69	2	751.	.02400	.00	.00	0.	91	8	A32	.01
1352	81A	23.3	49.92	1544.5	1557.89	2	709.	.02400	.00	.00	0.	91	8	A33	.01
1352	82A	22.2	39.08	1566.7	1561.67	2	1.	.02400	.00	.00	0.	91	11	A32	.01
1352	83A	.0	.00	1566.7	1561.66	5	1.	.01000	12.00	.00	0.	91	99	A37	.00
1352	84B	26.2	46.96	26.2	46.96	2	1438.	.06400	.00	.00	0.	91	10	A31	.01
1352	85B	33.5	58.97	59.7	99.37	2	1.	.06400	.00	.00	0.	91	11	A32	.01
1352	86B	.0	.00	59.7	99.35	4	1.	.01000	3.50	.00	0.	91	99	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1171 QA  1561.64 QAB  1580.62 QB    18.98    1352   87B  TB 1157 QB    99.34 QBA  1095.45 QA   996.12   *
*                                1352   87AB TAB 1171 QAB  1580.62 QA  1561.64 QB    18.98                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	99.34	1626.4	1580.62	2	405.	.02300	.00	.00	0.	91	0	A37	.00
1352	88A	2.8	7.82	1629.2	1579.96	2	1.	.02300	.00	.00	0.	91	5	A33	.01
1352	89C	21.6	51.32	21.6	51.32	2	1328.	.09400	.00	.00	0.	91	7	A34	.01
1352	90C	23.5	42.87	45.1	90.58	2	1.	.09400	.00	.00	0.	91	11	A33	.01

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1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN A STORM DAY 4

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*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1171 QA  1579.96 QAC  1593.59 QC    13.63    1352   91C  TC 1156 QC    90.57 QCA  1056.48 QA   965.90   *
*                                1352   91AC TAC 1171 QAC  1593.59 QA  1579.96 QC    13.63                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	90.57	1674.3	1593.59	2	977.	.02400	.00	.00	0.	91	0	A37	.00
1352	92A	30.8	62.31	1705.1	1599.10	2	999.	.01300	.00	.00	0.	91	9	A33	.01
1352	93A	42.1	85.17	1747.2	1606.44	2	448.	.02200	.00	.00	0.	91	9	A33	.01
1352	94A	16.0	36.73	1763.2	1609.58	2	1.	.02200	.00	.00	0.	91	7	A33	.01
1352	95D	371.4	679.60	371.4	679.60	2	1.	.02200	.00	.00	0.	91	0	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1174 QA  1609.58 QAD  1744.82 QD   135.24    1352   96D  TD 1159 QD   679.57 QDA  1792.76 QA  1113.18   *
*                                1352   96AD TAD 1164 QAD  1908.37 QA  1441.94 QD   466.43                                 *
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		SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL		RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	679.57	2134.6	1908.37	2	892.	.01700	.00	.00	0.	91	0	A37	.00
1352	97A	14.4	30.85	2149.0	1911.99	2	1.	.01700	.00	.00	0.	91	8	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	31.84	200	32.51	300	34.01	400	35.89
500	38.06	600	40.93	700	46.83	800	57.65	900	73.88
1000	105.67	1050	152.07	1100	249.99	1110	288.17	1120	349.20
1130	434.76	1131	444.19	1132	453.80	1133	464.18	1134	474.90
1135	486.14	1136	497.90	1137	510.27	1138	523.48	1139	537.68
1140	552.72	1141	568.99	1142	586.55	1143	605.65	1144	626.32
1145	648.97	1146	673.90	1147	701.58	1148	732.16	1149	768.81
1150	813.33	1151	870.05	1152	939.82	1153	1023.39	1154	1119.80
1155	1229.20	1156	1347.51	1157	1467.23	1158	1585.45	1159	1692.25
1160	1776.86	1161	1835.99	1162	1876.46	1163	1900.10	1164	1910.33
1165	1911.99	1166	1906.89	1167	1894.87	1168	1877.05	1169	1856.69
1170	1835.48	1171	1814.32	1172	1794.98	1173	1778.20	1174	1764.01
1175	1750.89	1176	1736.24	1177	1716.42	1178	1688.55	1179	1650.85
1180	1603.82	1181	1547.81	1182	1485.78	1183	1418.91	1184	1350.28
1185	1280.69	1186	1212.59	1187	1145.82	1188	1081.66	1189	1020.73
1190	962.85	1191	908.64	1192	857.65	1193	809.79	1194	765.28
1195	723.78	1196	685.16	1197	649.25	1198	615.85	1199	584.88
1200	555.96	1201	529.07	1202	504.12	1203	480.79	1204	459.17
1205	439.26	1206	420.92	1207	403.40	1208	386.99	1209	371.83
1210	357.56	1211	344.36	1212	331.62	1213	319.34	1214	307.62
1215	296.80	1216	286.94	1217	277.70	1218	268.62	1219	259.94
1220	251.77	1221	244.56	1222	237.53	1223	230.68	1224	224.26
1225	218.26	1226	212.64	1227	207.45	1228	202.38	1229	197.35
1230	192.49	1231	187.79	1232	183.15	1233	178.67	1234	174.30
1235	170.02	1236	165.78	1237	161.75	1238	157.88	1239	154.14
1240	150.78	1241	147.45	1242	144.18	1243	140.86	1244	137.75
1245	134.86	1246	132.11	1247	129.63	1248	127.33	1249	125.16
1250	122.97	1251	120.93	1252	118.90	1253	116.97	1254	115.05
1255	113.24	1256	111.46	1257	109.67	1258	107.91	1259	106.12
1260	104.52	1261	102.97	1262	101.48	1263	99.85	1264	98.27
1265	96.69	1266	95.15	1267	93.62	1268	92.22	1269	90.84
1270	89.46	1271	88.10	1272	86.79	1273	85.50	1274	84.17
1275	83.02	1276	81.83	1277	80.59	1278	79.44	1279	78.34
1280	77.31	1281	76.22	1282	75.21	1283	74.11	1284	73.14
1285	72.19	1286	71.26	1287	70.35	1288	69.45	1289	68.54
1290	67.66	1291	66.82	1292	66.02	1293	65.24	1294	64.44
1295	63.75	1296	62.96	1297	62.25	1298	61.47	1299	60.76
1300	60.08	1310	54.61	1320	50.91	1330	48.32	1340	46.34
1350	44.73	1360	43.29	1370	41.99	1380	40.74	1390	39.67
1400	38.65	1420	36.87	1440	35.38	1460	32.94	1500	31.63

TOTAL VOLUME THIS HYDROGRAPH = 242.73(Ac.Ft)

Basin B - 25 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	7.1	7	3.62	0.75	0.75
2A	36.3	0.01	93	2008	0.354	7.1	9	3.22	0.73	0.73
3A	11.1	0.01	93	1303	0.437	7.1	6	3.89	0.76	0.76
4A	25.5	0.01	93	2134	0.354	7.3	9	3.30	0.73	0.74
5A	18.9	0.01	93	1414	0.375	7.1	7	3.62	0.75	0.75
6A	19.2	0.01	93	1221	0.483	7.1	6	3.89	0.76	0.76
7A	24.7	0.01	93	1706	0.396	7.1	8	3.40	0.74	0.74
8A	20.4	0.01	93	1412	0.342	7.0	7	3.58	0.75	0.75
9B	25.7	0.01	91	1440	0.316	6.8	7	3.44	0.80	0.80
10B	39.8	0.01	93	2531	0.296	6.9	11	2.86	0.71	0.71
12A	15.7	0.01	91	1111	0.364	6.9	6	3.80	0.81	0.81
13A	31.9	0.01	91	1823	0.192	6.8	9	3.10	0.79	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	44.61	19.2	44.61	2	959.	.20900	.00	.00	0.	93	7	A36	.01
1352 2A	36.3	73.48	55.5	115.95	2	367.	.12300	.00	.00	0.	93	9	A36	.01
1352 3A	11.1	28.28	66.6	141.35	2	1.	.12300	.00	.00	0.	93	6	A36	.01
1352 4A	25.5	53.37	92.1	194.59	2	662.	.12100	.00	.00	0.	93	9	A37	.01
1352 5A	18.9	43.91	111.0	235.83	2	546.	.11000	.00	.00	0.	93	7	A36	.01
1352 6A	19.2	48.92	130.2	273.08	2	1340.	.16000	.00	.00	0.	93	6	A36	.01
1352 7A	24.7	53.23	154.9	318.15	2	592.	.06400	.00	.00	0.	93	8	A36	.01
1352 8A	20.4	47.40	175.3	346.57	2	1.	.06400	.00	.00	0.	93	7	A36	.01
1352 9B	25.7	61.06	25.7	61.06	2	980.	.09500	.00	.00	0.	91	7	A34	.01
1352 10B	39.8	77.66	65.5	136.77	2	1.	.09500	.00	.00	0.	91	11	A35	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1156 QA   346.56 QAB   481.88 QB   135.32    1352   11B  TB 1155 QB   136.75 QBA   465.87 QA   329.12   *
*                                 1352   11AB TAB 1156 QAB   481.88 QA   346.56 QB   135.32                      *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	136.75	240.8	481.88	2	761.	.08100	.00	.00	0.	91	0	A35	.00
1352 12A	15.7	41.88	256.5	501.61	2	1228.	.04900	.00	.00	0.	91	6	A35	.01
1352 13A	31.9	69.00	288.4	547.44	2	1.	.04900	.00	.00	0.	91	9	A35	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	4.40	200	4.55	300	4.79	400	5.05
500	5.38	600	5.97	700	7.40	800	9.47	900	12.40
1000	18.93	1050	29.13	1100	46.03	1110	57.37	1120	74.45
1130	94.54	1131	96.58	1132	98.70	1133	101.13	1134	103.71
1135	106.42	1136	109.40	1137	112.76	1138	116.56	1139	120.59
1140	124.91	1141	130.12	1142	135.68	1143	141.84	1144	148.60
1145	156.79	1146	165.55	1147	175.31	1148	186.48	1149	204.78
1150	226.11	1151	254.42	1152	292.41	1153	341.40	1154	393.86
1155	450.71	1156	501.58	1157	537.74	1158	547.44	1159	534.58
1160	502.78	1161	457.58	1162	405.33	1163	356.38	1164	309.57
1165	267.03	1166	229.87	1167	198.28	1168	172.45	1169	150.83
1170	133.22	1171	118.40	1172	106.37	1173	96.17	1174	88.09
1175	81.25	1176	75.38	1177	70.30	1178	66.22	1179	62.41
1180	59.12	1181	56.08	1182	53.60	1183	51.34	1184	49.12
1185	47.18	1186	45.40	1187	43.79	1188	42.32	1189	40.90
1190	39.53	1191	38.24	1192	37.01	1193	35.85	1194	34.86
1195	33.78	1196	32.75	1197	31.76	1198	30.93	1199	30.03
1200	29.32	1201	28.53	1202	27.83	1203	27.15	1204	26.58
1205	26.01	1206	25.43	1207	24.61	1208	24.09	1209	23.46
1210	22.99	1211	22.54	1212	22.10	1213	21.52	1214	20.93
1215	20.48	1216	20.05	1217	19.52	1218	19.14	1219	18.63
1220	18.26	1221	17.92	1222	17.59	1223	17.28	1224	16.73
1225	16.46	1226	16.20	1227	15.94	1228	15.68	1229	15.41
1230	15.01	1231	14.62	1232	14.39	1233	14.32	1234	14.01
1235	13.82	1236	13.63	1237	13.31	1238	13.12	1239	12.84
1240	12.82	1241	12.57	1242	12.43	1243	12.31	1244	12.18
1245	11.93	1246	11.82	1247	11.72	1248	11.62	1249	11.40
1250	11.43	1251	11.20	1252	11.10	1253	10.89	1254	10.92
1255	10.84	1256	10.62	1257	10.54	1258	10.46	1259	10.24
1260	10.15	1261	10.18	1262	10.09	1263	9.88	1264	9.80
1265	9.74	1266	9.68	1267	9.63	1268	9.59	1269	9.54
1270	9.22	1271	9.13	1272	9.05	1273	8.96	1274	8.87
1275	8.78	1276	8.69	1277	8.61	1278	8.40	1279	8.47
1280	8.42	1281	8.36	1282	8.18	1283	8.12	1284	8.05
1285	7.98	1286	7.79	1287	7.88	1288	7.84	1289	7.67
1290	7.62	1291	7.70	1292	7.52	1293	7.46	1294	7.28
1295	7.35	1296	7.30	1297	7.12	1298	7.19	1299	7.02
1300	6.97	1310	6.32	1320	5.98	1330	5.73	1340	5.56
1350	5.41	1360	5.26	1370	5.13	1380	5.00	1390	4.89
1400	4.81	1420	4.64	1440	4.48	1460	3.92	1500	3.92

TOTAL VOLUME THIS HYDROGRAPH = 35.49(Ac.Ft)

Basin C - 25 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	18.6	0.01	91	2004	0.274	6.7	9	3.02	0.79	0.79
2A	26.9	0.01	91	2490	0.245	6.8	11	2.78	0.78	0.78
5A	37.5	0.01	91	2766	0.110	6.7	14	2.45	0.76	0.76

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	38.98	18.6	38.98	2	704.	.07800	.00	.00	0.	91	9	A34	.01
1352	2A	26.9	50.78	45.5	88.85	2	1.	.07800	.00	.00	0.	91	11	A34	.01
1352	3B	288.4	547.40	288.4	547.40	2	1.	.04700	.00	.00	0.	91	0	A34	.00

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*                                                    CONFLUENCE Q'S                                                    *
*   1352    4A  TA 1155 QA    88.84 QAB   539.45 QB   450.61    1352    4B  TB 1158 QB   547.39 QBA   630.45 QA    83.05   *
*                                1352    4AB TAB 1158 QAB   630.45 QA    83.05 QB   547.39                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	547.39	333.9	630.45	2	1164.	.04700	.00	.00	0.	91	0	A34	.00
1352	5A	37.5	62.08	371.4	679.60	2	1.	.04700	.00	.00	0.	91	14	A34	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	5.61	200	5.84	300	6.12	400	6.47
500	6.88	600	7.55	700	9.70	800	12.95	900	17.51
1000	26.78	1050	40.39	1100	62.89	1110	76.46	1120	98.21
1130	123.82	1131	126.64	1132	129.52	1133	132.70	1134	135.96
1135	139.07	1136	142.48	1137	146.34	1138	150.57	1139	155.29
1140	160.46	1141	166.36	1142	172.98	1143	180.27	1144	188.20
1145	197.37	1146	207.59	1147	219.06	1148	231.67	1149	250.21
1150	273.77	1151	304.48	1152	343.15	1153	392.00	1154	447.02
1155	507.25	1156	567.82	1157	622.76	1158	662.91	1159	679.60
1160	670.94	1161	639.41	1162	591.17	1163	529.64	1164	466.27
1165	405.79	1166	350.63	1167	302.18	1168	264.11	1169	232.34
1170	205.70	1171	183.33	1172	164.56	1173	148.60	1174	135.21
1175	123.83	1176	114.45	1177	106.22	1178	99.08	1179	93.03
1180	87.72	1181	83.09	1182	78.83	1183	75.03	1184	71.85
1185	68.90	1186	66.15	1187	63.71	1188	61.36	1189	59.35
1190	57.50	1191	55.62	1192	53.90	1193	52.16	1194	50.60
1195	49.03	1196	47.65	1197	46.33	1198	45.02	1199	43.76
1200	42.56	1201	41.41	1202	40.34	1203	39.37	1204	38.47
1205	37.68	1206	36.73	1207	36.04	1208	35.25	1209	34.44
1210	33.73	1211	32.95	1212	32.19	1213	31.47	1214	30.86
1215	30.15	1216	29.44	1217	28.86	1218	28.18	1219	27.52
1220	26.97	1221	26.34	1222	25.90	1223	25.37	1224	24.86
1225	24.45	1226	24.01	1227	23.57	1228	22.97	1229	22.59
1230	22.23	1231	21.80	1232	21.45	1233	20.97	1234	20.59
1235	20.18	1236	19.89	1237	19.62	1238	19.35	1239	18.98
1240	18.59	1241	18.31	1242	18.05	1243	17.82	1244	17.51
1245	17.31	1246	17.05	1247	16.97	1248	16.67	1249	16.49
1250	16.24	1251	16.07	1252	15.81	1253	15.66	1254	15.59
1255	15.32	1256	15.15	1257	14.92	1258	14.78	1259	14.63
1260	14.50	1261	14.26	1262	14.10	1263	13.96	1264	13.78
1265	13.68	1266	13.56	1267	13.41	1268	13.17	1269	13.04
1270	12.93	1271	12.74	1272	12.63	1273	12.48	1274	12.33
1275	12.11	1276	12.00	1277	11.88	1278	11.86	1279	11.66
1280	11.55	1281	11.43	1282	11.23	1283	11.14	1284	10.96
1285	10.95	1286	10.83	1287	10.62	1288	10.51	1289	10.42
1290	10.33	1291	10.15	1292	10.05	1293	9.96	1294	9.89
1295	9.71	1296	9.70	1297	9.51	1298	9.52	1299	9.35
1300	9.27	1310	8.36	1320	7.77	1330	7.40	1340	7.15
1350	6.95	1360	6.78	1370	6.58	1380	6.42	1390	6.28
1400	6.14	1420	5.92	1440	5.74	1460	5.09	1500	5.06

TOTAL VOLUME THIS HYDROGRAPH = 47.50(Ac.Ft)

STEVENSON RANCH

50-YEAR CLEAR

EXISTING CONDITION

Basin A - 50 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	8.4	6	4.60	0.79	0.79
2A	34.8	0.01	93	1871	0.405	8.4	7	4.28	0.77	0.78
3A	33.3	0.01	93	2288	0.337	8.4	9	3.80	0.76	0.76
4A	37.9	0.01	93	1862	0.440	8.4	7	4.28	0.77	0.78
6B	28.8	0.01	93	1664	0.508	8.4	6	4.60	0.79	0.79
7B	12.2	0.01	93	1488	0.460	8.4	6	4.60	0.79	0.79
8B	22.3	0.01	93	2064	0.359	8.4	8	4.02	0.76	0.77
9B	24.6	0.01	93	2208	0.376	8.4	8	4.02	0.76	0.77
13A	24.0	0.01	93	1693	0.428	8.4	7	4.28	0.77	0.78
15C	37.0	0.01	93	2219	0.306	8.4	9	3.80	0.76	0.76
16C	40.2	0.01	93	2159	0.322	8.4	8	4.02	0.76	0.77
17C	31.9	0.01	93	1934	0.334	8.4	8	4.02	0.76	0.77
21A	39.2	0.01	93	2213	0.305	8.3	9	3.76	0.76	0.76
23D	30.8	0.01	93	1773	0.313	8.4	7	4.28	0.77	0.78
24D	39.3	0.01	93	1628	0.289	8.4	7	4.28	0.77	0.78
25D	42.3	0.01	93	1712	0.216	8.4	8	4.02	0.76	0.77
26D	30.9	0.01	93	1709	0.471	8.3	7	4.23	0.77	0.77
27D	26.9	0.01	93	1779	0.360	8.3	7	4.23	0.77	0.77
31A	29.2	0.01	93	2176	0.327	8.1	9	3.67	0.75	0.75
32A	22.2	0.01	93	1894	0.383	8.1	8	3.87	0.76	0.76
33A	23.1	0.01	93	1600	0.428	8.0	7	4.07	0.77	0.77
34A	35.7	0.01	93	2286	0.341	8.0	9	3.62	0.75	0.75
35A	29.2	0.01	93	2014	0.305	7.9	8	3.78	0.76	0.76
36A	25.6	0.01	93	1738	0.328	7.9	8	3.78	0.76	0.76
38A	23.7	0.01	93	1497	0.367	7.7	7	3.92	0.76	0.76
39A	32.5	0.01	93	1852	0.308	7.6	8	3.64	0.75	0.75
40A	20.2	0.01	93	1367	0.400	7.5	6	4.11	0.77	0.77
41A	22.5	0.01	93	1307	0.409	7.0	7	3.57	0.75	0.75
42A	28.5	0.01	93	1919	0.302	7.3	9	3.30	0.73	0.74
44A	20.2	0.01	93	1582	0.329	7.2	8	3.44	0.74	0.74
45A	24.8	0.01	93	1957	0.335	7.0	9	3.17	0.73	0.73
46A	15.1	0.01	93	1406	0.420	7.3	7	3.72	0.75	0.76
47A	24.6	0.01	93	2076	0.234	7.2	10	3.10	0.72	0.72
48A	24.9	0.01	93	1739	0.408	7.4	8	3.54	0.75	0.75
49A	20.9	0.01	93	1541	0.343	7.2	7	3.67	0.75	0.75
50A	19.2	0.01	93	1394	0.325	7.3	7	3.72	0.75	0.76
52E	28.8	0.01	93	1432	0.332	7.8	7	3.97	0.76	0.76
53E	24.8	0.01	93	1534	0.306	7.7	7	3.92	0.76	0.76
54E	33.4	0.01	93	1783	0.334	7.6	8	3.64	0.75	0.75
55E	23.1	0.01	93	1853	0.409	7.4	8	3.54	0.75	0.75
59A	28.2	0.01	93	2259	0.429	7.5	9	3.39	0.74	0.74
60A	27.2	0.01	93	1234	0.405	7.4	6	4.05	0.77	0.77
61A	17.9	0.01	93	1533	0.117	7.4	9	3.35	0.74	0.74
63F	27.0	0.01	93	1616	0.374	7.9	7	4.02	0.76	0.77
64F	40.8	0.01	93	2620	0.393	7.7	10	3.32	0.73	0.74

Basin A - 50 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	7.5	9	3.39	0.74	0.74
66F	32.6	0.01	93	1732	0.514	7.7	7	3.92	0.76	0.76
67F	18.8	0.01	93	1684	0.303	7.6	8	3.64	0.75	0.75
68F	9.2	0.01	93	1319	0.250	7.5	7	3.82	0.76	0.76
72A	6.4	0.01	93	1153	0.264	7.3	6	4.00	0.76	0.77
73A	20.0	0.01	91	1766	0.311	7.4	8	3.54	0.80	0.80
74A	21.9	0.01	91	1507	0.234	7.2	8	3.44	0.80	0.80
75A	42.0	0.01	91	1789	0.159	7.1	9	3.21	0.79	0.80
76A	26.1	0.01	91	1672	0.144	7.1	9	3.21	0.79	0.80
77A	12.2	0.01	91	1303	0.165	7.1	7	3.62	0.80	0.80
79A	14.2	0.01	91	1659	0.316	7.3	7	3.72	0.81	0.81
80A	18.2	0.01	91	1622	0.291	7.2	8	3.44	0.80	0.80
81A	23.3	0.01	91	1645	0.280	7.3	8	3.49	0.80	0.80
82A	22.2	0.01	91	2122	0.161	7.2	10	3.10	0.79	0.79
84B	26.2	0.01	91	1697	0.165	7.0	9	3.17	0.79	0.79
85B	33.5	0.01	91	2040	0.168	7.2	10	3.10	0.79	0.79
88A	2.8	0.01	91	467	0.096	7.3	5	4.36	0.82	0.82
89C	21.6	0.01	91	1492	0.372	7.7	7	3.92	0.81	0.81
90C	23.5	0.01	91	2246	0.220	7.5	10	3.23	0.79	0.80
92A	30.8	0.01	91	1641	0.181	7.4	8	3.54	0.80	0.80
93A	42.1	0.01	91	1873	0.232	7.4	8	3.54	0.80	0.80
94A	16.0	0.01	91	1377	0.290	7.5	7	3.82	0.81	0.81
97A	14.4	0.01	91	1487	0.269	7.5	7	3.82	0.81	0.81

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	116.51	32.5	116.51	2	1173.	.20100	.00	.00	0.	93	6	A42	.01
1352 2A	34.8	114.07	67.3	224.81	2	369.	.19500	.00	.00	0.	93	7	A42	.01
1352 3A	33.3	95.52	100.6	318.69	2	1353.	.24000	.00	.00	0.	93	9	A42	.01
1352 4A	37.9	124.23	138.5	435.80	2	1.	.24000	.00	.00	0.	93	7	A42	.01
1352 5A	.0	.00	138.5	435.79	4	1.	.01000	6.00	.00	0.	93	99	A42	.00
1352 6B	28.8	103.25	28.8	103.25	2	494.	.25300	.00	.00	0.	93	6	A42	.01
1352 7B	12.2	43.74	41.0	146.98	2	1.	.25300	.00	.00	0.	93	6	A42	.01
1352 8B	22.3	67.96	63.3	214.94	2	1342.	.28700	.00	.00	0.	93	8	A42	.01
1352 9B	24.6	74.97	87.9	283.32	2	1.	.28700	.00	.00	0.	93	8	A42	.01
1352 10B	.0	.00	87.9	283.32	4	1.	.01000	5.25	.00	0.	93	99	A42	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1155 QA   435.74 QAB   719.05 QB   283.31    1352   11B  TB 1155 QB   283.31 QBA   719.05 QA   435.74   *
*                                1352   11AB TAB 1155 QAB   719.05 QA   435.74 QB   283.31                                *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	283.31	226.4	719.05	2	655.	.14500	.00	.00	0.	93	0	A42	.00
1352 12A	.0	.00	226.4	710.70	4	1.	.01000	7.25	.00	0.	93	99	A42	.00
1352 13A	24.0	78.67	250.4	787.81	2	1.	.14500	.00	.00	0.	93	7	A42	.01
1352 14A	.0	.00	250.4	787.78	4	1.	.01000	7.50	.00	0.	93	99	A42	.00
1352 15C	37.0	106.14	37.0	106.14	2	826.	.24800	.00	.00	0.	93	9	A42	.01
1352 16C	40.2	122.51	77.2	227.01	2	1267.	.26000	.00	.00	0.	93	8	A42	.01
1352 17C	31.9	97.22	109.1	320.52	2	1.	.26000	.00	.00	0.	93	8	A42	.01
1352 18C	.0	.00	109.1	320.51	4	1.	.01000	5.50	.00	0.	93	99	A42	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1155 QA   787.72 QAC  1108.21 QC   320.49    1352   19C  TC 1155 QC   320.49 QCA  1108.21 QA   787.72   *
*                                1352   19AC TAC 1155 QAC  1108.21 QA   787.72 QC   320.49                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	320.49	359.5	1108.21	2	1161.	.09000	.00	.00	0.	93	0	A42	.00
1352 20A	.0	.00	359.5	1094.43	5	1.	.01000	11.00	.00	0.	93	99	A42	.00
1352 21A	39.2	112.45	398.7	1201.79	2	1.	.09000	.00	.00	0.	93	9	A42	.01
1352 22A	.0	.00	398.7	1201.78	5	1.	.01000	11.00	.00	0.	93	99	A42	.00
1352 23D	30.8	100.96	30.8	100.96	2	1242.	.23000	.00	.00	0.	93	7	A42	.01
1352 24D	39.3	128.82	70.1	226.32	2	1308.	.03800	.00	.00	0.	93	7	A42	.01
1352 25D	42.3	128.91	112.4	332.48	2	723.	.22800	.00	.00	0.	93	8	A42	.01
1352 26D	30.9	101.29	143.3	410.52	2	720.	.09000	.00	.00	0.	93	7	A42	.01
1352 27D	26.9	88.18	170.2	478.96	2	1.	.09000	.00	.00	0.	93	7	A42	.01
1352 28D	.0	.00	170.2	478.96	4	1.	.01000	6.25	.00	0.	93	99	A42	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1156 QA  1201.76 QAD  1680.71 QD   478.95    1352   29D  TD 1156 QD   478.95 QDA  1680.71 QA  1201.76   *
*                                1352   29AD TAD 1156 QAD  1680.71 QA  1201.76 QD   478.95                                   *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	478.95	568.9	1680.71	2	668.	.04800	.00	.00	0.	93	0	A42	.00
1352	30A	.0	.00	568.9	1658.81	5	1.	.01000	13.00	.00	0.	93	99	A42	.00
1352	31A	29.2	81.43	598.1	1734.36	2	506.	.04400	.00	.00	0.	93	9	A41	.01
1352	32A	22.2	65.81	620.3	1787.40	2	635.	.03900	.00	.00	0.	93	8	A41	.01
1352	33A	23.1	71.52	643.4	1815.75	2	593.	.04200	.00	.00	0.	93	7	A40	.01
1352	34A	35.7	96.48	679.1	1880.52	2	572.	.03500	.00	.00	0.	93	9	A40	.01
1352	35A	29.2	83.94	708.3	1924.92	2	485.	.04100	.00	.00	0.	93	8	A40	.01
1352	36A	25.6	73.59	733.9	1948.49	2	532.	.03800	.00	.00	0.	93	8	A40	.01
1352	37A	.0	.00	733.9	1948.34	5	1.	.01000	13.00	.00	0.	93	99	A42	.00
1352	38A	23.7	71.13	757.6	1975.79	2	396.	.05100	.00	.00	0.	93	7	A39	.01
1352	39A	32.5	87.81	790.1	2013.01	2	838.	.05600	.00	.00	0.	93	8	A38	.01
1352	40A	20.2	64.40	810.3	2007.78	2	1.	.05600	.00	.00	0.	93	6	A38	.01
1352	41A	22.5	59.17	832.8	2021.49	2	1.	.13300	.00	.00	0.	93	7	A35	.01
1352	42A	28.5	70.10	861.3	2058.37	2	840.	.05700	.00	.00	0.	93	9	A37	.01
1352	43A	.0	.00	861.3	2054.77	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	44A	20.2	51.12	881.5	2073.90	2	1.	.05700	.00	.00	0.	93	8	A36	.01
1352	45A	24.8	56.97	906.3	2102.61	2	575.	.03500	.00	.00	0.	93	9	A35	.01
1352	46A	15.1	42.57	921.4	2094.31	2	1319.	.03400	.00	.00	0.	93	7	A37	.01
1352	47A	24.6	55.52	946.0	2095.90	2	1.	.03400	.00	.00	0.	93	10	A36	.01
1352	48A	24.9	65.04	970.9	2108.57	2	722.	.03900	.00	.00	0.	93	8	A37	.01
1352	49A	20.9	56.94	991.8	2112.15	2	846.	.04700	.00	.00	0.	93	7	A36	.01
1352	50A	19.2	54.13	1011.0	2107.10	2	1.	.04700	.00	.00	0.	93	7	A37	.01
1352	51A	.0	.00	1011.0	2107.09	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	52E	28.8	86.43	28.8	86.43	2	940.	.14400	.00	.00	0.	93	7	A39	.01
1352	53E	24.8	74.43	53.6	158.41	2	971.	.27800	.00	.00	0.	93	7	A39	.01
1352	54E	33.4	90.24	87.0	244.63	2	1110.	.18700	.00	.00	0.	93	8	A38	.01
1352	55E	23.1	60.33	110.1	299.28	2	1.	.18700	.00	.00	0.	93	8	A37	.01
1352	56E	.0	.00	110.1	299.28	4	1.	.01000	5.25	.00	0.	93	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1163 QA  2107.07 QAE  2188.46 QE    81.39    1352   57E  TE 1156 QE   299.27 QEA  1642.69 QA  1343.41   *
*                                1352   57AE TAE 1162 QAE  2191.21 QA  2088.10 QE   103.10                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	299.27	1121.1	2191.21	2	180.	.03900	.00	.00	0.	93	0	A42	.00
1352	58A	.0	.00	1121.1	2188.68	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	59A	28.2	71.57	1149.3	2202.89	2	815.	.01800	.00	.00	0.	93	9	A38	.01
1352	60A	27.2	83.96	1176.5	2202.54	2	1136.	.05700	.00	.00	0.	93	6	A37	.01

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1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	44.03	1194.4	2202.54	2	1.	.05700	.00	.00	0.	93	9	A37	.01
1352	62A	.0	.00	1194.4	2202.53	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	63F	27.0	83.59	27.0	83.59	2	586.	.19600	.00	.00	0.	93	7	A40	.01
1352	64F	40.8	101.59	67.8	184.47	2	727.	.08900	.00	.00	0.	93	10	A39	.01
1352	65F	37.4	94.92	105.2	275.44	2	1.	.08900	.00	.00	0.	93	9	A38	.01
1352	66F	32.6	97.84	137.8	371.20	2	1.	.14100	.00	.00	0.	93	7	A39	.01
1352	67F	18.8	50.79	156.6	420.93	2	677.	.08100	.00	.00	0.	93	8	A38	.01
1352	68F	9.2	26.74	165.8	443.35	2	1.	.08100	.00	.00	0.	93	7	A38	.01
1352	69F	.0	.00	165.8	443.34	4	1.	.01000	6.00	.00	0.	93	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1164 QA  2202.51 QAF  2312.40 QF   109.88    1352   70F  TF 1155 QF   443.31 QFA  1798.91 QA  1355.60   *
*                                1352   70AF TAF 1164 QAF  2312.40 QA  2202.51 QF   109.88                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	443.31	1360.2	2312.40	2	561.	.03600	.00	.00	0.	93	0	A42	.00
1352	71A	.0	.00	1360.2	2309.29	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	72A	6.4	19.76	1366.6	2311.50	2	1.	.03600	.00	.00	0.	93	6	A37	.01
1352	73A	20.0	56.35	1386.6	2322.71	2	434.	.03000	.00	.00	0.	91	8	A37	.01
1352	74A	21.9	59.94	1408.5	2328.39	2	420.	.02900	.00	.00	0.	91	8	A36	.01
1352	75A	42.0	108.73	1450.5	2350.05	2	1019.	.02000	.00	.00	0.	91	9	A36	.01
1352	76A	26.1	67.57	1476.6	2356.60	2	249.	.04000	.00	.00	0.	91	9	A36	.01
1352	77A	12.2	35.71	1488.8	2361.41	2	1.	.04000	.00	.00	0.	91	7	A36	.01
1352	78A	.0	.00	1488.8	2361.41	5	1.	.01000	14.00	.00	0.	91	99	A42	.00
1352	79A	14.2	42.88	1503.0	2367.91	2	643.	.01900	.00	.00	0.	91	7	A37	.01
1352	80A	18.2	49.81	1521.2	2370.80	2	751.	.02400	.00	.00	0.	91	8	A36	.01
1352	81A	23.3	65.65	1544.5	2378.71	2	709.	.02400	.00	.00	0.	91	8	A37	.01
1352	82A	22.2	54.72	1566.7	2385.59	2	1.	.02400	.00	.00	0.	91	10	A36	.01
1352	83A	.0	.00	1566.7	2385.59	5	1.	.01000	14.00	.00	0.	91	99	A42	.00
1352	84B	26.2	65.63	26.2	65.63	2	1438.	.06400	.00	.00	0.	91	9	A35	.01
1352	85B	33.5	82.57	59.7	139.43	2	1.	.06400	.00	.00	0.	91	10	A36	.01
1352	86B	.0	.00	59.7	139.43	4	1.	.01000	4.00	.00	0.	91	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1168 QA  2385.58 QAB  2417.36 QB    31.78    1352   87B  TB 1156 QB   139.43 QBA  1668.90 QA  1529.47   *
*                                1352   87AB TAB 1167 QAB  2417.62 QA  2382.33 QB    35.29                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	139.43	1626.4	2417.62	2	405.	.02300	.00	.00	0.	91	0	A42	.00
1352	88A	2.8	10.20	1629.2	2418.50	2	1.	.02300	.00	.00	0.	91	5	A37	.01
1352	89C	21.6	69.04	21.6	69.04	2	1328.	.09400	.00	.00	0.	91	7	A39	.01
1352	90C	23.5	61.47	45.1	125.78	2	1.	.09400	.00	.00	0.	91	10	A38	.01

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1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN A STORM DAY 4

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*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1168 QA  2418.50 QAC  2442.15 QC    23.66    1352   91C  TC 1156 QC   125.78 QCA  1726.20 QA  1600.42   *
*                                1352   91AC TAC 1168 QAC  2442.15 QA  2418.50 QC    23.66                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	125.78	1674.3	2442.15	2	977.	.02400	.00	.00	0.	91	0	A42	.00
1352	92A	30.8	86.78	1705.1	2453.74	2	999.	.01300	.00	.00	0.	91	8	A37	.01
1352	93A	42.1	118.62	1747.2	2468.89	2	448.	.02200	.00	.00	0.	91	8	A37	.01
1352	94A	16.0	49.67	1763.2	2474.51	2	1.	.02200	.00	.00	0.	91	7	A38	.01
1352	95D	371.4	968.20	371.4	968.20	2	1.	.02200	.00	.00	0.	91	0	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1169 QA  2474.50 QAD  2753.18 QD   278.68    1352   96D  TD 1158 QD   968.18 QDA  2699.74 QA  1731.56   *
*                                1352   96AD TAD 1163 QAD  2943.10 QA  2299.54 QD   643.56                                  *
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		SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL		RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	968.18	2134.6	2943.10	2	892.	.01700	.00	.00	0.	91	0	A42	.00
1352	97A	14.4	44.70	2149.0	2945.84	2	1.	.01700	.00	.00	0.	91	7	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	41.14	200	42.29	300	45.78	400	51.13
500	58.04	600	66.52	700	77.41	800	93.54	900	126.17
1000	193.00	1050	267.17	1100	413.53	1110	473.57	1120	568.86
1130	702.40	1131	717.39	1132	732.74	1133	749.06	1134	765.73
1135	783.23	1136	801.80	1137	821.63	1138	842.63	1139	865.39
1140	889.75	1141	916.13	1142	944.58	1143	975.51	1144	1008.73
1145	1045.34	1146	1085.64	1147	1130.26	1148	1179.00	1149	1238.75
1150	1312.47	1151	1405.89	1152	1520.95	1153	1661.64	1154	1824.86
1155	2008.29	1156	2198.37	1157	2386.78	1158	2556.82	1159	2694.43
1160	2795.78	1161	2868.34	1162	2913.87	1163	2938.55	1164	2945.84
1165	2934.69	1166	2907.98	1167	2872.67	1168	2834.57	1169	2797.11
1170	2762.85	1171	2731.44	1172	2699.99	1173	2663.47	1174	2617.13
1175	2556.79	1176	2480.22	1177	2389.42	1178	2286.13	1179	2176.11
1180	2061.03	1181	1945.86	1182	1832.38	1183	1722.29	1184	1618.08
1185	1518.76	1186	1425.88	1187	1339.22	1188	1258.89	1189	1184.42
1190	1115.63	1191	1052.08	1192	993.49	1193	939.44	1194	889.68
1195	843.76	1196	801.46	1197	762.29	1198	726.29	1199	693.70
1200	663.26	1201	635.08	1202	609.00	1203	584.68	1204	562.27
1205	541.04	1206	520.80	1207	502.04	1208	484.80	1209	469.13
1210	454.31	1211	440.05	1212	426.66	1213	414.31	1214	403.32
1215	392.52	1216	382.20	1217	372.62	1218	363.72	1219	355.37
1220	347.23	1221	339.52	1222	331.91	1223	324.54	1224	317.23
1225	310.19	1226	303.28	1227	296.58	1228	290.01	1229	283.60
1230	277.29	1231	271.23	1232	265.67	1233	260.30	1234	254.98
1235	249.83	1236	245.03	1237	240.54	1238	236.44	1239	232.46
1240	228.58	1241	224.80	1242	221.11	1243	217.38	1244	213.73
1245	210.16	1246	206.76	1247	203.39	1248	200.13	1249	196.90
1250	193.76	1251	190.88	1252	187.96	1253	184.96	1254	182.16
1255	179.30	1256	176.68	1257	174.18	1258	171.79	1259	169.39
1260	167.18	1261	164.84	1262	162.67	1263	160.37	1264	158.19
1265	156.00	1266	153.85	1267	151.68	1268	149.69	1269	147.59
1270	145.64	1271	143.70	1272	141.74	1273	139.80	1274	137.95
1275	136.08	1276	134.31	1277	132.61	1278	130.88	1279	129.14
1280	127.52	1281	125.92	1282	124.41	1283	122.85	1284	121.24
1285	119.72	1286	118.20	1287	116.74	1288	115.38	1289	114.14
1290	112.96	1291	111.76	1292	110.56	1293	109.39	1294	108.28
1295	107.21	1296	106.16	1297	105.13	1298	104.03	1299	103.04
1300	102.08	1310	93.27	1320	85.33	1330	78.24	1340	72.49
1350	67.40	1360	63.37	1370	59.76	1380	56.50	1390	53.71
1400	51.27	1420	47.92	1440	45.57	1460	42.17	1500	40.87

TOTAL VOLUME THIS HYDROGRAPH = 367.34(Ac.Ft)

Basin B - 50 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	8.1	7	4.13	0.77	0.77
2A	36.3	0.01	93	2008	0.354	8.1	8	3.87	0.76	0.76
3A	11.1	0.01	93	1303	0.437	8.1	6	4.44	0.78	0.78
4A	25.5	0.01	93	2134	0.354	8.3	8	3.97	0.76	0.76
5A	18.9	0.01	93	1414	0.375	8.1	6	4.44	0.78	0.78
6A	19.2	0.01	93	1221	0.483	8.1	5	4.83	0.79	0.79
7A	24.7	0.01	93	1706	0.396	8.1	7	4.13	0.77	0.77
8A	20.4	0.01	93	1412	0.342	8.0	6	4.38	0.78	0.78
9B	25.7	0.01	91	1440	0.316	7.7	7	3.92	0.81	0.81
10B	39.8	0.01	93	2531	0.296	7.9	10	3.40	0.74	0.74
12A	15.7	0.01	91	1111	0.364	7.9	5	4.71	0.83	0.83
13A	31.9	0.01	91	1823	0.192	7.8	8	3.73	0.81	0.81

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	61.27	19.2	61.27	2	959.	.20900	.00	.00	0.	93	7	A41	.01
1352 2A	36.3	107.62	55.5	166.10	2	367.	.12300	.00	.00	0.	93	8	A41	.01
1352 3A	11.1	38.67	66.6	202.47	2	1.	.12300	.00	.00	0.	93	6	A41	.01
1352 4A	25.5	77.71	92.1	280.18	2	662.	.12100	.00	.00	0.	93	8	A42	.01
1352 5A	18.9	65.84	111.0	336.40	2	546.	.11000	.00	.00	0.	93	6	A41	.01
1352 6A	19.2	74.96	130.2	388.30	2	1340.	.16000	.00	.00	0.	93	5	A41	.01
1352 7A	24.7	78.82	154.9	456.21	2	592.	.06400	.00	.00	0.	93	7	A41	.01
1352 8A	20.4	69.18	175.3	500.18	2	1.	.06400	.00	.00	0.	93	6	A40	.01
1352 9B	25.7	82.15	25.7	82.15	2	980.	.09500	.00	.00	0.	91	7	A39	.01
1352 10B	39.8	110.32	65.5	188.93	2	1.	.09500	.00	.00	0.	91	10	A40	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1156 QA   500.17 QAB   686.60 QB   186.43    1352   11B  TB 1155 QB   188.91 QBA   682.15 QA   493.24   *
*                                 1352   11AB TAB 1156 QAB   686.60 QA   500.17 QB   186.43                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	188.91	240.8	686.60	2	761.	.08100	.00	.00	0.	91	0	A40	.00
1352 12A	15.7	62.29	256.5	717.81	2	1228.	.04900	.00	.00	0.	91	5	A40	.01
1352 13A	31.9	95.46	288.4	779.86	2	1.	.04900	.00	.00	0.	91	8	A39	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:

HYDROGRAPH AT POINT 13A

HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	5.70	200	6.24	300	7.15	400	8.16
500	9.40	600	10.93	700	12.91	800	15.98	900	22.27
1000	33.21	1050	47.02	1100	72.41	1110	89.85	1120	114.34
1130	142.71	1131	145.51	1132	148.63	1133	152.19	1134	156.13
1135	160.18	1136	164.69	1137	170.24	1138	176.27	1139	182.63
1140	189.37	1141	197.09	1142	205.50	1143	214.90	1144	225.02
1145	236.68	1146	249.71	1147	264.24	1148	280.73	1149	307.43
1150	340.85	1151	387.00	1152	449.66	1153	528.55	1154	612.59
1155	695.15	1156	757.68	1157	779.86	1158	766.46	1159	722.46
1160	656.68	1161	579.33	1162	506.14	1163	436.61	1164	374.14
1165	319.79	1166	274.72	1167	238.15	1168	208.76	1169	184.48
1170	165.02	1171	149.24	1172	136.47	1173	125.90	1174	116.96
1175	109.41	1176	103.08	1177	97.43	1178	92.43	1179	88.17
1180	84.52	1181	80.90	1182	77.51	1183	74.55	1184	71.87
1185	69.49	1186	67.30	1187	65.20	1188	63.02	1189	61.24
1190	59.35	1191	57.54	1192	55.80	1193	54.17	1194	52.63
1195	51.15	1196	49.92	1197	48.58	1198	47.47	1199	46.25
1200	45.35	1201	44.31	1202	43.48	1203	42.54	1204	41.80
1205	40.90	1206	40.02	1207	39.32	1208	38.45	1209	37.77
1210	36.99	1211	36.41	1212	35.68	1213	35.14	1214	34.62
1215	33.94	1216	33.44	1217	32.96	1218	32.50	1219	31.90
1220	31.48	1221	31.08	1222	30.52	1223	30.13	1224	29.57
1225	29.16	1226	28.57	1227	28.31	1228	27.76	1229	27.23
1230	27.02	1231	26.51	1232	26.17	1233	25.65	1234	25.45
1235	24.96	1236	24.62	1237	24.29	1238	23.81	1239	23.53
1240	23.24	1241	22.95	1242	22.53	1243	22.27	1244	22.02
1245	21.80	1246	21.60	1247	21.36	1248	20.94	1249	20.70
1250	20.45	1251	20.22	1252	20.00	1253	19.63	1254	19.40
1255	19.16	1256	18.90	1257	18.64	1258	18.24	1259	18.03
1260	17.83	1261	17.63	1262	17.43	1263	17.05	1264	17.02
1265	16.68	1266	16.65	1267	16.32	1268	15.99	1269	15.98
1270	15.65	1271	15.68	1272	15.40	1273	15.28	1274	15.16
1275	15.02	1276	14.87	1277	14.57	1278	14.60	1279	14.32
1280	14.21	1281	14.10	1282	13.83	1283	13.88	1284	13.77
1285	13.68	1286	13.43	1287	13.33	1288	13.25	1289	13.17
1290	13.08	1291	12.84	1292	12.77	1293	12.70	1294	12.63
1295	12.57	1296	12.51	1297	12.45	1298	12.38	1299	12.29
1300	12.20	1310	11.46	1320	10.75	1330	10.25	1340	9.56
1350	9.13	1360	8.67	1370	8.10	1380	7.60	1390	7.34
1400	6.88	1420	6.39	1440	5.92	1460	5.09	1500	5.09

TOTAL VOLUME THIS HYDROGRAPH = 54.52(Ac.Ft)

Basin C - 50 Year - Existing Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	18.6	0.01	91	2004	0.274	7.6	8	3.64	0.80	0.80
2A	26.9	0.01	91	2490	0.245	7.7	10	3.32	0.80	0.80
5A	37.5	0.01	91	2766	0.110	7.6	12	3.00	0.79	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	54.03	18.6	54.03	2	704.	.07800	.00	.00	0.	91	8	A38	.01
1352	2A	26.9	72.53	45.5	124.66	2	1.	.07800	.00	.00	0.	91	10	A39	.01
1352	3B	288.4	779.90	288.4	779.90	2	1.	.04700	.00	.00	0.	91	0	A39	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352    4A  TA 1155 QA   124.65 QAB   819.65 QB   694.99    1352    4B  TB 1157 QB   779.88 QBA   899.21 QA   119.33   *
*                                1352    4AB TAB 1157 QAB   899.21 QA   119.33 QB   779.88                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	779.88	333.9	899.21	2	1164.	.04700	.00	.00	0.	91	0	A39	.00
1352	5A	37.5	88.67	371.4	968.23	2	1.	.04700	.00	.00	0.	91	12	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 5A
HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	7.25	200	7.83	300	9.19	400	10.87
500	12.76	600	15.12	700	18.23	800	22.82	900	31.26
1000	45.84	1050	64.08	1100	97.20	1110	118.33	1120	149.40
1130	185.72	1131	189.87	1132	193.90	1133	197.80	1134	202.16
1135	206.95	1136	212.11	1137	217.92	1138	224.48	1139	232.18
1140	240.41	1141	249.83	1142	260.00	1143	270.84	1144	282.74
1145	296.34	1146	311.45	1147	328.51	1148	347.48	1149	375.43
1150	411.99	1151	460.72	1152	523.78	1153	603.67	1154	693.01
1155	787.75	1156	875.27	1157	939.81	1158	968.23	1159	956.53
1160	909.10	1161	829.32	1162	737.10	1163	643.36	1164	554.15
1165	473.98	1166	411.05	1167	358.31	1168	314.63	1169	278.56
1170	248.66	1171	223.72	1172	203.14	1173	186.10	1174	172.23
1175	160.16	1176	149.65	1177	140.95	1178	133.33	1179	126.43
1180	120.29	1181	115.11	1182	110.37	1183	106.00	1184	101.91
1185	98.31	1186	94.86	1187	91.86	1188	89.16	1189	86.42
1190	83.90	1191	81.53	1192	79.13	1193	76.96	1194	74.87
1195	72.85	1196	70.91	1197	68.95	1198	67.22	1199	65.74
1200	64.10	1201	62.83	1202	61.41	1203	60.14	1204	59.05
1205	57.88	1206	56.77	1207	55.65	1208	54.54	1209	53.61
1210	52.58	1211	51.55	1212	50.66	1213	49.70	1214	48.78
1215	48.03	1216	47.20	1217	46.51	1218	45.73	1219	45.15
1220	44.48	1221	43.92	1222	43.24	1223	42.71	1224	42.03
1225	41.35	1226	40.93	1227	40.26	1228	39.57	1229	38.90
1230	38.49	1231	37.82	1232	37.32	1233	36.71	1234	36.23
1235	35.62	1236	35.19	1237	34.79	1238	34.21	1239	33.77
1240	33.32	1241	32.89	1242	32.35	1243	31.82	1244	31.44
1245	31.09	1246	30.77	1247	30.33	1248	30.06	1249	29.80
1250	29.34	1251	28.99	1252	28.68	1253	28.26	1254	27.97
1255	27.65	1256	27.32	1257	26.90	1258	26.60	1259	26.27
1260	25.93	1261	25.47	1262	25.32	1263	24.91	1264	24.51
1265	24.36	1266	23.99	1267	23.74	1268	23.52	1269	23.30
1270	22.88	1271	22.63	1272	22.41	1273	22.21	1274	21.90
1275	21.68	1276	21.50	1277	21.33	1278	21.14	1279	20.92
1280	20.62	1281	20.44	1282	20.24	1283	20.05	1284	19.72
1285	19.56	1286	19.45	1287	19.32	1288	19.16	1289	18.86
1290	18.68	1291	18.52	1292	18.39	1293	18.24	1294	18.09
1295	17.95	1296	17.82	1297	17.70	1298	17.49	1299	17.41
1300	17.34	1310	16.34	1320	15.05	1330	14.20	1340	13.17
1350	12.40	1360	11.73	1370	10.92	1380	10.20	1390	9.58
1400	8.98	1420	8.18	1440	7.62	1460	6.59	1500	6.56

TOTAL VOLUME THIS HYDROGRAPH = 73.21(Ac.Ft)

STEVENSON RANCH

2-YEAR CLEAR

DEVELOPED CONDITION

Basin A - 02 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	3.3	17	1.09	0.47	0.47
2A	34.8	0.01	93	1871	0.405	3.3	20	1.01	0.45	0.45
3A	33.3	0.01	93	2288	0.337	3.3	25	0.91	0.42	0.42
4A	37.9	0.01	93	1862	0.440	3.3	20	1.01	0.45	0.45
6B	28.8	0.01	93	1664	0.508	3.3	17	1.09	0.47	0.47
7B	12.2	0.01	93	1488	0.460	3.3	16	1.12	0.47	0.48
8B	22.3	0.01	93	2064	0.359	3.3	22	0.97	0.44	0.44
9B	24.6	0.01	93	2208	0.376	3.3	23	0.95	0.43	0.43
13A	24.0	0.01	93	1693	0.428	3.3	18	1.06	0.46	0.47
15C	37.0	0.01	93	2219	0.306	3.3	24	0.93	0.42	0.43
16C	40.2	0.01	93	2159	0.322	3.3	24	0.93	0.42	0.43
17C	31.9	0.01	93	1934	0.334	3.3	21	0.99	0.44	0.45
21A	39.2	0.01	93	2213	0.305	3.2	25	0.90	0.41	0.42
23D	30.8	0.01	93	1773	0.313	3.3	20	1.01	0.45	0.45
24D	39.3	0.01	93	1628	0.289	3.3	19	1.04	0.46	0.46
25D	42.3	0.01	93	1712	0.216	3.3	21	0.99	0.44	0.45
26D	30.9	0.01	93	1709	0.471	3.2	18	1.05	0.46	0.46
27D	26.9	0.01	93	1779	0.360	3.2	20	1.00	0.45	0.45
31A	29.2	0.01	93	2176	0.327	3.1	25	0.88	0.41	0.41
32A	22.2	0.01	93	1894	0.383	3.1	22	0.93	0.42	0.43
33A	23.1	0.01	93	1600	0.428	3.1	19	0.99	0.44	0.45
34A	35.7	0.01	93	2286	0.341	3.1	26	0.85	0.40	0.40
35A	29.2	0.01	93	2014	0.305	3.1	25	0.86	0.40	0.40
36A	25.6	0.01	93	1738	0.328	3.1	22	0.91	0.42	0.42
38A	23.7	0.01	93	1497	0.367	3.0	19	0.95	0.43	0.43
39A	32.5	0.01	93	1852	0.308	2.9	25	0.82	0.39	0.39
40A	20.2	0.01	93	1367	0.400	2.9	18	0.95	0.43	0.43
41A	22.5	0.01	93	1307	0.409	2.7	20	0.84	0.39	0.40
42A	28.5	0.01	93	1919	0.302	2.8	27	0.76	0.37	0.37
44A	20.2	0.01	93	1582	0.329	2.8	23	0.81	0.38	0.39
45A	24.8	0.01	93	1957	0.335	2.7	29	0.71	0.34	0.35
46A	15.1	0.01	93	1406	0.420	2.8	19	0.90	0.41	0.42
47A	24.6	0.01	93	2076	0.234	2.8	30	0.72	0.35	0.35
48A	24.9	0.01	93	1739	0.408	2.9	23	0.83	0.39	0.40
49A	20.9	0.01	93	1541	0.343	2.8	22	0.83	0.39	0.39
50A	19.2	0.01	93	1394	0.325	2.8	20	0.88	0.41	0.41
52E	28.8	0.01	93	1432	0.332	3.0	19	0.96	0.43	0.44
53E	24.8	0.01	93	1534	0.306	3.0	21	0.91	0.42	0.42
54E	33.4	0.01	93	1783	0.334	2.9	23	0.86	0.40	0.40
55E	23.1	0.01	93	1853	0.409	2.9	24	0.82	0.39	0.39
59A	28.2	0.01	93	2259	0.429	2.9	27	0.78	0.37	0.38
60A	27.2	0.01	93	1234	0.405	2.9	17	0.96	0.43	0.44
61A	17.9	0.01	93	1533	0.117	2.9	27	0.77	0.37	0.38
63F	27.0	0.01	93	1616	0.374	3.1	20	0.95	0.43	0.44
64F	40.8	0.01	93	2620	0.393	3.0	30	0.77	0.37	0.37

Basin A - 02 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	2.9	27	0.78	0.37	0.38
66F	32.6	0.01	93	1732	0.514	3.0	20	0.93	0.42	0.43
67F	18.8	0.01	93	1684	0.303	2.9	23	0.86	0.40	0.40
68F	9.2	0.01	93	1319	0.250	2.9	20	0.90	0.41	0.42
72A	6.4	0.01	93	1153	0.264	2.8	18	0.92	0.42	0.43
73A	20.0	0.01	91	1766	0.311	2.9	18	0.94	0.61	0.61
74A	21.9	0.01	91	1507	0.234	2.8	17	0.94	0.61	0.61
75A	42.0	0.01	91	1789	0.159	2.7	22	0.82	0.58	0.59
76A	26.1	0.01	91	1672	0.144	2.7	21	0.84	0.59	0.59
77A	12.2	0.01	91	1303	0.165	2.7	17	0.92	0.61	0.61
79A	14.2	0.01	91	1659	0.316	2.8	17	0.95	0.61	0.62
80A	18.2	0.01	91	1622	0.291	2.8	18	0.91	0.61	0.61
81A	23.3	0.01	91	1645	0.280	2.8	18	0.92	0.61	0.61
82A	22.2	0.01	91	2122	0.161	2.8	24	0.80	0.58	0.58
84B	26.2	0.01	91	1697	0.165	2.7	21	0.82	0.58	0.59
85B	33.5	0.01	91	2040	0.168	2.8	23	0.81	0.58	0.58
88A	2.8	0.01	91	467	0.096	2.8	9	1.28	0.67	0.67
89C	21.6	0.01	91	1492	0.372	3.0	15	1.06	0.64	0.64
90C	23.5	0.01	91	2246	0.220	2.9	22	0.86	0.59	0.60
92A	30.8	0.01	91	1641	0.181	2.9	19	0.91	0.61	0.61
93A	37.7	0.01	91	1873	0.232	2.9	20	0.89	0.60	0.60
94A	11.0	0.01	91	1377	0.290	2.9	15	1.03	0.63	0.63
97A	13.4	0.01	91	1487	0.269	2.9	16	1.00	0.63	0.63

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

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1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	3.27	32.5	3.27	2	1173.	.20100	.00	.00	0.	93	17	A17	.01
1352 2A	34.8	2.99	67.3	6.03	2	369.	.19500	.00	.00	0.	93	20	A17	.01
1352 3A	33.3	2.23	100.6	8.21	2	1353.	.24000	.00	.00	0.	93	25	A17	.01
1352 4A	37.9	3.25	138.5	10.96	2	1.	.24000	.00	.00	0.	93	20	A17	.01
1352 5A	.0	.00	138.5	10.96	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 6B	28.8	2.90	28.8	2.90	2	494.	.25300	.00	.00	0.	93	17	A17	.01
1352 7B	12.2	1.30	41.0	4.17	2	1.	.25300	.00	.00	0.	93	16	A17	.01
1352 8B	22.3	1.73	63.3	5.89	2	1342.	.28700	.00	.00	0.	93	22	A17	.01
1352 9B	24.6	1.82	87.9	7.52	2	1.	.28700	.00	.00	0.	93	23	A17	.01
1352 10B	.0	.00	87.9	7.52	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1162 QA    10.96 QAB    18.27 QB     7.31    1352   11B  TB 1160 QB     7.52 QBA    18.36 QA    10.84   *
*                              1352   11AB TAB 1161 QAB    18.38 QA    10.94 QB     7.44                                 *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	7.52	226.4	18.38	2	655.	.14500	.00	.00	0.	93	0	A16	.00
1352 12A	.0	.00	226.4	18.32	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 13A	24.0	2.29	250.4	20.28	2	1.	.14500	.00	.00	0.	93	18	A17	.01
1352 14A	.0	.00	250.4	20.28	4	1.	.01000	2.00	.00	0.	93	99	A16	.00
1352 15C	37.0	2.61	37.0	2.61	2	826.	.24800	.00	.00	0.	93	24	A17	.01
1352 16C	40.2	2.84	77.2	5.38	2	1267.	.26000	.00	.00	0.	93	24	A17	.01
1352 17C	31.9	2.60	109.1	7.72	2	1.	.26000	.00	.00	0.	93	21	A17	.01
1352 18C	.0	.00	109.1	7.72	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1162 QA    20.28 QAC    27.94 QC     7.65    1352   19C  TC 1161 QC     7.72 QCA    27.91 QA    20.19   *
*                              1352   19AC TAC 1162 QAC    27.94 QA    20.28 QC     7.65                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	7.72	359.5	27.94	2	1161.	.09000	.00	.00	0.	93	0	A16	.00
1352 20A	.0	.00	359.5	27.48	4	1.	.01000	2.25	.00	0.	93	99	A16	.00
1352 21A	39.2	2.63	398.7	29.81	2	1.	.09000	.00	.00	0.	93	25	A17	.01
1352 22A	.0	.00	398.7	29.81	4	1.	.01000	2.25	.00	0.	93	99	A16	.00
1352 23D	30.8	2.64	30.8	2.64	2	1242.	.23000	.00	.00	0.	93	20	A17	.01
1352 24D	39.3	3.56	70.1	5.96	2	1308.	.03800	.00	.00	0.	93	19	A17	.01
1352 25D	42.3	3.45	112.4	7.98	2	723.	.22800	.00	.00	0.	93	21	A17	.01
1352 26D	30.9	2.95	143.3	9.97	2	720.	.09000	.00	.00	0.	93	18	A17	.01
1352 27D	26.9	2.31	170.2	11.58	2	1.	.09000	.00	.00	0.	93	20	A17	.01
1352 28D	.0	.00	170.2	11.58	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1164 QA    29.81 QAD    41.38 QD    11.57    1352   29D  TD 1165 QD    11.58 QDA    41.32 QA    29.74   *
*                                 1352   29AD TAD 1164 QAD    41.38 QA    29.81 QD    11.57                                 *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	11.58	568.9	41.38	2	668.	.04800	.00	.00	0.	93	0	A16	.00
1352	30A	.0	.00	568.9	41.12	4	1.	.01000	2.50	.00	0.	93	99	A16	.00
1352	31A	29.2	1.68	598.1	42.45	2	506.	.04400	.00	.00	0.	93	25	A16	.01
1352	32A	22.2	1.49	620.3	43.16	2	635.	.03900	.00	.00	0.	93	22	A16	.01
1352	33A	23.1	1.82	643.4	43.47	2	593.	.04200	.00	.00	0.	93	19	A16	.01
1352	34A	35.7	1.94	679.1	44.36	2	572.	.03500	.00	.00	0.	93	26	A16	.01
1352	35A	29.2	1.68	708.3	44.97	2	485.	.04100	.00	.00	0.	93	25	A16	.01
1352	36A	25.6	1.72	733.9	45.21	2	532.	.03800	.00	.00	0.	93	22	A16	.01
1352	37A	.0	.00	733.9	45.00	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	38A	23.7	1.60	757.6	45.28	2	396.	.05100	.00	.00	0.	93	19	A15	.01
1352	39A	32.5	1.54	790.1	45.68	2	838.	.05600	.00	.00	0.	93	25	A15	.01
1352	40A	20.2	1.45	810.3	45.56	2	1.	.05600	.00	.00	0.	93	18	A15	.01
1352	41A	22.5	1.19	832.8	45.79	2	1.	.13300	.00	.00	0.	93	20	A14	.01
1352	42A	28.5	1.19	861.3	46.24	2	840.	.05700	.00	.00	0.	93	27	A15	.01
1352	43A	.0	.00	861.3	45.92	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	44A	20.2	.86	881.5	46.12	2	1.	.05700	.00	.00	0.	93	23	A14	.01
1352	45A	24.8	.76	906.3	46.48	2	575.	.03500	.00	.00	0.	93	29	A14	.01
1352	46A	15.1	1.02	921.4	46.38	2	1319.	.03400	.00	.00	0.	93	19	A15	.01
1352	47A	24.6	.74	946.0	45.43	2	1.	.03400	.00	.00	0.	93	30	A14	.01
1352	48A	24.9	1.32	970.9	45.66	2	722.	.03900	.00	.00	0.	93	23	A15	.01
1352	49A	20.9	.96	991.8	45.57	2	846.	.04700	.00	.00	0.	93	22	A14	.01
1352	50A	19.2	1.23	1011.0	45.36	2	1.	.04700	.00	.00	0.	93	20	A15	.01
1352	51A	.0	.00	1011.0	45.36	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	52E	28.8	2.27	28.8	2.27	2	940.	.14400	.00	.00	0.	93	19	A16	.01
1352	53E	24.8	1.49	53.6	3.62	2	971.	.27800	.00	.00	0.	93	21	A15	.01
1352	54E	33.4	1.77	87.0	5.22	2	1110.	.18700	.00	.00	0.	93	23	A15	.01
1352	55E	23.1	1.16	110.1	6.12	2	1.	.18700	.00	.00	0.	93	24	A15	.01
1352	56E	.0	.00	110.1	6.12	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*****************************************************************************************************************************
*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1192 QA    45.36 QAE    46.45 QE     1.09    1352   57E  TE 1163 QE     6.12 QEA    24.81 QA    18.70   *
*                                 1352   57AE TAE 1192 QAE    46.45 QA    45.36 QE     1.09                                 *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	6.12	1121.1	46.45	2	180.	.03900	.00	.00	0.	93	0	A16	.00
1352	58A	.0	.00	1121.1	46.42	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	59A	28.2	1.18	1149.3	46.66	2	815.	.01800	.00	.00	0.	93	27	A15	.01
1352	60A	27.2	2.07	1176.5	46.16	2	1136.	.05700	.00	.00	0.	93	17	A15	.01

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1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	.75	1194.4	45.88	2	1.	.05700	.00	.00	0.	93	27	A15	.01
1352	62A	.0	.00	1194.4	45.88	4	1.	.01000	2.75	.00	0.	93	99	A16	.00
1352	63F	27.0	2.01	27.0	2.01	2	586.	.19600	.00	.00	0.	93	20	A16	.01
1352	64F	40.8	1.42	67.8	3.42	2	727.	.08900	.00	.00	0.	93	30	A15	.01
1352	65F	37.4	1.57	105.2	4.85	2	1.	.08900	.00	.00	0.	93	27	A15	.01
1352	66F	32.6	2.08	137.8	6.78	2	1.	.14100	.00	.00	0.	93	20	A15	.01
1352	67F	18.8	1.00	156.6	7.74	2	677.	.08100	.00	.00	0.	93	23	A15	.01
1352	68F	9.2	.59	165.8	8.16	2	1.	.08100	.00	.00	0.	93	20	A15	.01
1352	69F	.0	.00	165.8	8.16	4	1.	.01000	2.00	.00	0.	93	99	A16	.00

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*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   70A  TA 1200 QA    45.88 QAF    47.28 QF     1.40    1352   70F  TF 1162 QF     8.16 QFA    29.69 QA    21.53   *
*                                1352   70AF TAF 1200 QAF    47.28 QA    45.88 QF     1.40                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF   165.8       8.16    1360.2     47.28   2     561.   .03600      .00   .00        0.   93   0   A16   .00
    1352   71A      .0        .00    1360.2     47.11   4       1.   .01000     2.75   .00        0.   93  99   A16   .00
    1352   72A     6.4        .46    1366.6     47.15   2       1.   .03600      .00   .00        0.   93  18   A15   .01
    1352   73A    20.0       3.06    1386.6     47.29   2     434.   .03000      .00   .00        0.   91  18   A15   .01
    1352   74A    21.9       3.13    1408.5     47.34   2     420.   .02900      .00   .00        0.   91  17   A14   .01
    1352   75A    42.0       4.81    1450.5     47.47   2    1019.   .02000      .00   .00        0.   91  22   A14   .01
    1352   76A    26.1       3.10    1476.6     46.91   2     249.   .04000      .00   .00        0.   91  21   A14   .01
    1352   77A    12.2       1.74    1488.8     46.93   2       1.   .04000      .00   .00        0.   91  17   A14   .01
    1352   78A      .0        .00    1488.8     46.93   4       1.   .01000     2.75   .00        0.   91  99   A16   .00
    1352   79A    14.2       2.27    1503.0     47.02   2     643.   .01900      .00   .00        0.   91  17   A15   .01
    1352   80A    18.2       2.48    1521.2     46.82   2     751.   .02400      .00   .00        0.   91  18   A14   .01
    1352   81A    23.3       3.56    1544.5     46.65   2     709.   .02400      .00   .00        0.   91  18   A15   .01
    1352   82A    22.2       2.34    1566.7     46.50   2       1.   .02400      .00   .00        0.   91  24   A14   .01
    1352   83A      .0        .00    1566.7     46.50   4       1.   .01000     2.75   .00        0.   91  99   A16   .00
    1352   84B    26.2       3.12      26.2      3.12   2    1438.   .06400      .00   .00        0.   91  21   A14   .01
    1352   85B    33.5       3.68      59.7      6.08   2       1.   .06400      .00   .00        0.   91  23   A14   .01
    1352   86B      .0        .00      59.7      6.08   4       1.   .01000     2.00   .00        0.   91  99   A16   .00
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   87A  TA 1219 QA    46.50 QAB    46.86 QB      .36    1352   87B  TB 1162 QB     6.07 QBA    37.80 QA    31.73   *
*                                1352   87AB TAB 1219 QAB    46.86 QA    46.50 QB      .36                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB    59.7       6.07    1626.4     46.86   2     405.   .02300      .00   .00        0.   91   0   A16   .00
    1352   88A      2.8        .71    1629.2     46.78   2       1.   .02300      .00   .00        0.   91   9   A15   .01
    1352   89C     21.6       3.82      21.6      3.82   2    1328.   .09400      .00   .00        0.   91  15   A15   .01
    1352   90C     23.5       3.06      45.1      6.39   2       1.   .09400      .00   .00        0.   91  22   A15   .01
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1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN A STORM DAY 4

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                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   91A  TA 1220 QA    46.78 QAC    47.06 QC      .28    1352   91C  TC 1161 QC     6.39 QCA    40.54 QA    34.16   *
*                                1352   91AC TAC 1170 QAC    47.92 QA    44.05 QC     3.86                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC    45.1       6.39    1674.3     47.92   2     977.   .02400      .00   .00        0.   91   0   A16   .00
    1352   92A     30.8       4.52    1705.1     47.79   2     999.   .01300      .00   .00        0.   91  19   A15   .01
    1352   93A     37.7       5.32    1742.8     47.56   2     448.   .02200      .00   .00        0.   91  20   A15   .01
    1352   94A     11.0       1.95    1753.8     47.60   2       1.   .02200      .00   .00        0.   91  15   A15   .01
    1352   95D    382.1      37.00     382.1     37.00   2       1.   .02200      .00   .00        0.   91   0   A16   .00
*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   96A  TA 1179 QA    47.60 QAD    68.31 QD     20.71    1352   96D  TD 1165 QD    37.00 QDA    74.10 QA    37.10   *
*                                1352   96AD TAD 1169 QAD    77.54 QA    42.44 QD    35.10                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
```

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	37.00	2135.9	77.54	6	250.	.01600	32.00	.00	0.	91	0	A16	.00
1352	97A	13.4	2.25	2149.3	79.71	2	642.	.01700	.00	.00	0.	91	16	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	4.93	200	5.08	300	5.35	400	6.26
500	7.12	600	7.69	700	8.66	800	9.73	900	11.16
1000	13.25	1050	15.09	1100	18.37	1110	19.36	1120	20.90
1130	22.73	1131	23.01	1132	22.30	1133	33.02	1134	5.12
1135	60.23	1136	5.13	1137	60.73	1138	5.14	1139	61.31
1140	5.14	1141	61.97	1142	5.19	1143	62.75	1144	5.30
1145	63.80	1146	5.46	1147	65.24	1148	5.63	1149	67.56
1150	6.19	1151	71.46	1152	6.79	1153	78.10	1154	7.12
1155	79.71	1156	45.20	1157	55.44	1158	56.95	1159	60.10
1160	62.75	1161	65.33	1162	67.83	1163	70.24	1164	72.42
1165	74.07	1166	75.41	1167	76.34	1168	76.92	1169	77.42
1170	77.66	1171	77.40	1172	76.65	1173	75.60	1174	74.43
1175	73.22	1176	72.13	1177	71.15	1178	70.17	1179	69.17
1180	68.17	1181	66.97	1182	65.73	1183	64.43	1184	63.12
1185	61.75	1186	60.50	1187	59.18	1188	58.01	1189	56.71
1190	55.66	1191	54.40	1192	53.47	1193	52.23	1194	51.53
1195	50.26	1196	49.75	1197	49.63	1198	48.59	1199	48.28
1200	47.24	1201	46.58	1202	45.65	1203	45.14	1204	44.45
1205	44.02	1206	43.48	1207	43.12	1208	42.52	1209	42.35
1210	41.69	1211	42.14	1212	40.51	1213	42.94	1214	34.85
1215	48.77	1216	17.25	1217	67.49	1218	4.97	1219	77.54
1220	4.97	1221	77.54	1222	4.97	1223	77.54	1224	23.00
1225	67.29	1226	43.78	1227	49.26	1228	48.86	1229	49.64
1230	50.04	1231	50.30	1232	50.36	1233	50.28	1234	50.03
1235	49.67	1236	49.20	1237	48.64	1238	47.95	1239	47.23
1240	46.43	1241	45.45	1242	44.66	1243	43.79	1244	42.92
1245	41.24	1246	41.74	1247	35.70	1248	46.18	1249	4.96
1250	76.84	1251	4.96	1252	75.01	1253	4.96	1254	73.26
1255	4.96	1256	71.55	1257	4.96	1258	69.93	1259	4.96
1260	68.40	1261	4.96	1262	66.98	1263	4.96	1264	65.56
1265	4.95	1266	64.27	1267	4.95	1268	63.04	1269	4.95
1270	61.90	1271	4.95	1272	60.81	1273	4.95	1274	59.75
1275	4.95	1276	58.74	1277	4.95	1278	57.84	1279	4.95
1280	57.05	1281	4.95	1282	56.26	1283	4.95	1284	55.57
1285	4.95	1286	54.93	1287	4.95	1288	54.27	1289	4.95
1290	53.65	1291	4.95	1292	53.06	1293	4.95	1294	52.57
1295	4.95	1296	52.12	1297	4.95	1298	51.69	1299	4.95
1300	51.23	1310	4.95	1320	23.72	1330	4.94	1340	19.67
1350	4.94	1360	17.01	1370	4.94	1380	14.86	1390	4.94
1400	13.14	1420	4.94	1440	10.70	1460	4.90	1500	7.75

TOTAL VOLUME THIS HYDROGRAPH = 26.25(Ac.Ft)

Basin B - 02 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	3.1	18	1.02	0.45	0.46
2A	36.3	0.01	93	2008	0.354	3.1	23	0.91	0.42	0.42
3A	11.1	0.01	93	1303	0.437	3.1	16	1.08	0.47	0.47
4A	25.5	0.01	93	2134	0.354	3.2	23	0.94	0.43	0.43
5A	18.9	0.01	93	1414	0.375	3.1	17	1.05	0.46	0.46
6A	19.2	0.01	93	1221	0.483	3.1	14	1.15	0.48	0.49
7A	24.7	0.01	93	1706	0.396	3.1	20	0.97	0.44	0.44
8A	20.4	0.01	93	1412	0.342	3.1	18	1.01	0.45	0.45
9B	25.7	0.01	91	1440	0.316	3.0	17	1.00	0.52	0.52
10B	39.8	0.01	93	2531	0.296	3.1	30	0.79	0.37	0.38
12A	15.7	0.01	91	1111	0.364	3.1	13	1.16	0.55	0.55
13A	31.9	0.01	91	1823	0.192	3.0	22	0.90	0.49	0.49
14C	21.3	0.01	91	2178	0.27	3.0	20	0.93	0.61	0.61

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	1.60	19.2	1.60	2	959.	.20900	.00	.00	0.	93	18	A16	.01
1352 2A	36.3	2.31	55.5	3.82	2	367.	.12300	.00	.00	0.	93	23	A16	.01
1352 3A	11.1	1.04	66.6	4.76	2	1.	.12300	.00	.00	0.	93	16	A16	.01
1352 4A	25.5	1.88	92.1	6.62	2	662.	.12100	.00	.00	0.	93	23	A17	.01
1352 5A	18.9	1.68	111.0	8.05	2	546.	.11000	.00	.00	0.	93	17	A16	.01
1352 6A	19.2	2.05	130.2	9.55	2	1340.	.16000	.00	.00	0.	93	14	A16	.01
1352 7A	24.7	1.84	154.9	10.77	2	592.	.06400	.00	.00	0.	93	20	A16	.01
1352 8A	20.4	1.70	175.3	11.75	2	1.	.06400	.00	.00	0.	93	18	A16	.01
1352 9B	25.7	4.55	25.7	4.55	2	980.	.09500	.00	.00	0.	91	15	A15	.01
1352 10B	39.8	4.43	65.5	8.76	2	1.	.09500	.00	.00	0.	91	30	A16	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1165 QA    11.75 QAB    19.68 QB     7.94    1352   11B  TB 1160 QB     8.76 QBA    18.33 QA     9.56   *
*                              1352   11AB TAB 1164 QAB    19.84 QA    11.65 QB     8.19                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	8.76	240.8	19.84	2	761.	.08100	.00	.00	0.	91	0	A16	.00
1352 12A	15.7	3.57	256.5	20.18	2	1228.	.04900	.00	.00	0.	91	12	A16	.01
1352 13A	31.9	5.21	288.4	23.32	2	1.	.04900	.00	.00	0.	91	19	A16	.01
1352 14C	21.3	3.01	21.3	3.01	2	1.	.01000	.00	.00	0.	91	20	A15	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   15A  TA 1166 QA    23.32 QAC    25.58 QC     2.27    1352   15C  TC 1156 QC     3.01 QCA    17.04 QA    14.03   *
*                              1352   15AC TAC 1165 QAC    25.61 QA    23.20 QC     2.40                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	3.01	309.7	25.61	5	100.	.02000	3.00	.00	0.	91	0	A15	.00
1352 16A	.0	.00	309.7	25.59	2	1.	.01000	.00	.00	0.	91	99	A15	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.74	200	.76	300	.80	400	.85
500	.90	600	.97	700	1.14	800	1.29	900	1.63
1000	2.03	1050	2.39	1100	3.05	1110	3.27	1120	3.61
1130	4.07	1131	4.13	1132	4.19	1133	4.24	1134	4.31
1135	4.37	1136	4.43	1137	4.50	1138	4.57	1139	4.65
1140	4.73	1141	4.88	1142	5.06	1143	5.26	1144	5.52
1145	5.87	1146	6.28	1147	6.70	1148	7.15	1149	8.08
1150	9.33	1151	10.57	1152	11.97	1153	13.48	1154	14.64
1155	15.59	1156	16.75	1157	17.98	1158	19.28	1159	20.59
1160	21.90	1161	23.01	1162	24.00	1163	24.81	1164	25.33
1165	25.57	1166	25.59	1167	25.45	1168	24.80	1169	23.76
1170	22.58	1171	21.22	1172	20.10	1173	19.30	1174	18.50
1175	17.64	1176	16.74	1177	15.84	1178	14.98	1179	14.14
1180	13.34	1181	12.58	1182	11.86	1183	11.15	1184	10.44
1185	9.74	1186	9.03	1187	8.37	1188	7.76	1189	7.21
1190	6.71	1191	6.27	1192	5.88	1193	5.53	1194	5.22
1195	4.94	1196	4.69	1197	4.45	1198	4.24	1199	4.06
1200	3.92	1201	3.75	1202	3.61	1203	3.49	1204	3.37
1205	3.26	1206	3.17	1207	3.08	1208	3.00	1209	2.92
1210	2.86	1211	2.80	1212	2.74	1213	2.69	1214	2.64
1215	2.59	1216	2.55	1217	2.51	1218	2.47	1219	2.43
1220	2.39	1221	2.36	1222	2.33	1223	2.30	1224	2.28
1225	2.25	1226	2.22	1227	2.20	1228	2.17	1229	2.15
1230	2.13	1231	2.10	1232	2.08	1233	2.06	1234	2.04
1235	2.03	1236	2.01	1237	1.99	1238	1.97	1239	1.96
1240	1.94	1241	1.93	1242	1.91	1243	1.90	1244	1.88
1245	1.87	1246	1.85	1247	1.84	1248	1.83	1249	1.81
1250	1.80	1251	1.79	1252	1.78	1253	1.76	1254	1.75
1255	1.74	1256	1.73	1257	1.72	1258	1.66	1259	1.60
1260	1.59	1261	1.58	1262	1.57	1263	1.56	1264	1.55
1265	1.54	1266	1.53	1267	1.52	1268	1.52	1269	1.51
1270	1.50	1271	1.50	1272	1.49	1273	1.48	1274	1.47
1275	1.46	1276	1.46	1277	1.45	1278	1.44	1279	1.43
1280	1.43	1281	1.42	1282	1.41	1283	1.41	1284	1.40
1285	1.39	1286	1.39	1287	1.38	1288	1.38	1289	1.37
1290	1.36	1291	1.36	1292	1.36	1293	1.35	1294	1.34
1295	1.34	1296	1.33	1297	1.33	1298	1.32	1299	1.31
1300	1.30	1310	1.22	1320	1.15	1330	1.09	1340	1.02
1350	.95	1360	.92	1370	.89	1380	.86	1390	.84
1400	.82	1420	.80	1440	.77	1460	.74	1500	.74

TOTAL VOLUME THIS HYDROGRAPH = 3.53(Ac.Ft)

Basin C - 02 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	0.9	0.05	91	370	0.42	2.9	6	1.59	0.69	0.70
4B	2.5	0.01	91	460	0.42	2.9	7	1.48	0.68	0.68
5B	7.2	0.01	91	1000	0.33	2.9	12	1.15	0.64	0.64
6B	1.6	0.01	91	625	0.30	2.9	9	1.31	0.66	0.66
7B	1.5	0.70	91	845	0.05	2.9	12	1.15	0.64	0.82
8B	0.4	0.91	91	490	0.060	2.9	8	1.39	0.67	0.88
11A	4.6	0.70	91	1345	0.04	2.9	18	0.95	0.60	0.81
12A	3.7	0.70	91	1240	0.04	2.9	17	0.97	0.61	0.81
14A	2.6	0.70	91	980	0.07	2.9	13	1.10	0.64	0.82
15C	2.1	0.01	91	415	0.32	2.9	7	1.48	0.68	0.68
16C	2.9	0.25	91	1150	0.13	2.9	14	1.07	0.64	0.71
17C	5.8	0.60	91	1180	0.070	2.9	15	1.03	0.63	0.79
18C	1.0	0.05	91	780	0.09	2.9	12	1.15	0.64	0.65
21A	1.7	0.05	91	1000	0.08	2.9	15	1.03	0.63	0.64
22A	3.1	0.70	91	1000	0.02	2.9	16	1.00	0.63	0.82
23A	4.4	0.70	91	1000	0.02	2.9	16	1.00	0.63	0.82
24A	4.0	0.75	91	1550	0.08	2.9	17	0.97	0.61	0.83
25A	2.1	0.85	91	1500	0.08	2.9	16	1.00	0.63	0.86
27D	20.3	0.05	91	1993	0.128	2.9	22	0.89	0.6	0.61

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	.31	.9	.31	4	250.	.03000	2.00	.00	0.	91	6	A15	.05
1352	2A	.0	.00	.9	.30	4	1.	.01000	2.00	.00	0.	91	99	A15	.00
1352	3A	.0	.00	.9	.30	4	1.	.01000	2.00	.00	0.	91	99	A15	.00
1352	4B	2.5	.75	2.5	.75	2	170.	.01000	.00	.00	0.	91	7	A15	.01
1352	5B	7.2	1.49	9.7	2.14	2	480.	.05000	.00	.00	0.	91	12	A15	.01
1352	6B	1.6	.40	11.3	2.30	4	160.	.10000	2.00	.00	0.	91	9	A15	.01
1352	7B	1.5	.51	12.8	2.77	4	5.	.10000	2.00	.00	0.	91	12	A15	.65
1352	8B	.4	.19	13.2	2.90	4	30.	.02000	2.00	.00	0.	91	8	A15	.91
1352	9B	.0	.00	13.2	2.90	4	1.	.01000	2.00	.00	0.	91	99	A15	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1155 QA      .30 QAB     2.77 QB     2.47    1352   10B  TB 1158 QB     2.90 QBA     3.08 QA      .18   *
*                               1352   10AB TAB 1158 QAB     3.08 QA      .18 QB     2.90                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	2.90	14.1	3.08	4	800.	.06500	2.00	.00	0.	91	0	A15	.00
1352	11A	4.6	1.26	18.7	4.26	4	1.	.06500	2.00	.00	0.	91	18	A15	.65
1352	12A	3.7	1.04	22.4	5.27	4	50.	.06500	2.00	.00	0.	91	17	A15	.65
1352	13A	.0	.00	22.4	5.27	4	1.	.01000	2.00	.00	0.	91	99	A15	.00
1352	14A	2.6	.84	25.0	6.05	4	10.	.06500	2.00	.00	0.	91	13	A15	.65
1352	15C	2.1	.63	2.1	.63	4	120.	.09100	2.00	.00	0.	91	7	A15	.01
1352	16C	2.9	.68	5.0	1.31	4	770.	.09200	2.00	.00	0.	91	14	A15	.25
1352	17C	5.8	1.70	10.8	2.93	4	50.	.09200	2.00	.00	0.	91	15	A15	.60
1352	18C	1.0	.21	11.8	3.14	4	10.	.09200	2.00	.00	0.	91	12	A15	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1159 QA      6.05 QAC     8.99 QC     2.94    1352   19C  TC 1156 QC     3.14 QCA     8.65 QA     5.51   *
*                               1352   19AC TAC 1158 QAC     9.06 QA     6.00 QC     3.06                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	3.14	36.8	9.06	4	260.	.09000	2.00	.00	0.	91	0	A15	.00
1352	20A	.0	.00	36.8	9.02	4	1.	.01000	2.00	.00	0.	91	99	A15	.00
1352	21A	1.7	.31	38.5	9.31	4	130.	.08800	2.00	.00	0.	91	15	A15	.05
1352	22A	3.1	.91	41.6	10.19	4	1.	.02000	2.00	.00	0.	91	16	A15	.65
1352	23A	4.4	1.29	46.0	11.43	4	1040.	.08800	2.00	.00	0.	91	16	A15	.65
1352	24A	4.0	1.17	50.0	12.49	4	1.	.03400	2.00	.00	0.	91	17	A15	.70
1352	25A	2.1	.51	52.1	12.97	4	80.	.03200	2.00	.00	0.	91	16	A15	.40
1352	26D	309.7	25.60	309.7	25.60	2	1.	.01000	.00	.00	0.	91	0	A15	.00
1352	27D	20.3	2.79	330.0	27.98	2	1600.	.12800	.00	.00	0.	91	22	A15	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR - BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1160 QA     12.96 QAD    33.06 QD    20.10    1352   28D  TD 1168 QD    27.57 QDA    35.60 QA     8.03   *
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*                              1352   28AD TAD 1165 QAD    37.12 QA    11.00 QD    26.12                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	27.57	382.1	37.12	5	230.	.03000	12.00	.00	0.	91	0	A15	.00
1352 29A	.0	.00	382.1	37.04	2	1.	.01000	.00	.00	0.	91	99	A15	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:
HYDROGRAPH AT POINT 96AD
HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.77	200	.86	300	.89	400	1.21
500	1.37	600	1.49	700	1.87	800	2.18	900	2.60
1000	3.21	1050	3.85	1100	4.85	1110	5.32	1120	6.10
1130	7.01	1131	7.10	1132	7.19	1133	7.30	1134	7.40
1135	7.51	1136	7.62	1137	7.74	1138	7.89	1139	8.02
1140	8.17	1141	8.33	1142	8.51	1143	8.67	1144	8.89
1145	9.15	1146	9.51	1147	9.90	1148	10.45	1149	11.09
1150	12.04	1151	13.21	1152	15.04	1153	17.24	1154	19.98
1155	21.98	1156	24.70	1157	26.90	1158	28.95	1159	30.69
1160	32.27	1161	33.67	1162	34.88	1163	35.86	1164	36.58
1165	37.00	1166	37.04	1167	36.70	1168	36.03	1169	35.07
1170	33.87	1171	32.46	1172	30.92	1173	29.27	1174	27.58
1175	25.94	1176	24.45	1177	23.15	1178	21.84	1179	20.73
1180	19.71	1181	18.42	1182	17.94	1183	16.51	1184	16.43
1185	14.71	1186	15.16	1187	12.87	1188	14.17	1189	10.89
1190	13.60	1191	8.64	1192	13.64	1193	5.87	1194	14.67
1195	2.20	1196	17.25	1197	.77	1198	17.22	1199	.77
1200	15.61	1201	.77	1202	14.30	1203	.77	1204	13.21
1205	.77	1206	12.30	1207	.77	1208	11.51	1209	.77
1210	10.83	1211	.77	1212	10.24	1213	.77	1214	9.72
1215	.77	1216	9.29	1217	.77	1218	8.90	1219	.77
1220	8.56	1221	.77	1222	8.25	1223	.77	1224	8.01
1225	.77	1226	7.79	1227	.77	1228	7.59	1229	.77
1230	7.40	1231	.77	1232	7.21	1233	.77	1234	7.04
1235	.77	1236	6.86	1237	.77	1238	6.71	1239	.77
1240	6.54	1241	.77	1242	6.37	1243	.77	1244	6.25
1245	.77	1246	6.14	1247	.77	1248	6.03	1249	.77
1250	5.94	1251	.77	1252	5.88	1253	.77	1254	5.77
1255	.77	1256	5.67	1257	.77	1258	5.61	1259	.77
1260	5.55	1261	.77	1262	5.45	1263	.77	1264	5.34
1265	.77	1266	5.21	1267	.77	1268	5.11	1269	.77
1270	4.99	1271	.77	1272	4.77	1273	.77	1274	4.61
1275	.77	1276	4.52	1277	.77	1278	4.47	1279	.77
1280	4.44	1281	.77	1282	4.41	1283	.77	1284	4.35
1285	.77	1286	4.26	1287	.77	1288	4.19	1289	.77
1290	4.14	1291	.77	1292	4.11	1293	.77	1294	4.09
1295	.77	1296	4.07	1297	.77	1298	4.05	1299	.77
1300	4.00	1310	.77	1320	3.29	1330	.77	1340	2.82
1350	.77	1360	2.38	1370	.77	1380	2.11	1390	.77
1400	1.82	1420	.77	1440	1.62	1460	.77	1500	1.03

TOTAL VOLUME THIS HYDROGRAPH = 5.47(Ac.Ft)

STEVENSON RANCH

5-YEAR CLEAR

DEVELOPED CONDITION

Basin A - 05 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	4.9	10	2.11	0.64	0.65
2A	34.8	0.01	93	1871	0.405	4.9	12	1.94	0.62	0.63
3A	33.3	0.01	93	2288	0.337	4.9	15	1.75	0.60	0.60
4A	37.9	0.01	93	1862	0.440	4.9	12	1.94	0.62	0.63
6B	28.8	0.01	93	1664	0.508	4.9	11	2.02	0.64	0.64
7B	12.2	0.01	93	1488	0.460	4.9	10	2.11	0.64	0.65
8B	22.3	0.01	93	2064	0.359	4.9	13	1.87	0.61	0.62
9B	24.6	0.01	93	2208	0.376	4.9	14	1.80	0.60	0.61
13A	24.0	0.01	93	1693	0.428	4.9	11	2.02	0.64	0.64
15C	37.0	0.01	93	2219	0.306	4.9	15	1.75	0.60	0.60
16C	40.2	0.01	93	2159	0.322	4.9	14	1.80	0.60	0.61
17C	31.9	0.01	93	1934	0.334	4.9	13	1.87	0.61	0.62
21A	39.2	0.01	93	2213	0.305	4.8	15	1.73	0.59	0.60
23D	30.8	0.01	93	1773	0.313	4.9	12	1.94	0.62	0.63
24D	39.3	0.01	93	1628	0.289	4.9	12	1.94	0.62	0.63
25D	42.3	0.01	93	1712	0.216	4.9	13	1.87	0.61	0.62
26D	30.9	0.01	93	1709	0.471	4.8	11	2.00	0.63	0.64
27D	26.9	0.01	93	1779	0.360	4.8	12	1.92	0.62	0.62
31A	29.2	0.01	93	2176	0.327	4.7	15	1.68	0.59	0.59
32A	22.2	0.01	93	1894	0.383	4.7	13	1.80	0.60	0.61
33A	23.1	0.01	93	1600	0.428	4.7	11	1.92	0.62	0.62
34A	35.7	0.01	93	2286	0.341	4.7	15	1.66	0.58	0.59
35A	29.2	0.01	93	2014	0.305	4.6	14	1.70	0.59	0.59
36A	25.6	0.01	93	1738	0.328	4.6	13	1.76	0.59	0.60
38A	23.7	0.01	93	1497	0.367	4.5	11	1.85	0.61	0.61
39A	32.5	0.01	93	1852	0.308	4.4	14	1.63	0.58	0.58
40A	20.2	0.01	93	1367	0.400	4.4	11	1.80	0.60	0.61
41A	22.5	0.01	93	1307	0.409	4.1	11	1.68	0.59	0.59
42A	28.5	0.01	93	1919	0.302	4.3	15	1.52	0.56	0.57
44A	20.2	0.01	93	1582	0.329	4.2	13	1.60	0.58	0.58
45A	24.8	0.01	93	1957	0.335	4.1	16	1.41	0.54	0.54
46A	15.1	0.01	93	1406	0.420	4.3	11	1.76	0.59	0.60
47A	24.6	0.01	93	2076	0.234	4.2	18	1.37	0.53	0.54
48A	24.9	0.01	93	1739	0.408	4.3	13	1.65	0.58	0.59
49A	20.9	0.01	93	1541	0.343	4.2	13	1.60	0.58	0.58
50A	19.2	0.01	93	1394	0.325	4.3	12	1.69	0.59	0.59
52E	28.8	0.01	93	1432	0.332	4.6	11	1.88	0.62	0.62
53E	24.8	0.01	93	1534	0.306	4.5	12	1.78	0.60	0.60
54E	33.4	0.01	93	1783	0.334	4.4	14	1.63	0.58	0.58
55E	23.1	0.01	93	1853	0.409	4.3	14	1.59	0.57	0.58
59A	28.2	0.01	93	2259	0.429	4.4	16	1.51	0.56	0.57
60A	27.2	0.01	93	1234	0.405	4.3	10	1.86	0.61	0.62
61A	17.9	0.01	93	1533	0.117	4.3	15	1.54	0.57	0.57
63F	27.0	0.01	93	1616	0.374	4.6	12	1.82	0.61	0.61
64F	40.8	0.01	93	2620	0.393	4.5	17	1.51	0.56	0.57

Basin A - 05 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	4.4	15	1.56	0.57	0.57
66F	32.6	0.01	93	1732	0.514	4.5	12	1.78	0.60	0.60
67F	18.8	0.01	93	1684	0.303	4.4	13	1.69	0.59	0.59
68F	9.2	0.01	93	1319	0.250	4.4	12	1.73	0.59	0.59
72A	6.4	0.01	93	1153	0.264	4.3	11	1.76	0.59	0.60
73A	20.0	0.01	91	1766	0.311	4.3	12	1.71	0.72	0.72
74A	21.9	0.01	91	1507	0.234	4.2	12	1.66	0.71	0.72
75A	42.0	0.01	91	1789	0.159	4.1	14	1.52	0.70	0.70
76A	26.1	0.01	91	1672	0.144	4.1	14	1.52	0.70	0.70
77A	12.2	0.01	91	1303	0.165	4.1	12	1.64	0.71	0.71
79A	14.2	0.01	91	1659	0.316	4.3	12	1.69	0.72	0.72
80A	18.2	0.01	91	1622	0.291	4.2	12	1.66	0.71	0.72
81A	23.3	0.01	91	1645	0.280	4.3	12	1.69	0.72	0.72
82A	22.2	0.01	91	2122	0.161	4.2	16	1.45	0.69	0.69
84B	26.2	0.01	91	1697	0.165	4.1	14	1.50	0.70	0.70
85B	33.5	0.01	91	2040	0.168	4.2	15	1.50	0.70	0.70
88A	2.8	0.01	91	467	0.096	4.3	6	2.33	0.76	0.76
89C	21.6	0.01	91	1492	0.372	4.5	10	1.94	0.74	0.74
90C	23.5	0.01	91	2246	0.220	4.4	15	1.56	0.70	0.71
92A	30.8	0.01	91	1641	0.181	4.3	13	1.65	0.71	0.71
93A	37.7	0.01	91	1873	0.232	4.3	13	1.65	0.71	0.71
94A	11.0	0.01	91	1377	0.290	4.4	10	1.89	0.73	0.73
97A	13.4	0.01	91	1487	0.269	4.4	11	1.80	0.73	0.73

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	21.30	32.5	21.30	2	1173.	.20100	.00	.00	0.	93	10	A25	.01
1352 2A	34.8	19.85	67.3	40.19	2	369.	.19500	.00	.00	0.	93	12	A25	.01
1352 3A	33.3	16.08	100.6	55.77	2	1353.	.24000	.00	.00	0.	93	15	A25	.01
1352 4A	37.9	21.62	138.5	74.92	2	1.	.24000	.00	.00	0.	93	12	A25	.01
1352 5A	.0	.00	138.5	74.91	4	1.	.01000	3.25	.00	0.	93	99	A25	.00
1352 6B	28.8	17.50	28.8	17.50	2	494.	.25300	.00	.00	0.	93	11	A25	.01
1352 7B	12.2	7.99	41.0	25.32	2	1.	.25300	.00	.00	0.	93	10	A25	.01
1352 8B	22.3	11.97	63.3	37.28	2	1342.	.28700	.00	.00	0.	93	13	A25	.01
1352 9B	24.6	12.49	87.9	48.90	2	1.	.28700	.00	.00	0.	93	14	A25	.01
1352 10B	.0	.00	87.9	48.90	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1157 QA    74.91 QAB   123.80 QB    48.90    1352   11B  TB 1157 QB    48.90 QBA   123.80 QA    74.91   *
*                                 1352   11AB TAB 1157 QAB   123.80 QA    74.91 QB    48.90                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	48.90	226.4	123.80	2	655.	.14500	.00	.00	0.	93	0	A25	.00
1352 12A	.0	.00	226.4	123.31	4	1.	.01000	3.75	.00	0.	93	99	A25	.00
1352 13A	24.0	14.59	250.4	136.32	2	1.	.14500	.00	.00	0.	93	11	A25	.01
1352 14A	.0	.00	250.4	136.32	4	1.	.01000	4.00	.00	0.	93	99	A25	.00
1352 15C	37.0	17.86	37.0	17.86	2	826.	.24800	.00	.00	0.	93	15	A25	.01
1352 16C	40.2	20.41	77.2	37.97	2	1267.	.26000	.00	.00	0.	93	14	A25	.01
1352 17C	31.9	17.12	109.1	54.13	2	1.	.26000	.00	.00	0.	93	13	A25	.01
1352 18C	.0	.00	109.1	54.13	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1158 QA   136.32 QAC   189.91 QC    53.59    1352   19C  TC 1157 QC    54.12 QCA   189.56 QA   135.44  *
*                                 1352   19AC TAC 1158 QAC   189.91 QA   136.32 QC    53.59                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	54.12	359.5	189.91	2	1161.	.09000	.00	.00	0.	93	0	A25	.00
1352 20A	.0	.00	359.5	188.40	4	1.	.01000	4.50	.00	0.	93	99	A25	.00
1352 21A	39.2	18.92	398.7	205.96	2	1.	.09000	.00	.00	0.	93	15	A25	.01
1352 22A	.0	.00	398.7	205.96	4	1.	.01000	4.50	.00	0.	93	99	A25	.00
1352 23D	30.8	17.57	30.8	17.57	2	1242.	.23000	.00	.00	0.	93	12	A25	.01
1352 24D	39.3	22.42	70.1	39.16	2	1308.	.03800	.00	.00	0.	93	12	A25	.01
1352 25D	42.3	22.70	112.4	55.13	2	723.	.22800	.00	.00	0.	93	13	A25	.01
1352 26D	30.9	18.78	143.3	69.58	2	720.	.09000	.00	.00	0.	93	11	A25	.01
1352 27D	26.9	15.34	170.2	81.15	2	1.	.09000	.00	.00	0.	93	12	A25	.01
1352 28D	.0	.00	170.2	81.15	4	1.	.01000	3.25	.00	0.	93	99	A25	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1159 QA   205.95 QAD   286.36 QD    80.41    1352   29D  TD 1160 QD    81.15 QDA   285.26 QA   204.12   *
*                                1352   29AD TAD 1159 QAD   286.36 QA   205.95 QD    80.41                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	81.15	568.9	286.36	2	668.	.04800	.00	.00	0.	93	0	A25	.00
1352	30A	.0	.00	568.9	284.60	4	1.	.01000	5.25	.00	0.	93	99	A25	.00
1352	31A	29.2	13.13	598.1	296.34	2	506.	.04400	.00	.00	0.	93	15	A24	.01
1352	32A	22.2	11.11	620.3	304.03	2	635.	.03900	.00	.00	0.	93	13	A24	.01
1352	33A	23.1	13.17	643.4	307.13	2	593.	.04200	.00	.00	0.	93	11	A24	.01
1352	34A	35.7	16.06	679.1	317.45	2	572.	.03500	.00	.00	0.	93	15	A24	.01
1352	35A	29.2	13.85	708.3	322.71	2	485.	.04100	.00	.00	0.	93	14	A24	.01
1352	36A	25.6	12.81	733.9	326.60	2	532.	.03800	.00	.00	0.	93	13	A24	.01
1352	37A	.0	.00	733.9	324.53	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	38A	23.7	12.61	757.6	326.00	2	396.	.05100	.00	.00	0.	93	11	A23	.01
1352	39A	32.5	14.36	790.1	329.16	2	838.	.05600	.00	.00	0.	93	14	A23	.01
1352	40A	20.2	9.99	810.3	327.09	2	1.	.05600	.00	.00	0.	93	11	A22	.01
1352	41A	22.5	10.28	832.8	327.88	2	1.	.13300	.00	.00	0.	93	11	A21	.01
1352	42A	28.5	11.14	861.3	331.79	2	840.	.05700	.00	.00	0.	93	15	A22	.01
1352	43A	.0	.00	861.3	329.11	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	44A	20.2	8.74	881.5	330.00	2	1.	.05700	.00	.00	0.	93	13	A22	.01
1352	45A	24.8	8.51	906.3	332.87	2	575.	.03500	.00	.00	0.	93	16	A21	.01
1352	46A	15.1	7.47	921.4	331.40	2	1319.	.03400	.00	.00	0.	93	11	A22	.01
1352	47A	24.6	8.30	946.0	327.68	2	1.	.03400	.00	.00	0.	93	18	A22	.01
1352	48A	24.9	10.77	970.9	328.37	2	722.	.03900	.00	.00	0.	93	13	A22	.01
1352	49A	20.9	9.04	991.8	327.44	2	846.	.04700	.00	.00	0.	93	13	A22	.01
1352	50A	19.2	8.83	1011.0	325.84	2	1.	.04700	.00	.00	0.	93	12	A22	.01
1352	51A	.0	.00	1011.0	325.83	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	52E	28.8	15.33	28.8	15.33	2	940.	.14400	.00	.00	0.	93	11	A23	.01
1352	53E	24.8	12.32	53.6	27.01	2	971.	.27800	.00	.00	0.	93	12	A23	.01
1352	54E	33.4	14.76	87.0	40.92	2	1110.	.18700	.00	.00	0.	93	14	A23	.01
1352	55E	23.1	9.48	110.1	49.16	2	1.	.18700	.00	.00	0.	93	14	A22	.01
1352	56E	.0	.00	110.1	49.16	4	1.	.01000	2.75	.00	0.	93	99	A25	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1173 QA   325.82 QAE   331.36 QE     5.54    1352   57E  TE 1159 QE    49.16 QEA   179.81 QA   130.65   *
*                                1352   57AE TAE 1173 QAE   331.36 QA   325.82 QE     5.54                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	49.16	1121.1	331.36	2	180.	.03900	.00	.00	0.	93	0	A25	.00
1352	58A	.0	.00	1121.1	330.45	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	59A	28.2	10.46	1149.3	331.22	2	815.	.01800	.00	.00	0.	93	16	A22	.01
1352	60A	27.2	14.59	1176.5	329.04	2	1136.	.05700	.00	.00	0.	93	10	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	7.00	1194.4	328.04	2	1.	.05700	.00	.00	0.	93	15	A22	.01
1352	62A	.0	.00	1194.4	328.03	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	63F	27.0	14.40	27.0	14.40	2	586.	.19600	.00	.00	0.	93	12	A24	.01
1352	64F	40.8	15.52	67.8	29.86	2	727.	.08900	.00	.00	0.	93	17	A23	.01
1352	65F	37.4	14.62	105.2	43.78	2	1.	.08900	.00	.00	0.	93	15	A22	.01
1352	66F	32.6	16.19	137.8	59.13	2	1.	.14100	.00	.00	0.	93	12	A23	.01
1352	67F	18.8	8.77	156.6	67.73	2	677.	.08100	.00	.00	0.	93	13	A23	.01
1352	68F	9.2	4.23	165.8	71.22	2	1.	.08100	.00	.00	0.	93	12	A22	.01
1352	69F	.0	.00	165.8	71.22	4	1.	.01000	3.00	.00	0.	93	99	A25	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1177 QA   328.03 QAF   333.62 QF     5.60    1352   70F  TF 1158 QF    71.22 QFA   204.40 QA   133.18   *
*                                1352   70AF TAF 1177 QAF   333.62 QA   328.03 QF     5.60                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	71.22	1360.2	333.62	2	561.	.03600	.00	.00	0.	93	0	A25	.00
1352	71A	.0	.00	1360.2	332.49	4	1.	.01000	5.50	.00	0.	93	99	A25	.00
1352	72A	6.4	3.16	1366.6	332.62	2	1.	.03600	.00	.00	0.	93	11	A22	.01
1352	73A	20.0	12.77	1386.6	333.29	2	434.	.03000	.00	.00	0.	91	12	A22	.01
1352	74A	21.9	13.98	1408.5	332.90	2	420.	.02900	.00	.00	0.	91	12	A22	.01
1352	75A	42.0	23.08	1450.5	332.80	2	1019.	.02000	.00	.00	0.	91	14	A21	.01
1352	76A	26.1	14.34	1476.6	330.58	2	249.	.04000	.00	.00	0.	91	14	A21	.01
1352	77A	12.2	7.35	1488.8	330.27	2	1.	.04000	.00	.00	0.	91	12	A21	.01
1352	78A	.0	.00	1488.8	330.26	4	1.	.01000	5.50	.00	0.	91	99	A25	.00
1352	79A	14.2	9.07	1503.0	330.57	2	643.	.01900	.00	.00	0.	91	12	A22	.01
1352	80A	18.2	11.62	1521.2	329.60	2	751.	.02400	.00	.00	0.	91	12	A22	.01
1352	81A	23.3	14.88	1544.5	328.30	2	709.	.02400	.00	.00	0.	91	12	A22	.01
1352	82A	22.2	11.91	1566.7	327.76	2	1.	.02400	.00	.00	0.	91	16	A22	.01
1352	83A	.0	.00	1566.7	327.76	4	1.	.01000	5.50	.00	0.	91	99	A25	.00
1352	84B	26.2	14.40	26.2	14.40	2	1438.	.06400	.00	.00	0.	91	14	A21	.01
1352	85B	33.5	18.74	59.7	30.91	2	1.	.06400	.00	.00	0.	91	15	A22	.01
1352	86B	.0	.00	59.7	30.91	4	1.	.01000	2.25	.00	0.	91	99	A25	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1187 QA   327.75 QAB   329.33 QB     1.57    1352   87B  TB 1159 QB    30.90 QBA   183.47 QA   152.57   *
*                                1352   87AB TAB 1187 QAB   329.33 QA   327.75 QB     1.57                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	30.90	1626.4	329.33	2	405.	.02300	.00	.00	0.	91	0	A25	.00
1352	88A	2.8	2.69	1629.2	328.62	2	1.	.02300	.00	.00	0.	91	6	A22	.01
1352	89C	21.6	16.46	21.6	16.46	2	1328.	.09400	.00	.00	0.	91	10	A23	.01
1352	90C	23.5	13.15	45.1	28.05	2	1.	.09400	.00	.00	0.	91	15	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN A STORM DAY 4

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1188 QA   328.62 QAC   329.70 QC     1.08    1352   91C  TC 1158 QC    28.05 QCA   191.06 QA   163.01   *
*                                1352   91AC TAC 1188 QAC   329.70 QA   328.62 QC     1.08                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	28.05	1674.3	329.70	2	977.	.02400	.00	.00	0.	91	0	A25	.00
1352	92A	30.8	18.72	1705.1	328.60	2	999.	.01300	.00	.00	0.	91	13	A22	.01
1352	93A	37.7	22.92	1742.8	326.04	2	448.	.02200	.00	.00	0.	91	13	A22	.01
1352	94A	11.0	7.93	1753.8	325.57	2	1.	.02200	.00	.00	0.	91	10	A22	.01
1352	95D	382.1	195.10	382.1	195.10	2	1.	.02200	.00	.00	0.	91	0	A25	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1194 QA   325.57 QAD   343.96 QD    18.39    1352   96D  TD 1163 QD   195.10 QDA   398.21 QA   203.11   *
*                                1352   96AD TAD 1164 QAD   402.03 QA   210.71 QD   191.32                                  *
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		SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL		RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	195.10	2135.9	402.03	6	250.	.01600	32.00	.00	0.	91	0	A25	.00
1352	97A	13.4	9.06	2149.3	402.97	2	642.	.01700	.00	.00	0.	91	11	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	15.08	200	15.37	300	16.07	400	16.92
500	17.99	600	19.25	700	20.83	800	22.89	900	26.01
1000	30.91	1050	35.77	1100	50.06	1110	57.65	1120	69.61
1130	86.75	1131	88.86	1132	90.86	1133	93.04	1134	95.33
1135	97.80	1136	100.28	1137	102.88	1138	105.62	1139	108.47
1140	111.48	1141	114.77	1142	118.25	1143	122.02	1144	126.02
1145	130.59	1146	135.76	1147	141.62	1148	147.72	1149	155.63
1150	165.53	1151	178.20	1152	193.77	1153	212.29	1154	232.13
1155	252.95	1156	274.63	1157	296.00	1158	317.12	1159	338.03
1160	356.96	1161	374.21	1162	388.36	1163	397.92	1164	402.58
1165	402.97	1166	399.40	1167	392.90	1168	385.68	1169	379.10
1170	373.66	1171	369.26	1172	365.52	1173	362.06	1174	358.44
1175	354.67	1176	350.63	1177	346.37	1178	341.74	1179	336.74
1180	331.70	1181	326.85	1182	322.42	1183	318.71	1184	315.99
1185	314.47	1186	314.38	1187	315.86	1188	318.69	1189	323.00
1190	328.16	1191	332.66	1192	337.33	1193	341.67	1194	343.75
1195	343.11	1196	339.99	1197	334.31	1198	326.46	1199	317.64
1200	308.00	1201	297.81	1202	287.38	1203	276.86	1204	266.43
1205	256.16	1206	246.16	1207	236.52	1208	226.88	1209	217.72
1210	208.88	1211	200.42	1212	192.29	1213	184.51	1214	177.11
1215	170.05	1216	163.36	1217	157.01	1218	150.97	1219	145.25
1220	139.83	1221	134.73	1222	130.01	1223	125.52	1224	121.08
1225	116.86	1226	112.86	1227	109.02	1228	105.35	1229	101.91
1230	98.66	1231	95.56	1232	92.61	1233	89.82	1234	87.16
1235	84.62	1236	82.21	1237	79.95	1238	77.78	1239	75.69
1240	73.71	1241	71.83	1242	70.04	1243	68.39	1244	66.80
1245	65.23	1246	63.72	1247	62.26	1248	60.86	1249	59.52
1250	58.21	1251	57.00	1252	55.87	1253	54.77	1254	53.72
1255	52.73	1256	51.76	1257	50.81	1258	49.94	1259	48.94
1260	48.25	1261	47.48	1262	46.76	1263	46.09	1264	45.49
1265	44.90	1266	44.29	1267	43.71	1268	43.14	1269	42.63
1270	42.12	1271	41.59	1272	41.11	1273	40.65	1274	40.20
1275	39.73	1276	39.33	1277	38.91	1278	38.58	1279	38.17
1280	37.86	1281	37.48	1282	37.25	1283	36.87	1284	36.66
1285	36.25	1286	36.04	1287	35.54	1288	35.44	1289	34.77
1290	35.28	1291	33.84	1292	35.38	1293	32.41	1294	35.92
1295	30.55	1296	36.94	1297	29.20	1298	37.50	1299	28.06
1300	37.92	1310	29.90	1320	29.27	1330	20.97	1340	27.07
1350	18.36	1360	25.83	1370	16.33	1380	24.89	1390	15.08
1400	23.79	1420	15.08	1440	20.60	1460	14.99	1500	16.35

TOTAL VOLUME THIS HYDROGRAPH = 77.61(Ac.Ft)

Basin B - 05 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	4.7	11	1.95	0.63	0.63
2A	36.3	0.01	93	2008	0.354	4.7	14	1.74	0.60	0.60
3A	11.1	0.01	93	1303	0.437	4.7	9	2.14	0.65	0.65
4A	25.5	0.01	93	2134	0.354	4.8	14	1.78	0.60	0.60
5A	18.9	0.01	93	1414	0.375	4.7	10	2.04	0.64	0.64
6A	19.2	0.01	93	1221	0.483	4.7	9	2.14	0.65	0.65
7A	24.7	0.01	93	1706	0.396	4.7	12	1.87	0.61	0.62
8A	20.4	0.01	93	1412	0.342	4.7	11	1.92	0.62	0.62
9B	25.7	0.01	97	1440	0.316	4.5	11	1.85	0.65	0.65
10B	39.8	0.01	93	2531	0.296	4.6	17	1.55	0.57	0.57
12A	15.7	0.01	97	1111	0.364	4.6	9	2.09	0.68	0.68
13A	31.9	0.01	97	1823	0.192	4.6	14	1.68	0.63	0.64
14C	21.3	0.01	91	2178	0.27	4.5	14	1.65	0.71	0.71

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	10.94	19.2	10.94	2	959.	.20900	.00	.00	0.	93	11	A24	.01
1352 2A	36.3	17.21	55.5	27.76	2	367.	.12300	.00	.00	0.	93	14	A24	.01
1352 3A	11.1	7.30	66.6	34.31	2	1.	.12300	.00	.00	0.	93	9	A24	.01
1352 4A	25.5	12.95	92.1	47.16	2	662.	.12100	.00	.00	0.	93	14	A25	.01
1352 5A	18.9	11.65	111.0	57.37	2	546.	.11000	.00	.00	0.	93	10	A24	.01
1352 6A	19.2	12.64	130.2	68.04	2	1340.	.16000	.00	.00	0.	93	9	A24	.01
1352 7A	24.7	13.18	154.9	77.84	2	592.	.06400	.00	.00	0.	93	12	A24	.01
1352 8A	20.4	11.63	175.3	86.04	2	1.	.06400	.00	.00	0.	93	11	A24	.01
1352 9B	25.7	19.58	25.7	19.58	2	980.	.09500	.00	.00	0.	91	10	A23	.01
1352 10B	39.8	23.12	65.5	41.83	2	1.	.09500	.00	.00	0.	91	17	A24	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1159 QA    86.04 QAB   126.52 QB    40.49    1352   11B  TB 1157 QB    41.82 QBA   119.18 QA    77.36   *
*                              1352   11AB TAB 1159 QAB   126.52 QA    86.04 QB    40.49                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	41.82	240.8	126.52	2	761.	.08100	.00	.00	0.	91	0	A24	.00
1352 12A	15.7	14.18	256.5	130.37	2	1228.	.04900	.00	.00	0.	91	8	A24	.01
1352 13A	31.9	20.60	288.4	143.21	2	1.	.04900	.00	.00	0.	91	13	A23	.01
1352 14C	21.3	13.17	21.3	13.17	2	1.	.01000	.00	.00	0.	91	14	A23	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   15A  TA 1161 QA   143.20 QAC   154.48 QC    11.28    1352   15C  TC 1154 QC    13.17 QCA    93.32 QA    80.15   *
*                              1352   15AC TAC 1161 QAC   154.48 QA   143.20 QC    11.28                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	13.17	309.7	154.48	5	100.	.02000	10.00	.00	0.	91	0	A23	.00
1352 16A	.0	.00	309.7	154.05	2	1.	.01000	.00	.00	0.	91	99	A23	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	2.10	200	2.17	300	2.29	400	2.41
500	2.57	600	2.75	700	3.00	800	3.32	900	3.78
1000	4.55	1050	5.48	1100	9.41	1110	12.23	1120	15.93
1130	21.69	1131	22.45	1132	23.15	1133	23.98	1134	24.78
1135	25.55	1136	26.36	1137	27.28	1138	28.34	1139	29.43
1140	30.54	1141	31.92	1142	33.46	1143	35.04	1144	36.71
1145	38.70	1146	41.00	1147	43.48	1148	46.31	1149	51.23
1150	57.54	1151	64.09	1152	72.30	1153	82.10	1154	91.86
1155	101.67	1156	112.93	1157	124.10	1158	134.88	1159	143.59
1160	150.11	1161	154.05	1162	153.43	1163	148.41	1164	140.83
1165	131.01	1166	119.70	1167	108.71	1168	98.84	1169	89.37
1170	80.49	1171	72.21	1172	64.40	1173	57.32	1174	50.81
1175	45.21	1176	40.51	1177	36.06	1178	32.21	1179	28.81
1180	25.85	1181	23.29	1182	21.00	1183	18.97	1184	17.27
1185	15.53	1186	13.37	1187	14.46	1188	2.10	1189	28.66
1190	2.10	1191	26.37	1192	2.10	1193	24.62	1194	2.10
1195	23.24	1196	2.10	1197	22.18	1198	2.10	1199	21.31
1200	2.10	1201	20.64	1202	2.10	1203	20.11	1204	2.10
1205	19.68	1206	2.10	1207	19.32	1208	2.10	1209	19.01
1210	2.10	1211	18.75	1212	2.10	1213	18.53	1214	2.10
1215	18.33	1216	2.10	1217	18.14	1218	2.10	1219	17.97
1220	2.10	1221	17.81	1222	2.10	1223	17.65	1224	2.10
1225	17.51	1226	2.10	1227	17.37	1228	2.10	1229	17.24
1230	2.10	1231	17.11	1232	2.10	1233	17.02	1234	2.10
1235	16.92	1236	2.10	1237	16.81	1238	2.10	1239	16.71
1240	2.10	1241	16.61	1242	2.10	1243	16.52	1244	2.10
1245	16.43	1246	2.10	1247	16.33	1248	2.10	1249	16.25
1250	2.10	1251	16.18	1252	2.10	1253	16.10	1254	2.10
1255	16.03	1256	2.10	1257	15.93	1258	2.10	1259	15.82
1260	2.10	1261	15.69	1262	2.10	1263	15.55	1264	2.10
1265	15.41	1266	2.10	1267	15.31	1268	2.10	1269	15.19
1270	2.10	1271	15.08	1272	2.10	1273	14.95	1274	2.10
1275	14.85	1276	2.10	1277	14.75	1278	2.10	1279	14.64
1280	2.10	1281	14.54	1282	2.10	1283	14.43	1284	2.10
1285	14.34	1286	2.10	1287	14.24	1288	2.10	1289	14.14
1290	2.10	1291	14.05	1292	2.10	1293	13.95	1294	2.10
1295	13.86	1296	2.10	1297	13.77	1298	2.10	1299	13.69
1300	2.10	1310	4.10	1320	2.10	1330	3.67	1340	2.10
1350	3.34	1360	2.10	1370	3.04	1380	2.10	1390	2.78
1400	2.10	1420	2.50	1440	2.10	1460	2.17	1500	2.10

TOTAL VOLUME THIS HYDROGRAPH = 12.22(Ac.Ft)

Basin C - 05 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	0.9	0.05	91	370	0.42	3.8	5	2.27	0.75	0.76
4B	2.5	0.01	91	460	0.42	3.8	5	2.28	0.75	0.75
5B	7.2	0.01	91	1000	0.33	3.8	9	1.72	0.71	0.71
6B	1.6	0.01	91	625	0.30	3.8	7	1.94	0.74	0.74
7B	1.5	0.70	91	845	0.05	3.8	10	1.64	0.70	0.84
8B	0.4	0.91	91	490	0.060	3.8	7	1.94	0.74	0.89
11A	4.6	0.70	91	1345	0.04	3.8	15	1.35	0.67	0.83
12A	3.7	0.70	91	1240	0.04	3.8	14	1.40	0.67	0.83
14A	2.6	0.70	91	980	0.07	3.8	11	1.57	0.69	0.84
15C	2.1	0.01	91	415	0.32	3.8	5	2.27	0.75	0.75
16C	2.9	0.25	91	1150	0.13	3.8	12	1.50	0.68	0.74
17C	5.8	0.60	91	1180	0.070	3.8	12	1.50	0.68	0.81
18C	1.0	0.05	91	780	0.09	3.8	10	1.64	0.70	0.71
21A	1.7	0.05	91	1000	0.08	3.8	12	1.50	0.68	0.69
22A	3.1	0.70	91	1000	0.02	3.8	14	1.40	0.67	0.83
23A	4.4	0.70	91	1000	0.02	3.8	14	1.40	0.67	0.83
24A	4.0	0.75	91	1550	0.08	3.8	14	1.40	0.67	0.84
25A	2.1	0.85	91	1500	0.08	3.8	13	1.45	0.68	0.87
27D	20.3	0.05	91	1993	0.128	4.5	15	1.60	0.71	0.72

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	1.04	.9	1.04	4	250.	.03000	2.00	.00	0.	91	5	A23	.05
1352	2A	.0	.00	.9	.96	4	1.	.01000	2.00	.00	0.	91	99	A23	.00
1352	3A	.0	.00	.9	.96	4	1.	.01000	2.00	.00	0.	91	99	A23	.00
1352	4B	2.5	2.86	2.5	2.86	2	170.	.01000	.00	.00	0.	91	5	A23	.01
1352	5B	7.2	5.80	9.7	8.23	2	480.	.05000	.00	.00	0.	91	9	A23	.01
1352	6B	1.6	1.48	11.3	9.05	4	160.	.10000	2.00	.00	0.	91	7	A23	.01
1352	7B	1.5	1.41	12.8	10.36	4	5.	.10000	2.00	.00	0.	91	10	A23	.65
1352	8B	.4	.48	13.2	10.76	4	30.	.02000	2.00	.00	0.	91	7	A23	.91
1352	9B	.0	.00	13.2	10.75	4	1.	.01000	2.00	.00	0.	91	99	A23	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA      .96 QAB    10.31 QB     9.35    1352   10B  TB 1156 QB    10.75 QBA    11.51 QA      .77   *
*                              1352   10AB TAB 1156 QAB    11.51 QA      .77 QB    10.75                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	10.75	14.1	11.51	4	800.	.06500	2.00	.00	0.	91	0	A23	.00
1352	11A	4.6	3.53	18.7	14.75	4	1.	.06500	2.00	.00	0.	91	15	A23	.65
1352	12A	3.7	2.93	22.4	17.62	4	50.	.06500	2.00	.00	0.	91	14	A23	.65
1352	13A	.0	.00	22.4	17.58	4	1.	.01000	2.00	.00	0.	91	99	A23	.00
1352	14A	2.6	2.33	25.0	19.79	4	10.	.06500	2.00	.00	0.	91	11	A23	.65
1352	15C	2.1	2.40	2.1	2.40	4	120.	.09100	2.00	.00	0.	91	5	A23	.01
1352	16C	2.9	2.16	5.0	4.44	4	770.	.09200	2.00	.00	0.	91	12	A23	.25
1352	17C	5.8	4.88	10.8	9.16	4	50.	.09200	2.00	.00	0.	91	12	A23	.60
1352	18C	1.0	.77	11.8	9.90	4	10.	.09200	2.00	.00	0.	91	10	A23	.05

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1157 QA    19.79 QAC    29.01 QC     9.23    1352   19C  TC 1155 QC     9.90 QCA    28.28 QA    18.38   *
*                              1352   19AC TAC 1156 QAC    29.09 QA    19.37 QC     9.72                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	9.90	36.8	29.09	4	260.	.09000	2.00	.00	0.	91	0	A23	.00
1352	20A	.0	.00	36.8	29.03	4	1.	.01000	2.25	.00	0.	91	99	A23	.00
1352	21A	1.7	1.17	38.5	30.15	4	130.	.08800	2.00	.00	0.	91	12	A23	.05
1352	22A	3.1	2.46	41.6	32.55	4	1.	.02000	2.00	.00	0.	91	14	A23	.65
1352	23A	4.4	3.49	46.0	35.97	4	1040.	.08800	2.00	.00	0.	91	14	A23	.65
1352	24A	4.0	3.22	50.0	38.90	4	1.	.03400	2.00	.00	0.	91	14	A23	.70
1352	25A	2.1	1.58	52.1	40.40	4	80.	.03200	2.00	.00	0.	91	13	A23	.40
1352	26D	309.7	154.00	309.7	154.00	2	1.	.01000	.00	.00	0.	91	0	A23	.00
1352	27D	20.3	12.31	330.0	164.79	2	1600.	.12800	.00	.00	0.	91	15	A23	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR - BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1158 QA    40.37 QAD   165.22 QD   124.85    1352   28D  TD 1163 QD   162.91 QDA   194.82 QA    31.91   *
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*                              1352   28AD TAD 1162 QAD   195.62 QA    35.00 QD   160.62                                    *
*****************************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL       RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   28AD  330.0     162.91     382.1    195.62   5     230.   .03000    12.00   .00        0.   91   0   A23   .00
    1352   29A      .0        .00     382.1    195.12   2       1.   .01000      .00   .00        0.   91  99   A23   .00
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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	3.40	200	3.55	300	3.72	400	3.90
500	4.19	600	4.51	700	4.87	800	5.36	900	6.28
1000	7.73	1050	9.43	1100	14.93	1110	18.39	1120	23.81
1130	31.22	1131	32.10	1132	32.97	1133	33.92	1134	34.96
1135	36.07	1136	37.22	1137	38.39	1138	39.58	1139	40.84
1140	42.19	1141	43.65	1142	45.26	1143	47.06	1144	49.12
1145	51.39	1146	53.88	1147	56.68	1148	59.85	1149	63.57
1150	68.70	1151	75.73	1152	85.00	1153	96.22	1154	109.06
1155	122.86	1156	136.64	1157	149.25	1158	161.46	1159	172.89
1160	182.82	1161	190.32	1162	194.69	1163	195.12	1164	191.30
1165	183.07	1166	171.70	1167	158.31	1168	144.30	1169	130.85
1170	118.79	1171	107.83	1172	97.93	1173	88.89	1174	80.54
1175	72.89	1176	66.00	1177	60.09	1178	54.47	1179	49.51
1180	45.03	1181	41.00	1182	37.41	1183	34.23	1184	31.40
1185	28.89	1186	26.66	1187	24.59	1188	22.34	1189	20.74
1190	18.87	1191	16.52	1192	16.89	1193	17.57	1194	18.40
1195	18.61	1196	19.09	1197	18.28	1198	17.75	1199	17.28
1200	16.88	1201	16.52	1202	16.19	1203	15.91	1204	15.65
1205	15.42	1206	15.20	1207	15.02	1208	14.83	1209	14.67
1210	14.50	1211	14.36	1212	14.20	1213	14.08	1214	13.94
1215	13.84	1216	13.72	1217	13.64	1218	13.53	1219	13.47
1220	13.36	1221	13.31	1222	13.22	1223	13.19	1224	13.08
1225	13.06	1226	12.96	1227	12.94	1228	12.83	1229	12.82
1230	12.71	1231	12.72	1232	12.60	1233	12.62	1234	12.50
1235	12.55	1236	12.41	1237	12.47	1238	12.32	1239	12.40
1240	12.23	1241	12.33	1242	12.14	1243	12.27	1244	12.05
1245	12.20	1246	11.94	1247	12.12	1248	11.79	1249	12.00
1250	11.61	1251	11.88	1252	11.47	1253	11.82	1254	11.35
1255	11.77	1256	11.22	1257	11.73	1258	11.10	1259	11.71
1260	10.97	1261	11.71	1262	10.84	1263	11.71	1264	10.69
1265	11.73	1266	10.52	1267	11.75	1268	10.32	1269	11.77
1270	10.10	1271	11.84	1272	9.87	1273	11.92	1274	9.60
1275	12.04	1276	9.29	1277	12.18	1278	8.95	1279	12.38
1280	8.60	1281	12.66	1282	8.16	1283	12.96	1284	7.65
1285	13.31	1286	7.04	1287	13.74	1288	6.35	1289	14.29
1290	5.58	1291	14.98	1292	4.69	1293	15.82	1294	3.67
1295	16.83	1296	3.40	1297	16.97	1298	3.40	1299	16.86
1300	3.40	1310	13.70	1320	3.40	1330	6.57	1340	3.40
1350	5.67	1360	3.40	1370	5.09	1380	3.40	1390	4.67
1400	3.40	1420	4.23	1440	3.40	1460	3.72	1500	3.40

TOTAL VOLUME THIS HYDROGRAPH = 18.22(Ac.Ft)

STEVENSON RANCH

10-YEAR CLEAR

DEVELOPED CONDITION

Basin A - 10 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	6.0	8	2.87	0.71	0.71
2A	34.8	0.01	93	1871	0.405	6.0	10	2.58	0.69	0.69
3A	33.3	0.01	93	2288	0.337	6.0	12	2.37	0.67	0.67
4A	37.9	0.01	93	1862	0.440	6.0	10	2.58	0.69	0.69
6B	28.8	0.01	93	1664	0.508	6.0	9	2.71	0.70	0.70
7B	12.2	0.01	93	1488	0.460	6.0	8	2.87	0.71	0.71
8B	22.3	0.01	93	2064	0.359	6.0	11	2.47	0.68	0.68
9B	24.6	0.01	93	2208	0.376	6.0	11	2.47	0.68	0.68
13A	24.0	0.01	93	1693	0.428	6.0	9	2.71	0.70	0.70
15C	37.0	0.01	93	2219	0.306	6.0	12	2.37	0.67	0.67
16C	40.2	0.01	93	2159	0.322	6.0	11	2.47	0.68	0.68
17C	31.9	0.01	93	1934	0.334	6.0	10	2.58	0.69	0.69
21A	39.2	0.01	93	2213	0.305	5.9	12	2.34	0.67	0.67
23D	30.8	0.01	93	1773	0.313	6.0	10	2.58	0.69	0.69
24D	39.3	0.01	93	1628	0.289	6.0	10	2.58	0.69	0.69
25D	42.3	0.01	93	1712	0.216	6.0	10	2.58	0.69	0.69
26D	30.9	0.01	93	1709	0.471	5.9	9	2.68	0.69	0.70
27D	26.9	0.01	93	1779	0.360	5.9	10	2.55	0.69	0.69
31A	29.2	0.01	93	2176	0.327	5.8	12	2.29	0.66	0.66
32A	22.2	0.01	93	1894	0.383	5.8	10	2.49	0.68	0.68
33A	23.1	0.01	93	1600	0.428	5.7	9	2.59	0.69	0.69
34A	35.7	0.01	93	2286	0.341	5.7	12	2.26	0.66	0.66
35A	29.2	0.01	93	2014	0.305	5.6	12	2.23	0.66	0.66
36A	25.6	0.01	93	1738	0.328	5.6	10	2.43	0.68	0.68
38A	23.7	0.01	93	1497	0.367	5.5	9	2.49	0.68	0.68
39A	32.5	0.01	93	1852	0.308	5.4	11	2.23	0.66	0.66
40A	20.2	0.01	93	1367	0.400	5.4	9	2.42	0.68	0.68
41A	22.5	0.01	93	1307	0.409	5.0	9	2.26	0.66	0.66
42A	28.5	0.01	93	1919	0.302	5.2	12	2.06	0.64	0.64
44A	20.2	0.01	93	1582	0.329	5.1	11	2.12	0.64	0.65
45A	24.8	0.01	93	1957	0.335	5.0	13	1.90	0.62	0.62
46A	15.1	0.01	93	1406	0.420	5.2	9	2.36	0.67	0.67
47A	24.6	0.01	93	2076	0.234	5.1	14	1.89	0.62	0.62
48A	24.9	0.01	93	1739	0.408	5.3	11	2.18	0.65	0.65
49A	20.9	0.01	93	1541	0.343	5.1	10	2.21	0.65	0.66
50A	19.2	0.01	93	1394	0.325	5.2	10	2.25	0.66	0.66
52E	28.8	0.01	93	1432	0.332	5.6	9	2.52	0.68	0.69
53E	24.8	0.01	93	1534	0.306	5.5	10	2.37	0.67	0.67
54E	33.4	0.01	93	1783	0.334	5.4	11	2.23	0.66	0.66
55E	23.1	0.01	93	1853	0.409	5.3	11	2.18	0.65	0.65
59A	28.2	0.01	93	2259	0.429	5.4	12	2.12	0.64	0.65
60A	27.2	0.01	93	1234	0.405	5.3	8	2.53	0.68	0.69
61A	17.9	0.01	93	1533	0.117	5.3	12	2.09	0.64	0.64
63F	27.0	0.01	93	1616	0.374	5.6	10	2.43	0.68	0.68
64F	40.8	0.01	93	2620	0.393	5.5	14	2.02	0.64	0.64

Basin A - 10 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	5.4	12	2.12	0.64	0.65
66F	32.6	0.01	93	1732	0.514	5.5	10	2.37	0.67	0.67
67F	18.8	0.01	93	1684	0.303	5.4	11	2.23	0.66	0.66
68F	9.2	0.01	93	1319	0.250	5.4	9	2.42	0.68	0.68
72A	6.4	0.01	93	1153	0.264	5.2	9	2.36	0.67	0.67
73A	20.0	0.01	91	1766	0.311	5.3	10	2.28	0.76	0.76
74A	21.9	0.01	91	1507	0.234	5.1	10	2.21	0.75	0.75
75A	42.0	0.01	91	1789	0.159	5.1	12	2.00	0.74	0.74
76A	26.1	0.01	91	1672	0.144	5.1	12	2.00	0.74	0.74
77A	12.2	0.01	91	1303	0.165	5.1	10	2.18	0.75	0.75
79A	14.2	0.01	91	1659	0.316	5.2	10	2.25	0.75	0.76
80A	18.2	0.01	91	1622	0.291	5.1	10	2.21	0.75	0.75
81A	23.3	0.01	91	1645	0.280	5.2	10	2.25	0.75	0.76
82A	22.2	0.01	91	2122	0.161	5.1	13	1.96	0.74	0.74
84B	26.2	0.01	91	1697	0.165	5.0	12	1.92	0.74	0.74
85B	33.5	0.01	91	2040	0.168	5.1	13	1.96	0.74	0.74
88A	2.8	0.01	91	467	0.096	5.2	5	3.11	0.79	0.79
89C	21.6	0.01	91	1492	0.372	5.5	9	2.49	0.77	0.77
90C	23.5	0.01	91	2246	0.220	5.4	13	2.04	0.74	0.75
92A	30.8	0.01	91	1641	0.181	5.3	11	2.18	0.75	0.75
93A	37.7	0.01	91	1873	0.232	5.3	11	2.18	0.75	0.75
94A	11.0	0.01	91	1377	0.290	5.4	9	2.42	0.76	0.76
97A	13.4	0.01	91	1487	0.269	5.4	9	2.42	0.76	0.76

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	42.01	32.5	42.01	2	1173.	.20100	.00	.00	0.	93	8	A30	.01
1352 2A	34.8	39.70	67.3	79.78	2	369.	.19500	.00	.00	0.	93	10	A30	.01
1352 3A	33.3	33.43	100.6	112.44	2	1353.	.24000	.00	.00	0.	93	12	A30	.01
1352 4A	37.9	43.24	138.5	151.29	2	1.	.24000	.00	.00	0.	93	10	A30	.01
1352 5A	.0	.00	138.5	151.28	4	1.	.01000	4.00	.00	0.	93	99	A30	.00
1352 6B	28.8	34.85	28.8	34.85	2	494.	.25300	.00	.00	0.	93	9	A30	.01
1352 7B	12.2	15.77	41.0	50.27	2	1.	.25300	.00	.00	0.	93	8	A30	.01
1352 8B	22.3	23.81	63.3	74.01	2	1342.	.28700	.00	.00	0.	93	11	A30	.01
1352 9B	24.6	26.27	87.9	98.69	2	1.	.28700	.00	.00	0.	93	11	A30	.01
1352 10B	.0	.00	87.9	98.69	4	1.	.01000	3.50	.00	0.	93	99	A30	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1157 QA   151.28 QAB   247.81 QB    96.53    1352   11B  TB 1156 QB    98.69 QBA   249.96 QA   151.27   *
*                                 1352   11AB TAB 1156 QAB   249.96 QA   151.27 QB    98.69                                *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	98.69	226.4	249.96	2	655.	.14500	.00	.00	0.	93	0	A30	.00
1352 12A	.0	.00	226.4	248.46	4	1.	.01000	5.00	.00	0.	93	99	A30	.00
1352 13A	24.0	29.04	250.4	274.97	2	1.	.14500	.00	.00	0.	93	9	A30	.01
1352 14A	.0	.00	250.4	274.97	4	1.	.01000	5.00	.00	0.	93	99	A30	.00
1352 15C	37.0	37.14	37.0	37.14	2	826.	.24800	.00	.00	0.	93	12	A30	.01
1352 16C	40.2	42.92	77.2	79.81	2	1267.	.26000	.00	.00	0.	93	11	A30	.01
1352 17C	31.9	36.39	109.1	113.23	2	1.	.26000	.00	.00	0.	93	10	A30	.01
1352 18C	.0	.00	109.1	113.23	4	1.	.01000	3.75	.00	0.	93	99	A30	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1157 QA   274.97 QAC   387.01 QC   112.04    1352   19C  TC 1156 QC   113.22 QCA   386.83 QA   273.61   *
*                                 1352   19AC TAC 1157 QAC   387.01 QA   274.97 QC   112.04                                *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	113.22	359.5	387.01	2	1161.	.09000	.00	.00	0.	93	0	A30	.00
1352 20A	.0	.00	359.5	384.34	4	1.	.01000	5.75	.00	0.	93	99	A30	.00
1352 21A	39.2	39.35	398.7	420.60	2	1.	.09000	.00	.00	0.	93	12	A30	.01
1352 22A	.0	.00	398.7	420.60	4	1.	.01000	6.00	.00	0.	93	99	A30	.00
1352 23D	30.8	35.14	30.8	35.14	2	1242.	.23000	.00	.00	0.	93	10	A30	.01
1352 24D	39.3	44.84	70.1	77.59	2	1308.	.03800	.00	.00	0.	93	10	A30	.01
1352 25D	42.3	48.26	112.4	113.95	2	723.	.22800	.00	.00	0.	93	10	A30	.01
1352 26D	30.9	37.39	143.3	142.30	2	720.	.09000	.00	.00	0.	93	9	A30	.01
1352 27D	26.9	30.69	170.2	167.37	2	1.	.09000	.00	.00	0.	93	10	A30	.01
1352 28D	.0	.00	170.2	167.37	4	1.	.01000	4.25	.00	0.	93	99	A30	.00

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1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1158 QA   420.59 QAD   587.96 QD   167.36    1352   29D  TD 1158 QD   167.36 QDA   587.96 QA   420.59   *
*                                 1352   29AD TAD 1158 QAD   587.96 QA   420.59 QD   167.36                                 *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	167.36	568.9	587.96	2	668.	.04800	.00	.00	0.	93	0	A30	.00
1352	30A	.0	.00	568.9	582.34	4	1.	.01000	6.75	.00	0.	93	99	A30	.00
1352	31A	29.2	27.89	598.1	606.96	2	506.	.04400	.00	.00	0.	93	12	A29	.01
1352	32A	22.2	24.12	620.3	623.68	2	635.	.03900	.00	.00	0.	93	10	A29	.01
1352	33A	23.1	26.64	643.4	631.71	2	593.	.04200	.00	.00	0.	93	9	A29	.01
1352	34A	35.7	34.10	679.1	655.89	2	572.	.03500	.00	.00	0.	93	12	A29	.01
1352	35A	29.2	27.89	708.3	671.30	2	485.	.04100	.00	.00	0.	93	12	A29	.01
1352	36A	25.6	27.81	733.9	676.77	2	532.	.03800	.00	.00	0.	93	10	A29	.01
1352	37A	.0	.00	733.9	674.24	4	1.	.01000	7.00	.00	0.	93	99	A30	.00
1352	38A	23.7	26.09	757.6	679.12	2	396.	.05100	.00	.00	0.	93	9	A28	.01
1352	39A	32.5	31.48	790.1	687.79	2	838.	.05600	.00	.00	0.	93	11	A28	.01
1352	40A	20.2	21.09	810.3	686.34	2	1.	.05600	.00	.00	0.	93	9	A27	.01
1352	41A	22.5	21.04	832.8	689.19	2	1.	.13300	.00	.00	0.	93	9	A25	.01
1352	42A	28.5	24.55	861.3	699.54	2	840.	.05700	.00	.00	0.	93	12	A27	.01
1352	43A	.0	.00	861.3	694.73	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	44A	20.2	17.56	881.5	697.89	2	1.	.05700	.00	.00	0.	93	11	A26	.01
1352	45A	24.8	18.14	906.3	705.22	2	575.	.03500	.00	.00	0.	93	13	A25	.01
1352	46A	15.1	15.77	921.4	702.50	2	1319.	.03400	.00	.00	0.	93	9	A27	.01
1352	47A	24.6	18.14	946.0	700.24	2	1.	.03400	.00	.00	0.	93	14	A26	.01
1352	48A	24.9	22.88	970.9	703.08	2	722.	.03900	.00	.00	0.	93	11	A27	.01
1352	49A	20.9	19.51	991.8	701.33	2	846.	.04700	.00	.00	0.	93	10	A26	.01
1352	50A	19.2	18.90	1011.0	699.07	2	1.	.04700	.00	.00	0.	93	10	A27	.01
1352	51A	.0	.00	1011.0	699.06	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	52E	28.8	31.70	28.8	31.70	2	940.	.14400	.00	.00	0.	93	9	A28	.01
1352	53E	24.8	25.68	53.6	55.82	2	971.	.27800	.00	.00	0.	93	10	A28	.01
1352	54E	33.4	32.35	87.0	86.41	2	1110.	.18700	.00	.00	0.	93	11	A28	.01
1352	55E	23.1	21.23	110.1	105.08	2	1.	.18700	.00	.00	0.	93	11	A27	.01
1352	56E	.0	.00	110.1	105.08	4	1.	.01000	3.50	.00	0.	93	99	A30	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1168 QA   699.05 QAE   717.49 QE    18.44    1352   57E  TE 1157 QE   105.07 QEA   439.14 QA   334.07   *
*                                 1352   57AE TAE 1168 QAE   717.49 QA   699.05 QE    18.44                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	105.07	1121.1	717.49	2	180.	.03900	.00	.00	0.	93	0	A30	.00
1352	58A	.0	.00	1121.1	716.28	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	59A	28.2	24.29	1149.3	718.99	2	815.	.01800	.00	.00	0.	93	12	A27	.01
1352	60A	27.2	30.44	1176.5	715.58	2	1136.	.05700	.00	.00	0.	93	8	A27	.01

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1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	15.42	1194.4	713.45	2	1.	.05700	.00	.00	0.	93	12	A27	.01
1352	62A	.0	.00	1194.4	713.45	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	63F	27.0	29.33	27.0	29.33	2	586.	.19600	.00	.00	0.	93	10	A29	.01
1352	64F	40.8	33.44	67.8	62.53	2	727.	.08900	.00	.00	0.	93	14	A28	.01
1352	65F	37.4	32.21	105.2	93.51	2	1.	.08900	.00	.00	0.	93	12	A27	.01
1352	66F	32.6	33.75	137.8	125.60	2	1.	.14100	.00	.00	0.	93	10	A28	.01
1352	67F	18.8	18.21	156.6	143.24	2	677.	.08100	.00	.00	0.	93	11	A28	.01
1352	68F	9.2	9.61	165.8	151.22	2	1.	.08100	.00	.00	0.	93	9	A27	.01
1352	69F	.0	.00	165.8	151.21	4	1.	.01000	4.00	.00	0.	93	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1171 QA   713.44 QAF   732.97 QF    19.53    1352   70F  TF 1157 QF   151.21 QFA   532.35 QA   381.13   *
*                                1352   70AF TAF 1171 QAF   732.97 QA   713.44 QF    19.53                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	151.21	1360.2	732.97	2	561.	.03600	.00	.00	0.	93	0	A30	.00
1352	71A	.0	.00	1360.2	730.43	4	1.	.01000	7.25	.00	0.	93	99	A30	.00
1352	72A	6.4	6.68	1366.6	730.80	2	1.	.03600	.00	.00	0.	93	9	A27	.01
1352	73A	20.0	22.54	1386.6	733.68	2	434.	.03000	.00	.00	0.	91	11	A27	.01
1352	74A	21.9	23.57	1408.5	735.70	2	420.	.02900	.00	.00	0.	91	11	A26	.01
1352	75A	42.0	40.92	1450.5	738.87	2	1019.	.02000	.00	.00	0.	91	13	A26	.01
1352	76A	26.1	25.43	1476.6	738.40	2	249.	.04000	.00	.00	0.	91	13	A26	.01
1352	77A	12.2	13.93	1488.8	738.65	2	1.	.04000	.00	.00	0.	91	10	A26	.01
1352	78A	.0	.00	1488.8	738.65	4	1.	.01000	7.25	.00	0.	91	99	A30	.00
1352	79A	14.2	16.00	1503.0	740.28	2	643.	.01900	.00	.00	0.	91	11	A27	.01
1352	80A	18.2	19.59	1521.2	740.12	2	751.	.02400	.00	.00	0.	91	11	A26	.01
1352	81A	23.3	26.26	1544.5	740.47	2	709.	.02400	.00	.00	0.	91	11	A27	.01
1352	82A	22.2	20.78	1566.7	740.62	2	1.	.02400	.00	.00	0.	91	14	A26	.01
1352	83A	.0	.00	1566.7	740.62	4	1.	.01000	7.25	.00	0.	91	99	A30	.00
1352	84B	26.2	24.36	26.2	24.36	2	1438.	.06400	.00	.00	0.	91	13	A25	.01
1352	85B	33.5	31.35	59.7	52.90	2	1.	.06400	.00	.00	0.	91	14	A26	.01
1352	86B	.0	.00	59.7	52.90	4	1.	.01000	2.75	.00	0.	91	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1178 QA   740.61 QAB   747.90 QB     7.29    1352   87B  TB 1158 QB    52.90 QBA   458.89 QA   405.99   *
*                                1352   87AB TAB 1178 QAB   747.90 QA   740.61 QB     7.29                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	52.90	1626.4	747.90	2	405.	.02300	.00	.00	0.	91	0	A30	.00
1352	88A	2.8	4.39	1629.2	746.26	2	1.	.02300	.00	.00	0.	91	6	A27	.01
1352	89C	21.6	28.36	21.6	28.36	2	1328.	.09400	.00	.00	0.	91	9	A28	.01
1352	90C	23.5	23.03	45.1	49.35	2	1.	.09400	.00	.00	0.	91	14	A27	.01

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1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN A STORM DAY 4

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1179 QA   746.25 QAC   751.42 QC     5.16    1352   91C  TC 1157 QC    49.34 QCA   452.21 QA   402.86   *
*                                1352   91AC TAC 1178 QAC   751.72 QA   746.25 QC     5.47                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	49.34	1674.3	751.72	2	977.	.02400	.00	.00	0.	91	0	A30	.00
1352	92A	30.8	34.71	1705.1	752.77	2	999.	.01300	.00	.00	0.	91	11	A27	.01
1352	93A	37.7	40.26	1742.8	752.99	2	448.	.02200	.00	.00	0.	91	12	A27	.01
1352	94A	11.0	13.81	1753.8	752.39	2	1.	.02200	.00	.00	0.	91	9	A27	.01
1352	95D	382.1	375.70	382.1	375.70	2	1.	.02200	.00	.00	0.	91	0	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1183 QA   752.38 QAD   802.49 QD    50.11    1352   96D  TD 1161 QD   375.70 QDA   857.18 QA   481.48   *
*                                1352   96AD TAD 1169 QAD   883.64 QA   697.99 QD   185.65                                 *
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		SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL		RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	375.70	2135.9	883.64	6	250.	.01600	32.00	.00	0.	91	0	A30	.00
1352	97A	13.4	16.00	2149.3	885.76	2	642.	.01700	.00	.00	0.	91	10	A27	.01

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HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	22.29	200	22.79	300	23.85	400	25.13
500	26.69	600	28.72	700	31.11	800	34.36	900	38.91
1000	49.92	1050	68.66	1100	107.28	1110	124.15	1120	151.08
1130	189.69	1131	194.25	1132	198.85	1133	203.78	1134	208.86
1135	214.13	1136	219.59	1137	225.47	1138	231.85	1139	238.75
1140	246.09	1141	253.98	1142	262.73	1143	272.18	1144	282.16
1145	293.13	1146	305.14	1147	318.24	1148	332.91	1149	351.82
1150	375.41	1151	405.00	1152	443.28	1153	487.89	1154	535.80
1155	585.83	1156	637.29	1157	689.95	1158	741.55	1159	788.00
1160	827.85	1161	857.22	1162	874.24	1163	880.68	1164	882.21
1165	881.48	1166	881.07	1167	882.81	1168	885.17	1169	885.76
1170	882.49	1171	874.94	1172	864.54	1173	852.49	1174	839.92
1175	827.65	1176	816.94	1177	808.80	1178	803.86	1179	802.22
1180	803.53	1181	805.65	1182	806.66	1183	804.61	1184	798.04
1185	786.31	1186	769.43	1187	747.94	1188	723.04	1189	695.65
1190	666.66	1191	636.83	1192	606.91	1193	577.47	1194	548.68
1195	520.89	1196	494.22	1197	468.78	1198	444.59	1199	421.96
1200	400.27	1201	380.83	1202	361.03	1203	342.98	1204	325.76
1205	309.55	1206	294.49	1207	280.34	1208	266.94	1209	254.67
1210	243.27	1211	232.39	1212	222.51	1213	213.33	1214	204.58
1215	196.22	1216	188.29	1217	180.83	1218	173.76	1219	167.06
1220	160.76	1221	154.85	1222	149.34	1223	144.41	1224	139.51
1225	134.91	1226	130.47	1227	126.16	1228	122.11	1229	118.37
1230	114.58	1231	111.09	1232	107.89	1233	104.81	1234	101.86
1235	99.03	1236	96.36	1237	93.87	1238	91.53	1239	89.30
1240	87.19	1241	85.19	1242	83.35	1243	81.55	1244	79.83
1245	78.13	1246	76.52	1247	74.94	1248	73.43	1249	71.96
1250	70.55	1251	69.13	1252	67.80	1253	66.51	1254	65.30
1255	64.11	1256	62.96	1257	61.82	1258	60.74	1259	59.68
1260	58.74	1261	57.86	1262	57.03	1263	56.22	1264	55.44
1265	54.67	1266	53.97	1267	53.22	1268	52.54	1269	51.89
1270	51.31	1271	50.67	1272	50.11	1273	49.54	1274	48.96
1275	48.48	1276	47.99	1277	47.72	1278	47.13	1279	46.76
1280	46.31	1281	45.98	1282	45.62	1283	45.34	1284	44.96
1285	44.69	1286	44.34	1287	44.07	1288	43.73	1289	43.46
1290	43.17	1291	42.94	1292	42.63	1293	42.38	1294	42.08
1295	41.84	1296	41.55	1297	41.32	1298	41.04	1299	40.82
1300	40.59	1310	37.14	1320	36.64	1330	34.32	1340	33.24
1350	32.16	1360	30.39	1370	30.45	1380	28.19	1390	29.03
1400	26.81	1420	27.06	1440	24.76	1460	23.83	1500	22.17

TOTAL VOLUME THIS HYDROGRAPH = 133.71(Ac.Ft)

Basin B - 10 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	5.8	9	2.62	0.69	0.69
2A	36.3	0.01	93	2008	0.354	5.8	11	2.38	0.67	0.67
3A	11.1	0.01	93	1303	0.437	5.8	8	2.77	0.70	0.70
4A	25.5	0.01	93	2134	0.354	5.9	11	2.44	0.68	0.68
5A	18.9	0.01	93	1414	0.375	5.8	8	2.77	0.70	0.70
6A	19.2	0.01	93	1221	0.483	5.8	7	2.95	0.71	0.71
7A	24.7	0.01	93	1706	0.396	5.8	10	2.49	0.68	0.68
8A	20.4	0.01	93	1412	0.342	5.7	9	2.59	0.69	0.69
9B	25.7	0.01	97	1440	0.316	5.5	9	2.49	0.71	0.71
10B	39.8	0.01	93	2531	0.296	5.6	14	2.07	0.64	0.64
12A	15.7	0.01	97	1111	0.364	5.6	7	2.87	0.72	0.73
13A	31.9	0.01	97	1823	0.192	5.6	12	2.20	0.68	0.69
14C	21.3	0.01	91	2178	0.27	5.5	12	2.17	0.75	0.75

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	22.15	19.2	22.15	2	959.	.20900	.00	.00	0.	93	9	A29	.01
1352 2A	36.3	36.84	55.5	58.38	2	367.	.12300	.00	.00	0.	93	11	A29	.01
1352 3A	11.1	13.73	66.6	70.89	2	1.	.12300	.00	.00	0.	93	8	A29	.01
1352 4A	25.5	27.23	92.1	97.99	2	662.	.12100	.00	.00	0.	93	11	A30	.01
1352 5A	18.9	23.38	111.0	119.35	2	546.	.11000	.00	.00	0.	93	8	A29	.01
1352 6A	19.2	25.78	130.2	138.55	2	1340.	.16000	.00	.00	0.	93	7	A29	.01
1352 7A	24.7	26.83	154.9	160.64	2	592.	.06400	.00	.00	0.	93	10	A29	.01
1352 8A	20.4	23.53	175.3	176.81	2	1.	.06400	.00	.00	0.	93	9	A29	.01
1352 9B	25.7	33.74	25.7	33.74	2	980.	.09500	.00	.00	0.	91	9	A28	.01
1352 10B	39.8	42.52	65.5	74.97	2	1.	.09500	.00	.00	0.	91	14	A29	.01

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1158 QA   176.81 QAB   249.96 QB    73.15    1352   11B  TB 1156 QB    74.97 QBA   239.93 QA   164.97   *
*                              1352   11AB TAB 1157 QAB   250.13 QA   175.76 QB    74.38                                 *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	74.97	240.8	250.13	2	761.	.08100	.00	.00	0.	91	0	A29	.00
1352 12A	15.7	24.47	256.5	261.19	2	1228.	.04900	.00	.00	0.	91	7	A29	.01
1352 13A	31.9	37.57	288.4	284.83	2	1.	.04900	.00	.00	0.	91	11	A28	.01
1352 14C	21.3	23.80	21.3	23.80	2	1.	.01000	.00	.00	0.	91	12	A28	.01

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   15A  TA 1160 QA   284.83 QAC   305.40 QC    20.57    1352   15C  TC 1155 QC    23.79 QCA   228.17 QA   204.38   *
*                              1352   15AC TAC 1159 QAC   305.83 QA   284.51 QC    21.32                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	23.79	309.7	305.83	5	100.	.02000	10.00	.00	0.	91	0	A28	.00
1352 16A	.0	.00	309.7	305.43	2	1.	.01000	.00	.00	0.	91	99	A28	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	3.11	200	3.22	300	3.39	400	3.57
500	3.80	600	4.08	700	4.44	800	4.92	900	5.61
1000	8.42	1050	13.16	1100	22.38	1110	28.70	1120	37.59
1130	49.76	1131	51.18	1132	52.46	1133	53.87	1134	55.33
1135	56.90	1136	58.66	1137	60.55	1138	62.60	1139	64.80
1140	67.11	1141	69.93	1142	73.02	1143	76.11	1144	79.45
1145	83.65	1146	88.68	1147	93.74	1148	99.36	1149	109.37
1150	122.28	1151	136.75	1152	155.21	1153	177.21	1154	199.97
1155	224.49	1156	250.71	1157	273.97	1158	292.75	1159	304.50
1160	305.43	1161	295.74	1162	277.55	1163	255.26	1164	229.41
1165	205.11	1166	182.49	1167	161.61	1168	142.30	1169	125.22
1170	109.82	1171	96.37	1172	84.97	1173	75.68	1174	67.37
1175	60.39	1176	54.35	1177	49.42	1178	45.19	1179	41.46
1180	38.34	1181	35.55	1182	33.09	1183	31.03	1184	29.10
1185	27.26	1186	25.73	1187	24.47	1188	23.16	1189	21.88
1190	20.90	1191	19.94	1192	18.99	1193	18.27	1194	17.52
1195	16.76	1196	16.11	1197	15.49	1198	14.86	1199	14.31
1200	13.77	1201	13.27	1202	12.59	1203	12.63	1204	11.18
1205	13.27	1206	7.56	1207	16.45	1208	3.11	1209	20.72
1210	3.11	1211	19.77	1212	3.11	1213	19.06	1214	3.11
1215	18.25	1216	3.11	1217	17.57	1218	3.11	1219	16.86
1220	3.11	1221	16.19	1222	3.11	1223	15.70	1224	3.11
1225	15.30	1226	3.11	1227	14.92	1228	3.11	1229	14.52
1230	3.11	1231	14.14	1232	3.11	1233	13.83	1234	3.11
1235	13.57	1236	3.11	1237	13.32	1238	3.11	1239	13.08
1240	3.11	1241	12.71	1242	3.11	1243	12.47	1244	3.11
1245	12.18	1246	3.11	1247	11.91	1248	3.11	1249	11.67
1250	3.11	1251	11.47	1252	3.11	1253	11.24	1254	3.11
1255	11.03	1256	3.11	1257	10.83	1258	3.11	1259	10.63
1260	3.11	1261	10.45	1262	3.11	1263	10.24	1264	3.11
1265	10.10	1266	3.11	1267	9.91	1268	3.11	1269	9.76
1270	3.11	1271	9.57	1272	3.11	1273	9.39	1274	3.11
1275	9.23	1276	3.11	1277	9.11	1278	3.11	1279	8.99
1280	3.11	1281	8.83	1282	3.11	1283	8.72	1284	3.11
1285	8.61	1286	3.11	1287	8.49	1288	3.11	1289	8.32
1290	3.11	1291	8.14	1292	3.11	1293	8.03	1294	3.11
1295	7.92	1296	3.11	1297	7.81	1298	3.11	1299	7.67
1300	3.11	1310	5.77	1320	3.11	1330	5.24	1340	3.11
1350	4.72	1360	3.11	1370	4.33	1380	3.11	1390	3.99
1400	3.11	1420	3.63	1440	3.11	1460	3.20	1500	3.11

TOTAL VOLUME THIS HYDROGRAPH = 20.46(Ac.Ft)

Basin C - 10 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	0.9	0.05	91	370	0.42	5.4	5	3.22	0.79	0.80
4B	2.5	0.01	91	460	0.42	5.4	5	3.22	0.79	0.79
5B	7.2	0.01	91	1000	0.33	5.4	7	2.75	0.77	0.77
6B	1.6	0.01	91	625	0.30	5.4	5	3.22	0.79	0.79
7B	1.5	0.70	91	845	0.05	5.4	8	2.58	0.77	0.86
8B	0.4	0.91	91	490	0.060	5.4	5	3.22	0.79	0.89
11A	4.6	0.70	91	1345	0.04	5.4	11	2.22	0.75	0.86
12A	3.7	0.70	91	1240	0.04	5.4	11	2.22	0.75	0.86
14A	2.6	0.70	91	980	0.07	5.4	8	2.58	0.77	0.86
15C	2.1	0.01	91	415	0.32	5.4	5	3.22	0.79	0.79
16C	2.9	0.25	91	1150	0.13	5.4	9	2.44	0.76	0.80
17C	5.8	0.60	91	1180	0.070	5.4	10	2.33	0.76	0.84
18C	1.0	0.05	91	780	0.09	5.4	7	2.75	0.77	0.78
21A	1.7	0.05	91	1000	0.08	5.4	9	2.44	0.76	0.77
22A	3.1	0.70	91	1000	0.02	5.4	11	2.22	0.75	0.86
23A	4.4	0.70	91	1000	0.02	5.4	11	2.22	0.75	0.86
24A	4.0	0.75	91	1550	0.08	5.4	11	2.22	0.75	0.86
25A	2.1	0.85	91	1500	0.08	5.4	10	2.33	0.76	0.88
27D	20.3	0.05	91	1993	0.128	5.5	13	2.09	0.75	0.75

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	1.59	.9	1.59	4	250.	.03000	2.00	.00	0.	91	5	A27	.05
1352	2A	.0	.00	.9	1.49	4	1.	.01000	2.00	.00	0.	91	99	A27	.00
1352	3A	.0	.00	.9	1.49	4	1.	.01000	2.00	.00	0.	91	99	A27	.00
1352	4B	2.5	4.39	2.5	4.39	2	170.	.01000	.00	.00	0.	91	5	A27	.01
1352	5B	7.2	10.33	9.7	14.06	2	480.	.05000	.00	.00	0.	91	7	A27	.01
1352	6B	1.6	2.51	11.3	15.44	4	160.	.10000	2.00	.00	0.	91	6	A27	.01
1352	7B	1.5	2.30	12.8	17.63	4	5.	.10000	2.00	.00	0.	91	8	A27	.65
1352	8B	.4	.82	13.2	18.13	4	30.	.02000	2.00	.00	0.	91	5	A27	.91
1352	9B	.0	.00	13.2	18.12	4	1.	.01000	2.00	.00	0.	91	99	A27	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA     1.49 QAB    18.26 QB    16.77    1352   10B  TB 1156 QB    18.12 QBA    19.28 QA     1.16   *
*                               1352   10AB TAB 1156 QAB    19.28 QA     1.16 QB    18.12                                *
```

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	18.12	14.1	19.28	4	800.	.06500	2.00	.00	0.	91	0	A27	.00
1352	11A	4.6	6.07	18.7	24.79	4	1.	.06500	2.00	.00	0.	91	11	A27	.65
1352	12A	3.7	4.89	22.4	29.53	4	50.	.06500	2.00	.00	0.	91	11	A27	.65
1352	13A	.0	.00	22.4	29.50	4	1.	.01000	2.25	.00	0.	91	99	A27	.00
1352	14A	2.6	3.98	25.0	33.31	4	10.	.06500	2.00	.00	0.	91	8	A27	.65
1352	15C	2.1	3.69	2.1	3.69	4	120.	.09100	2.00	.00	0.	91	5	A27	.01
1352	16C	2.9	3.85	5.0	7.43	4	770.	.09200	2.00	.00	0.	91	9	A27	.25
1352	17C	5.8	7.97	10.8	14.97	4	50.	.09200	2.00	.00	0.	91	10	A27	.60
1352	18C	1.0	1.45	11.8	16.38	4	10.	.09200	2.00	.00	0.	91	7	A27	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1156 QA    33.30 QAC    49.00 QC    15.70    1352   19C  TC 1155 QC    16.38 QCA    48.65 QA    32.27   *
*                               1352   19AC TAC 1156 QAC    49.00 QA    33.30 QC    15.70                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	16.38	36.8	49.00	4	260.	.09000	2.00	.00	0.	91	0	A27	.00
1352	20A	.0	.00	36.8	48.95	4	1.	.01000	2.75	.00	0.	91	99	A27	.00
1352	21A	1.7	2.15	38.5	51.01	4	130.	.08800	2.00	.00	0.	91	9	A27	.05
1352	22A	3.1	4.09	41.6	54.93	4	1.	.02000	2.50	.00	0.	91	11	A27	.65
1352	23A	4.4	5.81	46.0	60.60	4	1040.	.08800	2.00	.00	0.	91	11	A27	.65
1352	24A	4.0	5.34	50.0	65.07	4	1.	.03400	2.50	.00	0.	91	11	A27	.70
1352	25A	2.1	2.87	52.1	67.75	4	80.	.03200	2.50	.00	0.	91	10	A28	.40
1352	26D	309.7	305.40	309.7	305.40	2	1.	.01000	.00	.00	0.	91	0	A28	.00
1352	27D	20.3	21.90	330.0	324.74	2	1600.	.12800	.00	.00	0.	91	13	A28	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR - BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1157 QA    67.63 QAD   324.20 QD   256.57    1352   28D  TD 1161 QD   321.99 QDA   375.18 QA    53.19   *
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*                              1352   28AD TAD 1160 QAD   376.77 QA    59.86 QD   316.91                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	321.99	382.1	376.77	5	230.	.03000	12.00	.00	0.	91	0	A28	.00
1352 29A	.0	.00	382.1	375.65	2	1.	.01000	.00	.00	0.	91	99	A28	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	4.98	200	5.15	300	5.45	400	5.77
500	6.23	600	6.82	700	7.37	800	8.29	900	9.52
1000	13.38	1050	20.28	1100	32.81	1110	39.98	1120	51.47
1130	66.18	1131	67.92	1132	69.67	1133	71.45	1134	73.31
1135	75.22	1136	77.20	1137	79.33	1138	81.68	1139	84.27
1140	87.12	1141	90.21	1142	93.58	1143	97.36	1144	101.51
1145	105.97	1146	110.92	1147	116.72	1148	123.38	1149	131.33
1150	141.87	1151	157.37	1152	177.67	1153	202.48	1154	231.19
1155	260.68	1156	289.71	1157	317.51	1158	343.02	1159	363.07
1160	374.81	1161	375.65	1162	365.84	1163	345.43	1164	318.91
1165	289.20	1166	259.54	1167	231.82	1168	207.11	1169	185.59
1170	165.73	1171	148.09	1172	132.33	1173	118.85	1174	106.91
1175	96.51	1176	87.53	1177	79.66	1178	72.84	1179	66.96
1180	62.26	1181	57.67	1182	53.71	1183	50.13	1184	47.05
1185	44.34	1186	41.89	1187	39.64	1188	37.63	1189	35.84
1190	34.19	1191	32.63	1192	31.15	1193	29.87	1194	28.68
1195	27.58	1196	26.55	1197	25.58	1198	24.66	1199	23.80
1200	23.00	1201	22.24	1202	21.51	1203	20.81	1204	20.07
1205	19.29	1206	18.91	1207	18.25	1208	17.74	1209	16.96
1210	16.81	1211	16.48	1212	16.96	1213	16.76	1214	16.99
1215	16.53	1216	16.69	1217	16.12	1218	16.25	1219	15.62
1220	15.81	1221	15.14	1222	15.38	1223	14.65	1224	14.96
1225	14.20	1226	14.60	1227	13.80	1228	14.30	1229	13.46
1230	14.05	1231	13.12	1232	13.81	1233	12.80	1234	13.59
1235	12.49	1236	13.41	1237	12.21	1238	13.28	1239	11.95
1240	13.16	1241	11.70	1242	13.08	1243	11.44	1244	12.97
1245	11.14	1246	12.87	1247	10.84	1248	12.77	1249	10.49
1250	12.67	1251	10.14	1252	12.60	1253	9.80	1254	12.59
1255	9.46	1256	12.59	1257	9.09	1258	12.61	1259	8.70
1260	12.67	1261	8.31	1262	12.76	1263	7.91	1264	12.91
1265	7.49	1266	13.10	1267	7.03	1268	13.34	1269	6.56
1270	13.62	1271	6.03	1272	13.96	1273	5.46	1274	14.34
1275	4.98	1276	14.60	1277	4.98	1278	14.35	1279	4.98
1280	14.12	1281	4.98	1282	13.97	1283	4.98	1284	13.80
1285	4.98	1286	13.59	1287	4.98	1288	13.40	1289	4.98
1290	13.26	1291	4.98	1292	13.08	1293	4.98	1294	12.86
1295	4.98	1296	12.68	1297	4.98	1298	12.54	1299	4.98
1300	12.37	1310	4.98	1320	9.87	1330	4.98	1340	8.76
1350	4.98	1360	7.70	1370	4.98	1380	6.98	1390	4.98
1400	6.39	1420	4.98	1440	5.69	1460	4.98	1500	5.09

TOTAL VOLUME THIS HYDROGRAPH = 29.90(Ac.Ft)

STEVENSON RANCH

25-YEAR CLEAR

DEVELOPED CONDITION

Basin A - 25 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	7.4	7	3.76	0.76	0.76
2A	34.8	0.01	93	1871	0.405	7.4	8	3.53	0.75	0.75
3A	33.3	0.01	93	2288	0.337	7.4	10	3.18	0.73	0.73
4A	37.9	0.01	93	1862	0.440	7.4	8	3.53	0.75	0.75
6B	28.8	0.01	93	1664	0.508	7.4	7	3.76	0.76	0.76
7B	12.2	0.01	93	1488	0.460	7.4	7	3.76	0.76	0.76
8B	22.3	0.01	93	2064	0.359	7.4	9	3.34	0.74	0.74
9B	24.6	0.01	93	2208	0.376	7.4	9	3.34	0.74	0.74
13A	24.0	0.01	93	1693	0.428	7.4	7	3.76	0.76	0.76
15C	37.0	0.01	93	2219	0.306	7.4	10	3.18	0.73	0.73
16C	40.2	0.01	93	2159	0.322	7.4	9	3.34	0.74	0.74
17C	31.9	0.01	93	1934	0.334	7.4	9	3.34	0.74	0.74
21A	39.2	0.01	93	2213	0.305	7.3	10	3.14	0.72	0.73
23D	30.8	0.01	93	1773	0.313	7.4	8	3.53	0.75	0.75
24D	39.3	0.01	93	1628	0.289	7.4	8	3.53	0.75	0.75
25D	42.3	0.01	93	1712	0.216	7.4	9	3.34	0.74	0.74
26D	30.9	0.01	93	1709	0.471	7.3	7	3.71	0.75	0.76
27D	26.9	0.01	93	1779	0.360	7.3	8	3.49	0.75	0.75
31A	29.2	0.01	93	2176	0.327	7.1	10	3.06	0.72	0.72
32A	22.2	0.01	93	1894	0.383	7.1	9	3.22	0.73	0.73
33A	23.1	0.01	93	1600	0.428	7.0	7	3.58	0.75	0.75
34A	35.7	0.01	93	2286	0.341	7.0	10	3.03	0.72	0.72
35A	29.2	0.01	93	2014	0.305	6.9	10	2.99	0.71	0.72
36A	25.6	0.01	93	1738	0.328	6.9	8	3.32	0.73	0.74
38A	23.7	0.01	93	1497	0.367	6.8	8	3.23	0.73	0.73
39A	32.5	0.01	93	1852	0.308	6.7	9	3.02	0.72	0.72
40A	20.2	0.01	93	1367	0.400	6.6	7	3.35	0.74	0.74
41A	22.5	0.01	93	1307	0.409	6.1	7	3.13	0.72	0.72
42A	28.5	0.01	93	1919	0.302	6.4	10	2.76	0.70	0.70
44A	20.2	0.01	93	1582	0.329	6.3	9	2.86	0.71	0.71
45A	24.8	0.01	93	1957	0.335	6.1	10	2.65	0.69	0.69
46A	15.1	0.01	93	1406	0.420	6.4	8	3.07	0.72	0.72
47A	24.6	0.01	93	2076	0.234	6.3	11	2.60	0.69	0.69
48A	24.9	0.01	93	1739	0.408	6.5	9	2.94	0.71	0.71
49A	20.9	0.01	93	1541	0.343	6.3	8	3.02	0.72	0.72
50A	19.2	0.01	93	1394	0.325	6.4	8	3.07	0.72	0.72
52E	28.8	0.01	93	1432	0.332	6.8	7	3.49	0.75	0.75
53E	24.8	0.01	93	1534	0.306	6.8	8	3.23	0.73	0.73
54E	33.4	0.01	93	1783	0.334	6.7	9	3.02	0.72	0.72
55E	23.1	0.01	93	1853	0.409	6.5	9	2.94	0.71	0.71
59A	28.2	0.01	93	2259	0.429	6.6	10	2.84	0.70	0.71
60A	27.2	0.01	93	1234	0.405	6.5	7	3.31	0.73	0.74
61A	17.9	0.01	93	1533	0.117	6.5	10	2.80	0.70	0.70
63F	27.0	0.01	93	1616	0.374	6.9	8	3.32	0.73	0.74
64F	40.8	0.01	93	2620	0.393	6.8	11	2.78	0.70	0.70

Basin A - 25 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	6.6	10	2.84	0.70	0.71
66F	32.6	0.01	93	1732	0.514	6.8	8	3.23	0.73	0.73
67F	18.8	0.01	93	1684	0.303	6.7	9	3.02	0.72	0.72
68F	9.2	0.01	93	1319	0.250	6.6	8	3.15	0.72	0.73
72A	6.4	0.01	93	1153	0.264	6.4	7	3.26	0.73	0.73
73A	20.0	0.01	91	1766	0.311	6.5	9	2.94	0.79	0.79
74A	21.9	0.01	91	1507	0.234	6.3	8	3.02	0.79	0.79
75A	42.0	0.01	91	1789	0.159	6.2	10	2.69	0.77	0.78
76A	26.1	0.01	91	1672	0.144	6.2	10	2.69	0.77	0.78
77A	12.2	0.01	91	1303	0.165	6.2	8	2.98	0.79	0.79
79A	14.2	0.01	91	1659	0.316	6.4	8	3.07	0.79	0.79
80A	18.2	0.01	91	1622	0.291	6.3	8	3.02	0.79	0.79
81A	23.3	0.01	91	1645	0.280	6.4	8	3.07	0.79	0.79
82A	22.2	0.01	91	2122	0.161	6.3	11	2.60	0.77	0.77
84B	26.2	0.01	91	1697	0.165	6.1	10	2.65	0.77	0.77
85B	33.5	0.01	91	2040	0.168	6.3	11	2.60	0.77	0.77
88A	2.8	0.01	91	467	0.096	6.4	5	3.82	0.81	0.81
89C	21.6	0.01	91	1492	0.372	6.8	7	3.44	0.80	0.80
90C	23.5	0.01	91	2246	0.220	6.6	11	2.71	0.78	0.78
92A	30.8	0.01	91	1641	0.181	6.5	9	2.94	0.79	0.79
93A	37.7	0.01	91	1873	0.232	6.5	9	2.94	0.79	0.79
94A	11.0	0.01	91	1377	0.290	6.6	7	3.35	0.80	0.80
97A	13.4	0.01	91	1487	0.269	6.6	8	3.15	0.79	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

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1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	78.17	32.5	78.17	2	1173.	.20100	.00	.00	0.	93	7	A37	.01
1352 2A	34.8	77.49	67.3	152.99	2	369.	.19500	.00	.00	0.	93	8	A37	.01
1352 3A	33.3	65.99	100.6	217.09	2	1353.	.24000	.00	.00	0.	93	10	A37	.01
1352 4A	37.9	84.39	138.5	295.39	2	1.	.24000	.00	.00	0.	93	8	A37	.01
1352 5A	.0	.00	138.5	295.39	4	1.	.01000	5.25	.00	0.	93	99	A37	.00
1352 6B	28.8	69.27	28.8	69.27	2	494.	.25300	.00	.00	0.	93	7	A37	.01
1352 7B	12.2	29.34	41.0	98.34	2	1.	.25300	.00	.00	0.	93	7	A37	.01
1352 8B	22.3	46.68	63.3	144.89	2	1342.	.28700	.00	.00	0.	93	9	A37	.01
1352 9B	24.6	51.49	87.9	193.56	2	1.	.28700	.00	.00	0.	93	9	A37	.01
1352 10B	.0	.00	87.9	193.55	4	1.	.01000	4.50	.00	0.	93	99	A37	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1156 QA   295.39 QAB   485.40 QB   190.01    1352   11B  TB 1155 QB   193.52 QBA   486.69 QA   293.16   *
*                                 1352   11AB TAB 1155 QAB   486.69 QA   293.16 QB   193.52                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	193.52	226.4	486.69	2	655.	.14500	.00	.00	0.	93	0	A37	.00
1352 12A	.0	.00	226.4	485.71	4	1.	.01000	6.25	.00	0.	93	99	A37	.00
1352 13A	24.0	57.72	250.4	533.64	2	1.	.14500	.00	.00	0.	93	7	A37	.01
1352 14A	.0	.00	250.4	533.64	4	1.	.01000	6.50	.00	0.	93	99	A37	.00
1352 15C	37.0	73.32	37.0	73.32	2	826.	.24800	.00	.00	0.	93	10	A37	.01
1352 16C	40.2	84.14	77.2	155.44	2	1267.	.26000	.00	.00	0.	93	9	A37	.01
1352 17C	31.9	66.77	109.1	218.55	2	1.	.26000	.00	.00	0.	93	9	A37	.01
1352 18C	.0	.00	109.1	218.54	4	1.	.01000	4.75	.00	0.	93	99	A37	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1156 QA   533.64 QAC   751.58 QC   217.95    1352   19C  TC 1155 QC   218.51 QCA   751.15 QA   532.64   *
*                                 1352   19AC TAC 1156 QAC   751.58 QA   533.64 QC   217.95                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	218.51	359.5	751.58	2	1161.	.09000	.00	.00	0.	93	0	A37	.00
1352 20A	.0	.00	359.5	744.44	4	1.	.01000	7.25	.00	0.	93	99	A37	.00
1352 21A	39.2	77.68	398.7	816.37	2	1.	.09000	.00	.00	0.	93	10	A37	.01
1352 22A	.0	.00	398.7	816.35	4	1.	.01000	7.50	.00	0.	93	99	A37	.00
1352 23D	30.8	68.58	30.8	68.58	2	1242.	.23000	.00	.00	0.	93	8	A37	.01
1352 24D	39.3	87.51	70.1	153.44	2	1308.	.03800	.00	.00	0.	93	8	A37	.01
1352 25D	42.3	88.54	112.4	225.62	2	723.	.22800	.00	.00	0.	93	9	A37	.01
1352 26D	30.9	74.32	143.3	275.34	2	720.	.09000	.00	.00	0.	93	7	A37	.01
1352 27D	26.9	59.90	170.2	326.77	2	1.	.09000	.00	.00	0.	93	8	A37	.01
1352 28D	.0	.00	170.2	326.77	4	1.	.01000	5.50	.00	0.	93	99	A37	.00

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1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1157 QA   816.34 QAD  1138.68 QD   322.35    1352   29D  TD 1156 QD   326.75 QDA  1143.06 QA   816.31   *
*                                 1352   29AD TAD 1156 QAD  1143.06 QA   816.31 QD   326.75                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	326.75	568.9	1143.06	2	668.	.04800	.00	.00	0.	93	0	A37	.00
1352	30A	.0	.00	568.9	1138.66	5	1.	.01000	11.00	.00	0.	93	99	A37	.00
1352	31A	29.2	55.92	598.1	1190.24	2	506.	.04400	.00	.00	0.	93	10	A36	.01
1352	32A	22.2	44.94	620.3	1215.89	2	635.	.03900	.00	.00	0.	93	9	A36	.01
1352	33A	23.1	53.67	643.4	1240.25	2	593.	.04200	.00	.00	0.	93	7	A36	.01
1352	34A	35.7	68.36	679.1	1280.80	2	572.	.03500	.00	.00	0.	93	10	A36	.01
1352	35A	29.2	53.97	708.3	1318.31	2	485.	.04100	.00	.00	0.	93	10	A35	.01
1352	36A	25.6	53.19	733.9	1329.91	2	532.	.03800	.00	.00	0.	93	8	A35	.01
1352	37A	.0	.00	733.9	1326.66	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	38A	23.7	47.55	757.6	1343.77	2	396.	.05100	.00	.00	0.	93	8	A34	.01
1352	39A	32.5	61.15	790.1	1367.67	2	838.	.05600	.00	.00	0.	93	9	A34	.01
1352	40A	20.2	42.13	810.3	1363.04	2	1.	.05600	.00	.00	0.	93	7	A33	.01
1352	41A	22.5	43.25	832.8	1370.35	2	1.	.13300	.00	.00	0.	93	7	A31	.01
1352	42A	28.5	48.74	861.3	1393.43	2	840.	.05700	.00	.00	0.	93	10	A33	.01
1352	43A	.0	.00	861.3	1385.49	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	44A	20.2	35.12	881.5	1397.68	2	1.	.05700	.00	.00	0.	93	9	A32	.01
1352	45A	24.8	39.07	906.3	1416.10	2	575.	.03500	.00	.00	0.	93	10	A31	.01
1352	46A	15.1	29.13	921.4	1412.68	2	1319.	.03400	.00	.00	0.	93	8	A33	.01
1352	47A	24.6	37.97	946.0	1411.82	2	1.	.03400	.00	.00	0.	93	11	A32	.01
1352	48A	24.9	45.01	970.9	1419.79	2	722.	.03900	.00	.00	0.	93	9	A33	.01
1352	49A	20.9	38.70	991.8	1416.88	2	846.	.04700	.00	.00	0.	93	8	A32	.01
1352	50A	19.2	37.04	1011.0	1412.06	2	1.	.04700	.00	.00	0.	93	8	A33	.01
1352	51A	.0	.00	1011.0	1412.06	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	52E	28.8	64.57	28.8	64.57	2	940.	.14400	.00	.00	0.	93	7	A35	.01
1352	53E	24.8	49.76	53.6	112.22	2	971.	.27800	.00	.00	0.	93	8	A34	.01
1352	54E	33.4	62.84	87.0	171.21	2	1110.	.18700	.00	.00	0.	93	9	A34	.01
1352	55E	23.1	41.75	110.1	209.13	2	1.	.18700	.00	.00	0.	93	9	A33	.01
1352	56E	.0	.00	110.1	209.13	4	1.	.01000	4.50	.00	0.	93	99	A37	.00

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*                                                   CONFLUENCE Q'S                                                          *
*   1352   57A  TA 1165 QA  1412.06 QAE  1455.03 QE    42.97    1352   57E  TE 1156 QE   209.12 QEA  1011.65 QA   802.53   *
*                                 1352   57AE TAE 1164 QAE  1462.85 QA  1410.20 QE    52.65                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	209.12	1121.1	1462.85	2	180.	.03900	.00	.00	0.	93	0	A37	.00
1352	58A	.0	.00	1121.1	1459.88	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	59A	28.2	48.23	1149.3	1468.45	2	815.	.01800	.00	.00	0.	93	10	A33	.01
1352	60A	27.2	56.73	1176.5	1464.68	2	1136.	.05700	.00	.00	0.	93	7	A33	.01

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1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	30.61	1194.4	1462.88	2	1.	.05700	.00	.00	0.	93	10	A33	.01
1352	62A	.0	.00	1194.4	1462.86	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	63F	27.0	56.10	27.0	56.10	2	586.	.19600	.00	.00	0.	93	8	A35	.01
1352	64F	40.8	68.16	67.8	123.95	2	727.	.08900	.00	.00	0.	93	11	A34	.01
1352	65F	37.4	63.97	105.2	184.34	2	1.	.08900	.00	.00	0.	93	10	A33	.01
1352	66F	32.6	65.41	137.8	248.19	2	1.	.14100	.00	.00	0.	93	8	A34	.01
1352	67F	18.8	35.37	156.6	282.85	2	677.	.08100	.00	.00	0.	93	9	A34	.01
1352	68F	9.2	17.75	165.8	298.07	2	1.	.08100	.00	.00	0.	93	8	A33	.01
1352	69F	.0	.00	165.8	298.06	4	1.	.01000	5.25	.00	0.	93	99	A37	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1166 QA  1462.84 QAF  1523.10 QF    60.26    1352   70F  TF 1156 QF   298.06 QFA  1194.01 QA   895.95   *
*                              1352   70AF TAF 1166 QAF  1523.10 QA  1462.84 QF    60.26                                 *
*****************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	298.06	1360.2	1523.10	2	561.	.03600	.00	.00	0.	93	0	A37	.00
1352	71A	.0	.00	1360.2	1517.99	5	1.	.01000	12.00	.00	0.	93	99	A37	.00
1352	72A	6.4	13.35	1366.6	1519.23	2	1.	.03600	.00	.00	0.	93	7	A33	.01
1352	73A	20.0	40.46	1386.6	1526.32	2	434.	.03000	.00	.00	0.	91	9	A33	.01
1352	74A	21.9	45.26	1408.5	1532.46	2	420.	.02900	.00	.00	0.	91	8	A32	.01
1352	75A	42.0	78.21	1450.5	1543.49	2	1019.	.02000	.00	.00	0.	91	10	A32	.01
1352	76A	26.1	48.60	1476.6	1545.22	2	249.	.04000	.00	.00	0.	91	10	A32	.01
1352	77A	12.2	25.21	1488.8	1548.40	2	1.	.04000	.00	.00	0.	91	8	A32	.01
1352	78A	.0	.00	1488.8	1548.40	5	1.	.01000	12.00	.00	0.	91	99	A37	.00
1352	79A	14.2	30.42	1503.0	1552.40	2	643.	.01900	.00	.00	0.	91	8	A33	.01
1352	80A	18.2	37.61	1521.2	1553.69	2	751.	.02400	.00	.00	0.	91	8	A32	.01
1352	81A	23.3	49.92	1544.5	1557.89	2	709.	.02400	.00	.00	0.	91	8	A33	.01
1352	82A	22.2	39.08	1566.7	1561.67	2	1.	.02400	.00	.00	0.	91	11	A32	.01
1352	83A	.0	.00	1566.7	1561.66	5	1.	.01000	12.00	.00	0.	91	99	A37	.00
1352	84B	26.2	46.96	26.2	46.96	2	1438.	.06400	.00	.00	0.	91	10	A31	.01
1352	85B	33.5	58.97	59.7	99.37	2	1.	.06400	.00	.00	0.	91	11	A32	.01
1352	86B	.0	.00	59.7	99.35	4	1.	.01000	3.50	.00	0.	91	99	A37	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1171 QA  1561.64 QAB  1580.62 QB    18.98    1352   87B  TB 1157 QB    99.34 QBA  1095.45 QA   996.12   *
*                              1352   87AB TAB 1171 QAB  1580.62 QA  1561.64 QB    18.98                                 *
*****************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	99.34	1626.4	1580.62	2	405.	.02300	.00	.00	0.	91	0	A37	.00
1352	88A	2.8	7.82	1629.2	1579.96	2	1.	.02300	.00	.00	0.	91	5	A33	.01
1352	89C	21.6	51.32	21.6	51.32	2	1328.	.09400	.00	.00	0.	91	7	A34	.01
1352	90C	23.5	42.87	45.1	90.58	2	1.	.09400	.00	.00	0.	91	11	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN A STORM DAY 4

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1171 QA  1579.96 QAC  1593.59 QC    13.63    1352   91C  TC 1156 QC    90.57 QCA  1056.48 QA   965.90   *
*                              1352   91AC TAC 1171 QAC  1593.59 QA  1579.96 QC    13.63                                 *
*****************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	90.57	1674.3	1593.59	2	977.	.02400	.00	.00	0.	91	0	A37	.00
1352	92A	30.8	62.31	1705.1	1599.10	2	999.	.01300	.00	.00	0.	91	9	A33	.01
1352	93A	37.7	76.27	1742.8	1605.41	2	448.	.02200	.00	.00	0.	91	9	A33	.01
1352	94A	11.0	25.25	1753.8	1607.52	2	1.	.02200	.00	.00	0.	91	7	A33	.01
1352	95D	382.1	707.10	382.1	707.10	2	1.	.02200	.00	.00	0.	91	0	A37	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1174 QA  1607.52 QAD  1749.96 QD   142.44    1352   96D  TD 1159 QD   707.09 QDA  1808.66 QA  1101.57   *
*                              1352   96AD TAD 1164 QAD  1902.04 QA  1438.02 QD   464.02                                 *
*****************************************************************************************************************
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		SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL		RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	707.09	2135.9	1902.04	6	250.	.01405	32.00	.00	0.	91	0	A37	.00
1352	97A	13.4	28.71	2149.3	1907.05	2	642.	.01700	.00	.00	0.	91	8	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	33.99	200	34.90	300	36.42	400	38.40
500	40.85	600	43.75	700	49.79	800	60.72	900	77.44
1000	109.76	1050	158.11	1100	257.95	1110	300.32	1120	365.00
1130	454.51	1131	464.28	1132	474.59	1133	485.07	1134	496.08
1135	507.75	1136	520.43	1137	533.94	1138	548.37	1139	564.04
1140	580.62	1141	598.66	1142	618.31	1143	639.42	1144	662.14
1145	687.43	1146	715.34	1147	746.34	1148	780.42	1149	823.84
1150	879.80	1151	950.51	1152	1036.57	1153	1138.51	1154	1255.60
1155	1379.11	1156	1504.03	1157	1622.73	1158	1727.86	1159	1806.91
1160	1857.75	1161	1885.52	1162	1899.65	1163	1905.46	1164	1907.05
1165	1904.25	1166	1895.90	1167	1881.76	1168	1862.40	1169	1840.81
1170	1819.04	1171	1799.32	1172	1782.63	1173	1768.60	1174	1755.91
1175	1741.77	1176	1722.46	1177	1694.30	1178	1655.70	1179	1606.92
1180	1549.36	1181	1485.03	1182	1416.12	1183	1345.16	1184	1274.02
1185	1204.94	1186	1136.82	1187	1073.45	1188	1010.55	1189	952.45
1190	897.19	1191	845.64	1192	797.41	1193	752.75	1194	711.25
1195	672.59	1196	636.88	1197	603.75	1198	572.92	1199	544.34
1200	517.78	1201	493.13	1202	470.30	1203	449.14	1204	429.89
1205	411.48	1206	394.71	1207	378.94	1208	364.35	1209	351.34
1210	337.80	1211	325.13	1212	312.95	1213	301.70	1214	291.38
1215	281.81	1216	272.57	1217	263.76	1218	255.45	1219	247.97
1220	240.58	1221	233.67	1222	227.07	1223	220.84	1224	215.22
1225	210.02	1226	204.91	1227	199.98	1228	195.09	1229	190.30
1230	185.76	1231	181.28	1232	176.79	1233	172.51	1234	168.37
1235	164.30	1236	160.37	1237	156.65	1238	153.11	1239	149.55
1240	146.11	1241	142.75	1242	139.69	1243	136.71	1244	134.08
1245	131.65	1246	129.35	1247	127.20	1248	125.09	1249	122.98
1250	120.88	1251	119.04	1252	117.22	1253	115.37	1254	113.45
1255	111.64	1256	109.84	1257	108.09	1258	106.32	1259	104.52
1260	102.86	1261	101.32	1262	99.93	1263	98.45	1264	97.01
1265	95.60	1266	94.30	1267	92.99	1268	91.67	1269	90.34
1270	89.06	1271	87.81	1272	86.57	1273	85.39	1274	84.22
1275	83.20	1276	82.11	1277	80.98	1278	80.01	1279	79.03
1280	78.00	1281	76.92	1282	76.03	1283	75.03	1284	74.10
1285	73.18	1286	72.28	1287	71.40	1288	70.53	1289	69.68
1290	68.93	1291	68.21	1292	67.47	1293	66.75	1294	65.97
1295	65.29	1296	64.53	1297	63.85	1298	63.16	1299	62.54
1300	61.90	1310	55.65	1320	53.46	1330	50.36	1340	48.74
1350	47.10	1360	45.53	1370	44.33	1380	42.95	1390	41.90
1400	40.81	1420	39.01	1440	37.65	1460	35.05	1500	33.80

TOTAL VOLUME THIS HYDROGRAPH = 248.21(Ac.Ft)

Basin B - 25 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	7.1	7	3.62	0.75	0.75
2A	36.3	0.01	93	2008	0.354	7.1	9	3.22	0.73	0.73
3A	11.1	0.01	93	1303	0.437	7.1	6	3.89	0.76	0.76
4A	25.5	0.01	93	2134	0.354	7.3	9	3.30	0.73	0.74
5A	18.9	0.01	93	1414	0.375	7.1	7	3.62	0.75	0.75
6A	19.2	0.01	93	1221	0.483	7.1	6	3.89	0.76	0.76
7A	24.7	0.01	93	1706	0.396	7.1	8	3.40	0.74	0.74
8A	20.4	0.01	93	1412	0.342	7.0	7	3.58	0.75	0.75
9B	25.7	0.01	97	1440	0.316	6.8	8	3.23	0.74	0.74
10B	39.8	0.01	93	2531	0.296	6.9	11	2.86	0.71	0.71
12A	15.7	0.01	97	1111	0.364	6.9	6	3.80	0.76	0.76
13A	31.9	0.01	97	1823	0.192	6.8	10	2.95	0.73	0.73
14C	21.3	0.01	91	2178	0.27	6.8	10	2.91	0.79	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	44.61	19.2	44.61	2	959.	.20900	.00	.00	0.	93	7	A36	.01
1352 2A	36.3	73.48	55.5	115.95	2	367.	.12300	.00	.00	0.	93	9	A36	.01
1352 3A	11.1	28.28	66.6	141.35	2	1.	.12300	.00	.00	0.	93	6	A36	.01
1352 4A	25.5	53.37	92.1	194.59	2	662.	.12100	.00	.00	0.	93	9	A37	.01
1352 5A	18.9	43.91	111.0	235.83	2	546.	.11000	.00	.00	0.	93	7	A36	.01
1352 6A	19.2	48.92	130.2	273.08	2	1340.	.16000	.00	.00	0.	93	6	A36	.01
1352 7A	24.7	53.23	154.9	318.15	2	592.	.06400	.00	.00	0.	93	8	A36	.01
1352 8A	20.4	47.40	175.3	346.57	2	1.	.06400	.00	.00	0.	93	7	A36	.01
1352 9B	25.7	61.06	25.7	61.06	2	980.	.09500	.00	.00	0.	91	7	A34	.01
1352 10B	39.8	77.66	65.5	136.77	2	1.	.09500	.00	.00	0.	91	11	A35	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1156 QA   346.56 QAB   481.88 QB   135.32    1352   11B  TB 1155 QB   136.75 QBA   465.87 QA   329.12   *
*                              1352   11AB TAB 1156 QAB   481.88 QA   346.56 QB   135.32                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	136.75	240.8	481.88	2	761.	.08100	.00	.00	0.	91	0	A35	.00
1352 12A	15.7	41.88	256.5	501.61	2	1228.	.04900	.00	.00	0.	91	6	A35	.01
1352 13A	31.9	66.85	288.4	545.62	2	1.	.04900	.00	.00	0.	91	9	A34	.01
1352 14C	21.3	42.55	21.3	42.55	2	1.	.01000	.00	.00	0.	91	10	A34	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   15A  TA 1158 QA   545.61 QAC   583.79 QC    38.18    1352   15C  TC 1154 QC    42.55 QCA   434.19 QA   391.64   *
*                              1352   15AC TAC 1158 QAC   583.79 QA   545.61 QC    38.18                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	42.55	309.7	583.79	5	100.	.02000	10.00	.00	0.	91	0	A34	.00
1352 16A	.0	.00	309.7	583.34	2	1.	.01000	.00	.00	0.	91	99	A34	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	4.69	200	4.86	300	5.12	400	5.40
500	5.75	600	6.29	700	7.90	800	10.25	900	13.60
1000	20.83	1050	32.02	1100	50.32	1110	63.21	1120	81.30
1130	103.08	1131	105.25	1132	107.33	1133	110.02	1134	112.95
1135	115.80	1136	118.91	1137	122.69	1138	126.86	1139	131.35
1140	136.24	1141	141.83	1142	148.18	1143	154.59	1144	161.74
1145	170.78	1146	180.64	1147	191.30	1148	203.26	1149	223.91
1150	250.10	1151	280.87	1152	322.22	1153	373.83	1154	428.93
1155	483.47	1156	535.60	1157	571.45	1158	583.34	1159	568.73
1160	533.52	1161	485.03	1162	428.26	1163	373.94	1164	325.67
1165	280.85	1166	242.75	1167	209.56	1168	182.67	1169	160.15
1170	141.71	1171	126.36	1172	113.74	1173	102.90	1174	94.41
1175	87.03	1176	80.78	1177	75.59	1178	71.03	1179	67.14
1180	63.50	1181	60.39	1182	57.71	1183	55.21	1184	52.92
1185	50.86	1186	49.03	1187	47.28	1188	45.72	1189	44.15
1190	42.73	1191	41.32	1192	40.10	1193	38.94	1194	37.70
1195	36.56	1196	35.43	1197	34.36	1198	33.41	1199	32.52
1200	31.69	1201	30.92	1202	30.23	1203	29.52	1204	28.87
1205	28.32	1206	27.60	1207	26.96	1208	26.31	1209	25.57
1210	25.03	1211	24.45	1212	23.88	1213	23.33	1214	22.82
1215	22.33	1216	21.77	1217	21.27	1218	20.86	1219	20.38
1220	19.92	1221	19.55	1222	19.22	1223	18.67	1224	18.20
1225	17.92	1226	17.65	1227	17.40	1228	16.99	1229	16.65
1230	16.40	1231	15.99	1232	15.76	1233	15.54	1234	15.28
1235	14.99	1236	14.71	1237	14.49	1238	14.30	1239	14.05
1240	13.76	1241	13.68	1242	13.47	1243	13.42	1244	13.17
1245	13.03	1246	12.71	1247	12.87	1248	12.36	1249	12.83
1250	11.70	1251	12.99	1252	10.48	1253	13.78	1254	8.67
1255	15.47	1256	6.72	1257	16.95	1258	4.69	1259	18.59
1260	4.69	1261	18.29	1262	4.69	1263	17.92	1264	4.69
1265	17.15	1266	4.69	1267	16.90	1268	4.69	1269	16.75
1270	4.69	1271	16.42	1272	4.69	1273	16.01	1274	4.69
1275	15.84	1276	4.69	1277	15.36	1278	4.69	1279	14.99
1280	4.69	1281	14.80	1282	4.69	1283	14.46	1284	4.69
1285	14.13	1286	4.69	1287	13.89	1288	4.69	1289	13.64
1290	4.69	1291	13.20	1292	4.69	1293	12.89	1294	4.69
1295	12.50	1296	4.69	1297	12.08	1298	4.69	1299	11.82
1300	4.69	1310	9.58	1320	4.69	1330	7.88	1340	4.69
1350	7.04	1360	4.69	1370	6.42	1380	4.69	1390	5.90
1400	4.69	1420	5.39	1440	4.69	1460	4.79	1500	4.69

TOTAL VOLUME THIS HYDROGRAPH = 38.43(Ac.Ft)

Basin C - 25 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	0.9	0.05	91	370	0.42	6.7	5	4.00	0.81	0.81
4B	2.5	0.01	91	460	0.42	6.7	5	4.00	0.81	0.81
5B	7.2	0.01	91	1000	0.33	6.7	6	3.67	0.81	0.81
6B	1.6	0.01	91	625	0.30	6.7	5	4.00	0.81	0.81
7B	1.5	0.70	91	845	0.05	6.7	7	3.41	0.80	0.87
8B	0.4	0.91	91	490	0.060	6.7	5	4.00	0.81	0.89
11A	4.6	0.70	91	1345	0.04	6.7	10	2.89	0.78	0.86
12A	3.7	0.70	91	1240	0.04	6.7	9	3.03	0.79	0.87
14A	2.6	0.70	91	980	0.07	6.7	7	3.41	0.80	0.87
15C	2.1	0.01	91	415	0.32	6.7	5	4.00	0.81	0.81
16C	2.9	0.25	91	1150	0.13	6.7	7	3.41	0.80	0.83
17C	5.8	0.60	91	1180	0.070	6.7	8	3.21	0.79	0.86
18C	1.0	0.05	91	780	0.09	6.7	6	3.67	0.81	0.81
21A	1.7	0.05	91	1000	0.08	6.7	7	3.41	0.80	0.81
22A	3.1	0.70	91	1000	0.02	6.7	9	3.03	0.79	0.87
23A	4.4	0.70	91	1000	0.02	6.7	9	3.03	0.79	0.87
24A	4.0	0.75	91	1550	0.08	6.7	9	3.03	0.79	0.87
25A	2.1	0.85	91	1500	0.08	6.7	9	3.03	0.79	0.87
27D	20.3	0.05	91	1993	0.128	6.8	11	2.78	0.8	0.79

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN C

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	.9	2.52	.9	2.52	4	250.	.03000	2.00	.00	0.	91	5	A33	.05
1352 2A	.0	.00	.9	2.37	4	1.	.01000	2.00	.00	0.	91	99	A33	.00
1352 3A	.0	.00	.9	2.37	4	1.	.01000	2.00	.00	0.	91	99	A33	.00
1352 4B	2.5	6.98	2.5	6.98	2	170.	.01000	.00	.00	0.	91	5	A33	.01
1352 5B	7.2	18.01	9.7	24.14	2	480.	.05000	.00	.00	0.	91	6	A33	.01
1352 6B	1.6	4.47	11.3	26.18	4	160.	.10000	2.00	.00	0.	91	5	A33	.01
1352 7B	1.5	3.76	12.8	29.67	4	5.	.10000	2.00	.00	0.	91	7	A33	.65
1352 8B	.4	1.24	13.2	30.59	4	30.	.02000	2.00	.00	0.	91	5	A33	.91
1352 9B	.0	.00	13.2	30.50	4	1.	.01000	2.25	.00	0.	91	99	A33	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA     2.37 QAB    31.71 QB    29.34    1352   10B  TB 1155 QB    30.49 QBA    32.66 QA     2.17   *
*                               1352   10AB TAB 1155 QAB    32.66 QA     2.17 QB    30.49                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 10AB	13.2	30.49	14.1	32.66	4	800.	.06500	2.00	.00	0.	91	0	A33	.00
1352 11A	4.6	9.82	18.7	41.54	4	1.	.06500	2.00	.00	0.	91	10	A33	.65
1352 12A	3.7	8.25	22.4	49.48	4	50.	.06500	2.00	.00	0.	91	9	A33	.65
1352 13A	.0	.00	22.4	49.46	4	1.	.01000	2.75	.00	0.	91	99	A33	.00
1352 14A	2.6	6.52	25.0	55.04	4	10.	.06500	2.00	.00	0.	91	7	A33	.65
1352 15C	2.1	5.86	2.1	5.86	4	120.	.09100	2.00	.00	0.	91	5	A33	.01
1352 16C	2.9	6.89	5.0	12.58	4	770.	.09200	2.00	.00	0.	91	7	A33	.25
1352 17C	5.8	13.54	10.8	25.56	4	50.	.09200	2.00	.00	0.	91	8	A33	.60
1352 18C	1.0	2.52	11.8	28.05	4	10.	.09200	2.00	.00	0.	91	6	A33	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1156 QA    55.04 QAC    81.16 QC    26.12    1352   19C  TC 1154 QC    28.04 QCA    80.38 QA    52.34   *
*                               1352   19AC TAC 1155 QAC    82.50 QA    54.91 QC    27.59                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	11.8	28.04	36.8	82.50	4	260.	.09000	2.25	.00	0.	91	0	A33	.00
1352 20A	.0	.00	36.8	81.98	4	1.	.01000	3.25	.00	0.	91	99	A33	.00
1352 21A	1.7	3.93	38.5	85.82	4	130.	.08800	2.25	.00	0.	91	7	A33	.05
1352 22A	3.1	6.92	41.6	92.26	4	1.	.02000	3.00	.00	0.	91	9	A33	.65
1352 23A	4.4	9.82	46.0	101.91	4	1040.	.08800	2.50	.00	0.	91	9	A33	.65
1352 24A	4.0	8.99	50.0	109.51	4	1.	.03400	3.00	.00	0.	91	9	A33	.70
1352 25A	2.1	4.67	52.1	113.98	4	80.	.03200	3.00	.00	0.	91	9	A34	.40
1352 26D	309.7	583.30	309.7	583.30	2	1.	.01000	.00	.00	0.	91	0	A34	.00
1352 27D	20.3	38.58	330.0	618.68	2	1600.	.12800	.00	.00	0.	91	11	A34	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR - BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1156 QA   113.69 QAD   619.29 QD   505.60    1352   28D  TD 1159 QD   610.67 QDA   707.60 QA    96.93   *
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*                              1352   28AD TAD 1159 QAD   707.60 QA    96.93 QD   610.67                                    *
*****************************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	610.67	382.1	707.60	5	230.	.03000	12.00	.00	0.	91	0	A34	.00
1352 29A	.0	.00	382.1	707.14	2	1.	.01000	.00	.00	0.	91	99	A34	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	7.93	200	8.26	300	8.63	400	9.11
500	9.77	600	10.55	700	12.73	800	16.06	900	21.15
1000	30.89	1050	45.15	1100	68.74	1110	83.09	1120	105.89
1130	132.21	1131	135.16	1132	138.10	1133	141.00	1134	144.01
1135	147.40	1136	151.15	1137	155.13	1138	159.60	1139	164.77
1140	170.50	1141	176.71	1142	183.58	1143	191.27	1144	199.77
1145	209.00	1146	219.32	1147	231.58	1148	245.27	1149	261.83
1150	285.53	1151	319.54	1152	363.09	1153	416.13	1154	478.07
1155	543.38	1156	607.00	1157	660.89	1158	697.36	1159	707.14
1160	689.99	1161	647.64	1162	590.56	1163	526.90	1164	463.88
1165	405.44	1166	354.61	1167	310.52	1168	272.86	1169	240.64
1170	213.66	1171	191.42	1172	172.60	1173	156.06	1174	142.40
1175	130.80	1176	121.33	1177	112.75	1178	105.44	1179	99.24
1180	93.86	1181	89.06	1182	84.73	1183	80.91	1184	77.54
1185	74.47	1186	71.65	1187	69.07	1188	66.89	1189	64.73
1190	62.77	1191	60.85	1192	59.02	1193	57.29	1194	55.66
1195	54.14	1196	52.69	1197	51.29	1198	49.93	1199	48.60
1200	47.34	1201	46.13	1202	45.01	1203	44.01	1204	43.06
1205	42.16	1206	41.29	1207	40.49	1208	39.71	1209	38.92
1210	38.12	1211	37.30	1212	36.52	1213	35.79	1214	35.07
1215	34.34	1216	33.64	1217	32.97	1218	32.34	1219	31.71
1220	31.09	1221	30.48	1222	29.90	1223	29.36	1224	28.84
1225	28.33	1226	27.80	1227	27.27	1228	26.80	1229	26.38
1230	26.00	1231	25.62	1232	25.22	1233	24.82	1234	24.41
1235	24.02	1236	23.66	1237	23.32	1238	22.98	1239	22.63
1240	22.30	1241	22.00	1242	21.71	1243	21.43	1244	21.17
1245	20.81	1246	20.71	1247	20.34	1248	20.20	1249	19.82
1250	19.74	1251	19.39	1252	19.30	1253	18.94	1254	18.85
1255	18.46	1256	18.26	1257	17.79	1258	17.68	1259	17.30
1260	17.33	1261	17.05	1262	17.30	1263	17.06	1264	17.25
1265	16.93	1266	17.09	1267	16.70	1268	16.80	1269	16.37
1270	16.52	1271	16.09	1272	16.30	1273	15.89	1274	16.13
1275	15.66	1276	15.92	1277	15.46	1278	15.77	1279	15.27
1280	15.59	1281	15.04	1282	15.36	1283	14.77	1284	15.16
1285	14.55	1286	14.97	1287	14.29	1288	14.74	1289	14.05
1290	14.57	1291	13.84	1292	14.40	1293	13.62	1294	14.23
1295	13.38	1296	14.04	1297	13.14	1298	13.86	1299	12.89
1300	13.65	1310	10.84	1320	11.86	1330	9.95	1340	10.75
1350	9.58	1360	10.12	1370	9.09	1380	9.61	1390	8.61
1400	9.23	1420	8.10	1440	8.75	1460	7.93	1500	8.05

TOTAL VOLUME THIS HYDROGRAPH = 54.57(Ac.Ft)

STEVENSON RANCH

50-YEAR CLEAR

DEVELOPED CONDITION

Basin A - 50 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	32.5	0.01	93	1507	0.416	8.4	6	4.60	0.79	0.79
2A	34.8	0.01	93	1871	0.405	8.4	7	4.28	0.77	0.78
3A	33.3	0.01	93	2288	0.337	8.4	9	3.80	0.76	0.76
4A	37.9	0.01	93	1862	0.440	8.4	7	4.28	0.77	0.78
6B	28.8	0.01	93	1664	0.508	8.4	6	4.60	0.79	0.79
7B	12.2	0.01	93	1488	0.460	8.4	6	4.60	0.79	0.79
8B	22.3	0.01	93	2064	0.359	8.4	8	4.02	0.76	0.77
9B	24.6	0.01	93	2208	0.376	8.4	8	4.02	0.76	0.77
13A	24.0	0.01	93	1693	0.428	8.4	7	4.28	0.77	0.78
15C	37.0	0.01	93	2219	0.306	8.4	9	3.80	0.76	0.76
16C	40.2	0.01	93	2159	0.322	8.4	8	4.02	0.76	0.77
17C	31.9	0.01	93	1934	0.334	8.4	8	4.02	0.76	0.77
21A	39.2	0.01	93	2213	0.305	8.3	9	3.76	0.76	0.76
23D	30.8	0.01	93	1773	0.313	8.4	7	4.28	0.77	0.78
24D	39.3	0.01	93	1628	0.289	8.4	7	4.28	0.77	0.78
25D	42.3	0.01	93	1712	0.216	8.4	8	4.02	0.76	0.77
26D	30.9	0.01	93	1709	0.471	8.3	7	4.23	0.77	0.77
27D	26.9	0.01	93	1779	0.360	8.3	7	4.23	0.77	0.77
31A	29.2	0.01	93	2176	0.327	8.1	9	3.67	0.75	0.75
32A	22.2	0.01	93	1894	0.383	8.1	8	3.87	0.76	0.76
33A	23.1	0.01	93	1600	0.428	8.0	7	4.07	0.77	0.77
34A	35.7	0.01	93	2286	0.341	8.0	9	3.62	0.75	0.75
35A	29.2	0.01	93	2014	0.305	7.9	8	3.78	0.76	0.76
36A	25.6	0.01	93	1738	0.328	7.9	8	3.78	0.76	0.76
38A	23.7	0.01	93	1497	0.367	7.7	7	3.92	0.76	0.76
39A	32.5	0.01	93	1852	0.308	7.6	8	3.64	0.75	0.75
40A	20.2	0.01	93	1367	0.400	7.5	6	4.11	0.77	0.77
41A	22.5	0.01	93	1307	0.409	7.0	7	3.57	0.75	0.75
42A	28.5	0.01	93	1919	0.302	7.3	9	3.30	0.73	0.74
44A	20.2	0.01	93	1582	0.329	7.2	8	3.44	0.74	0.74
45A	24.8	0.01	93	1957	0.335	7.0	9	3.17	0.73	0.73
46A	15.1	0.01	93	1406	0.420	7.3	7	3.72	0.75	0.76
47A	24.6	0.01	93	2076	0.234	7.2	10	3.10	0.72	0.72
48A	24.9	0.01	93	1739	0.408	7.4	8	3.54	0.75	0.75
49A	20.9	0.01	93	1541	0.343	7.2	7	3.67	0.75	0.75
50A	19.2	0.01	93	1394	0.325	7.3	7	3.72	0.75	0.76
52E	28.8	0.01	93	1432	0.332	7.8	7	3.97	0.76	0.76
53E	24.8	0.01	93	1534	0.306	7.7	7	3.92	0.76	0.76
54E	33.4	0.01	93	1783	0.334	7.6	8	3.64	0.75	0.75
55E	23.1	0.01	93	1853	0.409	7.4	8	3.54	0.75	0.75
59A	28.2	0.01	93	2259	0.429	7.5	9	3.39	0.74	0.74
60A	27.2	0.01	93	1234	0.405	7.4	6	4.05	0.77	0.77
61A	17.9	0.01	93	1533	0.117	7.4	9	3.35	0.74	0.74
63F	27.0	0.01	93	1616	0.374	7.9	7	4.02	0.76	0.77
64F	40.8	0.01	93	2620	0.393	7.7	10	3.32	0.73	0.74

Basin A - 50 Year -Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
65F	37.4	0.01	93	1980	0.293	7.5	9	3.39	0.74	0.74
66F	32.6	0.01	93	1732	0.514	7.7	7	3.92	0.76	0.76
67F	18.8	0.01	93	1684	0.303	7.6	8	3.64	0.75	0.75
68F	9.2	0.01	93	1319	0.250	7.5	7	3.82	0.76	0.76
72A	6.4	0.01	93	1153	0.264	7.3	6	4.00	0.76	0.77
73A	20.0	0.01	91	1766	0.311	7.4	8	3.54	0.80	0.80
74A	21.9	0.01	91	1507	0.234	7.2	8	3.44	0.80	0.80
75A	42.0	0.01	91	1789	0.159	7.1	9	3.21	0.79	0.80
76A	26.1	0.01	91	1672	0.144	7.1	9	3.21	0.79	0.80
77A	12.2	0.01	91	1303	0.165	7.1	7	3.62	0.80	0.80
79A	14.2	0.01	91	1659	0.316	7.3	7	3.72	0.81	0.81
80A	18.2	0.01	91	1622	0.291	7.2	8	3.44	0.80	0.80
81A	23.3	0.01	91	1645	0.280	7.3	8	3.49	0.80	0.80
82A	22.2	0.01	91	2122	0.161	7.2	10	3.10	0.79	0.79
84B	26.2	0.01	91	1697	0.165	7.0	9	3.17	0.79	0.79
85B	33.5	0.01	91	2040	0.168	7.2	10	3.10	0.79	0.79
88A	2.8	0.01	91	467	0.096	7.3	5	4.36	0.82	0.82
89C	21.6	0.01	91	1492	0.372	7.7	7	3.92	0.81	0.81
90C	23.5	0.01	91	2246	0.220	7.5	10	3.23	0.79	0.80
92A	30.8	0.01	91	1641	0.181	7.4	8	3.54	0.80	0.80
93A	37.7	0.01	91	1873	0.232	7.4	8	3.54	0.80	0.80
94A	11.0	0.01	91	1377	0.290	7.5	7	3.82	0.81	0.81
97A	13.4	0.01	91	1487	0.269	7.5	7	3.82	0.81	0.81

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	116.51	32.5	116.51	2	1173.	.20100	.00	.00	0.	93	6	A42	.01
1352 2A	34.8	114.07	67.3	224.81	2	369.	.19500	.00	.00	0.	93	7	A42	.01
1352 3A	33.3	95.52	100.6	318.69	2	1353.	.24000	.00	.00	0.	93	9	A42	.01
1352 4A	37.9	124.23	138.5	435.80	2	1.	.24000	.00	.00	0.	93	7	A42	.01
1352 5A	.0	.00	138.5	435.79	4	1.	.01000	6.00	.00	0.	93	99	A42	.00
1352 6B	28.8	103.25	28.8	103.25	2	494.	.25300	.00	.00	0.	93	6	A42	.01
1352 7B	12.2	43.74	41.0	146.98	2	1.	.25300	.00	.00	0.	93	6	A42	.01
1352 8B	22.3	67.96	63.3	214.94	2	1342.	.28700	.00	.00	0.	93	8	A42	.01
1352 9B	24.6	74.97	87.9	283.32	2	1.	.28700	.00	.00	0.	93	8	A42	.01
1352 10B	.0	.00	87.9	283.32	4	1.	.01000	5.25	.00	0.	93	99	A42	.00

****
* CONFLUENCE Q'S *
* 1352 11A TA 1155 QA 435.74 QAB 719.05 QB 283.31 1352 11B TB 1155 QB 283.31 QBA 719.05 QA 435.74 *
* 1352 11AB TAB 1155 QAB 719.05 QA 435.74 QB 283.31 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	283.31	226.4	719.05	2	655.	.14500	.00	.00	0.	93	0	A42	.00
1352 12A	.0	.00	226.4	710.70	4	1.	.01000	7.25	.00	0.	93	99	A42	.00
1352 13A	24.0	78.67	250.4	787.81	2	1.	.14500	.00	.00	0.	93	7	A42	.01
1352 14A	.0	.00	250.4	787.78	4	1.	.01000	7.50	.00	0.	93	99	A42	.00
1352 15C	37.0	106.14	37.0	106.14	2	826.	.24800	.00	.00	0.	93	9	A42	.01
1352 16C	40.2	122.51	77.2	227.01	2	1267.	.26000	.00	.00	0.	93	8	A42	.01
1352 17C	31.9	97.22	109.1	320.52	2	1.	.26000	.00	.00	0.	93	8	A42	.01
1352 18C	.0	.00	109.1	320.51	4	1.	.01000	5.50	.00	0.	93	99	A42	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1155 QA 787.72 QAC 1108.21 QC 320.49 1352 19C TC 1155 QC 320.49 QCA 1108.21 QA 787.72 *
* 1352 19AC TAC 1155 QAC 1108.21 QA 787.72 QC 320.49 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	320.49	359.5	1108.21	2	1161.	.09000	.00	.00	0.	93	0	A42	.00
1352 20A	.0	.00	359.5	1094.43	5	1.	.01000	11.00	.00	0.	93	99	A42	.00
1352 21A	39.2	112.45	398.7	1201.79	2	1.	.09000	.00	.00	0.	93	9	A42	.01
1352 22A	.0	.00	398.7	1201.78	5	1.	.01000	11.00	.00	0.	93	99	A42	.00
1352 23D	30.8	100.96	30.8	100.96	2	1242.	.23000	.00	.00	0.	93	7	A42	.01
1352 24D	39.3	128.82	70.1	226.32	2	1308.	.03800	.00	.00	0.	93	7	A42	.01
1352 25D	42.3	128.91	112.4	332.48	2	723.	.22800	.00	.00	0.	93	8	A42	.01
1352 26D	30.9	101.29	143.3	410.52	2	720.	.09000	.00	.00	0.	93	7	A42	.01
1352 27D	26.9	88.18	170.2	478.96	2	1.	.09000	.00	.00	0.	93	7	A42	.01
1352 28D	.0	.00	170.2	478.96	4	1.	.01000	6.25	.00	0.	93	99	A42	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

****
* CONFLUENCE Q'S *

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*   1352   29A  TA 1156 QA  1201.76 QAD  1680.71 QD   478.95    1352   29D  TD 1156 QD   478.95 QDA  1680.71 QA  1201.76   *
*                                1352   29AD TAD 1156 QAD  1680.71 QA  1201.76 QD   478.95                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	478.95	568.9	1680.71	2	668.	.04800	.00	.00	0.	93	0	A42	.00
1352	30A	.0	.00	568.9	1658.81	5	1.	.01000	13.00	.00	0.	93	99	A42	.00
1352	31A	29.2	81.43	598.1	1734.36	2	506.	.04400	.00	.00	0.	93	9	A41	.01
1352	32A	22.2	65.81	620.3	1787.40	2	635.	.03900	.00	.00	0.	93	8	A41	.01
1352	33A	23.1	71.52	643.4	1815.75	2	593.	.04200	.00	.00	0.	93	7	A40	.01
1352	34A	35.7	96.48	679.1	1880.52	2	572.	.03500	.00	.00	0.	93	9	A40	.01
1352	35A	29.2	83.94	708.3	1924.92	2	485.	.04100	.00	.00	0.	93	8	A40	.01
1352	36A	25.6	73.59	733.9	1948.49	2	532.	.03800	.00	.00	0.	93	8	A40	.01
1352	37A	.0	.00	733.9	1948.34	5	1.	.01000	13.00	.00	0.	93	99	A42	.00
1352	38A	23.7	71.13	757.6	1975.79	2	396.	.05100	.00	.00	0.	93	7	A39	.01
1352	39A	32.5	87.81	790.1	2013.01	2	838.	.05600	.00	.00	0.	93	8	A38	.01
1352	40A	20.2	64.40	810.3	2007.78	2	1.	.05600	.00	.00	0.	93	6	A38	.01
1352	41A	22.5	59.17	832.8	2021.49	2	1.	.13300	.00	.00	0.	93	7	A35	.01
1352	42A	28.5	70.10	861.3	2058.37	2	840.	.05700	.00	.00	0.	93	9	A37	.01
1352	43A	.0	.00	861.3	2054.77	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	44A	20.2	51.12	881.5	2073.90	2	1.	.05700	.00	.00	0.	93	8	A36	.01
1352	45A	24.8	56.97	906.3	2102.61	2	575.	.03500	.00	.00	0.	93	9	A35	.01
1352	46A	15.1	42.57	921.4	2094.31	2	1319.	.03400	.00	.00	0.	93	7	A37	.01
1352	47A	24.6	55.52	946.0	2095.90	2	1.	.03400	.00	.00	0.	93	10	A36	.01
1352	48A	24.9	65.04	970.9	2108.57	2	722.	.03900	.00	.00	0.	93	8	A37	.01
1352	49A	20.9	56.94	991.8	2112.15	2	846.	.04700	.00	.00	0.	93	7	A36	.01
1352	50A	19.2	54.13	1011.0	2107.10	2	1.	.04700	.00	.00	0.	93	7	A37	.01
1352	51A	.0	.00	1011.0	2107.09	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	52E	28.8	86.43	28.8	86.43	2	940.	.14400	.00	.00	0.	93	7	A39	.01
1352	53E	24.8	74.43	53.6	158.41	2	971.	.27800	.00	.00	0.	93	7	A39	.01
1352	54E	33.4	90.24	87.0	244.63	2	1110.	.18700	.00	.00	0.	93	8	A38	.01
1352	55E	23.1	60.33	110.1	299.28	2	1.	.18700	.00	.00	0.	93	8	A37	.01
1352	56E	.0	.00	110.1	299.28	4	1.	.01000	5.25	.00	0.	93	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1163 QA  2107.07 QAE  2188.46 QE    81.39    1352   57E  TE 1156 QE   299.27 QEA  1642.69 QA  1343.41   *
*                                1352   57AE TAE 1162 QAE  2191.21 QA  2088.10 QE   103.10                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	299.27	1121.1	2191.21	2	180.	.03900	.00	.00	0.	93	0	A42	.00
1352	58A	.0	.00	1121.1	2188.68	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	59A	28.2	71.57	1149.3	2202.89	2	815.	.01800	.00	.00	0.	93	9	A38	.01
1352	60A	27.2	83.96	1176.5	2202.54	2	1136.	.05700	.00	.00	0.	93	6	A37	.01

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1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	44.03	1194.4	2202.54	2	1.	.05700	.00	.00	0.	93	9	A37	.01
1352	62A	.0	.00	1194.4	2202.53	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	63F	27.0	83.59	27.0	83.59	2	586.	.19600	.00	.00	0.	93	7	A40	.01
1352	64F	40.8	101.59	67.8	184.47	2	727.	.08900	.00	.00	0.	93	10	A39	.01
1352	65F	37.4	94.92	105.2	275.44	2	1.	.08900	.00	.00	0.	93	9	A38	.01
1352	66F	32.6	97.84	137.8	371.20	2	1.	.14100	.00	.00	0.	93	7	A39	.01
1352	67F	18.8	50.79	156.6	420.93	2	677.	.08100	.00	.00	0.	93	8	A38	.01
1352	68F	9.2	26.74	165.8	443.35	2	1.	.08100	.00	.00	0.	93	7	A38	.01
1352	69F	.0	.00	165.8	443.34	4	1.	.01000	6.00	.00	0.	93	99	A42	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1164 QA  2202.51 QAF  2312.40 QF   109.88    1352   70F  TF 1155 QF   443.31 QFA  1798.91 QA  1355.60   *
*                              1352   70AF TAF 1164 QAF  2312.40 QA  2202.51 QF   109.88                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	443.31	1360.2	2312.40	2	561.	.03600	.00	.00	0.	93	0	A42	.00
1352	71A	.0	.00	1360.2	2309.29	5	1.	.01000	14.00	.00	0.	93	99	A42	.00
1352	72A	6.4	19.76	1366.6	2311.50	2	1.	.03600	.00	.00	0.	93	6	A37	.01
1352	73A	20.0	56.35	1386.6	2322.71	2	434.	.03000	.00	.00	0.	91	8	A37	.01
1352	74A	21.9	59.94	1408.5	2328.39	2	420.	.02900	.00	.00	0.	91	8	A36	.01
1352	75A	42.0	108.73	1450.5	2350.05	2	1019.	.02000	.00	.00	0.	91	9	A36	.01
1352	76A	26.1	67.57	1476.6	2356.60	2	249.	.04000	.00	.00	0.	91	9	A36	.01
1352	77A	12.2	35.71	1488.8	2361.41	2	1.	.04000	.00	.00	0.	91	7	A36	.01
1352	78A	.0	.00	1488.8	2361.41	5	1.	.01000	14.00	.00	0.	91	99	A42	.00
1352	79A	14.2	42.88	1503.0	2367.91	2	643.	.01900	.00	.00	0.	91	7	A37	.01
1352	80A	18.2	49.81	1521.2	2370.80	2	751.	.02400	.00	.00	0.	91	8	A36	.01
1352	81A	23.3	65.65	1544.5	2378.71	2	709.	.02400	.00	.00	0.	91	8	A37	.01
1352	82A	22.2	54.72	1566.7	2385.59	2	1.	.02400	.00	.00	0.	91	10	A36	.01
1352	83A	.0	.00	1566.7	2385.59	5	1.	.01000	14.00	.00	0.	91	99	A42	.00
1352	84B	26.2	65.63	26.2	65.63	2	1438.	.06400	.00	.00	0.	91	9	A35	.01
1352	85B	33.5	82.57	59.7	139.43	2	1.	.06400	.00	.00	0.	91	10	A36	.01
1352	86B	.0	.00	59.7	139.43	4	1.	.01000	4.00	.00	0.	91	99	A42	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1168 QA  2385.58 QAB  2417.36 QB    31.78    1352   87B  TB 1156 QB   139.43 QBA  1668.90 QA  1529.47   *
*                              1352   87AB TAB 1167 QAB  2417.62 QA  2382.33 QB    35.29                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	139.43	1626.4	2417.62	2	405.	.02300	.00	.00	0.	91	0	A42	.00
1352	88A	2.8	10.20	1629.2	2418.50	2	1.	.02300	.00	.00	0.	91	5	A37	.01
1352	89C	21.6	69.04	21.6	69.04	2	1328.	.09400	.00	.00	0.	91	7	A39	.01
1352	90C	23.5	61.47	45.1	125.78	2	1.	.09400	.00	.00	0.	91	10	A38	.01

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1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN A STORM DAY 4

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*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1168 QA  2418.50 QAC  2442.15 QC    23.66    1352   91C  TC 1156 QC   125.78 QCA  1726.20 QA  1600.42   *
*                              1352   91AC TAC 1168 QAC  2442.15 QA  2418.50 QC    23.66                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	125.78	1674.3	2442.15	2	977.	.02400	.00	.00	0.	91	0	A42	.00
1352	92A	30.8	86.78	1705.1	2453.74	2	999.	.01300	.00	.00	0.	91	8	A37	.01
1352	93A	37.7	106.22	1742.8	2467.16	2	448.	.02200	.00	.00	0.	91	8	A37	.01
1352	94A	11.0	34.15	1753.8	2470.75	2	1.	.02200	.00	.00	0.	91	7	A38	.01
1352	95D	382.1	1016.70	382.1	1016.70	2	1.	.02200	.00	.00	0.	91	0	A42	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1169 QA  2470.73 QAD  2762.81 QD   292.07    1352   96D  TD 1158 QD  1016.68 QDA  2729.67 QA  1712.99   *
*                              1352   96AD TAD 1163 QAD  2946.06 QA  2293.70 QD   652.36                                 *
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SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	1016.68	2135.9	2946.06	6	250.	.00868	32.00	.00	0.	91	0	A42	.00
1352	97A	13.4	41.60	2149.3	2953.11	2	642.	.01700	.00	.00	0.	91	7	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	43.95	200	45.45	300	48.96	400	54.38
500	61.45	600	70.24	700	81.27	800	97.53	900	130.89
1000	198.73	1050	275.10	1100	424.09	1110	489.57	1120	589.84
1130	727.13	1131	743.22	1132	759.07	1133	775.51	1134	792.95
1135	811.61	1136	831.39	1137	852.60	1138	875.36	1139	900.20
1140	926.57	1141	956.36	1142	987.40	1143	1020.74	1144	1056.57
1145	1096.37	1146	1140.52	1147	1189.38	1148	1242.79	1149	1311.32
1150	1399.76	1151	1511.93	1152	1649.67	1153	1819.31	1154	2009.43
1155	2206.88	1156	2400.45	1157	2576.51	1158	2719.18	1159	2820.07
1160	2882.55	1161	2923.37	1162	2945.64	1163	2953.11	1164	2946.81
1165	2926.21	1166	2892.17	1167	2852.07	1168	2812.79	1169	2776.67
1170	2744.61	1171	2713.75	1172	2679.56	1173	2634.99	1174	2577.11
1175	2501.55	1176	2410.03	1177	2305.78	1178	2192.85	1179	2075.22
1180	1956.80	1181	1840.40	1182	1729.45	1183	1621.75	1184	1521.11
1185	1425.26	1186	1337.08	1187	1254.67	1188	1178.94	1189	1109.06
1190	1044.83	1191	985.66	1192	931.73	1193	884.27	1194	837.41
1195	795.02	1196	755.73	1197	719.64	1198	686.63	1199	656.48
1200	628.73	1201	603.44	1202	579.70	1203	556.92	1204	535.55
1205	515.53	1206	497.23	1207	480.82	1208	465.26	1209	450.32
1210	436.35	1211	423.22	1212	411.52	1213	400.23	1214	389.44
1215	379.43	1216	370.28	1217	361.92	1218	353.80	1219	345.93
1220	338.20	1221	330.85	1222	323.49	1223	316.30	1224	309.25
1225	302.46	1226	295.82	1227	289.31	1228	282.85	1229	276.59
1230	270.92	1231	265.32	1232	259.77	1233	254.37	1234	249.38
1235	244.88	1236	240.79	1237	236.80	1238	232.92	1239	229.11
1240	225.38	1241	221.71	1242	218.06	1243	214.37	1244	210.92
1245	207.62	1246	204.34	1247	201.00	1248	197.83	1249	194.89
1250	191.75	1251	188.71	1252	185.72	1253	182.75	1254	180.16
1255	177.66	1256	175.33	1257	173.01	1258	170.70	1259	168.32
1260	166.15	1261	163.83	1262	161.68	1263	159.45	1264	157.29
1265	155.13	1266	153.05	1267	150.94	1268	149.09	1269	147.09
1270	145.13	1271	143.20	1272	141.28	1273	139.43	1274	137.68
1275	135.87	1276	134.12	1277	132.50	1278	130.87	1279	129.19
1280	127.58	1281	126.00	1282	124.43	1283	122.87	1284	121.25
1285	119.78	1286	118.41	1287	117.16	1288	115.98	1289	114.81
1290	113.62	1291	112.46	1292	111.33	1293	110.23	1294	109.18
1295	108.14	1296	107.07	1297	106.07	1298	105.10	1299	104.22
1300	103.31	1310	94.72	1320	86.73	1330	79.93	1340	74.33
1350	69.30	1360	65.62	1370	61.90	1380	58.63	1390	56.03
1400	53.68	1420	50.52	1440	48.22	1460	44.58	1500	43.70

TOTAL VOLUME THIS HYDROGRAPH = 374.48(Ac.Ft)

Basin B - 50 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	19.2	0.01	93	1503	0.339	8.1	7	4.13	0.77	0.77
2A	36.3	0.01	93	2008	0.354	8.1	8	3.87	0.76	0.76
3A	11.1	0.01	93	1303	0.437	8.1	6	4.44	0.78	0.78
4A	25.5	0.01	93	2134	0.354	8.3	8	3.97	0.76	0.76
5A	18.9	0.01	93	1414	0.375	8.1	6	4.44	0.78	0.78
6A	19.2	0.01	93	1221	0.483	8.1	5	4.83	0.79	0.79
7A	24.7	0.01	93	1706	0.396	8.1	7	4.13	0.77	0.77
8A	20.4	0.01	93	1412	0.342	8.0	6	4.38	0.78	0.78
9B	25.7	0.01	97	1440	0.316	7.7	7	3.92	0.77	0.77
10B	39.8	0.01	93	2531	0.296	7.9	10	3.40	0.74	0.74
12A	15.7	0.01	97	1111	0.364	7.9	5	4.71	0.79	0.79
13A	31.9	0.01	97	1823	0.192	7.8	9	3.53	0.75	0.76
14C	21.3	0.01	91	2178	0.27	7.7	9	3.49	0.80	0.80

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	61.27	19.2	61.27	2	959.	.20900	.00	.00	0.	93	7	A41	.01
1352 2A	36.3	107.62	55.5	166.10	2	367.	.12300	.00	.00	0.	93	8	A41	.01
1352 3A	11.1	38.67	66.6	202.47	2	1.	.12300	.00	.00	0.	93	6	A41	.01
1352 4A	25.5	77.71	92.1	280.18	2	662.	.12100	.00	.00	0.	93	8	A42	.01
1352 5A	18.9	65.84	111.0	336.40	2	546.	.11000	.00	.00	0.	93	6	A41	.01
1352 6A	19.2	74.96	130.2	388.30	2	1340.	.16000	.00	.00	0.	93	5	A41	.01
1352 7A	24.7	78.82	154.9	456.21	2	592.	.06400	.00	.00	0.	93	7	A41	.01
1352 8A	20.4	69.18	175.3	500.18	2	1.	.06400	.00	.00	0.	93	6	A40	.01
1352 9B	25.7	82.15	25.7	82.15	2	980.	.09500	.00	.00	0.	91	7	A39	.01
1352 10B	39.8	110.32	65.5	188.93	2	1.	.09500	.00	.00	0.	91	10	A40	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1156 QA   500.17 QAB   686.60 QB   186.43    1352   11B  TB 1155 QB   188.91 QBA   682.15 QA   493.24   *
*                              1352   11AB TAB 1156 QAB   686.60 QA   500.17 QB   186.43                          *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	188.91	240.8	686.60	2	761.	.08100	.00	.00	0.	91	0	A40	.00
1352 12A	15.7	62.29	256.5	717.81	2	1228.	.04900	.00	.00	0.	91	5	A40	.01
1352 13A	31.9	95.46	288.4	779.86	2	1.	.04900	.00	.00	0.	91	8	A39	.01
1352 14C	21.3	60.24	21.3	60.24	2	1.	.01000	.00	.00	0.	91	9	A39	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   15A  TA 1157 QA   779.84 QAC   835.75 QC    55.92    1352   15C  TC 1154 QC    60.24 QCA   672.73 QA   612.49   *
*                              1352   15AC TAC 1157 QAC   835.75 QA   779.84 QC    55.92                          *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	60.24	309.7	835.75	5	100.	.02000	10.00	.00	0.	91	0	A39	.00
1352 16A	.0	.00	309.7	834.65	2	1.	.01000	.00	.00	0.	91	99	A39	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	6.10	200	6.71	300	7.74	400	8.91
500	10.33	600	12.10	700	14.38	800	17.83	900	24.73
1000	36.64	1050	51.79	1100	79.30	1110	98.99	1120	125.03
1130	155.84	1131	158.95	1132	162.13	1133	166.08	1134	170.37
1135	174.88	1136	179.62	1137	185.72	1138	192.45	1139	199.49
1140	206.82	1141	215.17	1142	224.39	1143	234.35	1144	245.25
1145	258.20	1146	272.71	1147	288.32	1148	306.08	1149	336.85
1150	376.94	1151	427.93	1152	495.35	1153	579.09	1154	664.09
1155	746.15	1156	810.10	1157	834.65	1158	817.77	1159	769.04
1160	697.77	1161	614.12	1162	532.46	1163	459.66	1164	394.77
1165	339.22	1166	291.66	1167	253.71	1168	222.44	1169	197.25
1170	176.50	1171	159.94	1172	146.43	1173	135.29	1174	125.77
1175	117.98	1176	111.02	1177	105.13	1178	99.74	1179	95.22
1180	91.28	1181	87.55	1182	83.83	1183	80.70	1184	77.80
1185	75.23	1186	72.91	1187	70.68	1188	68.36	1189	66.33
1190	64.43	1191	62.53	1192	60.68	1193	58.86	1194	57.24
1195	55.64	1196	54.26	1197	52.93	1198	51.69	1199	50.52
1200	49.43	1201	48.37	1202	47.42	1203	46.49	1204	45.61
1205	44.75	1206	43.72	1207	42.97	1208	42.08	1209	41.23
1210	40.48	1211	39.75	1212	39.05	1213	38.37	1214	37.84
1215	37.21	1216	36.57	1217	36.08	1218	35.61	1219	35.00
1220	34.47	1221	34.10	1222	33.50	1223	33.02	1224	32.48
1225	31.95	1226	31.39	1227	30.95	1228	30.55	1229	29.89
1230	29.58	1231	29.18	1232	28.68	1233	28.21	1234	27.89
1235	27.53	1236	27.04	1237	26.70	1238	26.26	1239	25.85
1240	25.54	1241	25.25	1242	24.87	1243	24.48	1244	24.21
1245	23.98	1246	23.77	1247	23.55	1248	23.13	1249	22.77
1250	22.56	1251	22.30	1252	22.08	1253	21.70	1254	21.38
1255	21.17	1256	20.83	1257	20.60	1258	20.24	1259	19.89
1260	19.73	1261	19.45	1262	19.28	1263	18.95	1264	18.73
1265	18.54	1266	18.36	1267	18.18	1268	17.74	1269	17.60
1270	17.40	1271	17.28	1272	17.15	1273	16.87	1274	16.80
1275	16.64	1276	16.45	1277	16.21	1278	16.11	1279	15.97
1280	15.70	1281	15.58	1282	15.36	1283	15.29	1284	15.26
1285	15.14	1286	14.96	1287	14.73	1288	14.62	1289	14.54
1290	14.46	1291	14.22	1292	14.05	1293	13.97	1294	13.88
1295	13.84	1296	13.76	1297	13.73	1298	13.62	1299	13.59
1300	13.42	1310	12.69	1320	11.72	1330	11.31	1340	10.36
1350	10.03	1360	9.37	1370	8.85	1380	8.14	1390	7.99
1400	7.33	1420	6.93	1440	6.26	1460	6.18	1500	6.10

TOTAL VOLUME THIS HYDROGRAPH = 59.50(Ac.Ft)

Basin C - 50 Year - Developed Condition

Subarea	Area (Ac)	%imp	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in)	Tc-calculated (min)	Intensity (in/hr)	Cu	Cd
1A	0.9	0.05	91	370	0.42	7.6	5	4.53	0.82	0.82
4B	2.5	0.01	91	460	0.42	7.6	5	4.53	0.82	0.82
5B	7.2	0.01	91	1000	0.33	7.6	5	4.53	0.82	0.82
6B	1.6	0.01	91	625	0.30	7.6	5	4.53	0.82	0.82
7B	1.5	0.70	91	845	0.05	6.7	7	3.41	0.80	0.87
8B	0.4	0.91	91	490	0.060	6.7	5	4.00	0.81	0.89
11A	4.6	0.70	91	1345	0.04	6.7	10	2.89	0.78	0.86
12A	3.7	0.70	91	1240	0.04	6.7	9	3.03	0.79	0.87
14A	2.6	0.70	91	980	0.07	6.7	7	3.41	0.80	0.87
15C	2.1	0.01	91	415	0.32	7.6	5	4.53	0.82	0.82
16C	2.9	0.25	91	1150	0.13	7.6	7	3.87	0.81	0.83
17C	5.8	0.60	91	1180	0.070	6.7	8	3.21	0.79	0.86
18C	1.0	0.05	91	780	0.09	7.6	6	4.16	0.82	0.82
21A	1.7	0.05	91	1000	0.08	7.6	7	3.87	0.81	0.81
22A	3.1	0.70	91	1000	0.02	6.7	9	3.03	0.79	0.87
23A	4.4	0.70	91	1000	0.02	6.7	9	3.03	0.79	0.87
24A	4.0	0.75	91	1550	0.08	6.7	9	3.03	0.79	0.87
25A	2.1	0.85	91	1500	0.08	6.7	9	3.03	0.79	0.87
27D	20.3	0.05	91	1993	0.128	7.7	10	3.32	0.80	0.80

Notes:
1. Non-sequential subarea numbering allows for place holders in model incase revisions are required.
2. Length and Slope values shown are for longest path and Tc calcualtion only.

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN C

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	.9	3.39	.9	3.39	4	250.	.03000	2.00	.00	0.	91	5	A38	.05
1352 2A	.0	.00	.9	3.20	4	1.	.01000	2.00	.00	0.	91	99	A38	.00
1352 3A	.0	.00	.9	3.20	4	1.	.01000	2.00	.00	0.	91	99	A38	.00
1352 4B	2.5	9.38	2.5	9.38	2	170.	.01000	.00	.00	0.	91	5	A38	.01
1352 5B	7.2	27.01	9.7	34.37	2	480.	.05000	.00	.00	0.	91	5	A38	.01
1352 6B	1.6	6.00	11.3	36.65	4	160.	.10000	2.00	.00	0.	91	5	A38	.01
1352 7B	1.5	4.97	12.8	41.46	4	5.	.10000	2.00	.00	0.	91	7	A38	.65
1352 8B	.4	1.62	13.2	42.69	4	30.	.02000	2.25	.00	0.	91	5	A38	.91
1352 9B	.0	.00	13.2	42.68	4	1.	.01000	2.50	.00	0.	91	99	A38	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   10A  TA 1154 QA     3.20 QAB    45.61 QB    42.41    1352   10B  TB 1155 QB    42.68 QBA    45.57 QA     2.89   *
*                               1352   10AB TAB 1154 QAB    45.61 QA     3.20 QB    42.41                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 10AB	13.2	42.68	14.1	45.61	4	800.	.06500	2.00	.00	0.	91	0	A38	.00
1352 11A	4.6	13.01	18.7	57.31	4	1.	.06500	2.00	.00	0.	91	10	A38	.65
1352 12A	3.7	10.94	22.4	68.01	4	50.	.06500	2.25	.00	0.	91	9	A38	.65
1352 13A	.0	.00	22.4	67.91	4	1.	.01000	3.00	.00	0.	91	99	A38	.00
1352 14A	2.6	8.62	25.0	76.24	4	10.	.06500	2.25	.00	0.	91	7	A38	.65
1352 15C	2.1	7.88	2.1	7.88	4	120.	.09100	2.00	.00	0.	91	5	A38	.01
1352 16C	2.9	9.23	5.0	16.92	4	770.	.09200	2.00	.00	0.	91	7	A38	.25
1352 17C	5.8	17.98	10.8	34.22	4	50.	.09200	2.00	.00	0.	91	8	A38	.60
1352 18C	1.0	3.39	11.8	37.56	4	10.	.09200	2.00	.00	0.	91	6	A38	.05

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*                                                CONFLUENCE Q'S                                                 *
*   1352   19A  TA 1155 QA    76.18 QAC   113.06 QC    36.88    1352   19C  TC 1154 QC    37.55 QCA   110.48 QA    72.92   *
*                               1352   19AC TAC 1155 QAC   113.06 QA    76.18 QC    36.88                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	11.8	37.55	36.8	113.06	4	260.	.09000	2.50	.00	0.	91	0	A38	.00
1352 20A	.0	.00	36.8	112.47	4	1.	.01000	3.75	.00	0.	91	99	A38	.00
1352 21A	1.7	5.30	38.5	117.65	4	130.	.08800	2.50	.00	0.	91	7	A38	.05
1352 22A	3.1	9.16	41.6	126.22	4	1.	.02000	3.50	.00	0.	91	9	A38	.65
1352 23A	4.4	13.01	46.0	139.01	4	1040.	.08800	2.75	.00	0.	91	9	A38	.65
1352 24A	4.0	11.89	50.0	149.11	4	1.	.03400	3.25	.00	0.	91	9	A38	.70
1352 25A	2.1	6.21	52.1	155.08	4	80.	.03200	3.25	.00	0.	91	9	A39	.40
1352 26D	309.7	834.60	309.7	834.60	2	1.	.01000	.00	.00	0.	91	0	A39	.00
1352 27D	20.3	55.01	330.0	885.95	2	1600.	.12800	.00	.00	0.	91	10	A39	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR - BASIN C

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   28A  TA 1156 QA   154.71 QAD   941.82 QD   787.11    1352   28D  TD 1158 QD   874.50 QDA  1018.32 QA   143.82   *
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*                              1352   28AD TAD 1158 QAD  1018.32 QA   143.82 QD   874.50                                    *
*****************************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL       RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   28AD  330.0     874.50     382.1   1018.32   5     230.   .03000    12.00   .00        0.   91   0   A39   .00
    1352   29A      .0        .00     382.1   1016.72   2       1.   .01000      .00   .00        0.   91  99   A39   .00
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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 96AD
HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	10.34	200	11.11	300	12.55	400	14.26
500	16.37	600	19.08	700	22.45	800	27.23	900	36.24
1000	51.61	1050	70.88	1100	105.49	1110	127.50	1120	160.52
1130	197.21	1131	201.83	1132	205.81	1133	210.01	1134	214.40
1135	219.51	1136	225.12	1137	231.22	1138	238.21	1139	246.42
1140	255.44	1141	264.97	1142	275.30	1143	286.66	1144	298.99
1145	312.55	1146	328.17	1147	346.24	1148	366.28	1149	391.01
1150	427.60	1151	480.33	1152	548.75	1153	636.17	1154	734.89
1155	836.02	1156	925.69	1157	991.63	1158	1016.72	1159	994.85
1160	933.78	1161	847.15	1162	748.96	1163	652.21	1164	565.60
1165	492.14	1166	427.73	1167	374.54	1168	329.09	1169	292.03
1170	261.00	1171	235.50	1172	214.22	1173	196.81	1174	182.87
1175	170.06	1176	159.45	1177	150.31	1178	142.45	1179	135.30
1180	129.03	1181	123.81	1182	118.95	1183	114.45	1184	110.17
1185	106.28	1186	102.79	1187	99.66	1188	96.78	1189	94.02
1190	91.34	1191	88.81	1192	86.42	1193	84.17	1194	81.98
1195	79.82	1196	77.74	1197	75.80	1198	73.99	1199	72.29
1200	70.72	1201	69.36	1202	68.00	1203	66.70	1204	65.43
1205	64.22	1206	63.08	1207	61.95	1208	60.82	1209	59.73
1210	58.65	1211	57.59	1212	56.58	1213	55.65	1214	54.75
1215	53.88	1216	53.04	1217	52.26	1218	51.54	1219	50.88
1220	50.23	1221	49.56	1222	48.89	1223	48.26	1224	47.64
1225	47.00	1226	46.34	1227	45.66	1228	44.99	1229	44.34
1230	43.73	1231	43.13	1232	42.56	1233	42.02	1234	41.48
1235	40.92	1236	40.38	1237	39.87	1238	39.37	1239	38.87
1240	38.37	1241	37.88	1242	37.40	1243	36.94	1244	36.51
1245	36.09	1246	35.68	1247	35.31	1248	34.97	1249	34.63
1250	34.23	1251	33.80	1252	33.40	1253	33.05	1254	32.71
1255	32.36	1256	31.99	1257	31.62	1258	31.25	1259	30.87
1260	30.51	1261	30.14	1262	29.79	1263	29.46	1264	29.14
1265	28.84	1266	28.53	1267	28.23	1268	27.96	1269	27.71
1270	27.41	1271	27.09	1272	26.79	1273	26.53	1274	26.30
1275	26.08	1276	25.85	1277	25.63	1278	25.39	1279	25.16
1280	24.96	1281	24.77	1282	24.56	1283	24.32	1284	24.08
1285	23.87	1286	23.69	1287	23.51	1288	23.32	1289	23.11
1290	22.88	1291	22.68	1292	22.51	1293	22.32	1294	22.16
1295	21.99	1296	21.84	1297	21.72	1298	21.61	1299	21.50
1300	21.38	1310	20.23	1320	18.91	1330	17.93	1340	16.92
1350	15.93	1360	15.29	1370	14.29	1380	13.53	1390	12.94
1400	12.32	1420	11.36	1440	10.79	1460	10.34	1500	10.35

TOTAL VOLUME THIS HYDROGRAPH = 82.84(Ac.Ft)

STEVENSON RANCH

2-YEAR BURNED

EXISTING CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	6.31	32.5	6.31	2	1173.	.20100	.00	.00	0.	293	17	A17	.01
1352 2A	34.8	6.01	67.3	12.09	2	369.	.19500	.00	.00	0.	293	20	A17	.01
1352 3A	33.3	4.85	100.6	16.90	2	1353.	.24000	.00	.00	0.	293	25	A17	.01
1352 4A	37.9	6.55	138.5	22.99	2	1.	.24000	.00	.00	0.	293	20	A17	.01
1352 5A	.0	.00	138.5	22.99	4	1.	.01000	2.00	.00	0.	293	99	A16	.00
1352 6B	28.8	5.59	28.8	5.59	2	494.	.25300	.00	.00	0.	293	17	A17	.01
1352 7B	12.2	2.48	41.0	8.03	2	1.	.25300	.00	.00	0.	293	16	A17	.01
1352 8B	22.3	3.58	63.3	11.62	2	1342.	.28700	.00	.00	0.	293	22	A17	.01
1352 9B	24.6	3.83	87.9	15.29	2	1.	.28700	.00	.00	0.	293	23	A17	.01
1352 10B	.0	.00	87.9	15.29	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1160 QA    22.99 QAB    38.19 QB    15.20    1352   11B  TB 1159 QB    15.29 QBA    38.06 QA    22.77   *
*                                1352   11AB TAB 1160 QAB    38.19 QA    22.99 QB    15.20                                *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	15.29	226.4	38.19	2	655.	.14500	.00	.00	0.	293	0	A16	.00
1352 12A	.0	.00	226.4	38.08	4	1.	.01000	2.50	.00	0.	293	99	A16	.00
1352 13A	24.0	4.48	250.4	42.19	2	1.	.14500	.00	.00	0.	293	18	A17	.01
1352 14A	.0	.00	250.4	42.19	4	1.	.01000	2.50	.00	0.	293	99	A16	.00
1352 15C	37.0	5.58	37.0	5.58	2	826.	.24800	.00	.00	0.	293	24	A17	.01
1352 16C	40.2	6.06	77.2	11.57	2	1267.	.26000	.00	.00	0.	293	24	A17	.01
1352 17C	31.9	5.31	109.1	16.64	2	1.	.26000	.00	.00	0.	293	21	A17	.01
1352 18C	.0	.00	109.1	16.64	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   19A  TA 1161 QA    42.19 QAC    58.76 QC    16.57    1352   19C  TC 1160 QC    16.64 QCA    58.77 QA    42.13   *
*                                1352   19AC TAC 1160 QAC    58.77 QA    42.13 QC    16.64                                *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	16.64	359.5	58.77	2	1161.	.09000	.00	.00	0.	293	0	A16	.00
1352 20A	.0	.00	359.5	58.44	4	1.	.01000	3.00	.00	0.	293	99	A16	.00
1352 21A	39.2	5.71	398.7	63.82	2	1.	.09000	.00	.00	0.	293	25	A17	.01
1352 22A	.0	.00	398.7	63.82	4	1.	.01000	3.00	.00	0.	293	99	A16	.00
1352 23D	30.8	5.32	30.8	5.32	2	1242.	.23000	.00	.00	0.	293	20	A17	.01
1352 24D	39.3	7.06	70.1	12.11	2	1308.	.03800	.00	.00	0.	293	19	A17	.01
1352 25D	42.3	7.04	112.4	17.63	2	723.	.22800	.00	.00	0.	293	21	A17	.01
1352 26D	30.9	5.77	143.3	22.35	2	720.	.09000	.00	.00	0.	293	18	A17	.01
1352 27D	26.9	4.65	170.2	26.24	2	1.	.09000	.00	.00	0.	293	20	A17	.01
1352 28D	.0	.00	170.2	26.23	4	1.	.01000	2.25	.00	0.	293	99	A16	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                 *
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*   1352   29A  TA 1163 QA    63.81 QAD    89.94 QD    26.13    1352   29D  TD 1164 QD    26.23 QDA    89.66 QA    63.43   *
*                                1352   29AD TAD 1163 QAD    89.94 QA    63.81 QD    26.13                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	26.23	568.9	89.94	2	668.	.04800	.00	.00	0.	293	0	A16	.00
1352	30A	.0	.00	568.9	89.62	4	1.	.01000	3.50	.00	0.	293	99	A16	.00
1352	31A	29.2	3.86	598.1	93.08	2	506.	.04400	.00	.00	0.	293	25	A16	.01
1352	32A	22.2	3.24	620.3	95.60	2	635.	.03900	.00	.00	0.	293	22	A16	.01
1352	33A	23.1	3.76	643.4	97.95	2	593.	.04200	.00	.00	0.	293	19	A16	.01
1352	34A	35.7	4.55	679.1	101.32	2	572.	.03500	.00	.00	0.	293	26	A16	.01
1352	35A	29.2	3.86	708.3	103.83	2	485.	.04100	.00	.00	0.	293	25	A16	.01
1352	36A	25.6	3.74	733.9	105.86	2	532.	.03800	.00	.00	0.	293	22	A16	.01
1352	37A	.0	.00	733.9	105.57	4	1.	.01000	3.50	.00	0.	293	99	A16	.00
1352	38A	23.7	3.47	757.6	106.68	2	396.	.05100	.00	.00	0.	293	19	A15	.01
1352	39A	32.5	3.82	790.1	109.27	2	838.	.05600	.00	.00	0.	293	25	A15	.01
1352	40A	20.2	3.08	810.3	109.67	2	1.	.05600	.00	.00	0.	293	18	A15	.01
1352	41A	22.5	2.81	832.8	110.54	2	1.	.13300	.00	.00	0.	293	20	A14	.01
1352	42A	28.5	3.12	861.3	112.82	2	840.	.05700	.00	.00	0.	293	27	A15	.01
1352	43A	.0	.00	861.3	112.36	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	44A	20.2	2.24	881.5	113.33	2	1.	.05700	.00	.00	0.	293	23	A14	.01
1352	45A	24.8	2.28	906.3	115.15	2	575.	.03500	.00	.00	0.	293	29	A14	.01
1352	46A	15.1	2.21	921.4	115.28	2	1319.	.03400	.00	.00	0.	293	19	A15	.01
1352	47A	24.6	2.22	946.0	115.28	2	1.	.03400	.00	.00	0.	293	30	A14	.01
1352	48A	24.9	3.12	970.9	116.13	2	722.	.03900	.00	.00	0.	293	23	A15	.01
1352	49A	20.9	2.41	991.8	116.29	2	846.	.04700	.00	.00	0.	293	22	A14	.01
1352	50A	19.2	2.71	1011.0	116.50	2	1.	.04700	.00	.00	0.	293	20	A15	.01
1352	51A	.0	.00	1011.0	116.49	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	52E	28.8	4.69	28.8	4.69	2	940.	.14400	.00	.00	0.	293	19	A16	.01
1352	53E	24.8	3.37	53.6	7.91	2	971.	.27800	.00	.00	0.	293	21	A15	.01
1352	54E	33.4	4.19	87.0	11.96	2	1110.	.18700	.00	.00	0.	293	23	A15	.01
1352	55E	23.1	2.80	110.1	14.51	2	1.	.18700	.00	.00	0.	293	24	A15	.01
1352	56E	.0	.00	110.1	14.51	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                   CONFLUENCE Q'S                                                          *
*   1352   57A  TA 1183 QA   116.49 QAE   120.72 QE     4.22    1352   57E  TE 1162 QE    14.51 QEA    78.19 QA    63.68   *
*                                1352   57AE TAE 1183 QAE   120.72 QA   116.49 QE     4.22                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	14.51	1121.1	120.72	2	180.	.03900	.00	.00	0.	293	0	A16	.00
1352	58A	.0	.00	1121.1	120.55	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	59A	28.2	3.09	1149.3	121.51	2	815.	.01800	.00	.00	0.	293	27	A15	.01
1352	60A	27.2	4.32	1176.5	121.42	2	1136.	.05700	.00	.00	0.	293	17	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 2-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	1.96	1194.4	121.44	2	1.	.05700	.00	.00	0.	293	27	A15	.01
1352	62A	.0	.00	1194.4	121.44	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	63F	27.0	4.23	27.0	4.23	2	586.	.19600	.00	.00	0.	293	20	A16	.01
1352	64F	40.8	4.05	67.8	8.26	2	727.	.08900	.00	.00	0.	293	30	A15	.01
1352	65F	37.4	4.09	105.2	12.24	2	1.	.08900	.00	.00	0.	293	27	A15	.01
1352	66F	32.6	4.60	137.8	16.68	2	1.	.14100	.00	.00	0.	293	20	A15	.01
1352	67F	18.8	2.36	156.6	19.02	2	677.	.08100	.00	.00	0.	293	23	A15	.01
1352	68F	9.2	1.30	165.8	20.16	2	1.	.08100	.00	.00	0.	293	20	A15	.01
1352	69F	.0	.00	165.8	20.16	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1188 QA   121.44 QAF   127.09 QF     5.65    1352   70F  TF 1161 QF    20.16 QFA    91.68 QA    71.52   *
*                                1352   70AF TAF 1188 QAF   127.09 QA   121.44 QF     5.65                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF  165.8      20.16    1360.2    127.09   2     561.   .03600      .00   .00        0.  293   0   A16   .00
    1352   71A      .0        .00    1360.2    126.85   4       1.   .01000     3.75   .00        0.  293  99   A16   .00
    1352   72A     6.4        .98    1366.6    127.01   2       1.   .03600      .00   .00        0.  293  18   A15   .01
    1352   73A    20.0       4.20    1386.6    127.46   2     434.   .03000      .00   .00        0.  291  18   A15   .01
    1352   74A    21.9       4.33    1408.5    127.69   2     420.   .02900      .00   .00        0.  291  17   A14   .01
    1352   75A    42.0       6.87    1450.5    128.38   2    1019.   .02000      .00   .00        0.  291  22   A14   .01
    1352   76A    26.1       4.41    1476.6    128.03   2     249.   .04000      .00   .00        0.  291  21   A14   .01
    1352   77A    12.2       2.41    1488.8    128.24   2       1.   .04000      .00   .00        0.  291  17   A14   .01
    1352   78A      .0        .00    1488.8    128.24   4       1.   .01000     3.75   .00        0.  291  99   A16   .00
    1352   79A    14.2       3.10    1503.0    128.53   2     643.   .01900      .00   .00        0.  291  17   A15   .01
    1352   80A    18.2       3.45    1521.2    128.56   2     751.   .02400      .00   .00        0.  291  18   A14   .01
    1352   81A    23.3       4.89    1544.5    128.68   2     709.   .02400      .00   .00        0.  291  18   A15   .01
    1352   82A    22.2       3.39    1566.7    128.81   2       1.   .02400      .00   .00        0.  291  24   A14   .01
    1352   83A      .0        .00    1566.7    128.81   4       1.   .01000     3.75   .00        0.  291  99   A16   .00
    1352   84B    26.2       4.42      26.2      4.42   2    1438.   .06400      .00   .00        0.  291  21   A14   .01
    1352   85B    33.5       5.29      59.7      9.01   2       1.   .06400      .00   .00        0.  291  23   A14   .01
    1352   86B      .0        .00      59.7      9.01   4       1.   .01000     2.00   .00        0.  291  99   A16   .00
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1201 QA   128.81 QAB   130.00 QB     1.19    1352   87B  TB 1162 QB     9.01 QBA    96.90 QA    87.90   *
*                                1352   87AB TAB 1201 QAB   130.00 QA   128.81 QB     1.19                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB   59.7       9.01    1626.4    130.00   2     405.   .02300      .00   .00        0.  291   0   A16   .00
    1352   88A     2.8        .92    1629.2    129.88   2       1.   .02300      .00   .00        0.  291   9   A15   .01
    1352   89C    21.6       5.17      21.6      5.17   2    1328.   .09400      .00   .00        0.  291  15   A15   .01
    1352   90C    23.5       4.29      45.1      8.94   2       1.   .09400      .00   .00        0.  291  22   A15   .01
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    Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR =  2  SOIL DATA FILE: C:\civild\lasoilx.dat

    1352 - AIDLIN HILLS - EXISTING 2-YR BURNED - BASIN A                                                  STORM DAY 4
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1202 QA   129.87 QAC   130.77 QC      .90    1352   91C  TC 1160 QC     8.94 QCA    96.91 QA    87.97   *
*                                1352   91AC TAC 1202 QAC   130.77 QA   129.87 QC      .90                                 *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC   45.1       8.94    1674.3    130.77   2     977.   .02400      .00   .00        0.  291   0   A16   .00
    1352   92A    30.8       6.24    1705.1    130.85   2     999.   .01300      .00   .00        0.  291  19   A15   .01
    1352   93A    42.1       8.25    1747.2    130.79   2     448.   .02200      .00   .00        0.  291  20   A15   .01
    1352   94A    16.0       3.83    1763.2    130.95   2       1.   .02200      .00   .00        0.  291  15   A15   .01
    1352   95D   371.4      56.10     371.4     56.10   2       1.   .02200      .00   .00        0.  291   0   A16   .00
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1210 QA   130.95 QAD   140.25 QD     9.30    1352   96D  TD 1168 QD    56.10 QDA   163.09 QA   107.00   *
*                                1352   96AD TAD 1171 QAD   166.41 QA   112.60 QD    53.81                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
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LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	56.10	2134.6	166.41	2	892.	.01700	.00	.00	0.	291	0	A16	.00
1352	97A	14.4	3.29	2149.0	166.13	2	1.	.01700	.00	.00	0.	291	16	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	18.47	200	18.89	300	19.66	400	20.71
500	22.01	600	23.46	700	25.43	800	28.00	900	31.51
1000	37.27	1050	42.61	1100	52.19	1110	54.87	1120	58.39
1130	63.12	1131	63.65	1132	64.17	1133	64.71	1134	65.26
1135	65.81	1136	66.40	1137	67.02	1138	67.67	1139	68.34
1140	69.02	1141	69.74	1142	70.52	1143	71.33	1144	72.20
1145	73.16	1146	74.17	1147	75.26	1148	76.50	1149	78.15
1150	80.02	1151	82.27	1152	84.99	1153	88.19	1154	91.66
1155	95.60	1156	99.89	1157	104.28	1158	108.81	1159	113.46
1160	118.21	1161	123.11	1162	128.14	1163	133.27	1164	138.37
1165	143.05	1166	147.44	1167	151.43	1168	154.98	1169	158.20
1170	161.09	1171	163.44	1172	165.07	1173	165.93	1174	166.13
1175	165.79	1176	165.05	1177	164.05	1178	162.90	1179	161.57
1180	160.03	1181	158.25	1182	156.32	1183	154.39	1184	152.49
1185	150.67	1186	148.93	1187	147.28	1188	145.67	1189	144.08
1190	142.54	1191	141.06	1192	139.61	1193	138.25	1194	136.99
1195	135.87	1196	134.89	1197	134.06	1198	133.40	1199	132.92
1200	132.61	1201	132.51	1202	132.61	1203	132.97	1204	133.55
1205	134.34	1206	135.27	1207	136.32	1208	137.39	1209	138.38
1210	139.22	1211	139.81	1212	140.09	1213	140.03	1214	139.61
1215	138.83	1216	137.73	1217	136.31	1218	134.60	1219	132.65
1220	130.54	1221	128.25	1222	125.86	1223	123.36	1224	120.81
1225	118.20	1226	115.58	1227	112.94	1228	110.33	1229	107.75
1230	105.20	1231	102.68	1232	100.19	1233	97.77	1234	95.40
1235	93.09	1236	90.83	1237	88.65	1238	86.50	1239	84.44
1240	82.44	1241	80.50	1242	78.64	1243	76.83	1244	75.09
1245	73.41	1246	71.78	1247	70.21	1248	68.70	1249	67.24
1250	65.84	1251	64.50	1252	63.23	1253	61.99	1254	60.79
1255	59.63	1256	58.51	1257	57.46	1258	56.44	1259	55.45
1260	54.52	1261	53.62	1262	52.75	1263	51.95	1264	51.18
1265	50.41	1266	49.70	1267	49.00	1268	48.32	1269	47.68
1270	47.07	1271	46.47	1272	45.87	1273	45.30	1274	44.74
1275	44.19	1276	43.66	1277	43.15	1278	42.66	1279	42.21
1280	41.78	1281	41.36	1282	40.95	1283	40.56	1284	40.19
1285	39.84	1286	39.48	1287	39.15	1288	38.83	1289	38.52
1290	38.20	1291	37.89	1292	37.59	1293	37.30	1294	37.04
1295	36.77	1296	36.50	1297	36.23	1298	35.98	1299	35.74
1300	35.49	1310	33.38	1320	31.66	1330	30.17	1340	28.86
1350	27.74	1360	26.73	1370	25.84	1380	25.01	1390	24.26
1400	23.56	1420	22.39	1440	21.39	1460	19.87	1500	18.38

TOTAL VOLUME THIS HYDROGRAPH = 68.66(Ac.Ft)

STEVENSON RANCH

5-YEAR BURNED

EXISTING CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	28.10	32.5	28.10	2	1173.	.20100	.00	.00	0.	293	10	A25	.01
1352 2A	34.8	26.74	67.3	53.89	2	369.	.19500	.00	.00	0.	293	12	A25	.01
1352 3A	33.3	22.28	100.6	75.78	2	1353.	.24000	.00	.00	0.	293	15	A25	.01
1352 4A	37.9	29.12	138.5	102.61	2	1.	.24000	.00	.00	0.	293	12	A25	.01
1352 5A	.0	.00	138.5	102.61	4	1.	.01000	3.50	.00	0.	293	99	A25	.00
1352 6B	28.8	23.35	28.8	23.35	2	494.	.25300	.00	.00	0.	293	11	A25	.01
1352 7B	12.2	10.55	41.0	33.70	2	1.	.25300	.00	.00	0.	293	10	A25	.01
1352 8B	22.3	16.28	63.3	49.98	2	1342.	.28700	.00	.00	0.	293	13	A25	.01
1352 9B	24.6	17.16	87.9	66.38	2	1.	.28700	.00	.00	0.	293	14	A25	.01
1352 10B	.0	.00	87.9	66.38	4	1.	.01000	3.00	.00	0.	293	99	A25	.00

****
* CONFLUENCE Q'S *
* 1352 11A TA 1157 QA 102.60 QAB 168.77 QB 66.17 1352 11B TB 1156 QB 66.38 QBA 167.52 QA 101.14 *
* 1352 11AB TAB 1157 QAB 168.77 QA 102.60 QB 66.17 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	66.38	226.4	168.77	2	655.	.14500	.00	.00	0.	293	0	A25	.00
1352 12A	.0	.00	226.4	168.10	4	1.	.01000	4.25	.00	0.	293	99	A25	.00
1352 13A	24.0	19.46	250.4	185.90	2	1.	.14500	.00	.00	0.	293	11	A25	.01
1352 14A	.0	.00	250.4	185.89	4	1.	.01000	4.50	.00	0.	293	99	A25	.00
1352 15C	37.0	24.76	37.0	24.76	2	826.	.24800	.00	.00	0.	293	15	A25	.01
1352 16C	40.2	28.04	77.2	52.49	2	1267.	.26000	.00	.00	0.	293	14	A25	.01
1352 17C	31.9	23.29	109.1	74.89	2	1.	.26000	.00	.00	0.	293	13	A25	.01
1352 18C	.0	.00	109.1	74.88	4	1.	.01000	3.25	.00	0.	293	99	A25	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1157 QA 185.88 QAC 260.76 QC 74.88 1352 19C TC 1157 QC 74.88 QCA 260.76 QA 185.88 *
* 1352 19AC TAC 1157 QAC 260.76 QA 185.88 QC 74.88 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	74.88	359.5	260.76	2	1161.	.09000	.00	.00	0.	293	0	A25	.00
1352 20A	.0	.00	359.5	259.07	4	1.	.01000	5.00	.00	0.	293	99	A25	.00
1352 21A	39.2	26.23	398.7	283.75	2	1.	.09000	.00	.00	0.	293	15	A25	.01
1352 22A	.0	.00	398.7	283.74	4	1.	.01000	5.25	.00	0.	293	99	A25	.00
1352 23D	30.8	23.67	30.8	23.67	2	1242.	.23000	.00	.00	0.	293	12	A25	.01
1352 24D	39.3	30.20	70.1	53.10	2	1308.	.03800	.00	.00	0.	293	12	A25	.01
1352 25D	42.3	30.89	112.4	77.44	2	723.	.22800	.00	.00	0.	293	13	A25	.01
1352 26D	30.9	25.05	143.3	98.37	2	720.	.09000	.00	.00	0.	293	11	A25	.01
1352 27D	26.9	20.67	170.2	114.92	2	1.	.09000	.00	.00	0.	293	12	A25	.01
1352 28D	.0	.00	170.2	114.92	4	1.	.01000	3.75	.00	0.	293	99	A25	.00

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1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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* CONFLUENCE Q'S *

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*   1352   29A  TA 1159 QA   283.74 QAD   398.57 QD   114.83    1352   29D  TD 1160 QD   114.92 QDA   394.62 QA   279.70   *
*                                 1352   29AD TAD 1159 QAD   398.57 QA   283.74 QD   114.83                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	114.92	568.9	398.57	2	668.	.04800	.00	.00	0.	293	0	A25	.00
1352	30A	.0	.00	568.9	396.86	4	1.	.01000	5.75	.00	0.	293	99	A25	.00
1352	31A	29.2	18.44	598.1	413.64	2	506.	.04400	.00	.00	0.	293	15	A24	.01
1352	32A	22.2	15.30	620.3	424.64	2	635.	.03900	.00	.00	0.	293	13	A24	.01
1352	33A	23.1	17.74	643.4	433.30	2	593.	.04200	.00	.00	0.	293	11	A24	.01
1352	34A	35.7	22.55	679.1	450.37	2	572.	.03500	.00	.00	0.	293	15	A24	.01
1352	35A	29.2	19.25	708.3	461.51	2	485.	.04100	.00	.00	0.	293	14	A24	.01
1352	36A	25.6	17.64	733.9	470.46	2	532.	.03800	.00	.00	0.	293	13	A24	.01
1352	37A	.0	.00	733.9	468.05	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	38A	23.7	17.19	757.6	471.98	2	396.	.05100	.00	.00	0.	293	11	A23	.01
1352	39A	32.5	20.22	790.1	482.37	2	838.	.05600	.00	.00	0.	293	14	A23	.01
1352	40A	20.2	13.78	810.3	482.45	2	1.	.05600	.00	.00	0.	293	11	A22	.01
1352	41A	22.5	14.39	832.8	485.12	2	1.	.13300	.00	.00	0.	293	11	A21	.01
1352	42A	28.5	15.99	861.3	494.00	2	840.	.05700	.00	.00	0.	293	15	A22	.01
1352	43A	.0	.00	861.3	491.60	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	44A	20.2	12.34	881.5	494.42	2	1.	.05700	.00	.00	0.	293	13	A22	.01
1352	45A	24.8	12.50	906.3	501.22	2	575.	.03500	.00	.00	0.	293	16	A21	.01
1352	46A	15.1	10.30	921.4	500.81	2	1319.	.03400	.00	.00	0.	293	11	A22	.01
1352	47A	24.6	12.23	946.0	502.08	2	1.	.03400	.00	.00	0.	293	18	A22	.01
1352	48A	24.9	15.22	970.9	504.61	2	722.	.03900	.00	.00	0.	293	13	A22	.01
1352	49A	20.9	12.77	991.8	504.08	2	846.	.04700	.00	.00	0.	293	13	A22	.01
1352	50A	19.2	12.34	1011.0	503.41	2	1.	.04700	.00	.00	0.	293	12	A22	.01
1352	51A	.0	.00	1011.0	503.41	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	52E	28.8	20.88	28.8	20.88	2	940.	.14400	.00	.00	0.	293	11	A23	.01
1352	53E	24.8	16.98	53.6	37.29	2	971.	.27800	.00	.00	0.	293	12	A23	.01
1352	54E	33.4	20.78	87.0	57.23	2	1110.	.18700	.00	.00	0.	293	14	A23	.01
1352	55E	23.1	13.50	110.1	69.65	2	1.	.18700	.00	.00	0.	293	14	A22	.01
1352	56E	.0	.00	110.1	69.65	4	1.	.01000	3.00	.00	0.	293	99	A25	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1171 QA   503.41 QAE   517.76 QE    14.35    1352   57E  TE 1158 QE    69.64 QEA   333.21 QA   263.57   *
*                                 1352   57AE TAE 1170 QAE   519.32 QA   502.82 QE    16.50                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	69.64	1121.1	519.32	2	180.	.03900	.00	.00	0.	293	0	A25	.00
1352	58A	.0	.00	1121.1	518.41	4	1.	.01000	6.50	.00	0.	293	99	A25	.00
1352	59A	28.2	15.14	1149.3	521.02	2	815.	.01800	.00	.00	0.	293	16	A22	.01
1352	60A	27.2	19.85	1176.5	520.87	2	1136.	.05700	.00	.00	0.	293	10	A22	.01

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1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	10.04	1194.4	519.49	2	1.	.05700	.00	.00	0.	293	15	A22	.01
1352	62A	.0	.00	1194.4	519.49	4	1.	.01000	6.50	.00	0.	293	99	A25	.00
1352	63F	27.0	19.62	27.0	19.62	2	586.	.19600	.00	.00	0.	293	12	A24	.01
1352	64F	40.8	22.39	67.8	41.93	2	727.	.08900	.00	.00	0.	293	17	A23	.01
1352	65F	37.4	20.98	105.2	62.28	2	1.	.08900	.00	.00	0.	293	15	A22	.01
1352	66F	32.6	22.32	137.8	83.87	2	1.	.14100	.00	.00	0.	293	12	A23	.01
1352	67F	18.8	12.23	156.6	95.96	2	677.	.08100	.00	.00	0.	293	13	A23	.01
1352	68F	9.2	5.91	165.8	100.98	2	1.	.08100	.00	.00	0.	293	12	A22	.01
1352	69F	.0	.00	165.8	100.98	4	1.	.01000	3.50	.00	0.	293	99	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1174 QA   519.49 QAF   537.02 QF    17.53    1352   70F  TF 1157 QF   100.98 QFA   377.34 QA   276.36   *
*                                1352   70AF TAF 1173 QAF   538.99 QA   519.40 QF    19.59                                 *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF  165.8     100.98    1360.2    538.99   2     561.   .03600      .00   .00        0.  293   0   A25   .00
    1352   71A      .0        .00    1360.2    537.82   4       1.   .01000     6.50   .00        0.  293  99   A25   .00
    1352   72A     6.4       4.37    1366.6    538.28   2       1.   .03600      .00   .00        0.  293  11   A22   .01
    1352   73A    20.0      15.24    1386.6    539.98   2     434.   .03000      .00   .00        0.  291  12   A22   .01
    1352   74A    21.9      16.69    1408.5    540.52   2     420.   .02900      .00   .00        0.  291  12   A22   .01
    1352   75A    42.0      27.87    1450.5    543.21   2    1019.   .02000      .00   .00        0.  291  14   A21   .01
    1352   76A    26.1      17.32    1476.6    542.98   2     249.   .04000      .00   .00        0.  291  14   A21   .01
    1352   77A    12.2       8.81    1488.8    543.02   2       1.   .04000      .00   .00        0.  291  12   A21   .01
    1352   78A      .0        .00    1488.8    543.02   4       1.   .01000     6.50   .00        0.  291  99   A25   .00
    1352   79A    14.2      10.82    1503.0    544.04   2     643.   .01900      .00   .00        0.  291  12   A22   .01
    1352   80A    18.2      13.87    1521.2    543.94   2     751.   .02400      .00   .00        0.  291  12   A22   .01
    1352   81A    23.3      17.75    1544.5    544.35   2     709.   .02400      .00   .00        0.  291  12   A22   .01
    1352   82A    22.2      14.41    1566.7    544.67   2       1.   .02400      .00   .00        0.  291  16   A22   .01
    1352   83A      .0        .00    1566.7    544.66   4       1.   .01000     6.50   .00        0.  291  99   A25   .00
    1352   84B    26.2      17.39      26.2     17.39   2    1438.   .06400      .00   .00        0.  291  14   A21   .01
    1352   85B    33.5      22.60      59.7     37.74   2       1.   .06400      .00   .00        0.  291  15   A22   .01
    1352   86B      .0        .00      59.7     37.73   4       1.   .01000     2.50   .00        0.  291  99   A25   .00
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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1181 QA   544.66 QAB   549.36 QB     4.70    1352   87B  TB 1159 QB    37.72 QBA   366.62 QA   328.90   *
*                                1352   87AB TAB 1181 QAB   549.36 QA   544.66 QB     4.70                                  *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB   59.7      37.72    1626.4    549.36   2     405.   .02300      .00   .00        0.  291   0   A25   .00
    1352   88A     2.8       3.11    1629.2    548.70   2       1.   .02300      .00   .00        0.  291   6   A22   .01
    1352   89C    21.6      19.37      21.6     19.37   2    1328.   .09400      .00   .00        0.  291  10   A23   .01
    1352   90C    23.5      15.86      45.1     33.62   2       1.   .09400      .00   .00        0.  291  15   A22   .01
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1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN A STORM DAY 4

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                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1182 QA   548.70 QAC   551.85 QC     3.16    1352   91C  TC 1158 QC    33.62 QCA   365.16 QA   331.54   *
*                                1352   91AC TAC 1182 QAC   551.85 QA   548.70 QC     3.16                                  *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC   45.1      33.62    1674.3    551.85   2     977.   .02400      .00   .00        0.  291   0   A25   .00
    1352   92A    30.8      22.43    1705.1    552.36   2     999.   .01300      .00   .00        0.  291  13   A22   .01
    1352   93A    42.1      30.66    1747.2    552.37   2     448.   .02200      .00   .00        0.  291  13   A22   .01
    1352   94A    16.0      13.62    1763.2    552.80   2       1.   .02200      .00   .00        0.  291  10   A22   .01
    1352   95D   371.4     241.80     371.4    241.80   2       1.   .02200      .00   .00        0.  291   0   A25   .00
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1186 QA   552.80 QAD   589.01 QD    36.21    1352   96D  TD 1163 QD   241.80 QDA   640.17 QA   398.37   *
*                                1352   96AD TAD 1168 QAD   659.32 QA   474.37 QD   184.95                                 *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
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LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	241.80	2134.6	659.32	2	892.	.01700	.00	.00	0.	291	0	A25	.00
1352	97A	14.4	11.56	2149.0	660.51	2	1.	.01700	.00	.00	0.	291	11	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	41.72	200	42.60	300	44.66	400	47.00
500	49.84	600	53.38	700	57.84	800	63.74	900	72.08
1000	85.59	1050	98.97	1100	128.51	1110	139.85	1120	157.77
1130	184.40	1131	187.48	1132	190.47	1133	193.66	1134	196.98
1135	200.51	1136	204.15	1137	208.00	1138	212.02	1139	216.25
1140	220.72	1141	225.48	1142	230.42	1143	235.74	1144	241.34
1145	247.55	1146	254.22	1147	261.65	1148	269.69	1149	279.43
1150	290.69	1151	304.63	1152	321.42	1153	341.32	1154	363.49
1155	388.25	1156	414.51	1157	442.41	1158	471.92	1159	503.01
1160	533.21	1161	562.14	1162	588.63	1163	611.36	1164	629.24
1165	643.01	1166	652.33	1167	657.61	1168	659.88	1169	660.51
1170	659.61	1171	657.10	1172	653.26	1173	647.99	1174	641.30
1175	634.04	1176	626.65	1177	619.20	1178	611.88	1179	605.15
1180	599.31	1181	594.61	1182	591.30	1183	589.49	1184	589.02
1185	589.44	1186	590.01	1187	589.97	1188	588.54	1189	585.09
1190	579.16	1191	570.62	1192	559.69	1193	546.81	1194	532.20
1195	516.42	1196	499.82	1197	482.73	1198	465.40	1199	448.13
1200	430.90	1201	414.16	1202	397.75	1203	381.82	1204	366.50
1205	351.69	1206	337.56	1207	323.99	1208	311.01	1209	298.71
1210	287.00	1211	275.87	1212	265.31	1213	255.28	1214	245.75
1215	236.77	1216	228.26	1217	220.25	1218	212.66	1219	205.49
1220	198.67	1221	192.25	1222	186.23	1223	180.56	1224	175.13
1225	170.00	1226	165.16	1227	160.57	1228	156.34	1229	152.30
1230	148.43	1231	144.73	1232	141.22	1233	138.01	1234	134.97
1235	132.08	1236	129.35	1237	126.86	1238	124.49	1239	122.25
1240	120.13	1241	118.15	1242	116.27	1243	114.46	1244	112.71
1245	111.04	1246	109.45	1247	107.91	1248	106.41	1249	104.96
1250	103.58	1251	102.26	1252	100.96	1253	99.74	1254	98.62
1255	97.55	1256	96.53	1257	95.54	1258	94.60	1259	93.73
1260	92.88	1261	92.07	1262	91.26	1263	90.48	1264	89.71
1265	88.97	1266	88.25	1267	87.54	1268	86.83	1269	86.16
1270	85.49	1271	84.88	1272	84.26	1273	83.67	1274	83.07
1275	82.52	1276	81.96	1277	81.43	1278	80.90	1279	80.37
1280	79.85	1281	79.36	1282	78.85	1283	78.37	1284	77.87
1285	77.39	1286	76.92	1287	76.44	1288	75.98	1289	75.52
1290	75.07	1291	74.61	1292	74.17	1293	73.76	1294	73.34
1295	72.92	1296	72.49	1297	72.08	1298	71.71	1299	71.33
1300	70.94	1310	67.62	1320	64.80	1330	62.31	1340	60.11
1350	58.16	1360	56.32	1370	54.61	1380	53.12	1390	51.75
1400	50.47	1420	48.16	1440	46.17	1460	43.03	1500	41.47

TOTAL VOLUME THIS HYDROGRAPH = 169.67(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	14.74	19.2	14.74	2	959.	.20900	.00	.00	0.	293	11	A24	.01
1352 2A	36.3	23.93	55.5	38.30	2	367.	.12300	.00	.00	0.	293	14	A24	.01
1352 3A	11.1	9.63	66.6	47.20	2	1.	.12300	.00	.00	0.	293	9	A24	.01
1352 4A	25.5	17.78	92.1	64.87	2	662.	.12100	.00	.00	0.	293	14	A25	.01
1352 5A	18.9	15.51	111.0	78.84	2	546.	.11000	.00	.00	0.	293	10	A24	.01
1352 6A	19.2	16.66	130.2	93.71	2	1340.	.16000	.00	.00	0.	293	9	A24	.01
1352 7A	24.7	17.95	154.9	108.47	2	592.	.06400	.00	.00	0.	293	12	A24	.01
1352 8A	20.4	15.67	175.3	121.07	2	1.	.06400	.00	.00	0.	293	11	A24	.01
1352 9B	25.7	23.04	25.7	23.04	2	980.	.09500	.00	.00	0.	291	10	A23	.01
1352 10B	39.8	27.80	65.5	49.95	2	1.	.09500	.00	.00	0.	291	17	A24	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1159 QA   121.06 QAB   169.43 QB    48.37    1352   11B  TB 1157 QB    49.95 QBA   163.64 QA   113.69   *
*                                 1352   11AB TAB 1159 QAB   169.43 QA   121.06 QB    48.37                                *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	49.95	240.8	169.43	2	761.	.08100	.00	.00	0.	291	0	A24	.00
1352 12A	15.7	16.49	256.5	175.95	2	1228.	.04900	.00	.00	0.	291	8	A24	.01
1352 13A	31.9	24.56	288.4	193.80	2	1.	.04900	.00	.00	0.	291	13	A23	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 13A

HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	5.65	200	5.87	300	6.18	400	6.52
500	6.94	600	7.44	700	8.11	800	8.98	900	10.25
1000	12.33	1050	14.93	1100	20.76	1110	24.04	1120	29.42
1130	37.27	1131	38.20	1132	39.14	1133	40.17	1134	41.13
1135	42.16	1136	43.25	1137	44.46	1138	45.80	1139	47.15
1140	48.59	1141	50.32	1142	52.14	1143	54.11	1144	56.17
1145	58.70	1146	61.38	1147	64.41	1148	67.71	1149	73.31
1150	79.47	1151	86.80	1152	96.17	1153	107.83	1154	119.76
1155	133.42	1156	147.88	1157	162.29	1158	174.87	1159	184.62
1160	191.04	1161	193.80	1162	190.46	1163	183.54	1164	173.83
1165	161.62	1166	148.00	1167	135.72	1168	123.77	1169	112.26
1170	101.42	1171	91.34	1172	82.04	1173	73.47	1174	65.79
1175	59.15	1176	53.35	1177	48.19	1178	43.75	1179	39.90
1180	36.57	1181	33.80	1182	31.30	1183	29.11	1184	27.32
1185	25.81	1186	24.46	1187	23.37	1188	22.40	1189	21.53
1190	20.77	1191	20.12	1192	19.54	1193	19.00	1194	18.50
1195	18.07	1196	17.65	1197	17.27	1198	16.92	1199	16.62
1200	16.31	1201	16.02	1202	15.78	1203	15.54	1204	15.27
1205	15.07	1206	14.88	1207	14.69	1208	14.50	1209	14.34
1210	14.16	1211	14.01	1212	13.86	1213	13.69	1214	13.54
1215	13.39	1216	13.26	1217	13.14	1218	12.99	1219	12.87
1220	12.73	1221	12.62	1222	12.52	1223	12.42	1224	12.29
1225	12.17	1226	12.10	1227	11.99	1228	11.90	1229	11.79
1230	11.70	1231	11.64	1232	11.53	1233	11.45	1234	11.37
1235	11.27	1236	11.19	1237	11.11	1238	11.04	1239	10.94
1240	10.87	1241	10.81	1242	10.74	1243	10.68	1244	10.57
1245	10.50	1246	10.44	1247	10.38	1248	10.31	1249	10.25
1250	10.19	1251	10.11	1252	10.06	1253	10.00	1254	9.95
1255	9.88	1256	9.83	1257	9.81	1258	9.76	1259	9.69
1260	9.65	1261	9.60	1262	9.54	1263	9.50	1264	9.48
1265	9.42	1266	9.38	1267	9.34	1268	9.30	1269	9.26
1270	9.20	1271	9.16	1272	9.12	1273	9.08	1274	9.04
1275	9.01	1276	8.97	1277	8.90	1278	8.89	1279	8.83
1280	8.80	1281	8.76	1282	8.73	1283	8.69	1284	8.63
1285	8.62	1286	8.56	1287	8.53	1288	8.50	1289	8.47
1290	8.43	1291	8.37	1292	8.37	1293	8.31	1294	8.29
1295	8.26	1296	8.23	1297	8.20	1298	8.17	1299	8.14
1300	8.09	1310	7.82	1320	7.55	1330	7.35	1340	7.19
1350	7.00	1360	6.80	1370	6.63	1380	6.47	1390	6.35
1400	6.23	1420	5.99	1440	5.76	1460	5.09	1500	5.09

TOTAL VOLUME THIS HYDROGRAPH = 23.36(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 5-YR BURNED - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	14.32	18.6	14.32	2	704.	.07800	.00	.00	0.	291	13	A23	.01
1352	2A	26.9	19.22	45.5	33.02	2	1.	.07800	.00	.00	0.	291	15	A23	.01
1352	3B	288.4	193.80	288.4	193.80	2	1.	.04700	.00	.00	0.	291	0	A23	.00

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*                                                    CONFLUENCE Q'S                                                    *
*   1352    4A  TA 1156 QA    33.02 QAB   180.89 QB   147.88    1352    4B  TB 1161 QB   193.79 QBA   224.00 QA    30.21   *
*                                1352    4AB TAB 1161 QAB   224.00 QA    30.21 QB   193.79                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	193.79	333.9	224.00	2	1164.	.04700	.00	.00	0.	291	0	A23	.00
1352	5A	37.5	22.63	371.4	241.83	2	1.	.04700	.00	.00	0.	291	20	A23	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	7.16	200	7.41	300	7.79	400	8.18
500	8.68	600	9.31	700	10.18	800	11.30	900	12.82
1000	15.43	1050	18.63	1100	26.53	1110	30.50	1120	37.75
1130	47.86	1131	49.00	1132	50.14	1133	51.37	1134	52.68
1135	54.08	1136	55.53	1137	57.07	1138	58.69	1139	60.35
1140	62.11	1141	64.03	1142	66.09	1143	68.35	1144	70.82
1145	73.72	1146	76.89	1147	80.44	1148	84.31	1149	90.03
1150	96.73	1151	105.06	1152	115.22	1153	127.33	1154	140.25
1155	154.65	1156	169.68	1157	185.17	1158	200.56	1159	215.04
1160	227.34	1161	236.22	1162	241.34	1163	241.83	1164	237.43
1165	228.41	1166	215.75	1167	200.67	1168	184.86	1169	167.82
1170	151.71	1171	136.86	1172	123.08	1173	110.31	1174	99.82
1175	90.44	1176	82.05	1177	74.53	1178	67.87	1179	61.99
1180	56.74	1181	52.18	1182	48.13	1183	44.67	1184	41.52
1185	38.72	1186	36.20	1187	34.12	1188	32.26	1189	30.60
1190	29.14	1191	27.97	1192	26.90	1193	25.95	1194	25.17
1195	24.43	1196	23.76	1197	23.18	1198	22.64	1199	22.14
1200	21.66	1201	21.19	1202	20.80	1203	20.42	1204	20.06
1205	19.73	1206	19.43	1207	19.15	1208	18.86	1209	18.62
1210	18.38	1211	18.15	1212	17.95	1213	17.74	1214	17.54
1215	17.35	1216	17.16	1217	16.96	1218	16.78	1219	16.62
1220	16.44	1221	16.27	1222	16.13	1223	15.95	1224	15.81
1225	15.66	1226	15.53	1227	15.39	1228	15.28	1229	15.15
1230	15.04	1231	14.93	1232	14.80	1233	14.69	1234	14.56
1235	14.45	1236	14.34	1237	14.25	1238	14.17	1239	14.05
1240	13.95	1241	13.85	1242	13.74	1243	13.66	1244	13.56
1245	13.48	1246	13.38	1247	13.30	1248	13.21	1249	13.12
1250	13.04	1251	12.94	1252	12.87	1253	12.80	1254	12.72
1255	12.64	1256	12.58	1257	12.51	1258	12.44	1259	12.35
1260	12.30	1261	12.25	1262	12.17	1263	12.10	1264	12.06
1265	11.98	1266	11.93	1267	11.89	1268	11.82	1269	11.77
1270	11.70	1271	11.68	1272	11.62	1273	11.57	1274	11.52
1275	11.47	1276	11.42	1277	11.35	1278	11.30	1279	11.26
1280	11.22	1281	11.15	1282	11.12	1283	11.06	1284	11.00
1285	10.98	1286	10.91	1287	10.86	1288	10.82	1289	10.78
1290	10.74	1291	10.68	1292	10.66	1293	10.60	1294	10.54
1295	10.52	1296	10.46	1297	10.42	1298	10.39	1299	10.35
1300	10.29	1310	9.93	1320	9.62	1330	9.33	1340	9.09
1350	8.86	1360	8.62	1370	8.40	1380	8.22	1390	8.08
1400	7.89	1420	7.57	1440	7.32	1460	6.52	1500	6.50

TOTAL VOLUME THIS HYDROGRAPH = 29.87(Ac.Ft)

STEVENSON RANCH

10-YEAR BURNED

EXISTING CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	51.01	32.5	51.01	2	1173.	.20100	.00	.00	0.	293	8	A30	.01
1352 2A	34.8	48.85	67.3	97.99	2	369.	.19500	.00	.00	0.	293	10	A30	.01
1352 3A	33.3	41.74	100.6	138.95	2	1353.	.24000	.00	.00	0.	293	12	A30	.01
1352 4A	37.9	53.20	138.5	188.04	2	1.	.24000	.00	.00	0.	293	10	A30	.01
1352 5A	.0	.00	138.5	188.04	4	1.	.01000	4.50	.00	0.	293	99	A30	.00
1352 6B	28.8	42.61	28.8	42.61	2	494.	.25300	.00	.00	0.	293	9	A30	.01
1352 7B	12.2	19.15	41.0	61.46	2	1.	.25300	.00	.00	0.	293	8	A30	.01
1352 8B	22.3	29.51	63.3	90.89	2	1342.	.28700	.00	.00	0.	293	11	A30	.01
1352 9B	24.6	32.56	87.9	121.72	2	1.	.28700	.00	.00	0.	293	11	A30	.01
1352 10B	.0	.00	87.9	121.72	4	1.	.01000	3.75	.00	0.	293	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1156 QA   188.03 QAB   309.76 QB   121.72    1352   11B  TB 1156 QB   121.72 QBA   309.76 QA   188.03   *
*                                1352   11AB TAB 1156 QAB   309.76 QA   188.03 QB   121.72                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	121.72	226.4	309.76	2	655.	.14500	.00	.00	0.	293	0	A30	.00
1352 12A	.0	.00	226.4	308.18	4	1.	.01000	5.25	.00	0.	293	99	A30	.00
1352 13A	24.0	35.50	250.4	340.92	2	1.	.14500	.00	.00	0.	293	9	A30	.01
1352 14A	.0	.00	250.4	340.91	4	1.	.01000	5.50	.00	0.	293	99	A30	.00
1352 15C	37.0	46.38	37.0	46.38	2	826.	.24800	.00	.00	0.	293	12	A30	.01
1352 16C	40.2	53.20	77.2	99.39	2	1267.	.26000	.00	.00	0.	293	11	A30	.01
1352 17C	31.9	44.78	109.1	141.16	2	1.	.26000	.00	.00	0.	293	10	A30	.01
1352 18C	.0	.00	109.1	141.16	4	1.	.01000	4.00	.00	0.	293	99	A30	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   19A  TA 1157 QA   340.91 QAC   480.43 QC   139.52    1352   19C  TC 1156 QC   141.16 QCA   481.77 QA   340.62   *
*                                1352   19AC TAC 1156 QAC   481.77 QA   340.62 QC   141.16                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	141.16	359.5	481.77	2	1161.	.09000	.00	.00	0.	293	0	A30	.00
1352 20A	.0	.00	359.5	477.62	4	1.	.01000	6.25	.00	0.	293	99	A30	.00
1352 21A	39.2	49.13	398.7	524.34	2	1.	.09000	.00	.00	0.	293	12	A30	.01
1352 22A	.0	.00	398.7	524.32	4	1.	.01000	6.50	.00	0.	293	99	A30	.00
1352 23D	30.8	43.23	30.8	43.23	2	1242.	.23000	.00	.00	0.	293	10	A30	.01
1352 24D	39.3	55.16	70.1	96.06	2	1308.	.03800	.00	.00	0.	293	10	A30	.01
1352 25D	42.3	59.37	112.4	143.65	2	723.	.22800	.00	.00	0.	293	10	A30	.01
1352 26D	30.9	45.71	143.3	181.01	2	720.	.09000	.00	.00	0.	293	9	A30	.01
1352 27D	26.9	37.76	170.2	212.76	2	1.	.09000	.00	.00	0.	293	10	A30	.01
1352 28D	.0	.00	170.2	212.76	4	1.	.01000	4.75	.00	0.	293	99	A30	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
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*   1352   29A  TA 1157 QA   524.30 QAD   734.50 QD   210.20    1352   29D  TD 1158 QD   212.76 QDA   736.15 QA   523.39   *
*                                 1352   29AD TAD 1158 QAD   736.15 QA   523.39 QD   212.76                                 *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	212.76	568.9	736.15	2	668.	.04800	.00	.00	0.	293	0	A30	.00
1352	30A	.0	.00	568.9	732.95	4	1.	.01000	7.25	.00	0.	293	99	A30	.00
1352	31A	29.2	35.05	598.1	765.54	2	506.	.04400	.00	.00	0.	293	12	A29	.01
1352	32A	22.2	29.83	620.3	784.43	2	635.	.03900	.00	.00	0.	293	10	A29	.01
1352	33A	23.1	32.74	643.4	800.84	2	593.	.04200	.00	.00	0.	293	9	A29	.01
1352	34A	35.7	42.85	679.1	834.45	2	572.	.03500	.00	.00	0.	293	12	A29	.01
1352	35A	29.2	35.05	708.3	855.10	2	485.	.04100	.00	.00	0.	293	12	A29	.01
1352	36A	25.6	34.40	733.9	871.06	2	532.	.03800	.00	.00	0.	293	10	A29	.01
1352	37A	.0	.00	733.9	864.25	4	1.	.01000	7.75	.00	0.	293	99	A30	.00
1352	38A	23.7	32.23	757.6	874.82	2	396.	.05100	.00	.00	0.	293	9	A28	.01
1352	39A	32.5	39.48	790.1	892.08	2	838.	.05600	.00	.00	0.	293	11	A28	.01
1352	40A	20.2	26.21	810.3	892.70	2	1.	.05600	.00	.00	0.	293	9	A27	.01
1352	41A	22.5	26.51	832.8	898.99	2	1.	.13300	.00	.00	0.	293	9	A25	.01
1352	42A	28.5	31.27	861.3	917.86	2	840.	.05700	.00	.00	0.	293	12	A27	.01
1352	43A	.0	.00	861.3	914.16	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	44A	20.2	22.34	881.5	922.20	2	1.	.05700	.00	.00	0.	293	11	A26	.01
1352	45A	24.8	23.58	906.3	936.03	2	575.	.03500	.00	.00	0.	293	13	A25	.01
1352	46A	15.1	19.60	921.4	934.53	2	1319.	.03400	.00	.00	0.	293	9	A27	.01
1352	47A	24.6	23.55	946.0	938.66	2	1.	.03400	.00	.00	0.	293	14	A26	.01
1352	48A	24.9	28.89	970.9	944.65	2	722.	.03900	.00	.00	0.	293	11	A27	.01
1352	49A	20.9	24.59	991.8	944.19	2	846.	.04700	.00	.00	0.	293	10	A26	.01
1352	50A	19.2	23.66	1011.0	943.19	2	1.	.04700	.00	.00	0.	293	10	A27	.01
1352	51A	.0	.00	1011.0	943.19	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	52E	28.8	39.16	28.8	39.16	2	940.	.14400	.00	.00	0.	293	9	A28	.01
1352	53E	24.8	31.94	53.6	69.62	2	971.	.27800	.00	.00	0.	293	10	A28	.01
1352	54E	33.4	40.57	87.0	108.42	2	1110.	.18700	.00	.00	0.	293	11	A28	.01
1352	55E	23.1	26.81	110.1	132.74	2	1.	.18700	.00	.00	0.	293	11	A27	.01
1352	56E	.0	.00	110.1	132.74	4	1.	.01000	4.00	.00	0.	293	99	A30	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1167 QA   943.19 QAE   976.31 QE    33.13    1352   57E  TE 1157 QE   132.73 QEA   681.60 QA   548.86   *
*                                 1352   57AE TAE 1166 QAE   978.54 QA   939.14 QE    39.40                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	132.73	1121.1	978.54	2	180.	.03900	.00	.00	0.	293	0	A30	.00
1352	58A	.0	.00	1121.1	977.21	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	59A	28.2	30.94	1149.3	983.12	2	815.	.01800	.00	.00	0.	293	12	A27	.01
1352	60A	27.2	37.53	1176.5	983.83	2	1136.	.05700	.00	.00	0.	293	8	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	19.64	1194.4	983.27	2	1.	.05700	.00	.00	0.	293	12	A27	.01
1352	62A	.0	.00	1194.4	983.27	5	1.	.01000	11.00	.00	0.	293	99	A30	.00
1352	63F	27.0	36.28	27.0	36.28	2	586.	.19600	.00	.00	0.	293	10	A29	.01
1352	64F	40.8	42.86	67.8	78.92	2	727.	.08900	.00	.00	0.	293	14	A28	.01
1352	65F	37.4	41.04	105.2	118.83	2	1.	.08900	.00	.00	0.	293	12	A27	.01
1352	66F	32.6	41.99	137.8	159.00	2	1.	.14100	.00	.00	0.	293	10	A28	.01
1352	67F	18.8	22.84	156.6	181.25	2	677.	.08100	.00	.00	0.	293	11	A28	.01
1352	68F	9.2	11.94	165.8	191.59	2	1.	.08100	.00	.00	0.	293	9	A27	.01
1352	69F	.0	.00	165.8	191.59	4	1.	.01000	4.50	.00	0.	293	99	A30	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1169 QA   983.27 QAF  1026.42 QF    43.15    1352   70F  TF 1156 QF   191.58 QFA   767.03 QA   575.45   *
*                                1352   70AF TAF 1168 QAF  1028.20 QA   978.20 QF    50.01                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF   165.8     191.58    1360.2   1028.20   2     561.   .03600      .00   .00        0.  293   0   A30   .00
    1352   71A      .0        .00    1360.2   1027.01   5       1.   .01000    11.00   .00        0.  293  99   A30   .00
    1352   72A     6.4       8.31    1366.6   1027.97   2       1.   .03600      .00   .00        0.  293   9   A27   .01
    1352   73A    20.0      25.86    1386.6   1032.48   2     434.   .03000      .00   .00        0.  291  11   A27   .01
    1352   74A    21.9      27.12    1408.5   1034.83   2     420.   .02900      .00   .00        0.  291  11   A26   .01
    1352   75A    42.0      47.37    1450.5   1043.38   2    1019.   .02000      .00   .00        0.  291  13   A26   .01
    1352   76A    26.1      29.43    1476.6   1045.40   2     249.   .04000      .00   .00        0.  291  13   A26   .01
    1352   77A    12.2      15.97    1488.8   1046.42   2       1.   .04000      .00   .00        0.  291  10   A26   .01
    1352   78A      .0        .00    1488.8   1046.42   5       1.   .01000    11.00   .00        0.  291  99   A30   .00
    1352   79A    14.2      18.36    1503.0   1049.25   2     643.   .01900      .00   .00        0.  291  11   A27   .01
    1352   80A    18.2      22.54    1521.2   1050.90   2     751.   .02400      .00   .00        0.  291  11   A26   .01
    1352   81A    23.3      30.13    1544.5   1053.50   2     709.   .02400      .00   .00        0.  291  11   A27   .01
    1352   82A    22.2      24.11    1566.7   1056.07   2       1.   .02400      .00   .00        0.  291  14   A26   .01
    1352   83A      .0        .00    1566.7   1056.07   5       1.   .01000    11.00   .00        0.  291  99   A30   .00
    1352   84B    26.2      28.27      26.2     28.27   2    1438.   .06400      .00   .00        0.  291  13   A25   .01
    1352   85B    33.5      36.38      59.7     61.83   2       1.   .06400      .00   .00        0.  291  14   A26   .01
    1352   86B      .0        .00      59.7     61.83   4       1.   .01000     3.00   .00        0.  291  99   A30   .00
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1174 QA  1056.07 QAB  1069.08 QB    13.01    1352   87B  TB 1158 QB    61.83 QBA   752.11 QA   690.28   *
*                                1352   87AB TAB 1174 QAB  1069.08 QA  1056.07 QB    13.01                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB    59.7      61.83    1626.4   1069.08   2     405.   .02300      .00   .00        0.  291   0   A30   .00
    1352   88A      2.8       4.95    1629.2   1068.34   2       1.   .02300      .00   .00        0.  291   6   A27   .01
    1352   89C     21.6      32.26      21.6     32.26   2    1328.   .09400      .00   .00        0.  291   9   A28   .01
    1352   90C     23.5      26.65      45.1     56.86   2       1.   .09400      .00   .00        0.  291  14   A27   .01
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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN A STORM DAY 4

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                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1174 QA  1068.34 QAC  1077.64 QC     9.30    1352   91C  TC 1157 QC    56.86 QCA   732.13 QA   675.27   *
*                                1352   91AC TAC 1174 QAC  1077.64 QA  1068.34 QC     9.30                                   *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC    45.1      56.86    1674.3   1077.64   2     977.   .02400      .00   .00        0.  291   0   A30   .00
    1352   92A     30.8      39.82    1705.1   1081.35   2     999.   .01300      .00   .00        0.  291  11   A27   .01
    1352   93A     42.1      51.76    1747.2   1087.14   2     448.   .02200      .00   .00        0.  291  12   A27   .01
    1352   94A     16.0      22.90    1763.2   1088.91   2       1.   .02200      .00   .00        0.  291   9   A27   .01
    1352   95D    371.4     439.00     371.4    439.00   2       1.   .02200      .00   .00        0.  291   0   A30   .00
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1177 QA  1088.90 QAD  1185.73 QD    96.83    1352   96D  TD 1161 QD   439.00 QDA  1238.47 QA   799.47   *
*                                1352   96AD TAD 1166 QAD  1307.80 QA   995.32 QD   312.48                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
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LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	439.00	2134.6	1307.80	2	892.	.01700	.00	.00	0.	291	0	A30	.00
1352	97A	14.4	19.66	2149.0	1309.54	2	1.	.01700	.00	.00	0.	291	10	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	61.72	200	63.15	300	66.22	400	69.67
500	74.06	600	79.33	700	85.93	800	94.72	900	107.41
1000	131.27	1050	161.80	1100	225.05	1110	249.48	1120	288.91
1130	346.81	1131	353.34	1132	359.93	1133	367.02	1134	374.43
1135	382.14	1136	390.13	1137	398.60	1138	407.44	1139	416.76
1140	426.65	1141	437.13	1142	448.33	1143	460.29	1144	473.19
1145	487.22	1146	502.52	1147	519.22	1148	537.53	1149	559.26
1150	585.01	1151	616.66	1152	654.79	1153	700.14	1154	751.34
1155	808.11	1156	869.41	1157	934.92	1158	1002.95	1159	1068.28
1160	1129.00	1161	1182.42	1162	1225.46	1163	1256.75	1164	1279.87
1165	1295.96	1166	1305.36	1167	1309.49	1168	1309.54	1169	1305.21
1170	1296.16	1171	1283.73	1172	1269.01	1173	1253.11	1174	1237.37
1175	1222.89	1176	1210.32	1177	1199.99	1178	1191.44	1179	1183.43
1180	1174.29	1181	1162.07	1182	1145.52	1183	1123.64	1184	1096.62
1185	1064.81	1186	1029.03	1187	990.61	1188	950.59	1189	909.61
1190	868.74	1191	828.15	1192	788.68	1193	750.61	1194	713.82
1195	678.74	1196	645.52	1197	614.01	1198	584.16	1199	556.03
1200	529.66	1201	504.90	1202	481.71	1203	459.96	1204	439.59
1205	420.51	1206	402.82	1207	386.22	1208	370.67	1209	356.25
1210	342.87	1211	330.15	1212	318.14	1213	306.92	1214	296.40
1215	286.68	1216	277.44	1217	268.54	1218	260.10	1219	252.15
1220	244.96	1221	238.13	1222	231.61	1223	225.44	1224	219.88
1225	214.56	1226	209.53	1227	204.77	1228	200.34	1229	196.19
1230	192.22	1231	188.48	1232	184.88	1233	181.39	1234	178.02
1235	174.81	1236	171.73	1237	168.81	1238	165.96	1239	163.25
1240	160.74	1241	158.32	1242	155.94	1243	153.70	1244	151.60
1245	149.62	1246	147.81	1247	146.08	1248	144.44	1249	142.84
1250	141.30	1251	139.82	1252	138.43	1253	137.08	1254	135.77
1255	134.52	1256	133.28	1257	132.12	1258	130.99	1259	129.91
1260	128.86	1261	127.82	1262	126.79	1263	125.83	1264	124.90
1265	124.01	1266	123.16	1267	122.30	1268	121.46	1269	120.65
1270	119.87	1271	119.11	1272	118.34	1273	117.55	1274	116.78
1275	116.04	1276	115.32	1277	114.62	1278	113.91	1279	113.21
1280	112.53	1281	111.87	1282	111.19	1283	110.55	1284	109.92
1285	109.28	1286	108.66	1287	108.06	1288	107.47	1289	106.91
1290	106.36	1291	105.81	1292	105.28	1293	104.76	1294	104.23
1295	103.72	1296	103.21	1297	102.72	1298	102.22	1299	101.77
1300	101.29	1310	96.85	1320	93.11	1330	89.75	1340	86.56
1350	83.71	1360	81.29	1370	78.97	1380	76.82	1390	74.91
1400	73.11	1420	70.02	1440	67.28	1460	62.68	1500	61.35

TOTAL VOLUME THIS HYDROGRAPH = 268.46(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	27.21	19.2	27.21	2	959.	.20900	.00	.00	0.	293	9	A29	.01
1352 2A	36.3	45.94	55.5	72.62	2	367.	.12300	.00	.00	0.	293	11	A29	.01
1352 3A	11.1	16.75	66.6	88.08	2	1.	.12300	.00	.00	0.	293	8	A29	.01
1352 4A	25.5	33.75	92.1	121.83	2	662.	.12100	.00	.00	0.	293	11	A30	.01
1352 5A	18.9	28.53	111.0	148.24	2	546.	.11000	.00	.00	0.	293	8	A29	.01
1352 6A	19.2	31.16	130.2	172.83	2	1340.	.16000	.00	.00	0.	293	7	A29	.01
1352 7A	24.7	33.19	154.9	201.54	2	592.	.06400	.00	.00	0.	293	10	A29	.01
1352 8A	20.4	28.91	175.3	223.48	2	1.	.06400	.00	.00	0.	293	9	A29	.01
1352 9B	25.7	38.38	25.7	38.38	2	980.	.09500	.00	.00	0.	291	9	A28	.01
1352 10B	39.8	48.95	65.5	86.05	2	1.	.09500	.00	.00	0.	291	14	A29	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1157 QA   223.46 QAB   308.78 QB    85.32    1352   11B  TB 1156 QB    86.05 QBA   299.54 QA   213.49   *
*                                 1352   11AB TAB 1157 QAB   308.78 QA   223.46 QB    85.32                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	86.05	240.8	308.78	2	761.	.08100	.00	.00	0.	291	0	A29	.00
1352 12A	15.7	27.59	256.5	322.08	2	1228.	.04900	.00	.00	0.	291	7	A29	.01
1352 13A	31.9	42.99	288.4	353.02	2	1.	.04900	.00	.00	0.	291	11	A28	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 13A

HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	8.37	200	8.68	300	9.15	400	9.63
500	10.26	600	11.02	700	11.99	800	13.29	900	15.18
1000	19.46	1050	25.63	1100	37.80	1110	45.61	1120	57.25
1130	71.80	1131	73.40	1132	74.81	1133	76.51	1134	78.20
1135	80.10	1136	82.10	1137	84.30	1138	86.60	1139	89.15
1140	91.80	1141	95.08	1142	98.41	1143	102.06	1144	105.89
1145	110.82	1146	116.06	1147	121.88	1148	128.23	1149	138.87
1150	151.06	1151	166.54	1152	186.23	1153	211.23	1154	237.98
1155	268.39	1156	298.30	1157	324.31	1158	342.91	1159	353.02
1160	349.70	1161	336.36	1162	315.95	1163	290.67	1164	262.78
1165	236.93	1166	211.75	1167	187.97	1168	166.12	1169	146.52
1170	129.32	1171	114.51	1172	102.12	1173	91.65	1174	82.89
1175	75.34	1176	69.20	1177	64.05	1178	59.57	1179	55.71
1180	52.59	1181	49.69	1182	47.18	1183	44.93	1184	42.88
1185	41.00	1186	39.44	1187	37.91	1188	36.41	1189	35.20
1190	34.13	1191	32.94	1192	31.91	1193	31.03	1194	30.11
1195	29.24	1196	28.52	1197	27.76	1198	27.07	1199	26.51
1200	25.92	1201	25.39	1202	24.99	1203	24.54	1204	24.10
1205	23.75	1206	23.31	1207	22.98	1208	22.56	1209	22.25
1210	21.85	1211	21.56	1212	21.29	1213	20.94	1214	20.67
1215	20.31	1216	20.06	1217	19.83	1218	19.50	1219	19.27
1220	18.98	1221	18.79	1222	18.61	1223	18.39	1224	18.21
1225	18.03	1226	17.84	1227	17.61	1228	17.43	1229	17.26
1230	17.07	1231	16.93	1232	16.80	1233	16.67	1234	16.54
1235	16.38	1236	16.25	1237	16.14	1238	15.99	1239	15.90
1240	15.77	1241	15.72	1242	15.63	1243	15.51	1244	15.42
1245	15.29	1246	15.24	1247	15.12	1248	15.05	1249	14.98
1250	14.91	1251	14.83	1252	14.72	1253	14.64	1254	14.56
1255	14.45	1256	14.42	1257	14.31	1258	14.24	1259	14.17
1260	14.11	1261	14.00	1262	13.94	1263	13.91	1264	13.81
1265	13.74	1266	13.68	1267	13.61	1268	13.54	1269	13.48
1270	13.39	1271	13.33	1272	13.28	1273	13.23	1274	13.14
1275	13.09	1276	13.08	1277	13.03	1278	12.95	1279	12.90
1280	12.85	1281	12.80	1282	12.75	1283	12.70	1284	12.66
1285	12.61	1286	12.57	1287	12.49	1288	12.45	1289	12.36
1290	12.31	1291	12.27	1292	12.22	1293	12.17	1294	12.13
1295	12.08	1296	12.03	1297	11.99	1298	11.90	1299	11.85
1300	11.85	1310	11.49	1320	11.20	1330	10.85	1340	10.48
1350	10.20	1360	9.99	1370	9.74	1380	9.58	1390	9.29
1400	9.14	1420	8.88	1440	8.55	1460	7.53	1500	7.53

TOTAL VOLUME THIS HYDROGRAPH = 37.15(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 10-YR BURNED - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	25.07	18.6	25.07	2	704.	.07800	.00	.00	0.	291	11	A28	.01
1352	2A	26.9	33.04	45.5	57.47	2	1.	.07800	.00	.00	0.	291	13	A28	.01
1352	3B	288.4	353.00	288.4	353.00	2	1.	.04700	.00	.00	0.	291	0	A28	.00

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*                                                    CONFLUENCE Q'S                                                    *
*   1352    4A  TA 1156 QA    57.47 QAB   355.74 QB   298.27    1352    4B  TB 1159 QB   352.98 QBA   406.99 QA    54.02   *
*                                1352    4AB TAB 1159 QAB   406.99 QA    54.02 QB   352.98                                *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	352.98	333.9	406.99	2	1164.	.04700	.00	.00	0.	291	0	A28	.00
1352	5A	37.5	41.32	371.4	439.03	2	1.	.04700	.00	.00	0.	291	16	A28	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	10.58	200	10.95	300	11.56	400	12.10
500	12.95	600	13.86	700	15.08	800	16.74	900	19.10
1000	24.91	1050	33.48	1100	50.00	1110	59.17	1120	74.01
1130	92.45	1131	94.46	1132	96.50	1133	98.77	1134	101.03
1135	103.46	1136	105.96	1137	108.48	1138	111.17	1139	114.14
1140	117.26	1141	120.94	1142	124.89	1143	129.28	1144	134.03
1145	139.62	1146	145.77	1147	152.67	1148	160.19	1149	171.07
1150	184.50	1151	201.71	1152	222.85	1153	248.54	1154	276.71
1155	307.87	1156	340.31	1157	372.44	1158	401.41	1159	423.83
1160	437.33	1161	439.03	1162	429.25	1163	409.13	1164	381.80
1165	347.50	1166	312.40	1167	278.33	1168	246.50	1169	217.68
1170	194.34	1171	173.73	1172	155.72	1173	140.18	1174	126.78
1175	115.21	1176	105.28	1177	96.83	1178	89.50	1179	83.33
1180	77.79	1181	72.91	1182	68.86	1183	65.29	1184	62.05
1185	59.03	1186	56.45	1187	54.17	1188	51.96	1189	49.84
1190	48.07	1191	46.48	1192	44.90	1193	43.48	1194	42.14
1195	40.90	1196	39.65	1197	38.54	1198	37.49	1199	36.53
1200	35.55	1201	34.78	1202	33.95	1203	33.12	1204	32.55
1205	32.00	1206	31.32	1207	30.84	1208	30.28	1209	29.72
1210	29.19	1211	28.66	1212	28.22	1213	27.73	1214	27.27
1215	26.81	1216	26.51	1217	26.06	1218	25.64	1219	25.32
1220	24.90	1221	24.50	1222	24.20	1223	23.84	1224	23.57
1225	23.27	1226	23.03	1227	22.79	1228	22.53	1229	22.31
1230	22.06	1231	21.86	1232	21.64	1233	21.44	1234	21.25
1235	21.07	1236	20.91	1237	20.75	1238	20.58	1239	20.43
1240	20.25	1241	20.11	1242	19.97	1243	19.82	1244	19.70
1245	19.55	1246	19.47	1247	19.33	1248	19.22	1249	19.07
1250	18.98	1251	18.90	1252	18.78	1253	18.69	1254	18.58
1255	18.45	1256	18.40	1257	18.28	1258	18.16	1259	18.10
1260	17.96	1261	17.88	1262	17.77	1263	17.71	1264	17.59
1265	17.50	1266	17.40	1267	17.34	1268	17.27	1269	17.17
1270	17.09	1271	17.02	1272	16.92	1273	16.84	1274	16.77
1275	16.67	1276	16.61	1277	16.54	1278	16.49	1279	16.41
1280	16.34	1281	16.28	1282	16.22	1283	16.12	1284	16.08
1285	16.03	1286	15.98	1287	15.94	1288	15.89	1289	15.81
1290	15.74	1291	15.67	1292	15.57	1293	15.50	1294	15.44
1295	15.37	1296	15.31	1297	15.26	1298	15.17	1299	15.12
1300	15.06	1310	14.55	1320	14.19	1330	13.80	1340	13.35
1350	12.94	1360	12.69	1370	12.34	1380	12.10	1390	11.83
1400	11.54	1420	11.19	1440	10.80	1460	9.60	1500	9.60

TOTAL VOLUME THIS HYDROGRAPH = 47.85(Ac.Ft)

STEVENSON RANCH

25-YEAR BURNED

EXISTING CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	89.56	32.5	89.56	2	1173.	.20100	.00	.00	0.	293	7	A37	.01
1352 2A	34.8	89.29	67.3	176.19	2	369.	.19500	.00	.00	0.	293	8	A37	.01
1352 3A	33.3	76.77	100.6	251.10	2	1353.	.24000	.00	.00	0.	293	10	A37	.01
1352 4A	37.9	97.25	138.5	342.02	2	1.	.24000	.00	.00	0.	293	8	A37	.01
1352 5A	.0	.00	138.5	342.02	4	1.	.01000	5.50	.00	0.	293	99	A37	.00
1352 6B	28.8	79.36	28.8	79.36	2	494.	.25300	.00	.00	0.	293	7	A37	.01
1352 7B	12.2	33.62	41.0	112.74	2	1.	.25300	.00	.00	0.	293	7	A37	.01
1352 8B	22.3	54.05	63.3	166.66	2	1342.	.28700	.00	.00	0.	293	9	A37	.01
1352 9B	24.6	59.63	87.9	223.55	2	1.	.28700	.00	.00	0.	293	9	A37	.01
1352 10B	.0	.00	87.9	223.54	4	1.	.01000	4.75	.00	0.	293	99	A37	.00

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* CONFLUENCE Q'S *
* 1352 11A TA 1156 QA 342.02 QAB 561.24 QB 219.22 1352 11B TB 1155 QB 223.52 QBA 564.19 QA 340.67 *
* 1352 11AB TAB 1155 QAB 564.19 QA 340.67 QB 223.52 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	223.52	226.4	564.19	2	655.	.14500	.00	.00	0.	293	0	A37	.00
1352 12A	.0	.00	226.4	561.93	4	1.	.01000	6.50	.00	0.	293	99	A37	.00
1352 13A	24.0	66.14	250.4	619.41	2	1.	.14500	.00	.00	0.	293	7	A37	.01
1352 14A	.0	.00	250.4	619.38	4	1.	.01000	6.75	.00	0.	293	99	A37	.00
1352 15C	37.0	85.30	37.0	85.30	2	826.	.24800	.00	.00	0.	293	10	A37	.01
1352 16C	40.2	97.44	77.2	180.62	2	1267.	.26000	.00	.00	0.	293	9	A37	.01
1352 17C	31.9	77.32	109.1	254.63	2	1.	.26000	.00	.00	0.	293	9	A37	.01
1352 18C	.0	.00	109.1	254.62	4	1.	.01000	5.00	.00	0.	293	99	A37	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1155 QA 619.30 QAC 873.89 QC 254.59 1352 19C TC 1155 QC 254.59 QCA 873.89 QA 619.30 *
* 1352 19AC TAC 1155 QAC 873.89 QA 619.30 QC 254.59 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	254.59	359.5	873.89	2	1161.	.09000	.00	.00	0.	293	0	A37	.00
1352 20A	.0	.00	359.5	865.49	4	1.	.01000	7.75	.00	0.	293	99	A37	.00
1352 21A	39.2	90.37	398.7	952.24	2	1.	.09000	.00	.00	0.	293	10	A37	.01
1352 22A	.0	.00	398.7	952.23	4	1.	.01000	8.00	.00	0.	293	99	A37	.00
1352 23D	30.8	79.03	30.8	79.03	2	1242.	.23000	.00	.00	0.	293	8	A37	.01
1352 24D	39.3	100.84	70.1	177.23	2	1308.	.03800	.00	.00	0.	293	8	A37	.01
1352 25D	42.3	102.53	112.4	263.99	2	723.	.22800	.00	.00	0.	293	9	A37	.01
1352 26D	30.9	85.15	143.3	325.07	2	720.	.09000	.00	.00	0.	293	7	A37	.01
1352 27D	26.9	69.02	170.2	386.15	2	1.	.09000	.00	.00	0.	293	8	A37	.01
1352 28D	.0	.00	170.2	386.14	4	1.	.01000	5.75	.00	0.	293	99	A37	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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* CONFLUENCE Q'S *

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*   1352   29A  TA 1156 QA   952.19 QAD  1338.32 QD   386.13    1352   29D  TD 1156 QD   386.13 QDA  1338.32 QA   952.19   *
*                                 1352   29AD TAD 1156 QAD  1338.32 QA   952.19 QD   386.13                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	386.13	568.9	1338.32	2	668.	.04800	.00	.00	0.	293	0	A37	.00
1352	30A	.0	.00	568.9	1331.22	5	1.	.01000	12.00	.00	0.	293	99	A37	.00
1352	31A	29.2	65.25	598.1	1391.88	2	506.	.04400	.00	.00	0.	293	10	A36	.01
1352	32A	22.2	52.19	620.3	1429.11	2	635.	.03900	.00	.00	0.	293	9	A36	.01
1352	33A	23.1	61.65	643.4	1457.06	2	593.	.04200	.00	.00	0.	293	7	A36	.01
1352	34A	35.7	79.77	679.1	1515.65	2	572.	.03500	.00	.00	0.	293	10	A36	.01
1352	35A	29.2	63.18	708.3	1555.18	2	485.	.04100	.00	.00	0.	293	10	A35	.01
1352	36A	25.6	61.64	733.9	1581.91	2	532.	.03800	.00	.00	0.	293	8	A35	.01
1352	37A	.0	.00	733.9	1571.18	5	1.	.01000	12.00	.00	0.	293	99	A37	.00
1352	38A	23.7	55.27	757.6	1593.48	2	396.	.05100	.00	.00	0.	293	8	A34	.01
1352	39A	32.5	71.47	790.1	1630.91	2	838.	.05600	.00	.00	0.	293	9	A34	.01
1352	40A	20.2	48.80	810.3	1630.75	2	1.	.05600	.00	.00	0.	293	7	A33	.01
1352	41A	22.5	50.46	832.8	1643.73	2	1.	.13300	.00	.00	0.	293	7	A31	.01
1352	42A	28.5	57.48	861.3	1680.72	2	840.	.05700	.00	.00	0.	293	10	A33	.01
1352	43A	.0	.00	861.3	1670.48	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	44A	20.2	41.36	881.5	1686.78	2	1.	.05700	.00	.00	0.	293	9	A32	.01
1352	45A	24.8	46.44	906.3	1710.70	2	575.	.03500	.00	.00	0.	293	10	A31	.01
1352	46A	15.1	33.97	921.4	1716.82	2	1319.	.03400	.00	.00	0.	293	8	A33	.01
1352	47A	24.6	45.23	946.0	1719.49	2	1.	.03400	.00	.00	0.	293	11	A32	.01
1352	48A	24.9	52.80	970.9	1733.44	2	722.	.03900	.00	.00	0.	293	9	A33	.01
1352	49A	20.9	45.30	991.8	1737.28	2	846.	.04700	.00	.00	0.	293	8	A32	.01
1352	50A	19.2	43.19	1011.0	1735.88	2	1.	.04700	.00	.00	0.	293	8	A33	.01
1352	51A	.0	.00	1011.0	1735.87	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	52E	28.8	74.37	28.8	74.37	2	940.	.14400	.00	.00	0.	293	7	A35	.01
1352	53E	24.8	57.83	53.6	130.10	2	971.	.27800	.00	.00	0.	293	8	A34	.01
1352	54E	33.4	73.45	87.0	199.93	2	1110.	.18700	.00	.00	0.	293	9	A34	.01
1352	55E	23.1	48.98	110.1	245.12	2	1.	.18700	.00	.00	0.	293	9	A33	.01
1352	56E	.0	.00	110.1	245.11	4	1.	.01000	5.00	.00	0.	293	99	A37	.00

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*****************************************************************************************************************************
*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1164 QA  1735.87 QAE  1805.02 QE    69.15    1352   57E  TE 1156 QE   245.11 QEA  1350.57 QA  1105.46   *
*                                 1352   57AE TAE 1163 QAE  1813.23 QA  1727.64 QE    85.58                                  *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	245.11	1121.1	1813.23	2	180.	.03900	.00	.00	0.	293	0	A37	.00
1352	58A	.0	.00	1121.1	1809.99	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	59A	28.2	56.88	1149.3	1825.12	2	815.	.01800	.00	.00	0.	293	10	A33	.01
1352	60A	27.2	65.71	1176.5	1826.78	2	1136.	.05700	.00	.00	0.	293	7	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	36.10	1194.4	1829.32	2	1.	.05700	.00	.00	0.	293	10	A33	.01
1352	62A	.0	.00	1194.4	1829.31	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	63F	27.0	65.01	27.0	65.01	2	586.	.19600	.00	.00	0.	293	8	A35	.01
1352	64F	40.8	80.56	67.8	145.22	2	727.	.08900	.00	.00	0.	293	11	A34	.01
1352	65F	37.4	75.44	105.2	217.35	2	1.	.08900	.00	.00	0.	293	10	A33	.01
1352	66F	32.6	76.02	137.8	291.71	2	1.	.14100	.00	.00	0.	293	8	A34	.01
1352	67F	18.8	41.34	156.6	332.29	2	677.	.08100	.00	.00	0.	293	9	A34	.01
1352	68F	9.2	20.70	165.8	350.43	2	1.	.08100	.00	.00	0.	293	8	A33	.01
1352	69F	.0	.00	165.8	350.43	4	1.	.01000	5.50	.00	0.	293	99	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1165 QA  1829.30 QAF  1927.51 QF    98.21    1352   70F  TF 1156 QF   350.43 QFA  1589.76 QA  1239.33   *
*                              1352   70AF TAF 1164 QAF  1929.85 QA  1811.89 QF   117.96                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	350.43	1360.2	1929.85	2	561.	.03600	.00	.00	0.	293	0	A37	.00
1352	71A	.0	.00	1360.2	1928.14	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	72A	6.4	15.46	1366.6	1930.35	2	1.	.03600	.00	.00	0.	293	7	A33	.01
1352	73A	20.0	45.05	1386.6	1939.97	2	434.	.03000	.00	.00	0.	291	9	A33	.01
1352	74A	21.9	50.34	1408.5	1948.33	2	420.	.02900	.00	.00	0.	291	8	A32	.01
1352	75A	42.0	87.40	1450.5	1966.01	2	1019.	.02000	.00	.00	0.	291	10	A32	.01
1352	76A	26.1	54.31	1476.6	1973.88	2	249.	.04000	.00	.00	0.	291	10	A32	.01
1352	77A	12.2	28.04	1488.8	1977.89	2	1.	.04000	.00	.00	0.	291	8	A32	.01
1352	78A	.0	.00	1488.8	1977.89	5	1.	.01000	13.00	.00	0.	291	99	A37	.00
1352	79A	14.2	33.79	1503.0	1983.61	2	643.	.01900	.00	.00	0.	291	8	A33	.01
1352	80A	18.2	41.84	1521.2	1989.76	2	751.	.02400	.00	.00	0.	291	8	A32	.01
1352	81A	23.3	55.44	1544.5	1996.90	2	709.	.02400	.00	.00	0.	291	8	A33	.01
1352	82A	22.2	43.79	1566.7	2004.37	2	1.	.02400	.00	.00	0.	291	11	A32	.01
1352	83A	.0	.00	1566.7	2004.36	5	1.	.01000	14.00	.00	0.	291	99	A37	.00
1352	84B	26.2	52.57	26.2	52.57	2	1438.	.06400	.00	.00	0.	291	10	A31	.01
1352	85B	33.5	66.08	59.7	111.96	2	1.	.06400	.00	.00	0.	291	11	A32	.01
1352	86B	.0	.00	59.7	111.95	4	1.	.01000	3.75	.00	0.	291	99	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1168 QA  2004.36 QAB  2035.13 QB    30.77    1352   87B  TB 1157 QB   111.93 QBA  1519.13 QA  1407.20   *
*                              1352   87AB TAB 1168 QAB  2035.13 QA  2004.36 QB    30.77                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	111.93	1626.4	2035.13	2	405.	.02300	.00	.00	0.	291	0	A37	.00
1352	88A	2.8	8.59	1629.2	2035.96	2	1.	.02300	.00	.00	0.	291	5	A33	.01
1352	89C	21.6	56.77	21.6	56.77	2	1328.	.09400	.00	.00	0.	291	7	A34	.01
1352	90C	23.5	47.95	45.1	101.15	2	1.	.09400	.00	.00	0.	291	11	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN A STORM DAY 4

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1168 QA  2035.96 QAC  2056.90 QC    20.94    1352   91C  TC 1156 QC   101.14 QCA  1460.29 QA  1359.14   *
*                              1352   91AC TAC 1167 QAC  2058.00 QA  2035.30 QC    22.69                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	101.14	1674.3	2058.00	2	977.	.02400	.00	.00	0.	291	0	A37	.00
1352	92A	30.8	69.37	1705.1	2069.53	2	999.	.01300	.00	.00	0.	291	9	A33	.01
1352	93A	42.1	94.83	1747.2	2083.60	2	448.	.02200	.00	.00	0.	291	9	A33	.01
1352	94A	16.0	40.69	1763.2	2088.49	2	1.	.02200	.00	.00	0.	291	7	A33	.01
1352	95D	371.4	786.10	371.4	786.10	2	1.	.02200	.00	.00	0.	291	0	A37	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1170 QA  2088.49 QAD  2332.76 QD   244.27    1352   96D  TD 1159 QD   786.08 QDA  2341.38 QA  1555.29   *
*                              1352   96AD TAD 1163 QAD  2492.95 QA  1890.13 QD   602.82                                 *
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SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	RAIN	PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	786.08	2134.6	2492.95	2	892.	.01700	.00	.00	0.	291	0	A37	.00
1352	97A	14.4	34.27	2149.0	2496.15	2	1.	.01700	.00	.00	0.	291	8	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	93.12	200	95.46	300	100.19	400	105.49
500	112.14	600	120.39	700	132.57	800	151.36	900	179.02
1000	231.45	1050	302.67	1100	441.45	1110	494.05	1120	578.08
1130	694.18	1131	706.96	1132	720.02	1133	733.89	1134	748.21
1135	763.21	1136	778.91	1137	795.47	1138	813.04	1139	831.76
1140	851.52	1141	872.83	1142	895.85	1143	920.86	1144	947.76
1145	977.08	1146	1009.20	1147	1044.55	1148	1083.26	1149	1129.44
1150	1185.66	1151	1256.32	1152	1342.16	1153	1444.68	1154	1562.80
1155	1695.58	1156	1837.49	1157	1979.26	1158	2116.45	1159	2238.03
1160	2334.13	1161	2403.36	1162	2453.21	1163	2483.57	1164	2496.15
1165	2495.05	1166	2482.45	1167	2459.92	1168	2430.90	1169	2400.60
1170	2370.91	1171	2342.40	1172	2315.18	1173	2288.18	1174	2259.16
1175	2224.69	1176	2182.07	1177	2129.56	1178	2066.24	1179	1994.08
1180	1914.11	1181	1829.63	1182	1742.08	1183	1654.52	1184	1567.72
1185	1483.18	1186	1402.24	1187	1324.99	1188	1251.84	1189	1183.24
1190	1118.94	1191	1058.93	1192	1003.17	1193	951.27	1194	903.24
1195	858.64	1196	817.46	1197	779.32	1198	744.06	1199	711.53
1200	681.78	1201	653.87	1202	628.10	1203	604.12	1204	581.70
1205	561.11	1206	541.47	1207	522.94	1208	505.96	1209	490.58
1210	476.06	1211	462.18	1212	449.15	1213	437.35	1214	426.33
1215	415.77	1216	405.88	1217	396.64	1218	387.80	1219	379.29
1220	371.04	1221	363.02	1222	355.26	1223	347.71	1224	340.46
1225	333.40	1226	326.54	1227	320.12	1228	313.83	1229	307.67
1230	301.95	1231	296.76	1232	291.54	1233	286.50	1234	281.79
1235	277.46	1236	273.36	1237	269.58	1238	265.93	1239	262.37
1240	258.88	1241	255.33	1242	251.97	1243	248.61	1244	245.45
1245	242.33	1246	239.18	1247	236.13	1248	233.16	1249	230.34
1250	227.52	1251	224.82	1252	222.12	1253	219.51	1254	216.98
1255	214.64	1256	212.33	1257	210.06	1258	207.89	1259	205.74
1260	203.71	1261	201.75	1262	199.90	1263	197.92	1264	196.04
1265	194.21	1266	192.45	1267	190.68	1268	189.00	1269	187.29
1270	185.55	1271	183.89	1272	182.28	1273	180.64	1274	178.97
1275	177.57	1276	176.07	1277	174.49	1278	173.01	1279	171.65
1280	170.37	1281	169.01	1282	167.82	1283	166.55	1284	165.35
1285	164.19	1286	163.09	1287	162.03	1288	160.99	1289	159.94
1290	158.95	1291	158.00	1292	157.07	1293	156.13	1294	155.17
1295	154.36	1296	153.43	1297	152.62	1298	151.72	1299	150.92
1300	150.15	1310	142.89	1320	137.01	1330	132.16	1340	127.85
1350	123.94	1360	120.33	1370	117.02	1380	113.96	1390	111.19
1400	108.55	1420	104.02	1440	100.25	1460	93.79	1500	92.58

TOTAL VOLUME THIS HYDROGRAPH = 445.79(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	51.24	19.2	51.24	2	959.	.20900	.00	.00	0.	293	7	A36	.01
1352 2A	36.3	85.34	55.5	134.37	2	367.	.12300	.00	.00	0.	293	9	A36	.01
1352 3A	11.1	32.27	66.6	164.04	2	1.	.12300	.00	.00	0.	293	6	A36	.01
1352 4A	25.5	61.81	92.1	225.70	2	662.	.12100	.00	.00	0.	293	9	A37	.01
1352 5A	18.9	50.44	111.0	273.18	2	546.	.11000	.00	.00	0.	293	7	A36	.01
1352 6A	19.2	55.82	130.2	317.58	2	1340.	.16000	.00	.00	0.	293	6	A36	.01
1352 7A	24.7	61.50	154.9	371.08	2	592.	.06400	.00	.00	0.	293	8	A36	.01
1352 8A	20.4	54.45	175.3	407.89	2	1.	.06400	.00	.00	0.	293	7	A36	.01
1352 9B	25.7	67.55	25.7	67.55	2	980.	.09500	.00	.00	0.	291	7	A34	.01
1352 10B	39.8	86.61	65.5	152.27	2	1.	.09500	.00	.00	0.	291	11	A35	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1156 QA   407.88 QAB   558.39 QB   150.51    1352   11B  TB 1155 QB   152.26 QBA   544.00 QA   391.74   *
*                                 1352   11AB TAB 1156 QAB   558.39 QA   407.88 QB   150.51                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	152.26	240.8	558.39	2	761.	.08100	.00	.00	0.	291	0	A35	.00
1352 12A	15.7	46.11	256.5	580.20	2	1228.	.04900	.00	.00	0.	291	6	A35	.01
1352 13A	31.9	76.61	288.4	634.93	2	1.	.04900	.00	.00	0.	291	9	A35	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	12.69	200	13.17	300	13.87	400	14.62
500	15.59	600	16.89	700	19.12	800	22.23	900	26.73
1000	36.15	1050	50.06	1100	72.48	1110	87.22	1120	108.85
1130	132.75	1131	135.16	1132	137.68	1133	140.59	1134	143.65
1135	146.86	1136	150.43	1137	154.46	1138	159.04	1139	163.93
1140	169.16	1141	175.39	1142	182.02	1143	189.35	1144	197.33
1145	206.83	1146	217.00	1147	228.35	1148	241.25	1149	261.85
1150	286.31	1151	319.33	1152	363.42	1153	419.46	1154	478.74
1155	540.99	1156	594.32	1157	629.54	1158	634.93	1159	615.75
1160	576.83	1161	524.45	1162	464.94	1163	409.49	1164	357.53
1165	310.36	1166	269.13	1167	234.39	1168	206.18	1169	182.62
1170	163.56	1171	147.66	1172	134.92	1173	124.30	1174	115.69
1175	108.36	1176	102.28	1177	96.83	1178	92.24	1179	88.00
1180	84.40	1181	81.10	1182	78.19	1183	75.51	1184	72.90
1185	70.66	1186	68.68	1187	66.76	1188	64.90	1189	63.09
1190	61.37	1191	59.73	1192	58.18	1193	56.70	1194	55.44
1195	54.08	1196	52.78	1197	51.54	1198	50.52	1199	49.43
1200	48.62	1201	47.68	1202	46.75	1203	45.82	1204	45.04
1205	44.24	1206	43.46	1207	42.42	1208	41.73	1209	40.92
1210	40.31	1211	39.73	1212	39.14	1213	38.37	1214	37.60
1215	37.02	1216	36.48	1217	35.83	1218	35.37	1219	34.75
1220	34.27	1221	33.79	1222	33.36	1223	32.95	1224	32.26
1225	31.91	1226	31.56	1227	31.19	1228	30.83	1229	30.45
1230	29.92	1231	29.44	1232	29.18	1233	29.11	1234	28.71
1235	28.46	1236	28.19	1237	27.77	1238	27.53	1239	27.19
1240	27.14	1241	26.79	1242	26.60	1243	26.41	1244	26.21
1245	25.89	1246	25.73	1247	25.58	1248	25.41	1249	25.12
1250	25.10	1251	24.80	1252	24.64	1253	24.35	1254	24.36
1255	24.22	1256	23.93	1257	23.80	1258	23.66	1259	23.36
1260	23.22	1261	23.22	1262	23.07	1263	22.80	1264	22.69
1265	22.60	1266	22.52	1267	22.44	1268	22.35	1269	22.22
1270	21.80	1271	21.67	1272	21.53	1273	21.38	1274	21.23
1275	21.08	1276	20.94	1277	20.80	1278	20.56	1279	20.63
1280	20.55	1281	20.45	1282	20.20	1283	20.10	1284	19.99
1285	19.90	1286	19.71	1287	19.80	1288	19.73	1289	19.51
1290	19.43	1291	19.49	1292	19.25	1293	19.16	1294	18.94
1295	19.00	1296	18.90	1297	18.67	1298	18.73	1299	18.50
1300	18.41	1310	17.46	1320	16.86	1330	16.34	1340	15.89
1350	15.49	1360	15.05	1370	14.68	1380	14.32	1390	14.03
1400	13.80	1420	13.31	1440	12.89	1460	11.41	1500	11.41

TOTAL VOLUME THIS HYDROGRAPH = 62.54(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 25-YR BURNED - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	43.33	18.6	43.33	2	704.	.07800	.00	.00	0.	291	9	A34	.01
1352	2A	26.9	56.71	45.5	99.18	2	1.	.07800	.00	.00	0.	291	11	A34	.01
1352	3B	288.4	634.90	288.4	634.90	2	1.	.04700	.00	.00	0.	291	0	A34	.00

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**********************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                  *
*   1352    4A  TA 1155 QA    99.17 QAB   640.08 QB   540.91    1352    4B  TB 1158 QB   634.90 QBA   727.70 QA    92.80   *
*                                 1352    4AB TAB 1158 QAB   727.70 QA    92.80 QB   634.90                                *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	634.90	333.9	727.70	2	1164.	.04700	.00	.00	0.	291	0	A34	.00
1352	5A	37.5	69.77	371.4	786.14	2	1.	.04700	.00	.00	0.	291	14	A34	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	15.96	200	16.56	300	17.45	400	18.34
500	19.57	600	21.16	700	24.22	800	28.62	900	34.97
1000	47.73	1050	65.90	1100	95.14	1110	112.43	1120	139.59
1130	170.04	1131	173.34	1132	176.70	1133	180.42	1134	184.23
1135	187.92	1136	191.96	1137	196.48	1138	201.48	1139	207.08
1140	213.24	1141	220.30	1142	228.23	1143	236.87	1144	246.24
1145	256.96	1146	268.84	1147	282.17	1148	296.77	1149	318.13
1150	345.29	1151	380.54	1152	425.13	1153	481.44	1154	544.44
1155	612.13	1156	678.36	1157	735.80	1158	774.52	1159	786.14
1160	769.97	1161	729.82	1162	672.91	1163	602.75	1164	531.48
1165	464.09	1166	403.12	1167	349.75	1168	307.89	1169	273.25
1170	244.20	1171	219.95	1172	199.75	1173	182.70	1174	168.58
1175	156.80	1176	146.67	1177	137.92	1178	130.73	1179	124.25
1180	118.36	1181	113.29	1182	108.78	1183	104.70	1184	101.04
1185	97.63	1186	94.46	1187	91.79	1188	89.23	1189	86.78
1190	84.51	1191	82.20	1192	80.08	1193	77.94	1194	76.02
1195	74.08	1196	72.37	1197	70.72	1198	69.11	1199	67.55
1200	66.07	1201	64.75	1202	63.58	1203	62.45	1204	61.30
1205	60.25	1206	59.01	1207	58.09	1208	57.06	1209	56.00
1210	55.06	1211	54.04	1212	53.10	1213	52.20	1214	51.42
1215	50.52	1216	49.62	1217	48.87	1218	48.03	1219	47.22
1220	46.60	1221	45.87	1222	45.28	1223	44.60	1224	43.94
1225	43.39	1226	42.81	1227	42.25	1228	41.50	1229	41.04
1230	40.57	1231	39.98	1232	39.50	1233	38.88	1234	38.44
1235	37.98	1236	37.66	1237	37.34	1238	37.01	1239	36.54
1240	36.05	1241	35.70	1242	35.39	1243	35.10	1244	34.71
1245	34.47	1246	34.13	1247	33.97	1248	33.60	1249	33.38
1250	33.06	1251	32.81	1252	32.48	1253	32.27	1254	32.12
1255	31.75	1256	31.54	1257	31.27	1258	31.07	1259	30.87
1260	30.68	1261	30.36	1262	30.14	1263	29.96	1264	29.73
1265	29.56	1266	29.36	1267	29.16	1268	28.87	1269	28.70
1270	28.57	1271	28.33	1272	28.13	1273	27.90	1274	27.68
1275	27.38	1276	27.19	1277	27.02	1278	26.96	1279	26.70
1280	26.54	1281	26.38	1282	26.14	1283	26.00	1284	25.76
1285	25.72	1286	25.57	1287	25.31	1288	25.17	1289	25.07
1290	24.97	1291	24.73	1292	24.59	1293	24.50	1294	24.40
1295	24.17	1296	24.11	1297	23.88	1298	23.90	1299	23.66
1300	23.54	1310	22.33	1320	21.35	1330	20.69	1340	20.07
1350	19.55	1360	19.04	1370	18.50	1380	18.13	1390	17.68
1400	17.34	1420	16.80	1440	16.25	1460	14.52	1500	14.49

TOTAL VOLUME THIS HYDROGRAPH = 80.86(Ac.Ft)

STEVENSON RANCH

50-YEAR BURNED

EXISTING CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	129.86	32.5	129.86	2	1173.	.20100	.00	.00	0.	293	6	A42	.01
1352 2A	34.8	127.84	67.3	252.06	2	369.	.19500	.00	.00	0.	293	7	A42	.01
1352 3A	33.3	108.04	100.6	357.99	2	1353.	.24000	.00	.00	0.	293	9	A42	.01
1352 4A	37.9	139.23	138.5	490.89	2	1.	.24000	.00	.00	0.	293	7	A42	.01
1352 5A	.0	.00	138.5	490.87	4	1.	.01000	6.25	.00	0.	293	99	A42	.00
1352 6B	28.8	115.07	28.8	115.07	2	494.	.25300	.00	.00	0.	293	6	A42	.01
1352 7B	12.2	48.75	41.0	163.82	2	1.	.25300	.00	.00	0.	293	6	A42	.01
1352 8B	22.3	76.54	63.3	240.36	2	1342.	.28700	.00	.00	0.	293	8	A42	.01
1352 9B	24.6	84.43	87.9	317.88	2	1.	.28700	.00	.00	0.	293	8	A42	.01
1352 10B	.0	.00	87.9	317.88	4	1.	.01000	5.25	.00	0.	293	99	A42	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1155 QA   490.82 QAB   808.69 QB   317.87    1352   11B  TB 1155 QB   317.87 QBA   808.69 QA   490.82   *
*                                 1352   11AB TAB 1155 QAB   808.69 QA   490.82 QB   317.87                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	317.87	226.4	808.69	2	655.	.14500	.00	.00	0.	293	0	A42	.00
1352 12A	.0	.00	226.4	801.33	4	1.	.01000	7.50	.00	0.	293	99	A42	.00
1352 13A	24.0	88.17	250.4	887.85	2	1.	.14500	.00	.00	0.	293	7	A42	.01
1352 14A	.0	.00	250.4	887.83	4	1.	.01000	7.75	.00	0.	293	99	A42	.00
1352 15C	37.0	120.05	37.0	120.05	2	826.	.24800	.00	.00	0.	293	9	A42	.01
1352 16C	40.2	137.98	77.2	256.53	2	1267.	.26000	.00	.00	0.	293	8	A42	.01
1352 17C	31.9	109.49	109.1	362.34	2	1.	.26000	.00	.00	0.	293	8	A42	.01
1352 18C	.0	.00	109.1	362.33	4	1.	.01000	5.75	.00	0.	293	99	A42	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1155 QA   887.76 QAC  1250.06 QC   362.30    1352   19C  TC 1155 QC   362.30 QCA  1250.06 QA   887.76   *
*                                 1352   19AC TAC 1155 QAC  1250.06 QA   887.76 QC   362.30                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	362.30	359.5	1250.06	2	1161.	.09000	.00	.00	0.	293	0	A42	.00
1352 20A	.0	.00	359.5	1233.44	5	1.	.01000	11.00	.00	0.	293	99	A42	.00
1352 21A	39.2	127.19	398.7	1355.29	2	1.	.09000	.00	.00	0.	293	9	A42	.01
1352 22A	.0	.00	398.7	1355.29	5	1.	.01000	12.00	.00	0.	293	99	A42	.00
1352 23D	30.8	113.15	30.8	113.15	2	1242.	.23000	.00	.00	0.	293	7	A42	.01
1352 24D	39.3	144.38	70.1	254.01	2	1308.	.03800	.00	.00	0.	293	7	A42	.01
1352 25D	42.3	145.19	112.4	377.85	2	723.	.22800	.00	.00	0.	293	8	A42	.01
1352 26D	30.9	113.52	143.3	467.95	2	720.	.09000	.00	.00	0.	293	7	A42	.01
1352 27D	26.9	98.82	170.2	547.28	2	1.	.09000	.00	.00	0.	293	7	A42	.01
1352 28D	.0	.00	170.2	547.28	4	1.	.01000	6.50	.00	0.	293	99	A42	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1156 QA  1355.27 QAD  1902.54 QD   547.27    1352   29D  TD 1156 QD   547.27 QDA  1902.54 QA  1355.27   *
*                                1352   29AD TAD 1156 QAD  1902.54 QA  1355.27 QD   547.27                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	547.27	568.9	1902.54	2	668.	.04800	.00	.00	0.	293	0	A42	.00
1352	30A	.0	.00	568.9	1884.24	5	1.	.01000	13.00	.00	0.	293	99	A42	.00
1352	31A	29.2	92.29	598.1	1972.54	2	506.	.04400	.00	.00	0.	293	9	A41	.01
1352	32A	22.2	74.26	620.3	2025.67	2	635.	.03900	.00	.00	0.	293	8	A41	.01
1352	33A	23.1	80.46	643.4	2070.48	2	593.	.04200	.00	.00	0.	293	7	A40	.01
1352	34A	35.7	109.62	679.1	2141.85	2	572.	.03500	.00	.00	0.	293	9	A40	.01
1352	35A	29.2	94.93	708.3	2204.41	2	485.	.04100	.00	.00	0.	293	8	A40	.01
1352	36A	25.6	83.22	733.9	2243.48	2	532.	.03800	.00	.00	0.	293	8	A40	.01
1352	37A	.0	.00	733.9	2228.20	5	1.	.01000	14.00	.00	0.	293	99	A42	.00
1352	38A	23.7	80.19	757.6	2261.94	2	396.	.05100	.00	.00	0.	293	7	A39	.01
1352	39A	32.5	99.76	790.1	2315.65	2	838.	.05600	.00	.00	0.	293	8	A38	.01
1352	40A	20.2	72.31	810.3	2315.90	2	1.	.05600	.00	.00	0.	293	6	A38	.01
1352	41A	22.5	67.37	832.8	2343.78	2	1.	.13300	.00	.00	0.	293	7	A35	.01
1352	42A	28.5	80.19	861.3	2397.36	2	840.	.05700	.00	.00	0.	293	9	A37	.01
1352	43A	.0	.00	861.3	2381.36	5	1.	.01000	14.00	.00	0.	293	99	A42	.00
1352	44A	20.2	58.36	881.5	2405.45	2	1.	.05700	.00	.00	0.	293	8	A36	.01
1352	45A	24.8	65.49	906.3	2440.72	2	575.	.03500	.00	.00	0.	293	9	A35	.01
1352	46A	15.1	48.21	921.4	2452.34	2	1319.	.03400	.00	.00	0.	293	7	A37	.01
1352	47A	24.6	63.91	946.0	2460.98	2	1.	.03400	.00	.00	0.	293	10	A36	.01
1352	48A	24.9	74.09	970.9	2481.52	2	722.	.03900	.00	.00	0.	293	8	A37	.01
1352	49A	20.9	64.65	991.8	2480.45	2	846.	.04700	.00	.00	0.	293	7	A36	.01
1352	50A	19.2	61.30	1011.0	2482.83	2	1.	.04700	.00	.00	0.	293	7	A37	.01
1352	51A	.0	.00	1011.0	2482.81	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	52E	28.8	97.45	28.8	97.45	2	940.	.14400	.00	.00	0.	293	7	A39	.01
1352	53E	24.8	83.91	53.6	178.90	2	971.	.27800	.00	.00	0.	293	7	A39	.01
1352	54E	33.4	102.53	87.0	277.60	2	1110.	.18700	.00	.00	0.	293	8	A38	.01
1352	55E	23.1	68.73	110.1	340.36	2	1.	.18700	.00	.00	0.	293	8	A37	.01
1352	56E	.0	.00	110.1	340.36	4	1.	.01000	5.50	.00	0.	293	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1162 QA  2482.78 QAE  2607.85 QE   125.06    1352   57E  TE 1156 QE   340.36 QEA  2050.91 QA  1710.55   *
*                                1352   57AE TAE 1162 QAE  2607.85 QA  2482.78 QE   125.06                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	340.36	1121.1	2607.85	2	180.	.03900	.00	.00	0.	293	0	A42	.00
1352	58A	.0	.00	1121.1	2606.48	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	59A	28.2	81.69	1149.3	2629.39	2	815.	.01800	.00	.00	0.	293	9	A38	.01
1352	60A	27.2	94.48	1176.5	2632.24	2	1136.	.05700	.00	.00	0.	293	6	A37	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	50.37	1194.4	2630.04	2	1.	.05700	.00	.00	0.	293	9	A37	.01
1352	62A	.0	.00	1194.4	2630.03	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	63F	27.0	94.04	27.0	94.04	2	586.	.19600	.00	.00	0.	293	7	A40	.01
1352	64F	40.8	116.11	67.8	209.53	2	727.	.08900	.00	.00	0.	293	10	A39	.01
1352	65F	37.4	108.35	105.2	313.92	2	1.	.08900	.00	.00	0.	293	9	A38	.01
1352	66F	32.6	110.31	137.8	422.05	2	1.	.14100	.00	.00	0.	293	7	A39	.01
1352	67F	18.8	57.71	156.6	478.65	2	677.	.08100	.00	.00	0.	293	8	A38	.01
1352	68F	9.2	30.21	165.8	505.08	2	1.	.08100	.00	.00	0.	293	7	A38	.01
1352	69F	.0	.00	165.8	505.07	4	1.	.01000	6.25	.00	0.	293	99	A42	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1164 QA  2630.03 QAF  2770.15 QF   140.12    1352   70F  TF 1155 QF   505.03 QFA  2258.05 QA  1753.02   *
*                              1352   70AF TAF 1163 QAF  2798.01 QA  2629.97 QF   168.04                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	505.03	1360.2	2798.01	2	561.	.03600	.00	.00	0.	293	0	A42	.00
1352	71A	.0	.00	1360.2	2796.49	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	72A	6.4	22.23	1366.6	2799.95	2	1.	.03600	.00	.00	0.	293	6	A37	.01
1352	73A	20.0	61.92	1386.6	2814.54	2	434.	.03000	.00	.00	0.	291	8	A37	.01
1352	74A	21.9	65.93	1408.5	2826.50	2	420.	.02900	.00	.00	0.	291	8	A36	.01
1352	75A	42.0	119.85	1450.5	2853.21	2	1019.	.02000	.00	.00	0.	291	9	A36	.01
1352	76A	26.1	74.48	1476.6	2866.11	2	249.	.04000	.00	.00	0.	291	9	A36	.01
1352	77A	12.2	39.18	1488.8	2872.26	2	1.	.04000	.00	.00	0.	291	7	A36	.01
1352	78A	.0	.00	1488.8	2872.26	5	1.	.01000	15.00	.00	0.	291	99	A42	.00
1352	79A	14.2	46.99	1503.0	2881.34	2	643.	.01900	.00	.00	0.	291	7	A37	.01
1352	80A	18.2	54.79	1521.2	2891.01	2	751.	.02400	.00	.00	0.	291	8	A36	.01
1352	81A	23.3	72.13	1544.5	2901.81	2	709.	.02400	.00	.00	0.	291	8	A37	.01
1352	82A	22.2	60.44	1566.7	2914.70	2	1.	.02400	.00	.00	0.	291	10	A36	.01
1352	83A	.0	.00	1566.7	2914.69	5	1.	.01000	16.00	.00	0.	291	99	A42	.00
1352	84B	26.2	72.44	26.2	72.44	2	1438.	.06400	.00	.00	0.	291	9	A35	.01
1352	85B	33.5	91.21	59.7	154.85	2	1.	.06400	.00	.00	0.	291	10	A36	.01
1352	86B	.0	.00	59.7	154.85	4	1.	.01000	4.25	.00	0.	291	99	A42	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1166 QA  2914.69 QAB  2960.94 QB    46.24    1352   87B  TB 1156 QB   154.84 QBA  2171.64 QA  2016.79   *
*                              1352   87AB TAB 1165 QAB  2963.56 QA  2911.00 QB    52.56                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	154.84	1626.4	2963.56	2	355.	.02300	.00	.00	0.	291	0	A42	.00
1352	88A	2.8	11.12	1629.2	2964.36	2	1.	.02300	.00	.00	0.	291	5	A37	.01
1352	89C	21.6	75.53	21.6	75.53	2	1328.	.09400	.00	.00	0.	291	7	A39	.01
1352	90C	23.5	67.73	45.1	138.50	2	1.	.09400	.00	.00	0.	291	10	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN A STORM DAY 4

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1165 QA  2964.36 QAC  3000.74 QC    36.39    1352   91C  TC 1156 QC   138.50 QCA  2244.34 QA  2105.84   *
*                              1352   91AC TAC 1165 QAC  3000.74 QA  2964.36 QC    36.39                                 *
*****************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	138.50	1674.3	3000.74	2	927.	.02400	.00	.00	0.	291	0	A42	.00
1352	92A	30.8	95.35	1705.1	3017.26	2	999.	.01300	.00	.00	0.	291	8	A37	.01
1352	93A	42.1	130.33	1747.2	3038.95	2	448.	.02200	.00	.00	0.	291	8	A37	.01
1352	94A	16.0	54.38	1763.2	3047.31	2	1.	.02200	.00	.00	0.	291	7	A38	.01
1352	95D	371.4	1093.80	371.4	1093.80	2	1.	.02200	.00	.00	0.	291	0	A42	.00

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1167 QA  3047.30 QAD  3457.12 QD   409.82    1352   96D  TD 1158 QD  1093.78 QDA  3379.77 QA  2285.99   *
*                              1352   96AD TAD 1162 QAD  3652.37 QA  2830.00 QD   822.37                                 *
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SUBAREA SUBAREA TOTAL TOTAL CONV CONV CONV CONV CONV CONTROL SOIL RAIN PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	371.4	1093.78	2134.6	3652.37	2	892.	.01700	.00	.00	0.	291	0	A42	.00
1352	97A	14.4	48.94	2149.0	3656.20	2	1.	.01700	.00	.00	0.	291	7	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	120.08	200	123.42	300	131.00	400	140.31
500	152.19	600	166.90	700	185.36	800	212.63	900	262.52
1000	355.99	1050	459.83	1100	654.35	1110	732.80	1120	857.33
1130	1028.30	1131	1047.43	1132	1066.93	1133	1087.38	1134	1108.35
1135	1130.44	1136	1153.78	1137	1178.53	1138	1204.70	1139	1233.05
1140	1263.31	1141	1295.99	1142	1331.19	1143	1369.24	1144	1409.94
1145	1454.58	1146	1503.53	1147	1557.37	1148	1615.91	1149	1687.47
1150	1775.96	1151	1887.40	1152	2024.12	1153	2191.16	1154	2384.47
1155	2599.61	1156	2820.56	1157	3036.85	1158	3230.16	1159	3386.93
1160	3504.31	1161	3588.38	1162	3637.50	1163	3656.20	1164	3648.94
1165	3618.03	1166	3571.19	1167	3518.60	1168	3466.45	1169	3416.26
1170	3367.28	1171	3315.33	1172	3255.88	1173	3182.98	1174	3094.21
1175	2988.87	1176	2868.78	1177	2738.19	1178	2601.08	1179	2460.72
1180	2322.78	1181	2187.31	1182	2057.71	1183	1935.04	1184	1819.55
1185	1711.58	1186	1611.74	1187	1519.22	1188	1434.16	1189	1355.81
1190	1283.93	1191	1217.78	1192	1157.04	1193	1101.25	1194	1050.35
1195	1004.32	1196	961.60	1197	922.08	1198	885.64	1199	851.97
1200	821.04	1201	792.15	1202	765.76	1203	741.53	1204	719.54
1205	698.54	1206	678.84	1207	660.64	1208	644.15	1209	628.50
1210	613.64	1211	599.84	1212	587.00	1213	574.73	1214	562.77
1215	551.24	1216	540.15	1217	529.47	1218	519.06	1219	509.05
1220	499.25	1221	489.94	1222	480.75	1223	471.92	1224	463.22
1225	455.38	1226	447.72	1227	440.38	1228	433.38	1229	426.85
1230	420.64	1231	414.78	1232	409.13	1233	403.45	1234	397.91
1235	392.47	1236	387.21	1237	381.94	1238	376.86	1239	371.82
1240	366.85	1241	362.00	1242	357.27	1243	352.73	1244	348.25
1245	343.89	1246	339.82	1247	335.93	1248	332.30	1249	328.72
1250	325.23	1251	321.78	1252	318.34	1253	314.86	1254	311.63
1255	308.24	1256	305.01	1257	301.79	1258	298.60	1259	295.30
1260	292.24	1261	289.07	1262	286.13	1263	283.03	1264	280.15
1265	277.24	1266	274.42	1267	271.57	1268	268.97	1269	266.29
1270	263.78	1271	261.33	1272	258.91	1273	256.54	1274	254.28
1275	252.01	1276	249.90	1277	247.97	1278	246.06	1279	244.11
1280	242.23	1281	240.32	1282	238.42	1283	236.57	1284	234.70
1285	232.94	1286	231.19	1287	229.57	1288	228.04	1289	226.54
1290	224.99	1291	223.40	1292	221.85	1293	220.35	1294	218.90
1295	217.47	1296	216.02	1297	214.57	1298	213.08	1299	211.74
1300	210.37	1310	198.12	1320	187.55	1330	178.95	1340	171.59
1350	164.92	1360	159.30	1370	153.77	1380	148.58	1390	144.24
1400	140.10	1420	133.65	1440	128.57	1460	120.65	1500	119.36

TOTAL VOLUME THIS HYDROGRAPH = 621.96(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	68.78	19.2	68.78	2	959.	.20900	.00	.00	0.	293	7	A41	.01
1352 2A	36.3	121.43	55.5	187.54	2	367.	.12300	.00	.00	0.	293	8	A41	.01
1352 3A	11.1	43.17	66.6	228.52	2	1.	.12300	.00	.00	0.	293	6	A41	.01
1352 4A	25.5	87.52	92.1	316.04	2	662.	.12100	.00	.00	0.	293	8	A42	.01
1352 5A	18.9	73.51	111.0	380.29	2	546.	.11000	.00	.00	0.	293	6	A41	.01
1352 6A	19.2	83.14	130.2	439.21	2	1340.	.16000	.00	.00	0.	293	5	A41	.01
1352 7A	24.7	88.49	154.9	518.20	2	592.	.06400	.00	.00	0.	293	7	A41	.01
1352 8A	20.4	77.37	175.3	567.38	2	1.	.06400	.00	.00	0.	293	6	A40	.01
1352 9B	25.7	89.86	25.7	89.86	2	980.	.09500	.00	.00	0.	291	7	A39	.01
1352 10B	39.8	121.28	65.5	207.58	2	1.	.09500	.00	.00	0.	291	10	A40	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1156 QA   567.38 QAB   772.07 QB   204.69    1352   11B  TB 1155 QB   207.57 QBA   772.13 QA   564.56   *
*                                 1352   11AB TAB 1155 QAB   772.13 QA   564.56 QB   207.57                            *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	207.57	240.8	772.13	2	761.	.08100	.00	.00	0.	291	0	A40	.00
1352 12A	15.7	67.70	256.5	810.50	2	1228.	.04900	.00	.00	0.	291	5	A40	.01
1352 13A	31.9	104.66	288.4	882.88	2	1.	.04900	.00	.00	0.	291	8	A39	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 13A
HYDROGRAPH AT 1352 13A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	16.42	200	17.34	300	18.72	400	20.24
500	22.15	600	24.45	700	27.52	800	32.13	900	40.68
1000	55.21	1050	73.72	1100	105.18	1110	126.76	1120	156.37
1130	188.75	1131	191.95	1132	195.54	1133	199.63	1134	204.13
1135	208.84	1136	214.11	1137	220.53	1138	227.50	1139	234.86
1140	242.66	1141	251.51	1142	261.12	1143	271.84	1144	283.36
1145	296.52	1146	311.24	1147	327.65	1148	346.19	1149	375.97
1150	413.72	1151	465.96	1152	536.23	1153	623.74	1154	715.36
1155	802.54	1156	865.24	1157	882.88	1158	862.22	1159	809.98
1160	735.43	1161	649.61	1162	569.10	1163	493.07	1164	424.83
1165	366.08	1166	317.56	1167	278.36	1168	246.90	1169	221.20
1170	200.88	1171	184.56	1172	171.37	1173	160.17	1174	150.90
1175	143.07	1176	136.09	1177	129.93	1178	124.51	1179	120.02
1180	115.79	1181	111.62	1182	107.73	1183	104.38	1184	101.46
1185	98.73	1186	96.09	1187	93.56	1188	90.94	1189	88.79
1190	86.53	1191	84.34	1192	82.27	1193	80.33	1194	78.48
1195	76.72	1196	75.24	1197	73.64	1198	72.34	1199	70.92
1200	69.74	1201	68.41	1202	67.36	1203	66.18	1204	65.21
1205	64.06	1206	62.92	1207	61.99	1208	60.87	1209	60.02
1210	59.05	1211	58.31	1212	57.39	1213	56.72	1214	56.06
1215	55.21	1216	54.57	1217	53.99	1218	53.38	1219	52.58
1220	52.01	1221	51.45	1222	50.71	1223	50.16	1224	49.40
1225	48.82	1226	48.04	1227	47.68	1228	46.98	1229	46.31
1230	46.04	1231	45.40	1232	44.95	1233	44.28	1234	44.02
1235	43.37	1236	42.92	1237	42.49	1238	41.89	1239	41.52
1240	41.14	1241	40.77	1242	40.24	1243	39.94	1244	39.64
1245	39.36	1246	39.05	1247	38.70	1248	38.15	1249	37.81
1250	37.47	1251	37.15	1252	36.87	1253	36.39	1254	36.07
1255	35.70	1256	35.33	1257	34.99	1258	34.49	1259	34.22
1260	33.97	1261	33.71	1262	33.45	1263	32.98	1264	32.93
1265	32.49	1266	32.46	1267	32.05	1268	31.63	1269	31.60
1270	31.21	1271	31.26	1272	30.91	1273	30.75	1274	30.56
1275	30.35	1276	30.13	1277	29.73	1278	29.75	1279	29.39
1280	29.25	1281	29.09	1282	28.75	1283	28.78	1284	28.63
1285	28.52	1286	28.19	1287	28.05	1288	27.92	1289	27.80
1290	27.66	1291	27.38	1292	27.27	1293	27.14	1294	27.03
1295	26.95	1296	26.86	1297	26.74	1298	26.61	1299	26.45
1300	26.29	1310	25.22	1320	24.19	1330	23.36	1340	22.40
1350	21.68	1360	21.00	1370	20.11	1380	19.40	1390	18.97
1400	18.27	1420	17.57	1440	16.74	1460	14.78	1500	14.78

TOTAL VOLUME THIS HYDROGRAPH = 88.36(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - EXISTING 50-YR BURNED - BASIN C STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	1A	18.6	59.30	18.6	59.30	2	704.	.07800	.00	.00	0.	291	8	A38	.01
1352	2A	26.9	79.83	45.5	137.20	2	1.	.07800	.00	.00	0.	291	10	A39	.01
1352	3B	288.4	882.90	288.4	882.90	2	1.	.04700	.00	.00	0.	291	0	A39	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352    4A  TA 1155 QA   137.19 QAB   939.58 QB   802.39    1352    4B  TB 1157 QB   882.89 QBA  1014.27 QA   131.38   *
*                                1352    4AB TAB 1157 QAB  1014.27 QA   131.38 QB   882.89                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	4AB	288.4	882.89	333.9	1014.27	2	1164.	.04700	.00	.00	0.	291	0	A39	.00
1352	5A	37.5	98.11	371.4	1093.77	2	1.	.04700	.00	.00	0.	291	12	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:

HYDROGRAPH AT POINT 5A

HYDROGRAPH AT 1352 5A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	20.58	200	21.65	300	23.59	400	25.74
500	28.40	600	31.77	700	36.03	800	42.42	900	53.65
1000	72.61	1050	96.53	1100	137.05	1110	162.90	1120	200.14
1130	241.47	1131	246.16	1132	250.69	1133	255.13	1134	260.11
1135	265.60	1136	271.51	1137	278.23	1138	285.87	1139	294.76
1140	304.26	1141	315.06	1142	326.66	1143	339.00	1144	352.52
1145	367.97	1146	385.10	1147	404.31	1148	425.66	1149	457.11
1150	498.39	1151	553.31	1152	624.42	1153	714.04	1154	813.07
1155	915.83	1156	1007.61	1157	1071.18	1158	1093.77	1159	1073.10
1160	1015.42	1161	924.80	1162	822.16	1163	718.88	1164	621.54
1165	534.57	1166	466.58	1167	409.74	1168	362.98	1169	324.47
1170	292.72	1171	266.46	1172	244.98	1173	227.52	1174	212.80
1175	200.13	1176	189.57	1177	180.42	1178	172.13	1179	164.70
1180	158.30	1181	152.79	1182	147.43	1183	142.46	1184	137.86
1185	133.93	1186	130.26	1187	126.74	1188	123.59	1189	120.35
1190	117.37	1191	114.54	1192	111.67	1193	109.11	1194	106.63
1195	104.23	1196	101.93	1197	99.60	1198	97.56	1199	95.81
1200	93.99	1201	92.51	1202	90.73	1203	89.15	1204	87.81
1205	86.37	1206	84.97	1207	83.55	1208	82.16	1209	80.97
1210	79.64	1211	78.32	1212	77.22	1213	76.04	1214	74.93
1215	74.04	1216	73.04	1217	72.20	1218	71.29	1219	70.58
1220	69.69	1221	68.93	1222	68.04	1223	67.32	1224	66.43
1225	65.55	1226	64.96	1227	64.03	1228	63.13	1229	62.28
1230	61.73	1231	60.90	1232	60.28	1233	59.53	1234	58.93
1235	58.18	1236	57.63	1237	57.08	1238	56.35	1239	55.78
1240	55.21	1241	54.67	1242	54.01	1243	53.37	1244	52.91
1245	52.48	1246	52.08	1247	51.56	1248	51.21	1249	50.81
1250	50.18	1251	49.72	1252	49.31	1253	48.78	1254	48.40
1255	47.98	1256	47.55	1257	46.98	1258	46.54	1259	46.10
1260	45.67	1261	45.12	1262	44.92	1263	44.41	1264	43.89
1265	43.70	1266	43.23	1267	42.92	1268	42.65	1269	42.34
1270	41.83	1271	41.53	1272	41.25	1273	41.02	1274	40.64
1275	40.38	1276	40.16	1277	39.91	1278	39.62	1279	39.31
1280	38.92	1281	38.69	1282	38.44	1283	38.20	1284	37.82
1285	37.64	1286	37.46	1287	37.27	1288	37.06	1289	36.69
1290	36.47	1291	36.26	1292	36.09	1293	35.90	1294	35.71
1295	35.51	1296	35.32	1297	35.17	1298	34.92	1299	34.80
1300	34.68	1310	33.17	1320	31.48	1330	30.39	1340	28.99
1350	27.91	1360	26.98	1370	25.80	1380	24.82	1390	24.07
1400	23.21	1420	22.06	1440	21.14	1460	18.71	1500	18.73

TOTAL VOLUME THIS HYDROGRAPH = 114.72(Ac.Ft)

STEVENSON RANCH

2-YEAR BURNED

DEVELOPED CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	6.31	32.5	6.31	2	1173.	.20100	.00	.00	0.	293	17	A17	.01
1352 2A	34.8	6.01	67.3	12.09	2	369.	.19500	.00	.00	0.	293	20	A17	.01
1352 3A	33.3	4.85	100.6	16.90	2	1353.	.24000	.00	.00	0.	293	25	A17	.01
1352 4A	37.9	6.55	138.5	22.99	2	1.	.24000	.00	.00	0.	293	20	A17	.01
1352 5A	.0	.00	138.5	22.99	4	1.	.01000	2.00	.00	0.	293	99	A16	.00
1352 6B	28.8	5.59	28.8	5.59	2	494.	.25300	.00	.00	0.	293	17	A17	.01
1352 7B	12.2	2.48	41.0	8.03	2	1.	.25300	.00	.00	0.	293	16	A17	.01
1352 8B	22.3	3.58	63.3	11.62	2	1342.	.28700	.00	.00	0.	293	22	A17	.01
1352 9B	24.6	3.83	87.9	15.29	2	1.	.28700	.00	.00	0.	293	23	A17	.01
1352 10B	.0	.00	87.9	15.29	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1160 QA    22.99 QAB    38.19 QB    15.20    1352   11B  TB 1159 QB    15.29 QBA    38.06 QA    22.77   *
*                                1352   11AB TAB 1160 QAB    38.19 QA    22.99 QB    15.20                                *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	15.29	226.4	38.19	2	655.	.14500	.00	.00	0.	293	0	A16	.00
1352 12A	.0	.00	226.4	38.08	4	1.	.01000	2.50	.00	0.	293	99	A16	.00
1352 13A	24.0	4.48	250.4	42.19	2	1.	.14500	.00	.00	0.	293	18	A17	.01
1352 14A	.0	.00	250.4	42.19	4	1.	.01000	2.50	.00	0.	293	99	A16	.00
1352 15C	37.0	5.58	37.0	5.58	2	826.	.24800	.00	.00	0.	293	24	A17	.01
1352 16C	40.2	6.06	77.2	11.57	2	1267.	.26000	.00	.00	0.	293	24	A17	.01
1352 17C	31.9	5.31	109.1	16.64	2	1.	.26000	.00	.00	0.	293	21	A17	.01
1352 18C	.0	.00	109.1	16.64	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1161 QA    42.19 QAC    58.76 QC    16.57    1352   19C  TC 1160 QC    16.64 QCA    58.77 QA    42.13   *
*                                1352   19AC TAC 1160 QAC    58.77 QA    42.13 QC    16.64                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	16.64	359.5	58.77	2	1161.	.09000	.00	.00	0.	293	0	A16	.00
1352 20A	.0	.00	359.5	58.44	4	1.	.01000	3.00	.00	0.	293	99	A16	.00
1352 21A	39.2	5.71	398.7	63.82	2	1.	.09000	.00	.00	0.	293	25	A17	.01
1352 22A	.0	.00	398.7	63.82	4	1.	.01000	3.00	.00	0.	293	99	A16	.00
1352 23D	30.8	5.32	30.8	5.32	2	1242.	.23000	.00	.00	0.	293	20	A17	.01
1352 24D	39.3	7.06	70.1	12.11	2	1308.	.03800	.00	.00	0.	293	19	A17	.01
1352 25D	42.3	7.04	112.4	17.63	2	723.	.22800	.00	.00	0.	293	21	A17	.01
1352 26D	30.9	5.77	143.3	22.35	2	720.	.09000	.00	.00	0.	293	18	A17	.01
1352 27D	26.9	4.65	170.2	26.24	2	1.	.09000	.00	.00	0.	293	20	A17	.01
1352 28D	.0	.00	170.2	26.23	4	1.	.01000	2.25	.00	0.	293	99	A16	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
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*   1352   29A  TA 1163 QA    63.81 QAD    89.94 QD    26.13    1352   29D  TD 1164 QD    26.23 QDA    89.66 QA    63.43   *
*                                1352   29AD TAD 1163 QAD    89.94 QA    63.81 QD    26.13                                  *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	26.23	568.9	89.94	2	668.	.04800	.00	.00	0.	293	0	A16	.00
1352	30A	.0	.00	568.9	89.62	4	1.	.01000	3.50	.00	0.	293	99	A16	.00
1352	31A	29.2	3.86	598.1	93.08	2	506.	.04400	.00	.00	0.	293	25	A16	.01
1352	32A	22.2	3.24	620.3	95.60	2	635.	.03900	.00	.00	0.	293	22	A16	.01
1352	33A	23.1	3.76	643.4	97.95	2	593.	.04200	.00	.00	0.	293	19	A16	.01
1352	34A	35.7	4.55	679.1	101.32	2	572.	.03500	.00	.00	0.	293	26	A16	.01
1352	35A	29.2	3.86	708.3	103.83	2	485.	.04100	.00	.00	0.	293	25	A16	.01
1352	36A	25.6	3.74	733.9	105.86	2	532.	.03800	.00	.00	0.	293	22	A16	.01
1352	37A	.0	.00	733.9	105.57	4	1.	.01000	3.50	.00	0.	293	99	A16	.00
1352	38A	23.7	3.47	757.6	106.68	2	396.	.05100	.00	.00	0.	293	19	A15	.01
1352	39A	32.5	3.82	790.1	109.27	2	838.	.05600	.00	.00	0.	293	25	A15	.01
1352	40A	20.2	3.08	810.3	109.67	2	1.	.05600	.00	.00	0.	293	18	A15	.01
1352	41A	22.5	2.81	832.8	110.54	2	1.	.13300	.00	.00	0.	293	20	A14	.01
1352	42A	28.5	3.12	861.3	112.82	2	840.	.05700	.00	.00	0.	293	27	A15	.01
1352	43A	.0	.00	861.3	112.36	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	44A	20.2	2.24	881.5	113.33	2	1.	.05700	.00	.00	0.	293	23	A14	.01
1352	45A	24.8	2.28	906.3	115.15	2	575.	.03500	.00	.00	0.	293	29	A14	.01
1352	46A	15.1	2.21	921.4	115.28	2	1319.	.03400	.00	.00	0.	293	19	A15	.01
1352	47A	24.6	2.22	946.0	115.28	2	1.	.03400	.00	.00	0.	293	30	A14	.01
1352	48A	24.9	3.12	970.9	116.13	2	722.	.03900	.00	.00	0.	293	23	A15	.01
1352	49A	20.9	2.41	991.8	116.29	2	846.	.04700	.00	.00	0.	293	22	A14	.01
1352	50A	19.2	2.71	1011.0	116.50	2	1.	.04700	.00	.00	0.	293	20	A15	.01
1352	51A	.0	.00	1011.0	116.49	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	52E	28.8	4.69	28.8	4.69	2	940.	.14400	.00	.00	0.	293	19	A16	.01
1352	53E	24.8	3.37	53.6	7.91	2	971.	.27800	.00	.00	0.	293	21	A15	.01
1352	54E	33.4	4.19	87.0	11.96	2	1110.	.18700	.00	.00	0.	293	23	A15	.01
1352	55E	23.1	2.80	110.1	14.51	2	1.	.18700	.00	.00	0.	293	24	A15	.01
1352	56E	.0	.00	110.1	14.51	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                   CONFLUENCE Q'S                                                          *
*   1352   57A  TA 1183 QA   116.49 QAE   120.72 QE     4.22    1352   57E  TE 1162 QE    14.51 QEA    78.19 QA    63.68   *
*                                1352   57AE TAE 1183 QAE   120.72 QA   116.49 QE     4.22                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	14.51	1121.1	120.72	2	180.	.03900	.00	.00	0.	293	0	A16	.00
1352	58A	.0	.00	1121.1	120.55	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	59A	28.2	3.09	1149.3	121.51	2	815.	.01800	.00	.00	0.	293	27	A15	.01
1352	60A	27.2	4.32	1176.5	121.42	2	1136.	.05700	.00	.00	0.	293	17	A15	.01

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1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	1.96	1194.4	121.44	2	1.	.05700	.00	.00	0.	293	27	A15	.01
1352	62A	.0	.00	1194.4	121.44	4	1.	.01000	3.75	.00	0.	293	99	A16	.00
1352	63F	27.0	4.23	27.0	4.23	2	586.	.19600	.00	.00	0.	293	20	A16	.01
1352	64F	40.8	4.05	67.8	8.26	2	727.	.08900	.00	.00	0.	293	30	A15	.01
1352	65F	37.4	4.09	105.2	12.24	2	1.	.08900	.00	.00	0.	293	27	A15	.01
1352	66F	32.6	4.60	137.8	16.68	2	1.	.14100	.00	.00	0.	293	20	A15	.01
1352	67F	18.8	2.36	156.6	19.02	2	677.	.08100	.00	.00	0.	293	23	A15	.01
1352	68F	9.2	1.30	165.8	20.16	2	1.	.08100	.00	.00	0.	293	20	A15	.01
1352	69F	.0	.00	165.8	20.16	4	1.	.01000	2.00	.00	0.	293	99	A16	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1188 QA   121.44 QAF   127.09 QF     5.65    1352   70F  TF 1161 QF    20.16 QFA    91.68 QA    71.52   *
*                                1352   70AF TAF 1188 QAF   127.09 QA   121.44 QF     5.65                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF  165.8      20.16    1360.2    127.09   2     561.   .03600      .00   .00        0.  293   0   A16   .00
    1352   71A      .0        .00    1360.2    126.85   4       1.   .01000     3.75   .00        0.  293  99   A16   .00
    1352   72A     6.4        .98    1366.6    127.01   2       1.   .03600      .00   .00        0.  293  18   A15   .01
    1352   73A    20.0       4.20    1386.6    127.46   2     434.   .03000      .00   .00        0.  291  18   A15   .01
    1352   74A    21.9       4.33    1408.5    127.69   2     420.   .02900      .00   .00        0.  291  17   A14   .01
    1352   75A    42.0       6.87    1450.5    128.38   2    1019.   .02000      .00   .00        0.  291  22   A14   .01
    1352   76A    26.1       4.41    1476.6    128.03   2     249.   .04000      .00   .00        0.  291  21   A14   .01
    1352   77A    12.2       2.41    1488.8    128.24   2       1.   .04000      .00   .00        0.  291  17   A14   .01
    1352   78A      .0        .00    1488.8    128.24   4       1.   .01000     3.75   .00        0.  291  99   A16   .00
    1352   79A    14.2       3.10    1503.0    128.53   2     643.   .01900      .00   .00        0.  291  17   A15   .01
    1352   80A    18.2       3.45    1521.2    128.56   2     751.   .02400      .00   .00        0.  291  18   A14   .01
    1352   81A    23.3       4.89    1544.5    128.68   2     709.   .02400      .00   .00        0.  291  18   A15   .01
    1352   82A    22.2       3.39    1566.7    128.81   2       1.   .02400      .00   .00        0.  291  24   A14   .01
    1352   83A      .0        .00    1566.7    128.81   4       1.   .01000     3.75   .00        0.  291  99   A16   .00
    1352   84B    26.2       4.42      26.2      4.42   2    1438.   .06400      .00   .00        0.  291  21   A14   .01
    1352   85B    33.5       5.29      59.7      9.01   2       1.   .06400      .00   .00        0.  291  23   A14   .01
    1352   86B      .0        .00      59.7      9.01   4       1.   .01000     2.00   .00        0.  291  99   A16   .00
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1201 QA   128.81 QAB   130.00 QB     1.19    1352   87B  TB 1162 QB     9.01 QBA    96.90 QA    87.90   *
*                                1352   87AB TAB 1201 QAB   130.00 QA   128.81 QB     1.19                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB   59.7       9.01    1626.4    130.00   2     405.   .02300      .00   .00        0.  291   0   A16   .00
    1352   88A     2.8        .92    1629.2    129.88   2       1.   .02300      .00   .00        0.  291   9   A15   .01
    1352   89C    21.6       5.17      21.6      5.17   2    1328.   .09400      .00   .00        0.  291  15   A15   .01
    1352   90C    23.5       4.29      45.1      8.94   2       1.   .09400      .00   .00        0.  291  22   A15   .01
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1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED - BASIN A STORM DAY 4

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                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1202 QA   129.87 QAC   130.77 QC      .90    1352   91C  TC 1160 QC     8.94 QCA    96.91 QA    87.97   *
*                                1352   91AC TAC 1202 QAC   130.77 QA   129.87 QC      .90                                 *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC   45.1       8.94    1674.3    130.77   2     977.   .02400      .00   .00        0.  291   0   A16   .00
    1352   92A    30.8       6.24    1705.1    130.85   2     999.   .01300      .00   .00        0.  291  19   A15   .01
    1352   93A    37.7       7.39    1742.8    130.71   2     448.   .02200      .00   .00        0.  291  20   A15   .01
    1352   94A    11.0       2.63    1753.8    130.78   2       1.   .02200      .00   .00        0.  291  15   A15   .01
    1352   95D   382.1      61.00     382.1     61.00   2       1.   .02200      .00   .00        0.  291   0   A16   .00
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1210 QA   130.78 QAD   143.25 QD    12.47    1352   96D  TD 1166 QD    61.00 QDA   162.30 QA   101.30   *
*                                1352   96AD TAD 1170 QAD   168.31 QA   110.40 QD    57.91                                *
*****************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
```

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	61.00	2135.9	168.31	6	250.	.01600	32.00	.00	0.	291	0	A16	.00
1352	97A	13.4	3.06	2149.3	168.66	2	642.	.01700	.00	.00	0.	291	16	A15	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 97A

HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	18.19	200	18.84	300	19.71	400	20.77
500	22.26	600	23.72	700	25.71	800	28.28	900	32.23
1000	38.17	1050	43.75	1100	53.98	1110	57.06	1120	61.00
1130	66.34	1131	66.88	1132	67.49	1133	68.14	1134	68.77
1135	69.42	1136	70.10	1137	70.80	1138	71.54	1139	72.32
1140	73.11	1141	73.98	1142	74.91	1143	75.87	1144	76.96
1145	78.20	1146	79.56	1147	81.01	1148	82.61	1149	84.78
1150	87.44	1151	90.72	1152	94.61	1153	99.21	1154	104.22
1155	109.60	1156	115.07	1157	120.45	1158	125.75	1159	130.96
1160	136.29	1161	141.58	1162	146.55	1163	151.27	1164	155.58
1165	159.13	1166	162.16	1167	164.49	1168	166.26	1169	167.66
1170	168.54	1171	168.66	1172	168.12	1173	167.14	1174	165.84
1175	164.48	1176	163.16	1177	161.81	1178	160.41	1179	158.91
1180	157.33	1181	155.65	1182	153.91	1183	152.18	1184	150.48
1185	148.86	1186	147.26	1187	145.68	1188	144.11	1189	142.59
1190	141.11	1191	139.59	1192	138.14	1193	136.96	1194	135.90
1195	135.15	1196	135.04	1197	134.82	1198	134.24	1199	134.21
1200	134.89	1201	135.77	1202	136.44	1203	136.86	1204	137.47
1205	138.48	1206	139.73	1207	140.97	1208	142.05	1209	142.78
1210	143.19	1211	143.17	1212	142.73	1213	141.92	1214	140.73
1215	139.20	1216	137.41	1217	135.37	1218	133.27	1219	130.86
1220	128.51	1221	125.95	1222	123.33	1223	120.67	1224	117.99
1225	115.31	1226	112.68	1227	110.05	1228	107.46	1229	104.89
1230	102.42	1231	99.94	1232	97.56	1233	95.23	1234	92.99
1235	90.79	1236	88.68	1237	86.58	1238	84.61	1239	82.69
1240	80.84	1241	79.01	1242	77.30	1243	75.61	1244	74.06
1245	72.51	1246	71.06	1247	69.63	1248	68.29	1249	66.95
1250	65.70	1251	64.43	1252	63.25	1253	62.07	1254	61.01
1255	59.92	1256	58.91	1257	57.87	1258	56.94	1259	56.01
1260	55.20	1261	54.35	1262	53.58	1263	52.81	1264	52.12
1265	51.67	1266	50.93	1267	50.35	1268	49.64	1269	49.07
1270	48.40	1271	47.85	1272	47.21	1273	46.69	1274	46.09
1275	45.61	1276	45.05	1277	44.60	1278	44.12	1279	43.73
1280	43.00	1281	42.85	1282	42.19	1283	42.08	1284	41.47
1285	41.39	1286	40.72	1287	40.67	1288	40.07	1289	40.01
1290	39.42	1291	39.39	1292	38.81	1293	38.78	1294	38.23
1295	38.21	1296	37.55	1297	37.77	1298	36.84	1299	37.57
1300	35.94	1310	34.40	1320	30.89	1330	31.51	1340	27.65
1350	29.46	1360	25.08	1370	27.90	1380	23.05	1390	26.59
1400	21.71	1420	24.64	1440	19.61	1460	21.71	1500	18.09

TOTAL VOLUME THIS HYDROGRAPH = 69.83(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	3.25	19.2	3.25	2	959.	.20900	.00	.00	0.	293	18	A16	.01
1352 2A	36.3	5.11	55.5	8.28	2	367.	.12300	.00	.00	0.	293	23	A16	.01
1352 3A	11.1	2.05	66.6	10.20	2	1.	.12300	.00	.00	0.	293	16	A16	.01
1352 4A	25.5	3.97	92.1	14.15	2	662.	.12100	.00	.00	0.	293	23	A17	.01
1352 5A	18.9	3.35	111.0	17.23	2	546.	.11000	.00	.00	0.	293	17	A16	.01
1352 6A	19.2	3.90	130.2	20.58	2	1340.	.16000	.00	.00	0.	293	14	A16	.01
1352 7A	24.7	3.87	154.9	23.82	2	592.	.06400	.00	.00	0.	293	20	A16	.01
1352 8A	20.4	3.46	175.3	26.50	2	1.	.06400	.00	.00	0.	293	18	A16	.01
1352 9B	25.7	6.15	25.7	6.15	2	980.	.09500	.00	.00	0.	291	15	A15	.01
1352 10B	39.8	6.36	65.5	12.27	2	1.	.09500	.00	.00	0.	291	30	A16	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1163 QA    26.50 QAB    38.26 QB    11.75    1352   11B  TB 1160 QB    12.27 QBA    36.84 QA    24.57   *
*                              1352   11AB TAB 1162 QAB    38.26 QA    26.24 QB    12.02                                 *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	12.27	240.8	38.26	2	761.	.08100	.00	.00	0.	291	0	A16	.00
1352 12A	15.7	4.72	256.5	39.76	2	1228.	.04900	.00	.00	0.	291	12	A16	.01
1352 13A	31.9	7.11	288.4	44.46	2	1.	.04900	.00	.00	0.	291	19	A16	.01
1352 14C	21.3	4.58	21.3	4.58	2	1.	.01000	.00	.00	0.	291	20	A16	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   15A  TA 1166 QA    44.46 QAC    48.10 QC     3.64    1352   15C  TC 1156 QC     4.58 QCA    34.00 QA    29.42   *
*                              1352   15AC TAC 1165 QAC    48.25 QA    44.43 QC     3.83                                  *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	4.58	309.7	48.25	5	100.	.02000	10.00	.00	0.	291	0	A16	.00
1352 16A	.0	.00	309.7	48.21	2	1.	.01000	.00	.00	0.	291	99	A16	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	2.68	200	2.78	300	2.93	400	3.09
500	3.29	600	3.53	700	3.83	800	4.24	900	4.85
1000	5.84	1050	7.02	1100	8.95	1110	9.66	1120	10.78
1130	12.28	1131	12.45	1132	12.63	1133	12.82	1134	13.01
1135	13.20	1136	13.42	1137	13.61	1138	13.91	1139	13.92
1140	14.58	1141	14.32	1142	15.20	1143	15.27	1144	15.91
1145	16.35	1146	17.04	1147	17.68	1148	18.40	1149	19.71
1150	21.50	1151	23.33	1152	25.41	1153	27.68	1154	29.64
1155	31.41	1156	33.46	1157	35.64	1158	37.88	1159	40.04
1160	42.12	1161	43.97	1162	45.67	1163	46.95	1164	47.84
1165	48.21	1166	48.14	1167	47.72	1168	46.58	1169	44.82
1170	42.85	1171	40.57	1172	38.31	1173	36.38	1174	34.64
1175	32.88	1176	31.16	1177	29.50	1178	27.96	1179	26.48
1180	25.08	1181	23.77	1182	22.53	1183	21.32	1184	20.11
1185	18.92	1186	17.76	1187	16.68	1188	15.68	1189	14.76
1190	13.09	1191	14.51	1192	7.00	1193	19.93	1194	2.68
1195	23.56	1196	2.68	1197	22.23	1198	2.68	1199	21.16
1200	2.68	1201	20.32	1202	2.68	1203	19.63	1204	2.68
1205	19.05	1206	2.68	1207	18.56	1208	2.68	1209	18.11
1210	2.68	1211	17.72	1212	2.68	1213	17.38	1214	2.68
1215	17.07	1216	2.68	1217	16.80	1218	2.68	1219	16.54
1220	2.68	1221	16.31	1222	2.68	1223	16.09	1224	2.68
1225	15.89	1226	2.68	1227	15.68	1228	2.68	1229	15.51
1230	2.68	1231	15.32	1232	2.68	1233	15.17	1234	2.68
1235	15.03	1236	2.68	1237	14.88	1238	2.68	1239	14.74
1240	2.68	1241	14.59	1242	2.68	1243	14.45	1244	2.68
1245	14.30	1246	2.68	1247	14.02	1248	2.68	1249	13.69
1250	2.68	1251	13.36	1252	2.68	1253	13.06	1254	2.68
1255	12.81	1256	2.68	1257	12.57	1258	2.68	1259	12.34
1260	2.68	1261	12.11	1262	2.68	1263	11.77	1264	2.68
1265	11.57	1266	2.68	1267	11.38	1268	2.68	1269	11.14
1270	2.68	1271	11.00	1272	2.68	1273	10.76	1274	2.68
1275	10.53	1276	2.68	1277	10.32	1278	2.68	1279	10.12
1280	2.68	1281	9.94	1282	2.68	1283	9.80	1284	2.68
1285	9.61	1286	2.68	1287	9.45	1288	2.68	1289	9.30
1290	2.68	1291	9.13	1292	2.68	1293	9.02	1294	2.68
1295	8.83	1296	2.68	1297	8.73	1298	2.68	1299	8.55
1300	2.68	1310	5.25	1320	2.68	1330	4.71	1340	2.68
1350	4.27	1360	2.68	1370	3.87	1380	2.68	1390	3.49
1400	2.68	1420	3.17	1440	2.68	1460	2.79	1500	2.68

TOTAL VOLUME THIS HYDROGRAPH = 10.48(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED- BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	.39	.9	.39	4	250.	.03000	2.00	.00	0.	291	6	A15	.05
1352	2A	.0	.00	.9	.37	4	1.	.01000	2.00	.00	0.	291	99	A15	.00
1352	3A	.0	.00	.9	.37	4	1.	.01000	2.00	.00	0.	291	99	A15	.00
1352	4B	2.5	.96	2.5	.96	2	170.	.01000	.00	.00	0.	291	7	A15	.01
1352	5B	7.2	1.98	9.7	2.84	2	480.	.05000	.00	.00	0.	291	12	A15	.01
1352	6B	1.6	.53	11.3	3.11	4	160.	.10000	2.00	.00	0.	291	9	A15	.01
1352	7B	1.5	.54	12.8	3.62	4	5.	.10000	2.00	.00	0.	291	12	A15	.65
1352	8B	.4	.19	13.2	3.75	4	30.	.02000	2.00	.00	0.	291	8	A15	.91
1352	9B	.0	.00	13.2	3.75	4	1.	.01000	2.00	.00	0.	291	99	A15	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1155 QA      .37 QAB     3.64 QB     3.26    1352   10B  TB 1158 QB     3.75 QBA     3.98 QA      .23   *
*                               1352   10AB TAB 1157 QAB     3.99 QA      .29 QB     3.70                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	3.75	14.1	3.99	4	800.	.06500	2.00	.00	0.	291	0	A15	.00
1352	11A	4.6	1.35	18.7	5.27	4	1.	.06500	2.00	.00	0.	291	18	A15	.65
1352	12A	3.7	1.12	22.4	6.36	4	50.	.06500	2.00	.00	0.	291	17	A15	.65
1352	13A	.0	.00	22.4	6.35	4	1.	.01000	2.00	.00	0.	291	99	A15	.00
1352	14A	2.6	.90	25.0	7.19	4	10.	.06500	2.00	.00	0.	291	13	A15	.65
1352	15C	2.1	.81	2.1	.81	4	120.	.09100	2.00	.00	0.	291	7	A15	.01
1352	16C	2.9	.82	5.0	1.62	4	770.	.09200	2.00	.00	0.	291	14	A15	.25
1352	17C	5.8	1.85	10.8	3.40	4	50.	.09200	2.00	.00	0.	291	15	A15	.60
1352	18C	1.0	.28	11.8	3.68	4	10.	.09200	2.00	.00	0.	291	12	A15	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1159 QA     7.19 QAC    10.59 QC     3.40    1352   19C  TC 1156 QC     3.68 QCA    10.32 QA     6.64   *
*                               1352   19AC TAC 1158 QAC    10.71 QA     7.15 QC     3.55                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	3.68	36.8	10.71	4	260.	.09000	2.00	.00	0.	291	0	A15	.00
1352	20A	.0	.00	36.8	10.66	4	1.	.01000	2.00	.00	0.	291	99	A15	.00
1352	21A	1.7	.42	38.5	11.06	4	130.	.08800	2.00	.00	0.	291	15	A15	.05
1352	22A	3.1	.97	41.6	11.98	4	1.	.02000	2.00	.00	0.	291	16	A15	.65
1352	23A	4.4	1.38	46.0	13.33	4	1040.	.08800	2.00	.00	0.	291	16	A15	.65
1352	24A	4.0	1.24	50.0	14.46	4	1.	.03400	2.00	.00	0.	291	17	A15	.70
1352	25A	2.1	.59	52.1	15.01	4	80.	.03200	2.00	.00	0.	291	16	A15	.40
1352	26D	309.7	48.20	309.7	48.20	2	1.	.01000	.00	.00	0.	291	0	A15	.00
1352	27D	20.3	3.81	330.0	51.51	2	1993.	.12800	.00	.00	0.	291	22	A15	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 2-YR BURNED- BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1160 QA    15.01 QAD    53.09 QD    38.09    1352   28D  TD 1168 QD    50.77 QDA    59.97 QA     9.20   *
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*                              1352   28AD TAD 1166 QAD    61.12 QA    11.60 QD    49.52                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	50.77	382.1	61.12	5	230.	.03000	12.00	.00	0.	291	0	A15	.00
1352 29A	.0	.00	382.1	61.02	2	1.	.01000	.00	.00	0.	291	99	A15	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	2.87	200	3.31	300	3.48	400	3.68
500	4.16	600	4.44	700	4.81	800	5.33	900	6.33
1000	7.57	1050	9.03	1100	11.72	1110	12.59	1120	14.01
1130	15.94	1131	16.14	1132	16.36	1133	16.58	1134	16.82
1135	17.06	1136	17.31	1137	17.59	1138	17.88	1139	18.19
1140	18.52	1141	18.86	1142	19.23	1143	19.62	1144	20.05
1145	20.58	1146	21.16	1147	21.71	1148	22.50	1149	23.42
1150	24.58	1151	26.06	1152	28.08	1153	30.73	1154	33.86
1155	37.27	1156	40.70	1157	43.89	1158	46.79	1159	49.46
1160	51.94	1161	54.21	1162	56.23	1163	57.98	1164	59.43
1165	60.49	1166	61.02	1167	60.95	1168	60.36	1169	59.31
1170	57.85	1171	56.02	1172	53.88	1173	51.48	1174	48.92
1175	46.35	1176	43.88	1177	41.57	1178	39.43	1179	37.44
1180	35.58	1181	33.84	1182	32.20	1183	30.65	1184	29.19
1185	27.80	1186	26.48	1187	25.21	1188	23.99	1189	22.81
1190	21.66	1191	20.26	1192	19.33	1193	18.28	1194	17.44
1195	16.82	1196	17.07	1197	15.79	1198	15.05	1199	14.89
1200	15.15	1201	14.85	1202	14.31	1203	13.09	1204	12.84
1205	12.27	1206	12.55	1207	12.17	1208	12.52	1209	12.10
1210	12.49	1211	12.00	1212	12.42	1213	11.85	1214	12.32
1215	11.68	1216	12.21	1217	11.49	1218	12.11	1219	11.29
1220	12.00	1221	11.09	1222	11.90	1223	10.88	1224	11.82
1225	10.67	1226	11.76	1227	10.48	1228	11.72	1229	10.27
1230	11.69	1231	10.05	1232	11.67	1233	9.82	1234	11.67
1235	9.58	1236	11.70	1237	9.34	1238	11.75	1239	9.08
1240	11.83	1241	8.81	1242	11.94	1243	8.51	1244	12.07
1245	8.20	1246	12.26	1247	7.86	1248	12.47	1249	7.47
1250	12.69	1251	7.00	1252	12.92	1253	6.47	1254	13.20
1255	5.88	1256	13.53	1257	5.22	1258	13.91	1259	4.48
1260	14.38	1261	3.69	1262	14.93	1263	2.87	1264	15.52
1265	2.87	1266	15.25	1267	2.87	1268	14.95	1269	2.87
1270	14.66	1271	2.87	1272	14.37	1273	2.87	1274	14.07
1275	2.87	1276	13.83	1277	2.87	1278	13.58	1279	2.87
1280	13.30	1281	2.87	1282	13.02	1283	2.87	1284	12.76
1285	2.87	1286	12.50	1287	2.87	1288	12.29	1289	2.87
1290	12.06	1291	2.87	1292	11.88	1293	2.87	1294	11.66
1295	2.87	1296	11.42	1297	2.87	1298	11.23	1299	2.87
1300	11.01	1310	2.87	1320	7.68	1330	2.87	1340	6.82
1350	2.87	1360	6.15	1370	2.87	1380	5.53	1390	2.87
1400	4.85	1420	2.87	1440	4.20	1460	2.87	1500	3.22

TOTAL VOLUME THIS HYDROGRAPH = 13.27(Ac.Ft)

STEVENSON RANCH

5-YEAR BURNED

DEVELOPED CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	28.10	32.5	28.10	2	1173.	.20100	.00	.00	0.	293	10	A25	.01
1352 2A	34.8	26.74	67.3	53.89	2	369.	.19500	.00	.00	0.	293	12	A25	.01
1352 3A	33.3	22.28	100.6	75.78	2	1353.	.24000	.00	.00	0.	293	15	A25	.01
1352 4A	37.9	29.12	138.5	102.61	2	1.	.24000	.00	.00	0.	293	12	A25	.01
1352 5A	.0	.00	138.5	102.61	4	1.	.01000	3.50	.00	0.	293	99	A25	.00
1352 6B	28.8	23.35	28.8	23.35	2	494.	.25300	.00	.00	0.	293	11	A25	.01
1352 7B	12.2	10.55	41.0	33.70	2	1.	.25300	.00	.00	0.	293	10	A25	.01
1352 8B	22.3	16.28	63.3	49.98	2	1342.	.28700	.00	.00	0.	293	13	A25	.01
1352 9B	24.6	17.16	87.9	66.38	2	1.	.28700	.00	.00	0.	293	14	A25	.01
1352 10B	.0	.00	87.9	66.38	4	1.	.01000	3.00	.00	0.	293	99	A25	.00

****
* CONFLUENCE Q'S *
* 1352 11A TA 1157 QA 102.60 QAB 168.77 QB 66.17 1352 11B TB 1156 QB 66.38 QBA 167.52 QA 101.14 *
* 1352 11AB TAB 1157 QAB 168.77 QA 102.60 QB 66.17 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	66.38	226.4	168.77	2	655.	.14500	.00	.00	0.	293	0	A25	.00
1352 12A	.0	.00	226.4	168.10	4	1.	.01000	4.25	.00	0.	293	99	A25	.00
1352 13A	24.0	19.46	250.4	185.90	2	1.	.14500	.00	.00	0.	293	11	A25	.01
1352 14A	.0	.00	250.4	185.89	4	1.	.01000	4.50	.00	0.	293	99	A25	.00
1352 15C	37.0	24.76	37.0	24.76	2	826.	.24800	.00	.00	0.	293	15	A25	.01
1352 16C	40.2	28.04	77.2	52.49	2	1267.	.26000	.00	.00	0.	293	14	A25	.01
1352 17C	31.9	23.29	109.1	74.89	2	1.	.26000	.00	.00	0.	293	13	A25	.01
1352 18C	.0	.00	109.1	74.88	4	1.	.01000	3.25	.00	0.	293	99	A25	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1157 QA 185.88 QAC 260.76 QC 74.88 1352 19C TC 1157 QC 74.88 QCA 260.76 QA 185.88 *
* 1352 19AC TAC 1157 QAC 260.76 QA 185.88 QC 74.88 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	74.88	359.5	260.76	2	1161.	.09000	.00	.00	0.	293	0	A25	.00
1352 20A	.0	.00	359.5	259.07	4	1.	.01000	5.00	.00	0.	293	99	A25	.00
1352 21A	39.2	26.23	398.7	283.75	2	1.	.09000	.00	.00	0.	293	15	A25	.01
1352 22A	.0	.00	398.7	283.74	4	1.	.01000	5.25	.00	0.	293	99	A25	.00
1352 23D	30.8	23.67	30.8	23.67	2	1242.	.23000	.00	.00	0.	293	12	A25	.01
1352 24D	39.3	30.20	70.1	53.10	2	1308.	.03800	.00	.00	0.	293	12	A25	.01
1352 25D	42.3	30.89	112.4	77.44	2	723.	.22800	.00	.00	0.	293	13	A25	.01
1352 26D	30.9	25.05	143.3	98.37	2	720.	.09000	.00	.00	0.	293	11	A25	.01
1352 27D	26.9	20.67	170.2	114.92	2	1.	.09000	.00	.00	0.	293	12	A25	.01
1352 28D	.0	.00	170.2	114.92	4	1.	.01000	3.75	.00	0.	293	99	A25	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

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* CONFLUENCE Q'S *

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*   1352   29A  TA 1159 QA   283.74 QAD   398.57 QD   114.83    1352   29D  TD 1160 QD   114.92 QDA   394.62 QA   279.70   *
*                                 1352   29AD TAD 1159 QAD   398.57 QA   283.74 QD   114.83                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	114.92	568.9	398.57	2	668.	.04800	.00	.00	0.	293	0	A25	.00
1352	30A	.0	.00	568.9	396.86	4	1.	.01000	5.75	.00	0.	293	99	A25	.00
1352	31A	29.2	18.44	598.1	413.64	2	506.	.04400	.00	.00	0.	293	15	A24	.01
1352	32A	22.2	15.30	620.3	424.64	2	635.	.03900	.00	.00	0.	293	13	A24	.01
1352	33A	23.1	17.74	643.4	433.30	2	593.	.04200	.00	.00	0.	293	11	A24	.01
1352	34A	35.7	22.55	679.1	450.37	2	572.	.03500	.00	.00	0.	293	15	A24	.01
1352	35A	29.2	19.25	708.3	461.51	2	485.	.04100	.00	.00	0.	293	14	A24	.01
1352	36A	25.6	17.64	733.9	470.46	2	532.	.03800	.00	.00	0.	293	13	A24	.01
1352	37A	.0	.00	733.9	468.05	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	38A	23.7	17.19	757.6	471.98	2	396.	.05100	.00	.00	0.	293	11	A23	.01
1352	39A	32.5	20.22	790.1	482.37	2	838.	.05600	.00	.00	0.	293	14	A23	.01
1352	40A	20.2	13.78	810.3	482.45	2	1.	.05600	.00	.00	0.	293	11	A22	.01
1352	41A	22.5	14.39	832.8	485.12	2	1.	.13300	.00	.00	0.	293	11	A21	.01
1352	42A	28.5	15.99	861.3	494.00	2	840.	.05700	.00	.00	0.	293	15	A22	.01
1352	43A	.0	.00	861.3	491.60	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	44A	20.2	12.34	881.5	494.42	2	1.	.05700	.00	.00	0.	293	13	A22	.01
1352	45A	24.8	12.50	906.3	501.22	2	575.	.03500	.00	.00	0.	293	16	A21	.01
1352	46A	15.1	10.30	921.4	500.81	2	1319.	.03400	.00	.00	0.	293	11	A22	.01
1352	47A	24.6	12.23	946.0	502.08	2	1.	.03400	.00	.00	0.	293	18	A22	.01
1352	48A	24.9	15.22	970.9	504.61	2	722.	.03900	.00	.00	0.	293	13	A22	.01
1352	49A	20.9	12.77	991.8	504.08	2	846.	.04700	.00	.00	0.	293	13	A22	.01
1352	50A	19.2	12.34	1011.0	503.41	2	1.	.04700	.00	.00	0.	293	12	A22	.01
1352	51A	.0	.00	1011.0	503.41	4	1.	.01000	6.25	.00	0.	293	99	A25	.00
1352	52E	28.8	20.88	28.8	20.88	2	940.	.14400	.00	.00	0.	293	11	A23	.01
1352	53E	24.8	16.98	53.6	37.29	2	971.	.27800	.00	.00	0.	293	12	A23	.01
1352	54E	33.4	20.78	87.0	57.23	2	1110.	.18700	.00	.00	0.	293	14	A23	.01
1352	55E	23.1	13.50	110.1	69.65	2	1.	.18700	.00	.00	0.	293	14	A22	.01
1352	56E	.0	.00	110.1	69.65	4	1.	.01000	3.00	.00	0.	293	99	A25	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1171 QA   503.41 QAE   517.76 QE    14.35    1352   57E  TE 1158 QE    69.64 QEA   333.21 QA   263.57   *
*                                 1352   57AE TAE 1170 QAE   519.32 QA   502.82 QE    16.50                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	69.64	1121.1	519.32	2	180.	.03900	.00	.00	0.	293	0	A25	.00
1352	58A	.0	.00	1121.1	518.41	4	1.	.01000	6.50	.00	0.	293	99	A25	.00
1352	59A	28.2	15.14	1149.3	521.02	2	815.	.01800	.00	.00	0.	293	16	A22	.01
1352	60A	27.2	19.85	1176.5	520.87	2	1136.	.05700	.00	.00	0.	293	10	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	10.04	1194.4	519.49	2	1.	.05700	.00	.00	0.	293	15	A22	.01
1352	62A	.0	.00	1194.4	519.49	4	1.	.01000	6.50	.00	0.	293	99	A25	.00
1352	63F	27.0	19.62	27.0	19.62	2	586.	.19600	.00	.00	0.	293	12	A24	.01
1352	64F	40.8	22.39	67.8	41.93	2	727.	.08900	.00	.00	0.	293	17	A23	.01
1352	65F	37.4	20.98	105.2	62.28	2	1.	.08900	.00	.00	0.	293	15	A22	.01
1352	66F	32.6	22.32	137.8	83.87	2	1.	.14100	.00	.00	0.	293	12	A23	.01
1352	67F	18.8	12.23	156.6	95.96	2	677.	.08100	.00	.00	0.	293	13	A23	.01
1352	68F	9.2	5.91	165.8	100.98	2	1.	.08100	.00	.00	0.	293	12	A22	.01
1352	69F	.0	.00	165.8	100.98	4	1.	.01000	3.50	.00	0.	293	99	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   70A  TA 1174 QA   519.49 QAF   537.02 QF    17.53    1352   70F  TF 1157 QF   100.98 QFA   377.34 QA   276.36   *
*                                1352   70AF TAF 1173 QAF   538.99 QA   519.40 QF    19.59                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	100.98	1360.2	538.99	2	561.	.03600	.00	.00	0.	293	0	A25	.00
1352	71A	.0	.00	1360.2	537.82	4	1.	.01000	6.50	.00	0.	293	99	A25	.00
1352	72A	6.4	4.37	1366.6	538.28	2	1.	.03600	.00	.00	0.	293	11	A22	.01
1352	73A	20.0	15.24	1386.6	539.98	2	434.	.03000	.00	.00	0.	291	12	A22	.01
1352	74A	21.9	16.69	1408.5	540.52	2	420.	.02900	.00	.00	0.	291	12	A22	.01
1352	75A	42.0	27.87	1450.5	543.21	2	1019.	.02000	.00	.00	0.	291	14	A21	.01
1352	76A	26.1	17.32	1476.6	542.98	2	249.	.04000	.00	.00	0.	291	14	A21	.01
1352	77A	12.2	8.81	1488.8	543.02	2	1.	.04000	.00	.00	0.	291	12	A21	.01
1352	78A	.0	.00	1488.8	543.02	4	1.	.01000	6.50	.00	0.	291	99	A25	.00
1352	79A	14.2	10.82	1503.0	544.04	2	643.	.01900	.00	.00	0.	291	12	A22	.01
1352	80A	18.2	13.87	1521.2	543.94	2	751.	.02400	.00	.00	0.	291	12	A22	.01
1352	81A	23.3	17.75	1544.5	544.35	2	709.	.02400	.00	.00	0.	291	12	A22	.01
1352	82A	22.2	14.41	1566.7	544.67	2	1.	.02400	.00	.00	0.	291	16	A22	.01
1352	83A	.0	.00	1566.7	544.66	4	1.	.01000	6.50	.00	0.	291	99	A25	.00
1352	84B	26.2	17.39	26.2	17.39	2	1438.	.06400	.00	.00	0.	291	14	A21	.01
1352	85B	33.5	22.60	59.7	37.74	2	1.	.06400	.00	.00	0.	291	15	A22	.01
1352	86B	.0	.00	59.7	37.73	4	1.	.01000	2.50	.00	0.	291	99	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   87A  TA 1181 QA   544.66 QAB   549.36 QB     4.70    1352   87B  TB 1159 QB    37.72 QBA   366.62 QA   328.90   *
*                                1352   87AB TAB 1181 QAB   549.36 QA   544.66 QB     4.70                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	37.72	1626.4	549.36	2	405.	.02300	.00	.00	0.	291	0	A25	.00
1352	88A	2.8	3.11	1629.2	548.70	2	1.	.02300	.00	.00	0.	291	6	A22	.01
1352	89C	21.6	19.37	21.6	19.37	2	1328.	.09400	.00	.00	0.	291	10	A23	.01
1352	90C	23.5	15.86	45.1	33.62	2	1.	.09400	.00	.00	0.	291	15	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                 *
*   1352   91A  TA 1182 QA   548.70 QAC   551.85 QC     3.16    1352   91C  TC 1158 QC    33.62 QCA   365.16 QA   331.54   *
*                                1352   91AC TAC 1182 QAC   551.85 QA   548.70 QC     3.16                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	33.62	1674.3	551.85	2	977.	.02400	.00	.00	0.	291	0	A25	.00
1352	92A	30.8	22.43	1705.1	552.36	2	999.	.01300	.00	.00	0.	291	13	A22	.01
1352	93A	37.7	27.46	1742.8	552.15	2	448.	.02200	.00	.00	0.	291	13	A22	.01
1352	94A	11.0	9.36	1753.8	552.33	2	1.	.02200	.00	.00	0.	291	10	A22	.01
1352	95D	382.1	252.90	382.1	252.90	2	1.	.02200	.00	.00	0.	291	0	A25	.00

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*                                                CONFLUENCE Q'S                                                 *
*   1352   96A  TA 1186 QA   552.33 QAD   592.24 QD    39.91    1352   96D  TD 1162 QD   252.89 QDA   632.92 QA   380.03   *
*                                1352   96AD TAD 1167 QAD   664.02 QA   456.98 QD   207.04                                 *
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SUBAREA SUBAREA TOTAL TOTAL CONV CONV CONV CONV CONV CONTROL SOIL RAIN PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	252.89	2135.9	664.02	6	250.	.01600	32.00	.00	0.	291	0	A25	.00
1352	97A	13.4	10.76	2149.3	665.89	2	642.	.01700	.00	.00	0.	291	11	A22	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	42.24	200	43.36	300	45.44	400	47.87
500	50.72	600	54.45	700	58.94	800	65.04	900	73.72
1000	87.71	1050	102.00	1100	132.64	1110	145.42	1120	164.86
1130	193.15	1131	196.33	1132	199.50	1133	202.98	1134	206.60
1135	210.38	1136	214.24	1137	218.32	1138	222.66	1139	227.26
1140	232.10	1141	237.32	1142	242.86	1143	248.78	1144	255.05
1145	262.27	1146	270.16	1147	278.70	1148	287.89	1149	299.69
1150	314.06	1151	331.81	1152	353.18	1153	378.36	1154	405.56
1155	435.47	1156	465.66	1157	496.61	1158	528.55	1159	559.46
1160	587.23	1161	612.02	1162	632.14	1163	646.82	1164	656.60
1165	662.97	1166	665.48	1167	665.89	1168	665.55	1169	664.35
1170	661.55	1171	657.34	1172	651.70	1173	644.74	1174	636.94
1175	628.67	1176	620.44	1177	612.75	1178	605.92	1179	600.32
1180	596.28	1181	593.70	1182	592.44	1183	592.50	1184	593.22
1185	593.80	1186	593.28	1187	590.98	1188	586.28	1189	578.88
1190	568.85	1191	556.45	1192	542.11	1193	526.26	1194	509.40
1195	491.95	1196	474.19	1197	456.40	1198	438.70	1199	421.50
1200	404.60	1201	388.68	1202	372.61	1203	357.30	1204	342.53
1205	328.43	1206	314.98	1207	302.20	1208	289.98	1209	278.39
1210	267.43	1211	257.28	1212	247.83	1213	238.54	1214	229.75
1215	221.50	1216	213.72	1217	206.37	1218	199.41	1219	192.86
1220	186.65	1221	180.83	1222	175.38	1223	170.26	1224	165.37
1225	160.83	1226	156.55	1227	152.45	1228	148.53	1229	144.82
1230	141.39	1231	138.14	1232	135.08	1233	132.24	1234	129.83
1235	127.25	1236	124.86	1237	122.59	1238	120.50	1239	118.52
1240	116.64	1241	114.87	1242	113.14	1243	111.41	1244	109.73
1245	108.10	1246	106.56	1247	105.13	1248	103.77	1249	102.48
1250	101.31	1251	100.21	1252	99.14	1253	98.09	1254	97.05
1255	96.10	1256	95.23	1257	94.41	1258	93.60	1259	92.83
1260	92.07	1261	91.31	1262	90.56	1263	89.85	1264	89.14
1265	88.45	1266	87.77	1267	87.11	1268	86.45	1269	85.83
1270	85.21	1271	84.62	1272	84.07	1273	83.55	1274	83.00
1275	82.50	1276	81.94	1277	81.41	1278	80.94	1279	80.49
1280	80.01	1281	79.52	1282	79.02	1283	78.56	1284	78.07
1285	77.60	1286	77.14	1287	76.69	1288	76.25	1289	75.80
1290	75.41	1291	75.02	1292	74.61	1293	74.20	1294	73.78
1295	73.38	1296	72.98	1297	72.58	1298	72.21	1299	71.84
1300	71.47	1310	67.75	1320	65.22	1330	62.54	1340	60.40
1350	58.44	1360	56.67	1370	55.26	1380	53.55	1390	52.36
1400	50.87	1420	48.73	1440	46.68	1460	43.40	1500	42.02

TOTAL VOLUME THIS HYDROGRAPH = 171.99(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	14.74	19.2	14.74	2	959.	.20900	.00	.00	0.	293	11	A24	.01
1352 2A	36.3	23.93	55.5	38.30	2	367.	.12300	.00	.00	0.	293	14	A24	.01
1352 3A	11.1	9.63	66.6	47.20	2	1.	.12300	.00	.00	0.	293	9	A24	.01
1352 4A	25.5	17.78	92.1	64.87	2	662.	.12100	.00	.00	0.	293	14	A25	.01
1352 5A	18.9	15.51	111.0	78.84	2	546.	.11000	.00	.00	0.	293	10	A24	.01
1352 6A	19.2	16.66	130.2	93.71	2	1340.	.16000	.00	.00	0.	293	9	A24	.01
1352 7A	24.7	17.95	154.9	108.47	2	592.	.06400	.00	.00	0.	293	12	A24	.01
1352 8A	20.4	15.67	175.3	121.07	2	1.	.06400	.00	.00	0.	293	11	A24	.01
1352 9B	25.7	23.04	25.7	23.04	2	980.	.09500	.00	.00	0.	291	10	A23	.01
1352 10B	39.8	27.80	65.5	49.95	2	1.	.09500	.00	.00	0.	291	17	A24	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1159 QA   121.06 QAB   169.43 QB    48.37    1352   11B  TB 1157 QB    49.95 QBA   163.64 QA   113.69   *
*                              1352   11AB TAB 1159 QAB   169.43 QA   121.06 QB    48.37                                *
*****************************************************************************************************************
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	49.95	240.8	169.43	2	761.	.08100	.00	.00	0.	291	0	A24	.00
1352 12A	15.7	16.49	256.5	175.95	2	1228.	.04900	.00	.00	0.	291	8	A24	.01
1352 13A	31.9	19.82	288.4	191.73	2	1.	.04900	.00	.00	0.	291	19	A23	.01
1352 14C	21.3	15.76	21.3	15.76	2	1.	.01000	.00	.00	0.	291	14	A23	.01

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*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   15A  TA 1161 QA   191.72 QAC   205.38 QC    13.66    1352   15C  TC 1154 QC    15.76 QCA   130.54 QA   114.78   *
*                              1352   15AC TAC 1161 QAC   205.38 QA   191.72 QC    13.66                                *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	15.76	309.7	205.38	5	100.	.02000	10.00	.00	0.	291	0	A23	.00
1352 16A	.0	.00	309.7	205.12	2	1.	.01000	.00	.00	0.	291	99	A23	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	6.03	200	6.27	300	6.59	400	6.95
500	7.40	600	7.94	700	8.65	800	9.58	900	10.94
1000	13.17	1050	15.95	1100	22.37	1110	25.85	1120	31.93
1130	40.41	1131	41.38	1132	42.37	1133	43.44	1134	44.61
1135	45.78	1136	46.96	1137	48.28	1138	49.74	1139	51.24
1140	52.74	1141	54.51	1142	56.47	1143	58.53	1144	60.76
1145	63.41	1146	66.39	1147	69.61	1148	73.15	1149	78.90
1150	86.14	1151	94.05	1152	103.90	1153	115.95	1154	128.53
1155	142.33	1156	156.90	1157	171.37	1158	184.62	1159	194.96
1160	201.91	1161	205.12	1162	204.27	1163	198.71	1164	189.69
1165	178.34	1166	165.18	1167	151.54	1168	137.74	1169	124.38
1170	111.68	1171	99.62	1172	88.38	1173	78.95	1174	70.72
1175	63.45	1176	57.30	1177	51.78	1178	47.02	1179	42.95
1180	39.46	1181	36.41	1182	33.77	1183	31.38	1184	29.43
1185	27.75	1186	26.29	1187	25.00	1188	23.97	1189	23.00
1190	22.13	1191	21.43	1192	20.81	1193	20.24	1194	19.73
1195	19.24	1196	18.80	1197	18.41	1198	18.04	1199	17.70
1200	17.38	1201	17.09	1202	16.82	1203	16.55	1204	16.29
1205	16.05	1206	15.83	1207	15.64	1208	15.44	1209	15.26
1210	15.07	1211	14.90	1212	14.76	1213	14.57	1214	14.42
1215	14.26	1216	14.12	1217	13.97	1218	13.83	1219	13.71
1220	13.57	1221	13.42	1222	13.32	1223	13.21	1224	13.07
1225	12.96	1226	12.84	1227	12.78	1228	12.62	1229	12.60
1230	12.38	1231	12.46	1232	12.15	1233	12.36	1234	11.84
1235	12.36	1236	11.40	1237	12.53	1238	10.74	1239	13.06
1240	9.61	1241	14.01	1242	8.15	1243	15.33	1244	6.36
1245	16.81	1246	6.03	1247	16.87	1248	6.03	1249	16.67
1250	6.03	1251	16.45	1252	6.03	1253	16.24	1254	6.03
1255	16.06	1256	6.03	1257	15.86	1258	6.03	1259	15.69
1260	6.03	1261	15.49	1262	6.03	1263	15.29	1264	6.03
1265	15.15	1266	6.03	1267	14.98	1268	6.03	1269	14.80
1270	6.03	1271	14.64	1272	6.03	1273	14.45	1274	6.03
1275	14.32	1276	6.03	1277	14.15	1278	6.03	1279	14.00
1280	6.03	1281	13.84	1282	6.03	1283	13.69	1284	6.03
1285	13.53	1286	6.03	1287	13.39	1288	6.03	1289	13.25
1290	6.03	1291	13.09	1292	6.03	1293	12.91	1294	6.03
1295	12.73	1296	6.03	1297	12.57	1298	6.03	1299	12.43
1300	6.03	1310	11.02	1320	6.03	1330	9.93	1340	6.03
1350	9.15	1360	6.03	1370	8.33	1380	6.03	1390	7.67
1400	6.03	1420	7.01	1440	6.03	1460	6.15	1500	6.03

TOTAL VOLUME THIS HYDROGRAPH = 25.14(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	1.19	.9	1.19	4	250.	.03000	2.00	.00	0.	291	5	A23	.05
1352	2A	.0	.00	.9	1.11	4	1.	.01000	2.00	.00	0.	291	99	A23	.00
1352	3A	.0	.00	.9	1.11	4	1.	.01000	2.00	.00	0.	291	99	A23	.00
1352	4B	2.5	3.28	2.5	3.28	2	170.	.01000	.00	.00	0.	291	5	A23	.01
1352	5B	7.2	6.79	9.7	9.62	2	480.	.05000	.00	.00	0.	291	9	A23	.01
1352	6B	1.6	1.72	11.3	10.68	4	160.	.10000	2.00	.00	0.	291	7	A23	.01
1352	7B	1.5	1.48	12.8	12.08	4	5.	.10000	2.00	.00	0.	291	10	A23	.65
1352	8B	.4	.48	13.2	12.49	4	30.	.02000	2.00	.00	0.	291	7	A23	.91
1352	9B	.0	.00	13.2	12.47	4	1.	.01000	2.00	.00	0.	291	99	A23	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA     1.11 QAB    12.11 QB    11.01    1352   10B  TB 1156 QB    12.47 QBA    13.35 QA      .88   *
*                               1352   10AB TAB 1156 QAB    13.35 QA      .88 QB    12.47                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	12.47	14.1	13.35	4	800.	.04500	2.00	.00	0.	291	0	A23	.00
1352	11A	4.6	3.73	18.7	16.70	4	1.	.04500	2.00	.00	0.	291	15	A23	.65
1352	12A	3.7	3.09	22.4	19.73	4	50.	.04500	2.00	.00	0.	291	14	A23	.65
1352	13A	.0	.00	22.4	19.70	4	1.	.01000	2.00	.00	0.	291	99	A23	.00
1352	14A	2.6	2.45	25.0	22.02	4	10.	.04500	2.00	.00	0.	291	11	A23	.65
1352	15C	2.1	2.75	2.1	2.75	4	120.	.09100	2.00	.00	0.	291	5	A23	.01
1352	16C	2.9	2.44	5.0	5.06	4	770.	.09200	2.00	.00	0.	291	12	A23	.25
1352	17C	5.8	5.17	10.8	10.08	4	50.	.09200	2.00	.00	0.	291	12	A23	.60
1352	18C	1.0	.90	11.8	10.95	4	10.	.09200	2.00	.00	0.	291	10	A23	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1157 QA    22.01 QAC    32.17 QC    10.17    1352   19C  TC 1155 QC    10.95 QCA    31.31 QA    20.36   *
*                               1352   19AC TAC 1156 QAC    32.22 QA    21.50 QC    10.72                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	10.95	36.8	32.22	4	260.	.09000	2.00	.00	0.	291	0	A23	.00
1352	20A	.0	.00	36.8	32.18	4	1.	.01000	2.25	.00	0.	291	99	A23	.00
1352	21A	1.7	1.38	38.5	33.51	4	130.	.08800	2.00	.00	0.	291	12	A23	.05
1352	22A	3.1	2.59	41.6	36.04	4	1.	.02000	2.25	.00	0.	291	14	A23	.65
1352	23A	4.4	3.68	46.0	39.64	4	1040.	.08800	2.00	.00	0.	291	14	A23	.65
1352	24A	4.0	3.37	50.0	42.69	4	1.	.03400	2.00	.00	0.	291	14	A23	.70
1352	25A	2.1	1.74	52.1	44.35	4	80.	.03200	2.25	.00	0.	291	13	A23	.40
1352	26D	309.7	205.10	309.7	205.10	2	1.	.01000	.00	.00	0.	291	0	A23	.00
1352	27D	20.3	14.63	330.0	218.05	2	1600.	.12800	.00	.00	0.	291	15	A23	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 5-YR BURNED - BASIN C

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1158 QA    44.32 QAD   218.21 QD   173.89    1352   28D  TD 1163 QD   216.25 QDA   251.47 QA    35.21   *
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*                              1352   28AD TAD 1162 QAD   253.44 QA    38.54 QD   214.90                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	216.25	382.1	253.44	5	230.	.03000	12.00	.00	0.	291	0	A23	.00
1352 29A	.0	.00	382.1	252.87	2	1.	.01000	.00	.00	0.	291	99	A23	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	7.91	200	8.27	300	8.69	400	9.19
500	9.74	600	10.49	700	11.45	800	12.72	900	14.49
1000	17.48	1050	21.33	1100	29.66	1110	33.95	1120	41.47
1130	51.96	1131	53.11	1132	54.32	1133	55.60	1134	56.95
1135	58.37	1136	59.87	1137	61.44	1138	63.06	1139	64.77
1140	66.70	1141	68.71	1142	70.85	1143	73.24	1144	75.89
1145	78.78	1146	81.98	1147	85.62	1148	89.72	1149	94.45
1150	100.54	1151	108.96	1152	119.93	1153	133.45	1154	148.68
1155	165.09	1156	181.59	1157	197.97	1158	214.22	1159	228.53
1160	240.57	1161	248.87	1162	252.87	1163	252.11	1164	246.58
1165	236.45	1166	222.71	1167	206.95	1168	190.73	1169	174.28
1170	158.40	1171	143.78	1172	130.35	1173	118.03	1174	106.76
1175	96.49	1176	87.54	1177	79.62	1178	72.70	1179	66.59
1180	61.54	1181	56.67	1182	52.46	1183	48.76	1184	45.51
1185	42.56	1186	39.94	1187	37.69	1188	35.74	1189	33.99
1190	32.47	1191	31.16	1192	29.99	1193	28.94	1194	28.04
1195	27.24	1196	26.52	1197	25.86	1198	25.25	1199	24.69
1200	24.17	1201	23.70	1202	23.26	1203	22.86	1204	22.49
1205	22.13	1206	21.80	1207	21.48	1208	21.09	1209	20.80
1210	20.52	1211	20.28	1212	20.05	1213	19.83	1214	19.62
1215	19.42	1216	19.20	1217	19.00	1218	18.80	1219	18.62
1220	18.42	1221	18.24	1222	18.07	1223	17.91	1224	17.73
1225	17.57	1226	17.42	1227	17.29	1228	17.14	1229	17.00
1230	16.85	1231	16.73	1232	16.59	1233	16.48	1234	16.37
1235	16.27	1236	16.13	1237	16.00	1238	15.86	1239	15.74
1240	15.58	1241	15.47	1242	15.30	1243	15.15	1244	14.93
1245	14.75	1246	14.57	1247	14.46	1248	14.44	1249	14.44
1250	14.43	1251	14.41	1252	14.36	1253	14.32	1254	14.25
1255	14.19	1256	14.12	1257	14.08	1258	14.03	1259	13.99
1260	13.94	1261	13.90	1262	13.84	1263	13.80	1264	13.73
1265	13.70	1266	13.63	1267	13.59	1268	13.52	1269	13.50
1270	13.45	1271	13.42	1272	13.35	1273	13.32	1274	13.25
1275	13.22	1276	13.15	1277	13.13	1278	13.07	1279	13.06
1280	12.99	1281	12.97	1282	12.90	1283	12.89	1284	12.81
1285	12.80	1286	12.73	1287	12.72	1288	12.64	1289	12.63
1290	12.56	1291	12.55	1292	12.48	1293	12.48	1294	12.39
1295	12.38	1296	12.29	1297	12.27	1298	12.17	1299	12.17
1300	12.09	1310	11.05	1320	11.13	1330	10.45	1340	10.34
1350	9.92	1360	9.83	1370	9.65	1380	9.32	1390	9.30
1400	8.90	1420	8.73	1440	8.35	1460	8.21	1500	7.91

TOTAL VOLUME THIS HYDROGRAPH = 33.07(Ac.Ft)

STEVENSON RANCH

10-YEAR BURNED

DEVELOPED CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	51.01	32.5	51.01	2	1173.	.20100	.00	.00	0.	293	8	A30	.01
1352 2A	34.8	48.85	67.3	97.99	2	369.	.19500	.00	.00	0.	293	10	A30	.01
1352 3A	33.3	41.74	100.6	138.95	2	1353.	.24000	.00	.00	0.	293	12	A30	.01
1352 4A	37.9	53.20	138.5	188.04	2	1.	.24000	.00	.00	0.	293	10	A30	.01
1352 5A	.0	.00	138.5	188.04	4	1.	.01000	4.50	.00	0.	293	99	A30	.00
1352 6B	28.8	42.61	28.8	42.61	2	494.	.25300	.00	.00	0.	293	9	A30	.01
1352 7B	12.2	19.15	41.0	61.46	2	1.	.25300	.00	.00	0.	293	8	A30	.01
1352 8B	22.3	29.51	63.3	90.89	2	1342.	.28700	.00	.00	0.	293	11	A30	.01
1352 9B	24.6	32.56	87.9	121.72	2	1.	.28700	.00	.00	0.	293	11	A30	.01
1352 10B	.0	.00	87.9	121.72	4	1.	.01000	3.75	.00	0.	293	99	A30	.00

CONFLUENCE Q'S

1352 11A TA 1156 QA 188.03 QAB 309.76 QB 121.72 1352 11B TB 1156 QB 121.72 QBA 309.76 QA 188.03
1352 11AB TAB 1156 QAB 309.76 QA 188.03 QB 121.72

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	121.72	226.4	309.76	2	655.	.14500	.00	.00	0.	293	0	A30	.00
1352 12A	.0	.00	226.4	308.18	4	1.	.01000	5.25	.00	0.	293	99	A30	.00
1352 13A	24.0	35.50	250.4	340.92	2	1.	.14500	.00	.00	0.	293	9	A30	.01
1352 14A	.0	.00	250.4	340.91	4	1.	.01000	5.50	.00	0.	293	99	A30	.00
1352 15C	37.0	46.38	37.0	46.38	2	826.	.24800	.00	.00	0.	293	12	A30	.01
1352 16C	40.2	53.20	77.2	99.39	2	1267.	.26000	.00	.00	0.	293	11	A30	.01
1352 17C	31.9	44.78	109.1	141.16	2	1.	.26000	.00	.00	0.	293	10	A30	.01
1352 18C	.0	.00	109.1	141.16	4	1.	.01000	4.00	.00	0.	293	99	A30	.00

CONFLUENCE Q'S

1352 19A TA 1157 QA 340.91 QAC 480.43 QC 139.52 1352 19C TC 1156 QC 141.16 QCA 481.77 QA 340.62
1352 19AC TAC 1156 QAC 481.77 QA 340.62 QC 141.16

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	141.16	359.5	481.77	2	1161.	.09000	.00	.00	0.	293	0	A30	.00
1352 20A	.0	.00	359.5	477.62	4	1.	.01000	6.25	.00	0.	293	99	A30	.00
1352 21A	39.2	49.13	398.7	524.34	2	1.	.09000	.00	.00	0.	293	12	A30	.01
1352 22A	.0	.00	398.7	524.32	4	1.	.01000	6.50	.00	0.	293	99	A30	.00
1352 23D	30.8	43.23	30.8	43.23	2	1242.	.23000	.00	.00	0.	293	10	A30	.01
1352 24D	39.3	55.16	70.1	96.06	2	1308.	.03800	.00	.00	0.	293	10	A30	.01
1352 25D	42.3	59.37	112.4	143.65	2	723.	.22800	.00	.00	0.	293	10	A30	.01
1352 26D	30.9	45.71	143.3	181.01	2	720.	.09000	.00	.00	0.	293	9	A30	.01
1352 27D	26.9	37.76	170.2	212.76	2	1.	.09000	.00	.00	0.	293	10	A30	.01
1352 28D	.0	.00	170.2	212.76	4	1.	.01000	4.75	.00	0.	293	99	A30	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

CONFLUENCE Q'S

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*   1352   29A  TA 1157 QA   524.30 QAD   734.50 QD   210.20    1352   29D  TD 1158 QD   212.76 QDA   736.15 QA   523.39   *
*                                1352   29AD TAD 1158 QAD   736.15 QA   523.39 QD   212.76                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	212.76	568.9	736.15	2	668.	.04800	.00	.00	0.	293	0	A30	.00
1352	30A	.0	.00	568.9	732.95	4	1.	.01000	7.25	.00	0.	293	99	A30	.00
1352	31A	29.2	35.05	598.1	765.54	2	506.	.04400	.00	.00	0.	293	12	A29	.01
1352	32A	22.2	29.83	620.3	784.43	2	635.	.03900	.00	.00	0.	293	10	A29	.01
1352	33A	23.1	32.74	643.4	800.84	2	593.	.04200	.00	.00	0.	293	9	A29	.01
1352	34A	35.7	42.85	679.1	834.45	2	572.	.03500	.00	.00	0.	293	12	A29	.01
1352	35A	29.2	35.05	708.3	855.10	2	485.	.04100	.00	.00	0.	293	12	A29	.01
1352	36A	25.6	34.40	733.9	871.06	2	532.	.03800	.00	.00	0.	293	10	A29	.01
1352	37A	.0	.00	733.9	864.25	4	1.	.01000	7.75	.00	0.	293	99	A30	.00
1352	38A	23.7	32.23	757.6	874.82	2	396.	.05100	.00	.00	0.	293	9	A28	.01
1352	39A	32.5	39.48	790.1	892.08	2	838.	.05600	.00	.00	0.	293	11	A28	.01
1352	40A	20.2	26.21	810.3	892.70	2	1.	.05600	.00	.00	0.	293	9	A27	.01
1352	41A	22.5	26.51	832.8	898.99	2	1.	.13300	.00	.00	0.	293	9	A25	.01
1352	42A	28.5	31.27	861.3	917.86	2	840.	.05700	.00	.00	0.	293	12	A27	.01
1352	43A	.0	.00	861.3	914.16	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	44A	20.2	22.34	881.5	922.20	2	1.	.05700	.00	.00	0.	293	11	A26	.01
1352	45A	24.8	23.58	906.3	936.03	2	575.	.03500	.00	.00	0.	293	13	A25	.01
1352	46A	15.1	19.60	921.4	934.53	2	1319.	.03400	.00	.00	0.	293	9	A27	.01
1352	47A	24.6	23.55	946.0	938.66	2	1.	.03400	.00	.00	0.	293	14	A26	.01
1352	48A	24.9	28.89	970.9	944.65	2	722.	.03900	.00	.00	0.	293	11	A27	.01
1352	49A	20.9	24.59	991.8	944.19	2	846.	.04700	.00	.00	0.	293	10	A26	.01
1352	50A	19.2	23.66	1011.0	943.19	2	1.	.04700	.00	.00	0.	293	10	A27	.01
1352	51A	.0	.00	1011.0	943.19	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	52E	28.8	39.16	28.8	39.16	2	940.	.14400	.00	.00	0.	293	9	A28	.01
1352	53E	24.8	31.94	53.6	69.62	2	971.	.27800	.00	.00	0.	293	10	A28	.01
1352	54E	33.4	40.57	87.0	108.42	2	1110.	.18700	.00	.00	0.	293	11	A28	.01
1352	55E	23.1	26.81	110.1	132.74	2	1.	.18700	.00	.00	0.	293	11	A27	.01
1352	56E	.0	.00	110.1	132.74	4	1.	.01000	4.00	.00	0.	293	99	A30	.00

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*                                                          CONFLUENCE Q'S                                                   *
*   1352   57A  TA 1167 QA   943.19 QAE   976.31 QE    33.13    1352   57E  TE 1157 QE   132.73 QEA   681.60 QA   548.86   *
*                                1352   57AE TAE 1166 QAE   978.54 QA   939.14 QE    39.40                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	132.73	1121.1	978.54	2	180.	.03900	.00	.00	0.	293	0	A30	.00
1352	58A	.0	.00	1121.1	977.21	4	1.	.01000	8.00	.00	0.	293	99	A30	.00
1352	59A	28.2	30.94	1149.3	983.12	2	815.	.01800	.00	.00	0.	293	12	A27	.01
1352	60A	27.2	37.53	1176.5	983.83	2	1136.	.05700	.00	.00	0.	293	8	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	19.64	1194.4	983.27	2	1.	.05700	.00	.00	0.	293	12	A27	.01
1352	62A	.0	.00	1194.4	983.27	5	1.	.01000	11.00	.00	0.	293	99	A30	.00
1352	63F	27.0	36.28	27.0	36.28	2	586.	.19600	.00	.00	0.	293	10	A29	.01
1352	64F	40.8	42.86	67.8	78.92	2	727.	.08900	.00	.00	0.	293	14	A28	.01
1352	65F	37.4	41.04	105.2	118.83	2	1.	.08900	.00	.00	0.	293	12	A27	.01
1352	66F	32.6	41.99	137.8	159.00	2	1.	.14100	.00	.00	0.	293	10	A28	.01
1352	67F	18.8	22.84	156.6	181.25	2	677.	.08100	.00	.00	0.	293	11	A28	.01
1352	68F	9.2	11.94	165.8	191.59	2	1.	.08100	.00	.00	0.	293	9	A27	.01
1352	69F	.0	.00	165.8	191.59	4	1.	.01000	4.50	.00	0.	293	99	A30	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1169 QA   983.27 QAF  1026.42 QF    43.15    1352   70F  TF 1156 QF   191.58 QFA   767.03 QA   575.45   *
*                                1352   70AF TAF 1168 QAF  1028.20 QA   978.20 QF    50.01                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	191.58	1360.2	1028.20	2	561.	.03600	.00	.00	0.	293	0	A30	.00
1352	71A	.0	.00	1360.2	1027.01	5	1.	.01000	11.00	.00	0.	293	99	A30	.00
1352	72A	6.4	8.31	1366.6	1027.97	2	1.	.03600	.00	.00	0.	293	9	A27	.01
1352	73A	20.0	25.86	1386.6	1032.48	2	434.	.03000	.00	.00	0.	291	11	A27	.01
1352	74A	21.9	27.12	1408.5	1034.83	2	420.	.02900	.00	.00	0.	291	11	A26	.01
1352	75A	42.0	47.37	1450.5	1043.38	2	1019.	.02000	.00	.00	0.	291	13	A26	.01
1352	76A	26.1	29.43	1476.6	1045.40	2	249.	.04000	.00	.00	0.	291	13	A26	.01
1352	77A	12.2	15.97	1488.8	1046.42	2	1.	.04000	.00	.00	0.	291	10	A26	.01
1352	78A	.0	.00	1488.8	1046.42	5	1.	.01000	11.00	.00	0.	291	99	A30	.00
1352	79A	14.2	18.36	1503.0	1049.25	2	643.	.01900	.00	.00	0.	291	11	A27	.01
1352	80A	18.2	22.54	1521.2	1050.90	2	751.	.02400	.00	.00	0.	291	11	A26	.01
1352	81A	23.3	30.13	1544.5	1053.50	2	709.	.02400	.00	.00	0.	291	11	A27	.01
1352	82A	22.2	24.11	1566.7	1056.07	2	1.	.02400	.00	.00	0.	291	14	A26	.01
1352	83A	.0	.00	1566.7	1056.07	5	1.	.01000	11.00	.00	0.	291	99	A30	.00
1352	84B	26.2	28.27	26.2	28.27	2	1438.	.06400	.00	.00	0.	291	13	A25	.01
1352	85B	33.5	36.38	59.7	61.83	2	1.	.06400	.00	.00	0.	291	14	A26	.01
1352	86B	.0	.00	59.7	61.83	4	1.	.01000	3.00	.00	0.	291	99	A30	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1174 QA  1056.07 QAB  1069.08 QB    13.01    1352   87B  TB 1158 QB    61.83 QBA   752.11 QA   690.28   *
*                                1352   87AB TAB 1174 QAB  1069.08 QA  1056.07 QB    13.01                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	61.83	1626.4	1069.08	2	405.	.02300	.00	.00	0.	291	0	A30	.00
1352	88A	2.8	4.95	1629.2	1068.34	2	1.	.02300	.00	.00	0.	291	6	A27	.01
1352	89C	21.6	32.26	21.6	32.26	2	1328.	.09400	.00	.00	0.	291	9	A28	.01
1352	90C	23.5	26.65	45.1	56.86	2	1.	.09400	.00	.00	0.	291	14	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1174 QA  1068.34 QAC  1077.64 QC     9.30    1352   91C  TC 1157 QC    56.86 QCA   732.13 QA   675.27   *
*                                1352   91AC TAC 1174 QAC  1077.64 QA  1068.34 QC     9.30                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	56.86	1674.3	1077.64	2	977.	.02400	.00	.00	0.	291	0	A30	.00
1352	92A	30.8	39.82	1705.1	1081.35	2	999.	.01300	.00	.00	0.	291	11	A27	.01
1352	93A	37.7	46.35	1742.8	1086.46	2	448.	.02200	.00	.00	0.	291	12	A27	.01
1352	94A	11.0	15.74	1753.8	1087.48	2	1.	.02200	.00	.00	0.	291	9	A27	.01
1352	95D	382.1	457.10	382.1	457.10	2	1.	.02200	.00	.00	0.	291	0	A30	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1177 QA  1087.48 QAD  1189.00 QD   101.52    1352   96D  TD 1160 QD   457.09 QDA  1209.99 QA   752.90   *
*                                1352   96AD TAD 1167 QAD  1302.44 QA  1025.97 QD   276.47                                  *
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SUBAREA SUBAREA TOTAL TOTAL CONV CONV CONV CONV CONV CONTROL SOIL RAIN PCT

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	457.09	2135.9	1302.44	6	250.	.01600	32.00	.00	0.	291	0	A30	.00
1352	97A	13.4	18.29	2149.3	1305.61	2	642.	.01700	.00	.00	0.	291	10	A27	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	62.65	200	64.24	300	67.33	400	70.96
500	75.28	600	80.82	700	87.55	800	96.64	900	109.68
1000	133.96	1050	165.75	1100	230.18	1110	257.11	1120	299.91
1130	360.17	1131	367.32	1132	374.35	1133	381.84	1134	389.56
1135	397.57	1136	405.94	1137	414.91	1138	424.95	1139	435.23
1140	446.08	1141	457.63	1142	470.17	1143	483.51	1144	497.75
1145	513.34	1146	530.43	1147	549.07	1148	569.61	1149	595.51
1150	627.47	1151	667.39	1152	715.78	1153	772.09	1154	833.21
1155	897.81	1156	965.02	1157	1033.43	1158	1099.52	1159	1158.05
1160	1207.99	1161	1245.97	1162	1270.73	1163	1285.18	1164	1294.91
1165	1301.02	1166	1304.26	1167	1305.61	1168	1303.43	1169	1296.32
1170	1284.58	1171	1270.05	1172	1254.16	1173	1237.95	1174	1223.50
1175	1211.10	1176	1201.33	1177	1193.11	1178	1185.49	1179	1176.34
1180	1163.82	1181	1146.31	1182	1123.31	1183	1094.68	1184	1061.21
1185	1023.95	1186	984.11	1187	942.54	1188	900.41	1189	858.45
1190	817.12	1191	776.89	1192	738.18	1193	701.14	1194	665.83
1195	632.33	1196	600.79	1197	571.14	1198	543.19	1199	517.00
1200	492.53	1201	469.64	1202	448.26	1203	428.22	1204	410.05
1205	393.56	1206	376.97	1207	361.90	1208	347.62	1209	334.43
1210	322.08	1211	310.64	1212	299.91	1213	289.93	1214	280.42
1215	271.28	1216	262.54	1217	254.54	1218	247.41	1219	240.34
1220	233.78	1221	227.51	1222	221.64	1223	216.18	1224	211.05
1225	206.21	1226	201.80	1227	197.70	1228	193.77	1229	190.01
1230	186.38	1231	182.91	1232	179.54	1233	176.27	1234	173.20
1235	170.24	1236	167.39	1237	164.66	1238	162.00	1239	159.51
1240	157.15	1241	154.85	1242	152.68	1243	150.74	1244	148.96
1245	147.26	1246	145.69	1247	144.10	1248	142.55	1249	141.07
1250	139.64	1251	138.29	1252	137.03	1253	135.80	1254	134.58
1255	133.46	1256	132.38	1257	131.25	1258	130.14	1259	129.07
1260	128.06	1261	127.09	1262	126.15	1263	125.30	1264	124.47
1265	123.65	1266	122.82	1267	121.98	1268	121.17	1269	120.39
1270	119.65	1271	118.92	1272	118.17	1273	117.39	1274	116.66
1275	115.93	1276	115.21	1277	114.49	1278	113.78	1279	113.09
1280	112.45	1281	111.84	1282	111.20	1283	110.59	1284	109.94
1285	109.30	1286	108.68	1287	108.06	1288	107.50	1289	106.95
1290	106.38	1291	105.82	1292	105.31	1293	104.79	1294	104.25
1295	103.77	1296	103.30	1297	102.84	1298	102.36	1299	101.87
1300	101.35	1310	97.12	1320	93.46	1330	90.13	1340	87.21
1350	84.18	1360	82.13	1370	79.56	1380	77.52	1390	75.47
1400	73.93	1420	70.74	1440	68.21	1460	63.21	1500	62.31

TOTAL VOLUME THIS HYDROGRAPH = 271.33(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	27.21	19.2	27.21	2	959.	.20900	.00	.00	0.	293	9	A29	.01
1352 2A	36.3	45.94	55.5	72.62	2	367.	.12300	.00	.00	0.	293	11	A29	.01
1352 3A	11.1	16.75	66.6	88.08	2	1.	.12300	.00	.00	0.	293	8	A29	.01
1352 4A	25.5	33.75	92.1	121.83	2	662.	.12100	.00	.00	0.	293	11	A30	.01
1352 5A	18.9	28.53	111.0	148.24	2	546.	.11000	.00	.00	0.	293	8	A29	.01
1352 6A	19.2	31.16	130.2	172.83	2	1340.	.16000	.00	.00	0.	293	7	A29	.01
1352 7A	24.7	33.19	154.9	201.54	2	592.	.06400	.00	.00	0.	293	10	A29	.01
1352 8A	20.4	28.91	175.3	223.48	2	1.	.06400	.00	.00	0.	293	9	A29	.01
1352 9B	25.7	38.38	25.7	38.38	2	980.	.09500	.00	.00	0.	291	9	A28	.01
1352 10B	39.8	48.95	65.5	86.05	2	1.	.09500	.00	.00	0.	291	14	A29	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   11A  TA 1157 QA   223.46 QAB   308.78 QB    85.32    1352   11B  TB 1156 QB    86.05 QBA   299.54 QA   213.49   *
*                              1352   11AB TAB 1157 QAB   308.78 QA   223.46 QB    85.32                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	86.05	240.8	308.78	2	761.	.08100	.00	.00	0.	291	0	A29	.00
1352 12A	15.7	27.59	256.5	322.08	2	1228.	.04900	.00	.00	0.	291	7	A29	.01
1352 13A	31.9	42.99	288.4	353.02	2	1.	.04900	.00	.00	0.	291	11	A28	.01
1352 14C	21.3	27.33	21.3	27.33	2	1.	.01000	.00	.00	0.	291	12	A28	.01

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*                                                    CONFLUENCE Q'S                                                    *
*   1352   15A  TA 1159 QA   353.00 QAC   377.64 QC    24.63    1352   15C  TC 1155 QC    27.31 QCA   295.64 QA   268.33   *
*                              1352   15AC TAC 1159 QAC   377.64 QA   353.00 QC    24.63                                 *
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	27.31	309.7	377.64	5	100.	.02000	10.00	.00	0.	291	0	A28	.00
1352 16A	.0	.00	309.7	376.61	2	1.	.01000	.00	.00	0.	291	99	A28	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	8.93	200	9.26	300	9.77	400	10.28
500	10.95	600	11.76	700	12.80	800	14.19	900	16.20
1000	20.91	1050	27.80	1100	41.15	1110	49.94	1120	62.48
1130	78.21	1131	80.04	1132	81.62	1133	83.46	1134	85.33
1135	87.34	1136	89.54	1137	91.91	1138	94.47	1139	97.26
1140	100.19	1141	103.76	1142	107.64	1143	111.57	1144	115.82
1145	121.09	1146	127.13	1147	133.52	1148	140.61	1149	152.69
1150	167.97	1151	185.28	1152	207.51	1153	234.17	1154	261.83
1155	291.42	1156	321.83	1157	347.46	1158	366.53	1159	376.61
1160	374.54	1161	359.26	1162	336.62	1163	308.72	1164	278.05
1165	248.70	1166	222.30	1167	197.56	1168	174.96	1169	154.67
1170	136.85	1171	121.79	1172	108.55	1173	97.74	1174	88.42
1175	80.65	1176	74.03	1177	68.59	1178	63.81	1179	59.68
1180	56.33	1181	53.32	1182	50.57	1183	48.26	1184	46.07
1185	44.02	1186	42.26	1187	40.77	1188	39.19	1189	37.75
1190	36.62	1191	35.44	1192	34.25	1193	33.30	1194	32.37
1195	31.42	1196	30.60	1197	29.84	1198	29.09	1199	28.44
1200	27.81	1201	27.24	1202	26.78	1203	26.28	1204	25.81
1205	25.41	1206	24.94	1207	24.55	1208	24.14	1209	23.75
1210	23.37	1211	22.96	1212	22.72	1213	22.38	1214	22.01
1215	21.68	1216	21.39	1217	21.12	1218	20.80	1219	20.50
1220	20.22	1221	19.97	1222	19.77	1223	19.56	1224	19.35
1225	19.16	1226	18.98	1227	18.77	1228	18.55	1229	18.37
1230	18.18	1231	18.01	1232	17.89	1233	17.75	1234	17.62
1235	17.45	1236	17.30	1237	17.19	1238	17.04	1239	16.92
1240	16.80	1241	16.71	1242	16.66	1243	16.53	1244	16.42
1245	16.30	1246	16.20	1247	16.12	1248	16.02	1249	15.94
1250	15.87	1251	15.79	1252	15.68	1253	15.59	1254	15.50
1255	15.39	1256	15.33	1257	15.25	1258	15.15	1259	15.09
1260	15.02	1261	14.92	1262	14.83	1263	14.79	1264	14.73
1265	14.63	1266	14.56	1267	14.50	1268	14.44	1269	14.36
1270	14.28	1271	14.19	1272	14.11	1273	14.09	1274	13.97
1275	13.94	1276	13.89	1277	13.91	1278	13.76	1279	13.78
1280	13.62	1281	13.70	1282	13.49	1283	13.64	1284	13.35
1285	13.60	1286	13.19	1287	13.57	1288	12.95	1289	13.53
1290	12.64	1291	13.62	1292	12.31	1293	13.81	1294	11.85
1295	14.16	1296	11.22	1297	14.58	1298	10.59	1299	14.91
1300	10.05	1310	14.83	1320	9.32	1330	14.22	1340	8.93
1350	13.14	1360	8.93	1370	12.12	1380	8.93	1390	11.20
1400	8.93	1420	10.28	1440	8.93	1460	9.12	1500	8.93

TOTAL VOLUME THIS HYDROGRAPH = 39.97(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	1.78	.9	1.78	4	250.	.03000	2.00	.00	0.	291	5	A27	.05
1352	2A	.0	.00	.9	1.67	4	1.	.01000	2.00	.00	0.	291	99	A27	.00
1352	3A	.0	.00	.9	1.67	4	1.	.01000	2.00	.00	0.	291	99	A27	.00
1352	4B	2.5	4.92	2.5	4.92	2	170.	.01000	.00	.00	0.	291	5	A27	.01
1352	5B	7.2	11.70	9.7	15.95	2	480.	.05000	.00	.00	0.	291	7	A27	.01
1352	6B	1.6	2.83	11.3	17.58	4	160.	.10000	2.00	.00	0.	291	6	A27	.01
1352	7B	1.5	2.39	12.8	19.86	4	5.	.10000	2.00	.00	0.	291	8	A27	.65
1352	8B	.4	.83	13.2	20.36	4	30.	.02000	2.00	.00	0.	291	5	A27	.91
1352	9B	.0	.00	13.2	20.36	4	1.	.01000	2.00	.00	0.	291	99	A27	.00

CONFLUENCE Q'S

1352 10A TA 1154 QA 1.67 QAB 20.67 QB 19.01 1352 10B TB 1156 QB 20.36 QBA 21.67 QA 1.31
1352 10AB TAB 1155 QAB 21.71 QA 1.55 QB 20.16

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	20.36	14.1	21.71	4	800.	.06500	2.00	.00	0.	291	0	A27	.00
1352	11A	4.6	6.34	18.7	27.49	4	1.	.06500	2.00	.00	0.	291	11	A27	.65
1352	12A	3.7	5.10	22.4	32.48	4	50.	.06500	2.00	.00	0.	291	11	A27	.65
1352	13A	.0	.00	22.4	32.44	4	1.	.01000	2.25	.00	0.	291	99	A27	.00
1352	14A	2.6	4.15	25.0	36.42	4	10.	.06500	2.00	.00	0.	291	8	A27	.65
1352	15C	2.1	4.14	2.1	4.14	4	120.	.09100	2.00	.00	0.	291	5	A27	.01
1352	16C	2.9	4.24	5.0	8.25	4	770.	.09200	2.00	.00	0.	291	9	A27	.25
1352	17C	5.8	8.37	10.8	16.19	4	50.	.09200	2.00	.00	0.	291	10	A27	.60
1352	18C	1.0	1.63	11.8	17.78	4	10.	.09200	2.00	.00	0.	291	7	A27	.05

CONFLUENCE Q'S

1352 19A TA 1156 QA 36.41 QAC 53.41 QC 17.00 1352 19C TC 1155 QC 17.77 QCA 53.12 QA 35.35
1352 19AC TAC 1156 QAC 53.41 QA 36.41 QC 17.00

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	17.77	36.8	53.41	4	260.	.09000	2.00	.00	0.	291	0	A27	.00
1352	20A	.0	.00	36.8	53.37	4	1.	.01000	2.75	.00	0.	291	99	A27	.00
1352	21A	1.7	2.44	38.5	55.71	4	130.	.08800	2.00	.00	0.	291	9	A27	.05
1352	22A	3.1	4.28	41.6	59.82	4	1.	.02000	2.50	.00	0.	291	11	A27	.65
1352	23A	4.4	6.07	46.0	65.75	4	1040.	.08800	2.00	.00	0.	291	11	A27	.65
1352	24A	4.0	5.54	50.0	70.30	4	1.	.03400	2.50	.00	0.	291	11	A27	.70
1352	25A	2.1	3.09	52.1	73.19	4	80.	.03200	2.50	.00	0.	291	10	A28	.40
1352	26D	309.7	376.60	309.7	376.60	2	1.	.01000	.00	.00	0.	291	0	A28	.00
1352	27D	20.3	25.04	330.0	399.64	2	1600.	.12800	.00	.00	0.	291	13	A28	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 10-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

CONFLUENCE Q'S

1352 28A TA 1157 QA 73.05 QAD 404.79 QD 331.74 1352 28D TD 1161 QD 394.93 QDA 452.63 QA 57.70

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*                              1352   28AD TAD 1160 QAD   458.44 QA    64.96 QD   393.48                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	394.93	382.1	458.44	5	230.	.03000	12.00	.00	0.	291	0	A28	.00
1352 29A	.0	.00	382.1	457.13	2	1.	.01000	.00	.00	0.	291	99	A28	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

HYDROGRAPH AT POINT 96AD

HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	11.78	200	12.27	300	12.94	400	13.61
500	14.43	600	15.57	700	16.92	800	18.82	900	21.53
1000	27.63	1050	36.69	1100	53.80	1110	63.39	1120	79.07
1130	97.78	1131	99.98	1132	102.08	1133	104.33	1134	106.62
1135	109.01	1136	111.47	1137	114.08	1138	116.96	1139	120.15
1140	123.66	1141	127.53	1142	131.75	1143	136.45	1144	141.56
1145	147.03	1146	153.16	1147	160.33	1148	168.43	1149	177.87
1150	190.82	1151	210.10	1152	234.25	1153	262.95	1154	295.85
1155	330.55	1156	364.65	1157	397.27	1158	426.00	1159	446.99
1160	457.13	1161	454.43	1162	438.64	1163	412.24	1164	379.38
1165	343.87	1166	308.78	1167	276.38	1168	247.49	1169	221.82
1170	199.08	1171	179.18	1172	160.97	1173	145.30	1174	131.65
1175	120.24	1176	110.21	1177	101.46	1178	94.04	1179	87.63
1180	81.98	1181	77.07	1182	72.91	1183	69.22	1184	65.89
1185	62.98	1186	60.45	1187	57.97	1188	55.74	1189	53.68
1190	51.81	1191	50.09	1192	48.48	1193	46.97	1194	45.55
1195	44.24	1196	43.02	1197	41.88	1198	40.80	1199	39.79
1200	38.85	1201	37.96	1202	37.12	1203	36.34	1204	35.65
1205	35.03	1206	34.41	1207	33.81	1208	33.22	1209	32.64
1210	32.09	1211	31.58	1212	31.10	1213	30.63	1214	30.17
1215	29.74	1216	29.32	1217	28.91	1218	28.51	1219	28.13
1220	27.75	1221	27.37	1222	27.01	1223	26.66	1224	26.34
1225	26.05	1226	25.77	1227	25.50	1228	25.22	1229	24.96
1230	24.70	1231	24.45	1232	24.22	1233	23.99	1234	23.77
1235	23.59	1236	23.41	1237	23.22	1238	23.04	1239	22.85
1240	22.67	1241	22.50	1242	22.33	1243	22.18	1244	22.05
1245	21.92	1246	21.78	1247	21.64	1248	21.49	1249	21.32
1250	21.23	1251	21.07	1252	21.00	1253	20.87	1254	20.80
1255	20.67	1256	20.58	1257	20.44	1258	20.33	1259	20.21
1260	20.13	1261	20.01	1262	19.91	1263	19.78	1264	19.67
1265	19.56	1266	19.49	1267	19.40	1268	19.33	1269	19.24
1270	19.16	1271	19.06	1272	18.98	1273	18.89	1274	18.79
1275	18.68	1276	18.60	1277	18.50	1278	18.42	1279	18.35
1280	18.31	1281	18.25	1282	18.18	1283	18.09	1284	18.02
1285	17.92	1286	17.84	1287	17.75	1288	17.69	1289	17.61
1290	17.54	1291	17.43	1292	17.32	1293	17.22	1294	17.15
1295	17.08	1296	17.03	1297	16.98	1298	16.89	1299	16.79
1300	16.70	1310	16.29	1320	15.84	1330	15.37	1340	15.07
1350	14.38	1360	14.46	1370	13.77	1380	13.75	1390	13.14
1400	13.20	1420	12.52	1440	12.55	1460	11.80	1500	11.79

TOTAL VOLUME THIS HYDROGRAPH = 52.18(Ac.Ft)

STEVENSON RANCH

25-YEAR BURNED

DEVELOPED CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352 1A	32.5	89.56	32.5	89.56	2	1173.	.20100	.00	.00	0.	293	7	A37	.01
1352 2A	34.8	89.29	67.3	176.19	2	369.	.19500	.00	.00	0.	293	8	A37	.01
1352 3A	33.3	76.77	100.6	251.10	2	1353.	.24000	.00	.00	0.	293	10	A37	.01
1352 4A	37.9	97.25	138.5	342.02	2	1.	.24000	.00	.00	0.	293	8	A37	.01
1352 5A	.0	.00	138.5	342.02	4	1.	.01000	5.50	.00	0.	293	99	A37	.00
1352 6B	28.8	79.36	28.8	79.36	2	494.	.25300	.00	.00	0.	293	7	A37	.01
1352 7B	12.2	33.62	41.0	112.74	2	1.	.25300	.00	.00	0.	293	7	A37	.01
1352 8B	22.3	54.05	63.3	166.66	2	1342.	.28700	.00	.00	0.	293	9	A37	.01
1352 9B	24.6	59.63	87.9	223.55	2	1.	.28700	.00	.00	0.	293	9	A37	.01
1352 10B	.0	.00	87.9	223.54	4	1.	.01000	4.75	.00	0.	293	99	A37	.00

CONFLUENCE Q'S

1352 11A TA 1156 QA 342.02 QAB 561.24 QB 219.22 1352 11B TB 1155 QB 223.52 QBA 564.19 QA 340.67
1352 11AB TAB 1155 QAB 564.19 QA 340.67 QB 223.52

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	223.52	226.4	564.19	2	655.	.14500	.00	.00	0.	293	0	A37	.00
1352 12A	.0	.00	226.4	561.93	4	1.	.01000	6.50	.00	0.	293	99	A37	.00
1352 13A	24.0	66.14	250.4	619.41	2	1.	.14500	.00	.00	0.	293	7	A37	.01
1352 14A	.0	.00	250.4	619.38	4	1.	.01000	6.75	.00	0.	293	99	A37	.00
1352 15C	37.0	85.30	37.0	85.30	2	826.	.24800	.00	.00	0.	293	10	A37	.01
1352 16C	40.2	97.44	77.2	180.62	2	1267.	.26000	.00	.00	0.	293	9	A37	.01
1352 17C	31.9	77.32	109.1	254.63	2	1.	.26000	.00	.00	0.	293	9	A37	.01
1352 18C	.0	.00	109.1	254.62	4	1.	.01000	5.00	.00	0.	293	99	A37	.00

CONFLUENCE Q'S

1352 19A TA 1155 QA 619.30 QAC 873.89 QC 254.59 1352 19C TC 1155 QC 254.59 QCA 873.89 QA 619.30
1352 19AC TAC 1155 QAC 873.89 QA 619.30 QC 254.59

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	254.59	359.5	873.89	2	1161.	.09000	.00	.00	0.	293	0	A37	.00
1352 20A	.0	.00	359.5	865.49	4	1.	.01000	7.75	.00	0.	293	99	A37	.00
1352 21A	39.2	90.37	398.7	952.24	2	1.	.09000	.00	.00	0.	293	10	A37	.01
1352 22A	.0	.00	398.7	952.23	4	1.	.01000	8.00	.00	0.	293	99	A37	.00
1352 23D	30.8	79.03	30.8	79.03	2	1242.	.23000	.00	.00	0.	293	8	A37	.01
1352 24D	39.3	100.84	70.1	177.23	2	1308.	.03800	.00	.00	0.	293	8	A37	.01
1352 25D	42.3	102.53	112.4	263.99	2	723.	.22800	.00	.00	0.	293	9	A37	.01
1352 26D	30.9	85.15	143.3	325.07	2	720.	.09000	.00	.00	0.	293	7	A37	.01
1352 27D	26.9	69.02	170.2	386.15	2	1.	.09000	.00	.00	0.	293	8	A37	.01
1352 28D	.0	.00	170.2	386.14	4	1.	.01000	5.75	.00	0.	293	99	A37	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN A

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV

CONFLUENCE Q'S

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*   1352   29A  TA 1156 QA   952.19 QAD  1338.32 QD   386.13    1352   29D  TD 1156 QD   386.13 QDA  1338.32 QA   952.19   *
*                                 1352   29AD TAD 1156 QAD  1338.32 QA   952.19 QD   386.13                                  *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	386.13	568.9	1338.32	2	668.	.04800	.00	.00	0.	293	0	A37	.00
1352	30A	.0	.00	568.9	1331.22	5	1.	.01000	12.00	.00	0.	293	99	A37	.00
1352	31A	29.2	65.25	598.1	1391.88	2	506.	.04400	.00	.00	0.	293	10	A36	.01
1352	32A	22.2	52.19	620.3	1429.11	2	635.	.03900	.00	.00	0.	293	9	A36	.01
1352	33A	23.1	61.65	643.4	1457.06	2	593.	.04200	.00	.00	0.	293	7	A36	.01
1352	34A	35.7	79.77	679.1	1515.65	2	572.	.03500	.00	.00	0.	293	10	A36	.01
1352	35A	29.2	63.18	708.3	1555.18	2	485.	.04100	.00	.00	0.	293	10	A35	.01
1352	36A	25.6	61.64	733.9	1581.91	2	532.	.03800	.00	.00	0.	293	8	A35	.01
1352	37A	.0	.00	733.9	1571.18	5	1.	.01000	12.00	.00	0.	293	99	A37	.00
1352	38A	23.7	55.27	757.6	1593.48	2	396.	.05100	.00	.00	0.	293	8	A34	.01
1352	39A	32.5	71.47	790.1	1630.91	2	838.	.05600	.00	.00	0.	293	9	A34	.01
1352	40A	20.2	48.80	810.3	1630.75	2	1.	.05600	.00	.00	0.	293	7	A33	.01
1352	41A	22.5	50.46	832.8	1643.73	2	1.	.13300	.00	.00	0.	293	7	A31	.01
1352	42A	28.5	57.48	861.3	1680.72	2	840.	.05700	.00	.00	0.	293	10	A33	.01
1352	43A	.0	.00	861.3	1670.48	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	44A	20.2	41.36	881.5	1686.78	2	1.	.05700	.00	.00	0.	293	9	A32	.01
1352	45A	24.8	46.44	906.3	1710.70	2	575.	.03500	.00	.00	0.	293	10	A31	.01
1352	46A	15.1	33.97	921.4	1716.82	2	1319.	.03400	.00	.00	0.	293	8	A33	.01
1352	47A	24.6	45.23	946.0	1719.49	2	1.	.03400	.00	.00	0.	293	11	A32	.01
1352	48A	24.9	52.80	970.9	1733.44	2	722.	.03900	.00	.00	0.	293	9	A33	.01
1352	49A	20.9	45.30	991.8	1737.28	2	846.	.04700	.00	.00	0.	293	8	A32	.01
1352	50A	19.2	43.19	1011.0	1735.88	2	1.	.04700	.00	.00	0.	293	8	A33	.01
1352	51A	.0	.00	1011.0	1735.87	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	52E	28.8	74.37	28.8	74.37	2	940.	.14400	.00	.00	0.	293	7	A35	.01
1352	53E	24.8	57.83	53.6	130.10	2	971.	.27800	.00	.00	0.	293	8	A34	.01
1352	54E	33.4	73.45	87.0	199.93	2	1110.	.18700	.00	.00	0.	293	9	A34	.01
1352	55E	23.1	48.98	110.1	245.12	2	1.	.18700	.00	.00	0.	293	9	A33	.01
1352	56E	.0	.00	110.1	245.11	4	1.	.01000	5.00	.00	0.	293	99	A37	.00

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*****************************************************************************************************************************
*                                                   CONFLUENCE Q'S                                                          *
*   1352   57A  TA 1164 QA  1735.87 QAE  1805.02 QE    69.15    1352   57E  TE 1156 QE   245.11 QEA  1350.57 QA  1105.46   *
*                                 1352   57AE TAE 1163 QAE  1813.23 QA  1727.64 QE    85.58                                  *
*****************************************************************************************************************************
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	245.11	1121.1	1813.23	2	180.	.03900	.00	.00	0.	293	0	A37	.00
1352	58A	.0	.00	1121.1	1809.99	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	59A	28.2	56.88	1149.3	1825.12	2	815.	.01800	.00	.00	0.	293	10	A33	.01
1352	60A	27.2	65.71	1176.5	1826.78	2	1136.	.05700	.00	.00	0.	293	7	A33	.01

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1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	36.10	1194.4	1829.32	2	1.	.05700	.00	.00	0.	293	10	A33	.01
1352	62A	.0	.00	1194.4	1829.31	5	1.	.01000	13.00	.00	0.	293	99	A37	.00
1352	63F	27.0	65.01	27.0	65.01	2	586.	.19600	.00	.00	0.	293	8	A35	.01
1352	64F	40.8	80.56	67.8	145.22	2	727.	.08900	.00	.00	0.	293	11	A34	.01
1352	65F	37.4	75.44	105.2	217.35	2	1.	.08900	.00	.00	0.	293	10	A33	.01
1352	66F	32.6	76.02	137.8	291.71	2	1.	.14100	.00	.00	0.	293	8	A34	.01
1352	67F	18.8	41.34	156.6	332.29	2	677.	.08100	.00	.00	0.	293	9	A34	.01
1352	68F	9.2	20.70	165.8	350.43	2	1.	.08100	.00	.00	0.	293	8	A33	.01
1352	69F	.0	.00	165.8	350.43	4	1.	.01000	5.50	.00	0.	293	99	A37	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1165 QA  1829.30 QAF  1927.51 QF    98.21    1352   70F  TF 1156 QF   350.43 QFA  1589.76 QA  1239.33   *
*                                1352   70AF TAF 1164 QAF  1929.85 QA  1811.89 QF   117.96                                  *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   70AF   165.8     350.43    1360.2   1929.85   2     561.   .03600      .00   .00        0.  293   0   A37   .00
    1352   71A      .0        .00    1360.2   1928.14   5       1.   .01000    13.00   .00        0.  293  99   A37   .00
    1352   72A     6.4      15.46    1366.6   1930.35   2       1.   .03600      .00   .00        0.  293   7   A33   .01
    1352   73A    20.0      45.05    1386.6   1939.97   2     434.   .03000      .00   .00        0.  291   9   A33   .01
    1352   74A    21.9      50.34    1408.5   1948.33   2     420.   .02900      .00   .00        0.  291   8   A32   .01
    1352   75A    42.0      87.40    1450.5   1966.01   2    1019.   .02000      .00   .00        0.  291  10   A32   .01
    1352   76A    26.1      54.31    1476.6   1973.88   2     249.   .04000      .00   .00        0.  291  10   A32   .01
    1352   77A    12.2      28.04    1488.8   1977.89   2       1.   .04000      .00   .00        0.  291   8   A32   .01
    1352   78A      .0        .00    1488.8   1977.89   5       1.   .01000    13.00   .00        0.  291  99   A37   .00
    1352   79A    14.2      33.79    1503.0   1983.61   2     643.   .01900      .00   .00        0.  291   8   A33   .01
    1352   80A    18.2      41.84    1521.2   1989.76   2     751.   .02400      .00   .00        0.  291   8   A32   .01
    1352   81A    23.3      55.44    1544.5   1996.90   2     709.   .02400      .00   .00        0.  291   8   A33   .01
    1352   82A    22.2      43.79    1566.7   2004.37   2       1.   .02400      .00   .00        0.  291  11   A32   .01
    1352   83A      .0        .00    1566.7   2004.36   5       1.   .01000    14.00   .00        0.  291  99   A37   .00
    1352   84B    26.2      52.57      26.2     52.57   2    1438.   .06400      .00   .00        0.  291  10   A31   .01
    1352   85B    33.5      66.08      59.7    111.96   2       1.   .06400      .00   .00        0.  291  11   A32   .01
    1352   86B      .0        .00      59.7    111.95   4       1.   .01000     3.75   .00        0.  291  99   A37   .00
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1168 QA  2004.36 QAB  2035.13 QB    30.77    1352   87B  TB 1157 QB   111.93 QBA  1519.13 QA  1407.20   *
*                                1352   87AB TAB 1168 QAB  2035.13 QA  2004.36 QB    30.77                                   *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   87AB    59.7     111.93    1626.4   2035.13   2     405.   .02300      .00   .00        0.  291   0   A37   .00
    1352   88A      2.8       8.59    1629.2   2035.96   2       1.   .02300      .00   .00        0.  291   5   A33   .01
    1352   89C     21.6      56.77      21.6     56.77   2    1328.   .09400      .00   .00        0.  291   7   A34   .01
    1352   90C     23.5      47.95      45.1    101.15   2       1.   .09400      .00   .00        0.  291  11   A33   .01
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1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN A STORM DAY 4

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                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1168 QA  2035.96 QAC  2056.90 QC    20.94    1352   91C  TC 1156 QC   101.14 QCA  1460.29 QA  1359.14   *
*                                1352   91AC TAC 1167 QAC  2058.00 QA  2035.30 QC    22.69                                   *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
    LOCATION      AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   91AC    45.1     101.14    1674.3   2058.00   2     977.   .02400      .00   .00        0.  291   0   A37   .00
    1352   92A     30.8      69.37    1705.1   2069.53   2     999.   .01300      .00   .00        0.  291   9   A33   .01
    1352   93A     37.7      84.92    1742.8   2081.97   2     448.   .02200      .00   .00        0.  291   9   A33   .01
    1352   94A     11.0      27.97    1753.8   2085.25   2       1.   .02200      .00   .00        0.  291   7   A33   .01
    1352   95D    382.1     811.50     382.1    811.50   2       1.   .02200      .00   .00        0.  291   0   A37   .00
*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1170 QA  2085.25 QAD  2336.41 QD   251.16    1352   96D  TD 1159 QD   811.50 QDA  2353.65 QA  1542.15   *
*                                1352   96AD TAD 1164 QAD  2481.08 QA  1954.35 QD   526.73                                   *
*****************************************************************************************************************************
                  SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL      RAIN  PCT
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LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	811.50	2135.9	2481.08	6	250.	.01044	32.00	.00	0.	291	0	A37	.00
1352	97A	13.4	31.89	2149.3	2487.64	2	642.	.01700	.00	.00	0.	291	8	A33	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	94.53	200	97.03	300	101.97	400	107.46
500	114.23	600	122.66	700	134.98	800	153.93	900	181.75
1000	234.91	1050	307.86	1100	448.53	1110	505.49	1120	593.87
1130	713.01	1131	726.55	1132	739.98	1133	754.00	1134	768.56
1135	784.09	1136	800.77	1137	818.55	1138	837.37	1139	857.56
1140	879.01	1141	902.21	1142	927.34	1143	954.26	1144	982.99
1145	1014.63	1146	1051.04	1147	1089.91	1148	1132.18	1149	1185.43
1150	1253.41	1151	1338.14	1152	1440.86	1153	1563.01	1154	1699.33
1155	1845.73	1156	1994.60	1157	2134.87	1158	2257.72	1159	2350.78
1160	2415.24	1161	2454.52	1162	2477.28	1163	2486.79	1164	2487.64
1165	2478.96	1166	2460.78	1167	2436.31	1168	2406.85	1169	2377.10
1170	2347.93	1171	2320.67	1172	2293.90	1173	2265.90	1174	2232.55
1175	2190.56	1176	2138.15	1177	2074.48	1178	2001.04	1179	1920.89
1180	1833.91	1181	1745.93	1182	1655.24	1183	1566.78	1184	1480.09
1185	1397.32	1186	1318.26	1187	1243.96	1188	1174.18	1189	1109.17
1190	1048.52	1191	994.02	1192	942.64	1193	893.70	1194	849.22
1195	807.86	1196	769.87	1197	734.63	1198	702.18	1199	672.28
1200	644.74	1201	619.57	1202	596.34	1203	574.22	1204	553.34
1205	533.78	1206	515.93	1207	499.72	1208	484.59	1209	470.05
1210	456.46	1211	444.05	1212	432.50	1213	421.44	1214	411.03
1215	401.50	1216	392.67	1217	384.19	1218	375.86	1219	367.75
1220	359.88	1221	352.19	1222	344.79	1223	337.62	1224	330.71
1225	324.02	1226	317.55	1227	311.40	1228	305.60	1229	300.21
1230	294.79	1231	289.64	1232	284.64	1233	280.26	1234	276.29
1235	272.48	1236	268.75	1237	265.15	1238	261.59	1239	258.11
1240	254.66	1241	251.23	1242	248.04	1243	244.85	1244	241.81
1245	238.76	1246	235.73	1247	232.87	1248	229.97	1249	227.07
1250	224.21	1251	221.67	1252	219.19	1253	216.82	1254	214.46
1255	212.17	1256	209.99	1257	207.90	1258	205.84	1259	203.81
1260	201.92	1261	200.01	1262	198.20	1263	196.32	1264	194.55
1265	192.85	1266	191.19	1267	189.40	1268	187.60	1269	185.85
1270	184.24	1271	182.64	1272	181.08	1273	179.62	1274	178.03
1275	176.55	1276	175.06	1277	173.64	1278	172.40	1279	171.13
1280	169.85	1281	168.53	1282	167.38	1283	166.16	1284	165.08
1285	164.00	1286	162.91	1287	161.84	1288	160.85	1289	159.89
1290	158.95	1291	158.08	1292	157.20	1293	156.32	1294	155.42
1295	154.60	1296	153.69	1297	152.97	1298	152.12	1299	151.30
1300	150.50	1310	143.50	1320	137.92	1330	133.18	1340	128.82
1350	124.88	1360	121.43	1370	118.10	1380	114.93	1390	112.19
1400	109.59	1420	105.12	1440	101.32	1460	94.39	1500	94.02

TOTAL VOLUME THIS HYDROGRAPH = 449.39(Ac.Ft)

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1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	51.24	19.2	51.24	2	959.	.20900	.00	.00	0.	293	7	A36	.01
1352 2A	36.3	85.34	55.5	134.37	2	367.	.12300	.00	.00	0.	293	9	A36	.01
1352 3A	11.1	32.27	66.6	164.04	2	1.	.12300	.00	.00	0.	293	6	A36	.01
1352 4A	25.5	61.81	92.1	225.70	2	662.	.12100	.00	.00	0.	293	9	A37	.01
1352 5A	18.9	50.44	111.0	273.18	2	546.	.11000	.00	.00	0.	293	7	A36	.01
1352 6A	19.2	55.82	130.2	317.58	2	1340.	.16000	.00	.00	0.	293	6	A36	.01
1352 7A	24.7	61.50	154.9	371.08	2	592.	.06400	.00	.00	0.	293	8	A36	.01
1352 8A	20.4	54.45	175.3	407.89	2	1.	.06400	.00	.00	0.	293	7	A36	.01
1352 9B	25.7	67.55	25.7	67.55	2	980.	.09500	.00	.00	0.	291	7	A34	.01
1352 10B	39.8	86.61	65.5	152.27	2	1.	.09500	.00	.00	0.	291	11	A35	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   11A  TA 1156 QA   407.88 QAB   558.39 QB   150.51    1352   11B  TB 1155 QB   152.26 QBA   544.00 QA   391.74   *
*                              1352   11AB TAB 1156 QAB   558.39 QA   407.88 QB   150.51                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	152.26	240.8	558.39	2	761.	.08100	.00	.00	0.	291	0	A35	.00
1352 12A	15.7	46.11	256.5	580.20	2	1228.	.04900	.00	.00	0.	291	6	A35	.01
1352 13A	31.9	74.32	288.4	632.99	2	1.	.04900	.00	.00	0.	291	9	A34	.01
1352 14C	21.3	47.40	21.3	47.40	2	1.	.01000	.00	.00	0.	291	10	A34	.01

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*                                                CONFLUENCE Q'S                                                          *
*   1352   15A  TA 1158 QA   632.99 QAC   675.73 QC    42.74    1352   15C  TC 1154 QC    47.40 QCA   523.78 QA   476.38   *
*                              1352   15AC TAC 1158 QAC   675.73 QA   632.99 QC    42.74                                 *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	47.40	309.7	675.73	5	100.	.02000	10.00	.00	0.	291	0	A34	.00
1352 16A	.0	.00	309.7	675.52	2	1.	.01000	.00	.00	0.	291	99	A34	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 16A (26D)
HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	13.50	200	14.00	300	14.74	400	15.54
500	16.57	600	17.88	700	20.33	800	23.75	900	28.71
1000	38.99	1050	54.10	1100	78.22	1110	94.75	1120	117.59
1130	143.38	1131	146.01	1132	148.42	1133	151.69	1134	155.10
1135	158.50	1136	162.18	1137	166.72	1138	171.69	1139	177.10
1140	182.85	1141	189.56	1142	197.01	1143	204.63	1144	213.02
1145	223.49	1146	234.82	1147	247.15	1148	260.91	1149	284.12
1150	313.72	1151	349.26	1152	397.33	1153	456.67	1154	517.48
1155	578.37	1156	632.56	1157	668.24	1158	675.52	1159	654.99
1160	611.86	1161	556.13	1162	491.35	1163	430.05	1164	375.60
1165	327.17	1166	284.10	1167	248.09	1168	218.25	1169	194.00
1170	173.74	1171	157.21	1172	143.62	1173	132.69	1174	123.40
1175	115.69	1176	109.01	1177	103.48	1178	98.41	1179	94.06
1180	90.09	1181	86.69	1182	83.63	1183	80.63	1184	77.96
1185	75.59	1186	73.47	1187	71.46	1188	69.48	1189	67.51
1190	65.71	1191	63.94	1192	62.40	1193	60.93	1194	59.36
1195	57.93	1196	56.51	1197	55.18	1198	54.01	1199	52.95
1200	51.97	1201	51.08	1202	50.17	1203	49.21	1204	48.33
1205	47.57	1206	46.59	1207	45.77	1208	44.92	1209	43.97
1210	43.31	1211	42.55	1212	41.80	1213	41.08	1214	40.40
1215	39.77	1216	39.06	1217	38.47	1218	37.96	1219	37.41
1220	36.80	1221	36.31	1222	35.86	1223	35.17	1224	34.56
1225	34.22	1226	33.85	1227	33.50	1228	32.96	1229	32.49
1230	32.14	1231	31.63	1232	31.36	1233	31.11	1234	30.79
1235	30.43	1236	30.05	1237	29.76	1238	29.51	1239	29.20
1240	28.84	1241	28.70	1242	28.47	1243	28.30	1244	28.10
1245	27.77	1246	27.51	1247	27.38	1248	27.20	1249	26.99
1250	26.77	1251	26.48	1252	26.22	1253	25.95	1254	25.95
1255	25.90	1256	25.64	1257	25.41	1258	25.24	1259	25.09
1260	24.94	1261	24.80	1262	24.66	1263	24.42	1264	24.05
1265	23.85	1266	23.79	1267	23.70	1268	23.62	1269	23.50
1270	23.36	1271	23.08	1272	22.85	1273	22.82	1274	22.76
1275	22.50	1276	22.26	1277	22.15	1278	22.02	1279	21.80
1280	21.72	1281	21.76	1282	21.52	1283	21.33	1284	21.19
1285	21.10	1286	21.08	1287	20.87	1288	20.83	1289	20.73
1290	20.56	1291	20.46	1292	20.37	1293	20.27	1294	20.19
1295	20.02	1296	19.91	1297	19.81	1298	19.73	1299	19.65
1300	19.55	1310	18.58	1320	17.85	1330	17.41	1340	16.82
1350	16.48	1360	16.00	1370	15.56	1380	15.23	1390	14.92
1400	14.60	1420	14.18	1440	13.66	1460	13.53	1500	13.50

TOTAL VOLUME THIS HYDROGRAPH = 67.03(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	2.76	.9	2.76	4	250.	.03000	2.00	.00	0.	291	5	A33	.05
1352	2A	.0	.00	.9	2.61	4	1.	.01000	2.00	.00	0.	291	99	A33	.00
1352	3A	.0	.00	.9	2.61	4	1.	.01000	2.00	.00	0.	291	99	A33	.00
1352	4B	2.5	7.67	2.5	7.67	2	170.	.01000	.00	.00	0.	291	5	A33	.01
1352	5B	7.2	19.88	9.7	26.69	2	480.	.05000	.00	.00	0.	291	6	A33	.01
1352	6B	1.6	4.91	11.3	29.08	4	160.	.10000	2.00	.00	0.	291	5	A33	.01
1352	7B	1.5	3.89	12.8	32.72	4	5.	.10000	2.00	.00	0.	291	7	A33	.65
1352	8B	.4	1.25	13.2	33.65	4	30.	.02000	2.00	.00	0.	291	5	A33	.91
1352	9B	.0	.00	13.2	33.54	4	1.	.01000	2.50	.00	0.	291	99	A33	.00

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*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA     2.61 QAB    34.97 QB    32.36    1352   10B  TB 1155 QB    33.54 QBA    35.91 QA     2.37   *
*                              1352   10AB TAB 1155 QAB    35.91 QA     2.37 QB    33.54                                 *
```

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	33.54	14.1	35.91	4	800.	.06500	2.00	.00	0.	291	0	A33	.00
1352	11A	4.6	10.18	18.7	45.12	4	1.	.06500	2.00	.00	0.	291	10	A33	.65
1352	12A	3.7	8.55	22.4	53.35	4	50.	.06500	2.00	.00	0.	291	9	A33	.65
1352	13A	.0	.00	22.4	53.33	4	1.	.01000	2.75	.00	0.	291	99	A33	.00
1352	14A	2.6	6.74	25.0	59.12	4	10.	.06500	2.00	.00	0.	291	7	A33	.65
1352	15C	2.1	6.44	2.1	6.44	4	120.	.09100	2.00	.00	0.	291	5	A33	.01
1352	16C	2.9	7.43	5.0	13.70	4	770.	.09200	2.00	.00	0.	291	7	A33	.25
1352	17C	5.8	14.10	10.8	27.23	4	50.	.09200	2.00	.00	0.	291	8	A33	.60
1352	18C	1.0	2.76	11.8	29.96	4	10.	.09200	2.00	.00	0.	291	6	A33	.05

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*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1156 QA    59.12 QAC    86.98 QC    27.86    1352   19C  TC 1154 QC    29.96 QCA    86.29 QA    56.33   *
*                              1352   19AC TAC 1155 QAC    88.48 QA    59.02 QC    29.46                                 *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	29.96	36.8	88.48	4	260.	.09000	2.25	.00	0.	291	0	A33	.00
1352	20A	.0	.00	36.8	87.89	4	1.	.01000	3.25	.00	0.	291	99	A33	.00
1352	21A	1.7	4.33	38.5	92.12	4	130.	.08800	2.25	.00	0.	291	7	A33	.05
1352	22A	3.1	7.17	41.6	98.77	4	1.	.02000	3.00	.00	0.	291	9	A33	.65
1352	23A	4.4	10.17	46.0	108.77	4	1040.	.08800	2.50	.00	0.	291	9	A33	.65
1352	24A	4.0	9.27	50.0	116.54	4	1.	.03400	3.00	.00	0.	291	9	A33	.70
1352	25A	2.1	4.97	52.1	121.30	4	80.	.03200	3.00	.00	0.	291	9	A34	.40
1352	26D	309.7	675.50	309.7	675.50	2	1.	.01000	.00	.00	0.	291	0	A34	.00
1352	27D	20.3	42.88	330.0	714.98	2	1600.	.12800	.00	.00	0.	291	11	A34	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 25-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1156 QA   120.97 QAD   727.84 QD   606.87    1352   28D  TD 1159 QD   707.77 QDA   811.42 QA   103.65   *
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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 96AD
HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	17.82	200	18.48	300	19.50	400	20.58
500	22.00	600	23.79	700	26.91	800	31.46	900	38.13
1000	51.36	1050	69.89	1100	100.01	1110	117.99	1120	146.32
1130	177.11	1131	180.64	1132	183.95	1133	187.34	1134	190.85
1135	194.84	1136	199.26	1137	204.06	1138	209.37	1139	215.51
1140	222.26	1141	229.57	1142	237.65	1143	246.70	1144	256.43
1145	266.90	1146	278.93	1147	292.99	1148	308.60	1149	327.49
1150	354.58	1151	393.00	1152	442.11	1153	502.31	1154	572.72
1155	647.34	1156	714.66	1157	772.06	1158	807.17	1159	811.51
1160	787.62	1161	735.35	1162	669.16	1163	595.83	1164	526.56
1165	461.20	1166	405.37	1167	356.85	1168	315.64	1169	280.42
1170	251.14	1171	226.60	1172	206.00	1173	189.26	1174	174.79
1175	162.69	1176	152.32	1177	143.44	1178	135.94	1179	129.34
1180	123.50	1181	118.31	1182	113.87	1183	109.69	1184	105.91
1185	102.38	1186	99.17	1187	96.34	1188	93.78	1189	91.31
1190	88.92	1191	86.58	1192	84.34	1193	82.25	1194	80.29
1195	78.46	1196	76.68	1197	74.94	1198	73.27	1199	71.66
1200	70.15	1201	68.86	1202	67.61	1203	66.45	1204	65.29
1205	64.12	1206	63.00	1207	61.97	1208	60.95	1209	59.92
1210	58.89	1211	57.86	1212	56.90	1213	56.00	1214	55.09
1215	54.18	1216	53.33	1217	52.51	1218	51.73	1219	50.97
1220	50.25	1221	49.55	1222	48.84	1223	48.16	1224	47.51
1225	46.84	1226	46.15	1227	45.50	1228	44.95	1229	44.45
1230	43.95	1231	43.43	1232	42.89	1233	42.36	1234	41.86
1235	41.42	1236	41.01	1237	40.59	1238	40.16	1239	39.73
1240	39.32	1241	38.93	1242	38.54	1243	38.18	1244	37.88
1245	37.62	1246	37.35	1247	37.04	1248	36.71	1249	36.40
1250	36.13	1251	35.85	1252	35.58	1253	35.30	1254	35.01
1255	34.72	1256	34.46	1257	34.24	1258	34.05	1259	33.84
1260	33.59	1261	33.35	1262	33.11	1263	32.91	1264	32.73
1265	32.53	1266	32.27	1267	31.97	1268	31.70	1269	31.47
1270	31.29	1271	31.12	1272	30.95	1273	30.77	1274	30.54
1275	30.31	1276	30.14	1277	29.99	1278	29.80	1279	29.58
1280	29.36	1281	29.15	1282	28.94	1283	28.77	1284	28.61
1285	28.42	1286	28.21	1287	28.02	1288	27.88	1289	27.75
1290	27.61	1291	27.46	1292	27.33	1293	27.20	1294	27.07
1295	26.94	1296	26.81	1297	26.66	1298	26.52	1299	26.37
1300	26.22	1310	24.96	1320	24.00	1330	23.31	1340	22.54
1350	21.88	1360	21.38	1370	20.81	1380	20.25	1390	19.84
1400	19.41	1420	18.85	1440	18.17	1460	17.83	1500	17.82

TOTAL VOLUME THIS HYDROGRAPH = 86.91(Ac.Ft)

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*                              1352   28AD TAD 1158 QAD   812.33 QA   114.85 QD   697.48                                    *
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LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 28AD	330.0	707.77	382.1	812.33	5	230.	.03000	12.00	.00	0.	291	0	A34	.00
1352 29A	.0	.00	382.1	811.51	2	1.	.01000	.00	.00	0.	291	99	A34	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
HYDROGRAPH AT POINT 96AD
HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	17.82	200	18.48	300	19.50	400	20.58
500	22.00	600	23.79	700	26.91	800	31.46	900	38.13
1000	51.36	1050	69.89	1100	100.01	1110	117.99	1120	146.32
1130	177.11	1131	180.64	1132	183.95	1133	187.34	1134	190.85
1135	194.84	1136	199.26	1137	204.06	1138	209.37	1139	215.51
1140	222.26	1141	229.57	1142	237.65	1143	246.70	1144	256.43
1145	266.90	1146	278.93	1147	292.99	1148	308.60	1149	327.49
1150	354.58	1151	393.00	1152	442.11	1153	502.31	1154	572.72
1155	647.34	1156	714.66	1157	772.06	1158	807.17	1159	811.51
1160	787.62	1161	735.35	1162	669.16	1163	595.83	1164	526.56
1165	461.20	1166	405.37	1167	356.85	1168	315.64	1169	280.42
1170	251.14	1171	226.60	1172	206.00	1173	189.26	1174	174.79
1175	162.69	1176	152.32	1177	143.44	1178	135.94	1179	129.34
1180	123.50	1181	118.31	1182	113.87	1183	109.69	1184	105.91
1185	102.38	1186	99.17	1187	96.34	1188	93.78	1189	91.31
1190	88.92	1191	86.58	1192	84.34	1193	82.25	1194	80.29
1195	78.46	1196	76.68	1197	74.94	1198	73.27	1199	71.66
1200	70.15	1201	68.86	1202	67.61	1203	66.45	1204	65.29
1205	64.12	1206	63.00	1207	61.97	1208	60.95	1209	59.92
1210	58.89	1211	57.86	1212	56.90	1213	56.00	1214	55.09
1215	54.18	1216	53.33	1217	52.51	1218	51.73	1219	50.97
1220	50.25	1221	49.55	1222	48.84	1223	48.16	1224	47.51
1225	46.84	1226	46.15	1227	45.50	1228	44.95	1229	44.45
1230	43.95	1231	43.43	1232	42.89	1233	42.36	1234	41.86
1235	41.42	1236	41.01	1237	40.59	1238	40.16	1239	39.73
1240	39.32	1241	38.93	1242	38.54	1243	38.18	1244	37.88
1245	37.62	1246	37.35	1247	37.04	1248	36.71	1249	36.40
1250	36.13	1251	35.85	1252	35.58	1253	35.30	1254	35.01
1255	34.72	1256	34.46	1257	34.24	1258	34.05	1259	33.84
1260	33.59	1261	33.35	1262	33.11	1263	32.91	1264	32.73
1265	32.53	1266	32.27	1267	31.97	1268	31.70	1269	31.47
1270	31.29	1271	31.12	1272	30.95	1273	30.77	1274	30.54
1275	30.31	1276	30.14	1277	29.99	1278	29.80	1279	29.58
1280	29.36	1281	29.15	1282	28.94	1283	28.77	1284	28.61
1285	28.42	1286	28.21	1287	28.02	1288	27.88	1289	27.75
1290	27.61	1291	27.46	1292	27.33	1293	27.20	1294	27.07
1295	26.94	1296	26.81	1297	26.66	1298	26.52	1299	26.37
1300	26.22	1310	24.96	1320	24.00	1330	23.31	1340	22.54
1350	21.88	1360	21.38	1370	20.81	1380	20.25	1390	19.84
1400	19.41	1420	18.85	1440	18.17	1460	17.83	1500	17.82

TOTAL VOLUME THIS HYDROGRAPH = 86.91(Ac.Ft)

STEVENSON RANCH

50-YEAR BURNED

DEVELOPED CONDITION

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	32.5	129.86	32.5	129.86	2	1173.	.20100	.00	.00	0.	293	6	A42	.01
1352 2A	34.8	127.84	67.3	252.06	2	369.	.19500	.00	.00	0.	293	7	A42	.01
1352 3A	33.3	108.04	100.6	357.99	2	1353.	.24000	.00	.00	0.	293	9	A42	.01
1352 4A	37.9	139.23	138.5	490.89	2	1.	.24000	.00	.00	0.	293	7	A42	.01
1352 5A	.0	.00	138.5	490.87	4	1.	.01000	6.25	.00	0.	293	99	A42	.00
1352 6B	28.8	115.07	28.8	115.07	2	494.	.25300	.00	.00	0.	293	6	A42	.01
1352 7B	12.2	48.75	41.0	163.82	2	1.	.25300	.00	.00	0.	293	6	A42	.01
1352 8B	22.3	76.54	63.3	240.36	2	1342.	.28700	.00	.00	0.	293	8	A42	.01
1352 9B	24.6	84.43	87.9	317.88	2	1.	.28700	.00	.00	0.	293	8	A42	.01
1352 10B	.0	.00	87.9	317.88	4	1.	.01000	5.25	.00	0.	293	99	A42	.00

****
* CONFLUENCE Q'S *
* 1352 11A TA 1155 QA 490.82 QAB 808.69 QB 317.87 1352 11B TB 1155 QB 317.87 QBA 808.69 QA 490.82 *
* 1352 11AB TAB 1155 QAB 808.69 QA 490.82 QB 317.87 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	87.9	317.87	226.4	808.69	2	655.	.14500	.00	.00	0.	293	0	A42	.00
1352 12A	.0	.00	226.4	801.33	4	1.	.01000	7.50	.00	0.	293	99	A42	.00
1352 13A	24.0	88.17	250.4	887.85	2	1.	.14500	.00	.00	0.	293	7	A42	.01
1352 14A	.0	.00	250.4	887.83	4	1.	.01000	7.75	.00	0.	293	99	A42	.00
1352 15C	37.0	120.05	37.0	120.05	2	826.	.24800	.00	.00	0.	293	9	A42	.01
1352 16C	40.2	137.98	77.2	256.53	2	1267.	.26000	.00	.00	0.	293	8	A42	.01
1352 17C	31.9	109.49	109.1	362.34	2	1.	.26000	.00	.00	0.	293	8	A42	.01
1352 18C	.0	.00	109.1	362.33	4	1.	.01000	5.75	.00	0.	293	99	A42	.00

****
* CONFLUENCE Q'S *
* 1352 19A TA 1155 QA 887.76 QAC 1250.06 QC 362.30 1352 19C TC 1155 QC 362.30 QCA 1250.06 QA 887.76 *
* 1352 19AC TAC 1155 QAC 1250.06 QA 887.76 QC 362.30 *
****

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 19AC	109.1	362.30	359.5	1250.06	2	1161.	.09000	.00	.00	0.	293	0	A42	.00
1352 20A	.0	.00	359.5	1233.44	5	1.	.01000	11.00	.00	0.	293	99	A42	.00
1352 21A	39.2	127.19	398.7	1355.29	2	1.	.09000	.00	.00	0.	293	9	A42	.01
1352 22A	.0	.00	398.7	1355.29	5	1.	.01000	12.00	.00	0.	293	99	A42	.00
1352 23D	30.8	113.15	30.8	113.15	2	1242.	.23000	.00	.00	0.	293	7	A42	.01
1352 24D	39.3	144.38	70.1	254.01	2	1308.	.03800	.00	.00	0.	293	7	A42	.01
1352 25D	42.3	145.19	112.4	377.85	2	723.	.22800	.00	.00	0.	293	8	A42	.01
1352 26D	30.9	113.52	143.3	467.95	2	720.	.09000	.00	.00	0.	293	7	A42	.01
1352 27D	26.9	98.82	170.2	547.28	2	1.	.09000	.00	.00	0.	293	7	A42	.01
1352 28D	.0	.00	170.2	547.28	4	1.	.01000	6.50	.00	0.	293	99	A42	.00

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Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN A STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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* CONFLUENCE Q'S *

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*   1352   29A  TA 1156 QA  1355.27 QAD  1902.54 QD   547.27    1352   29D  TD 1156 QD   547.27 QDA  1902.54 QA  1355.27   *
*                                1352   29AD TAD 1156 QAD  1902.54 QA  1355.27 QD   547.27                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	29AD	170.2	547.27	568.9	1902.54	2	668.	.04800	.00	.00	0.	293	0	A42	.00
1352	30A	.0	.00	568.9	1884.24	5	1.	.01000	13.00	.00	0.	293	99	A42	.00
1352	31A	29.2	92.29	598.1	1972.54	2	506.	.04400	.00	.00	0.	293	9	A41	.01
1352	32A	22.2	74.26	620.3	2025.67	2	635.	.03900	.00	.00	0.	293	8	A41	.01
1352	33A	23.1	80.46	643.4	2070.48	2	593.	.04200	.00	.00	0.	293	7	A40	.01
1352	34A	35.7	109.62	679.1	2141.85	2	572.	.03500	.00	.00	0.	293	9	A40	.01
1352	35A	29.2	94.93	708.3	2204.41	2	485.	.04100	.00	.00	0.	293	8	A40	.01
1352	36A	25.6	83.22	733.9	2243.48	2	532.	.03800	.00	.00	0.	293	8	A40	.01
1352	37A	.0	.00	733.9	2228.20	5	1.	.01000	14.00	.00	0.	293	99	A42	.00
1352	38A	23.7	80.19	757.6	2261.94	2	396.	.05100	.00	.00	0.	293	7	A39	.01
1352	39A	32.5	99.76	790.1	2315.65	2	838.	.05600	.00	.00	0.	293	8	A38	.01
1352	40A	20.2	72.31	810.3	2315.90	2	1.	.05600	.00	.00	0.	293	6	A38	.01
1352	41A	22.5	67.37	832.8	2343.78	2	1.	.13300	.00	.00	0.	293	7	A35	.01
1352	42A	28.5	80.19	861.3	2397.36	2	840.	.05700	.00	.00	0.	293	9	A37	.01
1352	43A	.0	.00	861.3	2381.36	5	1.	.01000	14.00	.00	0.	293	99	A42	.00
1352	44A	20.2	58.36	881.5	2405.45	2	1.	.05700	.00	.00	0.	293	8	A36	.01
1352	45A	24.8	65.49	906.3	2440.72	2	575.	.03500	.00	.00	0.	293	9	A35	.01
1352	46A	15.1	48.21	921.4	2452.34	2	1319.	.03400	.00	.00	0.	293	7	A37	.01
1352	47A	24.6	63.91	946.0	2460.98	2	1.	.03400	.00	.00	0.	293	10	A36	.01
1352	48A	24.9	74.09	970.9	2481.52	2	722.	.03900	.00	.00	0.	293	8	A37	.01
1352	49A	20.9	64.65	991.8	2480.45	2	846.	.04700	.00	.00	0.	293	7	A36	.01
1352	50A	19.2	61.30	1011.0	2482.83	2	1.	.04700	.00	.00	0.	293	7	A37	.01
1352	51A	.0	.00	1011.0	2482.81	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	52E	28.8	97.45	28.8	97.45	2	940.	.14400	.00	.00	0.	293	7	A39	.01
1352	53E	24.8	83.91	53.6	178.90	2	971.	.27800	.00	.00	0.	293	7	A39	.01
1352	54E	33.4	102.53	87.0	277.60	2	1110.	.18700	.00	.00	0.	293	8	A38	.01
1352	55E	23.1	68.73	110.1	340.36	2	1.	.18700	.00	.00	0.	293	8	A37	.01
1352	56E	.0	.00	110.1	340.36	4	1.	.01000	5.50	.00	0.	293	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   57A  TA 1162 QA  2482.78 QAE  2607.85 QE   125.06    1352   57E  TE 1156 QE   340.36 QEA  2050.91 QA  1710.55   *
*                                1352   57AE TAE 1162 QAE  2607.85 QA  2482.78 QE   125.06                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	57AE	110.1	340.36	1121.1	2607.85	2	180.	.03900	.00	.00	0.	293	0	A42	.00
1352	58A	.0	.00	1121.1	2606.48	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	59A	28.2	81.69	1149.3	2629.39	2	815.	.01800	.00	.00	0.	293	9	A38	.01
1352	60A	27.2	94.48	1176.5	2632.24	2	1136.	.05700	.00	.00	0.	293	6	A37	.01

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1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	61A	17.9	50.37	1194.4	2630.04	2	1.	.05700	.00	.00	0.	293	9	A37	.01
1352	62A	.0	.00	1194.4	2630.03	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	63F	27.0	94.04	27.0	94.04	2	586.	.19600	.00	.00	0.	293	7	A40	.01
1352	64F	40.8	116.11	67.8	209.53	2	727.	.08900	.00	.00	0.	293	10	A39	.01
1352	65F	37.4	108.35	105.2	313.92	2	1.	.08900	.00	.00	0.	293	9	A38	.01
1352	66F	32.6	110.31	137.8	422.05	2	1.	.14100	.00	.00	0.	293	7	A39	.01
1352	67F	18.8	57.71	156.6	478.65	2	677.	.08100	.00	.00	0.	293	8	A38	.01
1352	68F	9.2	30.21	165.8	505.08	2	1.	.08100	.00	.00	0.	293	7	A38	.01
1352	69F	.0	.00	165.8	505.07	4	1.	.01000	6.25	.00	0.	293	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   70A  TA 1164 QA  2630.03 QAF  2770.15 QF   140.12    1352   70F  TF 1155 QF   505.03 QFA  2258.05 QA  1753.02   *
*                                1352   70AF TAF 1163 QAF  2798.01 QA  2629.97 QF   168.04                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	70AF	165.8	505.03	1360.2	2798.01	2	561.	.03600	.00	.00	0.	293	0	A42	.00
1352	71A	.0	.00	1360.2	2796.49	5	1.	.01000	15.00	.00	0.	293	99	A42	.00
1352	72A	6.4	22.23	1366.6	2799.95	2	1.	.03600	.00	.00	0.	293	6	A37	.01
1352	73A	20.0	61.92	1386.6	2814.54	2	434.	.03000	.00	.00	0.	291	8	A37	.01
1352	74A	21.9	65.93	1408.5	2826.50	2	420.	.02900	.00	.00	0.	291	8	A36	.01
1352	75A	42.0	119.85	1450.5	2853.21	2	1019.	.02000	.00	.00	0.	291	9	A36	.01
1352	76A	26.1	74.48	1476.6	2866.11	2	249.	.04000	.00	.00	0.	291	9	A36	.01
1352	77A	12.2	39.18	1488.8	2872.26	2	1.	.04000	.00	.00	0.	291	7	A36	.01
1352	78A	.0	.00	1488.8	2872.26	5	1.	.01000	15.00	.00	0.	291	99	A42	.00
1352	79A	14.2	46.99	1503.0	2881.34	2	643.	.01900	.00	.00	0.	291	7	A37	.01
1352	80A	18.2	54.79	1521.2	2891.01	2	751.	.02400	.00	.00	0.	291	8	A36	.01
1352	81A	23.3	72.13	1544.5	2901.81	2	709.	.02400	.00	.00	0.	291	8	A37	.01
1352	82A	22.2	60.44	1566.7	2914.70	2	1.	.02400	.00	.00	0.	291	10	A36	.01
1352	83A	.0	.00	1566.7	2914.69	5	1.	.01000	16.00	.00	0.	291	99	A42	.00
1352	84B	26.2	72.44	26.2	72.44	2	1438.	.06400	.00	.00	0.	291	9	A35	.01
1352	85B	33.5	91.21	59.7	154.85	2	1.	.06400	.00	.00	0.	291	10	A36	.01
1352	86B	.0	.00	59.7	154.85	4	1.	.01000	4.25	.00	0.	291	99	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   87A  TA 1166 QA  2914.69 QAB  2960.94 QB    46.24    1352   87B  TB 1156 QB   154.84 QBA  2171.64 QA  2016.79   *
*                                1352   87AB TAB 1165 QAB  2963.56 QA  2911.00 QB    52.56                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	87AB	59.7	154.84	1626.4	2963.56	2	405.	.02300	.00	.00	0.	291	0	A42	.00
1352	88A	2.8	11.12	1629.2	2964.09	2	1.	.02300	.00	.00	0.	291	5	A37	.01
1352	89C	21.6	75.53	21.6	75.53	2	1328.	.09400	.00	.00	0.	291	7	A39	.01
1352	90C	23.5	67.73	45.1	138.50	2	1.	.09400	.00	.00	0.	291	10	A38	.01

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1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN A STORM DAY 4

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

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*****************************************************************************************************************************
*                                                    CONFLUENCE Q'S                                                         *
*   1352   91A  TA 1165 QA  2964.08 QAC  3000.47 QC    36.39    1352   91C  TC 1156 QC   138.50 QCA  2234.24 QA  2095.74   *
*                                1352   91AC TAC 1165 QAC  3000.47 QA  2964.08 QC    36.39                                   *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	91AC	45.1	138.50	1674.3	3000.47	2	977.	.02400	.00	.00	0.	291	0	A42	.00
1352	92A	30.8	95.35	1705.1	3016.86	2	999.	.01300	.00	.00	0.	291	8	A37	.01
1352	93A	37.7	116.71	1742.8	3036.02	2	448.	.02200	.00	.00	0.	291	8	A37	.01
1352	94A	11.0	37.39	1753.8	3041.19	2	1.	.02200	.00	.00	0.	291	7	A38	.01
1352	95D	382.1	1140.20	382.1	1140.20	2	1.	.02200	.00	.00	0.	291	0	A42	.00

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*                                                    CONFLUENCE Q'S                                                         *
*   1352   96A  TA 1167 QA  3041.18 QAD  3465.59 QD   424.41    1352   96D  TD 1158 QD  1140.19 QDA  3386.06 QA  2245.88   *
*                                1352   96AD TAD 1162 QAD  3637.59 QA  2806.21 QD   831.38                                  *
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LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV

LOCATION		AREA(Ac)	Q(CFS)	AREA(Ac)	Q(CFS)	TYPE	LNGTH(Ft)	SLOPE	SIZE(Ft)	Z	Q(CFS)	NAME	TC	ZONE	IMPV
1352	96AD	382.1	1140.19	2135.9	3637.59	6	250.	.00698	32.00	.00	0.	291	0	A42	.00
1352	97A	13.4	45.55	2149.3	3644.95	2	642.	.01700	.00	.00	0.	291	7	A38	.01

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 97A
HYDROGRAPH AT 1352 97A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	122.37	200	125.99	300	133.57	400	143.02
500	154.96	600	169.68	700	188.39	800	215.97	900	266.35
1000	360.66	1050	466.34	1100	662.76	1110	746.36	1120	875.91
1130	1051.12	1131	1070.58	1132	1090.53	1133	1111.07	1134	1132.96
1135	1156.15	1136	1180.54	1137	1206.68	1138	1234.71	1139	1265.11
1140	1297.26	1141	1331.88	1142	1369.18	1143	1409.30	1144	1452.26
1145	1499.68	1146	1551.91	1147	1610.46	1148	1674.09	1149	1754.14
1150	1857.30	1151	1987.28	1152	2147.91	1153	2340.37	1154	2556.79
1155	2785.97	1156	3006.91	1157	3209.47	1158	3372.97	1159	3492.52
1160	3571.50	1161	3621.64	1162	3644.95	1163	3644.42	1164	3624.36
1165	3586.88	1166	3538.94	1167	3486.08	1168	3436.08	1169	3386.95
1170	3337.63	1171	3281.83	1172	3214.22	1173	3130.38	1174	3029.05
1175	2911.13	1176	2781.06	1177	2642.64	1178	2500.68	1179	2359.34
1180	2221.16	1181	2087.52	1182	1960.62	1183	1841.18	1184	1729.54
1185	1626.37	1186	1533.13	1187	1446.00	1188	1365.01	1189	1291.28
1190	1223.40	1191	1161.27	1192	1104.36	1193	1052.45	1194	1005.18
1195	961.94	1196	922.57	1197	886.18	1198	853.41	1199	821.71
1200	792.37	1201	766.16	1202	742.28	1203	720.21	1204	698.96
1205	679.20	1206	660.97	1207	644.23	1208	628.23	1209	613.33
1210	599.80	1211	587.12	1212	574.96	1213	563.21	1214	551.69
1215	540.60	1216	529.90	1217	519.62	1218	509.59	1219	499.97
1220	490.54	1221	481.61	1222	472.67	1223	464.08	1224	455.82
1225	447.96	1226	440.53	1227	433.67	1228	427.25	1229	421.28
1230	415.50	1231	409.89	1232	404.33	1233	398.71	1234	393.33
1235	388.09	1236	382.95	1237	377.78	1238	372.72	1239	367.76
1240	362.92	1241	358.17	1242	353.52	1243	348.90	1244	344.67
1245	340.67	1246	336.96	1247	333.31	1248	329.78	1249	326.35
1250	322.96	1251	319.52	1252	316.09	1253	312.69	1254	309.59
1255	306.24	1256	302.95	1257	299.76	1258	296.64	1259	293.41
1260	290.42	1261	287.27	1262	284.37	1263	281.41	1264	278.57
1265	275.77	1266	273.02	1267	270.31	1268	267.86	1269	265.30
1270	262.96	1271	260.46	1272	258.05	1273	255.77	1274	253.64
1275	251.52	1276	249.56	1277	247.78	1278	245.93	1279	243.91
1280	242.00	1281	240.18	1282	238.34	1283	236.55	1284	234.71
1285	232.99	1286	231.38	1287	229.87	1288	228.38	1289	226.82
1290	225.19	1291	223.61	1292	222.10	1293	220.66	1294	219.24
1295	217.75	1296	216.25	1297	214.89	1298	213.48	1299	212.12
1300	210.75	1310	198.74	1320	188.43	1330	180.14	1340	172.95
1350	166.26	1360	160.97	1370	155.20	1380	150.12	1390	146.01
1400	141.75	1420	135.41	1440	130.42	1460	122.07	1500	121.70

TOTAL VOLUME THIS HYDROGRAPH = 627.22(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN B STORM DAY 4

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 1A	19.2	68.78	19.2	68.78	2	959.	.20900	.00	.00	0.	293	7	A41	.01
1352 2A	36.3	121.43	55.5	187.54	2	367.	.12300	.00	.00	0.	293	8	A41	.01
1352 3A	11.1	43.17	66.6	228.52	2	1.	.12300	.00	.00	0.	293	6	A41	.01
1352 4A	25.5	87.52	92.1	316.04	2	662.	.12100	.00	.00	0.	293	8	A42	.01
1352 5A	18.9	73.51	111.0	380.29	2	546.	.11000	.00	.00	0.	293	6	A41	.01
1352 6A	19.2	83.14	130.2	439.21	2	1340.	.16000	.00	.00	0.	293	5	A41	.01
1352 7A	24.7	88.49	154.9	518.20	2	592.	.06400	.00	.00	0.	293	7	A41	.01
1352 8A	20.4	77.37	175.3	567.38	2	1.	.06400	.00	.00	0.	293	6	A40	.01
1352 9B	25.7	89.86	25.7	89.86	2	980.	.09500	.00	.00	0.	291	7	A39	.01
1352 10B	39.8	121.28	65.5	207.58	2	1.	.09500	.00	.00	0.	291	10	A40	.01

```
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   11A  TA 1156 QA   567.38 QAB   772.07 QB   204.69    1352   11B  TB 1155 QB   207.57 QBA   772.13 QA   564.56   *
*                                1352   11AB TAB 1155 QAB   772.13 QA   564.56 QB   207.57                          *
*****************************************************************************************************************
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 11AB	65.5	207.57	240.8	772.13	2	761.	.08100	.00	.00	0.	291	0	A40	.00
1352 12A	15.7	67.70	256.5	810.50	2	1228.	.04900	.00	.00	0.	291	5	A40	.01
1352 13A	31.9	104.66	288.4	882.88	2	1.	.04900	.00	.00	0.	291	8	A39	.01
1352 14C	21.3	66.18	21.3	66.18	2	1.	.01000	.00	.00	0.	291	9	A39	.01

```
*****************************************************************************************************************
*                                                CONFLUENCE Q'S                                                 *
*   1352   15A  TA 1157 QA   882.86 QAC   944.47 QC    61.61    1352   15C  TC 1154 QC    66.18 QCA   781.44 QA   715.26   *
*                                1352   15AC TAC 1157 QAC   944.47 QA   882.86 QC    61.61                                *
*****************************************************************************************************************
```

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352 15AC	21.3	66.18	309.7	944.47	5	100.	.02000	10.00	.00	0.	291	0	A39	.00
1352 16A	.0	.00	309.7	943.55	2	1.	.01000	.00	.00	0.	291	99	A39	.00

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:

HYDROGRAPH AT POINT 16A (26D)

HYDROGRAPH AT 1352 16A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	17.51	200	18.52	300	20.04	400	21.73
500	23.84	600	26.41	700	29.82	800	34.90	900	44.18
1000	59.91	1050	80.03	1100	113.94	1110	138.04	1120	169.48
1130	204.41	1131	208.06	1132	211.61	1133	216.21	1134	221.04
1135	226.27	1136	231.75	1137	238.81	1138	246.52	1139	254.63
1140	263.05	1141	272.60	1142	283.09	1143	294.42	1144	306.79
1145	321.36	1146	337.66	1147	355.21	1148	375.13	1149	409.93
1150	454.52	1151	511.19	1152	586.92	1153	679.25	1154	773.14
1155	858.63	1156	924.11	1157	943.55	1158	919.85	1159	861.84
1160	781.70	1161	688.21	1162	599.63	1163	519.08	1164	448.88
1165	387.34	1166	337.91	1167	295.97	1168	263.38	1169	235.94
1170	214.72	1171	197.13	1172	183.37	1173	171.42	1174	161.61
1175	153.27	1176	145.91	1177	139.30	1178	133.71	1179	128.71
1180	124.41	1181	119.94	1182	115.78	1183	112.19	1184	109.02
1185	106.09	1186	103.34	1187	100.64	1188	97.86	1189	95.43
1190	93.15	1191	90.86	1192	88.64	1193	86.47	1194	84.55
1195	82.62	1196	80.98	1197	79.40	1198	77.94	1199	76.54
1200	75.20	1201	73.81	1202	72.64	1203	71.45	1204	70.34
1205	69.22	1206	67.89	1207	66.92	1208	65.77	1209	64.71
1210	63.77	1211	62.86	1212	61.99	1213	61.14	1214	60.47
1215	59.67	1216	58.87	1217	58.26	1218	57.66	1219	56.83
1220	56.14	1221	55.62	1222	54.82	1223	54.18	1224	53.42
1225	52.71	1226	51.96	1227	51.39	1228	50.87	1229	50.02
1230	49.66	1231	49.13	1232	48.50	1233	47.90	1234	47.49
1235	47.00	1236	46.35	1237	45.93	1238	45.35	1239	44.84
1240	44.44	1241	44.08	1242	43.61	1243	43.13	1244	42.81
1245	42.53	1246	42.23	1247	41.89	1248	41.32	1249	40.85
1250	40.55	1251	40.20	1252	39.92	1253	39.42	1254	38.99
1255	38.67	1256	38.20	1257	37.89	1258	37.42	1259	37.00
1260	36.80	1261	36.44	1262	36.22	1263	35.79	1264	35.53
1265	35.28	1266	35.05	1267	34.83	1268	34.26	1269	34.10
1270	33.85	1271	33.72	1272	33.56	1273	33.19	1274	33.09
1275	32.84	1276	32.57	1277	32.25	1278	32.10	1279	31.92
1280	31.57	1281	31.42	1282	31.12	1283	31.03	1284	30.97
1285	30.81	1286	30.57	1287	30.27	1288	30.12	1289	29.99
1290	29.86	1291	29.63	1292	29.38	1293	29.23	1294	29.12
1295	29.03	1296	28.94	1297	28.83	1298	28.70	1299	28.55
1300	28.39	1310	27.21	1320	26.00	1330	25.15	1340	24.04
1350	23.27	1360	22.53	1370	21.52	1380	20.74	1390	20.27
1400	19.53	1420	18.72	1440	17.87	1460	17.51	1500	17.51

TOTAL VOLUME THIS HYDROGRAPH = 95.41(Ac.Ft)

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN C

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1352	1A	.9	3.68	.9	3.68	4	250.	.03000	2.00	.00	0.	291	5	A38	.05
1352	2A	.0	.00	.9	3.48	4	1.	.01000	2.00	.00	0.	291	99	A38	.00
1352	3A	.0	.00	.9	3.48	4	1.	.01000	2.00	.00	0.	291	99	A38	.00
1352	4B	2.5	10.21	2.5	10.21	2	170.	.01000	.00	.00	0.	291	5	A38	.01
1352	5B	7.2	29.41	9.7	37.54	2	480.	.05000	.00	.00	0.	291	5	A38	.01
1352	6B	1.6	6.53	11.3	40.27	4	160.	.10000	2.00	.00	0.	291	5	A38	.01
1352	7B	1.5	5.13	12.8	45.08	4	5.	.10000	2.00	.00	0.	291	7	A38	.65
1352	8B	.4	1.63	13.2	46.39	4	30.	.02000	2.25	.00	0.	291	5	A38	.91
1352	9B	.0	.00	13.2	46.32	4	1.	.01000	2.75	.00	0.	291	99	A38	.00

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   10A  TA 1154 QA     3.48 QAB    49.61 QB    46.14    1352   10B  TB 1155 QB    46.32 QBA    49.46 QA     3.14   *
*                              1352   10AB TAB 1154 QAB    49.61 QA     3.48 QB    46.14                                 *
```

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	10AB	13.2	46.32	14.1	49.61	4	800.	.06500	2.00	.00	0.	291	0	A38	.00
1352	11A	4.6	13.44	18.7	61.62	4	1.	.06500	2.00	.00	0.	291	10	A38	.65
1352	12A	3.7	11.30	22.4	72.69	4	50.	.06500	2.25	.00	0.	291	9	A38	.65
1352	13A	.0	.00	22.4	72.58	4	1.	.01000	3.25	.00	0.	291	99	A38	.00
1352	14A	2.6	8.89	25.0	81.17	4	10.	.06500	2.25	.00	0.	291	7	A38	.65
1352	15C	2.1	8.58	2.1	8.58	4	120.	.09100	2.00	.00	0.	291	5	A38	.01
1352	16C	2.9	9.88	5.0	18.26	4	770.	.09200	2.00	.00	0.	291	7	A38	.25
1352	17C	5.8	18.65	10.8	36.21	4	50.	.09200	2.00	.00	0.	291	8	A38	.60
1352	18C	1.0	3.69	11.8	39.85	4	10.	.09200	2.00	.00	0.	291	6	A38	.05

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   19A  TA 1155 QA    81.11 QAC   120.21 QC    39.10    1352   19C  TC 1154 QC    39.84 QCA   117.56 QA    77.72   *
*                              1352   19AC TAC 1155 QAC   120.21 QA    81.11 QC    39.10                                 *
```

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	RAIN ZONE	PCT IMPV
1352	19AC	11.8	39.84	36.8	120.21	4	260.	.09000	2.50	.00	0.	291	0	A38	.00
1352	20A	.0	.00	36.8	119.55	4	1.	.01000	3.75	.00	0.	291	99	A38	.00
1352	21A	1.7	5.78	38.5	125.21	4	130.	.08800	2.50	.00	0.	291	7	A38	.05
1352	22A	3.1	9.46	41.6	134.00	4	1.	.02000	3.50	.00	0.	291	9	A38	.65
1352	23A	4.4	13.43	46.0	147.21	4	1040.	.08800	2.75	.00	0.	291	9	A38	.65
1352	24A	4.0	12.22	50.0	157.51	4	1.	.03400	3.25	.00	0.	291	9	A38	.70
1352	25A	2.1	6.57	52.1	163.82	4	80.	.03200	3.50	.00	0.	291	9	A39	.40
1352	26D	309.7	943.50	309.7	943.50	2	1.	.01000	.00	.00	0.	291	0	A39	.00
1352	27D	20.3	60.29	330.0	999.96	2	1600.	.12800	.00	.00	0.	291	10	A39	.05

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\lasoilx.dat

1352 - AIDLIN HILLS - PROPOSED 50-YR BURNED - BASIN C

```
*                                                CONFLUENCE Q'S                                                          *
*   1352   28A  TA 1156 QA   163.54 QAD  1071.68 QD   908.13    1352   28D  TD 1158 QD   988.82 QDA  1141.16 QA   152.34   *
```

```
*                              1352   28AD TAD 1158 QAD  1141.16 QA   152.34 QD   988.82                                    *
*****************************************************************************************************************************
                 SUBAREA   SUBAREA     TOTAL   TOTAL  CONV   CONV     CONV     CONV   CONV   CONTROL SOIL       RAIN  PCT
    LOCATION     AREA(Ac)  Q(CFS)    AREA(Ac)  Q(CFS) TYPE  LNGTH(Ft) SLOPE  SIZE(Ft)   Z     Q(CFS) NAME  TC  ZONE  IMPV
    1352   28AD  330.0     988.82     382.1   1141.16   5     230.   .03000    12.00   .00        0.  291   0   A39   .00
    1352   29A      .0        .00     382.1   1140.24   2       1.   .01000      .00   .00        0.  291  99   A39   .00
```

Version 11.3, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
HYDROGRAPH AT POINT 96AD
HYDROGRAPH AT 1352 29A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	23.40	200	24.61	300	26.63	400	28.91
500	31.72	600	35.20	700	39.75	800	46.52	900	58.15
1000	77.79	1050	102.50	1100	144.32	1110	170.89	1120	209.98
1130	251.91	1131	256.63	1132	261.29	1133	265.91	1134	270.96
1135	276.71	1136	283.11	1137	290.12	1138	298.16	1139	307.48
1140	317.69	1141	328.54	1142	340.29	1143	353.12	1144	367.01
1145	382.27	1146	399.85	1147	420.05	1148	442.34	1149	470.08
1150	511.27	1151	570.31	1152	648.41	1153	742.33	1154	851.81
1155	960.46	1156	1055.65	1157	1121.61	1158	1140.24	1159	1109.82
1160	1037.18	1161	940.39	1162	831.20	1163	725.61	1164	630.57
1165	550.38	1166	482.43	1167	424.33	1168	376.69	1169	336.83
1170	304.19	1171	277.20	1172	255.12	1173	237.06	1174	221.88
1175	208.90	1176	198.39	1177	188.72	1178	180.26	1179	172.63
1180	166.24	1181	160.44	1182	155.09	1183	150.00	1184	145.24
1185	141.10	1186	137.28	1187	133.75	1188	130.38	1189	127.14
1190	124.00	1191	121.03	1192	118.26	1193	115.62	1194	113.01
1195	110.45	1196	108.03	1197	105.77	1198	103.67	1199	101.75
1200	99.98	1201	98.29	1202	96.65	1203	95.01	1204	93.47
1205	92.01	1206	90.60	1207	89.21	1208	87.79	1209	86.41
1210	85.07	1211	83.74	1212	82.52	1213	81.38	1214	80.27
1215	79.21	1216	78.23	1217	77.34	1218	76.50	1219	75.70
1220	74.87	1221	73.97	1222	73.09	1223	72.28	1224	71.48
1225	70.65	1226	69.78	1227	68.89	1228	68.03	1229	67.23
1230	66.44	1231	65.67	1232	64.97	1233	64.30	1234	63.61
1235	62.92	1236	62.28	1237	61.67	1238	61.05	1239	60.40
1240	59.75	1241	59.12	1242	58.52	1243	58.00	1244	57.51
1245	57.00	1246	56.50	1247	56.04	1248	55.63	1249	55.18
1250	54.66	1251	54.10	1252	53.61	1253	53.19	1254	52.76
1255	52.30	1256	51.81	1257	51.34	1258	50.85	1259	50.36
1260	49.89	1261	49.42	1262	48.99	1263	48.58	1264	48.19
1265	47.81	1266	47.43	1267	47.07	1268	46.74	1269	46.40
1270	46.03	1271	45.65	1272	45.30	1273	45.00	1274	44.73
1275	44.46	1276	44.17	1277	43.87	1278	43.56	1279	43.25
1280	42.98	1281	42.72	1282	42.43	1283	42.10	1284	41.79
1285	41.54	1286	41.33	1287	41.11	1288	40.85	1289	40.58
1290	40.29	1291	40.04	1292	39.82	1293	39.60	1294	39.37
1295	39.14	1296	38.93	1297	38.76	1298	38.62	1299	38.48
1300	38.33	1310	36.72	1320	34.99	1330	33.76	1340	32.40
1350	31.12	1360	30.27	1370	28.95	1380	27.89	1390	27.15
1400	26.25	1420	24.94	1440	24.04	1460	23.41	1500	23.40

TOTAL VOLUME THIS HYDROGRAPH = 123.50(Ac.Ft)

AIDLIN HILLS

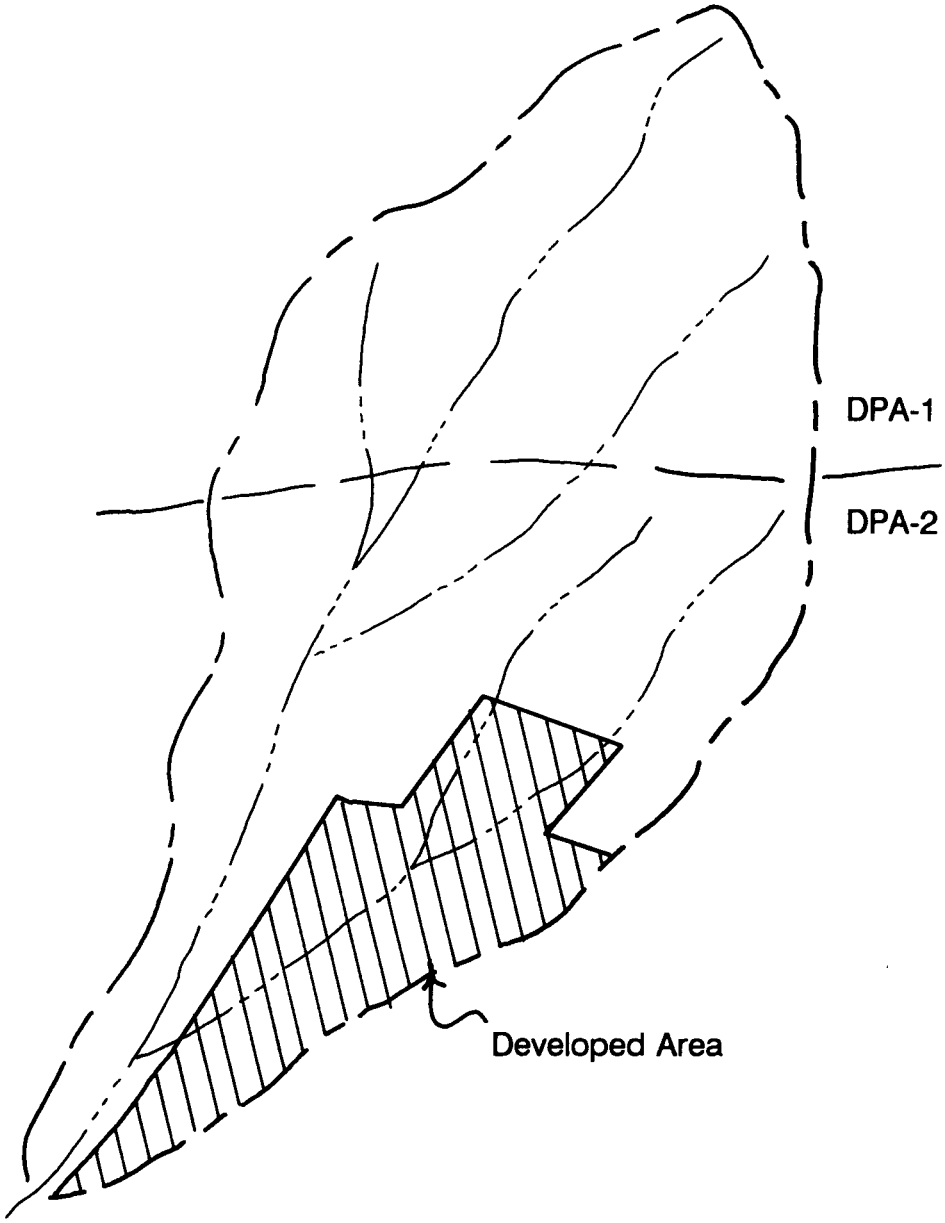
HYDROLOGY STUDY

APPENDIX C

FLOWRATE BULKING CALCULATIONS

Debris Production & Bulked Q Example

WORK MAP



Initials HK	Los Angeles County Department of Public Works
Date 6/17/91	Project Name DEBRIS PRODUCTION & BULKED Q EXAMPLE PROBLEM
Scale NONE	

LAP MRHNDO1.FRM 12/01/90
SEDEXPO1.FRM

EXAMPLE 1

DEBRIS PRODUCTION AND BULKED Q EXAMPLE

Given:

Burned **Q** = 348 cfs
Total Area = 224 acres = 0.35 sq. miles
Developed Area = 45 acres = 0.07 sq. miles

Problem:

Find the total debris production and the bulked Q.

Answer:

1. Calculate the areas for each DPA zone.

DPA Zone	Drainage Area		Developed Area
	Acres	Square Miles	Square Miles
1	77	0.12	0
2	147	0.23	0.07
Total	224	0.35	0.07

2. Determine the debris production rate (DPR) for each DPA zone from Appendix B-3 corresponding to the total drainage area.

For DPA zone 1 (total area = 0.35)
DPR = 155,000 cubic yards per sq. mile
DPA zone 1 (total area in DPA 1 - developed area = 0.12)
DPR = 222,000 cubic yards per sq. mile
DPA zone 2 (total area = 0.35)
DPR = 98,000 cubic yards per sq. mile
DPA zone 2 (total area in DPA 2 - developed area = 0.23 - 0.07 = 0.16)
DPR = 123,000 cubic yards per sq. mile

3. Calculate the total debris production as follows:

$$DP = 155{,}000\ (0.12 - 0)\left(\frac{0.12 - 0}{0.12 + 0.23}\right) + 222{,}000\ (0.12 - 0)\left(\frac{0.23 + 0}{0.12 + 0.23}\right)$$

$$+\ 98{,}000\ (0.23 - 0.07)\left(\frac{0.23 - 0.07}{0.12 + 0.23}\right) + 123{,}000\ (0.23 - 0.07)\left(\frac{0.12 + 0.07}{0.12 + 0.23}\right)$$

$$= 41{,}734.8\ yd^3$$

4. Determine the peak bulking factor for each DPA zone from Appendix B-6 and find the Q_{bulked} (Q_B) as follows:

In DPA zone 1:

Peak bulking factor for area $A_1 + A_2 = BF_{1(A1+A2)} = 2$

Peak bulking factor for area $A_1 - Ad_1 = BF_{1(A1-Ad1)} = 2$

In DPA zone 2:

Peak bulking factor for area $A_1 + A_2 = BF_{2(A1+A2)} = 1.81$

Peak bulking factor for area $A_2 - Ad_2 = BF_{2(A1-Ad2)} = 1.81$

$$Q_B = 2.00\left(\frac{348\,(0.12 - 0)}{0.12 + 0.23}\right)\left(\frac{0.12 - 0}{0.12 + 0.23}\right) +$$

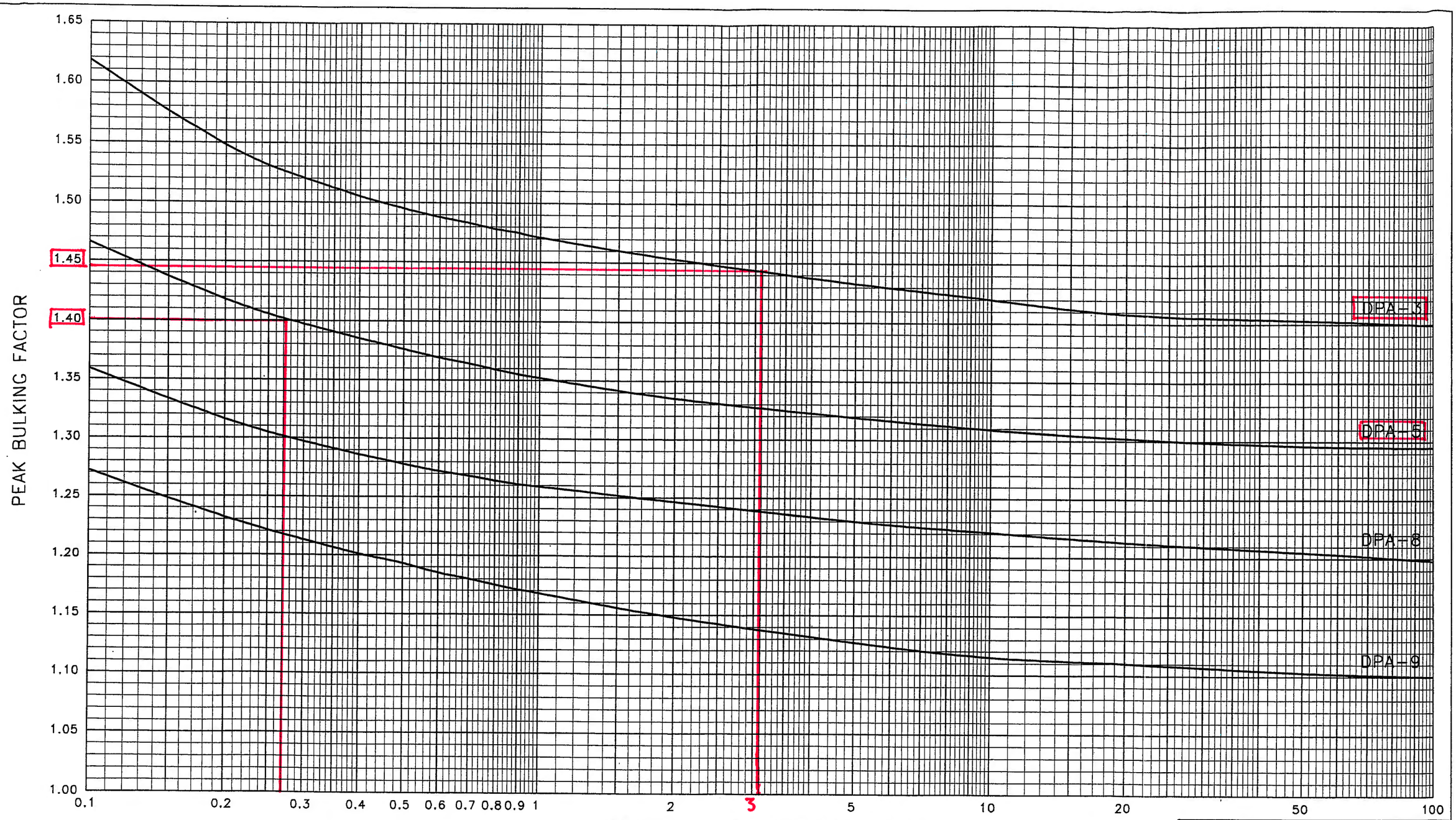
$$2.00\left(\frac{348\,(0.12 - 0)}{0.12 + 0.23}\right)\left(\frac{0.23 + 0}{0.12 + 0.23}\right) + \left(\frac{348\,(0)}{0.12 + 0.23}\right) +$$

$$1.81\left(\frac{348\,(0.23 - 0.07)}{0.12 + 0.23}\right)\left(\frac{0.23 - 0.07}{0.12 + 0.23}\right) +$$

$$1.81\left(\frac{348\,(0.23 - 0.07)}{0.12 + 0.23}\right)\left(\frac{0.12 + 0.07}{0.12 + 0.23}\right) + \left(\frac{348\,(0.07)}{0.12 + 0.23}\right)$$

$$= 596\ cfs$$

SAMPLE BULKING FACTOR CALC



EXISTING COND. BASIN A

1992 AC = 3.1 SQ. MI. @ DPA-3
170 AC = 0.27 SQ. MI. @ DPA-5

BULKING FACTOR = 1.45 @ DPA-3
BULKING FACTOR = 1.40 @ DPA-5

Los Angeles County
Department of Public Works

PEAK BULKING FACTORS
for Santa Clara Basin

VH2.SPG

AIDLIN HILLS

HYDROLOGY STUDY

UNDEVELOPED CONDITION

50-YR BULKING CALCS

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 97A

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1960.88	3.06	0.00	0.00
5	188.12	0.29	0.00	0.00
Total	2149.00	3.36	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.441
Zone 3 - Dev	1.441
Zone 5 Total	1.324
Zone 5 - Dev	1.324

Qb =	3656.20	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.32	
BF2-DEV =	1.32	
A1 =	3.06	sq mi
Ad1 =	0.00	sq mi
A2 =	0.29	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual

Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4386.57	cfs
Term 2 =	420.82	cfs
Term 3 =	37.09	cfs
Term 4 =	386.65	cfs

QBB = 5231.1 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 96AD

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1960.95	3.06	0.00	0.00
5	173.68	0.27	0.00	0.00
Total	2134.63	3.34	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.442
Zone 3 - Dev	1.442
Zone 5 Total	1.325
Zone 5 - Dev	1.325

Qb =	3652.37	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	3.06	sq mi
Ad1 =	0.00	sq mi
A2 =	0.27	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4444.55	cfs
Term 2 =	393.65	cfs
Term 3 =	32.04	cfs
Term 4 =	361.71	cfs

QBB = 5231.9 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 95D

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	371.40	0.58	34.90	0.05
5	0.00	0.00	0.00	0.00
Total	371.40	0.58	34.90	0.05

Peak Bulking Factor

Zone 3 Total	1.487
Zone 3 - Dev	1.491
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1093.80	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.58	sq mi
Ad1 =	0.05	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1335.17	cfs
Term 2 =	241.63	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1576.8 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 91AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1589.63	2.48	0.00	0.00
5	84.69	0.13	0.00	0.00
Total	1674.32	2.62	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.444
Zone 3 - Dev	1.444
Zone 5 Total	1.328
Zone 5 - Dev	1.328

Qb =	3000.74	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	2.48	sq mi
Ad1 =	0.00	sq mi
A2 =	0.13	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3905.80	cfs
Term 2 =	208.09	cfs
Term 3 =	10.20	cfs
Term 4 =	191.38	cfs

QBB = 4315.5 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 87AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1544.46	2.41	0.00	0.00
5	81.91	0.13	0.00	0.00
Total	1626.37	2.54	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.447
Zone 3 - Dev	1.447
Zone 5 Total	1.330
Zone 5 - Dev	1.330

Qb =	2963.56	cfs
BF1 TOT =	1.45	
BF1-DEV =	1.45	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	2.41	sq mi
Ad1 =	0.00	sq mi
A2 =	0.13	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3867.22	cfs
Term 2 =	205.09	cfs
Term 3 =	10.00	cfs
Term 4 =	188.51	cfs

QBB = 4270.8 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 70AF

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1360.20	2.13	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	1360.20	2.13	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.453
Zone 3 - Dev	1.453
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	2798.01	cfs
BF1 TOT =	1.45	
BF1-DEV =	1.45	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	2.13	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4065.51	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 4065.5 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 57AE

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1121.07	1.75	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	1121.07	1.75	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.455
Zone 3 - Dev	1.455
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	2607.85	cfs
BF1 TOT =	1.46	
BF1-DEV =	1.46	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	1.75	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3794.42	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 3794.4 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 29AD

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	568.90	0.89	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	568.90	0.89	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.475
Zone 3 - Dev	1.475
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1902.54	cfs
BF1 TOT =	1.48	
BF1-DEV =	1.48	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.89	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	2806.25	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 2806.2 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 19AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	359.47	0.56	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	359.47	0.56	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.490
Zone 3 - Dev	1.490
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1250.06	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.56	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1862.59	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1862.6 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 11AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	226.40	0.35	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	226.40	0.35	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.510
Zone 3 - Dev	1.510
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	808.69	cfs
BF1 TOT =	1.51	
BF1-DEV =	1.51	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.35	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1221.12	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1221.1 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN B - Outlet Point 13A

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	288.37	0.45	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	288.37	0.45	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.500
Zone 3 - Dev	1.500
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	882.88	cfs
BF1 TOT =	1.50	
BF1-DEV =	1.50	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.45	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1324.32	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1324.3 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN B - Outlet Point 11AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	240.81	0.38	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	240.81	0.38	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.507
Zone 3 - Dev	1.507
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	772.13	cfs
BF1 TOT =	1.51	
BF1-DEV =	1.51	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.38	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1163.60	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1163.6 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Outlet Point 5A

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	371.40	0.58	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	371.40	0.58	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.441
Zone 3 - Dev	1.443
Zone 5 Total	1.326
Zone 5 - Dev	1.400

Qb =	1093.77	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.33	
BF2-DEV =	1.40	
A1 =	0.58	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1576.12	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1576.1 cfs

UNDEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Outlet Point 4AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	333.90	0.52	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	333.90	0.52	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.487
Zone 3 - Dev	1.487
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1014.27	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.52	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1508.22	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1508.2 cfs

AIDLIN HILLS

HYDROLOGY STUDY

DEVELOPED CONDITION

50-YR BULKING CALCS

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 97A

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1971.70	3.08	34.90	0.05
5	177.60	0.28	0.00	0.00
Total	2149.30	3.36	0.00	0.05

Peak Bulking Factor

Zone 3 Total	1.441
Zone 3 - Dev	1.443
Zone 5 Total	1.324
Zone 5 - Dev	1.324

Qb =	3644.95	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.32	
BF2-DEV =	1.32	
A1 =	3.08	sq mi
Ad1 =	0.05	sq mi
A2 =	0.28	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4265.11	cfs
Term 2 =	527.79	cfs
Term 3 =	32.95	cfs
Term 4 =	365.82	cfs

QBB = 5191.7 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 96AD

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1971.70	3.08	34.90	0.05
5	164.20	0.26	0.00	0.00
Total	2135.90	3.34	34.90	0.05

Peak Bulking Factor

Zone 3 Total	1.442
Zone 3 - Dev	1.443
Zone 5 Total	1.325
Zone 5 - Dev	1.325

Qb =	3637.59	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	3.08	sq mi
Ad1 =	0.05	sq mi
A2 =	0.26	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4313.07	cfs
Term 2 =	503.12	cfs
Term 3 =	28.49	cfs
Term 4 =	342.05	cfs

QBB = 5186.7 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 95D

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	382.07	0.60	34.90	0.05
5	0.00	0.00	0.00	0.00
Total	382.07	0.60	34.90	0.05

Peak Bulking Factor

Zone 3 Total	1.487
Zone 3 - Dev	1.491
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1140.20	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.60	sq mi
Ad1 =	0.05	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1399.88	cfs
Term 2 =	245.26	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1645.1 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 91AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1589.63	2.48	0.00	0.00
5	84.69	0.13	0.00	0.00
Total	1674.32	2.62	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.444
Zone 3 - Dev	1.444
Zone 5 Total	1.328
Zone 5 - Dev	1.328

Qb =	3000.47	cfs
BF1 TOT =	1.44	
BF1-DEV =	1.44	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	2.48	sq mi
Ad1 =	0.00	sq mi
A2 =	0.13	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3905.45	cfs
Term 2 =	208.07	cfs
Term 3 =	10.20	cfs
Term 4 =	191.36	cfs

QBB = 4315.1 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 87AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1544.46	2.41	0.00	0.00
5	81.91	0.13	0.00	0.00
Total	1626.37	2.54	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.447
Zone 3 - Dev	1.447
Zone 5 Total	1.330
Zone 5 - Dev	1.330

Qb =	2963.56	cfs
BF1 TOT =	1.45	
BF1-DEV =	1.45	
BF2 TOT =	1.33	
BF2-DEV =	1.33	
A1 =	2.41	sq mi
Ad1 =	0.00	sq mi
A2 =	0.13	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3867.22	cfs
Term 2 =	205.09	cfs
Term 3 =	10.00	cfs
Term 4 =	188.51	cfs

QBB = 4270.8 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 70AF

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1360.20	2.13	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	1360.20	2.13	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.453
Zone 3 - Dev	1.453
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	2798.01	cfs
BF1 TOT =	1.45	
BF1-DEV =	1.45	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	2.13	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	4065.51	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 4065.5 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 57AE

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	1121.07	1.75	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	1121.07	1.75	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.455
Zone 3 - Dev	1.455
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	2607.85	cfs
BF1 TOT =	1.46	
BF1-DEV =	1.46	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	1.75	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	3794.42	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 3794.4 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 29AD

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	568.90	0.89	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	568.90	0.89	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.475
Zone 3 - Dev	1.475
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1902.54	cfs
BF1 TOT =	1.48	
BF1-DEV =	1.48	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.89	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	2806.25	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 2806.2 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 19AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	359.47	0.56	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	359.47	0.56	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.490
Zone 3 - Dev	1.490
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	1250.06	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.56	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1862.59	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1862.6 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN A - Outlet Point 11AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	226.40	0.35	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	226.40	0.35	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.510
Zone 3 - Dev	1.510
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	808.69	cfs
BF1 TOT =	1.51	
BF1-DEV =	1.51	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.35	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1221.12	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1221.1 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN B - Outlet Point 15AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	309.67	0.48	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	309.67	0.48	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.495
Zone 3 - Dev	1.495
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	944.47	cfs
BF1 TOT =	1.50	
BF1-DEV =	1.50	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.48	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1411.98	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1412.0 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN B - Outlet Point 11AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	240.81	0.38	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	240.81	0.38	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.507
Zone 3 - Dev	1.507
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	772.10	cfs
BF1 TOT =	1.51	
BF1-DEV =	1.51	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.38	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1163.55	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1163.6 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Outlet Point 27D

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	20.30	0.03	0.00	0.00
5	0.00	0.00	0.00	0.00
Total	20.30	0.03	0.00	0.00

Peak Bulking Factor

Zone 3 Total	1.618
Zone 3 - Dev	1.618
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	60.29	cfs
BF1 TOT =	1.62	
BF1-DEV =	1.62	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.03	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	97.55	cfs
Term 2 =	0.00	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 97.5 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Import Point 26D

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	309.67	0.48	34.90	0.05
5	0.00	0.00	0.00	0.00
Total	309.67	0.48	34.90	0.05

Peak Bulking Factor

Zone 3 Total	1.490
Zone 3 - Dev	1.493
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	943.50	cfs
BF1 TOT =	1.49	
BF1-DEV =	1.49	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.48	sq mi
Ad1 =	0.05	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	1106.80	cfs
Term 2 =	247.20	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 1354.0 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Outlet Point 19AC

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	36.80	0.06	19.60	0.03
5	0.00	0.00	0.00	0.00
Total	36.80	0.06	19.60	0.03

Peak Bulking Factor

Zone 3 Total	1.618
Zone 3 - Dev	1.618
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	120.21	cfs
BF1 TOT =	1.62	
BF1-DEV =	1.62	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.06	sq mi
Ad1 =	0.03	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	42.49	cfs
Term 2 =	112.44	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 154.9 cfs

DEVELOPED CONDITION - 50-YR, BURNED AND BULKED FLOWRATE

BASIN C - Outlet Point 10AB

DPA	Drainage Area		Developed Area	
	ac	sq mi	ac	sq mi
3	14.10	0.02	1.90	0.00
5	0.00	0.00	0.00	0.00
Total	14.10	0.02	1.90	0.00

Peak Bulking Factor

Zone 3 Total	1.618
Zone 3 - Dev	1.618
Zone 5 Total	0.000
Zone 5 - Dev	0.000

Qb =	49.61	cfs
BF1 TOT =	1.62	
BF1-DEV =	1.62	
BF2 TOT =	0.00	
BF2-DEV =	0.00	
A1 =	0.02	sq mi
Ad1 =	0.00	sq mi
A2 =	0.00	sq mi
Ad2 =	0.00	sq mi

LACDPW - Sedimentation Manual
Equation 3.3.5: For Partially Developed Watershed in Multiple DPA Zones

Term 1 =	60.09	cfs
Term 2 =	16.04	cfs
Term 3 =	0.00	cfs
Term 4 =	0.00	cfs

QBB = 76.1 cfs

AIDLIN HILLS

HYDROLOGY STUDY

50-YR

DEBRIS PRODUCTION CALC

(DEBRIS BASINS)

Debris Production Calculation

DPA Zone = 3
Production Rates per LACDPW Debris Production Rate Chart for Santa Clara Basin

Debris Production = Debris Rate per Area x Undeveloped Area of Basin

Debris Production

Basin	Area	Undevelped Area		Production Rate (per LACDPW Chart)	Debris Production
	ac	ac	sq. mi.	CY/ sq mi.	CY
A	2.1	1.7	0.003	140000	372
B & C	9.7	9.1	0.014	140000	1991
D	1.6	1.4	0.002	140000	306

Debris Basin Volume Calculation

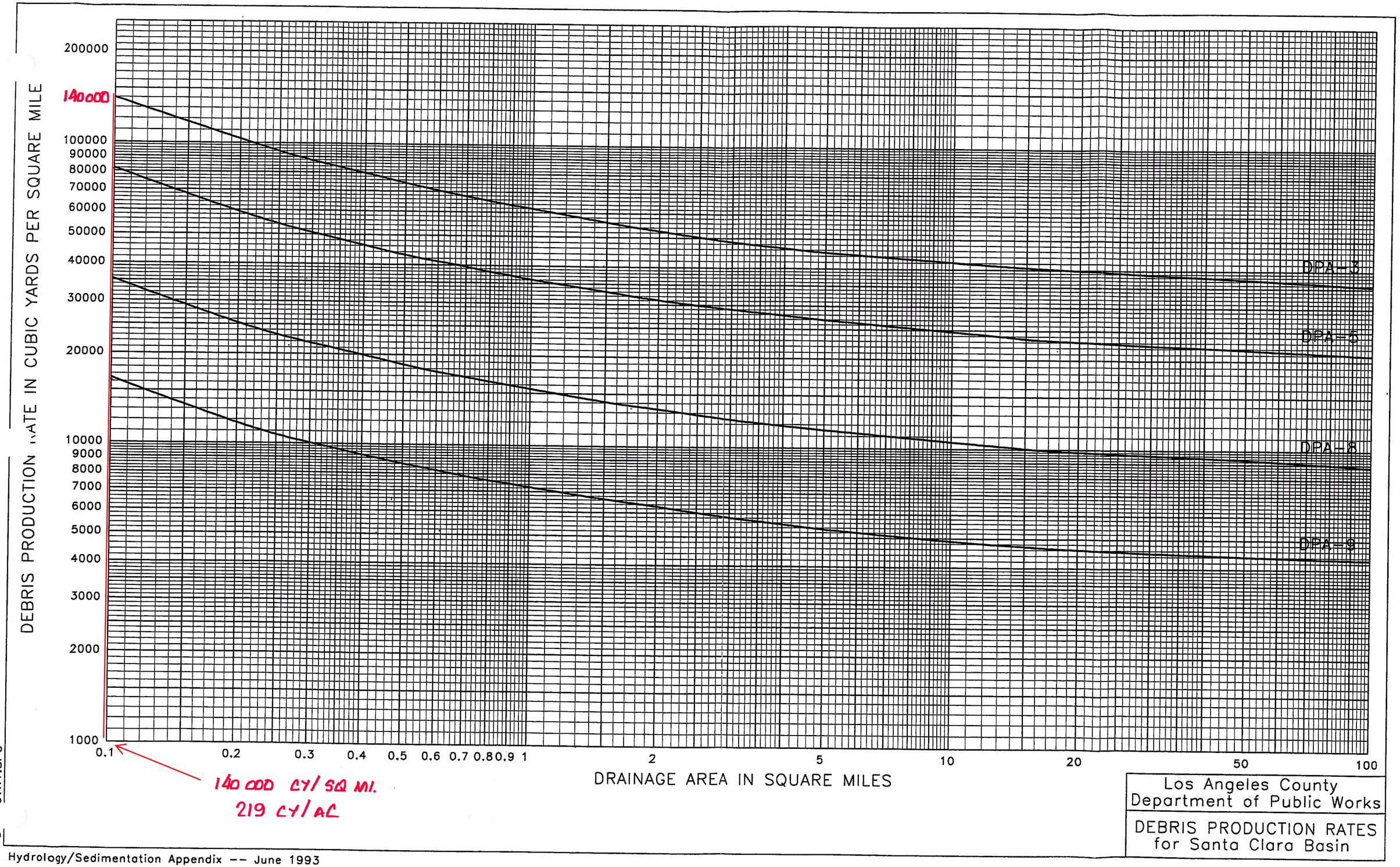
Volume = Avg. Area x Depth

Debris Basin Volume				
Basin	Avg. Area	Avg Depth	Volume Provided	
	sf	ft	cf	cy
A	5,410	2	10,819	401
B	4,836	2	9,671	358
C	4,967	10	49,666	1839
D	3,543	3	10,630	394

Note: Basin average areas calculated in AutoCAD

Summary

Debris Basin Summary		
Basin	Volume Required	Volume Provided
	CY	CY
A	370	400
B & C	1,990	2,200
D	310	390



Los Angeles County
Department of Public Works

DEBRIS PRODUCTION RATES
for Santa Clara Basin

AIDLIN HILLS

HYDROLOGY STUDY

APPENDIX D

EXHIBITS

EXISTING CONDITION

DRAINAGE CONCEPT

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN A

SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	ac	min	cfs			cfs
1A	32.5	32.5	6	129.9		3	
2A	34.8	67.3	7	127.8		3	
3A	33.3	100.6	9	108.0		3	
4A	37.9	138.4	7	139.2		3	
6B	28.8	28.8	6	115.1		3	
7B	12.2	41.0	6	48.8		3	
8B	22.3	63.3	8	76.5		3	
9B	24.6	87.9	8	84.4		3	
11AB	-	226.4			808.7		1221.1
13A	24.0	250.4	7	88.2		3	
15C	37.0	287.4	9	120.1		3	
16C	40.2	77.1	8	138.0		3	
17C	31.9	109.1	8	109.5		3	
19AC	-	359.5			1250.1		1862.6
21A	39.2	398.7	9	127.2		3	
23D	30.8	30.8	7	113.2		3	
24D	39.3	70.1	7	144.4		3	
25D	42.3	112.4	8	145.2		3	
26D	30.9	143.3	7	113.5		3	
27D	26.9	170.1	7	98.8		3	
29AD	-	568.9			1902.5		2806.2
31A	29.2	598.1	9	92.3		3	
32A	22.2	620.3	8	74.3		3	
33A	23.1	643.4	7	80.5		3	
34A	35.7	679.1	9	109.6		3	
35A	29.2	708.3	8	94.9		3	
36A	25.6	733.9	8	83.2		3	
38A	23.7	757.6	7	80.2		3	
39A	32.5	790.1	8	99.8		3	
40A	20.2	810.3	6	72.3		3	
41A	22.5	832.8	7	67.4		3	
42A	28.5	861.3	9	80.2		3	
44A	20.2	881.5	8	58.4		3	
45A	24.8	906.3	9	65.5		3	
46A	15.1	921.3	7	48.2		3	
47A	24.6	946.0	10	63.9		3	
48A	24.9	970.9	8	74.1		3	
49A	20.9	991.8	7	64.7		3	
50A	19.2	1011.0	7	61.3		3	
52E	28.8	28.8	7	97.5		3	
53E	24.8	53.5	7	83.9		3	
54E	33.4	86.9	8	102.5		3	
55E	23.1	110.0	8	68.7		3	
57AE		1121.1			2607.9		3794.4
59A	28.2	1149.3	9	81.7		3	
60A	27.2	1176.5	6	94.5		3	
61A	17.9	1194.4	9	50.4		3	
63F	27.0	27.0	7	94.0		3	
64F	40.8	67.8	10	116.1		3	
65F	37.4	105.2	9	108.4		3	
66F	32.6	137.8	7	110.3		3	
67F	18.8	156.6	8	57.7		3	
68F	9.2	165.9	7	30.2		3	
70AF	-	1360.2			2798.0		4065.5
72A	6.4	1366.6	6	22.2		3	
73A	20.0	1386.6	8	61.9		3	
74A	21.9	1408.5	8	65.9		3	
75A	42.0	1450.5	9	119.9		3	
76A	26.1	1476.6	9	74.5		3	
77A	12.2	1488.8	7	39.2		3	
79A	14.2	1503.0	7	47.0		3	
80A	18.2	1521.2	8	54.8		3	
81A	23.3	1544.5	8	72.1		3	
82A	22.2	1566.6	10	60.4		5	
84B	26.2	26.2	9	72.4		5	
85B	33.5	59.8	10	91.2		5	
87AB		1626.4			2963.6		4270.8
88A	2.8	1629.2	5	11.1		5	
89C	21.6	21.6	7	75.5		3	
90C	23.5	45.2	10	67.7		3	
91AC	-	1674.3			3000.7		4315.5
92A	30.8	1705.1	8	95.4		5	
93A	42.1	1747.2	8	130.3		5	
94A	16.0	1763.2	7	54.4		5	
95D *		371.4			1093.8		1576.8
96AD	-	2134.6			3652.4	5	5231.9
97A	14.4	2149.0	7	48.9	3656.2	5	5231.1

* Import point of Basin C flows

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN B

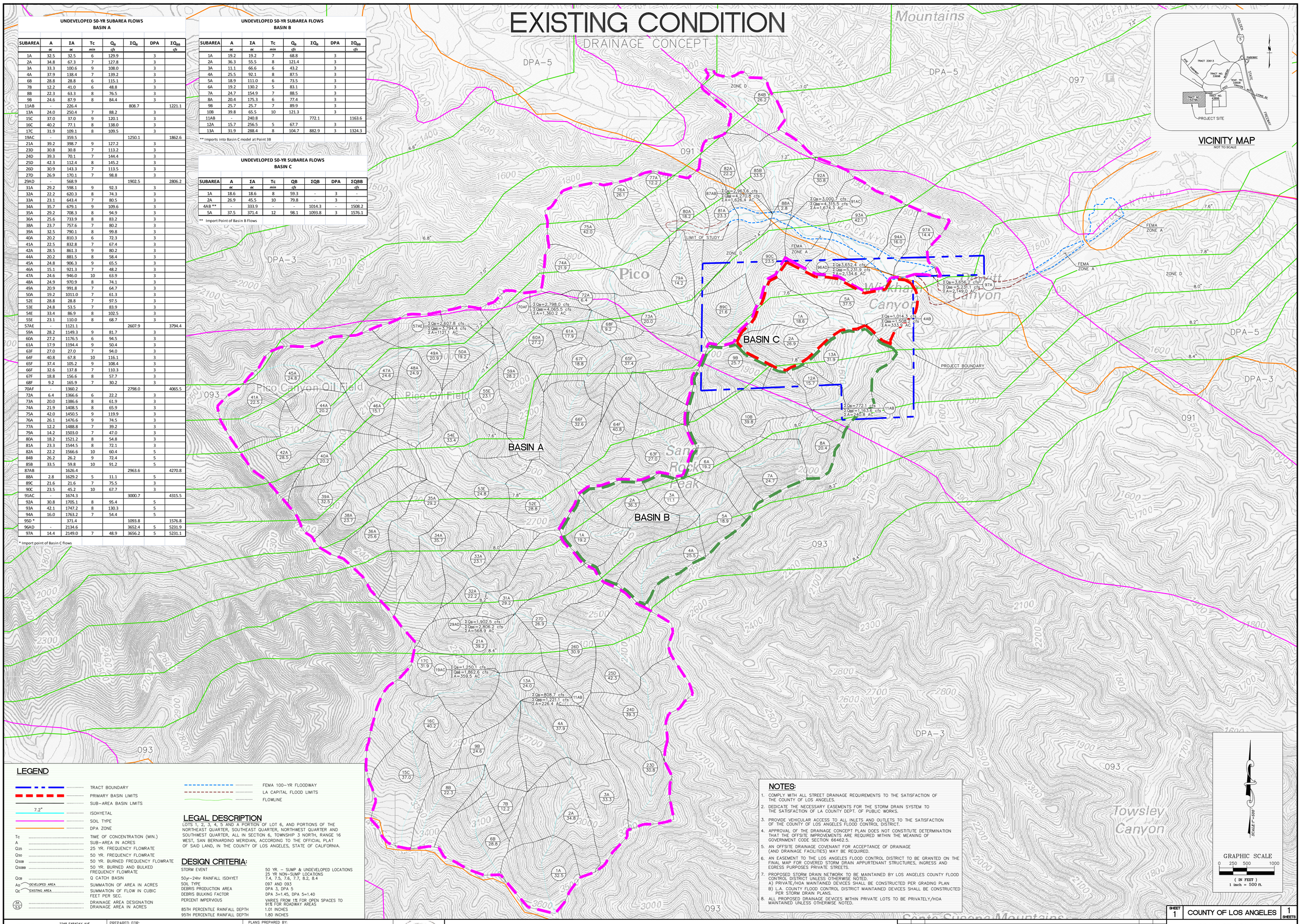
SUBAREA	A	ΣA	Tc	Q_B	$ΣQ_B$	DPA	$ΣQ_{BB}$
	ac	ac	min	cfs			cfs
1A	19.2	19.2	7	68.8		3	
2A	36.3	55.5	8	121.4		3	
3A	11.1	66.6	6	43.2		3	
4A	25.5	92.1	8	87.5		3	
5A	18.9	111.0	6	73.5		3	
6A	19.2	130.2	5	83.1		3	
7A	24.7	154.9	7	88.5		3	
8A	20.4	175.3	6	77.4		3	
9B	25.7	25.7	7	89.9		3	
10B	39.8	65.5	10	121.3		3	
11AB	-	240.8			772.1		1163.6
12A	15.7	256.5	5	67.7		3	
13A	31.9	288.4	8	104.7	882.9	3	1324.3

** Imports into Basin C model at Point 3B

UNDEVELOPED 50-YR SUBAREA FLOWS
BASIN C

SUBAREA	A	ΣA	Tc	QB	ΣQB	DPA	ΣQBB
	ac	ac	min	cfs			cfs
1A	18.6	18.6	8	59.3	-	3	-
2A	26.9	45.5	10	79.8	-	3	-
4AB **	-	333.9	-	-	1014.3	-	1508.2
5A	37.5	371.4	12	98.1	1093.8	3	1576.1

** Import Point of Basin B Flows



LEGEND

- TRACT BOUNDARY
- PRIMARY BASIN LIMITS
- SUB-AREA BASIN LIMITS
- 7.2" ISOHYETAL
- SOIL TYPE
- DPA ZONE
- Tc — TIME OF CONCENTRATION (MIN.)
- A — SUB-AREA IN ACRES
- Q_{25} — 25 YR. FREQUENCY FLOWRATE
- Q_{50} — 50 YR. FREQUENCY FLOWRATE
- Q_{50B} — 50 YR. BURNED FREQUENCY FLOWRATE
- Q_{50BB} — 50 YR. BURNED AND BULKED FREQUENCY FLOWRATE
- Q_{CB} — Q CATCH BASIN
- A_D — DEVELOPED AREA; Q_E — EXISTING AREA — SUMMATION OF AREA IN ACRES; SUMMATION OF FLOW IN CUBIC FEET PER SEC.
- 3A / 33.3 — DRAINAGE AREA DESIGNATION; DRAINAGE AREA IN ACRES
- FEMA 100-YR FLOODWAY
- LA CAPITAL FLOOD LIMITS
- FLOWLINE

LEGAL DESCRIPTION

LOTS 1, 2, 3, 4, 5 AND A PORTION OF LOT 6, AND PORTIONS OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, NORTHWEST QUARTER AND SOUTHWEST QUARTER, ALL IN SECTION 6, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA.

DESIGN CRITERIA:

STORM EVENT	50 YR. – SUMP & UNDEVELOPED LOCATIONS 25 YR NON-SUMP LOCATIONS
50yr-24hr RAINFALL ISOHYET	7.4, 7.5, 7.6, 7.7, 8.2, 8.4
SOIL TYPE	097 AND 093
DEBRIS PRODUCTION AREA	DPA 3, DPA 5
DEBRIS BULKING FACTOR	DPA 3=1.45, DPA 5=1.40
PERCENT IMPERVIOUS	VARIES FROM 1% FOR OPEN SPACES TO 91% FOR ROADWAY AREAS
85TH PERCENTILE RAINFALL DEPTH	1.01 INCHES
95TH PERCENTILE RAINFALL DEPTH	1.80 INCHES

NOTES:

1. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
2. DEDICATE THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM TO THE SATISFACTION OF LA COUNTY DEPT. OF PUBLIC WORKS.
3. PROVIDE VEHICULAR ACCESS TO ALL INLETS AND OUTLETS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT.
4. APPROVAL OF THE DRAINAGE CONCEPT PLAN DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5.
5. AN OFFSITE DRAINAGE COVENANT FOR ACCEPTANCE OF DRAINAGE (AND DRAINAGE FACILITIES) MAY BE REQUIRED.
6. AN EASEMENT TO THE LOS ANGELES FLOOD CONTROL DISTRICT TO BE GRANTED ON THE FINAL MAP FOR COVERED STORM DRAIN APPURTENANT STRUCTURES, INGRESS AND EGRESS PURPOSES PRIVATE STREETS.
7. PROPOSED STORM DRAIN NETWORK TO BE MAINTAINED BY LOS ANGELES COUNTY FLOOD CONTROL DISTRICT UNLESS OTHERWISE NOTED.
   A) PRIVATE/HOA MAINTAINED DEVICES SHALL BE CONSTRUCTED PER GRADING PLAN
   B) L.A. COUNTY FLOOD CONTROL DISTRICT MAINTAINED DEVICES SHALL BE CONSTRUCTED PER STORM DRAIN PLANS.
8. ALL PROPOSED DRAINAGE DEVICES WITHIN PRIVATE LOTS TO BE PRIVATELY/HOA MAINTAINED UNLESS OTHERWISE NOTED.

ALLIANCE LAND PLANNING & ENGINEERING INC.
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27451 TOURNEY ROAD SUITE 140 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PREPARED FOR:
LENNAR HOMES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
(951)817-3542
REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 11/19/14 DATE

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 | COUNTY OF LOS ANGELES | 1 SHEETS

DRAINAGE CONCEPT
VESTING TENTATIVE TRACT MAP NO. 52796

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

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DEVELOPED CONDITION

DRAINAGE CONCEPT

DEVELOPED 50-YR SUBAREA FLOWS
BASIN A

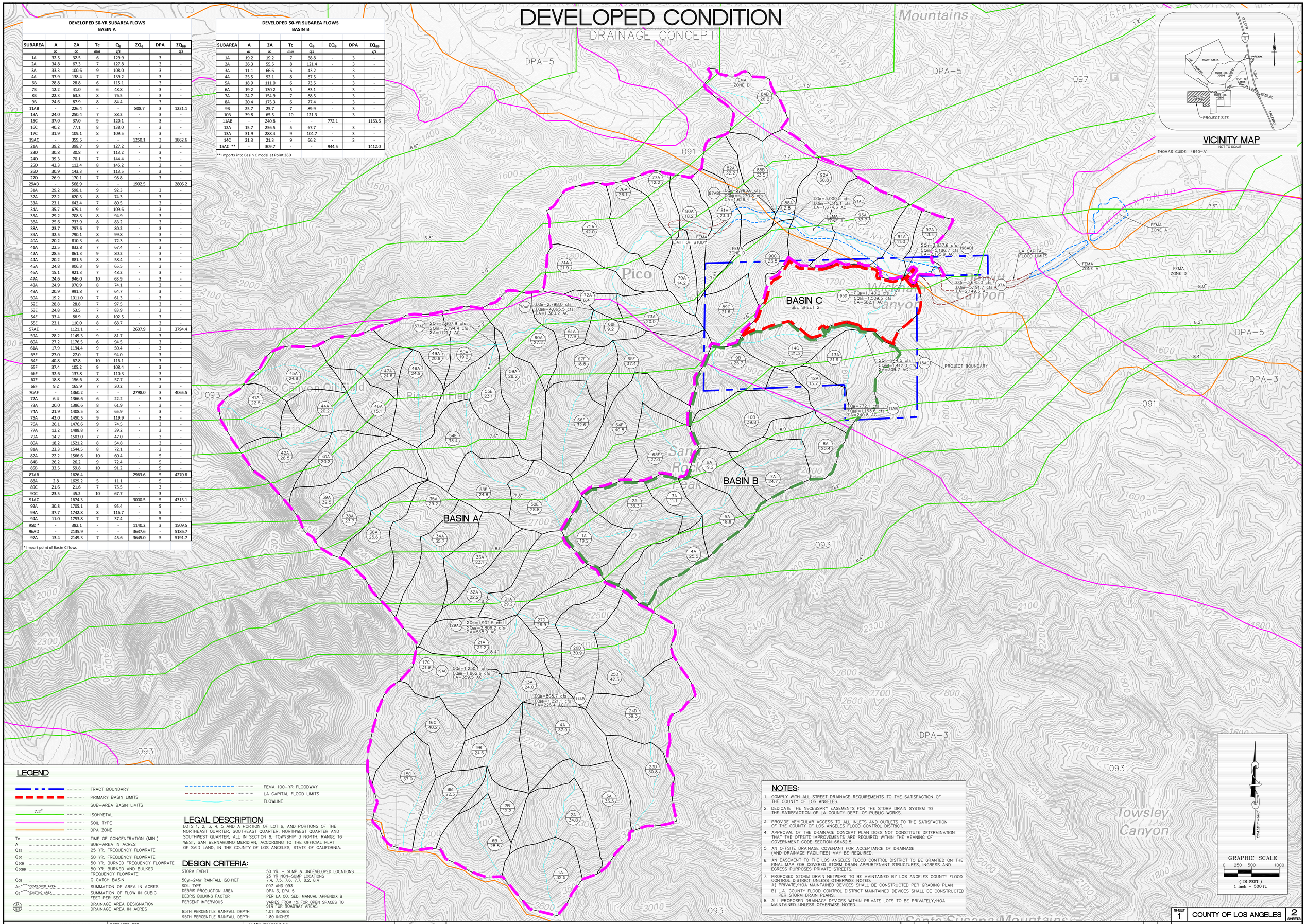
SUBAREA	A	ΣA	Tc	Q_B	ΣQ_B	DPA	ΣQ_{BB}
	ac	ac	min	cfs			cfs
1A	32.5	32.5	6	129.9	-	3	-
2A	34.8	67.3	7	127.8	-	3	-
3A	33.3	100.6	9	108.0	-	3	-
4A	37.9	138.4	7	139.2	-	3	-
6B	28.8	28.8	6	115.1	-	3	-
7B	12.2	41.0	6	48.8	-	3	-
8B	22.3	63.3	8	76.5	-	3	-
9B	24.6	87.9	8	84.4	-	3	-
11AB	-	226.4	-	-	808.7	3	1221.1
13A	24.0	250.4	7	88.2	-	3	-
15C	37.0	37.0	9	120.1	-	3	-
16C	40.2	77.1	8	138.0	-	3	-
17C	31.9	109.1	8	109.5	-	3	-
19AC	-	359.5	-	-	1250.1	3	1862.6
21A	39.2	398.7	9	127.2	-	3	-
23D	30.8	30.8	7	113.2	-	3	-
24D	39.3	70.1	7	144.4	-	3	-
25D	42.3	112.4	8	145.2	-	3	-
26D	30.9	143.3	7	113.5	-	3	-
27D	26.9	170.1	7	98.8	-	3	-
29AD	-	568.9	-	-	1902.5	-	2806.2
31A	29.2	598.1	9	92.3	-	3	-
32A	22.2	620.3	8	74.3	-	3	-
33A	23.1	643.4	7	80.5	-	3	-
34A	35.7	679.1	9	109.6	-	3	-
35A	29.2	708.3	8	94.9	-	3	-
36A	25.6	733.9	8	83.2	-	3	-
38A	23.7	757.6	7	80.2	-	3	-
39A	32.5	790.1	8	99.8	-	3	-
40A	20.2	810.3	6	72.3	-	3	-
41A	22.5	832.8	7	67.4	-	3	-
42A	28.5	861.3	9	80.2	-	3	-
44A	20.2	881.5	8	58.4	-	3	-
45A	24.8	906.3	9	65.5	-	3	-
46A	15.1	921.3	7	48.2	-	3	-
47A	24.6	946.0	10	63.9	-	3	-
48A	24.9	970.9	8	74.1	-	3	-
49A	20.9	991.8	7	64.7	-	3	-
50A	19.2	1011.0	7	61.3	-	3	-
52E	28.8	28.8	7	97.5	-	3	-
53E	24.8	53.5	7	83.9	-	3	-
54E	33.4	86.9	8	102.5	-	3	-
55E	23.1	110.0	8	68.7	-	3	-
57AE	-	1121.1	-	-	2607.9	3	3794.4
59A	28.2	1149.3	9	81.7	-	3	-
60A	27.2	1176.5	6	94.5	-	3	-
61A	17.9	1194.4	9	50.4	-	3	-
63F	27.0	27.0	7	94.0	-	3	-
64F	40.8	67.8	10	116.1	-	3	-
65F	37.4	105.2	9	108.4	-	3	-
66F	32.6	137.8	7	110.3	-	3	-
67F	18.8	156.6	8	57.7	-	3	-
68F	9.2	165.9	7	30.2	-	3	-
70AF	-	1360.2	-	-	2798.0	3	4065.5
72A	6.4	1366.6	6	22.2	-	3	-
73A	20.0	1386.6	8	61.9	-	3	-
74A	21.9	1408.5	8	65.9	-	3	-
75A	42.0	1450.5	9	119.9	-	3	-
76A	26.1	1476.6	9	74.5	-	3	-
77A	12.2	1488.8	7	39.2	-	3	-
79A	14.2	1503.0	7	47.0	-	3	-
80A	18.2	1521.2	8	54.8	-	3	-
81A	23.3	1544.5	8	72.1	-	3	-
82A	22.2	1566.6	10	60.4	-	5	-
84B	26.2	26.2	9	72.4	-	5	-
85B	33.5	59.8	10	91.2	-	5	-
87AB	-	1626.4	-	-	2963.6	5	4270.8
88A	2.8	1629.2	5	11.1	-	5	-
89C	21.6	21.6	7	75.5	-	3	-
90C	23.5	45.2	10	67.7	-	3	-
91AC	-	1674.3	-	-	3000.5	5	4315.1
92A	30.8	1705.1	8	95.4	-	5	-
93A	37.7	1742.8	8	116.7	-	5	-
94A	11.0	1753.8	7	37.4	-	5	-
95D *	-	382.1	-	-	1140.2	3	1509.5
96AD	-	2135.9	-	-	3637.6	-	5186.7
97A	13.4	2149.3	7	45.6	3645.0	5	5191.7

* Import point of Basin C flows

DEVELOPED 50-YR SUBAREA FLOWS
BASIN B

SUBAREA	A	ΣA	Tc	Q_B	ΣQ_B	DPA	ΣQ_{BB}
	ac	ac	min	cfs			cfs
1A	19.2	19.2	7	68.8	-	3	-
2A	36.3	55.5	8	121.4	-	3	-
3A	11.1	66.6	6	43.2	-	3	-
4A	25.5	92.1	8	87.5	-	3	-
5A	18.9	111.0	6	73.5	-	3	-
6A	19.2	130.2	5	83.1	-	3	-
7A	24.7	154.9	7	88.5	-	3	-
8A	20.4	175.3	6	77.4	-	3	-
9B	25.7	25.7	7	89.9	-	3	-
10B	39.8	65.5	10	121.3	-	3	-
11AB	-	240.8	-	-	772.1		1163.6
12A	15.7	256.5	5	67.7	-	3	-
13A	31.9	288.4	9	104.7	-	3	-
14C	21.3	21.3	9	66.2	-	3	-
15AC **	-	309.7	-	-	944.5		1412.0

** Imports into Basin C model at Point 26D



VICINITY MAP

NOT TO SCALE

THOMAS GUIDE: 4640-A1

LEGEND

- TRACT BOUNDARY
- PRIMARY BASIN LIMITS
- SUB-AREA BASIN LIMITS
- 7.2" ISOHYETAL
- SOIL TYPE
- DPA ZONE
- FEMA 100-YR FLOODWAY
- LA CAPITAL FLOOD LIMITS
- FLOWLINE

Tc	TIME OF CONCENTRATION (MIN.)
A	SUB-AREA IN ACRES
Q_{25}	25 YR. FREQUENCY FLOWRATE
Q_{50}	50 YR. FREQUENCY FLOWRATE
Q_{50B}	50 YR. BURNED FREQUENCY FLOWRATE
Q_{50BB}	50 YR. BURNED AND BULKED FREQUENCY FLOWRATE
Q_{CB}	Q CATCH BASIN
ΣQ DEVELOPED AREA	SUMMATION OF AREA IN ACRES
ΣQ EXISTING AREA	SUMMATION OF FLOW IN CUBIC FEET PER SEC.
(3A / 5.5)	DRAINAGE AREA DESIGNATION / DRAINAGE AREA IN ACRES

LEGAL DESCRIPTION

LOTS 1, 2, 3, 4, 5 AND A PORTION OF LOT 6, AND PORTIONS OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, NORTHWEST QUARTER AND SOUTHWEST QUARTER, ALL IN SECTION 6, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA.

DESIGN CRITERIA:

STORM EVENT	50 YR. – SUMP & UNDEVELOPED LOCATIONS 25 YR NON-SUMP LOCATIONS
50yr-24hr RAINFALL ISOHYET	7.4, 7.5, 7.6, 7.7, 8.2, 8.4
SOIL TYPE	097 AND 093
DEBRIS PRODUCTION AREA	DPA 3, DPA 5
DEBRIS BULKING FACTOR	PER LA CO. SED. MANUAL APPENDIX B
PERCENT IMPERVIOUS	VARIES FROM 1% FOR OPEN SPACES TO 91% FOR ROADWAY AREAS
85TH PERCENTILE RAINFALL DEPTH	1.01 INCHES
95TH PERCENTILE RAINFALL DEPTH	1.80 INCHES

NOTES:

1. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
2. DEDICATE THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM TO THE SATISFACTION OF LA COUNTY DEPT. OF PUBLIC WORKS.
3. PROVIDE VEHICULAR ACCESS TO ALL INLETS AND OUTLETS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT.
4. APPROVAL OF THE DRAINAGE CONCEPT PLAN DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5.
5. AN OFFSITE DRAINAGE COVENANT FOR ACCEPTANCE OF DRAINAGE (AND DRAINAGE FACILITIES) MAY BE REQUIRED.
6. AN EASEMENT TO THE LOS ANGELES FLOOD CONTROL DISTRICT TO BE GRANTED ON THE FINAL MAP FOR COVERED STORM DRAIN APPURTENANT STRUCTURES, INGRESS AND EGRESS PURPOSES PRIVATE STREETS.
7. PROPOSED STORM DRAIN NETWORK TO BE MAINTAINED BY LOS ANGELES COUNTY FLOOD CONTROL DISTRICT UNLESS OTHERWISE NOTED.
   A) PRIVATE/HOA MAINTAINED DEVICES SHALL BE CONSTRUCTED PER GRADING PLAN
   B) L.A. COUNTY FLOOD CONTROL DISTRICT MAINTAINED DEVICES SHALL BE CONSTRUCTED PER STORM DRAIN PLANS.
8. ALL PROPOSED DRAINAGE DEVICES WITHIN PRIVATE LOTS TO BE PRIVATELY/HOA MAINTAINED UNLESS OTHERWISE NOTED.

GRAPHIC SCALE
0 250 500 1000
(IN FEET)
1 inch = 500 ft.

SCALE 1"=500'

ALLIANCE LAND PLANNING & ENGINEERING INC.
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PREPARED FOR:
LENNAR HOMES
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CORONA, CA 92879
(951)817-3542
REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
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2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896

PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG W. WHITTEKER R.C.E. 51929 — 11/19/14 DATE

REGISTERED PROFESSIONAL ENGINEER No. 51929 Exp. 6/30/15 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 — COUNTY OF LOS ANGELES — 2 SHEETS

DRAINAGE CONCEPT
VESTING TENTATIVE TRACT MAP NO. 52796

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

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DEVELOPED CONDITION

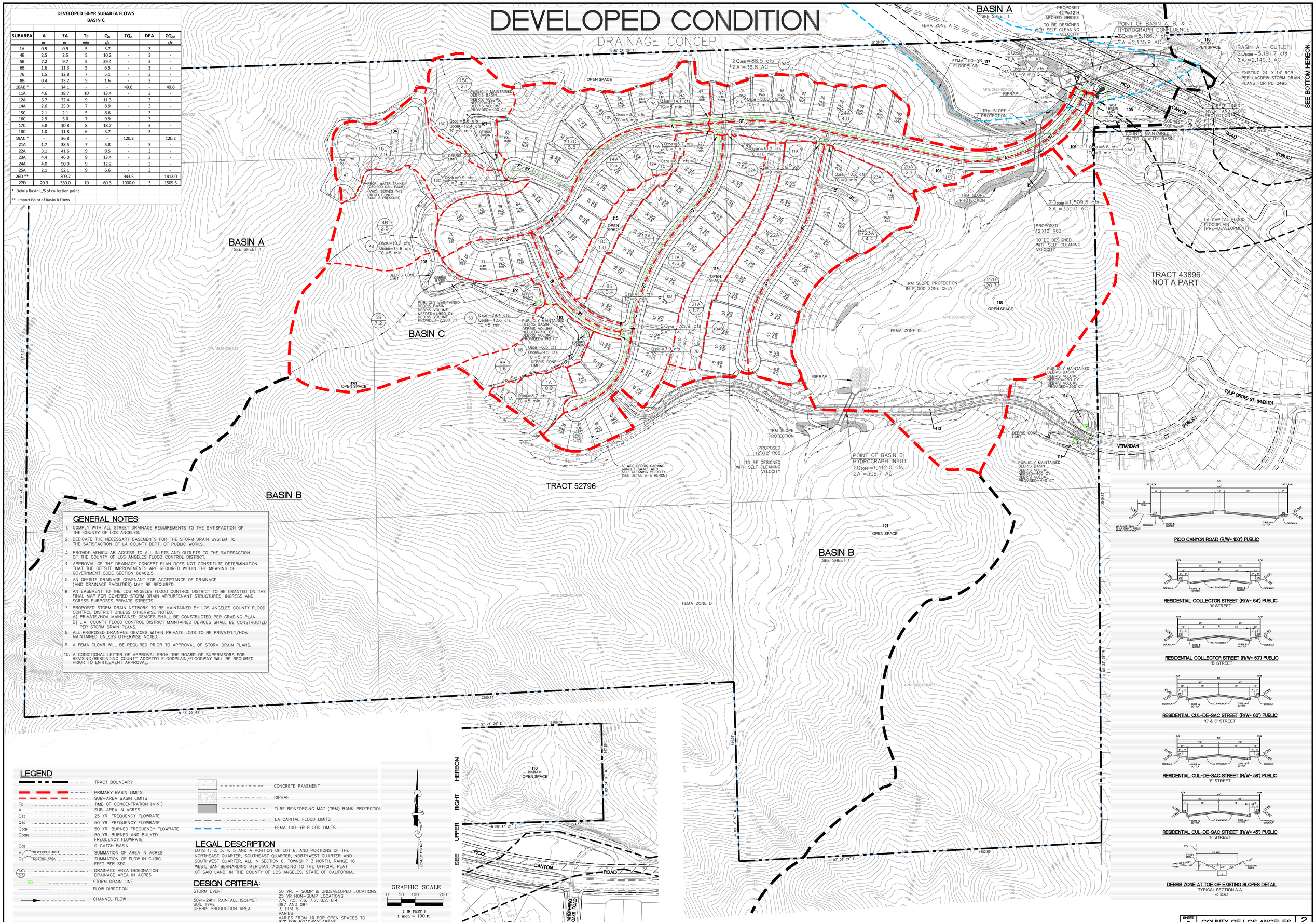
DRAINAGE CONCEPT

DEVELOPED 50-YR SUBAREA FLOWS
BASIN C

SUBAREA	A	ΣA	Tc	Q_{50}	$ΣQ_{50}$	DPA	$ΣQ_{50B}$
	ac	ac	min	cfs			cfs
1A	0.9	0.9	5	3.7	-	3	-
4B	2.5	2.5	5	10.2	-	3	-
5B	7.2	9.7	5	29.4	-	3	-
6B	1.6	11.3	5	6.5	-	3	-
7B	1.5	12.8	7	5.1	-	3	-
8B	0.4	13.2	5	1.6	-	3	-
10AB *	-	14.1	-	-	49.6	-	49.6
11A	4.6	18.7	10	13.4	-	3	-
12A	3.7	22.4	9	11.3	-	3	-
14A	2.6	25.0	7	8.9	-	3	-
15C	2.1	2.1	5	8.6	-	3	-
16C	2.9	5.0	7	9.9	-	3	-
17C	5.8	10.8	8	18.7	-	3	-
18C	1.0	11.8	6	3.7	-	3	-
19AC *	-	36.8	-	-	120.2		120.2
21A	1.7	38.5	7	5.8	-	3	-
22A	3.1	41.6	9	9.5	-	3	-
23A	4.4	46.0	9	13.4	-	3	-
24A	4.0	50.0	9	12.2	-	3	-
25A	2.1	52.1	9	6.6	-	3	-
26D **	-	309.7	-	-	943.5	-	1412.0
27D	20.3	330.0	10	60.3	1000.0	3	1509.5

* Debris Basin U/S of collection point

** Import Point of Basin B Flows



GENERAL NOTES:

1. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
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8. ALL PROPOSED DRAINAGE DEVICES WITHIN PRIVATE LOTS TO BE PRIVATELY/HOA MAINTAINED UNLESS OTHERWISE NOTED.
9. A FEMA CLOMR WILL BE REQUIRED PRIOR TO APPROVAL OF STORM DRAIN PLANS.
10. A CONDITIONAL LETTER OF APPROVAL FROM THE BOARD OF SUPERVISORS FOR REVISING/RESCINDING COUNTY ADOPTED FLOODPLAIN/FLOODWAY WILL BE REQUIRED PRIOR TO ENTITLEMENT APPROVAL.

LEGEND

- TRACT BOUNDARY
- PRIMARY BASIN LIMITS
- SUB-AREA BASIN LIMITS
- Tc — TIME OF CONCENTRATION (MIN.)
- A — SUB-AREA IN ACRES
- Q25 — 25 YR. FREQUENCY FLOWRATE
- Q50 — 50 YR. FREQUENCY FLOWRATE
- Q50B — 50 YR. BURNED FREQUENCY FLOWRATE
- Q50BB — 50 YR. BURNED AND BULKED FREQUENCY FLOWRATE
- QCB — Q CATCH BASIN
- AD — DEVELOPED AREA — SUMMATION OF AREA IN ACRES
- QC — EXISTING AREA — SUMMATION OF FLOW IN CUBIC FEET PER SEC.
- 5A / 5.5 — DRAINAGE AREA DESIGNATION / DRAINAGE AREA IN ACRES
- SD — STORM DRAIN LINE
- FLOW DIRECTION
- CHANNEL FLOW
- CONCRETE PAVEMENT
- RIPRAP
- TURF REINFORCING MAT (TRM) BANK PROTECTION
- LA CAPITAL FLOOD LIMITS
- FEMA 100-YR FLOOD LIMITS

LEGAL DESCRIPTION

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DESIGN CRITERIA:

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50yr-24hr RAINFALL ISOHYET	7.4, 7.5, 7.6, 7.7, 8.2, 8.4
SOIL TYPE	097 AND 094
DEBRIS PRODUCTION AREA	3, DPA 5 VARIES VARIES FROM 1% FOR OPEN SPACES TO 91% FOR ROADWAY AREAS

SCALE: 1"=100'

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 inch = 100 ft.

SEE UPPER RIGHT HEREON

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431-9896 FAX: (760) 431-8802
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PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 11/19/14
DATE

REGISTERED PROFESSIONAL ENGINEER No. 51929 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 2 | COUNTY OF LOS ANGELES | 2 SHEETS

DRAINAGE CONCEPT
VESTING TENTATIVE TRACT MAP
NO. 52796

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

I:\CAD\1352\HYDROLOGY\1352_HYDRO-BORDER.dwg

LID

for

AIDLIN HILLS
COUNTY OF LOS ANGELES
TR 052796
Job No. 1352

January 2015

REGISTERED PROFESSIONAL ENGINEER
CRAIG M. WHITTAKER
No. 71829
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

Project:

The Aidlin Hills Project (the project) is a 230 acre development located along Pico Canyon Road in the community of Stevenson Ranch. The project (VTTM No. 52796) proposes to develop approximately 52 acres of the overall project area. VTTM 52796 will construct 102 single family lots.

Methodology:

Volumes were calculated using the County of Los Angeles "LID" HydroCalc calculator. Per the newly adopted MS4 permit, the volume based BMPs use an 85th percentile design storm of 1.01 inches as determined from the LA County 85th Percentile Analysis (1998) at the Valencia Water District rain gauge. The soil type for the project is 091. Single Family lots were assumed to have a imperviousness of 65%, streets were assumed to have an imperviousness of 91%, and landscaped slopes where assumed to have an imperviousness of 10%.

Drainage Concept:

Water quality flows for the 102 single family lots, streets, and slopes will all be treated at a common downstream water quality basin. Flows will be captured using conventional catch basins and then conveyed via closed storm drain pipes to one large basin where the LID design storm will be infiltrated. Using GMED Policy GS 200.1, percolation test results provided by geotechnical engineer, R.T. Frankian and Assoc., report a measured infiltration rate of 1.92 in/hr for boring #PB-1 at the location of the proposed basin. Due to debris basins being upstream of the large basin, a forebay will be designed within the basin per County of Los Angeles requirements. All water quality BMPs will be designed with high flow bypasses to ensure no damage to adjacent homes or slopes. See the 'LID/ Water Quality Exhibit' for locations of single family lots and the large Water Quality basin. Water quality volume and basin design summaries have been included with this report.

LOT AREA SUMMARY

Lot #	AREA (SF)	AREA (AC)
1	7141	0.16
2	7205	0.17
3	7729	0.18
4	10873	0.25
5	13319	0.31
6	12049	0.28
7	8311	0.19
8	7174	0.16
9	10223	0.23
10	8289	0.19
11	7350	0.17
12	7166	0.16
13	8629	0.20
14	9301	0.21
15	8513	0.20
16	8426	0.19
17	9250	0.21
18	7613	0.17
19	7259	0.17
20	7264	0.17
21	7722	0.18
22	7642	0.18
23	6519	0.15
24	6262	0.14
25	6196	0.14
26	7301	0.17
27	7252	0.17
28	7422	0.17
29	7040	0.16
30	6090	0.14
31	6877	0.16
32	8347	0.19
33	8781	0.20
34	9266	0.21
35	8687	0.20
36	8540	0.20
37	8267	0.19
38	8690	0.20
39	8992	0.21
40	8752	0.20
41	7910	0.18
42	8275	0.19
43	7666	0.18
44	8191	0.19
45	7628	0.18
46	7209	0.17
47	8765	0.20
48	7452	0.17
49	8359	0.19
50	7698	0.18
51	7676	0.18
52	8933	0.21

LOT AREA SUMMARY

Lot #	AREA (SF)	AREA (AC)
53	8385	0.19
54	12294	0.28
55	9788	0.22
56	9904	0.23
57	9133	0.21
58	9354	0.21
59	9045	0.21
60	8345	0.19
61	7793	0.18
62	9118	0.21
63	10157	0.23
64	13345	0.31
65	13381	0.31
66	12830	0.29
67	9503	0.22
68	8220	0.19
69	8425	0.19
70	10425	0.24
71	13452	0.31
72	7469	0.17
73	6540	0.15
74	8262	0.19
75	8901	0.20
76	9888	0.23
77	10151	0.23
78	8308	0.19
79	8484	0.19
80	8956	0.21
81	9299	0.21
82	8853	0.20
83	6971	0.16
84	8582	0.20
85	9809	0.23
86	10195	0.23
87	11007	0.25
88	9218	0.21
89	8815	0.20
90	8976	0.21
91	12951	0.30
92	10304	0.24
93	7928	0.18
94	8211	0.19
95	9304	0.21
96	9750	0.22
97	10984	0.25
98	9339	0.21
99	9640	0.22
100	10845	0.25
101	11731	0.27
102	9314	0.21
	SUBTOTAL	**20.8 AC**
STREET	335129	7.7
SLOPES	466341	10.7
	TOTAL	**39.2 AC**

WATER QUALITY DESIGN VOLUME

AREA TYPE	Σ AREA (SF)	Σ AREA (AC)	IMP.	SOIL TYPE	RAIN AMOUNT (IN)	FLOWPATH LENGTH (FT)	FLOWPATH SLOPE	MITIGATED VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)
Lots 1-102	905373	20.8	0.65	91	1.01	2700	0.080	46,769	
STREET	335129	7.7	0.91	91	1.01	2600	0.078	23,194	
SLOPES	466341	10.7	0.10	91	1.01	2700	0.128	7,004	
	TOTAL	**39.2 AC**					**TOTAL**	**76,968**	**77,450**

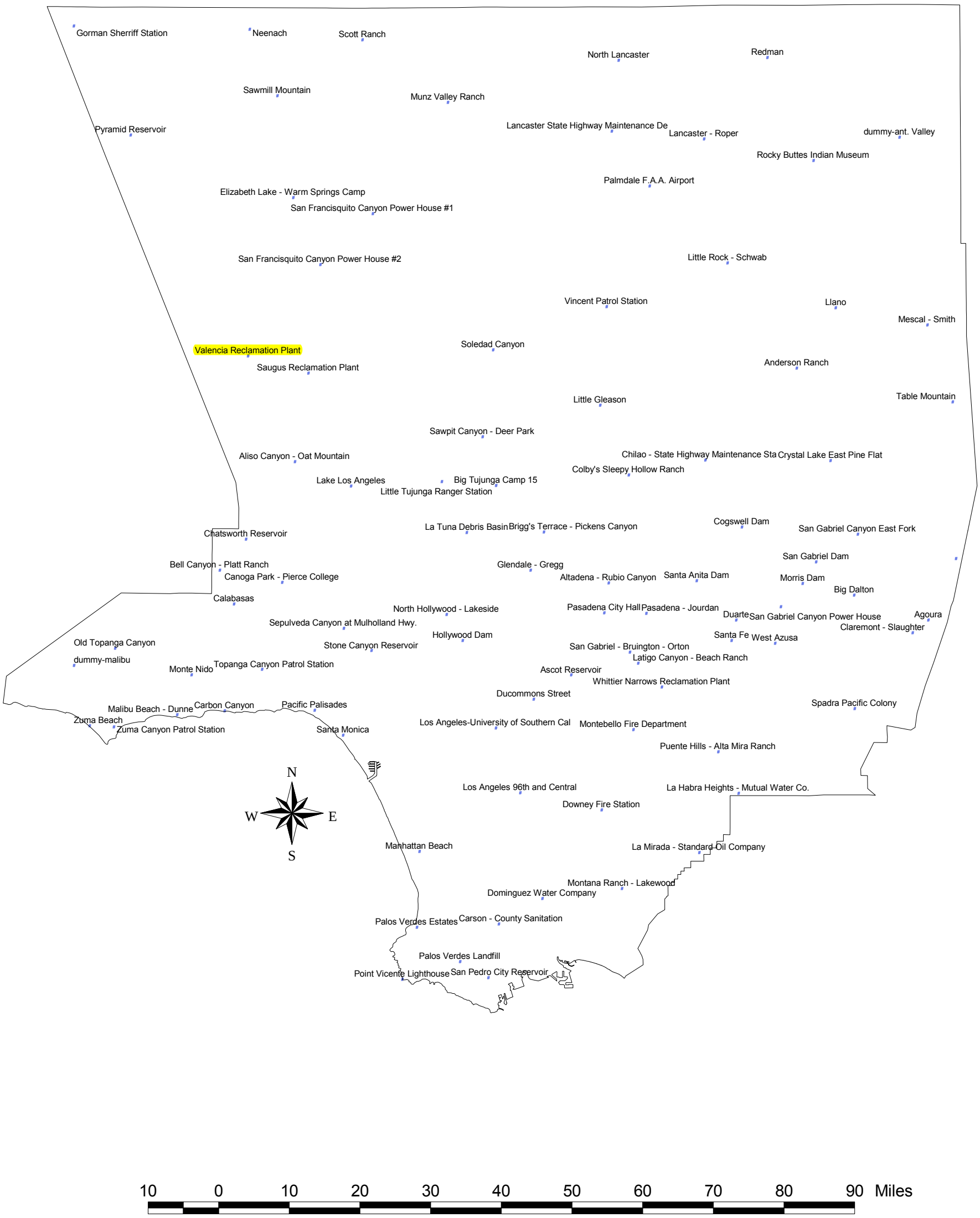
WATER QUALITY BASIN VOLUME

Elev	Area	Depth	Vol
ft	*sq ft*	*ft*	*cu ft*
1,470	14,426	7.0	77,450
1,463	7,703		

Summary of Rain Gage Data

24-hour Rainfall Total								
Gage No.	Gage Name	Mean	50th Percentile	75th Percentile	85th Percentile	90th Percentile	95th Percentile	99th Percentile
5	Calabasas	0.57	0.24	0.74	1.10	1.41	2.07	4.23
6	Topanga Canyon Patrol Station	0.54	0.20	0.69	1.11	1.44	2.10	4.05
13	North Hollywood - Lakeside	0.53	0.23	0.66	1.06	1.40	2.02	3.69
17	Sepulveda Canyon at Mulholland Hwy.	0.44	0.24	0.77	1.26	1.64	2.31	4.31
23	Chatsworth Reservoir	0.47	0.20	0.60	0.94	1.23	1.82	3.34
43	Palos Verdes Estates	0.26	0.13	0.34	0.52	0.67	0.94	1.67
44	Point Vicente Lighthouse	0.28	0.10	0.34	0.55	0.75	1.07	2.00
53	Colby's Sleepy Hollow Ranch	0.70	0.26	0.80	1.36	1.85	2.74	5.63
63	Santa Anita Dam	0.55	0.20	0.69	1.12	1.53	2.20	4.16
82	Table Mountain	0.51	0.23	0.57	0.96	1.26	1.91	4.11
107	Downey Fire Station	0.50	0.28	0.66	0.97	1.25	1.77	3.00
120	Vincent Patrol Station	0.30	0.16	0.39	0.60	0.79	1.13	1.67
125	San Francisquito Canyon Power House #1	0.44	0.20	0.59	0.91	1.20	1.69	3.02
128	Elizabeth Lake - Warm Springs Camp	0.66	0.34	0.90	1.35	1.63	2.32	4.16
156	La Mirada - Standard Oil Company	0.43	0.17	0.45	0.72	0.95	1.43	2.84
172	Duarte	0.66	0.35	0.88	1.32	1.67	2.34	3.77
176	Altadena - Rubio Canyon	0.60	0.25	0.76	1.20	1.61	2.28	3.95
201	Puente Hills - Alta Mira Ranch	0.58	0.30	0.78	1.12	1.40	2.03	3.38
223	Big Dalton	0.50	0.14	0.59	1.00	1.38	2.11	3.82
225	Montana Ranch - Lakewood	0.44	0.24	0.60	0.88	1.10	1.57	2.69
227	San Gabriel - Bruington - Orton	0.56	0.27	0.75	1.15	1.45	2.03	3.58
237	Stone Canyon Reservoir	0.58	0.22	0.77	1.20	1.66	2.35	3.95
238	Hollywood Dam	0.48	0.21	0.63	0.96	1.27	1.92	2.93
277	Sawmill Mountain	0.65	0.27	0.89	1.38	1.77	2.32	4.39
283	Crystal Lake East Pine Flat	0.70	0.24	0.77	1.32	1.90	2.89	5.89
291	Los Angeles 96th and Central	0.49	0.30	0.65	0.92	1.18	1.60	2.96
293	Lake Los Angeles	0.49	0.23	0.69	1.01	1.31	1.87	3.10
298	Gorman Sherriff Station	0.39	0.12	0.37	0.60	0.82	1.25	2.29
299	Little Rock - Schwab	0.29	0.09	0.29	0.48	0.65	0.95	1.65
304	Sawpit Canyon - Deer Park	0.60	0.19	0.73	1.20	1.76	2.45	4.88
306	Zuma Beach	0.31	0.16	0.40	0.60	0.78	1.10	2.07
322	Munz Valley Ranch	0.47	0.26	0.60	0.90	1.15	1.67	2.99
334	Cogswell Dam	0.77	0.22	0.86	1.52	2.23	3.41	6.27
356	Spadra Pacific Colony	0.49	0.25	0.62	0.98	1.27	1.78	3.01
372	San Francisquito Canyon Power House #2	0.45	0.21	0.60	0.90	1.15	1.68	3.00
373	Brigg's Terrace - Pickens Canyon	0.65	0.16	0.63	1.13	1.56	2.33	4.20
379	San Gabriel Canyon East Fork	0.65	0.23	0.76	1.30	1.70	2.60	5.18
390	Morris Dam	0.55	0.19	0.67	1.12	1.52	2.26	4.31
391	Montebello Fire Department	0.51	0.17	0.54	0.87	1.13	1.56	3.05
405	Soledad Canyon	0.48	0.20	0.56	0.90	1.18	1.73	3.20
406	West Azusa	0.51	0.26	0.68	1.03	1.36	1.85	2.93
409	Pyramid Reservoir	0.54	0.17	0.63	1.07	1.50	2.29	4.41
425	San Gabriel Dam	0.63	0.20	0.75	1.28	1.79	2.61	4.83
434	Agoura	0.41	0.13	0.44	0.75	1.03	1.58	3.46
435	Monte Nido	0.47	0.20	0.60	0.96	1.28	1.79	3.46
438	Los Angeles-University of Southern Cal	0.60	0.32	0.75	1.10	1.43	2.05	4.22
443	Latigo Canyon - Beach Ranch	0.47	0.16	0.57	0.95	1.33	1.96	3.66
446	Aliso Canyon - Oat Mountain	0.57	0.27	0.74	1.13	1.45	2.10	3.57
447	Carbon Canyon	0.35	0.17	0.46	0.70	0.89	1.26	2.19
455	Lancaster State Highway Maintenance De	0.32	0.16	0.38	0.59	0.79	1.18	2.08
458	Zuma Canyon Patrol Station	0.48	0.22	0.60	0.90	1.20	1.80	3.17
491	Pacific Palisades	0.40	0.27	0.60	0.85	1.05	1.41	2.24
492	Chilao - State Highway Maintenance Sta	0.66	0.28	0.76	1.30	1.73	2.54	4.94
497	Claremont - Slaughter	0.47	0.21	0.61	0.96	1.27	1.85	3.07
517	Anderson Ranch	0.50	0.18	0.56	0.98	1.35	2.08	3.84
564	Llano	0.31	0.18	0.40	0.61	0.78	1.01	1.75
598	Neenach	0.36	0.14	0.45	0.69	0.93	1.35	2.75
610	Pasadena City Hall	0.48	0.18	0.60	1.00	1.35	2.00	3.54
619	San Antonio Canyon - Sierra Power Hous	0.44	0.11	0.40	0.70	1.00	1.71	4.29
627	San Gabriel Canyon Power House	0.48	0.17	0.59	1.00	1.37	2.04	3.56
634	Santa Monica	0.50	0.25	0.67	1.02	1.32	1.78	3.08
694	Big Tujunga Camp 15	0.58	0.29	0.71	1.10	1.50	2.05	4.29
716	Ducommons Street	0.47	0.24	0.62	0.94	1.24	1.74	3.33
735	Bell Canyon - Platt Ranch	0.37	0.13	0.43	0.74	0.98	1.55	2.99
750	Palmdale F.A.A. Airport	0.24	0.12	0.30	0.48	0.61	0.90	1.54
795	Pasadena - Jourdan	0.49	0.19	0.63	1.02	1.41	2.00	3.44
807	Ascot Reservoir	0.48	0.23	0.63	0.98	1.30	1.80	3.10
1006	San Pedro City Reservoir	0.27	0.14	0.36	0.53	0.69	1.02	1.60
1025	Malibu Beach - Dunne	0.33	0.16	0.43	0.64	0.84	1.17	2.20
1041	Santa Fe	0.53	0.27	0.71	1.09	1.40	1.93	3.18
1050	Old Topanga Canyon	0.50	0.18	0.60	1.01	1.38	2.04	3.67
1051	Canoga Park - Pierce College	0.50	0.20	0.65	1.00	1.33	1.95	3.56
1070	Manhattan Beach	0.41	0.22	0.54	0.82	1.05	1.39	2.39
1072	Little Tujunga Ranger Station	0.57	0.31	0.77	1.10	1.39	1.95	3.56
1074	Little Gleason	0.69	0.31	0.79	1.28	1.71	2.59	5.91
1081	Glendale - Gregg	0.55	0.24	0.71	1.11	1.45	2.09	3.79
1088	La Habra Heights - Mutual Water Co.	0.52	0.28	0.68	1.05	1.32	1.94	3.12
1107	La Tuna Debris Basin	0.55	0.30	0.70	1.07	1.40	1.89	3.49
1113	Dominguez Water Company	0.35	0.15	0.42	0.73	0.95	1.42	2.63
1242	Rocky Buttes Indian Museum	0.14	0.05	0.16	0.24	0.32	0.50	0.97
1243	Redman	0.26	0.10	0.29	0.44	0.60	0.88	2.65
1244	Lancaster - Roper	0.15	0.04	0.16	0.27	0.41	0.55	1.47
1246	Scott Ranch	0.14	0.08	0.20	0.40	0.60	0.96	1.51
1247	North Lancaster	0.13	0.04	0.12	0.24	0.32	0.50	0.80
1248	Mescal - Smith	0.22	0.08	0.20	0.36	0.60	1.20	2.32
1252	Palos Verdes Landfill	0.55	0.31	0.73	1.09	1.49	2.01	3.20
1253	Carson - County Sanitation	0.44	0.20	0.55	0.89	1.22	1.65	2.47
1259	Whittier Narrows Reclamation Plant	0.49	0.26	0.60	0.90	1.25	1.80	3.01
1262	Saugus Reclamation Plant	0.51	0.28	0.62	0.94	1.29	1.81	3.49
1263	Valencia Reclamation Plant	0.49	0.28	0.62	1.01	1.31	1.80	2.78
	Discarded Gages							
1248	Mescal - Smith	0.22	0.08	0.20	0.36	0.60	1.20	2.32
1249	Relay	0.32	0.08	0.20	0.30	0.46	0.60	1.15
1252	Palos Verdes Landfill	0.55	0.31	0.73	1.09	1.49	2.01	3.20
1253	Carson - County Sanitation	0.44	0.20	0.55	0.89	1.22	1.65	2.47
1259	Whittier Narrows Reclamation Plant	0.49	0.26	0.60	0.90	1.25	1.80	3.01
1262	Saugus Reclamation Plant	0.51	0.28	0.62	0.94	1.29	1.81	3.49
1263	Valencia Reclamation Plant	0.49	0.28	0.62	1.01	1.31	1.80	2.78

85th Percentile 24-hr Isohyetal Map Gages



10 0 10 20 30 40 50 60 70 80 90 Miles

Rain Gage Name

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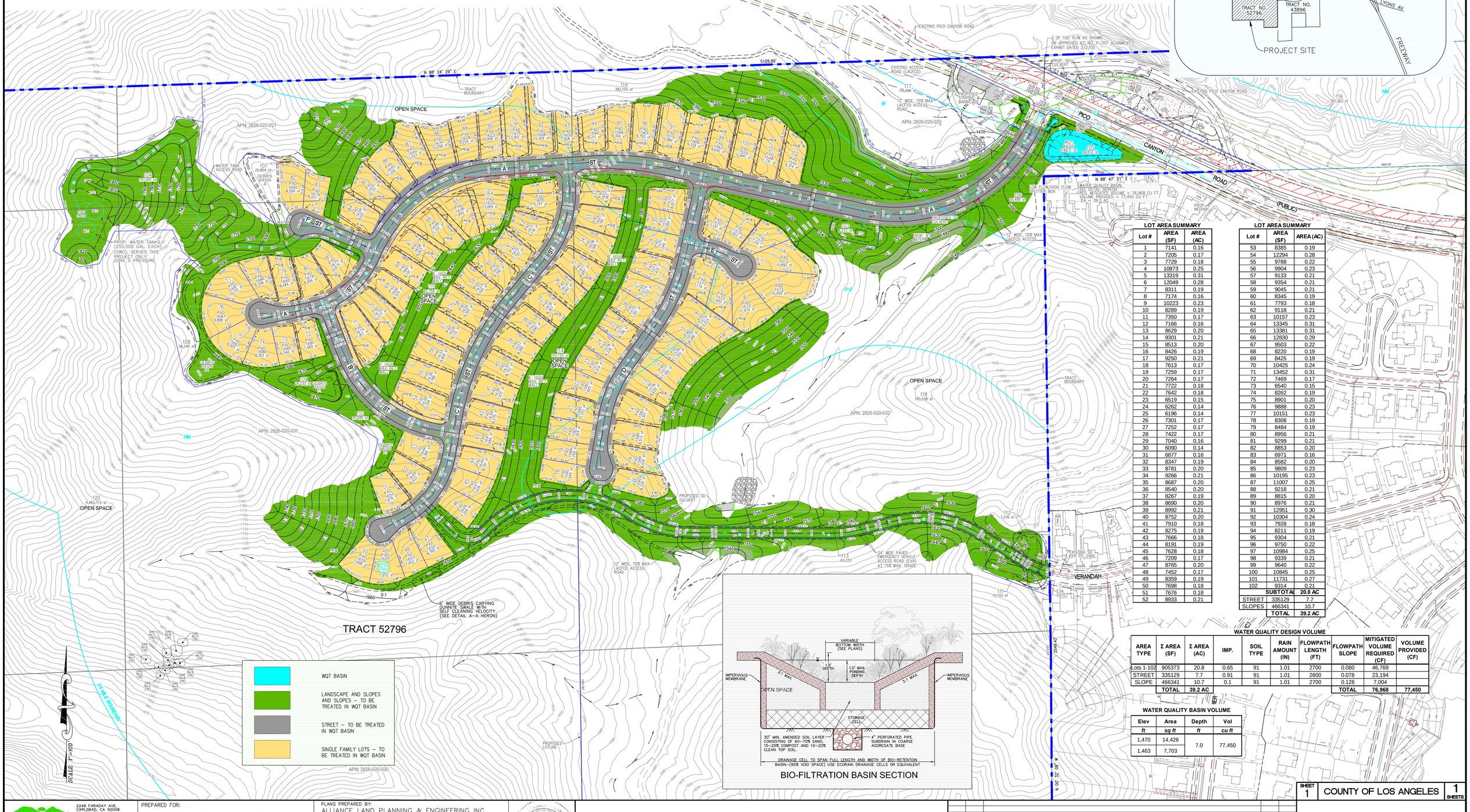
Date: 02/10/2004

LID/WATER QUALITY EXHIBIT
FOR
STEVENSON RANCH
TTM 52796



LOT AREA SUMMARY

Lot #	AREA (SF)	AREA (AC)
1	7141	0.16
2	7205	0.17
3	7729	0.18
4	10873	0.25
5	13319	0.31
6	12049	0.28
7	8311	0.19
8	7174	0.16
9	10223	0.23
10	8289	0.19
11	7350	0.17
12	7166	0.16
13	8629	0.20
14	9301	0.21
15	8513	0.20
16	8426	0.19
17	9250	0.21
18	7613	0.17
19	7259	0.17
20	7264	0.17
21	7722	0.18
22	7642	0.18
23	6519	0.15
24	6262	0.14
25	6196	0.14
26	7301	0.17
27	7252	0.17
28	7422	0.17
29	7040	0.16
30	6090	0.14
31	6877	0.16
32	8347	0.19
33	8781	0.20
34	9266	0.21
35	8687	0.20
36	8540	0.20
37	8267	0.19
38	8690	0.20
39	8992	0.21
40	8752	0.20
41	7910	0.18
42	8275	0.19
43	7666	0.18
44	8191	0.19
45	7628	0.18
46	7209	0.17
47	8765	0.20
48	7452	0.17
49	8359	0.19
50	7698	0.18
51	7676	0.18
52	8933	0.21

LOT AREA SUMMARY

Lot #	AREA (SF)	AREA (AC)
53	8385	0.19
54	12294	0.28
55	9788	0.22
56	9904	0.23
57	9133	0.21
58	9354	0.21
59	9045	0.21
60	8345	0.19
61	7793	0.18
62	9118	0.21
63	10157	0.23
64	13345	0.31
65	13381	0.31
66	12830	0.29
67	9503	0.22
68	8220	0.19
69	8425	0.19
70	10425	0.24
71	13452	0.31
72	7469	0.17
73	6540	0.15
74	8262	0.19
75	8901	0.20
76	9888	0.23
77	10151	0.23
78	8308	0.19
79	8484	0.19
80	8956	0.21
81	9299	0.21
82	8853	0.20
83	6971	0.16
84	8582	0.20
85	9809	0.23
86	10195	0.23
87	11007	0.25
88	9218	0.21
89	8815	0.20
90	8976	0.21
91	12951	0.30
92	10304	0.24
93	7928	0.18
94	8211	0.19
95	9304	0.21
96	9750	0.22
97	10984	0.25
98	9339	0.21
99	9640	0.22
100	10845	0.25
101	11731	0.27
102	9314	0.21
	SUBTOTAL	**20.8 AC**
STREET	335129	7.7
SLOPES	466341	10.7
	TOTAL	**39.2 AC**

WATER QUALITY DESIGN VOLUME

AREA TYPE	Σ AREA (SF)	Σ AREA (AC)	IMP.	SOIL TYPE	RAIN AMOUNT (IN)	FLOWPATH LENGTH (FT)	FLOWPATH SLOPE	MITIGATED VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)
Lots 1-102	905373	20.8	0.65	91	1.01	2700	0.080	46,769	
STREET	335129	7.7	0.91	91	1.01	2600	0.078	23,194	
SLOPE	466341	10.7	0.1	91	1.01	2700	0.128	7,004	
	TOTAL	**39.2 AC**					**TOTAL**	**76,968**	**77,450**

WATER QUALITY BASIN VOLUME

Elev	Area	Depth	Vol
ft	*sq ft*	*ft*	*cu ft*
1,470	14,426	7.0	77,450
1,463	7,703		

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431-9896 FAX: (760) 431-8802
27451 TOURNEY ROAD SUITE 140 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PREPARED FOR:
LENNAR HOMES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
(951)817-3542
REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896

PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 1/15/15 DATE

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 — COUNTY OF LOS ANGELES — 1 SHEETS

LID/WATER QUALITY EXHIBIT

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

I:\CAD\1352\SUSMP\1352-LID-WATER-QUALITY-EXHIBIT.dwg

PCA GMTR
Telephone: (626) 458-4925

County of Los Angeles Department of Public Works
Geotechnical and Materials Engineering Division
GEOLOGIC AND SOILS ENGINEERING REVIEW SHEET
900 S. Fremont Avenue, Alhambra, CA 91803

Tentative Tract / Parcel Map	52796	**Tentative Map Dated**	1/29/14 (Rev.)	**Parent Tract**	
Grading By Subdivider? [Y] (Y or N)	1,600,000 yd^3	**Location**	Stevenson Ranch	**APN**	
Geologist	R. T. Frankian & Associates	**Subdivider**	Lennar Homes, Inc.		
Soils Engineer	R. T. Frankian & Associates	**Engineer/Arch.**	Alliance		

Review of:
Geologic Report(s) Dated:
Soils Engineering Report(s) Dated:
Geotechnical Report(s) Dated: **6/24/14, 6/6/14, 4/2/14**, 3/27/14
References: The J. Byer Group: 3/29/01, 6/5/00

TENTATIVE MAP FEASIBILITY IS NOT RECOMMENDED FOR APPROVAL. PRIOR TO RECOMMENDING APPROVAL OF THE TENTATIVE TRACT OR PARCEL MAP:

G1. Provide a geotechnical map that complies with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The geotechnical map shall be based on the Tentative Map.

G2. Topography/Grading shown on the geotechnical map and tentative map/Exhibit "A" must conform.

G3. Evaluate debris flow potential for the building area located below the natural slope of lot 82. Provide mitigation recommendations as necessary. Show recommended mitigation on the geologic map.

G4. It appears based on the design of the proposed debris flow channel south and east of lots 47-50, that this device most likely will contain debris derived from the ascending slopes, rather than being deflected and transported to the basins. Does it have sufficient drop to direct debris and accommodate the flow towards the natural drainage as shown on the geotechnical map? If not, the volume of debris required for containment must be determined, and the containment areas must be shown on the Tentative Map.

S1. Provide data and calculations to substantiate the infiltration rates presented on Page 4 of the infiltration evaluation report dated 4/2/14.

S2. Show the following on the revised geotechnical map:
   a. Existing and proposed grades.
   b. Approximate limits and depth of removal and recompaction of unsuitable soils.
   c. Location of "Restricted Use Areas".
   d. All recommended mitigation measures, as necessary.

NOTE: Provide a copy of this review sheet with your resubmittal.

NOTE TO THE PLAN CHECKER/BUILDING AND SAFETY DISTRICT ENGINEER:
A. ON-SITE SOILS ARE CORROSIVE TO FERROUS METALS AND CONCRETE.
B. ON-SITE SOILS HAVE A MEDIUM EXPANSION POTENTIAL.

Prepared by

REGISTERED PROFESSIONAL ENGINEER JEREMY CHUN YIN WAN No. GE 2849 GEOTECHNICAL STATE OF CALIFORNIA

Jeremy Wan
Soils Section

PROFESSIONAL GEOLOGIST Geir R. Mathisen No. 2376 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

Geir Mathisen
Geology Section

Date 10/16/14

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey
NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.
P:\gmepub\Development Review\!Combined Reviews\Tracts and Parcels\TR 052796, Stevenson Ranch, TTM-NA_11.docx

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

April 2, 2014

Lennar Homes
980 Montecito Drive, Suite
Corona, California 92879

Job No. 2013-014-052

Attention: Ms. Cherryl Thompson

Subject: Infiltration Evaluation
Vesting Tentative Tract Map No. 52796
Los Angeles County, California

Ladies/Gentlemen:

This report presents the results of our infiltration evaluation for Vesting Tentative Tract Map No. 52796 (VTTM 52796), Los Angeles County, California. The evaluation was undertaken to assist Alliance Land Planning & Engineering, Inc. (Alliance) in designing a system for controlling site rainfall and storm water. The field work and data analyses for the evaluation were performed in accordance with the 2009 Los Angeles County Low-Impact Development (LID) Standards and the 2011 Los Angeles County Administrative Manual, Department of Public Works, Geotechnical and Materials Engineering Division (GMED) June 1, 2011 Policy Memo GS200.1, titled "Low Impact Development Best Management Practice Guideline for Design, Investigation and Reporting."

Our findings and recommendations are based on the results of field testing, previous subsurface investigations, a review of published data, and engineering and geologic analyses. The assessment of general site environmental conditions for the presence of contaminants in the soils and groundwater at the site was beyond the scope of the supplemental investigation.

R. T. FRANKIAN & ASSOCIATES
1329 SCOTT ROAD BURBANK CALIFORNIA 91504
TEL. (818) 531-1501 FAX (818) 531-1511 WWW.RTFRANKIAN.COM

SITE DESCRIPTION

VTTM 52796 consists of approximately 230 acres of hillside terrain located along the south side of Pico Canyon, within Los Angeles County, California. Topography at the site is characterized by a series of steep to moderately steep northwest-southeast trending ridges. These ridges descend towards intervening northwest-southeast trending drainage courses that flow towards the centrally located Wickham Canyon. Wickham Canyon, a northerly-draining tributary of Pico Canyon, essentially bisects the site. Elevations across the site range from approximately 1,470 feet above mean sea level, near the confluence of Wickham and Pico Canyons, to 2,000 feet, in the southwest corner of the site. The natural slopes on-site exhibit gradients ranging from approximately 1½:1 to 3:1 (horizontal:vertical).

Development of VTTM 52796 will encompass approximately 120 of the 230 acres and will consist of cut and fill grading to create 102 single-family lots. The 102 lots will all be located west of Wickham Canyon. Included in the development will be realignment and widening of Pico Canyon Road, a private driveway/fire lane extending westerly from Tract No. 43896, and two water quality basins. The water quality basins will be located on Lot Nos. 105 and 106. Lot No. 105 lies within the alluviated flood plain of Pico Canyon. Lot No. 106 is located within a future fill area and will be underlain by approximately 50 feet of engineered fill.

GEOLOGIC MATERIALS

The site is underlain by marine sedimentary bedrock units of the Pliocene age Pico Formation. These bedrock units are composed of interbedded sandstone, conglomerate, and siltstone. Within the flood plain of Pico Canyon, along the north side of VTTM 52796, and in Wickham Canyon, in the central portion of the site, the Pico Formation is mantled by Holocene age alluvial deposits. Other geologic units identified on-site include three landslides, slope wash deposits, residual soil, artificial fill, and stockpiled rock.

Groundwater within the area typically occurs within the alluvial deposits at depths of 14 to 19 feet below existing ground surface (GeoSoils, Inc.[GeoSoils], 1989 and The J. Byer Group, Inc. [J. Byer], 2000).

INFILTRATION INVESTIGATION

SUBSURFACE CONDITIONS

Storm water infiltration is proposed for the two water quality basins located within Lot Nos. 105 and 106. The subsurface conditions within the area of the water quality basins were previously investigated by GeoSoils (1989 and 1997) and J. Byer (2000). The locations of the GeoSoils and J. Byer borings are indicated on the Geologic Map, presented as Figure 1. GeoSoils Boring B-17G and J. Byer Boring B-5B were located near Lot No. 105; J. Byer Boring B-8B was located near Lot No. 106. The boring logs are presented in Appendix A.

A review of the Lot No. 105 borings indicates the presence of alluvial deposits to depths of 24 and 30 feet in Borings B-17G and B-5B, respectively. The alluvial deposits are composed of interlayered sand, silt, and gravel, with the gravelly zones occurring near the base of the alluvium. Pico Formation siltstone directly underlies the alluvium. Groundwater was not present in GeoSoils Boring B-17G on February 13, 1990, but was observed at a depth of 18 feet in J. Byer Boring B-5B. The surface elevation for B-5B was approximately 1,463 feet above mean sea level (msl). Therefore, the corresponding elevation of groundwater is approximately 1,445 feet msl.

Based on our review of J. Byer Boring B-8B, Lot No. 106 is mantled by 20 feet of alluvial deposits consisting primarily of silty sand and gravelly sand. Beneath the alluvial deposits are Pico Formation conglomerate and siltstone beds. Groundwater was observed at a depth of 14 feet, corresponding to a groundwater elevation of 1,463 feet msl.

INFILTRATION TESTING

In-situ boring percolation tests (designated PB-1 and PB-2) were performed for Lot Nos. 105 and 106, respectively. The locations of the percolation tests are shown on the Geologic Map, Figure 1. The percolation test borings consisted of hand-auger borings excavated to depths of 64 inches (PB-1) and 56 inches (PB-2). Infiltration testing was performed in accordance with the "Boring Percolation Testing Procedures" outlined in GMED Policy Memo GS200.1 (2011). A description of the test method is presented in Appendix B of this report.

Infiltration rates obtained from the percolation testing were 1.92 inches per hour (in/hr) for PB-1 and 10.46 in/hr for PB-2.

CONCLUSIONS AND RECOMMENDATIONS

The results of percolation testing indicate that the existing alluvial soils within the area of the water quality basin proposed for Lot No. 105 will meet the minimum LID infiltration rate of 0.3 in/hr. Groundwater beneath Lot No. 105 has been observed at approximate elevation 1,445 feet msl. The bottom of the water quality basin will be approximately 1,465 feet msl, or approximately 20 feet above observed groundwater.

The water quality basin proposed for Lot No. 106 is in an area currently mantled by alluvial deposits exhibiting an acceptable infiltration rate; however, the Alliance grading plan indicates that approximately 50 feet of engineered fill will be placed within Lot No. 106 to achieve grade. The actual infiltration characteristics of future fill materials will depend upon many factors such as the fill soil classification, the degree of compaction, and the in-situ moisture content. If the future engineered fill on Lot No. 106 does not meet the minimum infiltration rate of 0.3 in/hr, then additional mitigation methods such as deep dry wells or other mitigation methods may be needed. As indicated by the percolation testing, the infiltration rate for natural alluvial materials is well in excess of the 0.3 in/hr minimum acceptable infiltration rate. Appropriate reduction factors should be utilized by the infiltration designer to account for

non-uniform soil conditions and the tendency for the infiltration rate to be reduced as the quantity of infiltrated water volume increases.

The design of the water quality basins should take into consideration the following Los Angeles County setbacks (GMED, 2011):

- the infiltration basin should maintain a setback of at least 5 feet from adjacent property lines and public right of way;
- the infiltration basin should be located at least 15 feet from, or beyond a 1:1 plane drawn down from, the bottom of any existing or future foundations;
- the infiltration basin should be set back at least 10 feet (measured horizontally) from existing drainage courses; and
- the infiltration basin should be set back a horizontal distance of 5 feet or H/2, where H equals the slope height, whichever is greater, from the face of any descending slope.

LIMITATIONS

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Lennar Homes and their design consultants, to be used solely for planning and design of the VTTM 52796 project, and associated grading. The report has not been prepared for use by other parties and may not contain sufficient information for purposes of other parties or other uses.

-oOo-

We appreciate the opportunity to be of service. Please call if you have questions or would like to discuss this report in more detail.

The following are attached and complete this report.

- References
- Geologic Map – Figure 1 (in pocket)
- Appendix A – Boring Logs (5 pages)
- Appendix B – Boring Percolation Testing Procedures

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REFERENCES

GeoSoils, Inc., 1989, "Preliminary Geologic and Geotechnical Engineering Investigation, Revised Vesting Tentative Tract 43896, Newhall, California," for Dale Poe Development, dated September 15, 1989, W.O. 3062-A-VN.

GeoSoils, Inc., 1997, "Geotechnical Review of Revised Vesting Tentative Tract Map, Tentative Tract 43896, 'Mini' Sanborne Ranch, Stevenson Ranch, California," for Stevenson Ranch Ventures, LLC, dated July 14, 1997, W.O. 3062A-VN.

J. Byer Group, Inc., 2000, "Geologic and Soils Engineering Exploration, Proposed Hillside Residential Subdivision, Tentative Tract 52796, 26300 Pico Canyon Road, Los Angeles County, California," for Adlin Properties, dated June 5, 2000, Project No. JB 17826-B.

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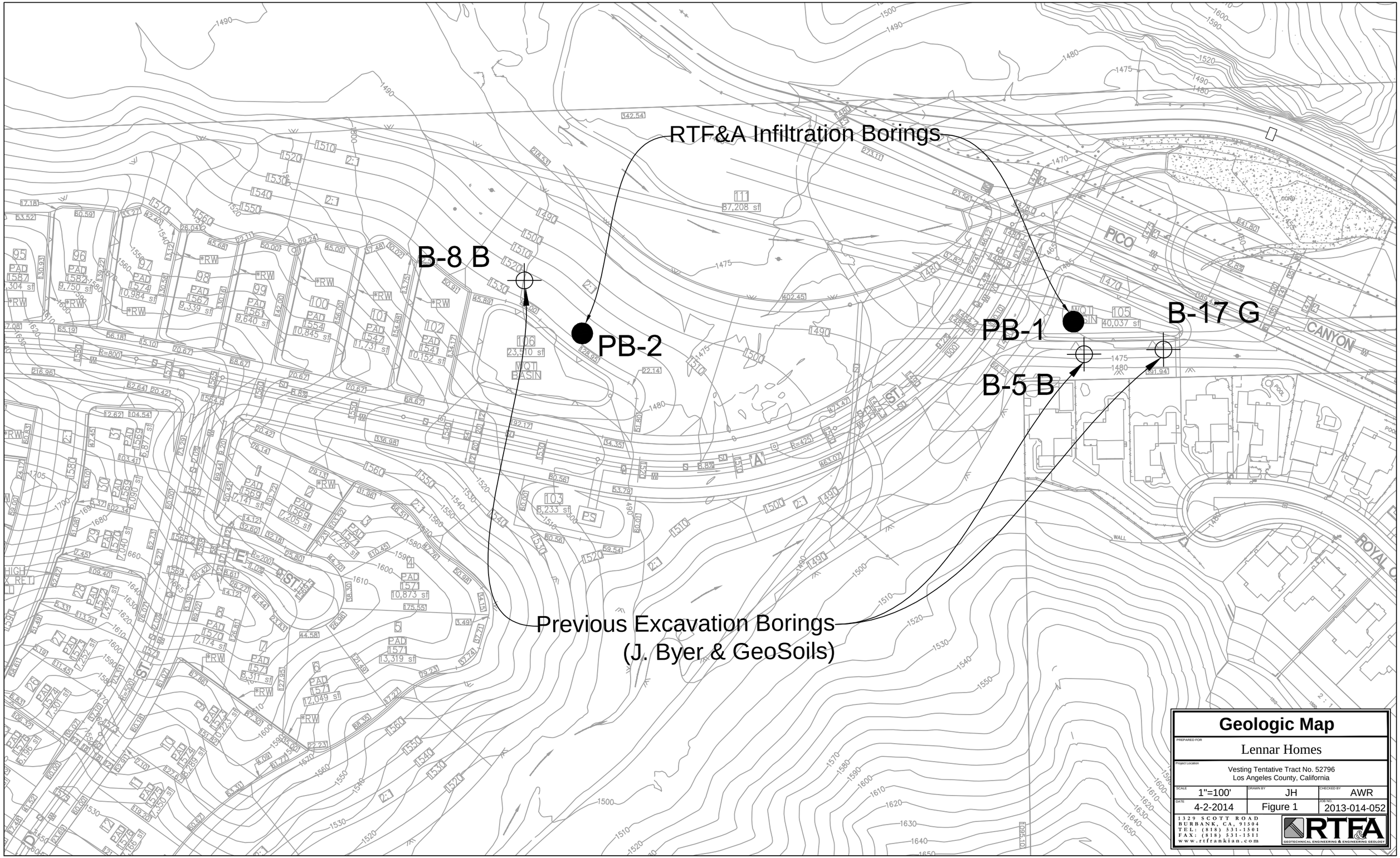
Los Angeles County Department of Public Works, Geotechnical and Materials Engineering Division, 2011, "Low Impact Development Best Management Practice Guideline for Design, Investigation, and Reporting," dated June 1, 2011, GS200.1.


RTF&A Infiltration Borings
Previous Excavation Borings
(J. Byer & GeoSoils)
B-8 B
PB-2
PB-1
B-5 B
B-17 G
PICO
CANYON
ROYAL
WQT BASIN
Geologic Map
PREPARED FOR
Lennar Homes
Project Location
Vesting Tentative Tract No. 52796
Los Angeles County, California
SCALE 1"=100'
DRAWN BY JH
CHECKED BY AWR
DATE 4-2-2014
Figure 1
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Lennar Homes
April 2, 2014
2013-014-052

APPENDIX A

BORING LOGS

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GEOSOILS, INC.
BORING LOG

CLIENT Dale Poe Development

WORK ORDER NO. 3062-A-VN

DATE EXCAVATED 2-13-90

SAMPLE METHOD Hollow Stem

BORING NO. B-17

SHEET 1 OF 1

Depth (ft.)	SAMPLE Bulk	SAMPLE Undis-turbed	SAMPLE Blows/ft.	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	DESCRIPTION OF MATERIAL
							ALLUVIUM: (Qal)
5		▨	12/43		102.6	4.7	@ 4' Brown sandy SILT with gravel
		▨	8/13				@ 8' Brown silty SAND with gravel
10		▨	/18				
		▨	27/22			4.4	@ 12' Brown sandy GRAVEL
15		▨	24/50 /6"				@ 16' Rock
20		▨	28/41			11.4	@ 20' Brown wet sandy GRAVEL, silty
25		▨	24/50 /2"				BEDROCK: (Tp) Pico Fm. @ 24' Gray brown weathered SILTSTONE, moist, dense.
		▨	50/5"				
30		▨	50/6"		112.2	9.5	Total Depth 30' No Groundwater No Caving
35							

Plate A-17

FORM 88/9

Project No: JB 17826-B

Client: AIDLIN

Location: PICO CANYON

Log of Boring 5

By: JAI

SUBSURFACE PROFILE

Elevation	Depth	Description	Symbol	USCS	Type	Blow Count	Moisture Content (%)	Dry Density (pcf)		
1463	0	Ground Surface								
		ALLUVIUM Silty Sand, tan, slightly moist, slightly dense								
1462	1									
1461	2									
1460	3									
1459	4									
1458	5	Silt, brown, firm, slightly moist, no gravel or rock fragments		—	R	9	15.8	83.1		
1457	6									
1456	7			ML						
1455	8									
1454	9									
1453	10	Clayey Sand, brown to reddish brown, slightly moist, firm, rock fragments to ¼ inch		—	R	19				No Recovery Too Rocky
1452	11									
1451	12			SC						
1450	13									
1449	14									
1448	15	Gravelly Sand, light brown, loose, slightly moist, rock fragments to 1½ inches		—	R	41	8.2	113.8		
1447	16			GM						
1446	17									
1445	18	groundwater								
1444	19									
1443	20									

Surface: Alluvial Valley

Drill Method: Hollow-Stem Auger

Drill Date: 9/29/98

Size: 8 Inch

Elevation: 1463.0

Sheet: 1 of 2

Project No: JB 17826-B

Client: AIDLIN

Location: PICO CANYON

Log of Boring 5

By: JAI

The J. Byer Group, Inc.
1461 E. Chevy Chase Dr., Suite 200
Glendale, CA 91206
(818) 549-9959

SUBSURFACE PROFILE

Elevation	Depth	Description	Symbol	USCS	Type	Blow Count	Moisture Content (%)	Dry Density (pcf)	% Saturation	Remarks
		Gravelly Sand, light brown to gray, loose, saturated, rock fragments to 1 inch		---	R	28				No Recovery Too Rocky
1442	21									
1441	22			GM						
1440	23									
1439	24									
1438	25	Gravelly Sand, light brown, loose, saturated, rock fragments to ½ inch		---	SPT	15				
1437	26			GM						
1436	27									
1435	28									
1434	29									
1433	30	**BEDROCK** Siltstone, gray, hard, dry End at 30 Feet; Water at 18 Feet; No Caving		---	SPT	50				
1432	31									
1431	32									
1430	33									
1429	34									
1428	35									
1427	36									
1426	37									
1425	38									
1424	39									
1423	40									

Surface: Alluvial Valley

Drill Method: Hollow-Stem Auger

Drill Date: 9/29/98

Size: 8 Inch

Elevation: 1463.0

Sheet: 2 of 2

Project No: JB 17826-B

Client: AIDLIN

Location: PICO CANYON

Log of Boring 8

By: JAI

The J. Byer Group, Inc.
512 East Wilson Ave., Suite 201
Glendale, CA 91206
(818) 549-9959

SUBSURFACE PROFILE				SAMPLE			Lab Data				
Elevation	Depth	Description	Symbol	USCS	Type	Blow Count Per Foot	Moisture Content (%)	Dry Density (pcf)	PHI Angle (degrees)	Cohesion (psf)	Remarks
1477	0	Ground Surface									
		ALLUVIUM Silty Sand with cobbles, gray, tan, slightly moist, slightly dense									
1476	1										
1475	2			SM							
1474	3			—	R	14					
1473	4										
1472	5										
1471	6	Gravelly Sand with cobbles, gold brown		—	R	29	6.1	103.7			
1470	7										
1469	8			GM							
1468	9			—	R	30	6.0	103.0			
1467	10										
1466	11										
1465	12			—	R	50					Too rocky - no recovery
1464	13										
1463	14	groundwater									
1462	15										
1461	16										
1460	17	Gravelly Sand, mottled gray, brown, orange, saturated		—	SPT	21					
1459	18										
1458	19										
1457	20										

Surface: Alluvial Valley

Drill Method: Hollow-Stem Auger

Drill Date: 10/1/98

Size: 8 Inch

Elevation: 1477.0

Sheet: 1 of 2

Project No: JB 17826-B

Client: AIDLIN

Location: PICO CANYON

Log of Boring 8

By: JAI

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SUBSURFACE PROFILE				SAMPLE			Lab Data				
Elevation	Depth	Description	Symbol	USCS	Type	Blow Count Per Foot	Moisture Content (%)	Dry Density (pcf)	PHI Angle (degrees)	Cohesion (psf)	Remarks
		BEDROCK									
1456	21	Conglomerate, gray, yellow-brown, hard, massive		—	SPT	43					
1455	22										
1454	23										
		Siltstone, dark gray, hard, massive									
1453	24										
		End at 24 Feet; Water at 14 Feet									
1452	25										
1451	26										
1450	27										
1449	28										
1448	29										
1447	30										
1446	31										
1445	32										
1444	33										
1443	34										
1442	35										
1441	36										
1440	37										
1439	38										
1438	39										
1437	40										

Surface: Alluvial Valley

Drill Method: Hollow-Stem Auger

Drill Date: 10/1/98

Size: 8 Inch

Elevation: 1477.0

Sheet: 2 of 2

Lennar Homes
April 2, 2014
2013-014-052

APPENDIX B

BORING PERCOLATION TESTING PROCEDURES

RTF&A
GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

APPENDIX B

BORING PERCOLATION TESTING PROCEDURES

The percolation test performed in boring method is performed within a four-inch-diameter hand auger boring that is excavated to the approximate invert elevation of the proposed BMP device. The test is performed after presoaking the boring sidewall soils by filling an installed casing with water and allowing the water level to drop in successive cycles. The water level is periodically monitored during the test and is recorded. The test cycle is performed up to eight times but may be stopped if three successive cycles yield a drop within 10 percent of each other. The field procedures are as follows:

- The boring is initially drilled to the desired depth and then a 2-inch-diameter PVC pipe casing is installed the full depth of the boring. The lower portion of the casing is perforated with slots not greater than 0.02 inches in width and is capped at the bottom.

- The perforated portion of the pipe is then surrounded with a filter pack consisting of washed sand. After installation of the filter materials, the boring is then pre-soaked by filling the lower portion of the casing with water and maintaining a level that is at least 12 inches above the bottom of the casing for a period of 30 minutes. The depth of water level is periodically measured with the resulting depth readings recorded.

- The casing is then refilled with water up to a level of at least 12 inches above the bottom of the pipe. The water level is allowed to drop for a period of 30 minutes and the depth of the water level is measured at approximately 10-minute intervals. At the completion of the 30-minute time period, the water level is again measured and recorded, signifying the end of that test cycle.

- The casing is then refilled with water and the next test cycle is begun. The test cycles are repeated up to a total of eight times to complete the series of tests within the boring, but may be stopped if three successive cycles yield a drop within 10 percent of each other.

- At the completion of the test the installed casing is removed and the hole is backfilled with the soils initially excavated from the boring.

HYDRAULIC STUDY

for

STEVENSON RANCH
COUNTY OF LOS ANGELES
TR 052796
Job No. 1352

OCTOBER 2014

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Appendix B - DRAWINGS

1. HEC-RAS Sections - Existing & Proposed Condition, Pico & Wickham Canyon Creek
2. Q50BB Floodplain - Existing & Proposed Condition, Pico & Wickham Canyon Creek
3. LACDPW Plans for Private Drain (PD) 2495

Appendix C - HEC-RAS OUTPUT

1. Standard Table 1 - Q50BB Existing & Proposed Output, n = 0.025 & 0.085, Pico & Wickham Canyon Creek
2. Profile - Q50BB Existing & Proposed Output, n = 0.025 & 0.085, Pico & Wickham Canyon Creek
3. Cross Sections - Q50BB Existing & Proposed Output, n = 0.025 & 0.085, Pico & Wickham Canyon Creek
4. Errors, Warnings, and Notes - Q50BB Exist & Proposed Output, n = 0.025 & 0.085, Pico & Wickham Canyon Creek

Introduction

This hydraulic study of Pico Canyon Creek and the tributary Wickham Canyon Creek is in response to the proposed development of Stevenson Ranch subdivision located in Santa Clarita, CA in Los Angeles County. The purpose of this study is to analyze impacts due to storm water improvements, drainage culverts, and the proposed Stevenson Ranch grading plan as they relate to the LA County 50-Year Burned and Bulked (50-YR BB) flowrate.

An approximate total reach length of just under 1700 feet was modeled for Pico Canyon Creek and a reach length of approximately 2000 feet was modeled for the tributary of Wickham Canyon Creek. Wickham Canyon Creek junctions into Pico Canyon Creek approximately 700' upstream of an existing 24'W x 14'H concrete box culvert structure and approximately 200' upstream of a proposed double 18'W x 12'H concrete box culvert that is proposed to run below the crossing of Pico Canyon Road. Two additional culverts are proposed along Wickham Canyon Creek; one 12'W x 12'H concrete box that will run below the proposed crossing of Verandah Court, and one 12'W x 12'H concrete box that will run below pad slope grading and the proposed 'A' St crossing. Flow in both creeks runs in a general easterly direction.

The HEC-RAS model containing both existing and proposed condition plans for Pico Canyon and Wickham Canyon Creeks are included in the Appendix of this report. Also included are two (2) sets of four (4) drawings each; one set of work maps detailing the existing and proposed condition HEC-RAS cross sections, and the other set showing the resulting existing and proposed condition floodplains for the 50YR BB Capital Flood event. Each set contains separate drawings for both Pico and Wickham Canyon Creeks.

Methodology

Topography

Geopak software via the MicroStation platform was utilized to cut cross sections in order to develop the HEC-RAS 4.1.0 hydraulic model. Existing condition topography as well as proposed grading plan topography was used to create two separate 3-dimensional surfaces from which the cross sections were cut. Sections are geo-referenced within the HEC-RAS model and have been checked for accuracy against contours shown on provided topo maps.

Boundary Conditions

The model is run at a 'mixed' regime for floodplain mapping and freeboard analysis. Therefore, both a downstream and upstream boundary condition has been designated for Pico Canyon Creek. LACDPW plans for PD 2495 (provided as an appendix) detail an existing 24'W x 14'H concrete box culvert at the downstream of the Pico Canyon reach. Water surface elevations at the inlet of this structure are assumed to be running at critical depth as indicated by the plan and profile on Sheet 24A at RS 38+75 of the PD 2495 plans. Therefore, critical depth is used as the downstream boundary condition of Pico Canyon Creek.

Wickham Canyon Creek junctions into Pico Canyon Creek and therefore HEC-RAS automatically assumes the water depth at the location of the junction as a downstream boundary condition. Wickham Canyon Creek is also modeled assuming a 'Mixed' flow regime.

Flows

Runoff flowrates reflecting the LA County 50-Yr Burned and Bulked (50YR BB) Capital event are presented within this HEC-RAS model. A full range of flows were generated by Alliance (2-yr thru 100-yr) during the Hydrology phase of project study, however, for culvert design and high water evaluation purposes, only the 50YR BB has been modeled at this time. Flowrates modeled here have been taken directly from the associated Hydrology Report for Aidlin Hills, Tentative Tract No. 52796, dated October 2014 by Alliance Land Planning & Engineering.

Flowrates can be seen to decrease slightly after transitioning into the developed condition. This is believed to be due to an increase in time of concentration that offsets the increase in impervious area due to development. The majority of both the Pico Canyon Creek and Wickham Canyon Creek watershed's remain untouched by development. Care has been taken to apply changes in flowrate at proper cross section locations within each respective reach of Pico and Wickham Canyon Creeks.

HEC-RAS Flowrates
Pico Canyon Creek - Existing

Reach	RS	Q cfs
PICO_EX	1777	4320
PICO_EX	1058	5230
PICO_EX Lower	958	5230
PICO_EX Lower	110	5230

HEC-RAS Flowrates
Wickham Canyon Creek - Existing

Reach	RS	Q cfs
WICKHAM_EX	1985	1160
WICKHAM_EX	1432	1510
WICKHAM_EX	156	1580

HEC-RAS Flowrates
Pico Canyon Creek - Proposed

Reach	RS	Q cfs
PICO_PR	1726	4320
PICO_PR	727	5190
PICO_PR Lower	680	5190
PICO_PR Lower	110	5190

HEC-RAS Flowrates
Wickham Canyon Creek - Proposed

Reach	RS	Q cfs
WICKHAM_PR	2156	1160
WICKHAM_PR	1788	1410
WICKHAM_PR	465	1510
WICKHAM_PR	112	1510

Manning's 'n'

Per LACDPW design guidelines, Manning's roughness coefficients of n = 0.085 and n = 0.025 have respectively been modeled to assess an extreme high water condition and a high velocity condition.

The n = 0.085 scenario is considered a fully vegetated condition and is used to determine the maximum water depth and freeboard which will be seen at any road crossings/culverts and for any top of bank grading along Pico and Wickham Canyon Creeks. This high water run was also used result in the most conservative sizing of proposed culverts within Stevenson Ranch.

The n = 0.025 scenario is considered a non-vegetated condition and is used to determine a maximum velocity which is used to calculate bank protection toe-down and peak scour conditions in and around culverts.

At any existing or proposed culverts in both Manning's scenarios described above, concrete inlet and outlet structures have been modeled using a Manning's of 0.014. No vegetation is assumed to grow on concrete outlet aprons or concrete wingwalls. No vegetation is assumed to grow on the existing concrete inlet structure into the downstream 24'W x 14'H RCB as well.

Expansion/Contraction and Losses

Expansion rates for both upstream and downstream of culverts have been held at a 1:1 ratio (1 foot horizontal for 1 foot longitudinal). These guidelines are the basis for setting of all ineffective flow markers within the model. Ineffective markers are set where top width expansion or contraction occurs at a greater rate than the upstream or downstream reach length is long.

Losses at upstream and downstream sections of culverts have been set to 0.3 for contraction and 0.5 for expansion as prescribed by the HEC-RAS manual.

Results/Impacts

Tables attached at the end of this report detail impacts pertaining to water surface elevation, maximum channel depths, average channel velocity, top width, and Froude number.

Pico Canyon Creek Results, n = 0.085

In Pico Canyon Creek, proposed water surface elevations upstream of Pico Canyon Rd culvert tend to average within 0.1 ft of existing condition water surface elevations. Immediately upstream of the Pico Canyon Rd culvert at RS 680, backwater does push water surface elevations significantly higher until normalization occurs approximately 230 feet upstream of the culvert at RS 907. Encroachment of proposed grading along the south bank upstream of the culvert also contributes to higher water surface elevation in this area up to RS 1121. Downstream of the Pico Rd culvert, proposed water surface elevations tend to average 0.4 ft to 0.6 ft less than those of the existing condition. This is believed to be a result of the Pico Canyon Rd culvert constricting flow and

generating additional velocity prior to moving into the inlet sections of the existing downstream 24'W x 14' culvert where velocities already range upwards of 25 to 30 fps.

Pico Canyon Creek Results, n = 0.025

Proposed velocities in Pico Canyon Creek tend to average between 6 fps and 9 fps upstream of the Pico Canyon Rd culvert. Bedslope is moderately steep at an average of 2.2% in this reach. Downstream of the Pico Canyon Rd culvert, velocities average between 25 fps and 30 fps. The outlet structure of the Pico Canyon Rd culvert is approximately 250 ft upstream of the inlet structure of an existing 24'W x 14'H RCB culvert detailed in LACDPW PD 2495.

Upstream of the proposed culvert in Pico Canyon Creek, the Froude number averages around 1.5. HEC-RAS output shows that the proposed culvert at Pico Canyon Rd runs at a super-critical regime. The Froude number downstream of the Pico Canyon Culvert averages around 2.4.

To address these high velocities, Turf Reinforcing Mat (TRM) is proposed along any grading where the floodplain will run along the slope. TRM is considered adequate protection for the majority of this project as with a mostly wide floodplain that is expected to occur, velocities along the perimeter are expected to average less than 5 fps and will be much less than the average main channel velocities reported in the HEC-RAS model.

The downstream invert of the proposed Pico Canyon Rd culvert is proposed to be concrete lined in order to keep velocities high as needed to match flow conditions moving into the existing 24'W x 14'H RCB at the project outlet. It has been shown that velocities increase slightly at this inlet of the existing 24'W x 14'H RCB from 28.9 fps in the existing to 31.8 fps in the proposed. This increase of 2.9 fps is considered due to upstream momentum generated by the proposed Pico Canyon Rd culvert. This increase is also considered relatively insignificant for a discussion of velocities greater than 25 fps. However, a potential mitigating solution to this condition would be to place grouted riprap at Pico Canyon Rd culvert outlet apron and wingwalls to slightly reduce velocities going into the 24' x 14' RCB.

Depths at the inlet of the existing 24' x 14' RCB are shown to match relatively well as compared to existing LACDPW plan, PD 2495. Flowrates within this model are slightly higher than those shown on the PD 2495 plans. A summary table of flowrate, velocities, and depths at the inlet of the existing 24'W x 14'H RCB is shown below. These hydraulic values are identical in both the n = 0.025 model and n = 0.085 model due to the inlet/outlet invert and sidewalls being set at 0.014 for the concrete sections at these structures.

Hydraulic Summary at Inlet of Existing 24'W x 14'H RCB

	LACDPW PD 2495	Existing Model	Proposed Model
Flowrate, cfs	4,881	5,230	5,190
Velocity, fps	n/a	28.9	31.8
Depth, ft	7.6	7.5	6.8

Wickham Canyon Creek Results, n = 0.085

In Wickham Creek Canyon, proposed water surface elevations tend to average 0.1 ft below those of the existing condition. This is mostly in part to little encroachment by any proposed grading and a slightly lower flowrate. However, upstream of the Verandah Court culvert and the 'A' Street culvert, the effects of backwater can be seen as water surfaces increase in the proposed condition.

Wickham Canyon Creek Results, n = 0.025

Velocities in Wickham Canyon Creek average between 7 fps and 10 fps. However, velocities do increase locally upstream and downstream of each respective culvert at Verandah Ct. and 'A' St. Bedslope is also moderately steep at an average of 3.6% in this reach.

The Froude number in Wickham Canyon Creek averages around 1.7. HEC-RAS detailed output results that both proposed culverts in Wickham Creek run at a super-critical regime.

TRM bank protection is also proposed in the Wickham Canyon reach where any floodplain waters run along proposed grading. The outer perimeter of the floodplain in this reach is not expected to generate velocities greater than 5 fps. The downstream invert of both the Verandah Ct culvert and the A St. culvert are proposed to be lined with riprap due to high exist velocities.

Proposed Culverts

Pico Canyon Creek

1. Double 18'W x 12'H Concrete Box @ 348 ft long

This culvert is to run below the proposed intersection of Pico Canyon Rd and 'A' St. This culvert is proposed as a double box (each box at 18 ft wide by 12 ft high) and has been sized with a 2 ft thick intermediate wall and 1 ft thick outer side and top walls as an initial assumption. This culvert is designed to be self cleaning for sediment transport purposes during the 50-YR BB capital event. This culvert will outlet approximately 220 feet upstream of the inlet of the existing 24'W x 14'H box culvert structure of PD 2495.

As described above, a grouted riprap outlet for this Pico Canyon Rd culvert is a potential mitigating solution for the slightly higher velocities which result at the inlet of the existing 24'W x 14'H RCB.

Wickham Canyon Creek

1. Single 12'W x 12'H Concrete Box @ 210 ft long

This culvert is to run below pad slope grading and the proposed 'A' St. The skew of the proposed alignment with respect to 'A' St results in a 210' length requirement. This culvert will outlet directly into Pico Canyon Creek at approximately 125 feet upstream of the inlet for the larger double box culvert at Pico Canyon Rd. The outlet structure of this culvert is intended to be orientated at an efficient angle with the flow path of Pico Canyon Creek to minimize junction losses in this area. This culvert is designed to be self cleaning for sediment transport purposes during the 50-YR BB capital event. The culvert operates under Inlet Control and will be equipped with a riprap lined outlet.

2. Single 12'W x 12'H Concrete Box @ 120 ft long

This culvert is to run below the proposed Verandah Court road crossing and is the most upstream of the two Wickham Canyon Creek culverts. Alignment is approximately perpendicular to that of the road. This culvert is also designed to be self cleaning for sediment transport purposes during the 50-YR BB capital event. This culvert also operates under Inlet Control and will be equipped with a riprap lined outlet.

HEC-RAS model output has indicated that all three culverts operator under 'Inlet Control' given their current configuration. Because of this, all three culverts have been modeled with the intention of maximum hydraulic efficiency at each inlet structure. Flared wingwalls between 30 and 75 degrees from headwall, depressed inlets, rounded edges at inlet walls, and concrete aprons have been assumed to support the selection of 0.2 for Entrance Loss Coefficient (k_{en}) within the model.

Freeboard

Tables below show freeboard along the south bank of Pico Canyon Creek and at the Pico Canyon Rd culvert crossing. Freeboard downstream of the Pico Rd culvert is also shown for old Pico Canyon Road running along the north bank of Pico Creek. Access road elevations in this area are lower than those of the proposed Pico Canyon Road along the south bank.

Freeboard has also been tabulated along west bank of Wickham Canyon Creek, at Verandah Court culvert crossing, and at the "A" Street culvert crossing.

Both tables represent Freeboard within the proposed condition for the n = 0.085 model

Freeboard
Pico Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
1726	1570.0	-	1494.9	75.1
1603	1560.0	-	1490.5	69.5
1465	1560.0	-	1488.4	71.6
1356	1550.0	-	1486.2	63.8
1242	1540.0	-	1483.0	57.0
1121	1530.0	-	1481.3	48.7
1007	1530.0	-	1479.4	50.6
907 *	-	1481.0	1478.2	2.8
792 *	-	1479.8	1475.2	4.6
727 *	-	1479.8	1474.8	5.0
700 *	-	1479.0	1474.4	4.6
680 **	-	1476.3	1473.2	3.1
500	Culvert		-	-
331 *	-	1468.0	1462.5	5.5
305 *	-	1468.0	1460.9	7.1
255 *	-	1467.3	1460.1	7.2
205 *	-	1466.0	1457.0	9.0
155 *	-	1464.9	1453.7	11.2
130 *	-	1464.3	1452.0	12.3
110 *	-	1464.0	1450.8	13.2

* Road Elevations taken from Pico Canyon Rd at north bank
** Road Elevations taken from low roadway point at headwall

.

Freeboard
Wickham Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
2156	-	-	-	-
2073	-	-	-	-
2007	-	-	-	-
1947	-	-	-	-
1881	-	-	-	-
1835	-	-	-	-
1810	-	-	-	-
1788	-	1540.7	1536.2	4.5
1727	Culvert		-	-
1666	-	1540.7	1527.4	13.3
1646	-	-	-	-
1631	-	-	-	-
1581	-	-	-	-
1540	-	-	-	-
1470	-	-	-	-
1342	1570.0	-	1515.5	54.5
1233	1570.0	-	1511.1	58.9
1115	1570.0	-	1507.0	63.0
1010	1570.0	-	1502.8	67.3
928	1570.0	-	1500.1	69.9
853	-	-	-	-
753	-	-	-	-
647	1520.0	-	1495.1	24.9
571	-	1518.0	1495.0	23.0
504	-	1507.0	1494.9	12.1
465	-	1500.0	1493.1	6.9
322.5	Culvert		-	-
248	-	1486.0	1477.2	8.8
192	-	1484.0	1473.6	10.4
154	-	1482.0	1475.1	6.9

HEC-RAS Errors, Warnings, and Notes

A list of all HEC-RAS Errors, Warnings, and Notes has been compiled in the HEC-RAS Output section at the end of this report. There are no 'Errors' listed in current model output. However, Warnings and Notes of three (3) major classes are present throughout both existing and proposed models. These three classes are felt to be related to the
super-critical nature of a few sections within the model being modeled at a sub-critical regime, the relatively steep nature of the bedslope (average of ~2.2%), and the variance of top width as it naturally occurs from section to section.

Warnings and Notes attributed to a super-critical channel being modeled as a sub-critical regime are;

1. Calculation of multiple critical depths.
2. Not being able to calculate a valid sub-critical answer.

This class of Warning is felt to result when a sub-critical answer does not exist from cross section to cross section and HEC-RAS is forced to opt for critical depth. Iterations in the standard step calculation in HEC-RAS functionality have been increased to the maximum value of 40 in attempt to minimize this type of error.

Warnings attributed to a steep bedslope are;

3. Energy losses greater than 1.0 ft between cross sections.
4. A change in velocity head of more than 0.5 ft.

This class of warnings is felt to be a result of the steep bedslope condition (also an indirect response to a super-critical channel at some sections). The Channel Invert component of the Energy Equation occasionally changes by greater 3.0 ft for every 100 ft as the reach traverses downstream. This effect, in turn, is related to velocity head loss Warnings as well.

Lastly, a Warning attributed to variance in terrain is;

5. A conveyance ratio outside the range of 0.7 - 1.4 between cross sections.

This class is felt to be due to top width variance between a wide and narrow channel. Current model bank stations are placed at extreme ends of each section as a constant Manning's of n = 0.085 is used throughout the model. Only where top width increases or decreases by a significant amount and at contraction and expansion areas outside of culverts, are ineffective flow markers utilized to mitigate such top width variance. This was done in attempt to minimize this type of error without losing actual geometry within each channel cross section.

Warning 3, 4, and 5 recommend inclusion of additional cross sections as a solution. Cross Sections average no more than 100 ft apart throughout the majority of the reach within the current model. Cross sections upstream and downstream of culverts average no more than 25 ft.

In addition to the above set of 5 referenced Warnings and Notes, only a Warning discussing the use of 'split flow calculations' is present in the model output. Spilt flow does occasionally occur in both Pico and Wickham Canyon Creeks and ineffective flow markers have been set where appropriate.

APPENDIX A

DATA TABLES

AIDLIN HILLS HYDRAULIC STUDY
OCTOBER 2014

HEC-RAS RESULTS
Pico and Wickham Canyon Creek

Q50BB

n=0.025

HEC-RAS Results
Pico Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.025

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1777	PICO_EX	4320	1493.3	4.1	13.1	195.5	1.4
1654	PICO_EX	4320	1489.4	2.9	15.2	208.7	1.9
1516	PICO_EX	4320	1484.1	4.1	17.8	97.4	2.0
1407	PICO_EX	4320	1484.2	7.2	14.2	145.0	1.1
1293	PICO_EX	4320	1481.5	6.1	17.2	156.7	1.4
1172	PICO_EX	4320	1478.6	4.6	19.3	205.2	1.8
1058	PICO_EX	5230	1477.9	5.8	18.2	245.5	1.5
958	PICO_EX Lower	5230	1475.7	5.5	17.3	205.0	1.7
843	PICO_EX Lower	5230	1474.3	6.3	16.7	212.5	1.5
778	PICO_EX Lower	5230	1472.6	6.6	19.2	230.0	1.7
734	PICO_EX Lower	5230	1471.8	6.8	19.3	215.9	1.7
684	PICO_EX Lower	5230	1471.2	7.2	19.2	212.4	1.6
609	PICO_EX Lower	5230	1469.7	6.7	17.7	121.0	1.6
556	PICO_EX Lower	5230	1468.5	6.5	18.2	83.1	1.6
473	PICO_EX Lower	5230	1471.1	11.1	9.3	285.5	0.6
416	PICO_EX Lower	5230	1470.3	11.3	11.2	286.0	0.7
373	PICO_EX Lower	5230	1467.1	9.1	17.6	90.0	1.2
353	PICO_EX Lower	5230	1465.6	8.8	19.1	154.2	1.5
331	PICO_EX Lower	5230	1464.2	7.7	20.7	170.3	1.7
305	PICO_EX Lower	5230	1462.4	6.3	22.0	102.9	1.9
255	PICO_EX Lower	5230	1458.9	3.9	25.9	94.6	2.6
205	PICO_EX Lower	5230	1456.9	3.4	27.0	75.2	2.8
155	PICO_EX Lower	5230	1453.8	4.4	29.1	46.5	2.6
130	PICO_EX Lower	5230	1452.1	5.7	30.5	32.3	2.3
110	PICO_EX Lower	5230	1451.0	7.0	31.3	25.7	2.1

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Pico Canyon Creek - Proposed Condition
Q = 50-YR BB, n=0.025

RS	Profile	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1726	PICO_PR	4320	1493.3	4.1	13.1	195.5	1.4
1603	PICO_PR	4320	1489.4	2.9	15.2	208.7	1.9
1465	PICO_PR	4320	1484.1	4.1	17.8	97.4	2.0
1356	PICO_PR	4320	1484.2	7.2	14.2	145.1	1.1
1242	PICO_PR	4320	1481.5	6.1	17.2	156.6	1.4
1121	PICO_PR	4320	1478.6	4.6	19.3	192.7	1.8
1007	PICO_PR	4320	1477.5	5.4	18.3	184.3	1.5
907	PICO_PR	4320	1475.3	5.0	17.3	139.7	1.8
792	PICO_PR	4320	1473.9	5.9	15.9	132.4	1.5
727	PICO_PR	5190	1474.8	9.8	4.8	191.2	0.3
700	PICO_PR	5190	1474.5	11.0	6.5	162.4	0.4
680	PICO_PR Lower	5190	1473.2	12.2	10.6	49.8	0.5
500	PICO_PR Lower	Culvert					
331	PICO_PR Lower	5190	1462.5	6.0	21.6	43.6	1.6
305	PICO_PR Lower	5190	1460.9	4.8	23.5	52.6	2.0
255	PICO_PR Lower	5190	1460.1	4.7	24.0	59.0	2.2
205	PICO_PR Lower	5190	1457.0	3.5	26.9	65.8	2.7
155	PICO_PR Lower	5190	1453.7	4.3	29.5	46.4	2.7
130	PICO_PR Lower	5190	1452.0	5.6	30.9	32.2	2.4
110	PICO_PR Lower	5190	1450.8	6.8	31.8	25.7	2.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Wickham Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.025

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1985	WICKHAM_EX	1160	1549.9	5.9	12.8	31.4	1.3
1902	WICKHAM_EX	1160	1543.2	3.2	21.2	26.2	2.6
1836	WICKHAM_EX	1160	1540.4	4.4	19.9	29.2	2.5
1776	WICKHAM_EX	1160	1536.9	3.9	21.7	41.4	2.4
1714	WICKHAM_EX	1160	1535.1	5.1	21.1	40.3	2.0
1667	WICKHAM_EX	1160	1532.9	4.0	21.7	34.9	2.1
1641	WICKHAM_EX	1160	1530.8	2.8	23.0	28.3	2.9
1611	WICKHAM_EX	1160	1530.0	4.0	21.6	44.8	2.5
1559	WICKHAM_EX	1160	1528.7	4.1	17.1	52.3	2.6
1499	WICKHAM_EX	1160	1526.1	4.1	15.9	48.3	2.3
1467	WICKHAM_EX	1160	1525.6	3.6	15.2	54.4	1.7
1432	WICKHAM_EX	1510	1524.8	4.8	15.6	67.7	1.7
1383	WICKHAM_EX	1510	1523.5	4.5	17.6	77.7	1.7
1343	WICKHAM_EX	1510	1521.8	3.8	19.9	107.1	2.0
1272	WICKHAM_EX	1510	1517.7	3.0	25.2	96.7	3.0
1156	WICKHAM_EX	1510	1514.0	3.0	16.6	132.8	2.2
1047	WICKHAM_EX	1510	1510.1	4.1	18.3	76.6	1.8
930	WICKHAM_EX	1510	1505.2	4.2	21.7	68.7	2.1
825	WICKHAM_EX	1510	1501.2	5.2	20.6	52.8	2.0
743	WICKHAM_EX	1510	1497.8	4.8	21.2	28.8	2.2
667	WICKHAM_EX	1510	1495.1	4.7	20.9	28.7	2.3
567	WICKHAM_EX	1510	1491.2	4.2	21.9	74.5	2.4
472	WICKHAM_EX	1510	1488.8	3.2	6.8	98.9	1.9
375	WICKHAM_EX	1510	1485.5	2.5	7.7	101.2	1.9
282	WICKHAM_EX	1510	1482.4	3.4	10.8	167.5	2.1
210	WICKHAM_EX	1510	1478.7	2.7	11.2	199.0	2.4
156	WICKHAM_EX	1580	1476.8	3.3	9.6	188.1	1.8

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Wickham Canyon Creek - Proposed Condition
Q = 50-YR BB, n=0.025

RS	Profile	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
2156	WICKHAM_PR	1160	1549.9	5.9	12.8	31.4	1.3
2073	WICKHAM_PR	1160	1543.2	3.2	21.2	26.2	2.6
2007	WICKHAM_PR	1160	1540.4	4.4	19.9	29.2	2.5
1947	WICKHAM_PR	1160	1536.9	3.9	21.7	41.4	2.4
1881	WICKHAM_PR	1160	1538.7	8.7	4.3	109.8	0.3
1835	WICKHAM_PR	1160	1538.8	9.9	2.2	177.9	0.1
1810	WICKHAM_PR	1160	1538.7	10.7	2.8	155.3	0.2
1788	WICKHAM_PR	1410	1536.2	10.2	11.6	77.3	0.6
1727	WICKHAM_PR	Culvert					
1666	WICKHAM_PR	1410	1527.4	4.9	24.1	63.8	1.9
1646	WICKHAM_PR	1410	1524.4	3.4	26.9	39.6	3.3
1631	WICKHAM_PR	1410	1523.9	3.9	25.0	31.0	3.2
1581	WICKHAM_PR	1410	1523.0	4.0	22.7	73.1	2.3
1540	WICKHAM_PR	1410	1521.6	3.6	23.3	100.7	2.5
1470	WICKHAM_PR	1410	1517.5	2.9	27.3	92.0	3.3
1342	WICKHAM_PR	1410	1514.1	3.1	17.6	124.1	2.1
1233	WICKHAM_PR	1410	1510.0	4.0	18.9	75.0	1.9
1115	WICKHAM_PR	1410	1505.1	4.1	21.5	67.7	2.1
1010	WICKHAM_PR	1410	1501.1	5.1	20.4	41.8	2.1
928	WICKHAM_PR	1410	1497.6	4.6	21.0	27.0	2.2
853	WICKHAM_PR	1410	1495.0	4.6	20.6	28.3	2.3
753	WICKHAM_PR	1410	1494.9	7.9	3.5	128.7	0.2
647	WICKHAM_PR	1410	1495.0	9.3	1.7	172.8	0.1
571	WICKHAM_PR	1410	1494.9	10.7	2.2	134.1	0.1
504	WICKHAM_PR	1410	1494.8	12.2	3.2	88.9	0.2
465	WICKHAM_PR	1510	1493.1	11.2	9.6	74.6	0.5
322.5	WICKHAM_PR	Culvert					
248	WICKHAM_PR	1510	1477.2	4.2	25.9	225.8	2.2
192	WICKHAM_PR	1510	1473.6	3.6	28.3	222.2	4.6
154	WICKHAM_PR	1510	1475.1	6.1	2.2	223.9	0.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS ANALYSIS
Pico and Wickham Canyon Creek

Q50BB

n=0.025

HEC-RAS Analysis
Pico Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n = 0.025

Ex RS	Prop RS	Q Total			W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX (cfs)	PROP (cfs)	Δ (cfs)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft/s)	PROP (ft/s)	Δ (ft/s)	EX (ft)	PROP (ft)	Δ (ft)
1777	1726	4320	4320	0	1494.9	1494.9	0.0	5.7	5.7	0.0	7.0	7.0	0.0	245.3	245.3	0.0
1654	1603	4320	4320	0	1490.5	1490.5	0.0	4.1	4.1	0.0	8.3	8.3	0.0	286.3	286.3	0.0
1516	1465	4320	4320	0	1488.4	1488.4	0.0	8.4	8.4	0.0	5.5	5.5	0.0	185.7	185.7	0.0
1407	1356	4320	4320	0	1486.3	1486.2	-0.1	9.3	9.2	-0.1	9.0	9.3	0.3	255.1	251.9	-3.2
1293	1242	4320	4320	0	1482.9	1483.0	0.1	7.5	7.6	0.1	10.2	9.7	-0.5	233.7	214.0	-19.7
1172	1121	4320	4320	0	1481.6	1481.3	-0.2	7.6	7.3	-0.2	5.6	6.4	0.9	338.7	281.9	-56.8
1058	1007	5230	4320	-910	1479.9	1479.4	-0.4	7.8	7.3	-0.4	8.1	8.1	0.0	326.4	263.1	-63.3
958	907	5230	4320	-910	1478.4	1478.2	-0.2	8.1	8.0	-0.2	6.7	5.8	-0.9	271.5	268.1	-3.4
843	792	5230	4320	-910	1476.0	1475.2	-0.8	8.0	7.2	-0.8	8.5	9.7	1.2	274.5	212.1	-62.3
778	727	5230	5190	-40	1475.3	1474.8	-0.5	9.3	9.8	0.5	6.4	4.8	-1.6	308.2	191.2	-116.9
-	700	-	5190	-	-	1474.4	-	-	10.9	-	-	6.7	-	-	162.0	-
734	680	5230	5190	-40	1474.9	1473.2	-1.6	9.9	12.2	2.4	6.2	10.6	4.4	284.1	49.8	-234.3
684		5230		-	1474.4		-	10.4		-	6.0		-	282.5		-
609		5230		-	1473.7		-	10.7		-	6.0		-	244.3		-
556		5230		-	1473.2		-	11.2		-	6.2		-	265.4		-
473	Culvert	5230	Culvert	-	1472.4	Culvert	-	12.4	Culvert	-	6.9	Culvert	-	314.8	Culvert	-
416		5230		-	1471.2		-	12.2		-	9.0		-	290.5		-
373		5230		-	1469.6		-	11.6		-	11.2		-	269.5		-
353		5230		-	1468.5		-	11.7		-	12.0		-	206.3		-
331	331	5230	5190	-40	1468.0	1462.5	-5.5	11.5	6.0	-5.5	11.1	21.6	10.5	210.5	43.6	-166.9
305	305	5230	5190	-40	1464.6	1460.9	-3.8	8.5	4.8	-3.8	13.8	23.5	9.8	170.1	52.6	-117.5
255	255	5230	5190	-40	1459.8	1460.1	0.2	4.8	4.7	-0.2	21.0	24.0	3.0	104.2	59.0	-45.2
205	205	5230	5190	-40	1457.4	1457.0	-0.4	3.9	3.5	-0.4	23.5	26.9	3.4	76.8	65.9	-10.9
155	155	5230	5190	-40	1454.1	1453.7	-0.4	4.7	4.3	-0.5	26.6	29.5	2.9	46.9	46.4	-0.4
130	130	5230	5190	-40	1452.5	1452.0	-0.6	6.1	5.6	-0.6	28.1	30.9	2.8	32.4	32.2	-0.1
110	110	5230	5190	-40	1451.5	1450.8	-0.7	7.5	6.8	-0.7	28.9	31.8	2.9	25.8	25.7	-0.1

Note: 1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values

HEC-RAS Analysis
Wickham Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n=0.025

Ex RS	Prop RS	Q Total			W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX (cfs)	PROP (cfs)	Δ (cfs)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft/s)	PROP (ft/s)	Δ (ft/s)	EX (ft)	PROP (ft)	Δ (ft)
1985	2156	1160	1160	0	1550.6	1550.6	0.0	6.6	6.6	0.0	10.3	10.3	0.0	37.8	37.8	0.0
1902	2073	1160	1160	0	1545.8	1545.8	0.0	5.8	5.8	0.0	8.3	8.3	0.0	52.1	52.1	0.0
1836	2007	1160	1160	0	1542.3	1542.3	0.0	6.3	6.3	0.0	9.5	9.5	0.0	59.1	59.1	0.0
1776	1947	1160	1160	0	1539.1	1539.1	0.1	6.1	6.1	0.1	7.9	7.6	-0.2	88.1	88.6	0.5
1714	1881	1160	1160	0	1536.8	1538.9	2.1	6.8	8.9	2.1	9.3	4.1	-5.2	88.6	111.3	22.7
1667	1835	1160	1160	0	1534.4	1538.8	4.5	5.5	9.9	4.5	10.1	2.2	-8.0	77.7	178.5	100.8
1641	1810	1160	1160	0	1532.1	1538.7	6.7	4.1	10.7	6.7	11.8	2.8	-9.0	92.4	155.4	63.0
1611	1788	1160	1410	250	1532.1	1536.2	4.1	6.1	10.2	4.1	6.9	11.6	4.6	84.8	77.3	-7.5
1559		1160		-	1530.3		-	5.6		-	6.1		-	90.9		-
1499	Culvert	1160	Culvert	-	1528.4	Culvert	-	6.4	Culvert	-	5.0	Culvert	-	94.7	Culvert	-
1467	1666	1160	1410	250.0	1527.6	1527.4	-0.3	5.6	4.9	-0.8	6.1	24.1	18.0	86.6	63.8	-22.8
-	1646	-	1410	-	-	1524.4	-	-	3.4	-	-	26.8	-	-	39.8	-
1432	1631	1510	1410	-100	1526.6	1526.5	-0.1	6.6	6.5	-0.1	7.4	8.6	1.2	85.4	79.8	-5.6
1383	1581	1510	1410	-100	1524.6	1524.6	-0.1	5.6	5.6	-0.1	9.7	9.4	-0.3	101.7	100.9	-0.8
1343	1540	1510	1410	-100	1522.9	1522.8	-0.1	4.9	4.8	-0.1	9.6	9.4	-0.2	123.2	122.2	-1.0
1272	1470	1510	1410	-100	1519.0	1519.0	0.1	4.3	4.4	0.1	8.6	7.7	-0.9	134.3	134.9	0.6
1156	1342	1510	1410	-100	1515.5	1515.5	-0.1	4.5	4.5	-0.1	5.0	5.6	0.6	149.9	130.7	-19.1
1047	1233	1510	1410	-100	1511.2	1511.1	-0.1	5.2	5.1	-0.1	10.0	9.8	-0.2	90.2	89.0	-1.3
930	1115	1510	1410	-100	1507.1	1507.0	-0.2	6.1	6.0	-0.1	8.3	8.2	-0.1	89.3	87.6	-1.7
825	1010	1510	1410	-100	1502.9	1502.8	-0.1	6.9	6.8	-0.1	10.2	9.9	-0.2	77.1	75.8	-1.3
743	928	1510	1410	-100	1500.3	1500.1	-0.2	7.3	7.1	-0.2	8.3	8.2	-0.1	94.1	92.6	-1.5
667	853	1510	1410	-100	1497.4	1497.3	-0.1	7.1	6.9	-0.1	9.2	9.1	-0.2	92.9	85.0	-7.8
567	753	1510	1410	-100	1493.1	1495.1	2.0	6.1	8.1	2.0	7.5	3.2	-4.3	117.8	129.7	11.8
472	647	1510	1410	-100	1490.0	1495.1	5.1	4.5	9.4	4.9	4.1	1.7	-2.4	143.5	173.8	30.3
375	571	1510	1410	-100	1487.1	1495.0	7.9	4.1	10.8	6.6	4.5	2.2	-2.3	143.2	134.7	-8.5
282	-	1510	-	-	1483.0	-	-	4.0	-	-	5.9	-	-	221.3	-	-
210	-	1510	-	-	1479.7	-	-	3.7	-	-	3.6	-	-	324.2	-	-
156	-	1580	-	-	1479.6	-	-	6.1	-	-	1.5	-	-	423.1	-	-
-	504	-	1410	-	-	1494.9	-	-	12.3	-	-	3.2	-	-	89.0	-
-	465	-	1510	-	-	1493.1	-	-	11.2	-	-	9.6	-	-	74.6	-
-	Culvert	-	Culvert	-	-	Culvert	-	-	Culvert	-	-	Culvert	-	-	Culvert	-
-	248	-	1510	-	-	1477.2	-	-	4.2	-	-	25.9	-	-	225.8	-
-	192	-	1510	-	-	1473.6	-	-	3.6	-	-	28.1	-	-	222.7	-
-	154	-	1510	-	-	1475.1	-	-	6.1	-	-	2.2	-	-	225.0	-

Note: 1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values

HEC-RAS RESULTS
Pico and Wickham Canyon Creek

Q50BB

n=0.085

HEC-RAS Results
Pico Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.085

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1777	PICO_EX	4320	1494.9	5.7	7.0	245.3	0.6
1654	PICO_EX	4320	1490.5	4.1	8.3	286.3	0.8
1516	PICO_EX	4320	1488.4	8.4	5.5	185.7	0.4
1407	PICO_EX	4320	1486.3	9.3	9.0	255.1	0.6
1293	PICO_EX	4320	1482.9	7.5	10.2	233.7	0.7
1172	PICO_EX	4320	1481.6	7.6	5.6	338.7	0.4
1058	PICO_EX	5230	1479.9	7.8	8.1	326.4	0.6
958	PICO_EX Lower	5230	1478.4	8.1	6.7	271.5	0.5
843	PICO_EX Lower	5230	1476.0	8.0	8.5	274.5	0.6
778	PICO_EX Lower	5230	1475.3	9.3	6.4	308.2	0.4
734	PICO_EX Lower	5230	1474.9	9.9	6.2	284.1	0.4
684	PICO_EX Lower	5230	1474.4	10.4	6.0	282.5	0.4
609	PICO_EX Lower	5230	1473.7	10.7	6.0	244.3	0.4
556	PICO_EX Lower	5230	1473.2	11.2	6.2	265.4	0.4
473	PICO_EX Lower	5230	1472.4	12.4	6.9	314.8	0.4
416	PICO_EX Lower	5230	1471.2	12.2	9.0	290.5	0.6
373	PICO_EX Lower	5230	1469.6	11.6	11.2	269.5	0.7
353	PICO_EX Lower	5230	1468.5	11.7	12.0	206.3	0.8
331	PICO_EX Lower	5230	1468.0	11.5	11.1	210.5	0.7
305	PICO_EX Lower	5230	1464.6	8.5	13.8	170.1	1.0
255	PICO_EX Lower	5230	1459.8	4.8	21.0	104.2	1.9
205	PICO_EX Lower	5230	1457.4	3.9	23.5	76.8	2.2
155	PICO_EX Lower	5230	1454.1	4.7	26.6	46.9	2.3
130	PICO_EX Lower	5230	1452.5	6.1	28.1	32.4	2.1
110	PICO_EX Lower	5230	1451.5	7.5	28.9	25.8	1.9

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Pico Canyon Creek - Proposed Condition
Q = 50-YR BB, n=0.085

RS	Profile	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1726	PICO_PR	4320	1494.9	5.7	7.0	245.3	0.6
1603	PICO_PR	4320	1490.5	4.1	8.3	286.3	0.8
1465	PICO_PR	4320	1488.4	8.4	5.5	185.7	0.4
1356	PICO_PR	4320	1486.2	9.2	9.3	251.9	0.6
1242	PICO_PR	4320	1483.0	7.6	9.7	214.0	0.7
1121	PICO_PR	4320	1481.3	7.3	6.4	281.9	0.5
1007	PICO_PR	4320	1479.4	7.3	8.1	263.1	0.6
907	PICO_PR	4320	1478.2	8.0	5.8	268.1	0.4
792	PICO_PR	4320	1475.2	7.2	9.7	212.1	0.8
727	PICO_PR	5190	1474.8	9.8	4.8	191.2	0.3
700	PICO_PR	5190	1474.4	10.9	6.7	162.0	0.4
680	PICO_PR Lower	5190	1473.2	12.2	10.6	49.8	0.5
500	PICO_PR Lower	Culvert					
331	PICO_PR Lower	5190	1462.5	6.0	21.6	43.6	1.6
305	PICO_PR Lower	5190	1460.9	4.8	23.5	52.6	2.0
255	PICO_PR Lower	5190	1460.1	4.7	24.0	59.0	2.2
205	PICO_PR Lower	5190	1457.0	3.5	26.9	65.9	2.7
155	PICO_PR Lower	5190	1453.7	4.3	29.5	46.4	2.7
130	PICO_PR Lower	5190	1452.0	5.6	30.9	32.2	2.4
110	PICO_PR Lower	5190	1450.8	6.8	31.8	25.7	2.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Wickham Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.085

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1985	WICKHAM_EX	1160	1550.6	6.6	10.3	37.8	1.0
1902	WICKHAM_EX	1160	1545.8	5.8	8.3	52.1	0.7
1836	WICKHAM_EX	1160	1542.3	6.3	9.5	59.1	0.9
1776	WICKHAM_EX	1160	1539.1	6.1	7.9	88.1	0.6
1714	WICKHAM_EX	1160	1536.8	6.8	9.3	88.6	0.7
1667	WICKHAM_EX	1160	1534.4	5.5	10.1	77.7	0.8
1641	WICKHAM_EX	1160	1532.1	4.1	11.8	92.4	1.2
1611	WICKHAM_EX	1160	1532.1	6.1	6.9	84.8	0.6
1559	WICKHAM_EX	1160	1530.3	5.6	6.1	90.9	0.8
1499	WICKHAM_EX	1160	1528.4	6.4	5.0	94.7	0.6
1467	WICKHAM_EX	1160	1527.6	5.6	6.1	86.6	0.5
1432	WICKHAM_EX	1510	1526.6	6.6	7.4	85.4	0.6
1383	WICKHAM_EX	1510	1524.6	5.6	9.7	101.7	0.8
1343	WICKHAM_EX	1510	1522.9	4.9	9.6	123.2	0.8
1272	WICKHAM_EX	1510	1519.0	4.3	8.6	134.3	0.8
1156	WICKHAM_EX	1510	1515.5	4.5	5.0	149.9	0.5
1047	WICKHAM_EX	1510	1511.2	5.2	10.0	90.2	0.9
930	WICKHAM_EX	1510	1507.1	6.1	8.3	89.3	0.6
825	WICKHAM_EX	1510	1502.9	6.9	10.2	77.1	0.8
743	WICKHAM_EX	1510	1500.3	7.3	8.3	94.1	0.6
667	WICKHAM_EX	1510	1497.4	7.1	9.2	92.9	0.8
567	WICKHAM_EX	1510	1493.1	6.1	7.5	117.8	0.6
472	WICKHAM_EX	1510	1490.0	4.5	4.1	143.5	0.6
375	WICKHAM_EX	1510	1487.1	4.1	4.5	143.2	0.5
282	WICKHAM_EX	1510	1483.0	4.0	5.9	221.3	1.0
210	WICKHAM_EX	1510	1479.7	3.7	3.6	324.2	0.6
156	WICKHAM_EX	1580	1479.6	6.1	1.5	423.1	0.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS Results
Wickham Canyon Creek - Proposed Condition
Q = 50-YR BB, n=0.085

RS	Profile	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
2156	WICKHAM_PR	1160	1550.6	6.6	10.3	37.8	1.0
2073	WICKHAM_PR	1160	1545.8	5.8	8.3	52.1	0.7
2007	WICKHAM_PR	1160	1542.3	6.3	9.5	59.1	0.9
1947	WICKHAM_PR	1160	1539.1	6.1	7.6	88.6	0.6
1881	WICKHAM_PR	1160	1538.9	8.9	4.1	111.3	0.3
1835	WICKHAM_PR	1160	1538.8	9.9	2.2	178.5	0.1
1810	WICKHAM_PR	1160	1538.7	10.7	2.8	155.4	0.2
1788	WICKHAM_PR	1410	1536.2	10.2	11.6	77.3	0.6
1727	WICKHAM_PR	Culvert					
1666	WICKHAM_PR	1410	1527.4	4.9	24.1	63.8	1.9
1646	WICKHAM_PR	1410	1524.4	3.4	26.8	39.8	3.3
1631	WICKHAM_PR	1410	1526.5	6.5	8.6	79.8	0.7
1581	WICKHAM_PR	1410	1524.6	5.6	9.4	100.9	0.8
1540	WICKHAM_PR	1410	1522.8	4.8	9.4	122.2	0.8
1470	WICKHAM_PR	1410	1519.0	4.4	7.7	134.9	0.7
1342	WICKHAM_PR	1410	1515.5	4.5	5.6	130.7	0.6
1233	WICKHAM_PR	1410	1511.1	5.1	9.8	89.0	0.9
1115	WICKHAM_PR	1410	1507.0	6.0	8.2	87.6	0.6
1010	WICKHAM_PR	1410	1502.8	6.8	9.9	75.8	0.8
928	WICKHAM_PR	1410	1500.1	7.1	8.2	92.6	0.6
853	WICKHAM_PR	1410	1497.3	6.9	9.1	85.0	0.8
753	WICKHAM_PR	1410	1495.1	8.1	3.2	129.7	0.2
647	WICKHAM_PR	1410	1495.1	9.4	1.7	173.8	0.1
571	WICKHAM_PR	1410	1495.0	10.8	2.2	134.7	0.1
504	WICKHAM_PR	1410	1494.9	12.3	3.2	89.0	0.2
465	WICKHAM_PR	1510	1493.1	11.2	9.6	74.6	0.5
322.5	WICKHAM_PR	Culvert					
248	WICKHAM_PR	1510	1477.2	4.2	25.9	225.8	2.2
192	WICKHAM_PR	1510	1473.6	3.6	28.1	222.7	4.5
154	WICKHAM_PR	1510	1475.1	6.1	2.2	225.0	0.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

HEC-RAS ANALYSIS
Pico and Wickham Canyon Creek

Q50BB

n=0.085

HEC-RAS Analysis
Pico Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n = 0.085

Ex RS	Prop RS	Q Total			W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX (cfs)	PROP (cfs)	Δ (cfs)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft/s)	PROP (ft/s)	Δ (ft/s)	EX (ft)	PROP (ft)	Δ (ft)
1777	1726	4320	4320	0	1494.9	1494.9	0.0	5.7	5.7	0.0	7.0	7.0	0.0	245.3	245.3	0.0
1654	1603	4320	4320	0	1490.5	1490.5	0.0	4.1	4.1	0.0	8.3	8.3	0.0	286.3	286.3	0.0
1516	1465	4320	4320	0	1488.4	1488.4	0.0	8.4	8.4	0.0	5.5	5.5	0.0	185.7	185.7	0.0
1407	1356	4320	4320	0	1486.3	1486.2	-0.1	9.3	9.2	-0.1	9.0	9.3	0.3	255.1	251.9	-3.2
1293	1242	4320	4320	0	1482.9	1483.0	0.1	7.5	7.6	0.1	10.2	9.7	-0.5	233.7	214.0	-19.7
1172	1121	4320	4320	0	1481.6	1481.3	-0.2	7.6	7.3	-0.2	5.6	6.4	0.9	338.7	281.9	-56.8
1058	1007	5230	4320	-910	1479.9	1479.4	-0.4	7.8	7.3	-0.4	8.1	8.1	0.0	326.4	263.1	-63.3
958	907	5230	4320	-910	1478.4	1478.2	-0.2	8.1	8.0	-0.2	6.7	5.8	-0.9	271.5	268.1	-3.4
843	792	5230	4320	-910	1476.0	1475.2	-0.8	8.0	7.2	-0.8	8.5	9.7	1.2	274.5	212.1	-62.3
778	727	5230	5190	-40	1475.3	1474.8	-0.5	9.3	9.8	0.5	6.4	4.8	-1.6	308.2	191.2	-116.9
-	700	-	5190	-	-	1474.4	-	-	10.9	-	-	6.7	-	-	162.0	-
734	680	5230	5190	-40	1474.9	1473.2	-1.6	9.9	12.2	2.4	6.2	10.6	4.4	284.1	49.8	-234.3
684		5230		-	1474.4		-	10.4		-	6.0		-	282.5		-
609		5230		-	1473.7		-	10.7		-	6.0		-	244.3		-
556		5230		-	1473.2		-	11.2		-	6.2		-	265.4		-
473	Culvert	5230	Culvert	-	1472.4	Culvert	-	12.4	Culvert	-	6.9	Culvert	-	314.8	Culvert	-
416		5230		-	1471.2		-	12.2		-	9.0		-	290.5		-
373		5230		-	1469.6		-	11.6		-	11.2		-	269.5		-
353		5230		-	1468.5		-	11.7		-	12.0		-	206.3		-
331	331	5230	5190	-40	1468.0	1462.5	-5.5	11.5	6.0	-5.5	11.1	21.6	10.5	210.5	43.6	-166.9
305	305	5230	5190	-40	1464.6	1460.9	-3.8	8.5	4.8	-3.8	13.8	23.5	9.8	170.1	52.6	-117.5
255	255	5230	5190	-40	1459.8	1460.1	0.2	4.8	4.7	-0.2	21.0	24.0	3.0	104.2	59.0	-45.2
205	205	5230	5190	-40	1457.4	1457.0	-0.4	3.9	3.5	-0.4	23.5	26.9	3.4	76.8	65.9	-10.9
155	155	5230	5190	-40	1454.1	1453.7	-0.4	4.7	4.3	-0.5	26.6	29.5	2.9	46.9	46.4	-0.4
130	130	5230	5190	-40	1452.5	1452.0	-0.6	6.1	5.6	-0.6	28.1	30.9	2.8	32.4	32.2	-0.1
110	110	5230	5190	-40	1451.5	1450.8	-0.7	7.5	6.8	-0.7	28.9	31.8	2.9	25.8	25.7	-0.1

Note: 1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values

HEC-RAS Analysis
Wickham Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n=0.085

Ex RS	Prop RS	Q Total			W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX (cfs)	PROP (cfs)	Δ (cfs)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft)	PROP (ft)	Δ (ft)	EX (ft/s)	PROP (ft/s)	Δ (ft/s)	EX (ft)	PROP (ft)	Δ (ft)
1985	2156	1160	1160	0	1550.6	1550.6	0.0	6.6	6.6	0.0	10.3	10.3	0.0	37.8	37.8	0.0
1902	2073	1160	1160	0	1545.8	1545.8	0.0	5.8	5.8	0.0	8.3	8.3	0.0	52.1	52.1	0.0
1836	2007	1160	1160	0	1542.3	1542.3	0.0	6.3	6.3	0.0	9.5	9.5	0.0	59.1	59.1	0.0
1776	1947	1160	1160	0	1539.1	1539.1	0.1	6.1	6.1	0.1	7.9	7.6	-0.2	88.1	88.6	0.5
1714	1881	1160	1160	0	1536.8	1538.9	2.1	6.8	8.9	2.1	9.3	4.1	-5.2	88.6	111.3	22.7
1667	1835	1160	1160	0	1534.4	1538.8	4.5	5.5	9.9	4.5	10.1	2.2	-8.0	77.7	178.5	100.8
1641	1810	1160	1160	0	1532.1	1538.7	6.7	4.1	10.7	6.7	11.8	2.8	-9.0	92.4	155.4	63.0
1611	1788	1160	1410	250	1532.1	1536.2	4.1	6.1	10.2	4.1	6.9	11.6	4.6	84.8	77.3	-7.5
1559		1160		-	1530.3		-	5.6		-	6.1		-	90.9		-
1499	Culvert	1160	Culvert	-	1528.4	Culvert	-	6.4	Culvert	-	5.0	Culvert	-	94.7	Culvert	-
1467	1666	1160	1410	250.0	1527.6	1527.4	-0.3	5.6	4.9	-0.8	6.1	24.1	18.0	86.6	63.8	-22.8
-	1646	-	1410	-	-	1524.4	-	-	3.4	-	-	26.8	-	-	39.8	-
1432	1631	1510	1410	-100	1526.6	1526.5	-0.1	6.6	6.5	-0.1	7.4	8.6	1.2	85.4	79.8	-5.6
1383	1581	1510	1410	-100	1524.6	1524.6	-0.1	5.6	5.6	-0.1	9.7	9.4	-0.3	101.7	100.9	-0.8
1343	1540	1510	1410	-100	1522.9	1522.8	-0.1	4.9	4.8	-0.1	9.6	9.4	-0.2	123.2	122.2	-1.0
1272	1470	1510	1410	-100	1519.0	1519.0	0.1	4.3	4.4	0.1	8.6	7.7	-0.9	134.3	134.9	0.6
1156	1342	1510	1410	-100	1515.5	1515.5	-0.1	4.5	4.5	-0.1	5.0	5.6	0.6	149.9	130.7	-19.1
1047	1233	1510	1410	-100	1511.2	1511.1	-0.1	5.2	5.1	-0.1	10.0	9.8	-0.2	90.2	89.0	-1.3
930	1115	1510	1410	-100	1507.1	1507.0	-0.2	6.1	6.0	-0.1	8.3	8.2	-0.1	89.3	87.6	-1.7
825	1010	1510	1410	-100	1502.9	1502.8	-0.1	6.9	6.8	-0.1	10.2	9.9	-0.2	77.1	75.8	-1.3
743	928	1510	1410	-100	1500.3	1500.1	-0.2	7.3	7.1	-0.2	8.3	8.2	-0.1	94.1	92.6	-1.5
667	853	1510	1410	-100	1497.4	1497.3	-0.1	7.1	6.9	-0.1	9.2	9.1	-0.2	92.9	85.0	-7.8
567	753	1510	1410	-100	1493.1	1495.1	2.0	6.1	8.1	2.0	7.5	3.2	-4.3	117.8	129.7	11.8
472	647	1510	1410	-100	1490.0	1495.1	5.1	4.5	9.4	4.9	4.1	1.7	-2.4	143.5	173.8	30.3
375	571	1510	1410	-100	1487.1	1495.0	7.9	4.1	10.8	6.6	4.5	2.2	-2.3	143.2	134.7	-8.5
282	-	1510	-	-	1483.0	-	-	4.0	-	-	5.9	-	-	221.3	-	-
210	-	1510	-	-	1479.7	-	-	3.7	-	-	3.6	-	-	324.2	-	-
156	-	1580	-	-	1479.6	-	-	6.1	-	-	1.5	-	-	423.1	-	-
-	504	-	1410	-	-	1494.9	-	-	12.3	-	-	3.2	-	-	89.0	-
-	465	-	1510	-	-	1493.1	-	-	11.2	-	-	9.6	-	-	74.6	-
-	Culvert	-	Culvert	-	-	Culvert	-	-	Culvert	-	-	Culvert	-	-	Culvert	-
-	248	-	1510	-	-	1477.2	-	-	4.2	-	-	25.9	-	-	225.8	-
-	192	-	1510	-	-	1473.6	-	-	3.6	-	-	28.1	-	-	222.7	-
-	154	-	1510	-	-	1475.1	-	-	6.1	-	-	2.2	-	-	225.0	-

Note: 1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values

FLOWRATES
Pico and Wickham Canyon Creek

Q50BB

HEC-RAS Flowrates
Pico Canyon Creek - Existing

Reach	RS	Q cfs
PICO_EX	1777	4320
PICO_EX	1058	5230
PICO_EX Lower	958	5230
PICO_EX Lower	110	5230

HEC-RAS Flowrates
Wickham Canyon Creek - Existing

Reach	RS	Q cfs
WICKHAM_EX	1985	1160
WICKHAM_EX	1432	1510
WICKHAM_EX	156	1580

HEC-RAS Flowrates
Pico Canyon Creek - Proposed

Reach	RS	Q cfs
PICO_PR	1726	4320
PICO_PR	727	5190
PICO_PR Lower	680	5190
PICO_PR Lower	110	5190

HEC-RAS Flowrates
Wickham Canyon Creek - Proposed

Reach	RS	Q cfs
WICKHAM_PR	2156	1160
WICKHAM_PR	1788	1410
WICKHAM_PR	465	1510
WICKHAM_PR	112	1510

FREEBOARD
Pico and Wickham Canyon Creek

Q50BB

n=0.085

Freeboard
Pico Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
1726	1570.0	-	1494.9	75.1
1603	1560.0	-	1490.5	69.5
1465	1560.0	-	1488.4	71.6
1356	1550.0	-	1486.2	63.8
1242	1540.0	-	1483.0	57.0
1121	1530.0	-	1481.3	48.7
1007	1530.0	-	1479.4	50.6
907 *	-	1481.0	1478.2	2.8
792 *	-	1479.8	1475.2	4.6
727 *	-	1479.8	1474.8	5.0
700 *	-	1479.0	1474.4	4.6
680 **	-	1476.3	1473.2	3.1
500	Culvert		-	-
331 *	-	1468.0	1462.5	5.5
305 *	-	1468.0	1460.9	7.1
255 *	-	1467.3	1460.1	7.2
205 *	-	1466.0	1457.0	9.0
155 *	-	1464.9	1453.7	11.2
130 *	-	1464.3	1452.0	12.3
110 *	-	1464.0	1450.8	13.2

Freeboard
Wickham Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
2156	-	-	-	-
2073	-	-	-	-
2007	-	-	-	-
1947	-	-	-	-
1881	-	-	-	-
1835	-	-	-	-
1810	-	-	-	-
1788	-	1540.7	1536.2	4.5
1727	Culvert		-	-
1666	-	1540.7	1527.4	13.3
1646	-	-	-	-
1631	-	-	-	-
1581	-	-	-	-
1540	-	-	-	-
1470	-	-	-	-
1342	1570.0	-	1515.5	54.5
1233	1570.0	-	1511.1	58.9
1115	1570.0	-	1507.0	63.0
1010	1570.0	-	1502.8	67.3
928	1570.0	-	1500.1	69.9
853	-	-	-	-
753	-	-	-	-
647	1520.0	-	1495.1	24.9
571	-	1518.0	1495.0	23.0
504	-	1507.0	1494.9	12.1
465	-	1500.0	1493.1	6.9
322.5	Culvert		-	-
248	-	1486.0	1477.2	8.8
192	-	1484.0	1473.6	10.4
154	-	1482.0	1475.1	6.9

HYDRAULIC ANALYSIS

AT INLET OF EXISTING 24'W x 14'H RCB PER PD 2495

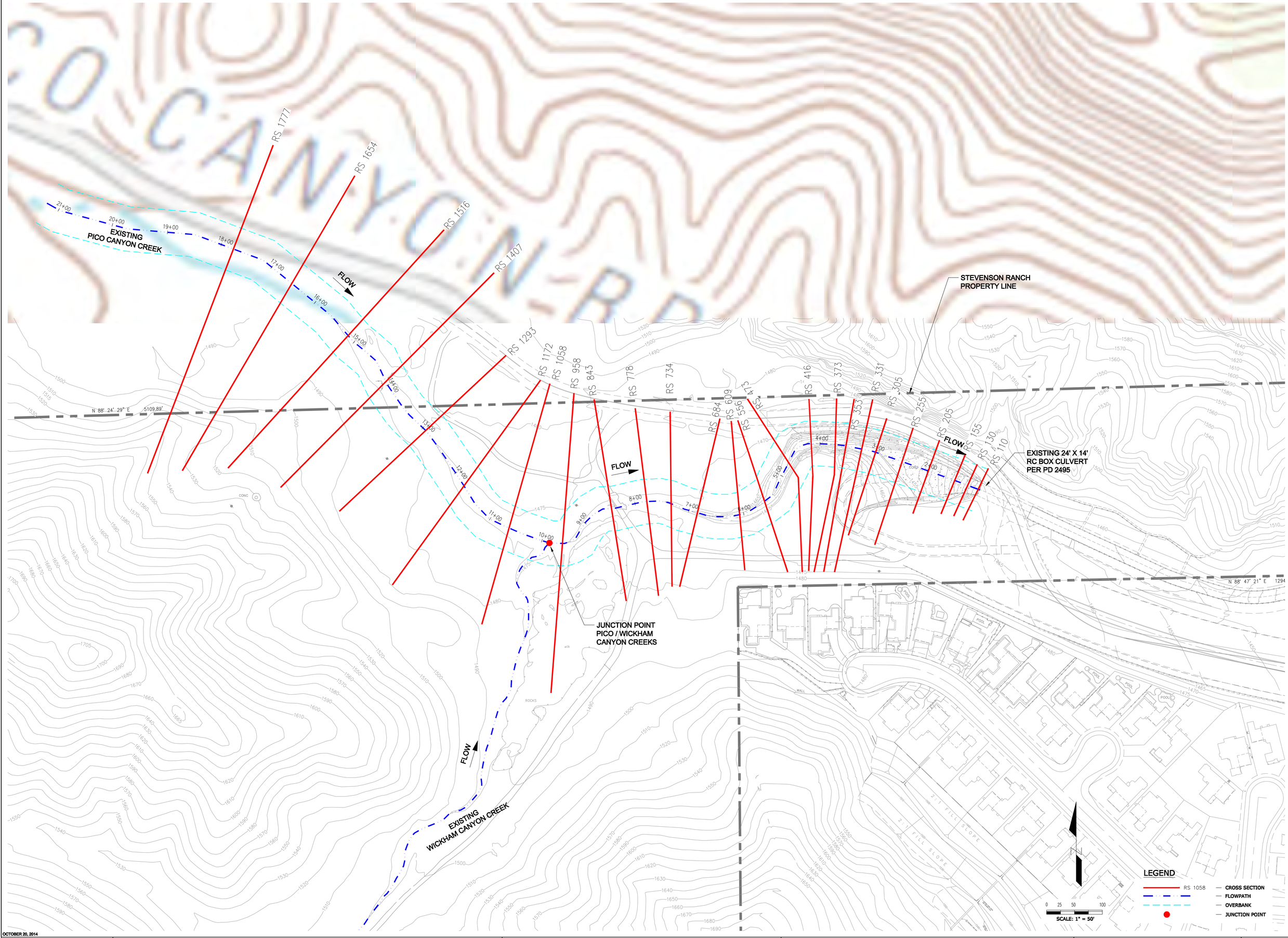
Hydraulic Summary at Inlet of Existing 24'W x 14'H RCB

	LACDPW PD 2495	Existing Model	Proposed Model
Flowrate, cfs	4881	5230	5190
Velocity, fps	n/a	28.9	31.8
Depth, ft	7.8	7.5	6.8

APPENDIX B

EXHIBITS & PLANS

AIDLIN HILLS HYDRAULIC STUDY
OCTOBER 2014



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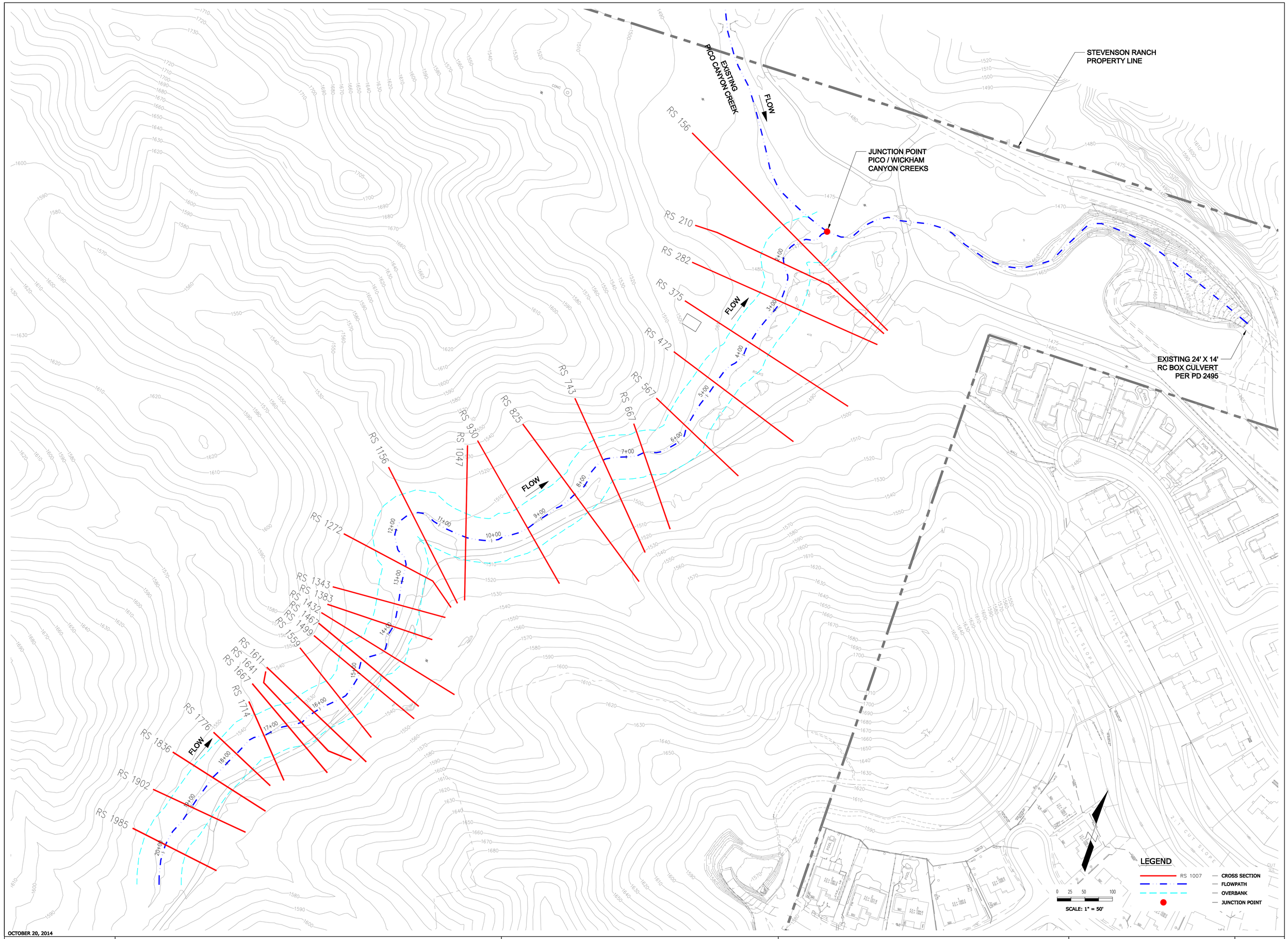
PICO CANYON CREEK
HYDRAULIC STUDY
FOR
STEVENSON RANCH

TITLE

EXISTING CONDITION
HEC-RAS SECTIONS

SHEET

1 OF 8



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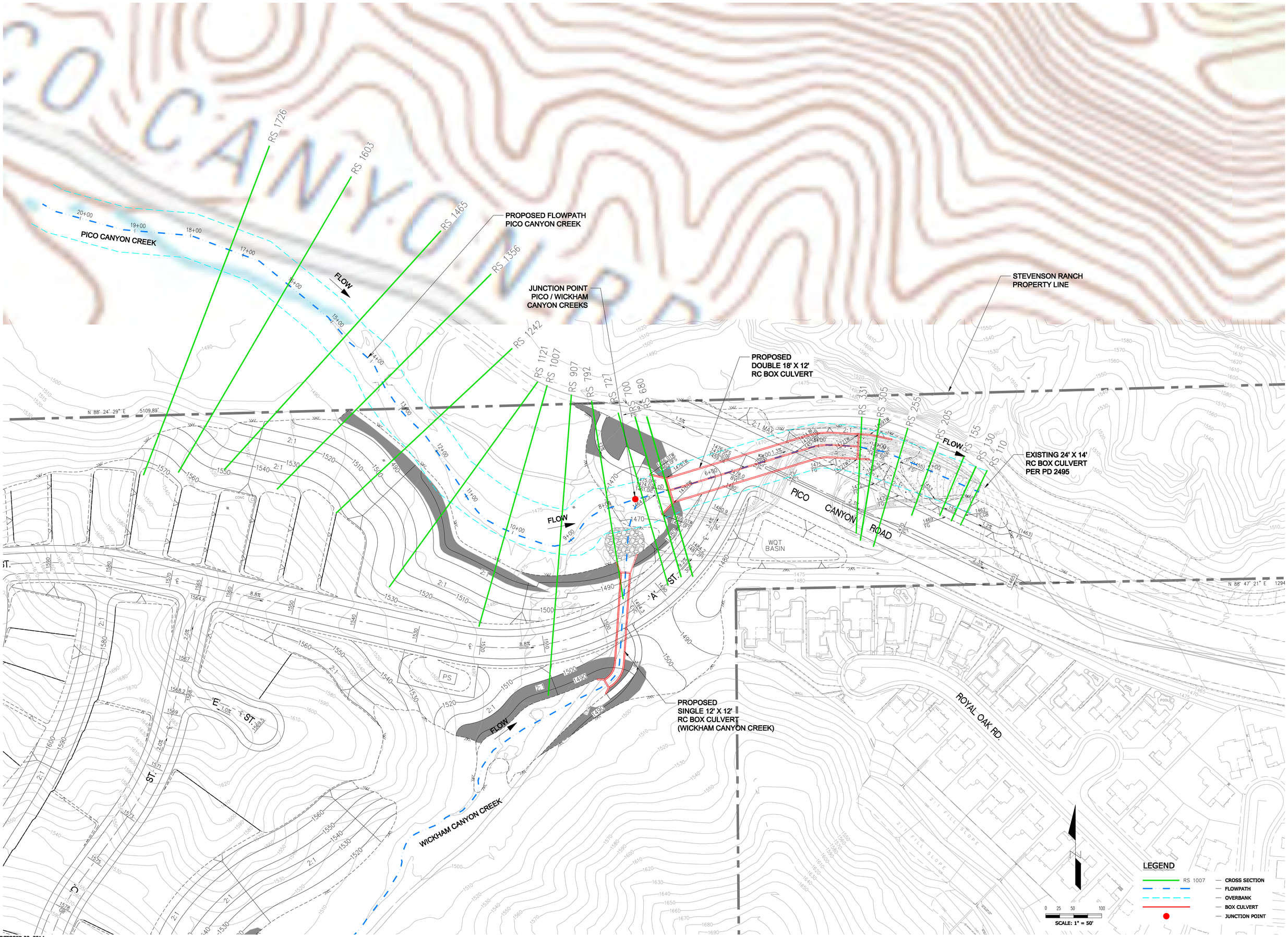
TITLE

EXISTING CONDITION HEC-RAS SECTIONS

SHEET

2 OF 8



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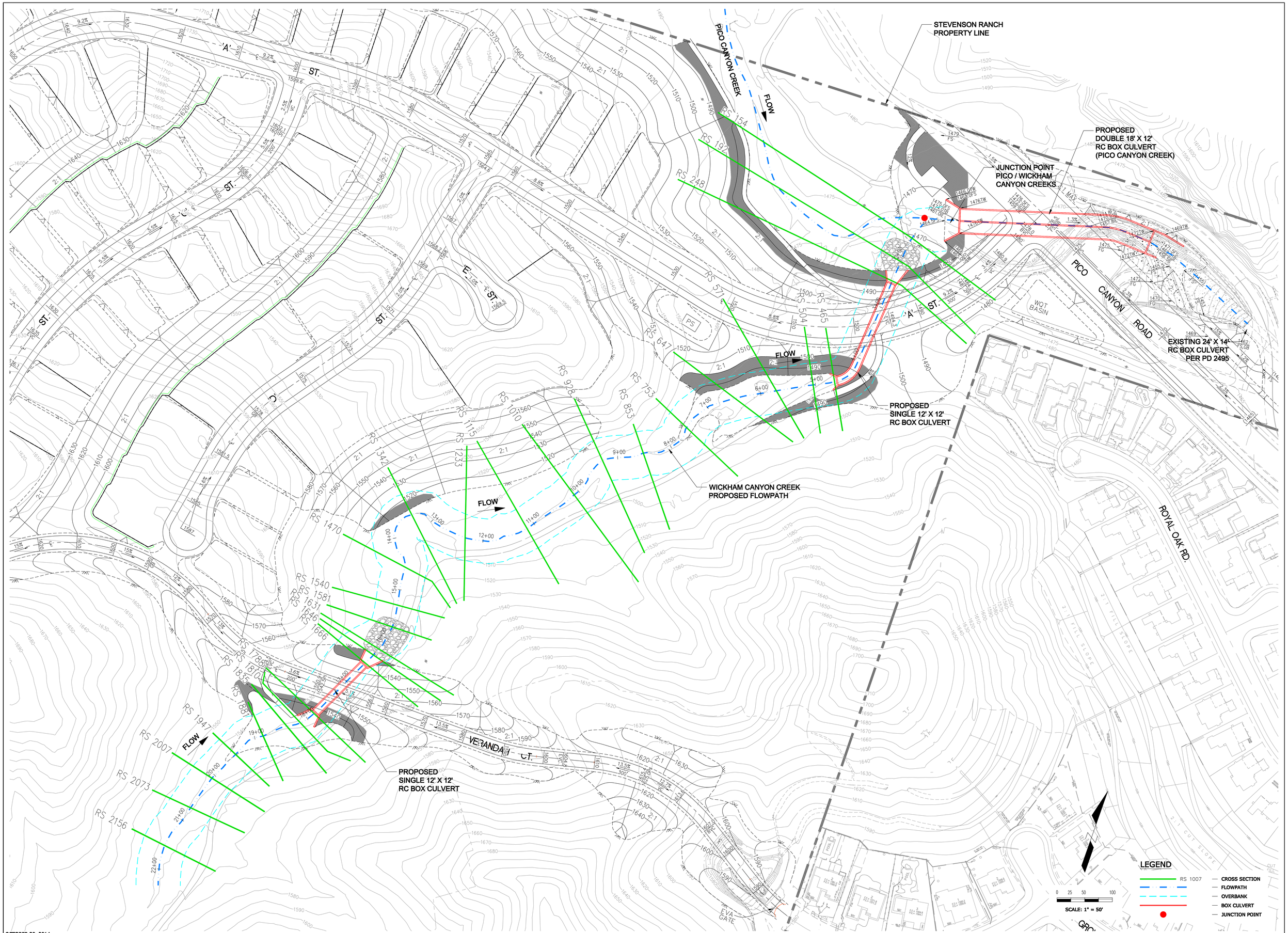
FOR
STEVENSON RANCH

TITLE

PROPOSED CONDITION
HEC-RAS SECTIONS

SHEET

3 OF 8



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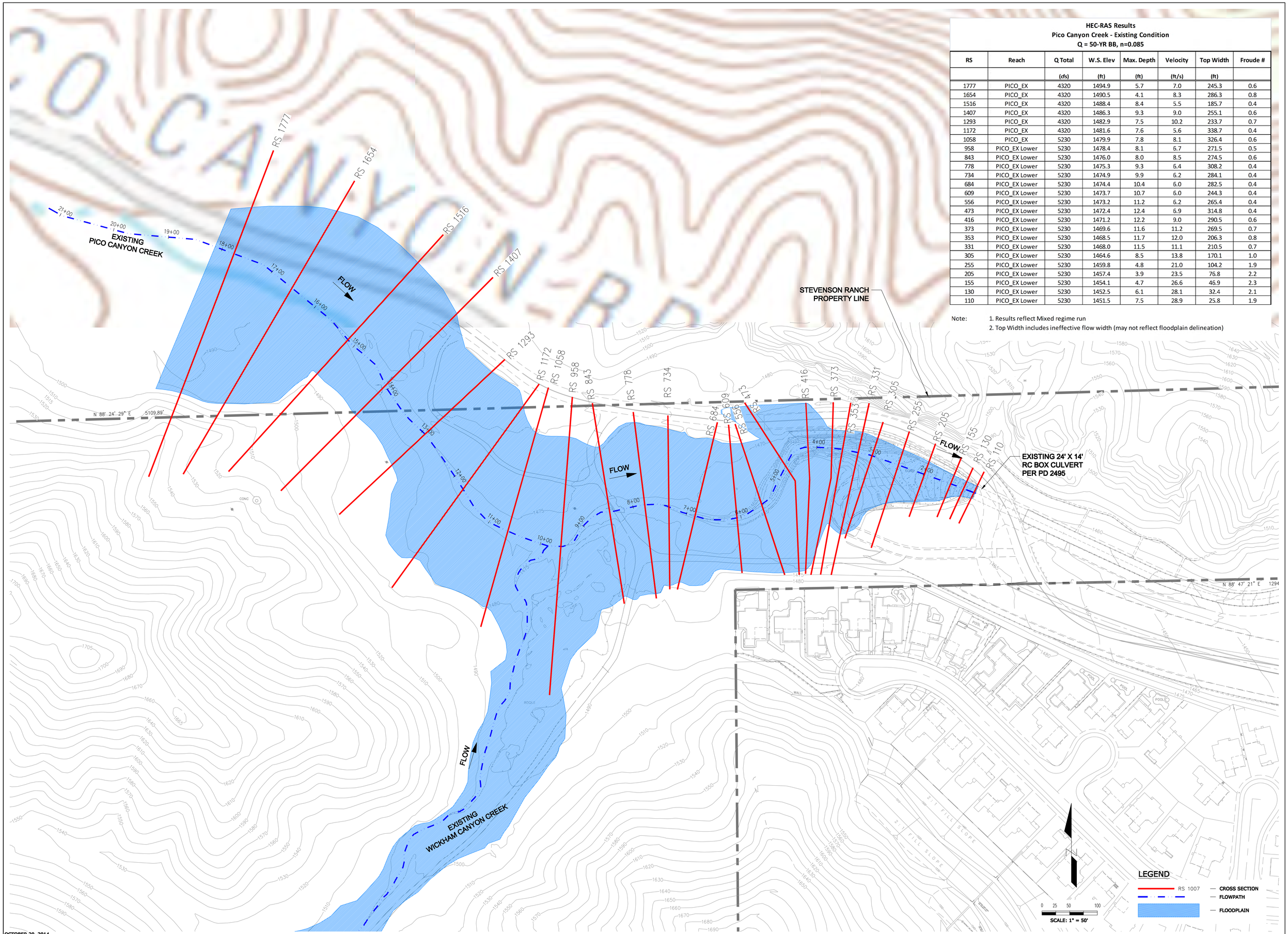
HYDRAULIC STUDY
FOR
STEVENSON RANCH

TITLE

PROPOSED CONDITION
HEC-RAS SECTIONS

SHEET

4 OF 8



HEC-RAS Results
Pico Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.085

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1777	PICO_EX	4320	1494.9	5.7	7.0	245.3	0.6
1654	PICO_EX	4320	1490.5	4.1	8.3	286.3	0.8
1516	PICO_EX	4320	1488.4	8.4	5.5	185.7	0.4
1407	PICO_EX	4320	1486.3	9.3	9.0	255.1	0.6
1293	PICO_EX	4320	1482.9	7.5	10.2	233.7	0.7
1172	PICO_EX	4320	1481.6	7.6	5.6	338.7	0.4
1058	PICO_EX	5230	1479.9	7.8	8.1	326.4	0.6
958	PICO_EX Lower	5230	1478.4	8.1	6.7	271.5	0.5
843	PICO_EX Lower	5230	1476.0	8.0	8.5	274.5	0.6
778	PICO_EX Lower	5230	1475.3	9.3	6.4	308.2	0.4
734	PICO_EX Lower	5230	1474.9	9.9	6.2	284.1	0.4
684	PICO_EX Lower	5230	1474.4	10.4	6.0	282.5	0.4
609	PICO_EX Lower	5230	1473.7	10.7	6.0	244.3	0.4
556	PICO_EX Lower	5230	1473.2	11.2	6.2	265.4	0.4
473	PICO_EX Lower	5230	1472.4	12.4	6.9	314.8	0.4
416	PICO_EX Lower	5230	1471.2	12.2	9.0	290.5	0.6
373	PICO_EX Lower	5230	1469.6	11.6	11.2	269.5	0.7
353	PICO_EX Lower	5230	1468.5	11.7	12.0	206.3	0.8
331	PICO_EX Lower	5230	1468.0	11.5	11.1	210.5	0.7
305	PICO_EX Lower	5230	1464.6	8.5	13.8	170.1	1.0
255	PICO_EX Lower	5230	1459.8	4.8	21.0	104.2	1.9
205	PICO_EX Lower	5230	1457.4	3.9	23.5	76.8	2.2
155	PICO_EX Lower	5230	1454.1	4.7	26.6	46.9	2.3
130	PICO_EX Lower	5230	1452.5	6.1	28.1	32.4	2.1
110	PICO_EX Lower	5230	1451.5	7.5	28.9	25.8	1.9

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)

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PROJECT
PICO CANYON CREEK
HYDRAULIC STUDY
FOR
STEVENSON RANCH

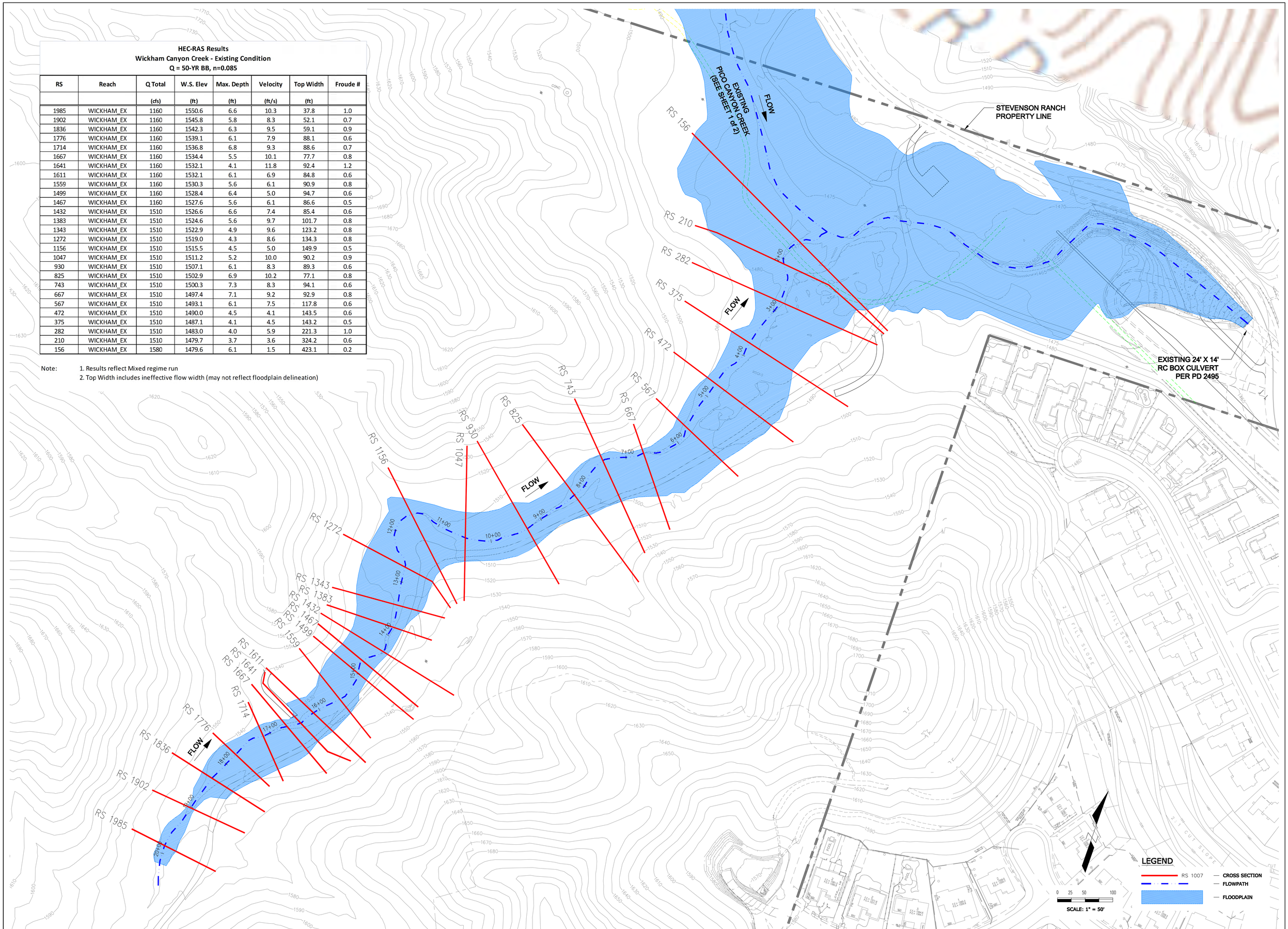
TITLE
EXISTING CONDITION
FLOODPLAIN

SHEET
5 OF 8

HEC-RAS Results
Wickham Canyon Creek - Existing Condition
Q = 50-YR BB, n=0.085

RS	Reach	Q Total	W.S. Elev	Max. Depth	Velocity	Top Width	Froude #
		(cfs)	(ft)	(ft)	(ft/s)	(ft)	
1985	WICKHAM_EX	1160	1550.6	6.6	10.3	37.8	1.0
1902	WICKHAM_EX	1160	1545.8	5.8	8.3	52.1	0.7
1836	WICKHAM_EX	1160	1542.3	6.3	9.5	59.1	0.9
1776	WICKHAM_EX	1160	1539.1	6.1	7.9	88.1	0.6
1714	WICKHAM_EX	1160	1536.8	6.8	9.3	88.6	0.7
1667	WICKHAM_EX	1160	1534.4	5.5	10.1	77.7	0.8
1641	WICKHAM_EX	1160	1532.1	4.1	11.8	92.4	1.2
1611	WICKHAM_EX	1160	1532.1	6.1	6.9	84.8	0.6
1559	WICKHAM_EX	1160	1530.3	5.6	6.1	90.9	0.8
1499	WICKHAM_EX	1160	1528.4	6.4	5.0	94.7	0.6
1467	WICKHAM_EX	1160	1527.6	5.6	6.1	86.6	0.5
1432	WICKHAM_EX	1510	1526.6	6.6	7.4	85.4	0.6
1383	WICKHAM_EX	1510	1524.6	5.6	9.7	101.7	0.8
1343	WICKHAM_EX	1510	1522.9	4.9	9.6	123.2	0.8
1272	WICKHAM_EX	1510	1519.0	4.3	8.6	134.3	0.8
1156	WICKHAM_EX	1510	1515.5	4.5	5.0	149.9	0.5
1047	WICKHAM_EX	1510	1511.2	5.2	10.0	90.2	0.9
930	WICKHAM_EX	1510	1507.1	6.1	8.3	89.3	0.6
825	WICKHAM_EX	1510	1502.9	6.9	10.2	77.1	0.8
743	WICKHAM_EX	1510	1500.3	7.3	8.3	94.1	0.6
667	WICKHAM_EX	1510	1497.4	7.1	9.2	92.9	0.8
567	WICKHAM_EX	1510	1493.1	6.1	7.5	117.8	0.6
472	WICKHAM_EX	1510	1490.0	4.5	4.1	143.5	0.6
375	WICKHAM_EX	1510	1487.1	4.1	4.5	143.2	0.5
282	WICKHAM_EX	1510	1483.0	4.0	5.9	221.3	1.0
210	WICKHAM_EX	1510	1479.7	3.7	3.6	324.2	0.6
156	WICKHAM_EX	1580	1479.6	6.1	1.5	423.1	0.2

Note: 1. Results reflect Mixed regime run
2. Top Width includes ineffective flow width (may not reflect floodplain delineation)



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PROJECT
WICKHAM CANYON CREEK HYDRAULIC STUDY FOR STEVENSON RANCH

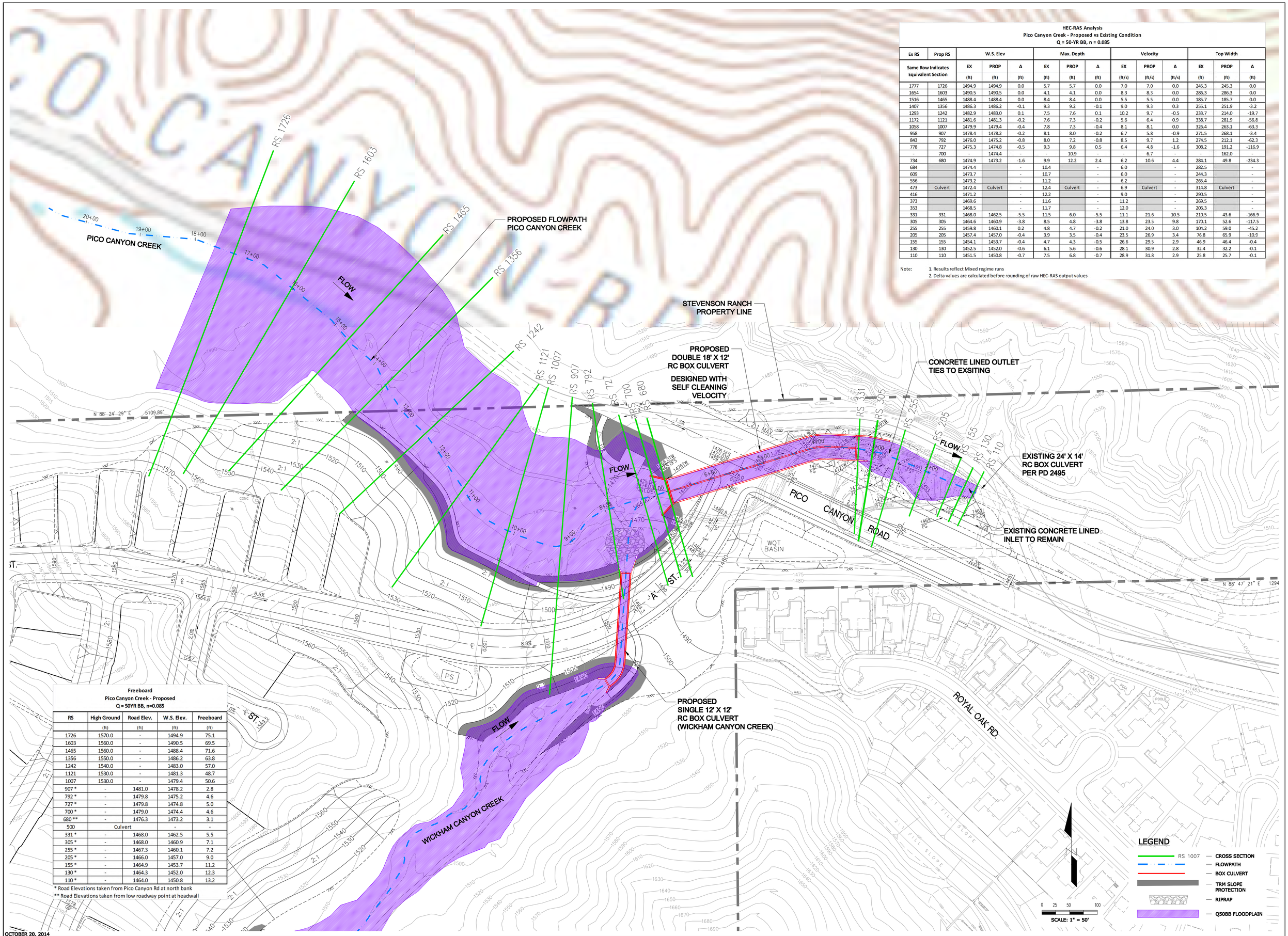
TITLE
EXISTING CONDITION FLOODPLAIN

SHEET
6 OF 8

HEC-RAS Analysis
Pico Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n = 0.085

Ex RS	Prop RS	W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX	PROP	Δ	EX	PROP	Δ	EX	PROP	Δ	EX	PROP	Δ
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft/s)	(ft/s)	(ft)	(ft)	(ft)
1777	1726	1494.9	1494.9	0.0	5.7	5.7	0.0	7.0	7.0	0.0	245.3	245.3	0.0
1654	1603	1490.5	1490.5	0.0	4.1	4.1	0.0	8.3	8.3	0.0	286.3	286.3	0.0
1516	1465	1488.4	1488.4	0.0	8.4	8.4	0.0	5.5	5.5	0.0	185.7	185.7	0.0
1407	1356	1486.3	1486.2	-0.1	9.3	9.2	-0.1	9.0	9.3	0.3	255.1	251.9	-3.2
1293	1242	1482.9	1483.0	0.1	7.5	7.6	0.1	10.2	9.7	-0.5	233.7	214.0	-19.7
1172	1121	1481.6	1481.3	-0.2	7.6	7.3	-0.2	5.6	6.4	0.9	338.7	281.9	-56.8
1058	1007	1479.9	1479.4	-0.4	7.8	7.3	-0.4	8.1	8.1	0.0	326.4	263.1	-63.3
958	907	1478.4	1478.2	-0.2	8.1	8.0	-0.2	6.7	5.8	-0.9	271.5	268.1	-3.4
843	792	1476.0	1475.2	-0.8	8.0	7.2	-0.8	8.5	9.7	1.2	274.5	212.1	-62.3
778	727	1475.3	1474.8	-0.5	9.3	9.8	0.5	6.4	4.8	-1.6	308.2	191.2	-116.9
-	700	-	1474.4	-	-	10.9	-	-	6.7	-	-	162.0	-
734	680	1474.9	1473.2	-1.6	9.9	12.2	2.4	6.2	10.6	4.4	284.1	49.8	-234.3
684		1474.4		-	10.4		-	6.0		-	282.5		-
609		1473.7		-	10.7		-	6.0		-	244.3		-
556		1473.2		-	11.2		-	6.2		-	265.4		-
473	Culvert	1472.4	Culvert	-	12.4	Culvert	-	6.9	Culvert	-	314.8	Culvert	-
416		1471.2		-	12.2		-	9.0		-	290.5		-
373		1469.6		-	11.6		-	11.2		-	269.5		-
353		1468.5		-	11.7		-	12.0		-	206.3		-
331	331	1468.0	1462.5	-5.5	11.5	6.0	-5.5	11.1	21.6	10.5	210.5	43.6	-166.9
305	305	1464.6	1460.9	-3.8	8.5	4.8	-3.8	13.8	23.5	9.8	170.1	52.6	-117.5
255	255	1459.8	1460.1	0.2	4.8	4.7	-0.2	21.0	24.0	3.0	104.2	59.0	-45.2
205	205	1457.4	1457.0	-0.4	3.9	3.5	-0.4	23.5	26.9	3.4	76.8	65.9	-10.9
155	155	1454.1	1453.7	-0.4	4.7	4.3	-0.5	26.6	29.5	2.9	46.9	46.4	-0.4
130	130	1452.5	1452.0	-0.6	6.1	5.6	-0.6	28.1	30.9	2.8	32.4	32.2	-0.1
110	110	1451.5	1450.8	-0.7	7.5	6.8	-0.7	28.9	31.8	2.9	25.8	25.7	-0.1

Note: 1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values



Freeboard
Pico Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
1726	1570.0	-	1494.9	75.1
1603	1560.0	-	1490.5	69.5
1465	1560.0	-	1488.4	71.6
1356	1550.0	-	1486.2	63.8
1242	1540.0	-	1483.0	57.0
1121	1530.0	-	1481.3	48.7
1007	1530.0	-	1479.4	50.6
907 *	-	1481.0	1478.2	2.8
792 *	-	1479.8	1475.2	4.6
727 *	-	1479.8	1474.8	5.0
700 *	-	1479.0	1474.4	4.6
680 **	-	1476.3	1473.2	3.1
500	Culvert		-	-
331 *	-	1468.0	1462.5	5.5
305 *	-	1468.0	1460.9	7.1
255 *	-	1467.3	1460.1	7.2
205 *	-	1466.0	1457.0	9.0
155 *	-	1464.9	1453.7	11.2
130 *	-	1464.3	1452.0	12.3
110 *	-	1464.0	1450.8	13.2

* Road Elevations taken from Pico Canyon Rd at north bank
** Road Elevations taken from low roadway point at headwall

OCTOBER 20, 2014

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PROJECT
PICO CANYON CREEK HYDRAULIC STUDY FOR STEVENSON RANCH

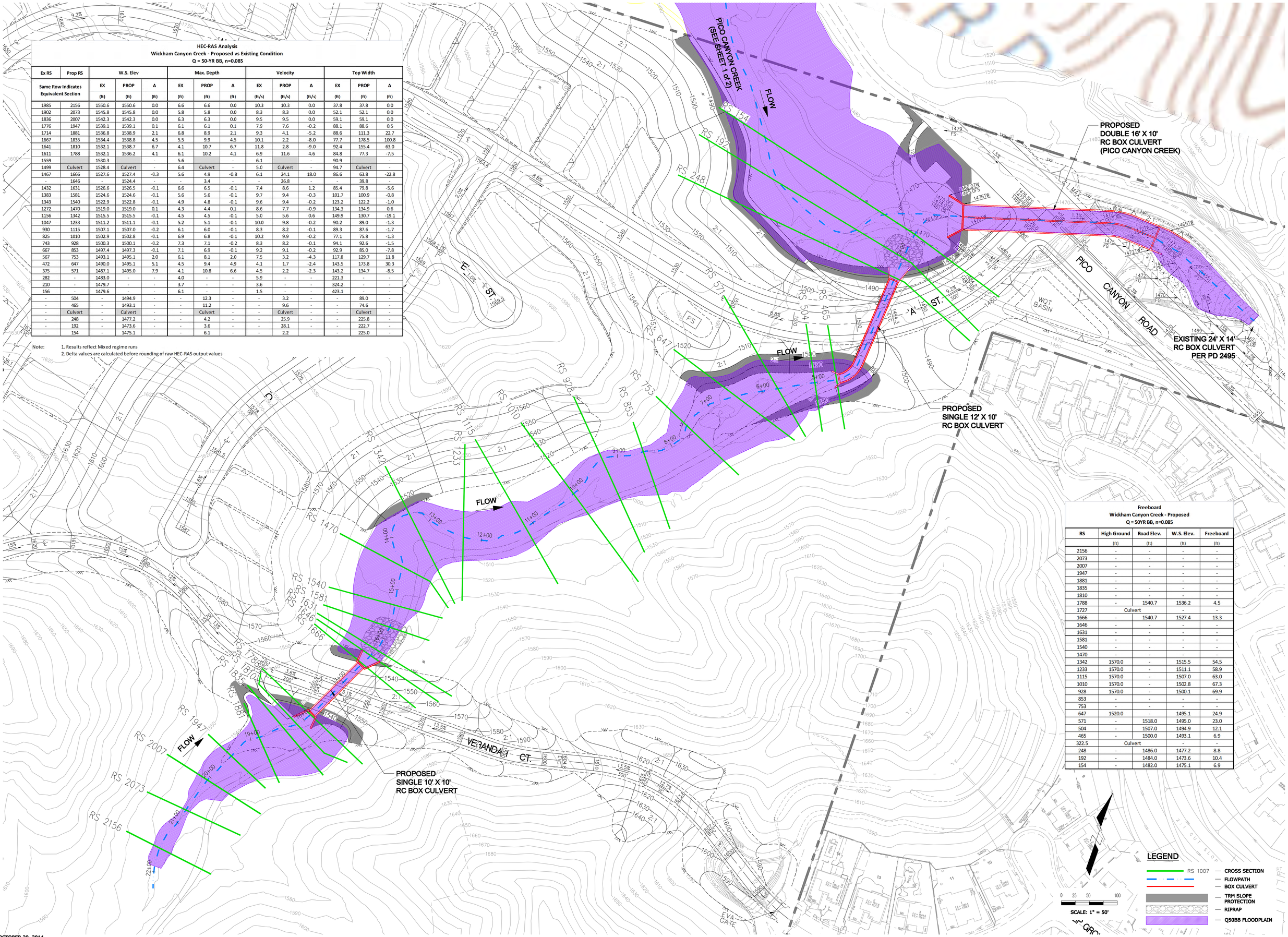
TITLE
PROPOSED CONDITION FLOODPLAIN & IMPACTS

SHEET
7 OF 8

HEC-RAS Analysis
Wickham Canyon Creek - Proposed vs Existing Condition
Q = 50-YR BB, n=0.085

Ex RS	Prop RS	W.S. Elev			Max. Depth			Velocity			Top Width		
Same Row Indicates Equivalent Section		EX	PROP	Δ	EX	PROP	Δ	EX	PROP	Δ	EX	PROP	Δ
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft/s)	(ft/s)	(ft)	(ft)	(ft)
1985	2156	1550.6	1550.6	0.0	6.6	6.6	0.0	10.3	10.3	0.0	37.8	37.8	0.0
1902	2073	1545.8	1545.8	0.0	5.8	5.8	0.0	8.3	8.3	0.0	52.1	52.1	0.0
1836	2007	1542.3	1542.3	0.0	6.3	6.3	0.0	9.5	9.5	0.0	59.1	59.1	0.0
1776	1947	1539.1	1539.1	0.1	6.1	6.1	0.1	7.9	7.6	-0.2	88.1	88.6	0.5
1714	1881	1536.8	1538.9	2.1	6.8	8.9	2.1	9.3	4.1	-5.2	88.6	111.3	22.7
1667	1835	1534.4	1538.8	4.5	5.5	9.9	4.5	10.1	2.2	-8.0	77.7	178.5	100.8
1641	1810	1532.1	1538.7	6.7	4.1	10.7	6.7	11.8	2.8	-9.0	92.4	155.4	63.0
1611	1788	1532.1	1536.2	4.1	6.1	10.2	4.1	6.9	11.6	4.6	84.8	77.3	-7.5
1559		1530.3		-	5.6		-	6.1		-	90.9		-
1499	Culvert	1528.4	Culvert	-	6.4	Culvert	-	5.0	Culvert	-	94.7	Culvert	-
1467	1666	1527.6	1527.4	-0.3	5.6	4.9	-0.8	6.1	24.1	18.0	86.6	63.8	-22.8
-	1646	-	1524.4	-	-	3.4	-	-	26.8	-	-	39.8	-
1432	1631	1526.6	1526.5	-0.1	6.6	6.5	-0.1	7.4	8.6	1.2	85.4	79.8	-5.6
1383	1581	1524.6	1524.6	-0.1	5.6	5.6	-0.1	9.7	9.4	-0.3	101.7	100.9	-0.8
1343	1540	1522.9	1522.8	-0.1	4.9	4.8	-0.1	9.6	9.4	-0.2	123.2	122.2	-1.0
1272	1470	1519.0	1519.0	0.1	4.3	4.4	0.1	8.6	7.7	-0.9	134.3	134.9	0.6
1156	1342	1515.5	1515.5	-0.1	4.5	4.5	-0.1	5.0	5.6	0.6	149.9	130.7	-19.1
1047	1233	1511.2	1511.1	-0.1	5.2	5.1	-0.1	10.0	9.8	-0.2	90.2	89.0	-1.3
930	1115	1507.1	1507.0	-0.2	6.1	6.0	-0.1	8.3	8.2	-0.1	89.3	87.6	-1.7
825	1010	1502.9	1502.8	-0.1	6.9	6.8	-0.1	10.2	9.9	-0.2	77.1	75.8	-1.3
743	928	1500.3	1500.1	-0.2	7.3	7.1	-0.2	8.3	8.2	-0.1	94.1	92.6	-1.5
667	853	1497.4	1497.3	-0.1	7.1	6.9	-0.1	9.2	9.1	-0.2	92.9	85.0	-7.8
567	753	1493.1	1495.1	2.0	6.1	8.1	2.0	7.5	3.2	-4.3	117.8	129.7	11.8
472	647	1490.0	1495.1	5.1	4.5	9.4	4.9	4.1	1.7	-2.4	143.5	173.8	30.3
375	571	1487.1	1495.0	7.9	4.1	10.8	6.6	4.5	2.2	-2.3	143.2	134.7	-8.5
282	-	1483.0	-	-	4.0	-	-	5.9	-	-	221.3	-	-
210	-	1479.7	-	-	3.7	-	-	3.6	-	-	324.2	-	-
156	-	1479.6	-	-	6.1	-	-	1.5	-	-	423.1	-	-
-	504	-	1494.9	-	-	12.3	-	-	3.2	-	-	89.0	-
-	465	-	1493.1	-	-	11.2	-	-	9.6	-	-	74.6	-
-	Culvert	-	Culvert	-	-	Culvert	-	-	Culvert	-	-	Culvert	-
-	248	-	1477.2	-	-	4.2	-	-	25.9	-	-	225.8	-
-	192	-	1473.6	-	-	3.6	-	-	28.1	-	-	222.7	-
-	154	-	1475.1	-	-	6.1	-	-	2.2	-	-	225.0	-

Note:
1. Results reflect Mixed regime runs
2. Delta values are calculated before rounding of raw HEC-RAS output values



Freeboard
Wickham Canyon Creek - Proposed
Q = 50YR BB, n=0.085

RS	High Ground	Road Elev.	W.S. Elev.	Freeboard
	(ft)	(ft)	(ft)	(ft)
2156	-	-	-	-
2073	-	-	-	-
2007	-	-	-	-
1947	-	-	-	-
1881	-	-	-	-
1835	-	-	-	-
1810	-	-	-	-
1788	-	1540.7	1536.2	4.5
1727	Culvert		-	-
1666	-	1540.7	1527.4	13.3
1646	-	-	-	-
1631	-	-	-	-
1581	-	-	-	-
1540	-	-	-	-
1470	-	-	-	-
1342	1570.0	-	1515.5	54.5
1233	1570.0	-	1511.1	58.9
1115	1570.0	-	1507.0	63.0
1010	1570.0	-	1502.8	67.3
928	1570.0	-	1500.1	69.9
853	-	-	-	-
753	-	-	-	-
647	1520.0	-	1495.1	24.9
571	-	1518.0	1495.0	23.0
504	-	1507.0	1494.9	12.1
465	-	1500.0	1493.1	6.9
322.5	Culvert		-	-
248	-	1486.0	1477.2	8.8
192	-	1484.0	1473.6	10.4
154	-	1482.0	1475.1	6.9

OCTOBER 20, 2014

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PROJECT
WICKHAM CANYON CREEK HYDRAULIC STUDY FOR STEVENSON RANCH

TITLE
PROPOSED CONDITION FLOODPLAIN & IMPACTS

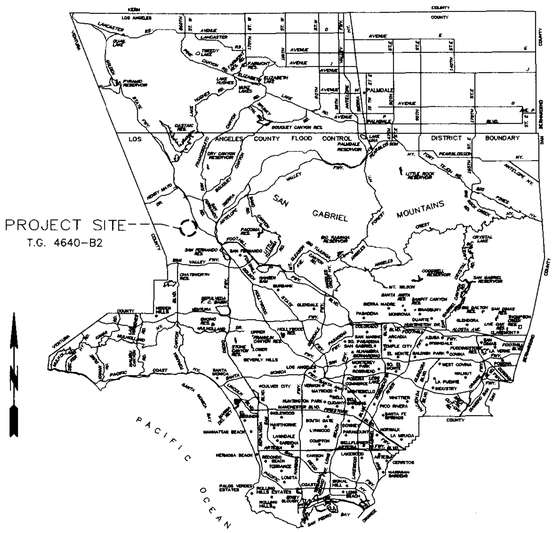
SHEET
8 OF 8

BENCH MARKS L 3026
R.D.B.M. TAG IN S CB 8.2M W/O BCR @
SW COR LYONS AVE. & WILEY CANYON RD.
30.5M W/O & 12.2M S/O C/L INT
(NR W END CB)
NEWHALL 1995 ELEV.= 1265.296

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
PRIVATE DRAIN NO. 2495
TRACT NO.'s 43896-04, -05, -07 & 43896

STORM DRAIN PLANS IN
TRACT NO.'s 43896-04, -05,-07, & 43896 P.D. NO. 2495

393-F33.1-35



LOCATION MAP

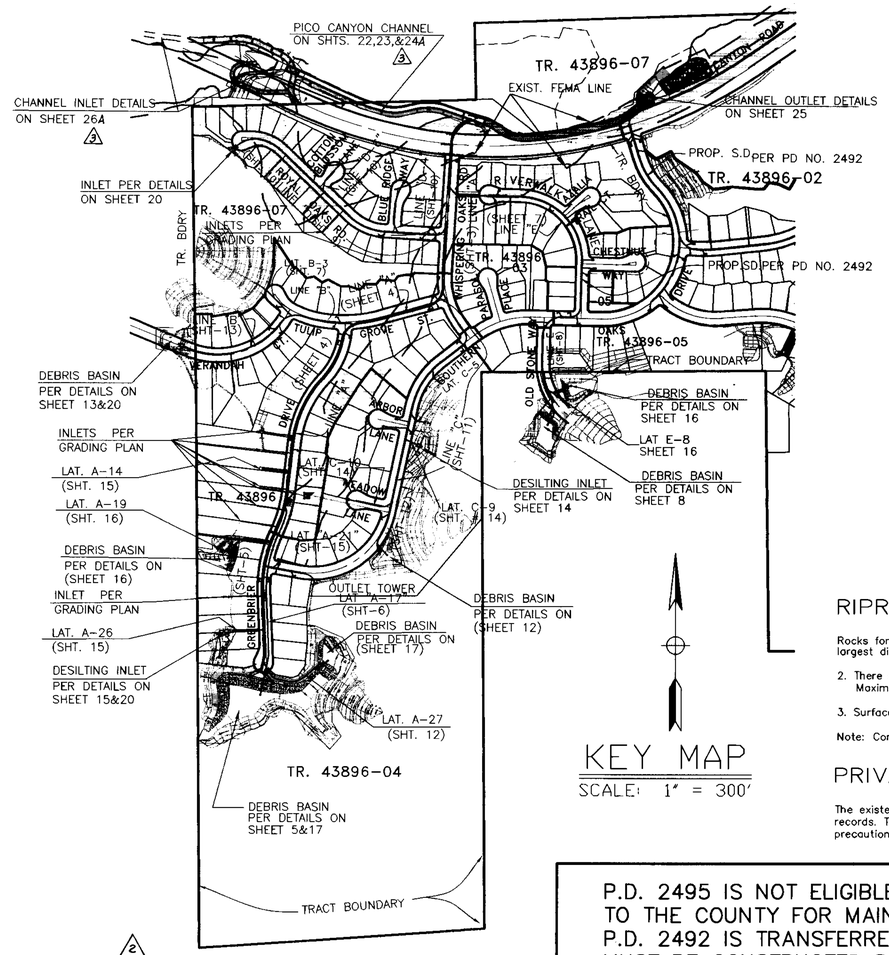
INDEX TO STANDARD DRAWINGS

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

DWG. NO.	DESCRIPTION
3092-0	PIPE BEDDING FOR PRIVATE DRAINS
6008-0	MINIMUM PUBLIC SAFETY REQUIREMENTS
3080-1	PIPE BEDDING IN TRENCHES

AMERICAN PUBLIC WORKS ASSOCIATION

STD. PLAN	TITLE
110-1	DRIVEWAY APPROACHES
224-1	SUPPORTS FOR CONDUITS ACROSS TRENCHES
225-1	BLANKET PROTECTION FOR PIPES
300-2	CURB OPENING C.B.
301-2	CURB OPENING C.B. W/GRATINGS & DEBRIS SKIMMER
308-1	MONOLITHIC CONNECTION
309-1	C.B. REINFORCEMENT
310-1	C.B. FACE PLATE ASSEMBLY AND PROTECTION BAR
311-2	FRAME GRATING FOR C.B.
312-2	C.B. M.H. FRAME AND COVER
313-1	LOCAL DEPRESSION AT C.B.
320-1	MANHOLE NO. 2
321-1	MANHOLE NO. 1
322-1	MANHOLE NO. 4
323-1	MANHOLE-CONC. BOX STORM DRAIN
324-1	CONC. RINGS REDUCER & PIPE FOR M.H. SHAFT
331-2	JUNCTION STRUCTURE NO. 2
332-1	JUNCTION STRUCTURE-PIPE TO PIPE 24" DIA.
340-1	TRANSITION STRUCTURE NO. 3
342-1	TRANSITION STRUCTURE-RCB TO PIPE
360-1	PROTECTION BARRIER
361-0	TRASH RACK (INCLINED)
380-2	CONCRETE COLLAR
381-1	ABANDONMENT SEALS FOR MANHOLES AND INLETS
383-1	VELOCITY CONTROL RING PRECAST RCP SECTION
600-1	CHAIN LINK FENCE AND GATES
630-2	24" MANHOLE FRAME AND COVER
635-2	STANDARD DROP STEP
330-1	MANHOLE SHAFT SAFETY LEDGE
221-1	PIPE ANCHORS
225-1	BLANKET PROTECTION FOR PIPE



KEY MAP
SCALE: 1" = 300'

INDEX TO PROJECT DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES, WATER QUALITY NOTES, HYDRAULIC ELEMENTS
3	PLAN AND PROFILE, LINE "A"
4	PLAN AND PROFILE, LINE "A"
5	PLAN AND PROFILE, LINE "A"
6	PLAN AND PROFILE, TOWER OUTLET LATERAL A-17
7	PLAN AND PROFILE, LINE "E"& LAT. B-3"
8	PLAN AND PROFILE, LINE "E"
9	PLAN AND PROFILE, LINE "D"
10	PLAN AND PROFILE, LINE "D" , LAT. D-4 & LAT. D-6
11	PLAN AND PROFILE, LINE "C"
12	PLAN AND PROFILE, LINE "C" & LAT. A-27
13	PLAN AND PROFILE, LINE "B"
14	PLAN AND PROFILE, LATERALS "C-8 & C-9"
15	PLAN AND PROFILE, LATERALS "A-14, A-21,A-26"
16	PLAN AND PROFILE, LATERALS "A-19 & E-8"
17	LINE "A" DEBRIS BASIN
18	LINE "A" DEBRIS BASIN-CROSS SECTIONS
19	OUTLET TOWER DETAILS
20	INLET STRUCTURE AND MISC. DETAILS
21	DESILTING INLET DETAILS
22	PLAN AND PROFILE- PICO CANYON CHANNEL (STA 17+00 TO 24+00)
23	PLAN AND PROFILE- PICO CANYON CHANNEL (STA 24+00 TO 33+02.28)
3 24A	PLAN AND PROFILE- PICO CANYON CHANNEL (STA 33+02.28 TO 40+00)
25	PICO CANYON CHANNEL OUTLET DETAILS
3 26A	PICO CANYON CHANNEL INLET DETAILS
27	OPEN CHANNEL STRUCTURAL DETAILS
28	DOUBLE BOX STRUCTURAL DETAILS
29	SINGLE RC. BOX - STRUCTURAL DETAIL SHEET
30	STRUCTURAL DETAILS
2 ~~31~~ (VOID)	~~STRUCTURAL DETAILS~~
31A	STRUCTURAL DETAILS (REPLACES SH. 31)
4 32	FENCE, GATE, & WALL DETAILS

RIPRAP NOTES

Rocks for grouted riprap shall be good quality broken concrete and/or river run rock. The smallest dimensions shall exceed 6 inches and the largest dimension shall not exceed 24 inches. The largest dimension shall not exceed 4 times the smallest dimension.

2. There shall be a grout bed of at least 2 inches beneath the first layer of rocks. All the voids between the rocks shall be filled with grout. Maximum spacing between rocks shall be 2 inches.

3. Surface rocks shall be imbeded from 1/2 to 2/3 of their maximum dimension.

Note: Concrete may be substituted for grout.

PRIVATE ENGINEERS NOTICE TO CONTRACTORS

The existence and location of any underground utility pipes or structures shown on these plans are obtained by a search of the available records. To the best of our knowledge, there are no existing utilities except as shown on this map. The contractor is required to take due precautionary measures to protect the utility lines shown and any other lines not of record or shown on this drawing.

Warren L Smith
RCE SIGNATURE

SEPT. 6, 2000
DATE

PF546937

P.D. 2495 IS NOT ELIGIBLE FOR TRANSFER TO THE COUNTY FOR MAINTENANCE UNTIL P.D. 2492 IS TRANSFERRED AND P.D. 2492 MUST BE CONSTRUCTED BEFORE OR CONCURRENT WITH P.D. 2495

2
1 ~~PARTIAL APPROVAL - EXCLUDING ALL WORK WITHIN ZONE "A" WHICH IS SHOWN ON SHEETS 6, 7, 8, 10, AND 22 THRU 30~~

APPROVED HARRY W. STONE DIRECTOR OF PUBLIC WORKS
BY Phil Dowson ASSISTANT DIVISION ENGINEER 9/18/00 DATE

RECOMMENDED LAND DEVELOPMENT DIVISION
BY SUBDIVISION PLAN CHECKING SECTION 9/19/00 DATE

SUBMITTED
BY SUBDIVISION PLAN CHECKING SECTION 9/18/00 DATE

NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	REVISE PARTIAL APPROVAL NOTE.	S.R. CONSULT. Warren L Smith C13818 10-17-00	B. Hamt	10/23/00
2	DELETE PARTIAL APPROVAL NOTE. REVISE DWG INDEX.	S.R. CONSULT. Warren L Smith C13818 1-05-01	B. Hamt	1/08/01
3	VOID SHEET 24 & 26; REPLACED BY SHEET 24A & 26A	SR CONSULTANTS Warren L Smith C13818 6-14-01		6/21/01
4	ADD DETAIL SHEET & REVISE TOTAL NUMBER OF SHEETS	S.R. CONSULT. Warren L Smith C13818 10/30/01		11/8/01
5	REMOVE EXISTING DEBRIS BASIN AND LAT. E-8 ON SHEET 16. ADD LAT. E-1, E-2 AND E-3 ON SHEET 8.	S.R. CONSULTANTS Warren L Smith C13818 3/22/05	M.O. Safford	5/18/05

REGISTERED PROFESSIONAL ENGINEER WARREN L. SMITH No. 13818 Exp. 3-31-01 CIVIL STATE OF CALIFORNIA

Warren L Smith 9/6/00
PROJECT ENGINEER DATE

STORM DRAIN PLANS IN
TRACT NO. 43896-04-05-07 AND 43896 P.D. NO. 2495
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

PREPARED BY:
SR CONSULTANTS,INC.
ENGINEERING . LAND PLANNING . LAND SURVEYING
PASADENA, CALIFORNIA 91107
Phone : (626) 683-0430
Fax : (626) 683-9058

SR CONSULTANTS

4

TITLE SHEET | SHEET 1 OF ~~31~~ 32

393-F33.1-35

FILE I:\PROJECTS\891-001 AIDLIN\Storm Drain\TR43896-03 & 04\Sheet1.dwg
09-01-00

Q= 4881 c.f.s.

33+02.28 E.C. & MATCH LINE SEE SHEET 23

33+73.83 B.C.

34+17.40 E.C.

EXISTING GROUND

C.L. 8" DEEP X 5' WIDE NOTCH IN NORTH CHANNEL WALL FOR DOWNDRAIN OVERFLOW

FINISHED SURFACE AND TOP OF NORTH & SOUTH CHANNEL WALL

SUPER ELEV. DEPTH

HYDRAULIC DEPTH

12' HIGH WALL

W.S.

35+56.00 END OF 12' HIGH CHN. WALL & BEGIN WALL HEIGHT TRANSITION

VERTICAL WALL TRANSITION

36+06.00 G.B.

36+46.00 END OF 22'W. CHN. AND BEGIN OF CHN. WIDTH TRANS.

36+71.00 END OF REF. SECT.

36+76.00 END OF RECT. CONC. CHN. AND BEGIN OF 24'W X 14'H R.C.BOX

FOR HEADWALL DETAILS SEE SHEET 30

37+58.00 C.L. U.S.

37+75.00 EDGE OF H.W.

37+80.00 D.S.

38+00.00 T.S.

38+25.00 T.S.

38+50.000 T.S.

38+75.00 T.S.

39+00.00 T.S.

39+25.00 T.S.

39+50.00 T.S.

39+75.00 T.S.

40+00.00 T.S.

TOP OF NORTH WING WALL

TOP OF SOUTH WING WALL

TOP OF PAVED SLOPE AND PICO ROAD (N.)

TOP OF SLOPE PAVING (S.)

JOIN EXIST F.L.

S= 0.012500

S= 0.01250

S= 0.0100

S= 0.1200

S= 0.1000

S= 0.06000

S= 0.04000

S= 0.0200

S= 0.01600

CONST. 253.72 L.F. OF 12'H X 22'W RECT. CONC. CHN. PER DETAIL SHEET 27

CONST. 120 L.F. OF VAR. W X VAR H. PER PROFILE

99 L.F. OF 24'W X 14'H R.C.BOX PER DETAILS SHT.29

C.L. CHANNEL CURVE DATA

(1)
Δ 08°19'15"
R 300.00'
L 43.57'
T 21.82'

TR. 43896-07

EXIST. FEMA LINE

EXISTING WATER SURFACE FOR Q50 BURN & BULK

EXISTING WATER SURFACE

15" SEWER

PICO CANYON ROAD

16'W. DBL. DRIVE GATE PER APWA STD. 600-1

TR. BOUNDARY

400' 24" RCP. LOW FLOW SD.

NOT TO BE MAINTAINED BY LACFCD.

JOIN P.C. PAVEMENT

15'WIDE ACCESS RD. PER DETAIL HEREON

22' WIDE RC. CHANNEL

STA. 33+81

STA. 34+68

STA. 35+77

N 65°34'18" W

287.31'

REALIGNED PICO CANYON ROAD (SEE GRADING PLAN)

20'W. EASEMENT TO L.A.C.F.C.D. FOR ACCESS RD. PURPOSES

END FENCE

5' HIGH CHAIN LINK R/W FENCE PER APWA STD. 600-1

N 67°57'37" W 70.07'

5' HIGH CHAIN LINK WALL FENCE PER APWA STD. 600

PROP. FEMA LINE

EXISTING WATER SURFACE FOR Q50 BURN & BULK

VARIABLE WIDTH EASEMENT TO LACFCD FOR FLOOD CONTROL PURPOSES

EXIST. FEMA LINE

5' HIGH CHAIN LINK R/W FENCE PER APWA STD. 600-1

PROPOSED FEMA LINE

INLET STRUCTURE PER DETAIL SHEET 26

END FENCE

EXISTING WATER SURFACE FOR Q50 BURN & BULK

EXIST. ROAD

JOIN

SECTION R – R
ACCESS ROAD DETAIL
N.T.S.

15' W.
3" A.C. ON 4" C.A.B.
2"X6" REDWOOD HEADER

SEC. "P-P"
ACCESS ROAD DETAIL
N.T.S.

15' W
2%
3" A.C. ON 4" C.A.B.
2"X6" REDWOOD HEADER
PROPOSED CONC. RECT. CONC. CHAN. WALL

SEC. "Q-Q"
ACCESS ROAD DETAIL
N.T.S.

15' R/W
14' ROAD
3" A.C. ON 4" C.A.B.
6" CONC. W/ 6"X 6" #10 X #10 W.W.F.
CUT-OFF WALL

GRAPHIC SCALE
SCALE : 1"=40'

DOWNDRAINS W/5'W. SPLASH PADS PER GRADING PLAN JOIN TO 8' DEEP NOTCH IN TOP OF CHANNEL WALL (5'WIDE) (NOT TO BE MAINTAINED BY LACFCD)

35+56.00 BEGIN TRANSITION WALL HEIGHT

47' WIDE EASEMENT TO LACFCD FOR FLOOD CONTROL PURPOSES.

36+46.00 END OF 22'W. RECT. CONC. CHN. AND BEGIN OF RECT. CONC. CHN. TRANS.

36+71.00 REF. SECT. 23'W X 21.40'H

36+76.00 REF. SECT. 24'W X 21.64' RECT. CONC. CHN. AND BEGIN OF 24'W X 14'H R.C.BOX

37+56.00 C.L. U.S. WITH R.C.B. WALL PER APWA STD. 334-1

32 LF 24"RCP 2000D. S=0.67 (MAT'L-1)

5' HIGH CHAIN LINK HEADWALL FENCE PER APWA STD. 600-1

37+75.00 FACE OF H.W. CONST. INLET STRUCTURE PER DETAIL SHT. 26

37+80.00 C.B. PER STR.STA. 1+1.70 C.B. PER 300-1 W=7' V=5' DETAIL SHT. 26

BACK OPENING PER GR PL / STD. 314-2 FOR CONN. TO DOWNDRAIN

RECT. CONC. CHANNEL SEE PER STRUCTURAL DETAILS ON SHEET 27

REVIEWED AND DEVELOPMENT APPROVED BY: SUBDIVISION PLAN CHECKING SECTION — DATE 6/21/01

NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	REPLACEMENT SHEET FOR VOIDED SHEET 24 OF 31 PICO CANYON CHANNEL	S. R. CONSULT. W.M.L. SMITH C13818 5-1-01		6/21/01
2	REVISE TOTAL NUMBER OF SHEET	S. R. CONSULT. C13818 10/30/01		11-9-01

REGISTERED PROFESSIONAL ENGINEER WARREN L. SMITH No. 13818 Exp. 3-31-05 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER — DATE 6/18/01

EASEMENT LINE DATA:

LINE	BEARING	DISTANCE
L1	N 73°53'33" W	29.54'
L4	N 65°34'18" W	39.21'
L5	N 65°51'34" E	16.29'
L6	N 81°59'54" E	31.02'
L7	N 88°45'24" E	51.51'
L8	N 88°38'10" E	35.44'

EASEMENT CURVE DATA:

CURVE	DELTA	RADIUS	LENGTH	TANGENT
C2	08°19'15"	284.00'	41.24'	20.66'
C4	01°10'16"	271.00'	5.54'	2.77'
C5	14°05'06"	271.00'	66.62'	33.48'
C10	22°50'18"	271.00'	108.02'	54.74'
C11	33°05'20"	231.00'	133.41'	68.62'
C12	48°10'49"	231.00'	194.25'	103.28'
C14	15°05'29"	231.00'	60.84'	30.60'
C15	23°02'36"	229.00'	92.10'	46.68'
C16	16°58'47"	269.00'	79.72'	40.15'
C17	01°15'10"	269.00'	5.88'	2.94'
C18	04°40'41"	269.00'	21.96'	10.99'
C19	11°02'56"	269.00'	51.87'	26.02'
C20	23°35'23"	182.00'	74.93'	38.00'
C21	23°35'23"	203.00'	83.58'	42.39'
C22	153°02'43"	55.50'	148.25'	231.58'
C23	153°02'43"	34.50'	92.15'	143.95'
C24	131°15'00"	34.50'	79.03'	76.14'
C25	21°47'43"	34.50'	13.12'	6.64'
C26	41°56'42"	82.87'	60.67'	31.76'
C27	48°34'06"	50.00'	42.38'	22.56'

PF546961

STORM DRAIN PLANS IN
TRACT No. 43896-04-05-07 AND 43896 P.D. No. 2495

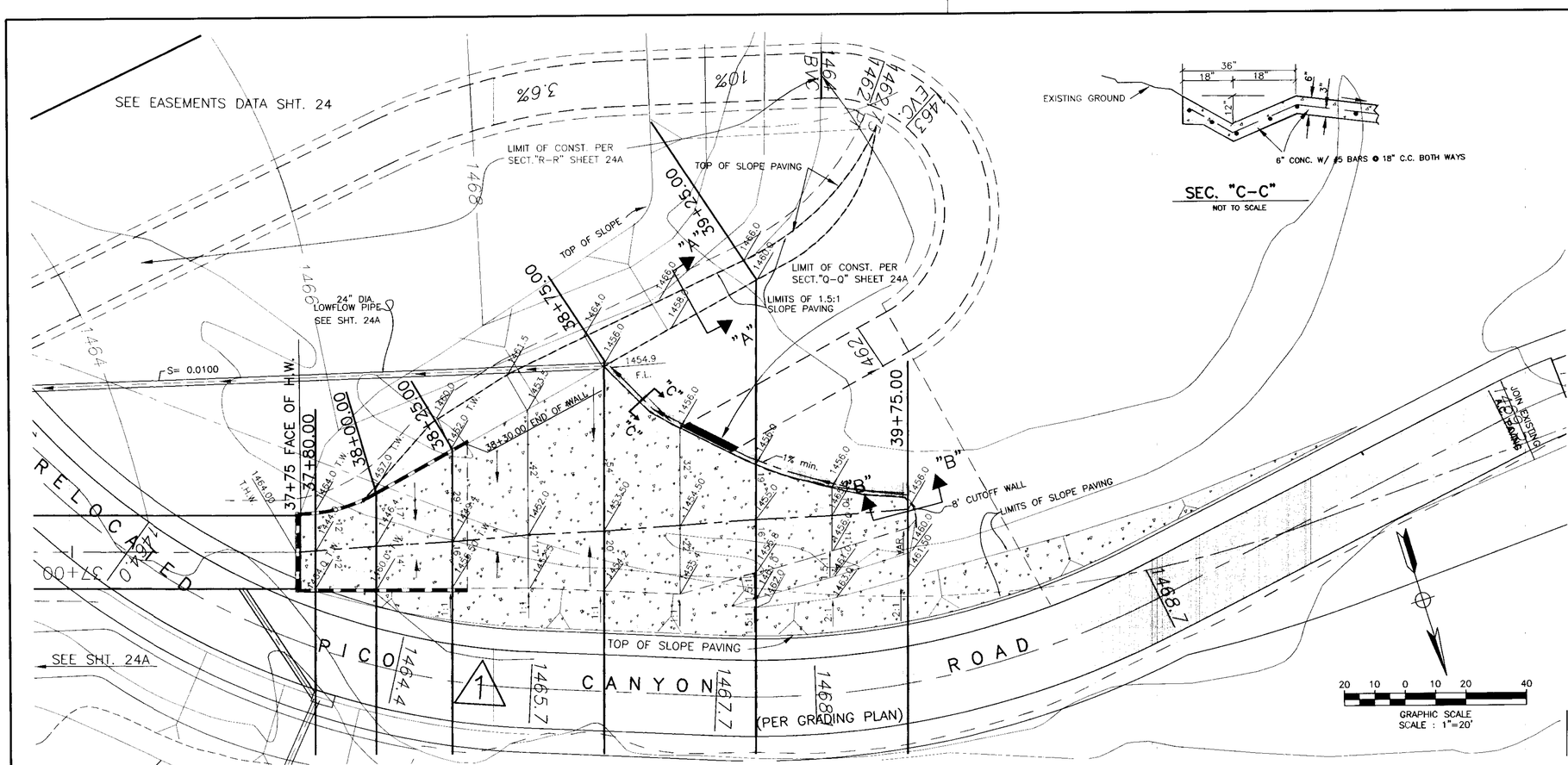
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SR CONSULTANTS

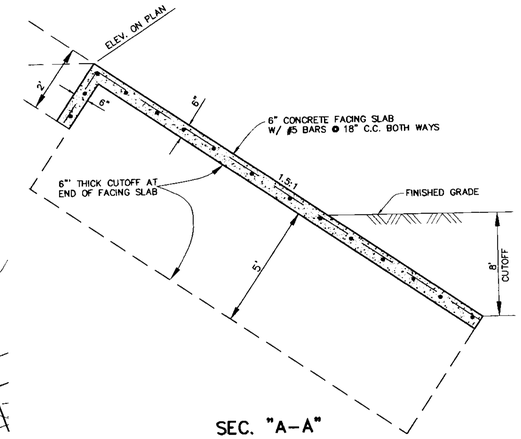
SR CONSULTANTS, INC.
LAND PLANNING ENGINEERING SURVEYING
2698 MATARO STREET
PASADENA, CALIFORNIA 91107
Phone : (626) 683-0430
Fax : (626) 683-9058

DWG PICO CYN. CHANNEL — SHEET 24A OF ~~34~~ 32

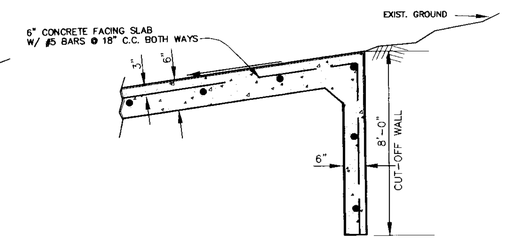
FILE I:\PROJECTS\B91-001 AIDLIN\storm-drain channel\CHNPPSD3A.dwg
6-21 2001



SEC. "C-C"
NOT TO SCALE

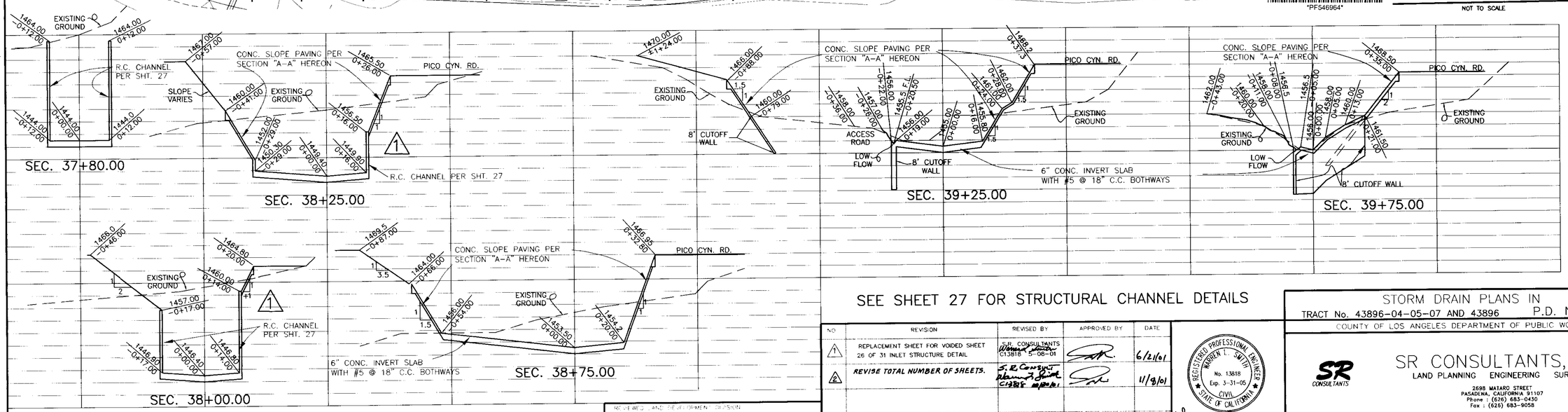


SEC. "A-A"
CONCRETE SLOPE PAVING (FACING SLAB)
NOT TO SCALE



SEC. "B-B"
BOTTOM SLAB
NOT TO SCALE

PF546964



SEE SHEET 27 FOR STRUCTURAL CHANNEL DETAILS

NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	REPLACEMENT SHEET FOR VOIDED SHEET 26 OF 31 INLET STRUCTURE DETAIL	S.R. CONSULTANTS C13818 5-08-01		6/21/01
2	REVISE TOTAL NUMBER OF SHEETS.	S.R. Consult. C13818		11/9/01

REVIEWED AND RECOMMENDED FOR APPROVAL
BY: 6/21/01
SUBDIVISION PLAN CHECKING SECTION DATE

REGISTERED PROFESSIONAL ENGINEER WARREN L. SMITH No. 13818 Exp. 3-31-05 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

STORM DRAIN PLANS IN
TRACT No. 43896-04-05-07 AND 43896 P.D. No. 2495
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SR CONSULTANTS

SR CONSULTANTS, INC.
LAND PLANNING ENGINEERING SURVEYING
2698 MATARO STREET
PASADENA, CALIFORNIA 91107
Phone : (626) 683-0430
Fax : (626) 683-9058

PICO CYN. CHANNEL INLET DETAILS

SHEET 26A OF ~~31~~ 32

FILE I:\PROJECTS\B91-001 AIDLIN\storm-drain-channel\INLET-DETAIL-SFC.dwg
REV. 06-21-2001

APPENDIX C

HEC-RAS MODEL OUTPUT

AIDLIN HILLS HYDRAULIC STUDY
OCTOBER 2014

HEC-RAS MODEL OUTPUT

Existing Condition

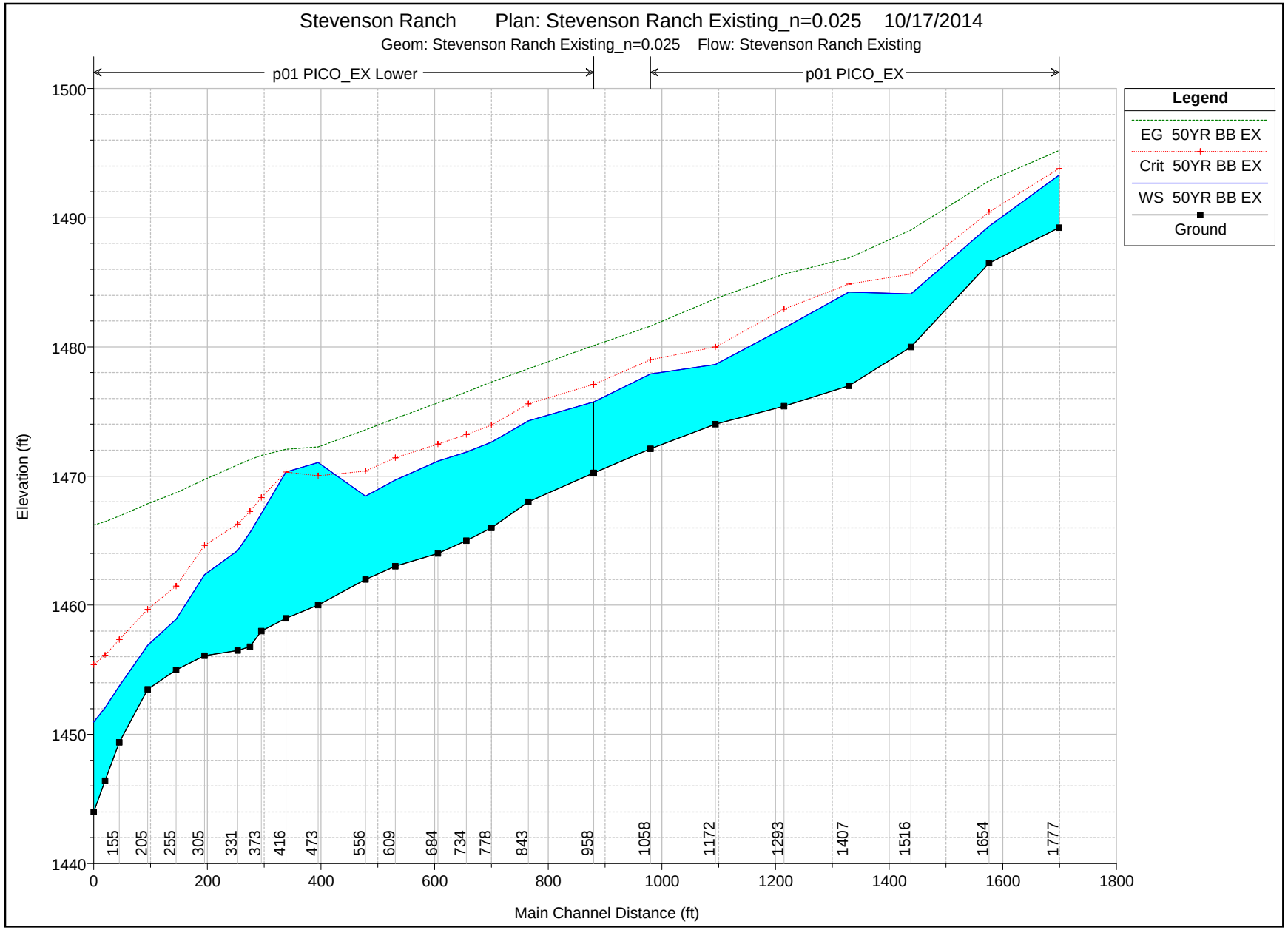
Pico Canyon Creek

Q50BB

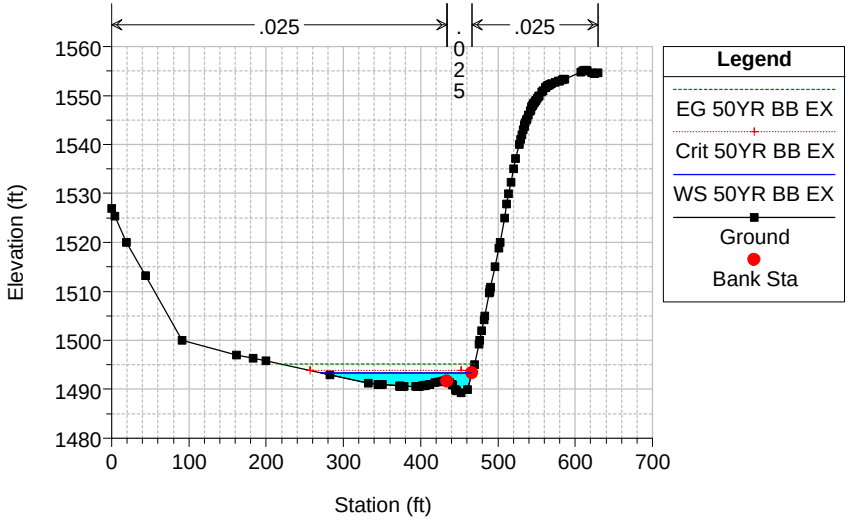
n=0.025

HEC-RAS Plan: EX_n=0.025 Profile: 50YR BB EX

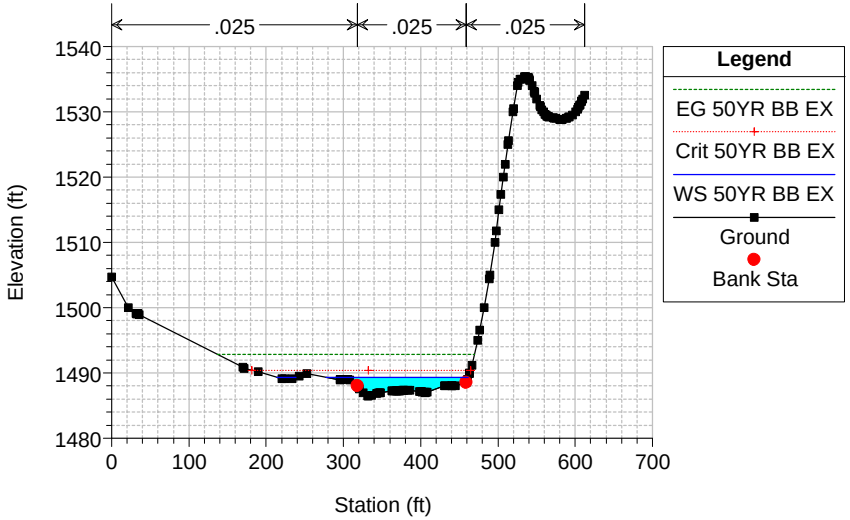
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PICO_EX	1777	50YR BB EX	4320.00	1489.24	1493.30	1493.81	1495.20	0.012508	13.08	399.37	195.47	1.37
PICO_EX	1654	50YR BB EX	4320.00	1486.47	1489.35	1490.43	1492.87	0.026680	15.22	298.51	208.67	1.91
PICO_EX	1516	50YR BB EX	4320.00	1480.00	1484.09	1485.63	1489.03	0.026949	17.84	242.21	97.35	1.99
PICO_EX	1407	50YR BB EX	4320.00	1477.00	1484.23	1484.86	1486.89	0.007935	14.23	340.44	145.04	1.12
PICO_EX	1293	50YR BB EX	4320.00	1475.40	1481.47	1482.91	1485.65	0.011634	17.21	303.37	156.66	1.42
PICO_EX	1172	50YR BB EX	4320.00	1474.00	1478.62	1480.00	1483.73	0.020638	19.32	286.04	205.23	1.84
PICO_EX	1058	50YR BB EX	5230.00	1472.10	1477.91	1479.00	1481.60	0.011801	18.20	433.92	245.52	1.46
PICO_EX Lower	958	50YR BB EX	5230.00	1470.25	1475.74	1477.09	1480.12	0.017358	17.27	341.88	204.99	1.67
PICO_EX Lower	843	50YR BB EX	5230.00	1468.00	1474.26	1475.60	1478.31	0.012871	16.68	369.88	212.53	1.48
PICO_EX Lower	778	50YR BB EX	5230.00	1466.00	1472.63	1473.95	1477.26	0.018050	19.19	359.11	229.95	1.72
PICO_EX Lower	734	50YR BB EX	5230.00	1465.00	1471.83	1473.22	1476.51	0.016229	19.25	361.43	215.86	1.65
PICO_EX Lower	684	50YR BB EX	5230.00	1464.00	1471.16	1472.46	1475.66	0.015755	19.23	376.28	212.43	1.63
PICO_EX Lower	609	50YR BB EX	5230.00	1463.00	1469.68	1471.41	1474.46	0.015629	17.67	310.38	121.02	1.61
PICO_EX Lower	556	50YR BB EX	5230.00	1462.00	1468.46	1470.39	1473.59	0.015830	18.19	289.28	83.10	1.63
PICO_EX Lower	473	50YR BB EX	5230.00	1460.00	1471.06	1470.03	1472.25	0.001825	9.31	665.90	285.51	0.61
PICO_EX Lower	416	50YR BB EX	5230.00	1459.00	1470.32	1470.32	1472.07	0.002718	11.19	566.02	286.01	0.73
PICO_EX Lower	373	50YR BB EX	5230.00	1458.00	1467.09	1468.34	1471.61	0.008326	17.63	321.12	89.95	1.23
PICO_EX Lower	353	50YR BB EX	5230.00	1456.80	1465.61	1467.25	1471.28	0.013309	19.11	273.95	154.20	1.53
PICO_EX Lower	331	50YR BB EX	5230.00	1456.50	1464.23	1466.28	1470.86	0.016160	20.66	253.11	170.34	1.68
PICO_EX Lower	305	50YR BB EX	5230.00	1456.10	1462.36	1464.63	1469.73	0.020927	21.97	241.90	102.91	1.89
PICO_EX Lower	255	50YR BB EX	5230.00	1455.00	1458.92	1461.47	1468.69	0.012721	25.94	234.48	94.55	2.55
PICO_EX Lower	205	50YR BB EX	5230.00	1453.50	1456.90	1459.70	1467.87	0.015439	27.01	206.20	75.20	2.75
PICO_EX Lower	155	50YR BB EX	5230.00	1449.40	1453.75	1457.33	1466.92	0.014031	29.12	179.63	46.49	2.61
PICO_EX Lower	130	50YR BB EX	5230.00	1446.40	1452.06	1456.13	1466.46	0.012421	30.45	171.74	32.26	2.33
PICO_EX Lower	110	50YR BB EX	5230.00	1444.00	1450.95	1455.39	1466.20	0.006566	31.34	166.90	25.70	2.09


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
p01 PICO_EX Lower
p01 PICO_EX
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Elevation (ft)
1500
1490
1480
1470
1460
1450
1440
155
205
255
305
331
373
416
473
556
609
684
734
778
843
958
1058
1172
1293
1407
1516
1654
1777
0
200
400
600
800
1000
1200
1400
1600
1800
Main Channel Distance (ft)

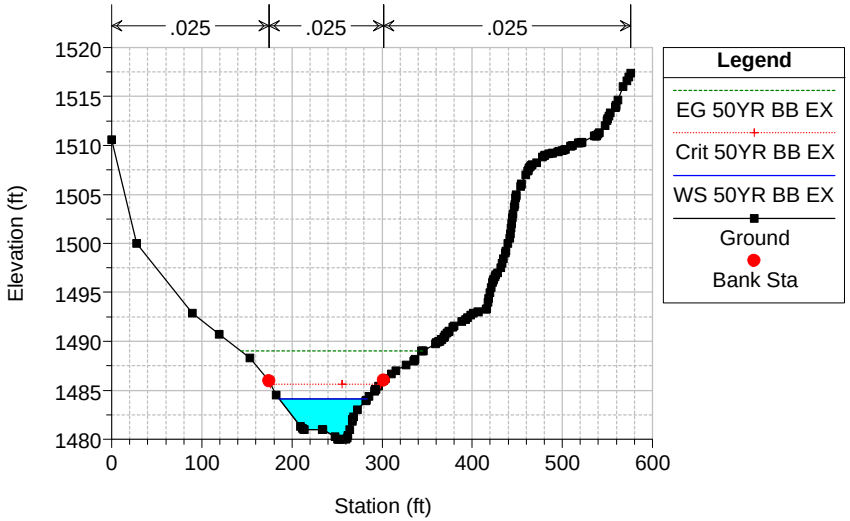
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1777 Most U/S Section



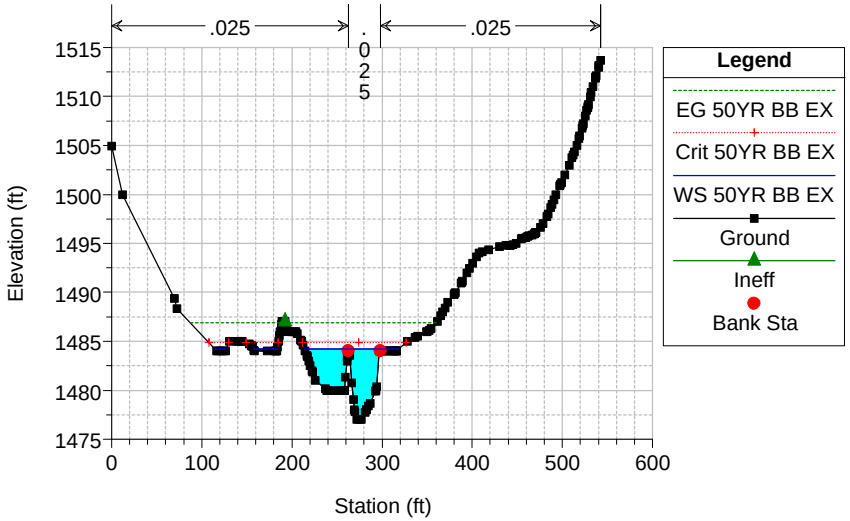
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1654

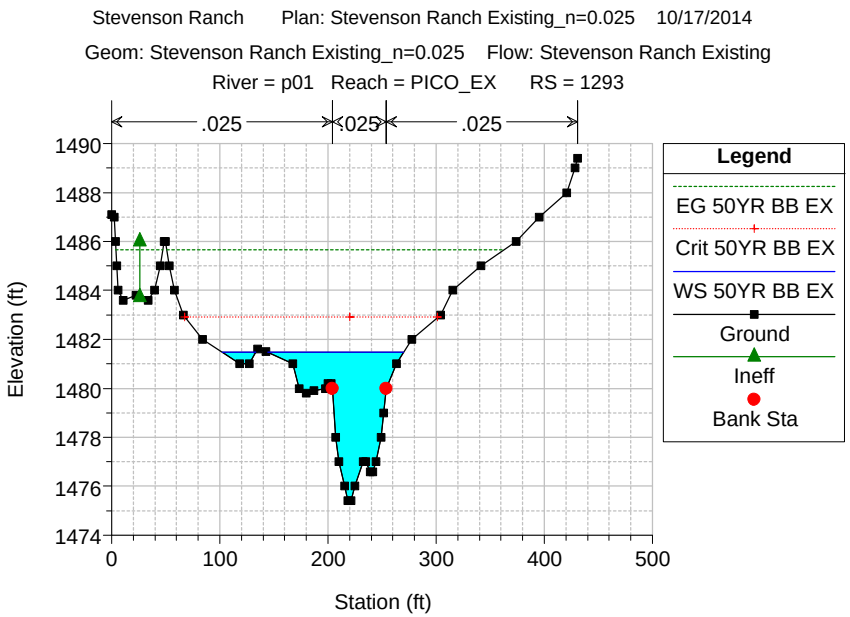


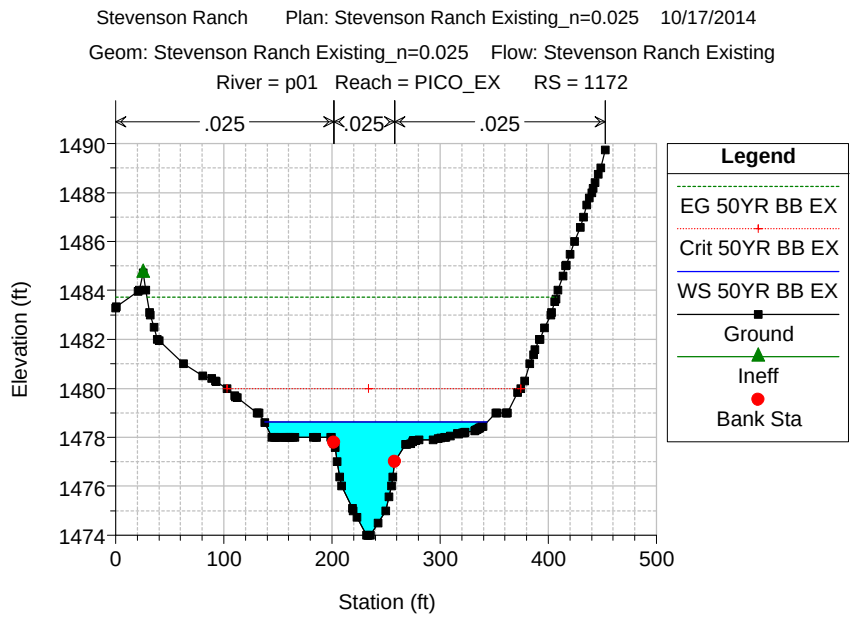
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1516

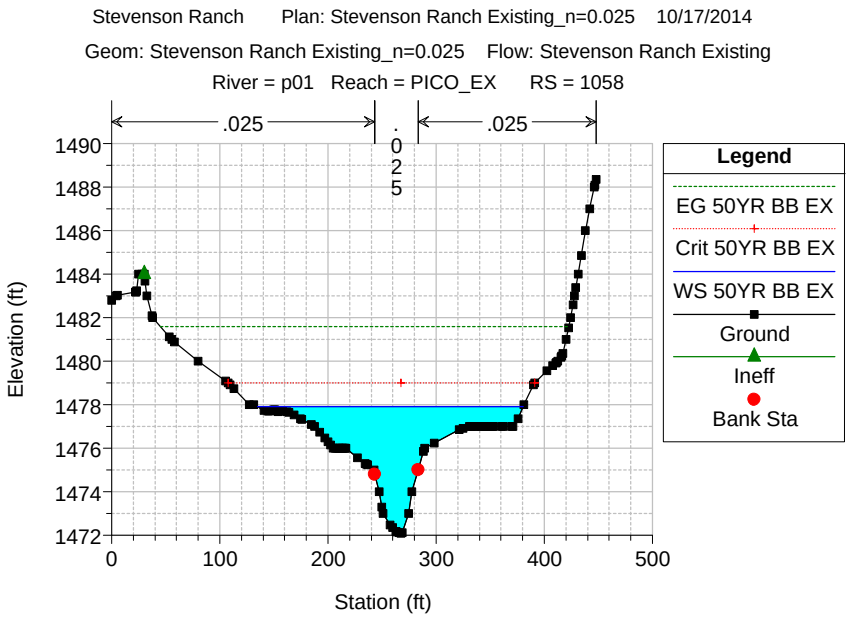


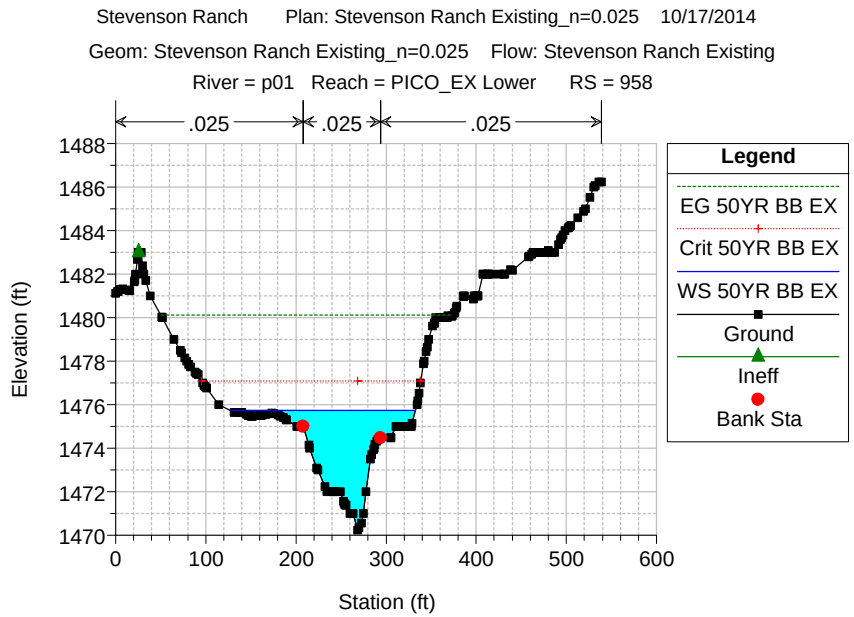
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1407




Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1293
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1172
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1058
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta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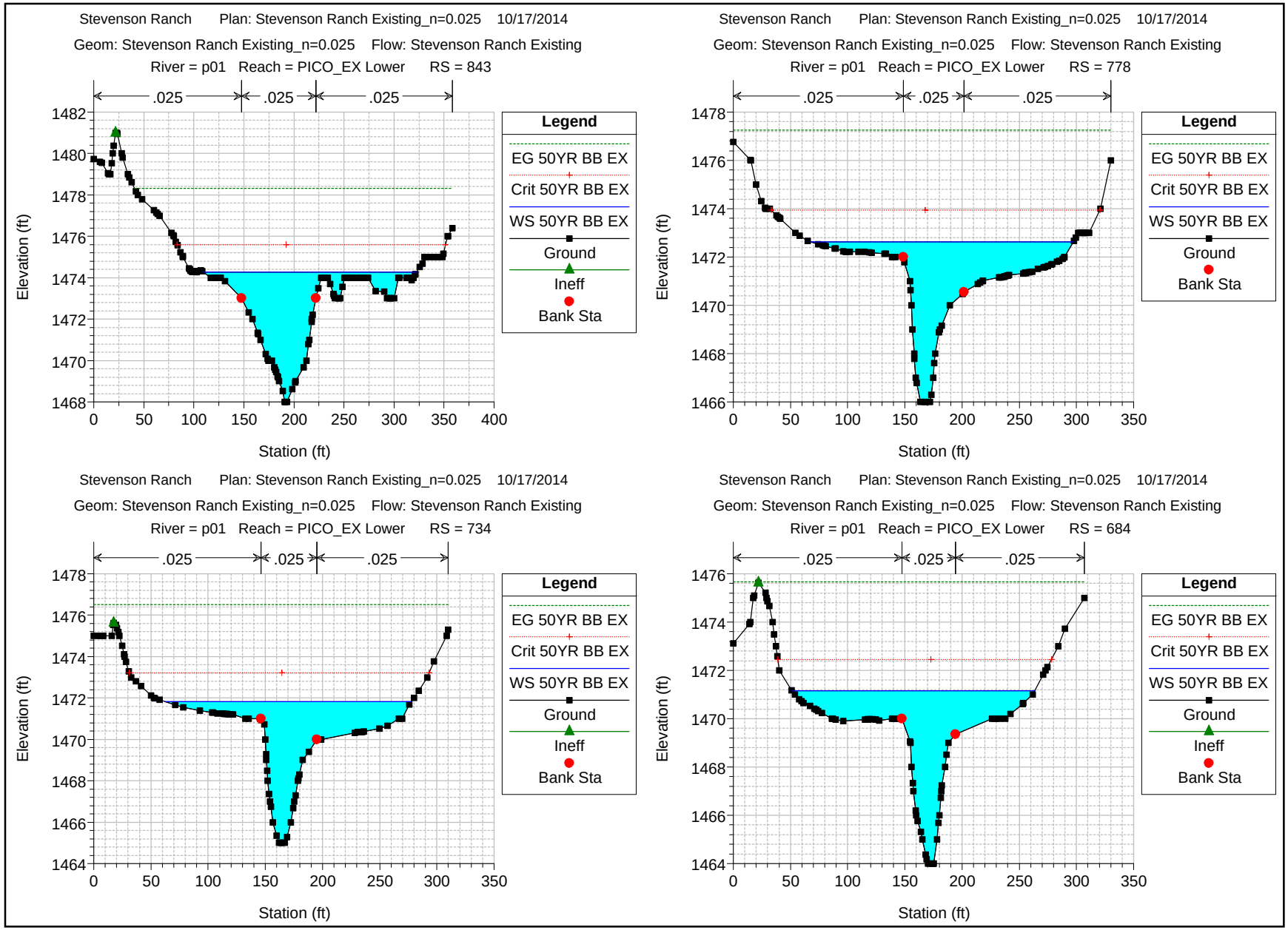
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 958
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta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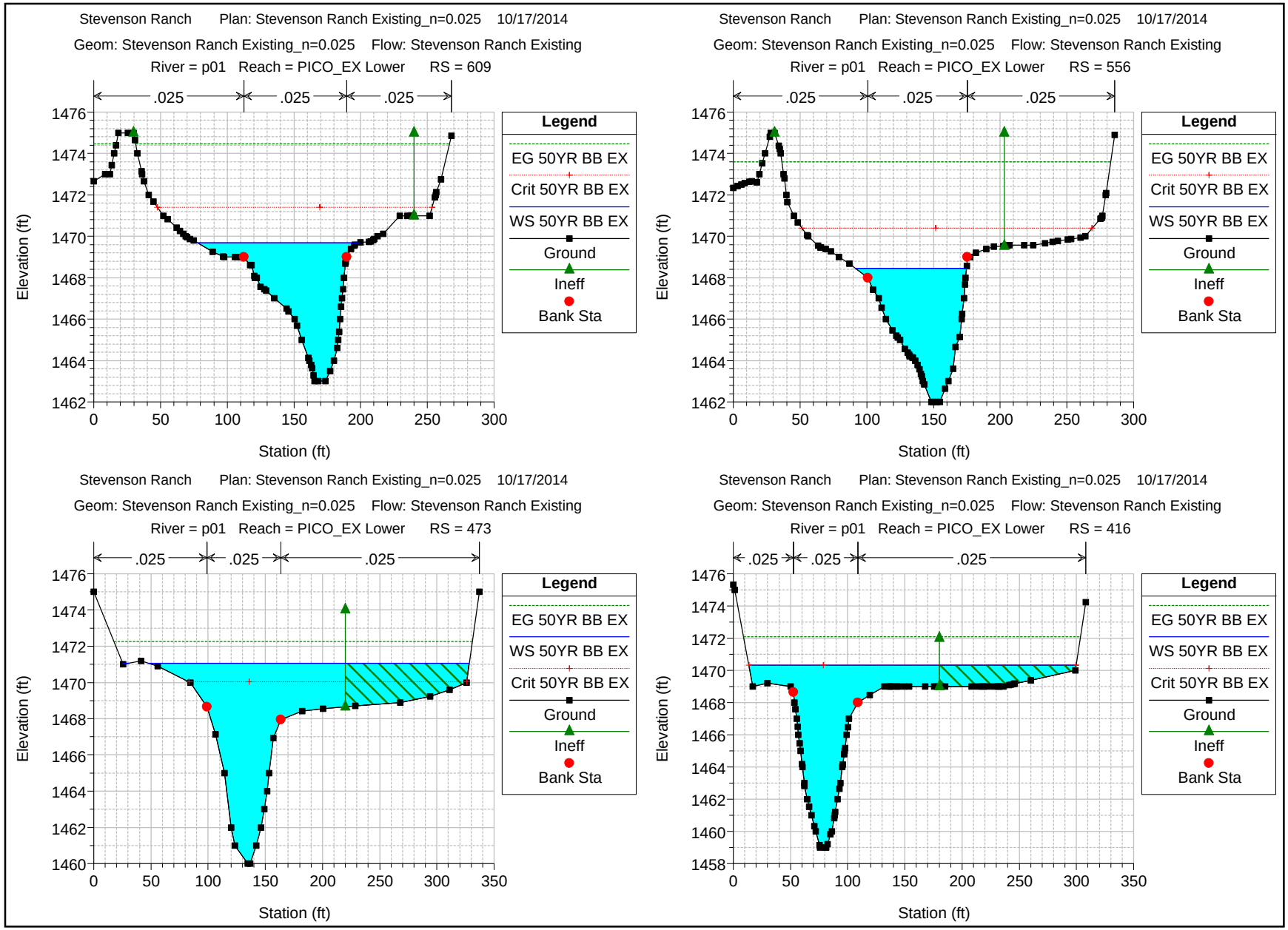
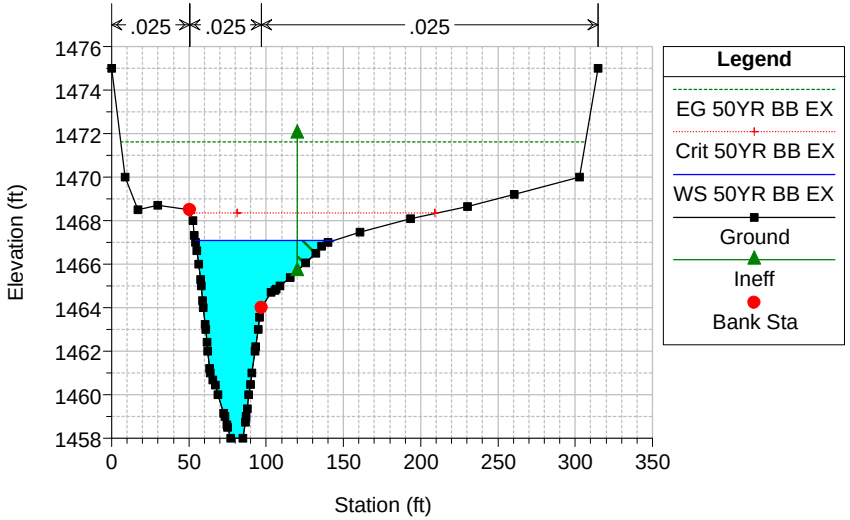
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 843
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 778
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 734
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 684
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 609
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 556
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 473
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 416
.025 .025 .025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

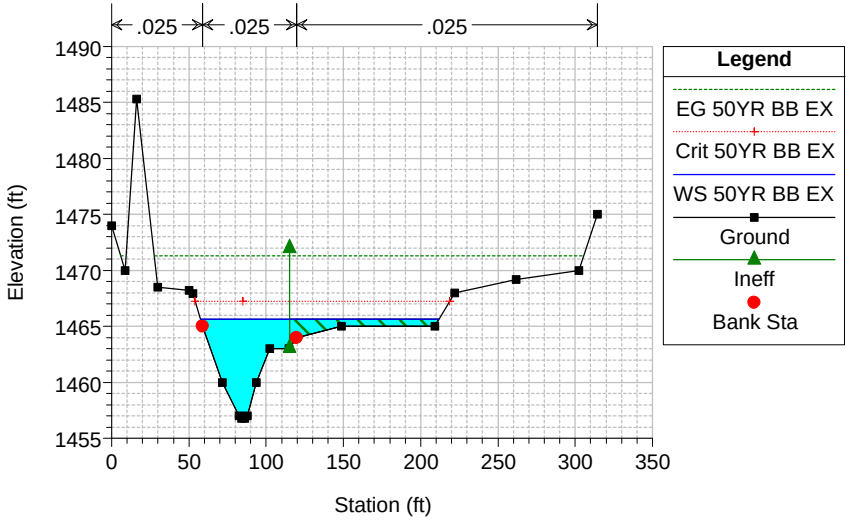
River = p01 Reach = PICO_EX Lower RS = 373



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

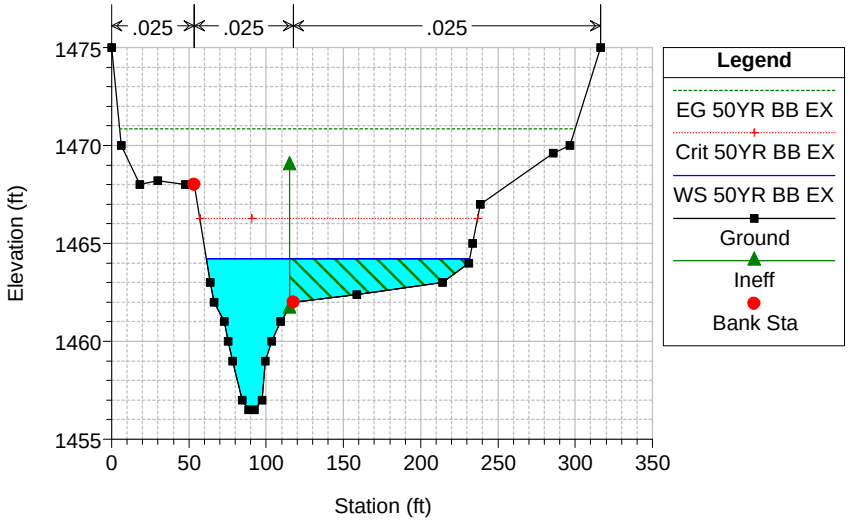
River = p01 Reach = PICO_EX Lower RS = 353



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

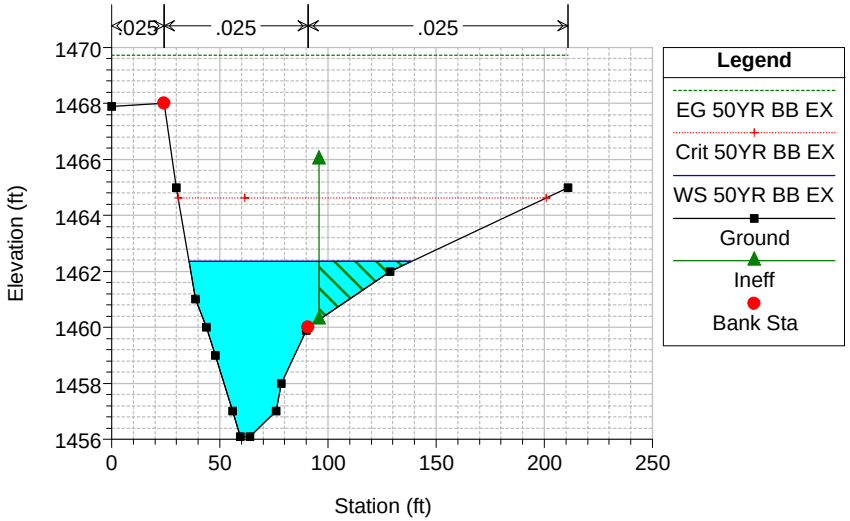
River = p01 Reach = PICO_EX Lower RS = 331



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

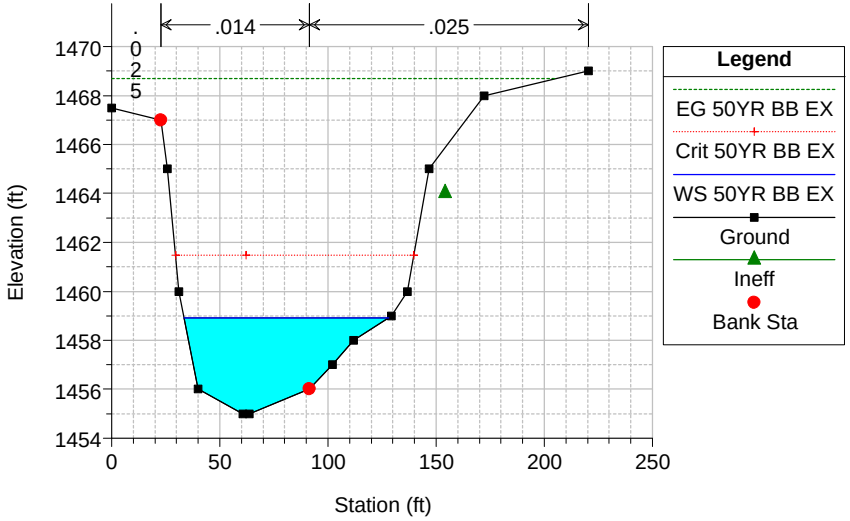
River = p01 Reach = PICO_EX Lower RS = 305 Section is at location of RS 39+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

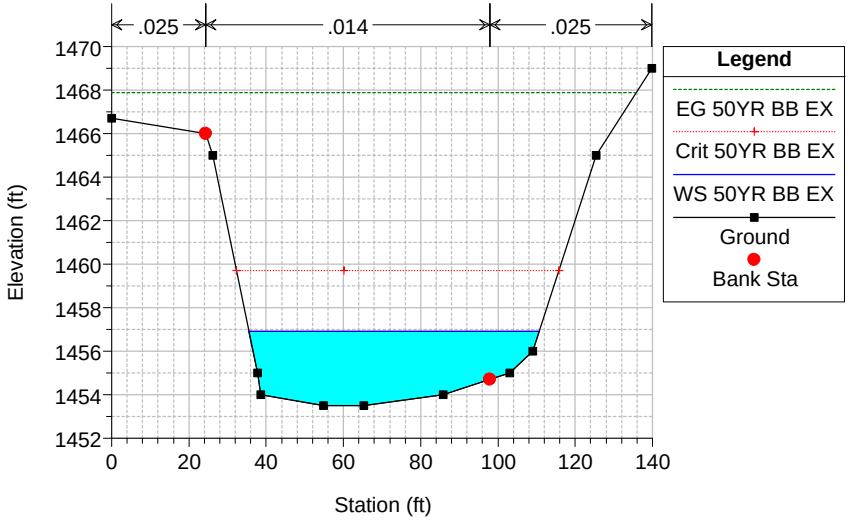
River = p01 Reach = PICO_EX Lower RS = 255 Section is at location of RS 39+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

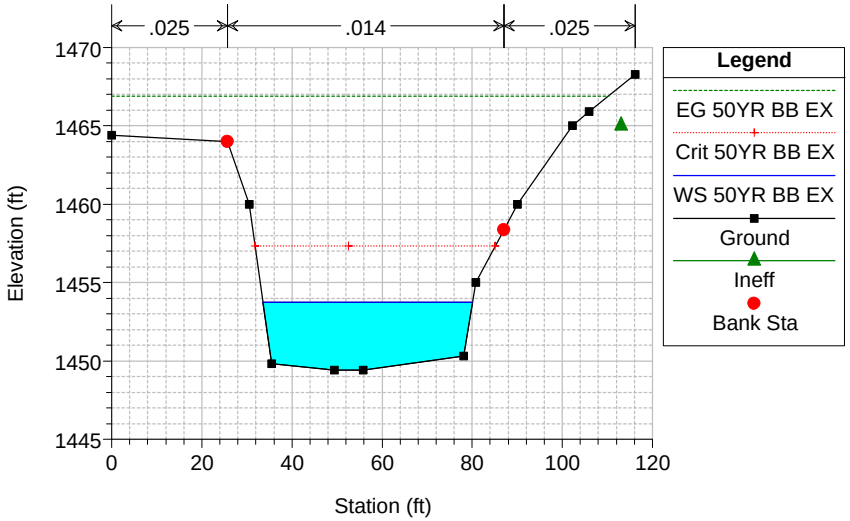
River = p01 Reach = PICO_EX Lower RS = 205 Section is at location of RS 38+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

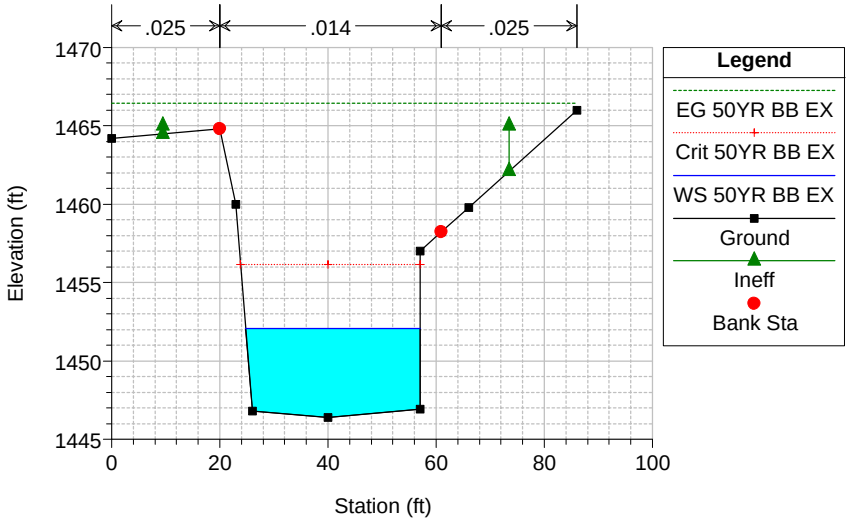
River = p01 Reach = PICO_EX Lower RS = 155 Section is at location of RS 38+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

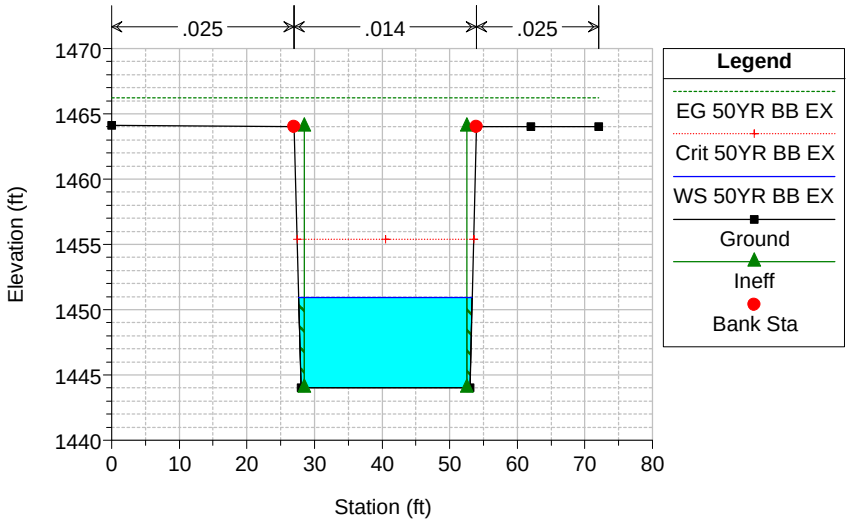
River = p01 Reach = PICO_EX Lower RS = 130 Section is at location of RS 38+00 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

River = p01 Reach = PICO_EX Lower RS = 110 Inlet to 24' x14' RCB. Section is at location of RS 37+80...



HEC-RAS MODEL OUTPUT

Proposed Condition

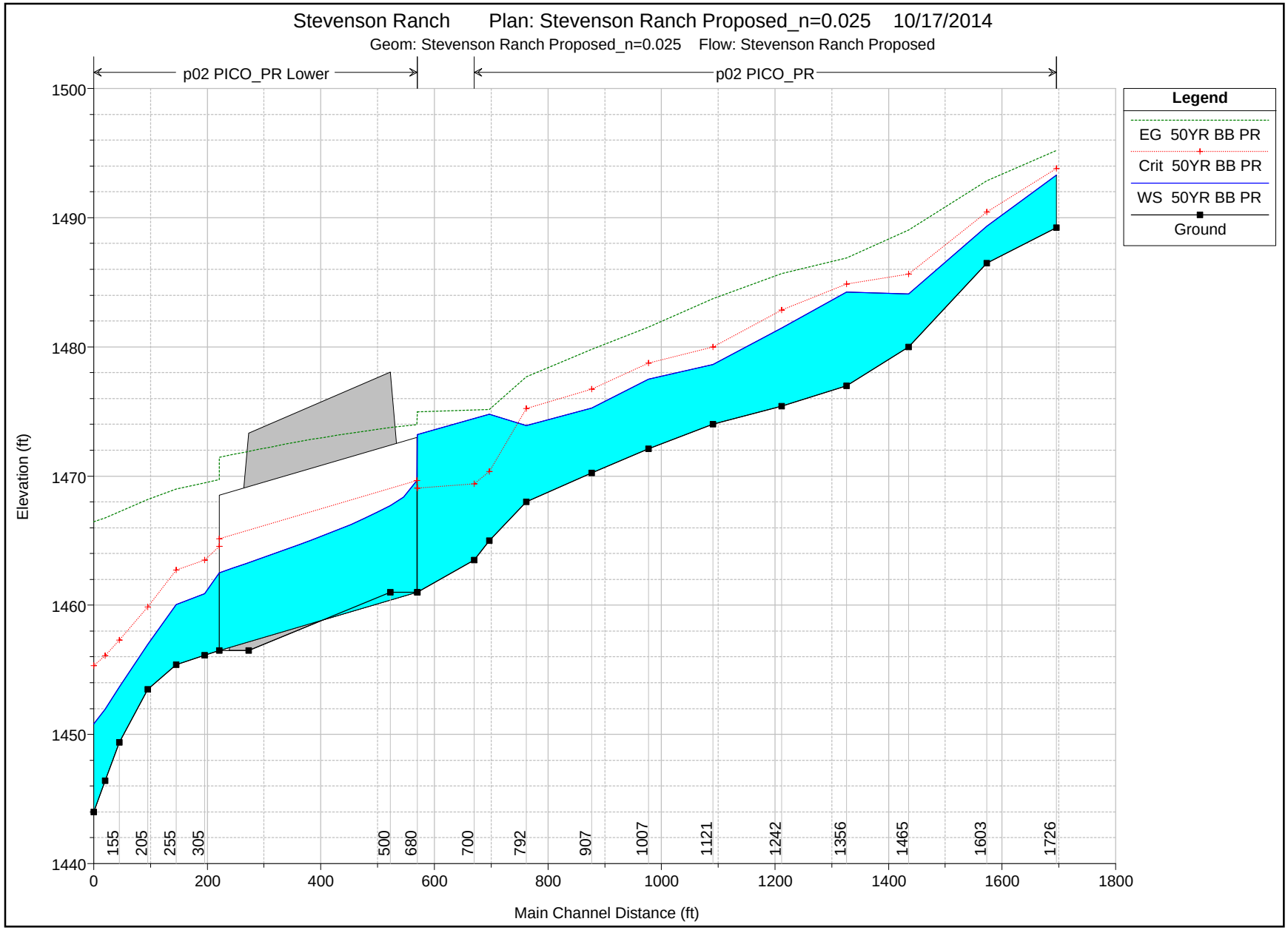
Pico Canyon Creek

Q50BB

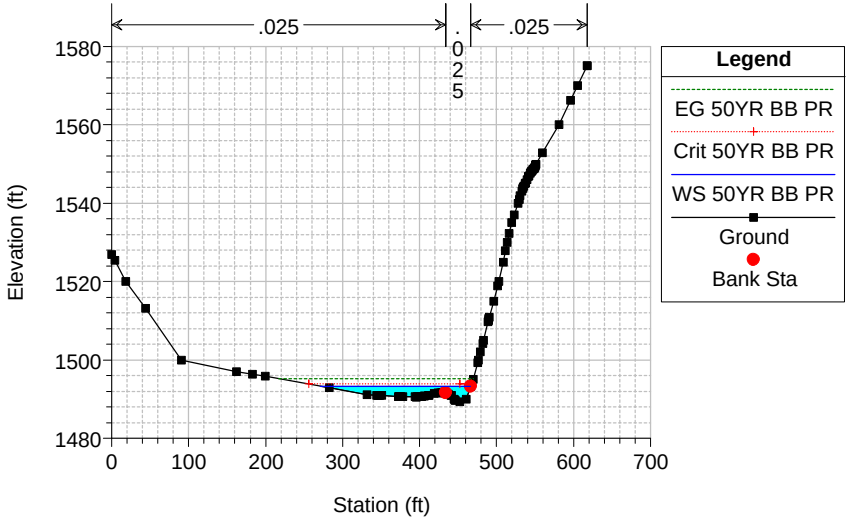
n=0.025

HEC-RAS Plan: PR_n=0.025 Profile: 50YR BB PR

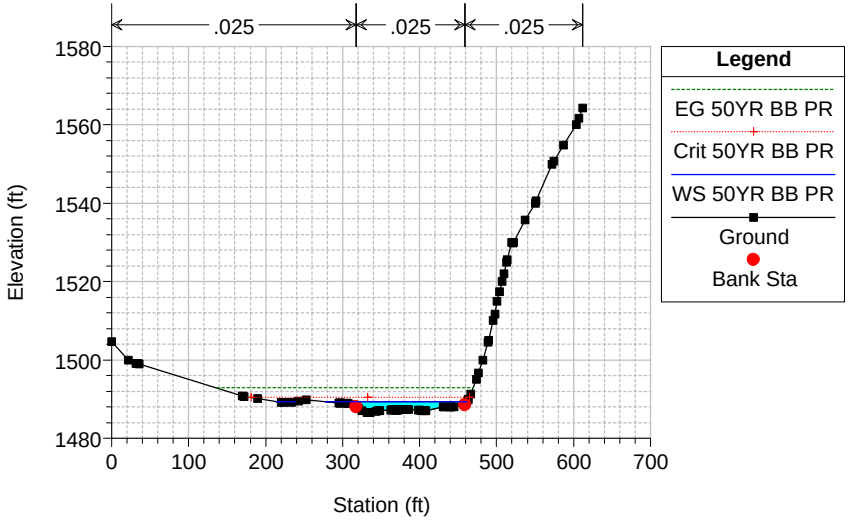
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PICO_PR	1726	50YR BB PR	4320.00	1489.24	1493.30	1493.81	1495.20	0.012508	13.08	399.37	195.47	1.37
PICO_PR	1603	50YR BB PR	4320.00	1486.47	1489.35	1490.43	1492.87	0.026680	15.22	298.51	208.67	1.91
PICO_PR	1465	50YR BB PR	4320.00	1480.00	1484.09	1485.63	1489.03	0.026949	17.84	242.21	97.35	1.99
PICO_PR	1356	50YR BB PR	4320.00	1477.00	1484.24	1484.86	1486.89	0.007924	14.22	340.63	145.11	1.12
PICO_PR	1242	50YR BB PR	4320.00	1475.40	1481.47	1482.86	1485.65	0.011645	17.22	303.22	156.55	1.42
PICO_PR	1121	50YR BB PR	4320.00	1474.00	1478.62	1480.00	1483.73	0.020612	19.32	282.80	192.74	1.83
PICO_PR	1007	50YR BB PR	4320.00	1472.10	1477.48	1478.76	1481.54	0.013498	18.29	328.73	184.25	1.54
PICO_PR	907	50YR BB PR	4320.00	1470.25	1475.28	1476.73	1479.82	0.021250	17.28	264.73	139.66	1.81
PICO_PR	792	50YR BB PR	4320.00	1468.00	1473.89	1475.22	1477.70	0.013296	15.87	293.06	132.43	1.48
PICO_PR	727	50YR BB PR	5190.00	1465.00	1474.78	1470.35	1475.14	0.000403	4.77	1088.82	191.16	0.30
PICO_PR	700	50YR BB PR	5190.00	1463.50	1474.47	1469.39	1475.10	0.000168	6.49	833.91	162.44	0.35
PICO_PR Lower	680	50YR BB PR	5190.00	1461.00	1473.21	1469.07	1474.97	0.000356	10.62	488.47	49.83	0.54
PICO_PR Lower	500		Culvert									
PICO_PR Lower	331	50YR BB PR	5190.00	1456.50	1462.51	1464.57	1469.74	0.003780	21.58	240.52	43.58	1.55
PICO_PR Lower	305	50YR BB PR	5190.00	1456.12	1460.88	1463.50	1469.47	0.008177	23.52	220.64	52.55	2.02
PICO_PR Lower	255	50YR BB PR	5190.00	1455.40	1460.06	1462.71	1469.00	0.009380	24.00	216.22	58.96	2.21
PICO_PR Lower	205	50YR BB PR	5190.00	1453.50	1456.97	1459.88	1468.19	0.014862	26.94	195.47	65.80	2.71
PICO_PR Lower	155	50YR BB PR	5190.00	1449.40	1453.67	1457.31	1467.22	0.014813	29.54	175.70	46.44	2.68
PICO_PR Lower	130	50YR BB PR	5190.00	1446.40	1451.95	1456.08	1466.75	0.013034	30.87	168.13	32.23	2.38
PICO_PR Lower	110	50YR BB PR	5190.00	1444.00	1450.81	1455.33	1466.47	0.006940	31.76	163.40	25.68	2.15


Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
p02 PICO_PR Lower
p02 PICO_PR
Legend
EG 50YR BB PR
Crit 50YR BB PR
WS 50YR BB PR
Ground
Elevation (ft)
1500
1490
1480
1470
1460
1450
1440
0
200
400
600
800
1000
1200
1400
1600
1800
Main Channel Distance (ft)
155
205
255
305
500
680
700
792
907
1007
1121
1242
1356
1465
1603
1726

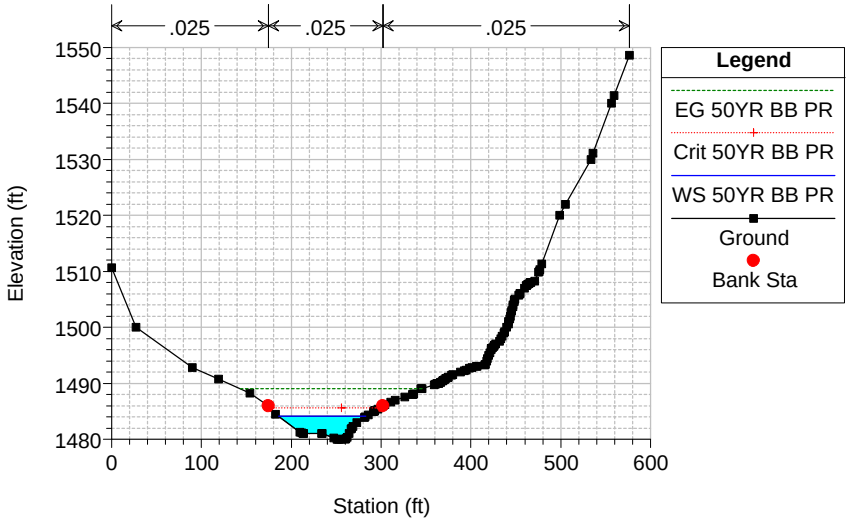
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1726 Most U/S Section



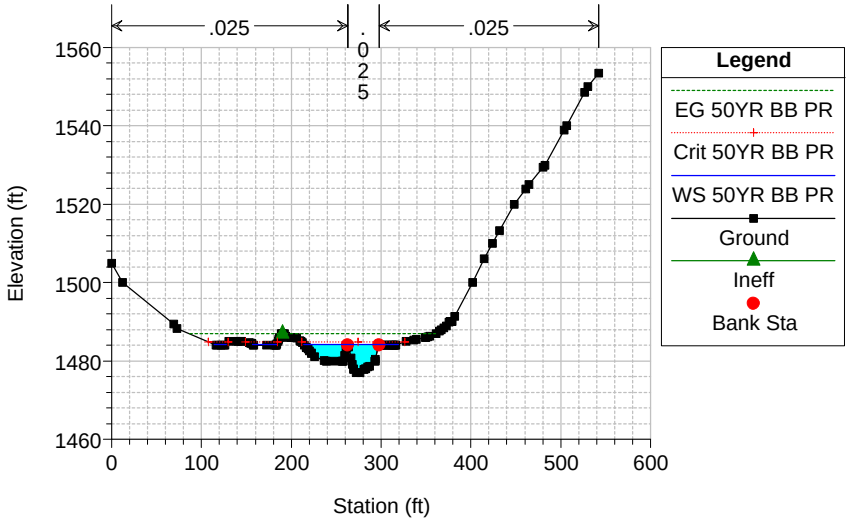
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1603



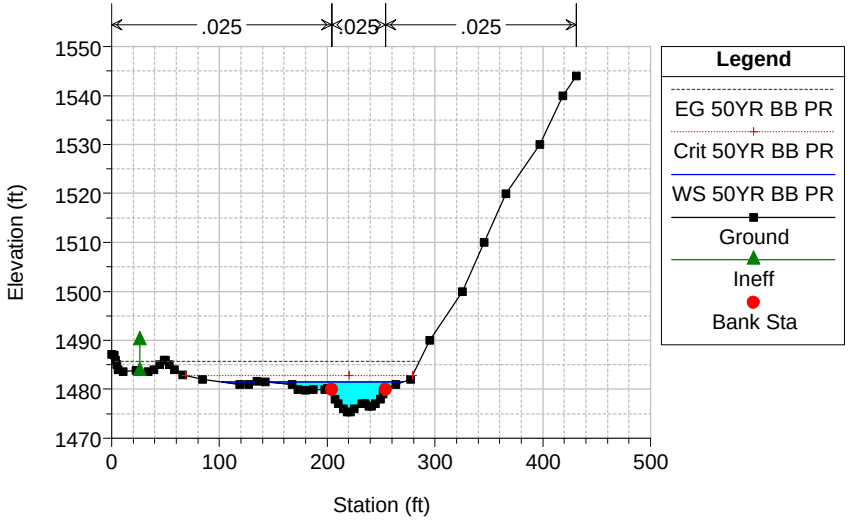
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1465



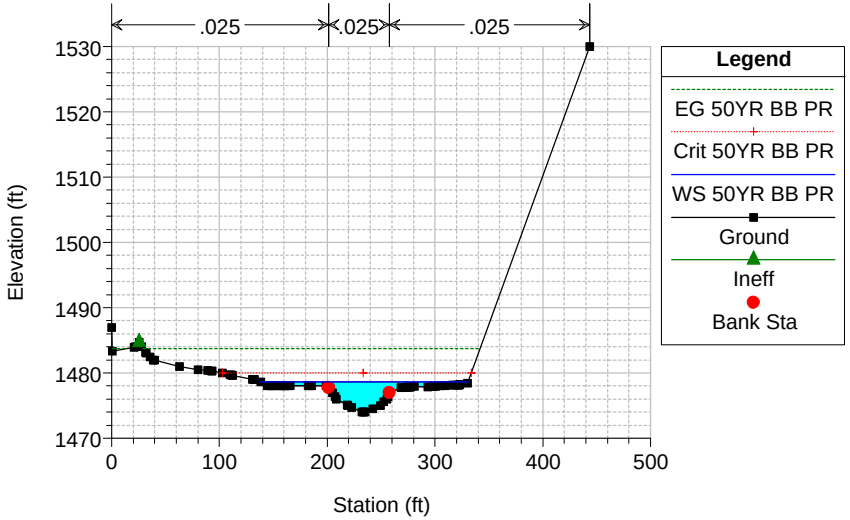
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1356



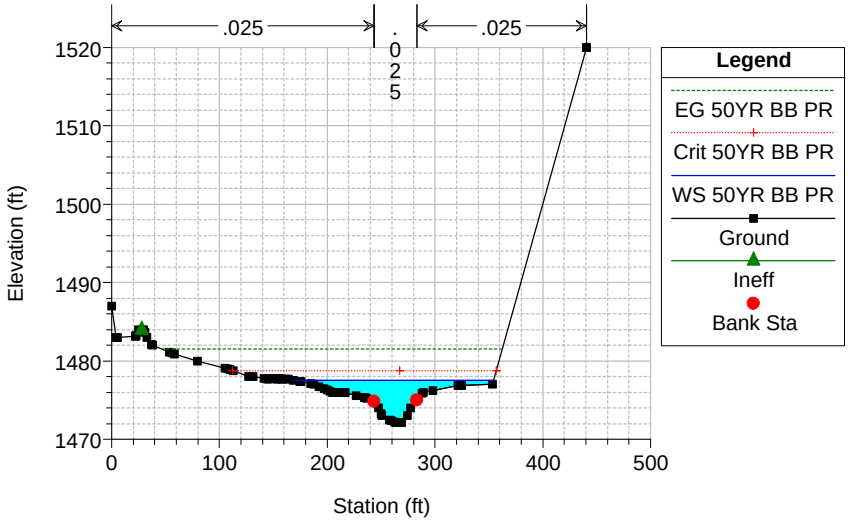
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1242



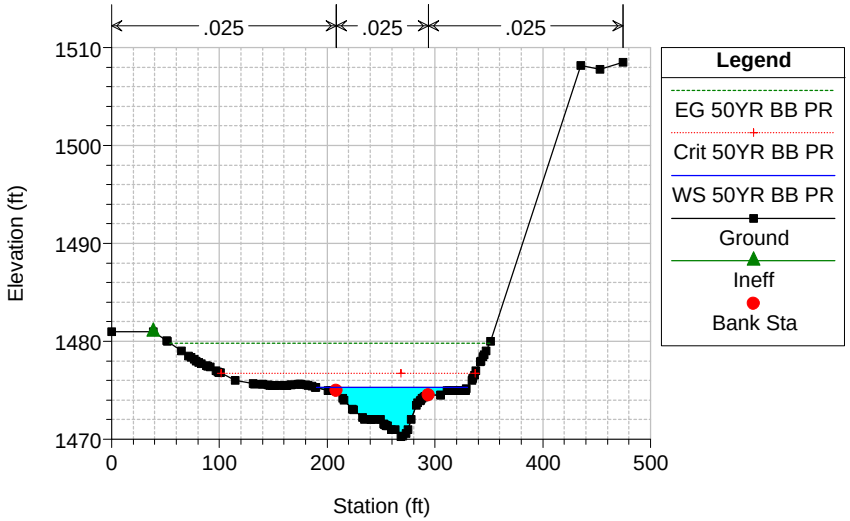
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1121



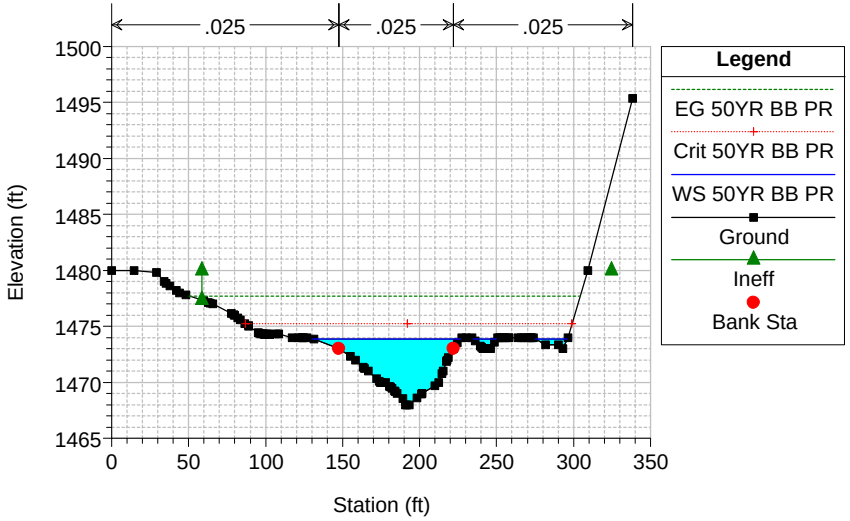
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1007



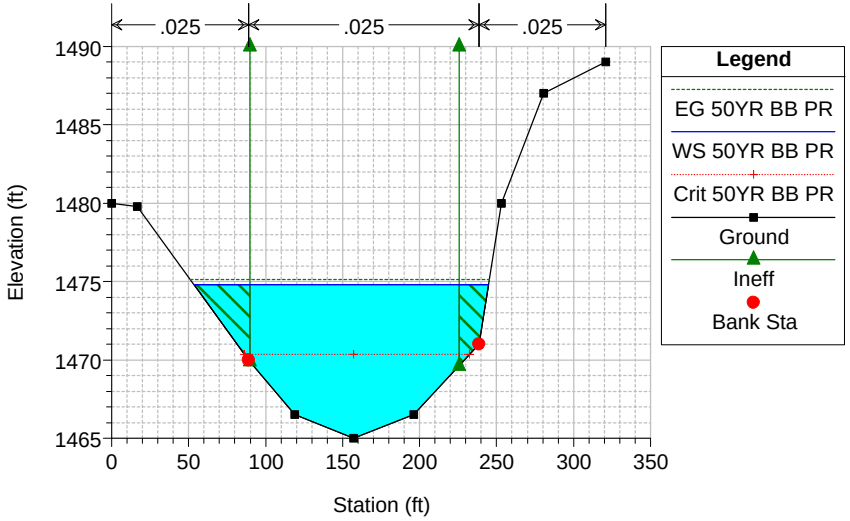
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 907



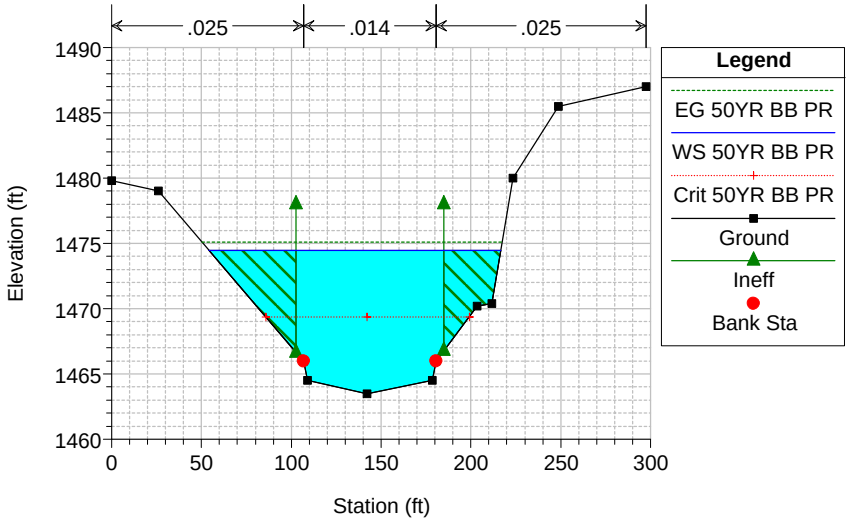
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 792



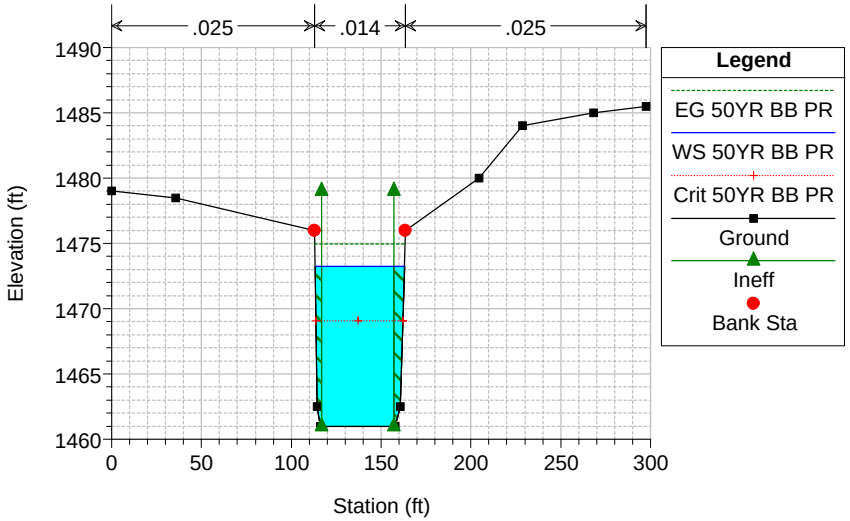
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 727



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 700



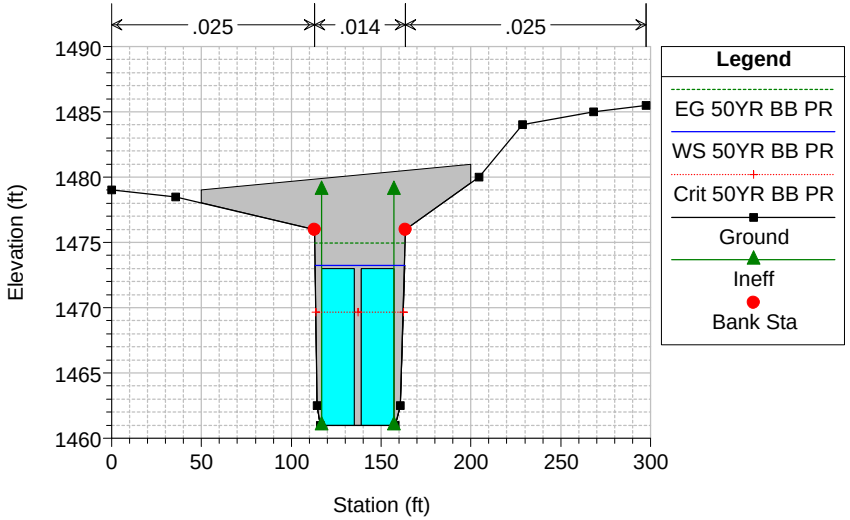
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR Lower RS = 680 U/S Pico Canyon Rd Culvert



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

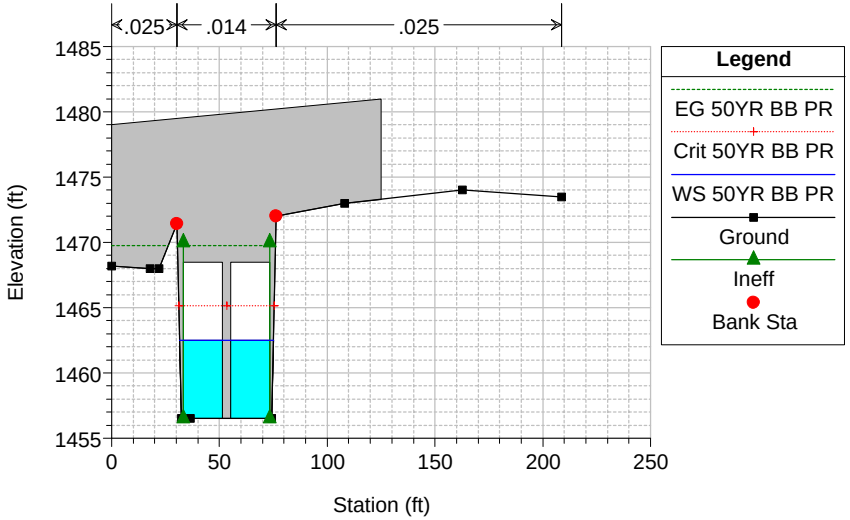
River = p02 Reach = PICO_PR Lower RS = 500 Culv Double 18'W x 12'H RCB at Pico Canyon Road



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

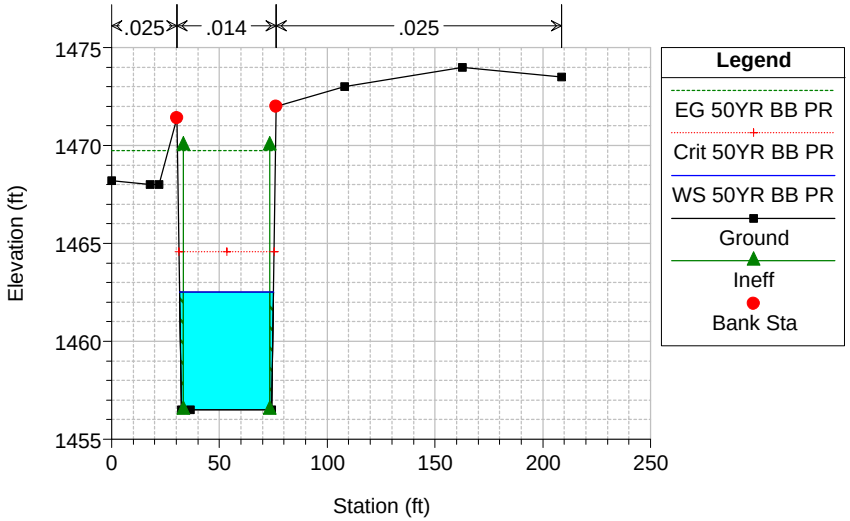
River = p02 Reach = PICO_PR Lower RS = 500 Culv Double 18'W x 12'H RCB at Pico Canyon Road



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

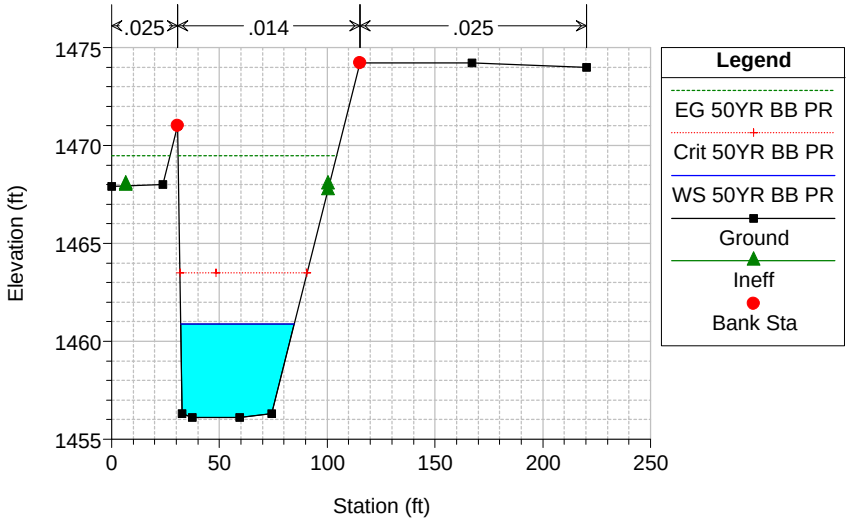
River = p02 Reach = PICO_PR Lower RS = 331 D/S Pico Canyon Rd Culvert



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

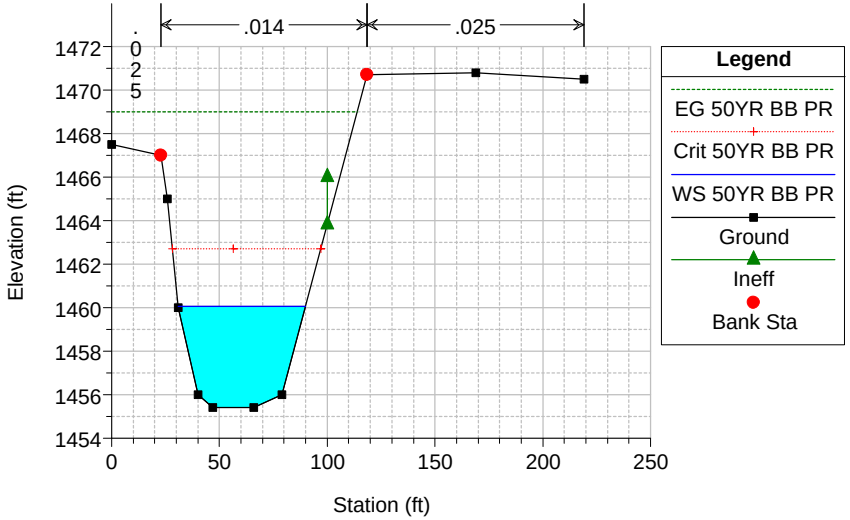
River = p02 Reach = PICO_PR Lower RS = 305 Section is at location of RS 39+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

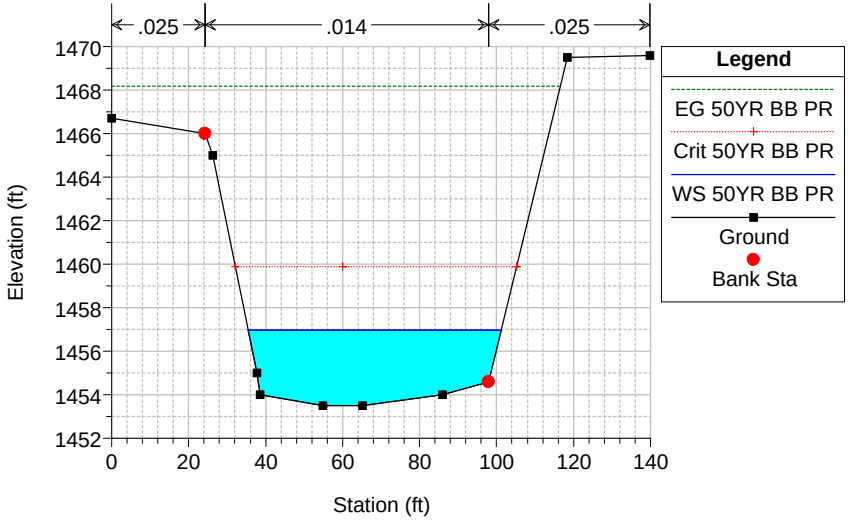
River = p02 Reach = PICO_PR Lower RS = 255 Section is at location of RS 39+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

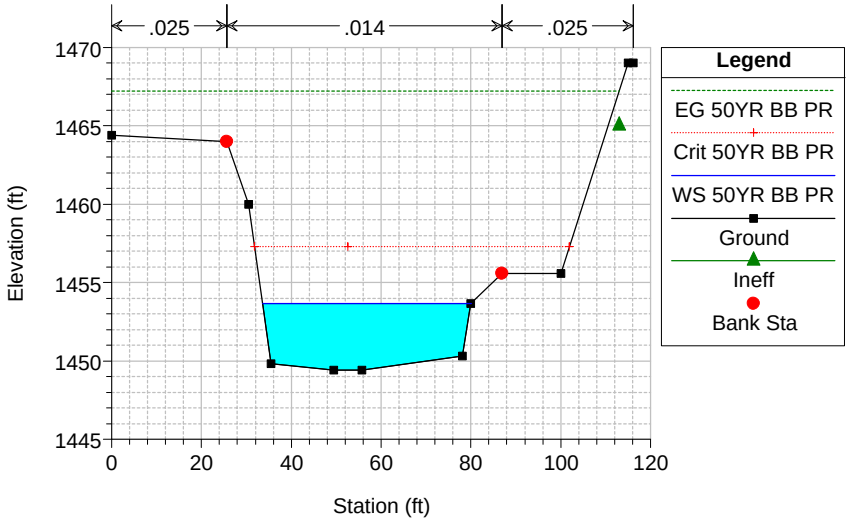
River = p02 Reach = PICO_PR Lower RS = 205 Section is at location of RS 38+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

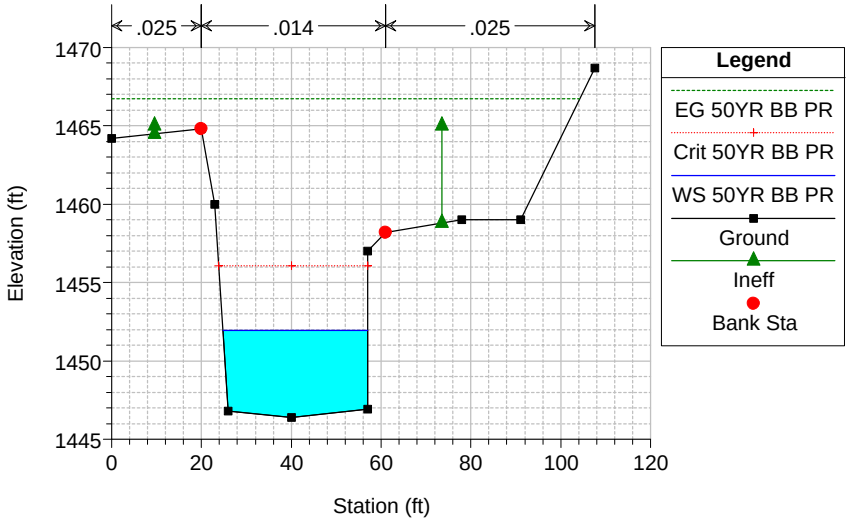
River = p02 Reach = PICO_PR Lower RS = 155 Section is at location of RS 38+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

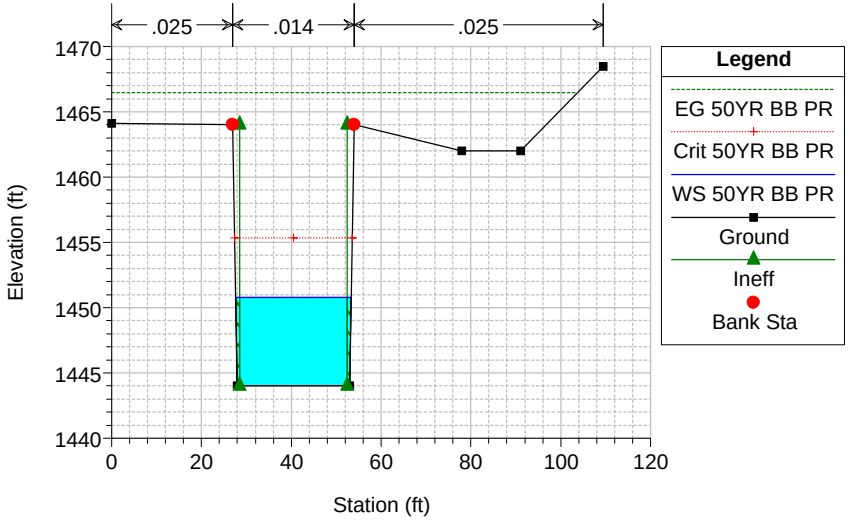
River = p02 Reach = PICO_PR Lower RS = 130 Section is at location of RS 38+00 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

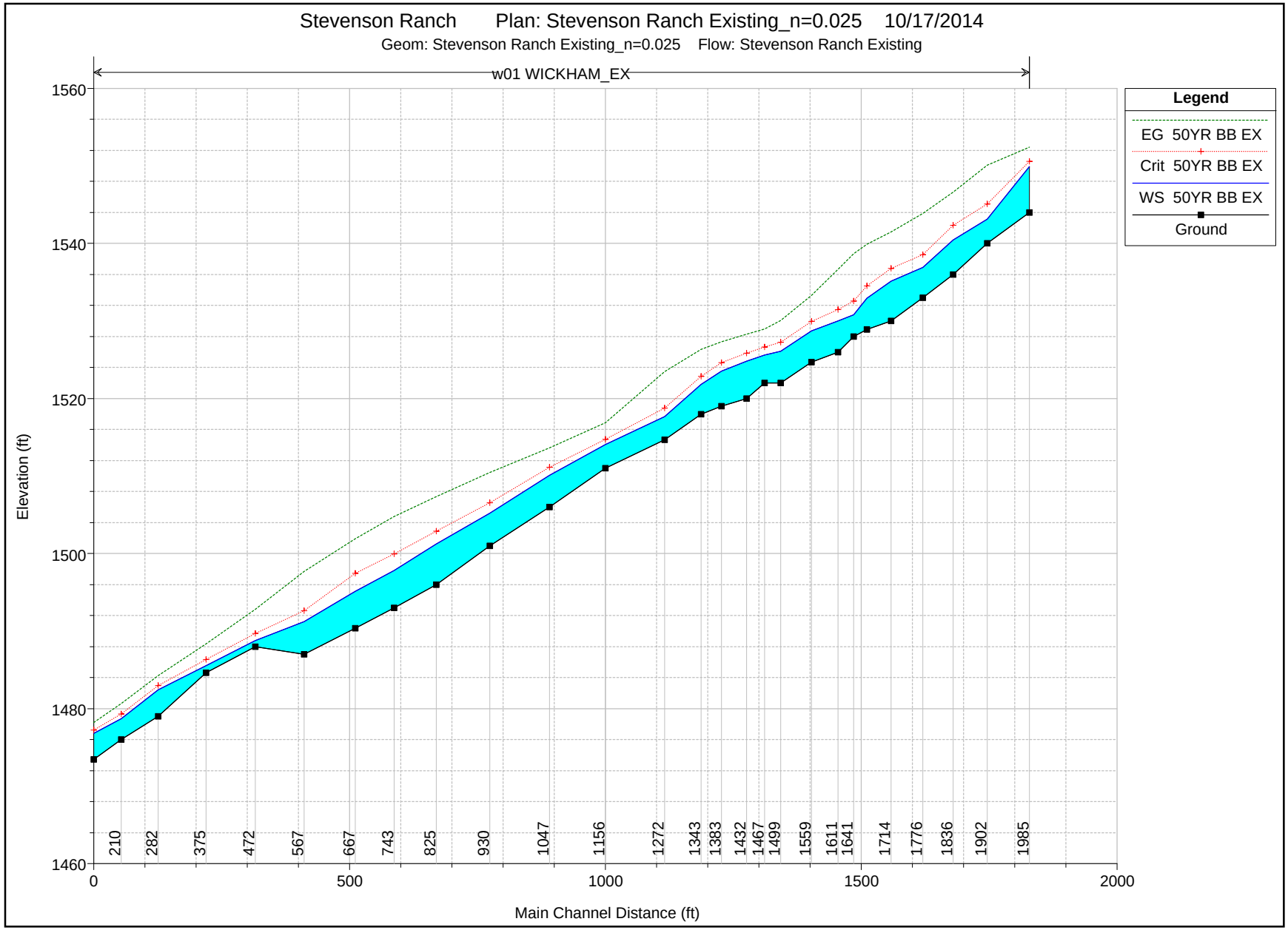
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

River = p02 Reach = PICO_PR Lower RS = 110 Inlet to 24' x14' RCB. Section is at location of RS 37+80...

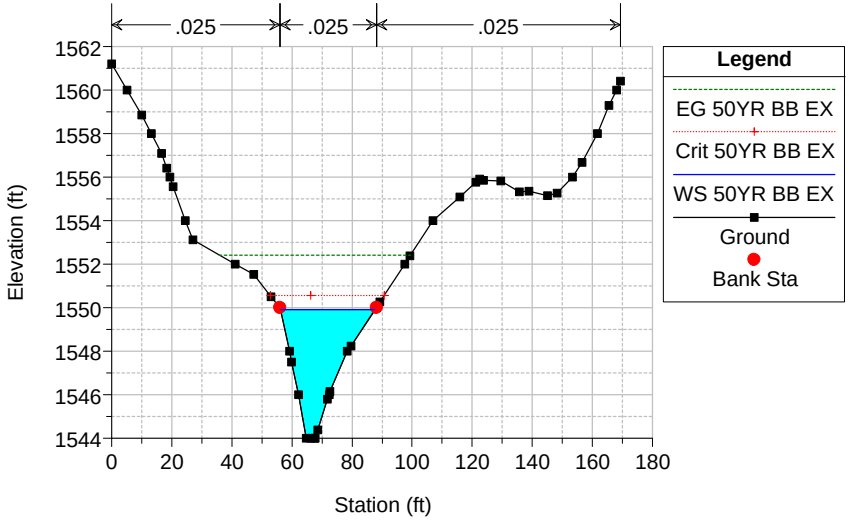


HEC-RAS Plan: EX_n=0.025 River: w01 Reach: WICKHAM_EX Profile: 50YR BB EX

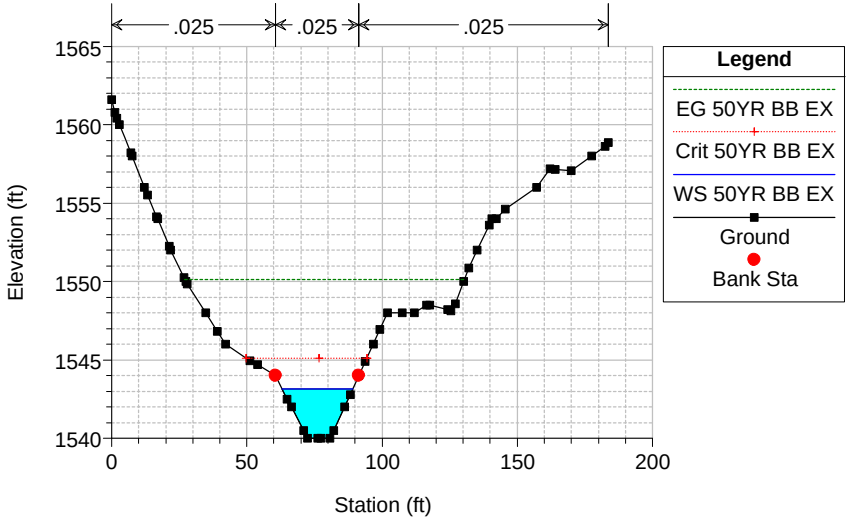
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
WICKHAM_EX	1985	50YR BB EX	1160.00	1544.00	1549.90	1550.56	1552.43	0.012510	12.75	90.95	31.44	1.32
WICKHAM_EX	1902	50YR BB EX	1160.00	1540.00	1543.16	1545.11	1550.13	0.050275	21.19	54.74	26.20	2.58
WICKHAM_EX	1836	50YR BB EX	1160.00	1536.00	1540.44	1542.36	1546.61	0.048947	19.94	58.18	29.22	2.49
WICKHAM_EX	1776	50YR BB EX	1160.00	1533.00	1536.89	1538.54	1543.86	0.040749	21.69	59.67	41.42	2.39
WICKHAM_EX	1714	50YR BB EX	1160.00	1530.00	1535.12	1536.76	1541.49	0.030786	21.05	64.34	40.31	2.04
WICKHAM_EX	1667	50YR BB EX	1160.00	1528.92	1532.93	1534.55	1539.93	0.033161	21.71	59.59	34.91	2.14
WICKHAM_EX	1641	50YR BB EX	1160.00	1528.00	1530.80	1532.56	1538.67	0.064362	23.02	51.75	28.32	2.93
WICKHAM_EX	1611	50YR BB EX	1160.00	1526.00	1530.00	1531.44	1536.68	0.046678	21.62	61.50	44.82	2.51
WICKHAM_EX	1559	50YR BB EX	1160.00	1524.69	1528.74	1529.92	1533.28	0.060675	17.09	67.86	52.27	2.64
WICKHAM_EX	1499	50YR BB EX	1160.00	1522.00	1526.12	1527.25	1530.05	0.042987	15.92	72.88	48.29	2.28
WICKHAM_EX	1467	50YR BB EX	1160.00	1522.00	1525.58	1526.62	1528.97	0.020505	15.23	84.96	54.41	1.71
WICKHAM_EX	1432	50YR BB EX	1510.00	1520.00	1524.84	1525.86	1528.27	0.019486	15.58	111.61	67.67	1.65
WICKHAM_EX	1383	50YR BB EX	1510.00	1519.00	1523.52	1524.63	1527.31	0.018303	17.63	116.21	77.70	1.69
WICKHAM_EX	1343	50YR BB EX	1510.00	1518.00	1521.84	1522.88	1526.36	0.026570	19.93	114.27	107.08	2.01
WICKHAM_EX	1272	50YR BB EX	1510.00	1514.68	1517.66	1518.79	1523.44	0.064409	25.22	92.28	96.67	2.95
WICKHAM_EX	1156	50YR BB EX	1510.00	1511.00	1514.04	1514.74	1516.89	0.038386	16.55	124.56	132.83	2.21
WICKHAM_EX	1047	50YR BB EX	1510.00	1506.00	1510.12	1511.12	1513.66	0.022769	18.33	115.34	76.63	1.84
WICKHAM_EX	930	50YR BB EX	1510.00	1501.00	1505.21	1506.53	1510.48	0.029407	21.66	98.69	68.69	2.06
WICKHAM_EX	825	50YR BB EX	1510.00	1496.00	1501.21	1502.87	1507.37	0.027953	20.59	81.79	52.78	2.03
WICKHAM_EX	743	50YR BB EX	1510.00	1493.00	1497.79	1499.94	1504.77	0.033999	21.23	72.10	28.78	2.18
WICKHAM_EX	667	50YR BB EX	1510.00	1490.38	1495.12	1497.44	1501.92	0.039765	20.94	72.12	28.74	2.33
WICKHAM_EX	567	50YR BB EX	1510.00	1487.00	1491.24	1492.63	1497.71	0.042625	21.85	86.24	74.48	2.43
WICKHAM_EX	472	50YR BB EX	1510.00	1488.00	1488.75	1489.72	1492.81	0.045368	6.81	102.99	98.89	1.89
WICKHAM_EX	375	50YR BB EX	1510.00	1484.62	1485.51	1486.33	1488.35	0.039137	7.72	114.18	101.19	1.86
WICKHAM_EX	282	50YR BB EX	1510.00	1479.00	1482.44	1483.00	1484.25	0.042651	10.82	139.61	167.53	2.09
WICKHAM_EX	210	50YR BB EX	1510.00	1476.00	1478.71	1479.28	1480.64	0.059342	11.15	135.42	199.02	2.38
WICKHAM_EX	156	50YR BB EX	1580.00	1473.46	1476.78	1477.24	1478.22	0.031849	9.64	163.89	188.08	1.82


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
w01 WICKHAM_EX
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Elevation (ft)
1460
1480
1500
1520
1540
1560
0
500
1000
1500
2000
Main Channel Distance (ft)
210
282
375
472
567
667
743
825
930
1047
1156
1272
1343
1383
1432
1467
1499
1559
1611
1641
1714
1776
1836
1902
1985

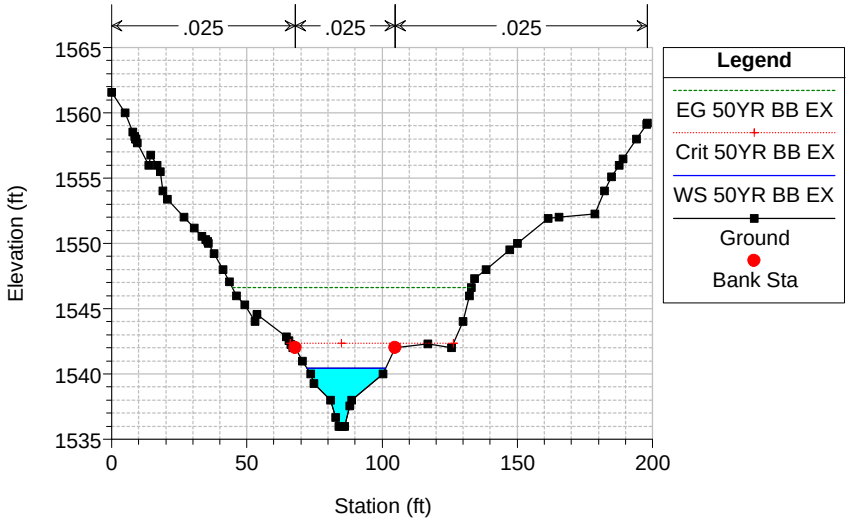
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1985 Most U/S Section



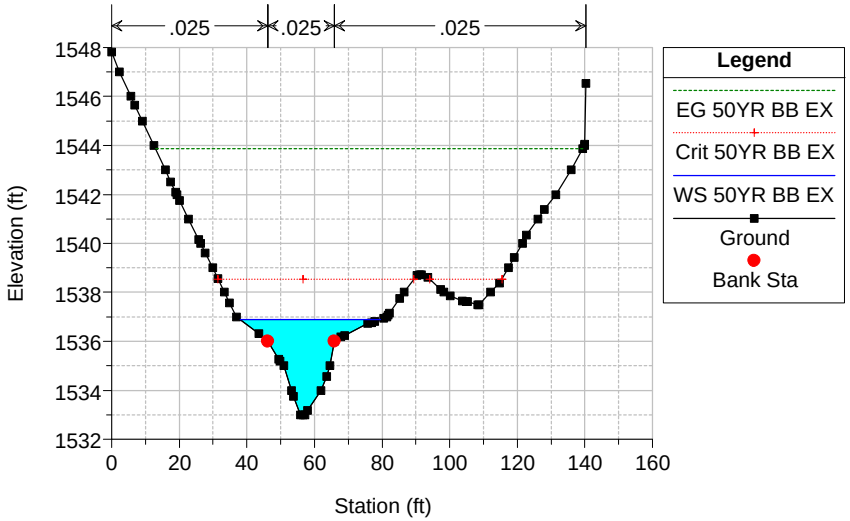
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1902



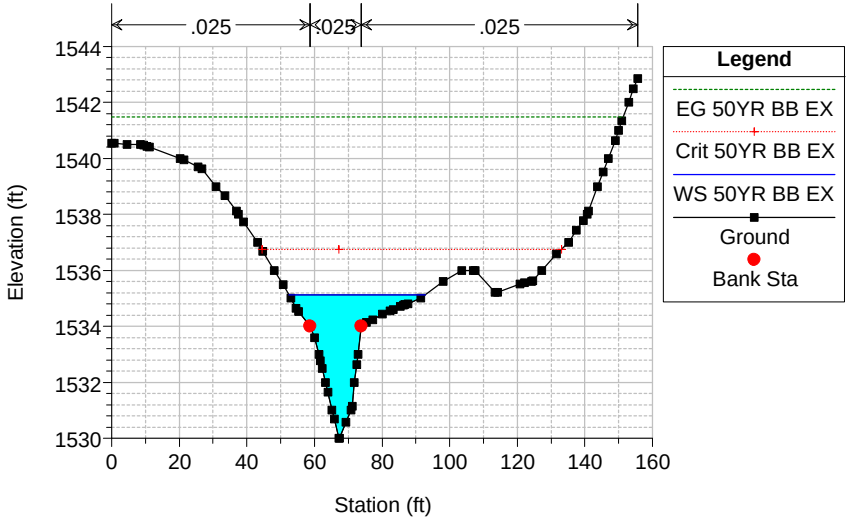
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1836



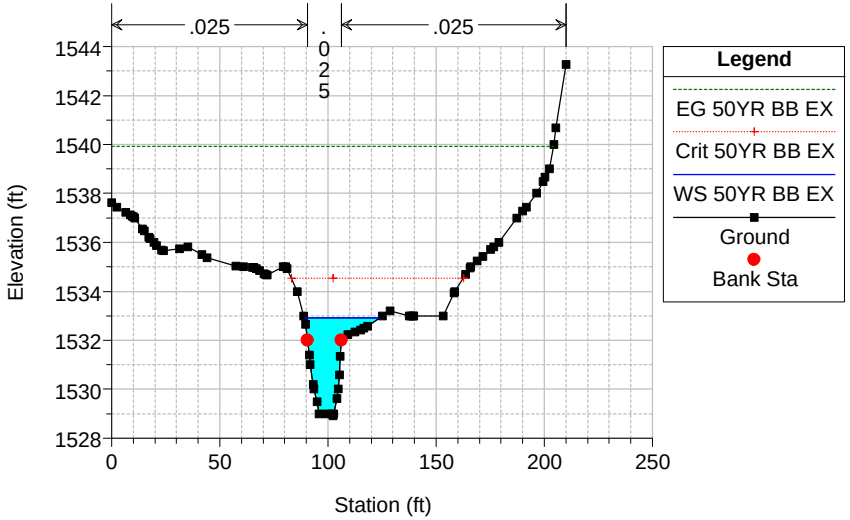
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1776



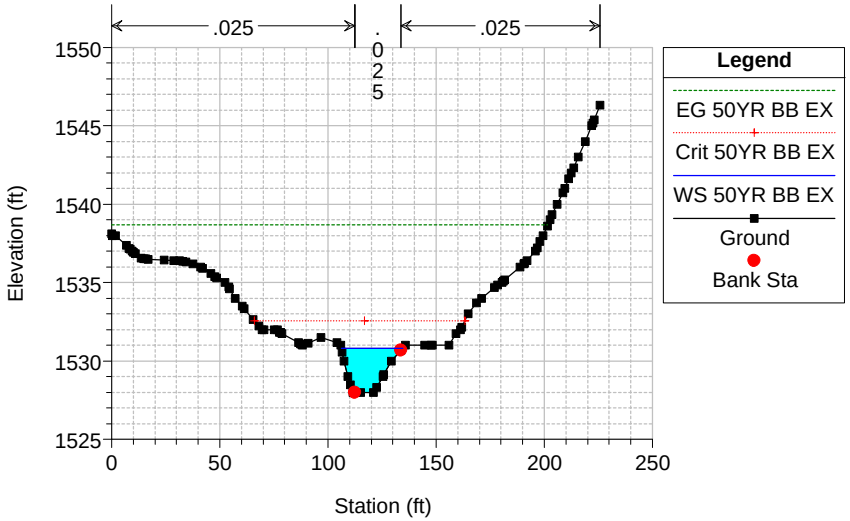
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1714



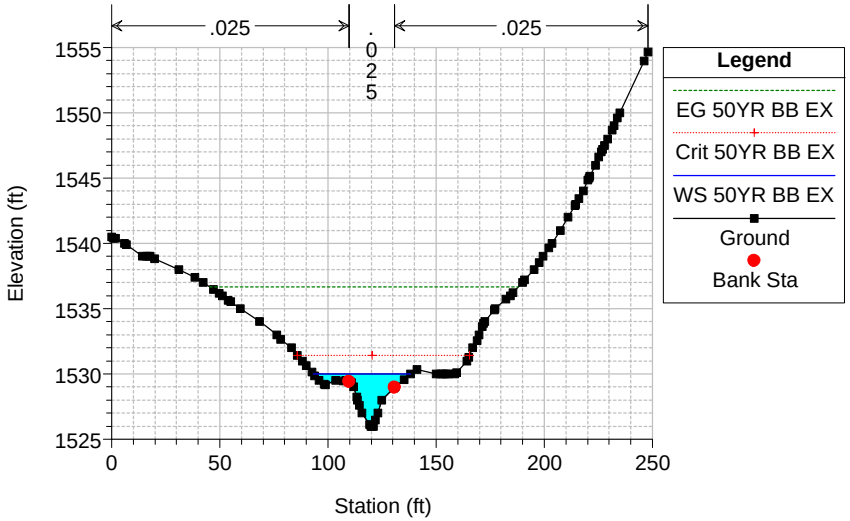
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1667

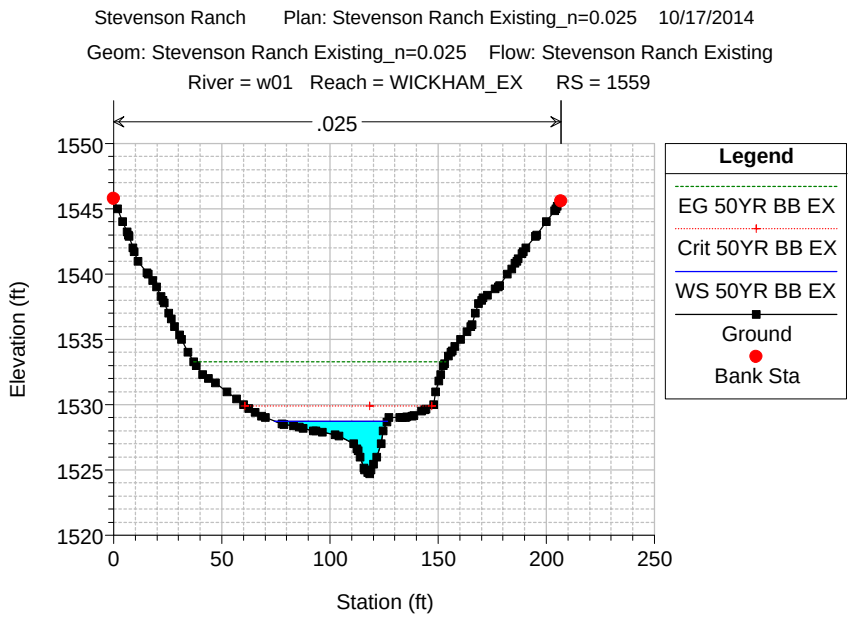


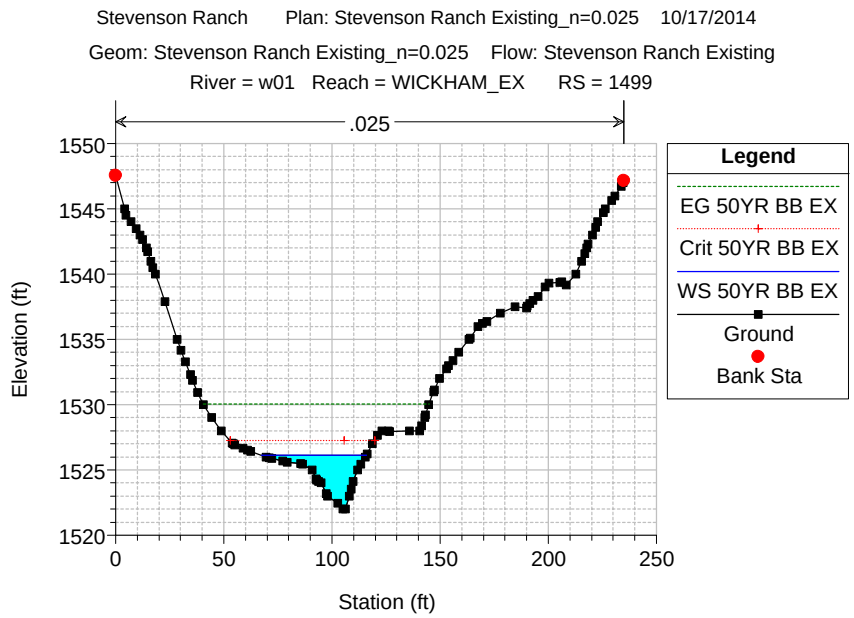
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1641

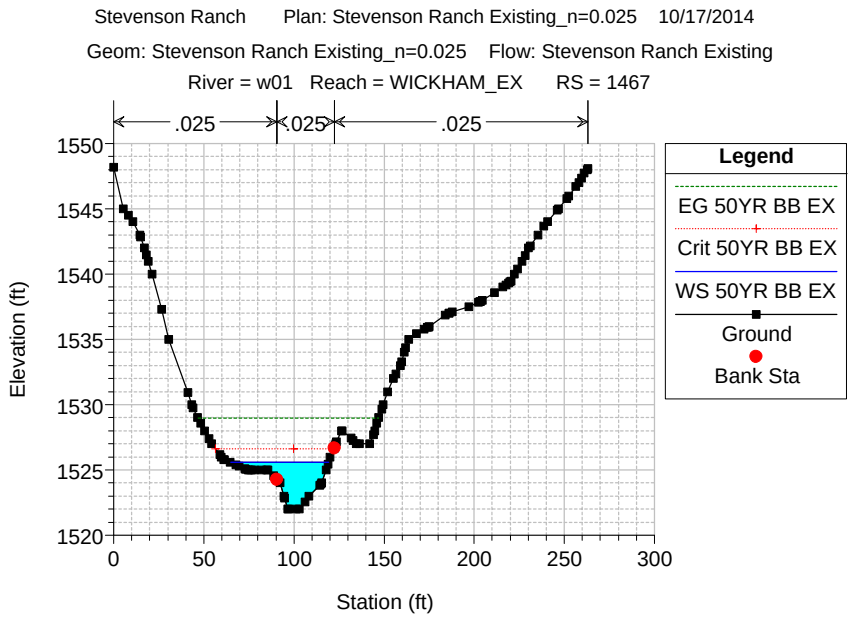


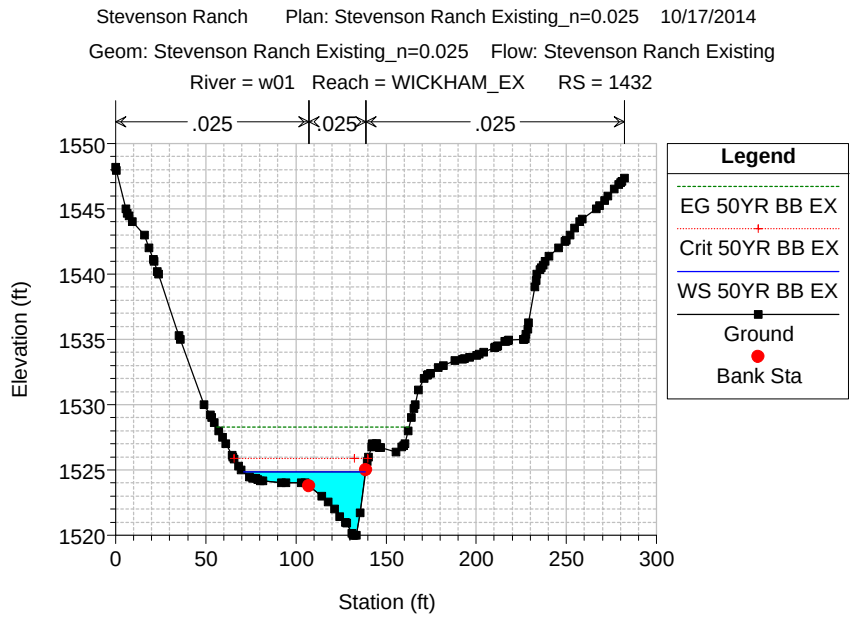
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1611

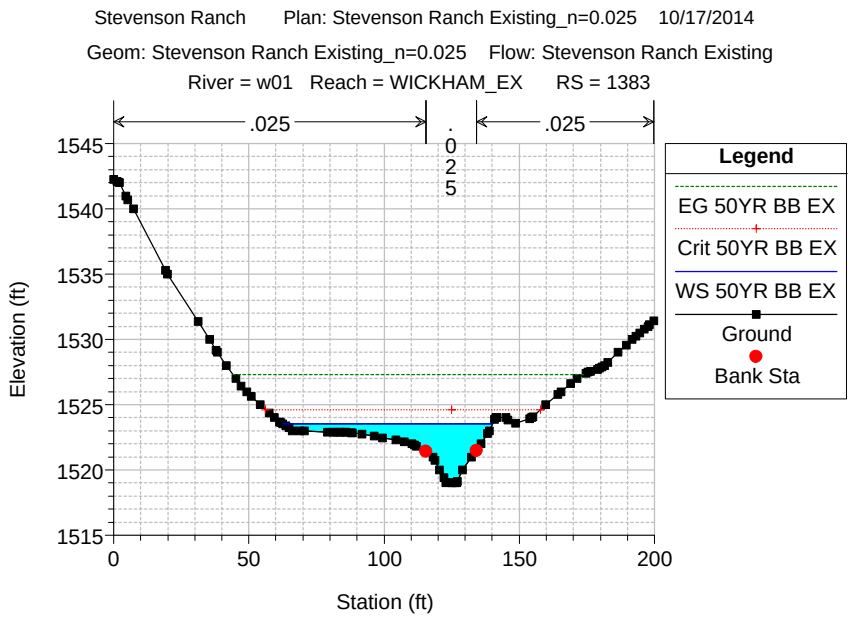


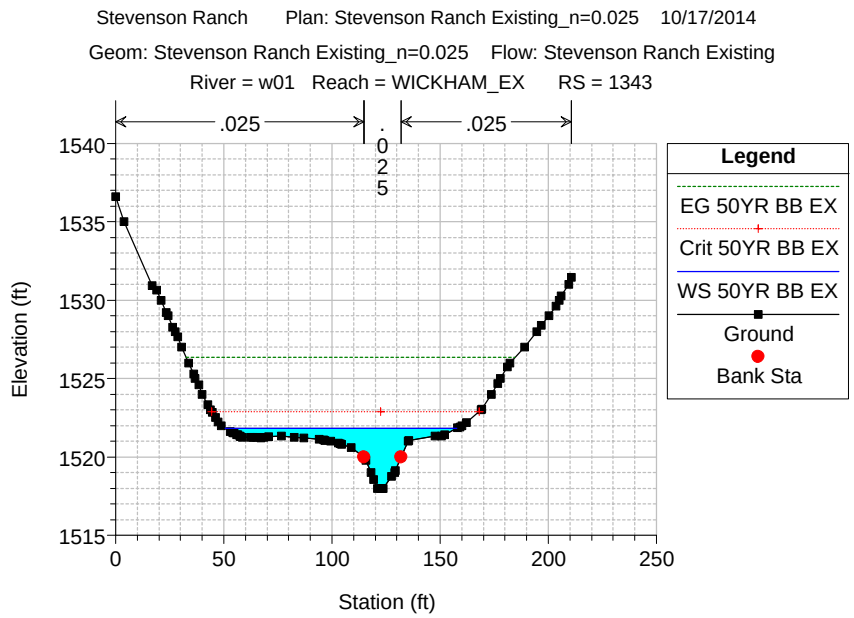

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1559
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)

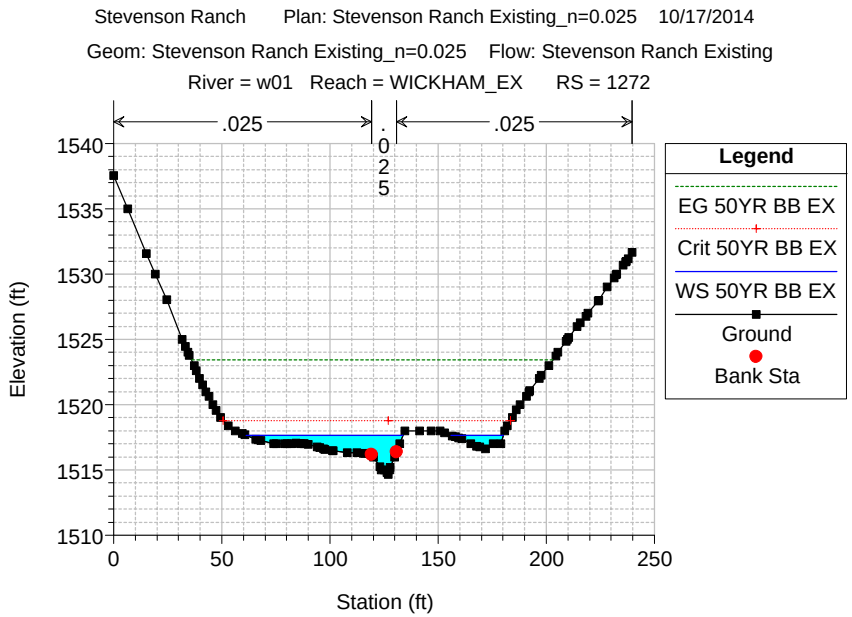

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1499
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)

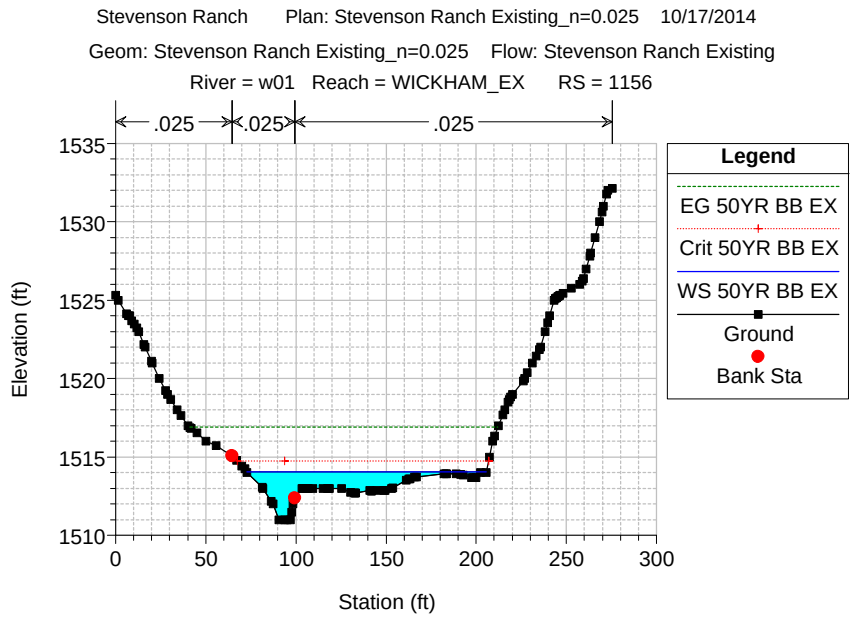

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1467
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1432
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)

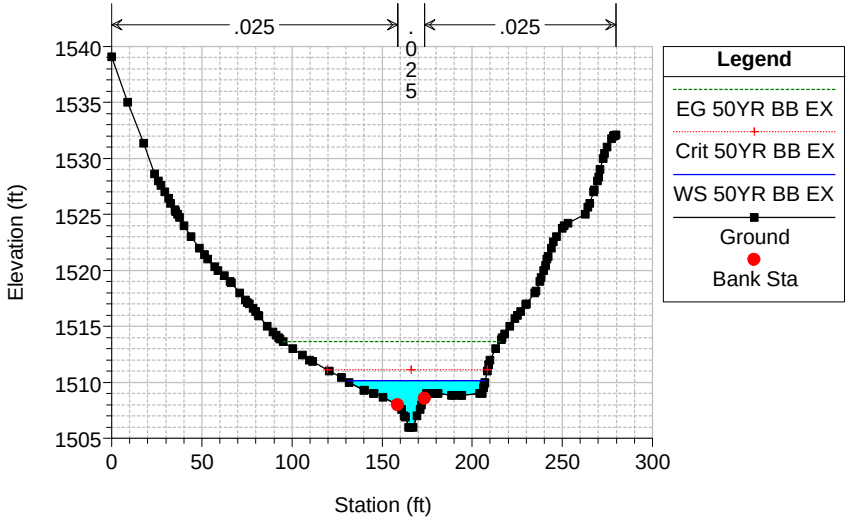

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1383
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1343
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)

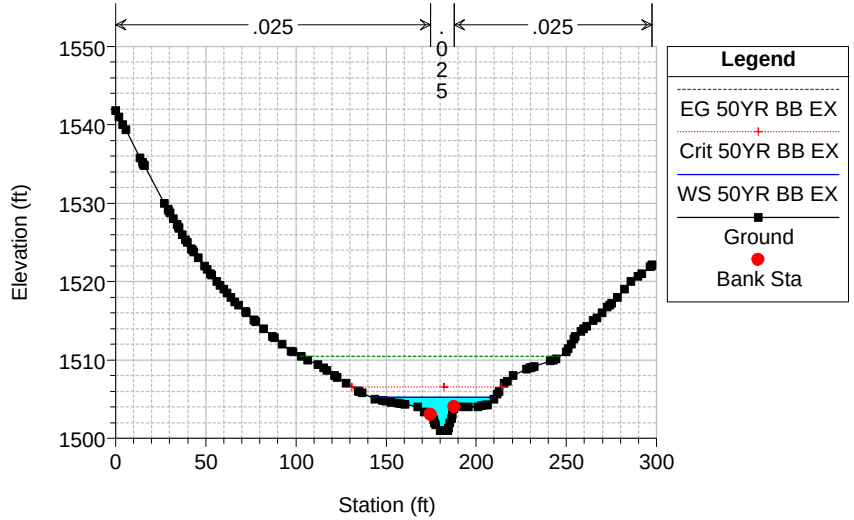

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1272
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1156
.025
.025
.025
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta
Elevation (ft)
Station (ft)

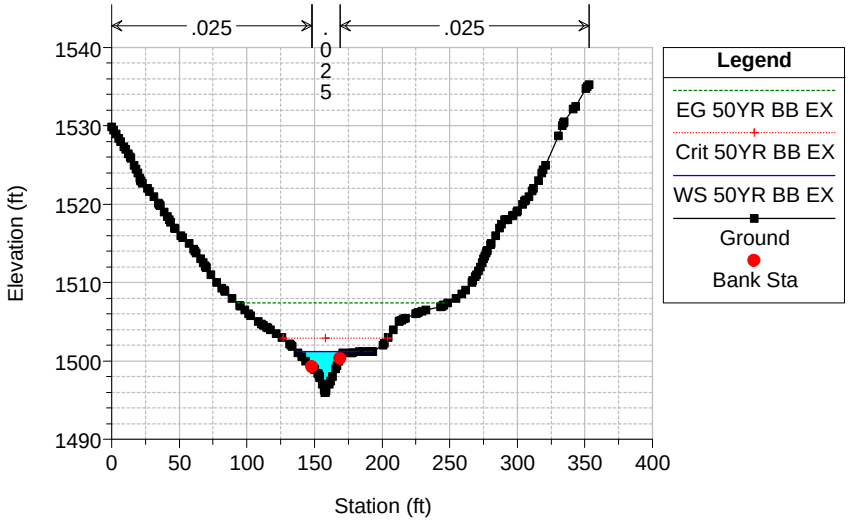
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1047



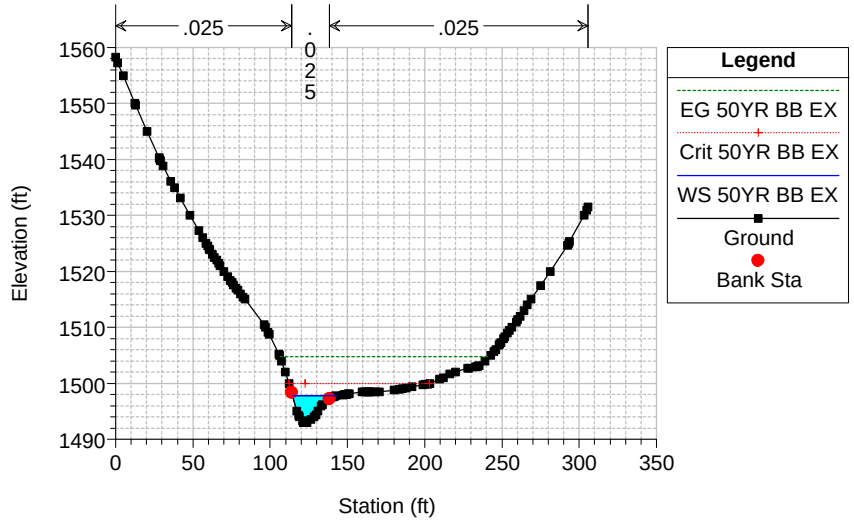
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 930

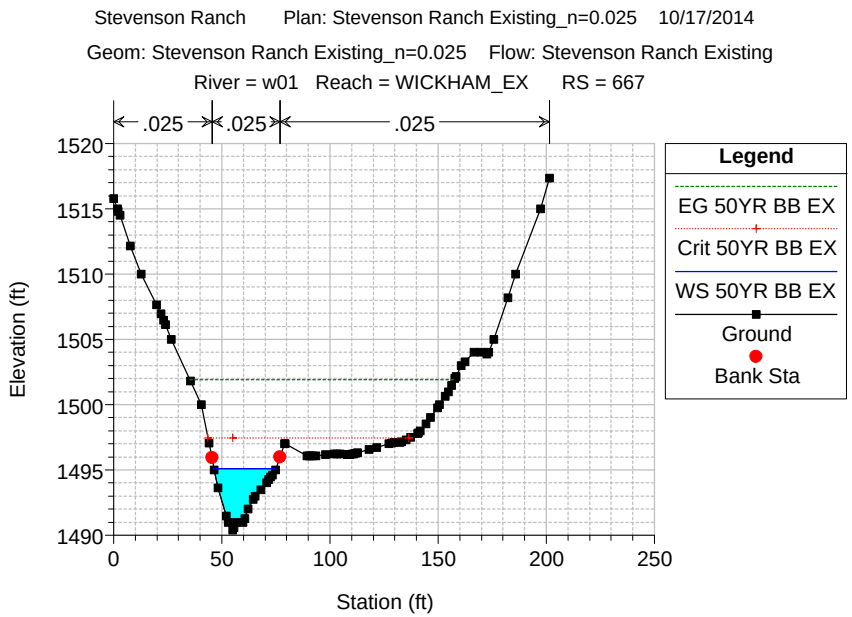


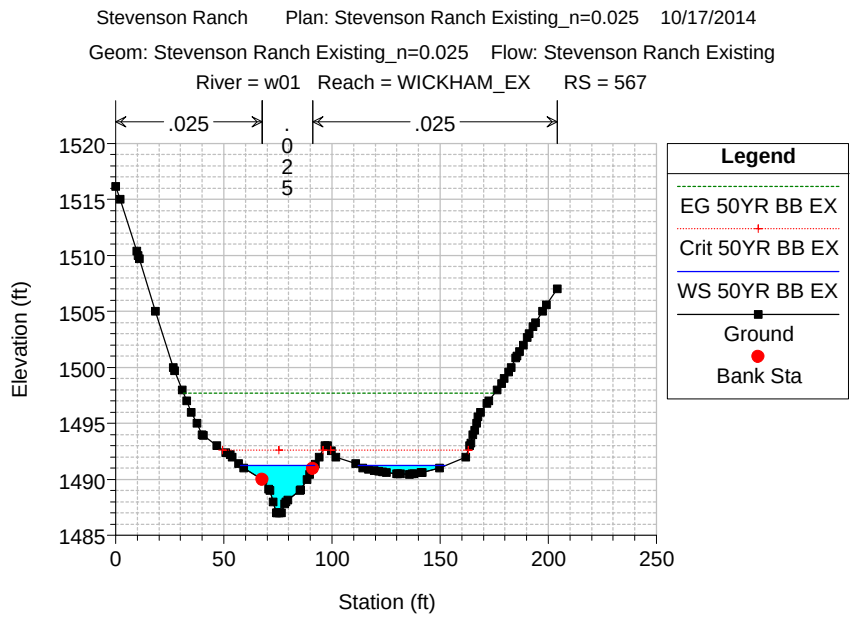
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 825

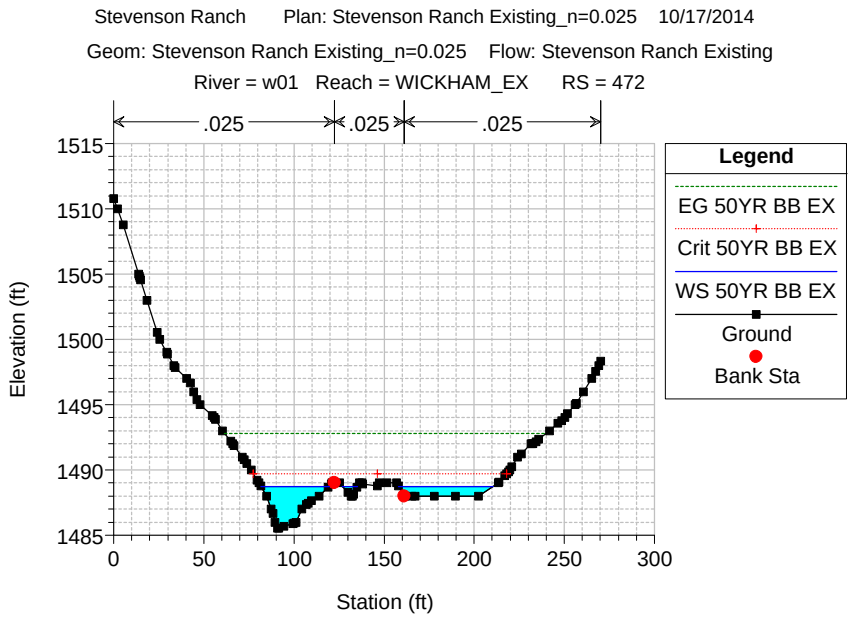


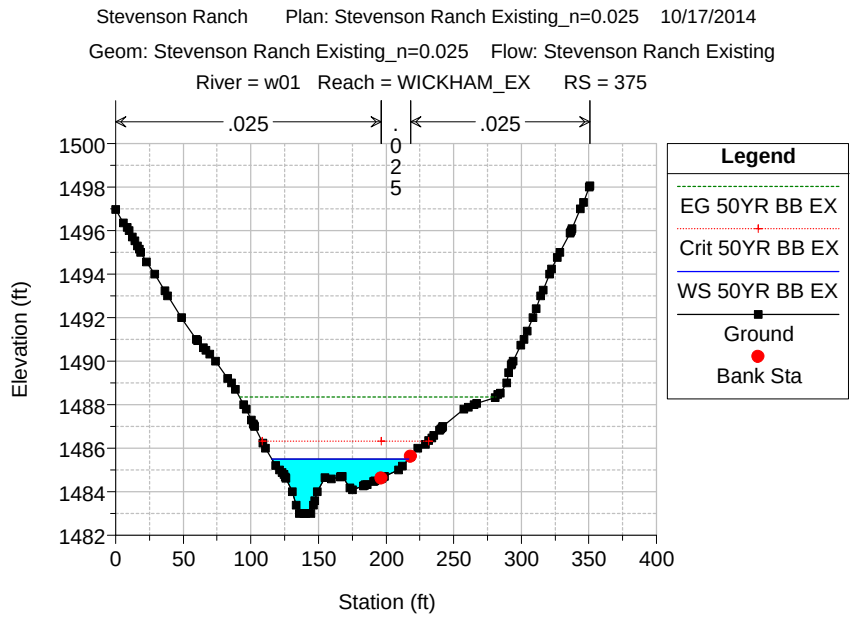
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 743




Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 667
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 567
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta

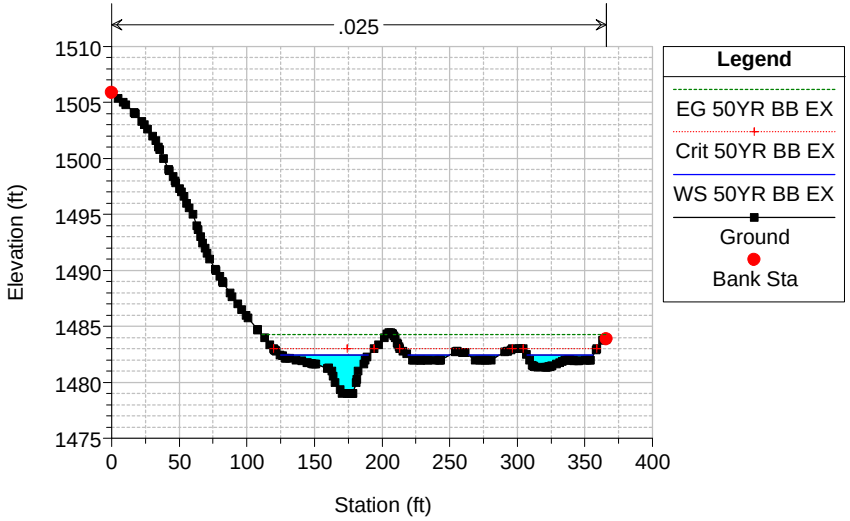

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 472
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 375
.025
.025
.025
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

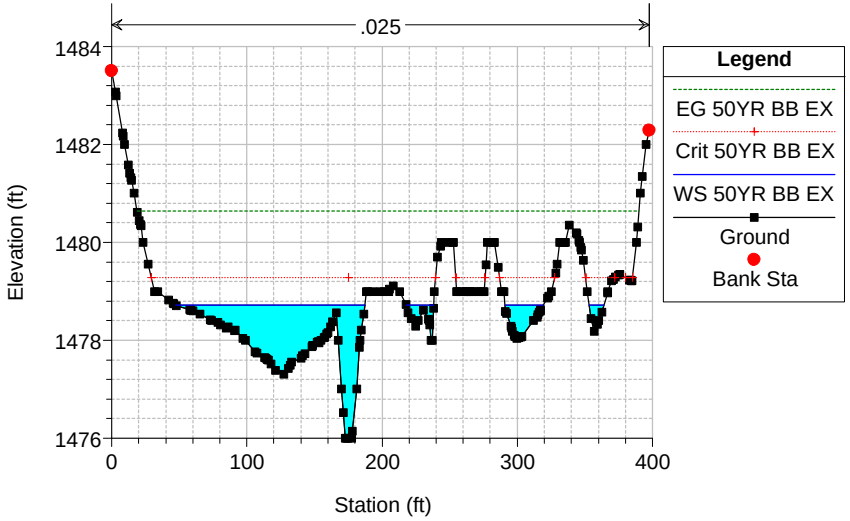
River = w01 Reach = WICKHAM_EX RS = 282



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

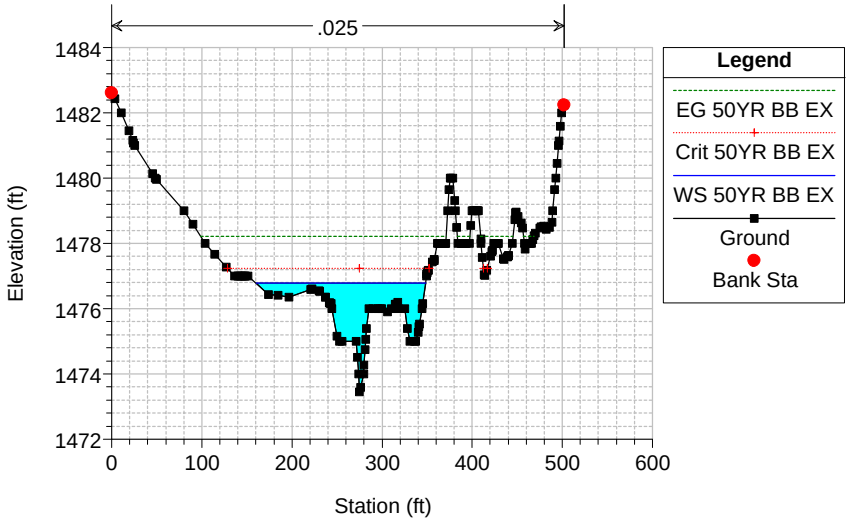
River = w01 Reach = WICKHAM_EX RS = 210



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.025 10/17/2014

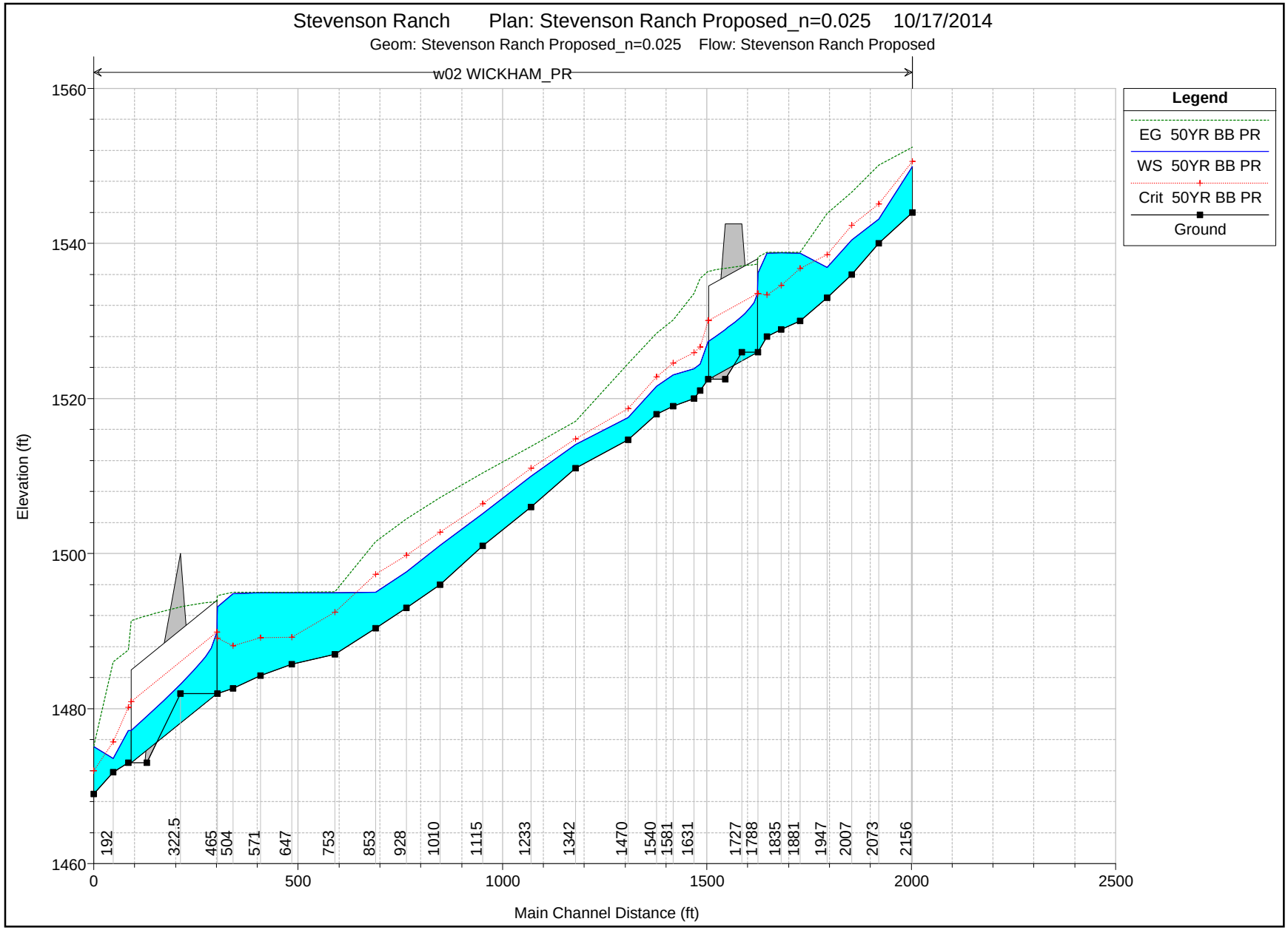
Geom: Stevenson Ranch Existing_n=0.025 Flow: Stevenson Ranch Existing

River = w01 Reach = WICKHAM_EX RS = 156 Most D/S Section - Junction w Pico Canyon Creek

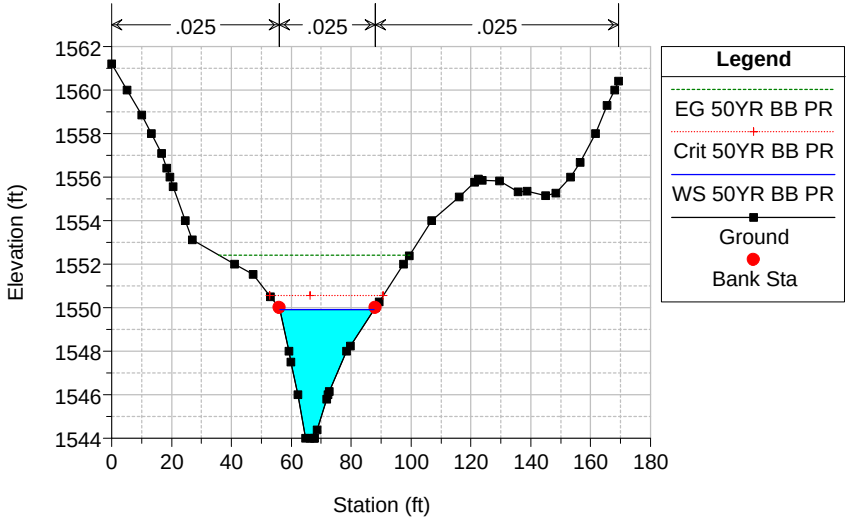


HEC-RAS Plan: PR_n=0.025 River: w02 Reach: WICKHAM_PR Profile: 50YR BB PR

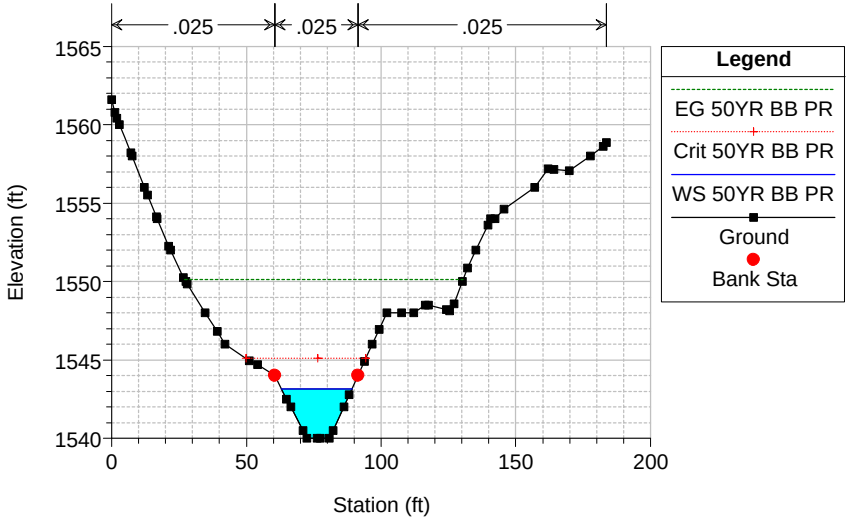
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
WICKHAM_PR	2156	50YR BB PR	1160.00	1544.00	1549.90	1550.56	1552.43	0.012510	12.75	90.95	31.44	1.32
WICKHAM_PR	2073	50YR BB PR	1160.00	1540.00	1543.16	1545.11	1550.13	0.050275	21.19	54.74	26.20	2.58
WICKHAM_PR	2007	50YR BB PR	1160.00	1536.00	1540.44	1542.36	1546.61	0.048947	19.94	58.18	29.22	2.49
WICKHAM_PR	1947	50YR BB PR	1160.00	1533.00	1536.89	1538.54	1543.86	0.040749	21.69	59.67	41.42	2.39
WICKHAM_PR	1881	50YR BB PR	1160.00	1530.00	1538.71	1536.76	1538.89	0.000484	4.31	373.82	109.80	0.29
WICKHAM_PR	1835	50YR BB PR	1160.00	1528.92	1538.79	1534.58	1538.84	0.000084	2.19	673.88	177.88	0.13
WICKHAM_PR	1810	50YR BB PR	1160.00	1528.00	1538.73	1533.36	1538.83	0.000122	2.83	446.37	155.30	0.16
WICKHAM_PR	1788	50YR BB PR	1410.00	1526.00	1536.16	1533.55	1538.24	0.000539	11.56	121.95	77.26	0.64
WICKHAM_PR	1727		Culvert									
WICKHAM_PR	1666	50YR BB PR	1410.00	1522.50	1527.37	1530.05	1536.42	0.006271	24.14	58.41	63.80	1.93
WICKHAM_PR	1646	50YR BB PR	1410.00	1521.00	1524.42	1526.64	1535.50	0.080903	26.89	54.64	39.58	3.28
WICKHAM_PR	1631	50YR BB PR	1410.00	1520.00	1523.86	1525.89	1533.57	0.083886	25.00	56.42	30.99	3.23
WICKHAM_PR	1581	50YR BB PR	1410.00	1519.00	1523.03	1524.55	1530.10	0.037128	22.66	79.81	73.13	2.34
WICKHAM_PR	1540	50YR BB PR	1410.00	1518.00	1521.58	1522.80	1528.44	0.040863	23.33	87.88	100.67	2.46
WICKHAM_PR	1470	50YR BB PR	1410.00	1514.68	1517.53	1518.72	1524.50	0.081704	27.30	79.94	92.03	3.29
WICKHAM_PR	1342	50YR BB PR	1410.00	1511.00	1514.06	1514.78	1517.07	0.032786	17.64	119.54	124.07	2.10
WICKHAM_PR	1233	50YR BB PR	1410.00	1506.00	1509.98	1511.01	1513.82	0.025830	18.92	104.62	74.98	1.94
WICKHAM_PR	1115	50YR BB PR	1410.00	1501.00	1505.13	1506.41	1510.40	0.029961	21.49	92.70	67.66	2.07
WICKHAM_PR	1010	50YR BB PR	1410.00	1496.00	1501.06	1502.75	1507.20	0.029337	20.44	75.18	41.76	2.07
WICKHAM_PR	928	50YR BB PR	1410.00	1493.00	1497.63	1499.79	1504.49	0.035586	21.03	67.55	26.95	2.21
WICKHAM_PR	853	50YR BB PR	1410.00	1490.38	1494.99	1497.31	1501.57	0.040290	20.58	68.50	28.33	2.33
WICKHAM_PR	753	50YR BB PR	1410.00	1487.00	1494.91	1492.42	1495.04	0.000316	3.45	516.48	128.72	0.24
WICKHAM_PR	647	50YR BB PR	1410.00	1485.72	1494.97	1489.20	1495.00	0.000047	1.71	1029.36	172.82	0.10
WICKHAM_PR	571	50YR BB PR	1410.00	1484.28	1494.94	1489.16	1494.99	0.000066	2.18	833.01	134.07	0.12
WICKHAM_PR	504	50YR BB PR	1410.00	1482.60	1494.84	1488.07	1494.98	0.000146	3.21	508.39	88.85	0.17
WICKHAM_PR	465	50YR BB PR	1510.00	1481.95	1493.13	1489.07	1494.58	0.000330	9.64	156.56	74.57	0.51
WICKHAM_PR	322.5		Culvert									
WICKHAM_PR	248	50YR BB PR	1510.00	1473.00	1477.17	1480.14	1487.56	0.008850	25.87	58.38	225.83	2.23
WICKHAM_PR	192	50YR BB PR	1510.00	1471.80	1473.57	1475.67	1486.03	0.181600	28.32	53.31	222.24	4.57
WICKHAM_PR	154	50YR BB PR	1510.00	1469.00	1475.08	1471.96	1475.16	0.000239	2.22	681.07	223.88	0.20


Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
w02 WICKHAM_PR
Legend
EG 50YR BB PR
WS 50YR BB PR
Crit 50YR BB PR
Ground
Elevation (ft)
1460
1480
1500
1520
1540
1560
0
500
1000
1500
2000
2500
Main Channel Distance (ft)
192
322.5
465
504
571
647
753
853
928
1010
1115
1233
1342
1470
1540
1581
1631
1727
1788
1835
1881
1947
2007
2073
2156

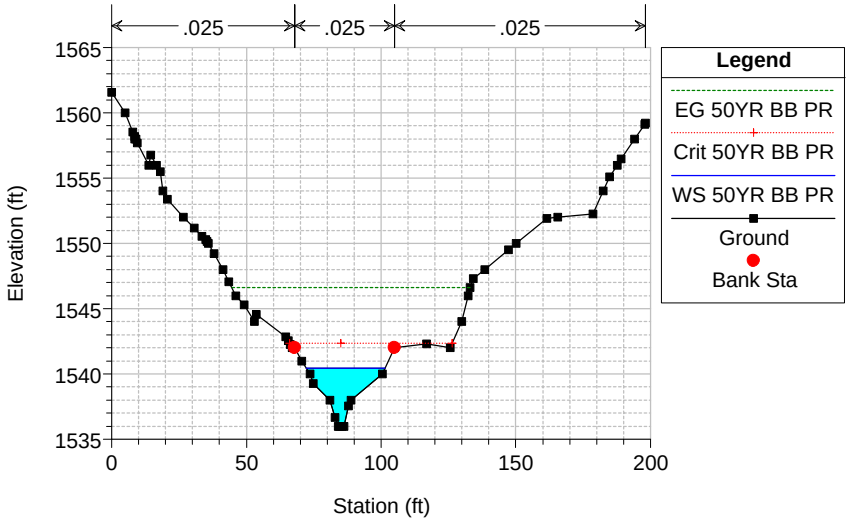
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2156 Most U/S Section



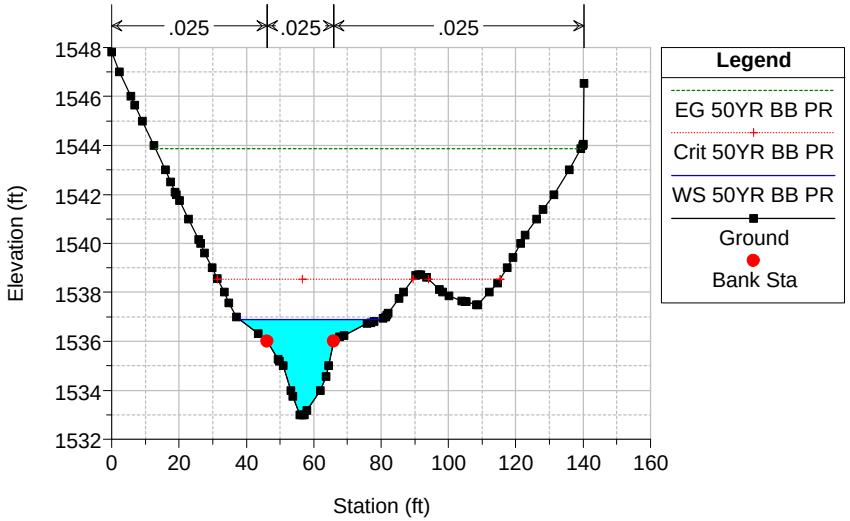
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2073



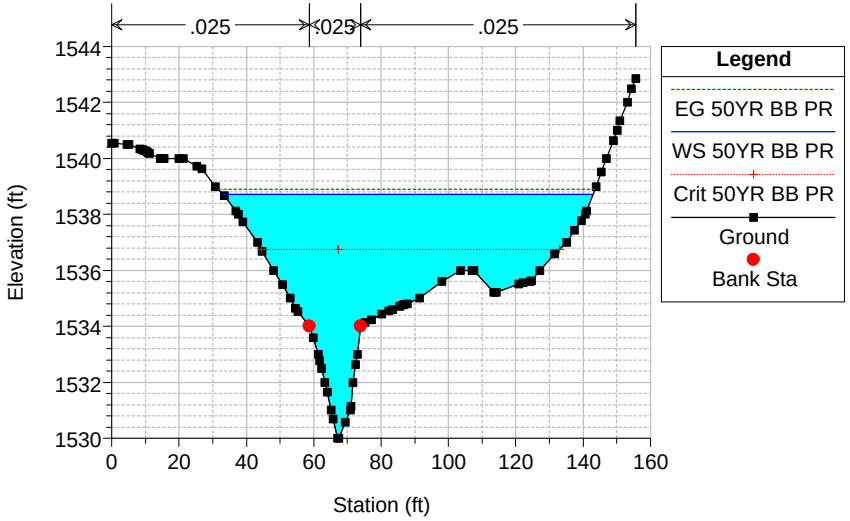
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2007



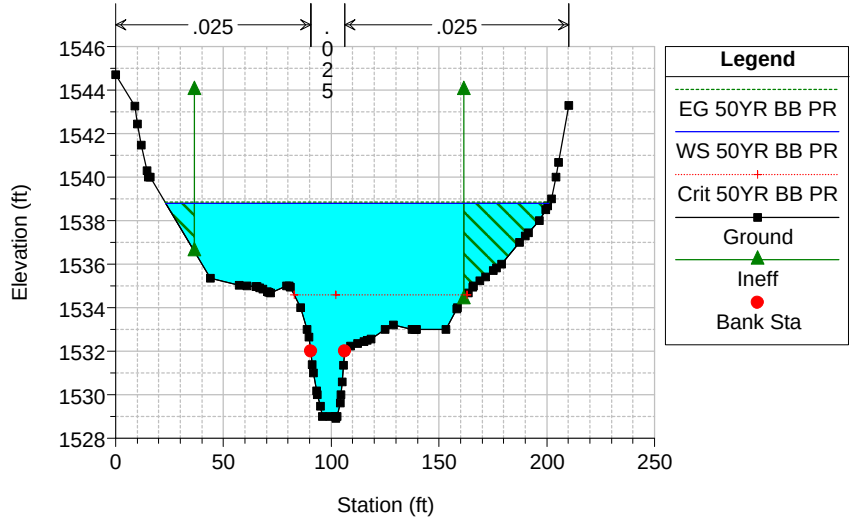
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1947



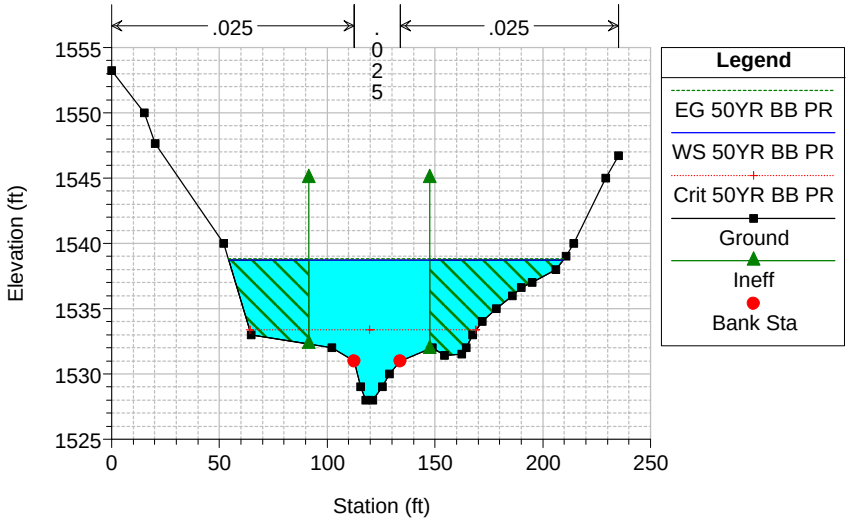
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1881



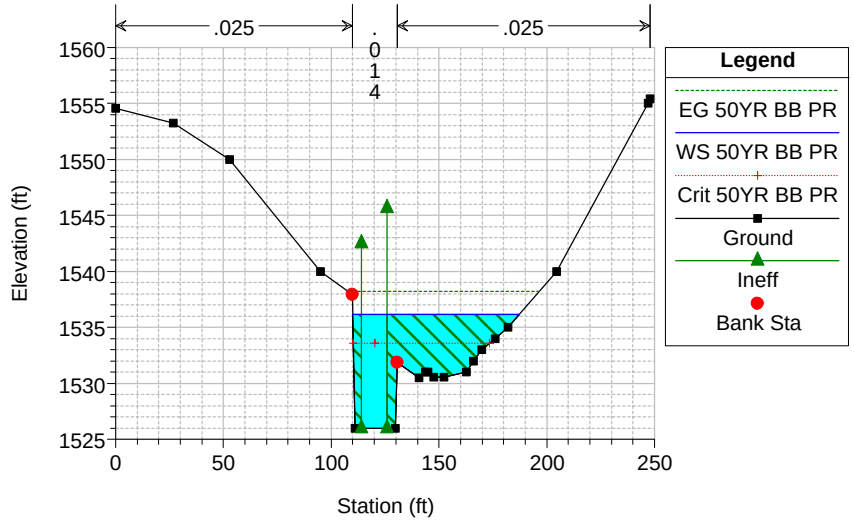
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1835



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1810



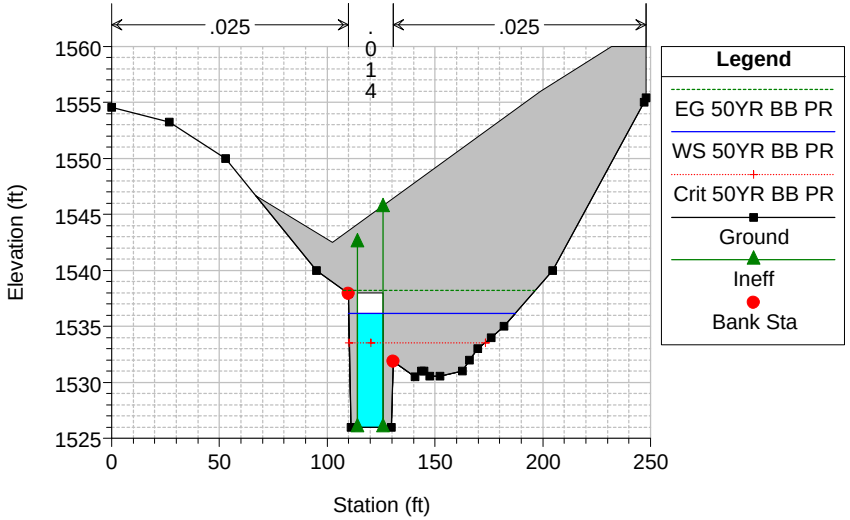
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1788 U/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

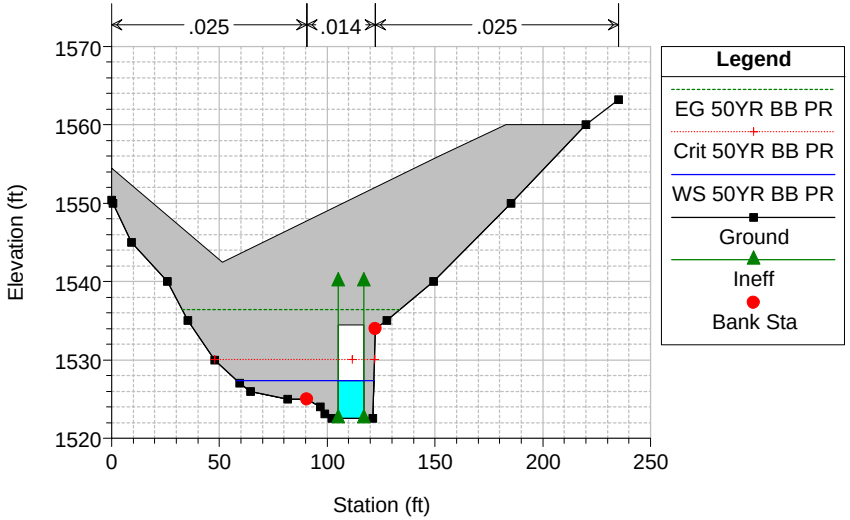
River = w02 Reach = WICKHAM_PR RS = 1727 Culv Single 12'W x 12'H RCB at Verandah Ct



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

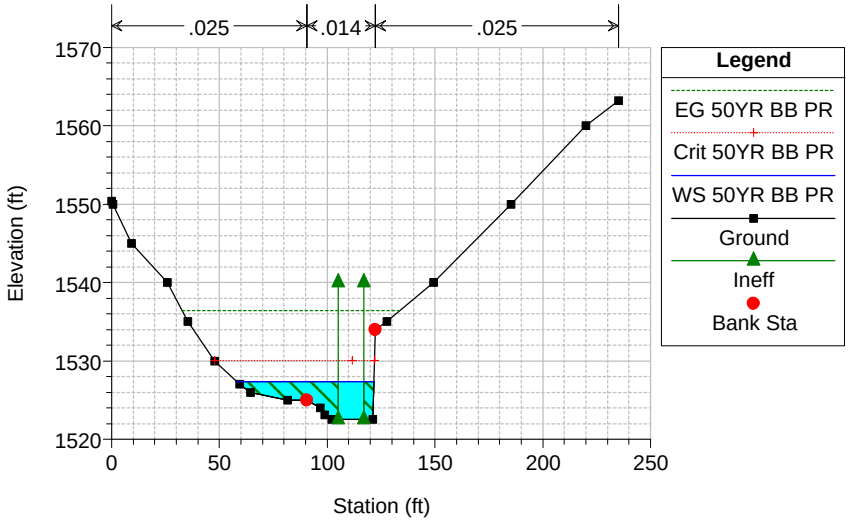
River = w02 Reach = WICKHAM_PR RS = 1727 Culv Single 12'W x 12'H RCB at Verandah Ct



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

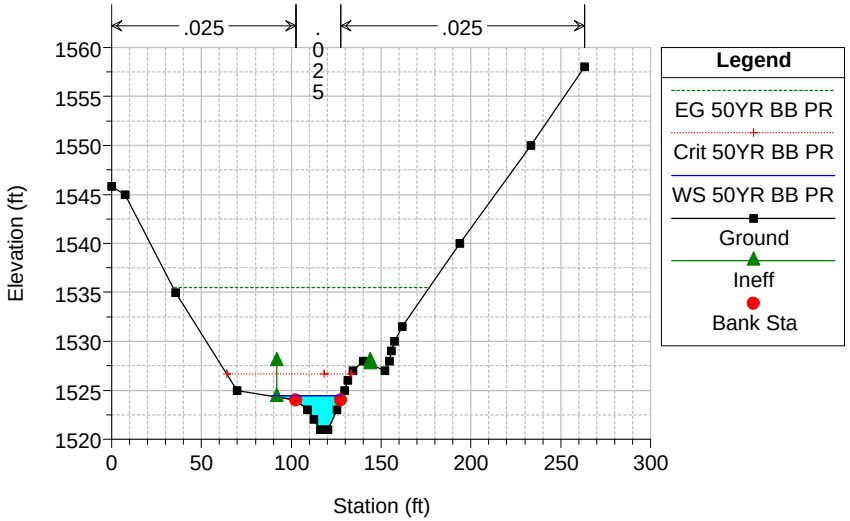
River = w02 Reach = WICKHAM_PR RS = 1666 D/S Section 12'W x 12'H RCB



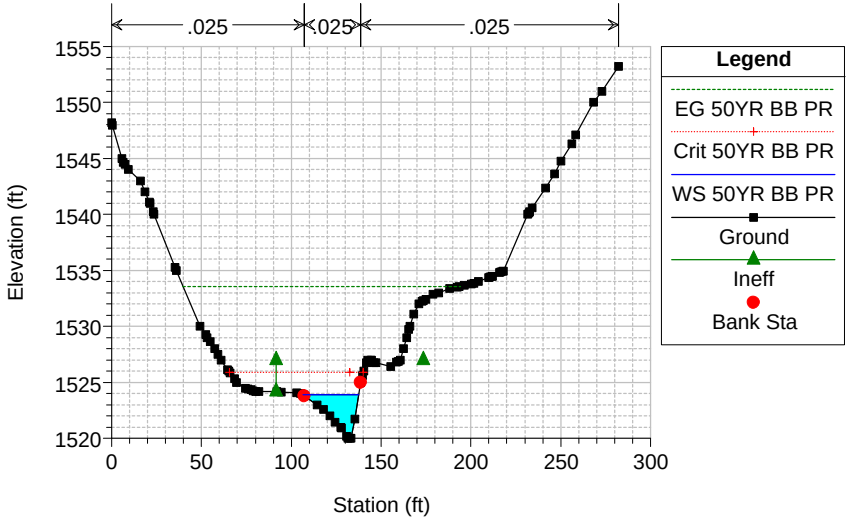
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

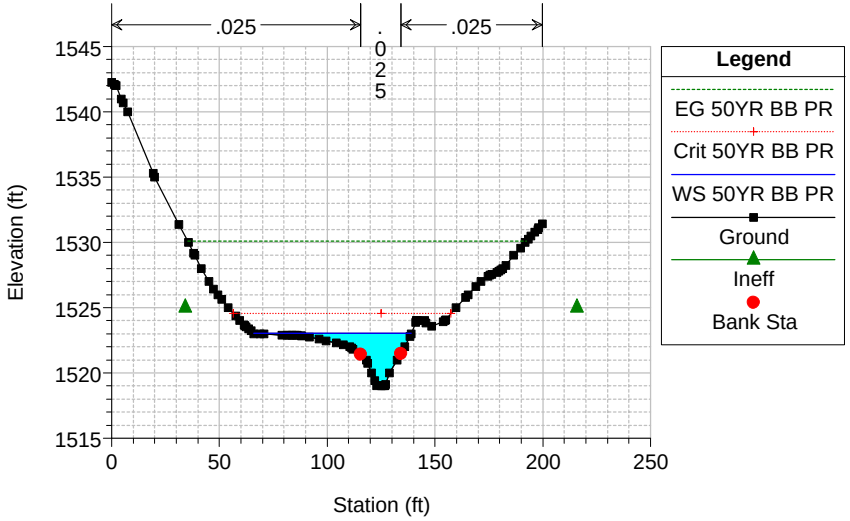
River = w02 Reach = WICKHAM_PR RS = 1646



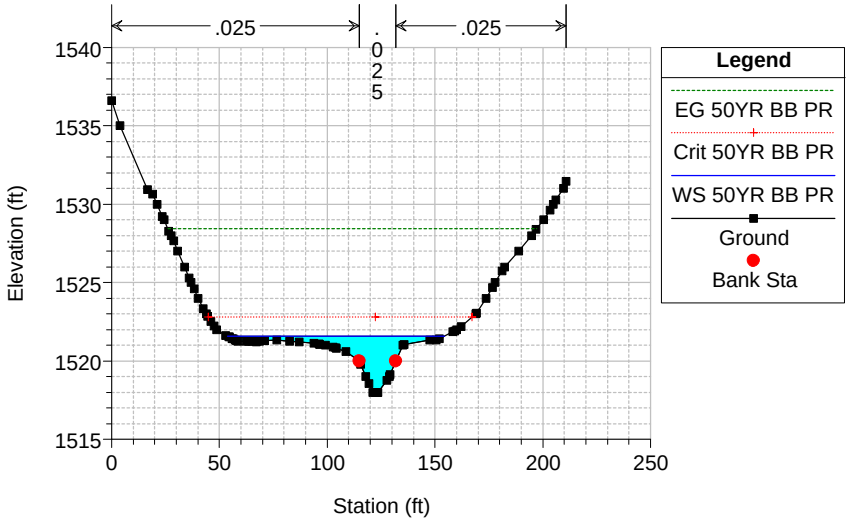
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1631



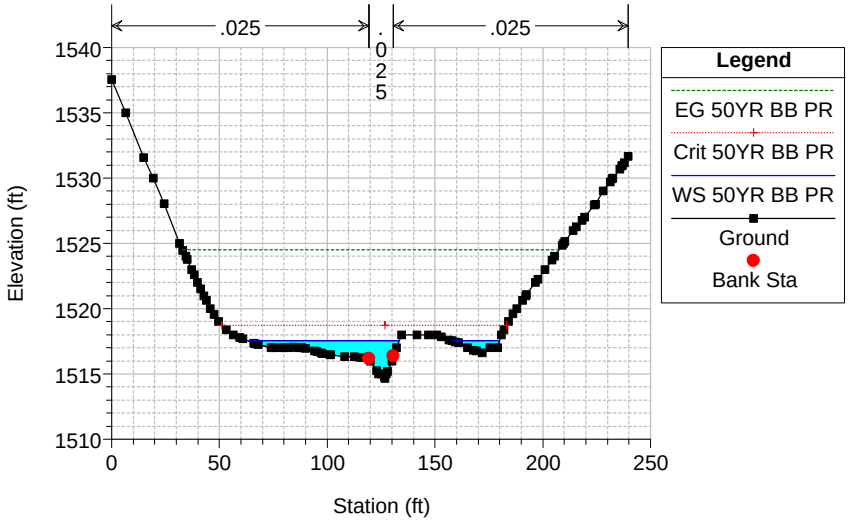
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1581



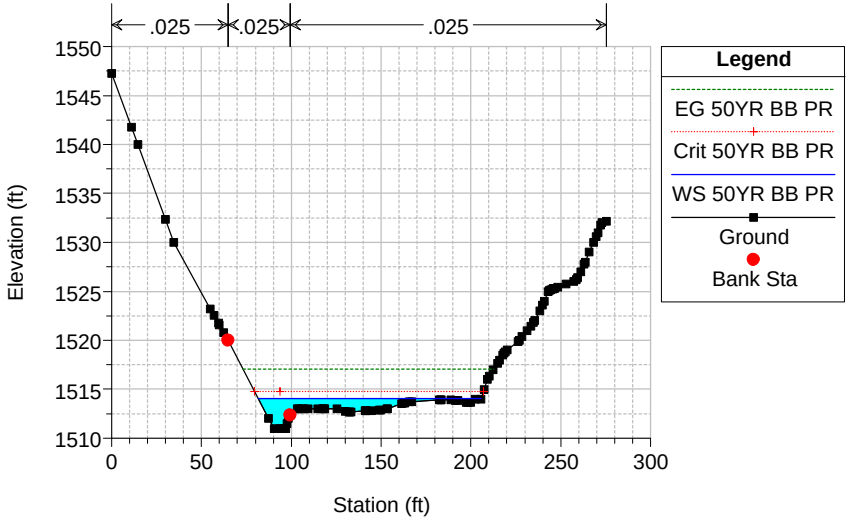
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1540



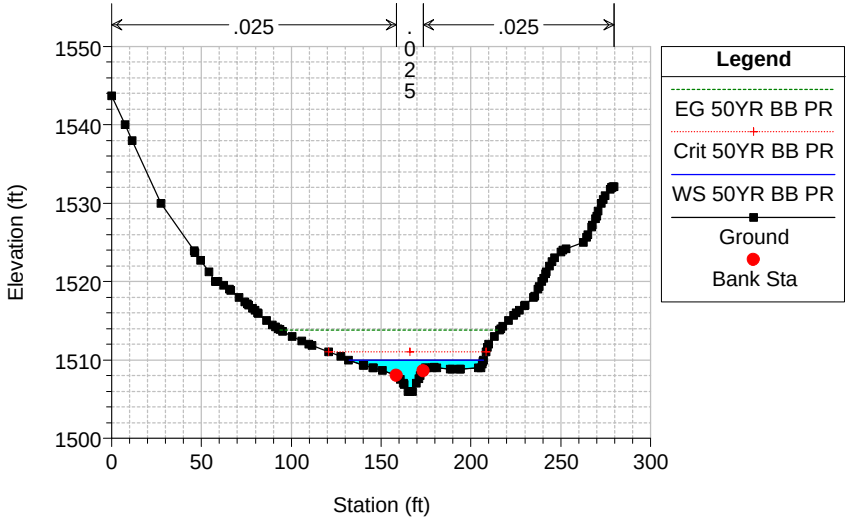
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1470



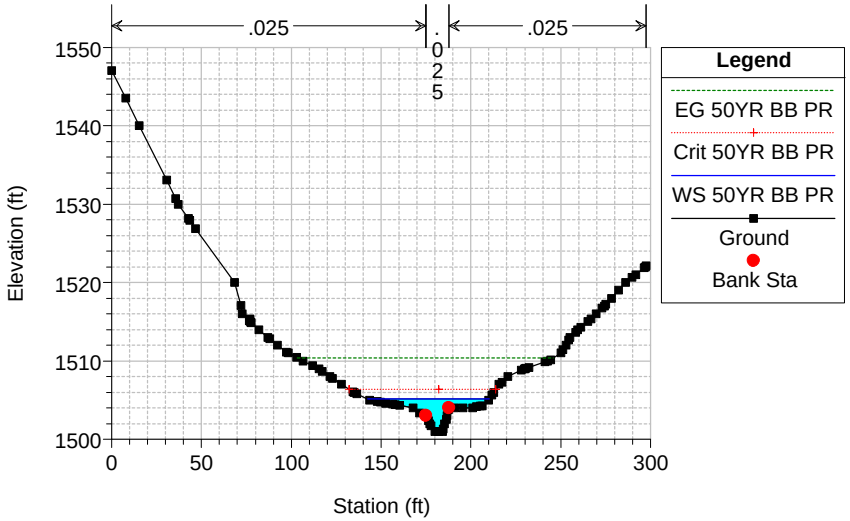
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1342



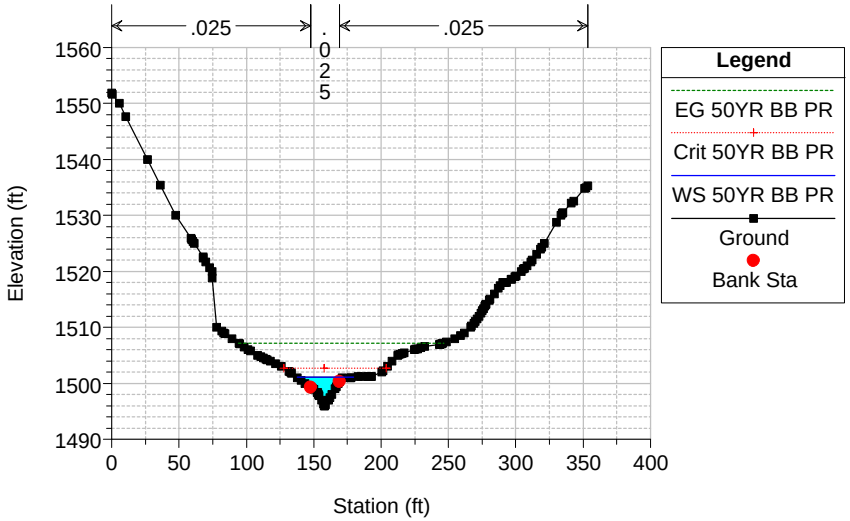
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1233



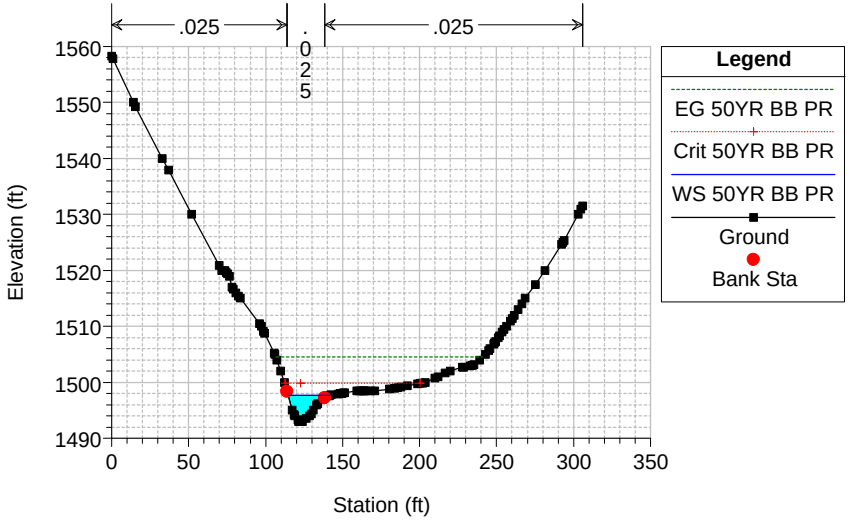
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1115



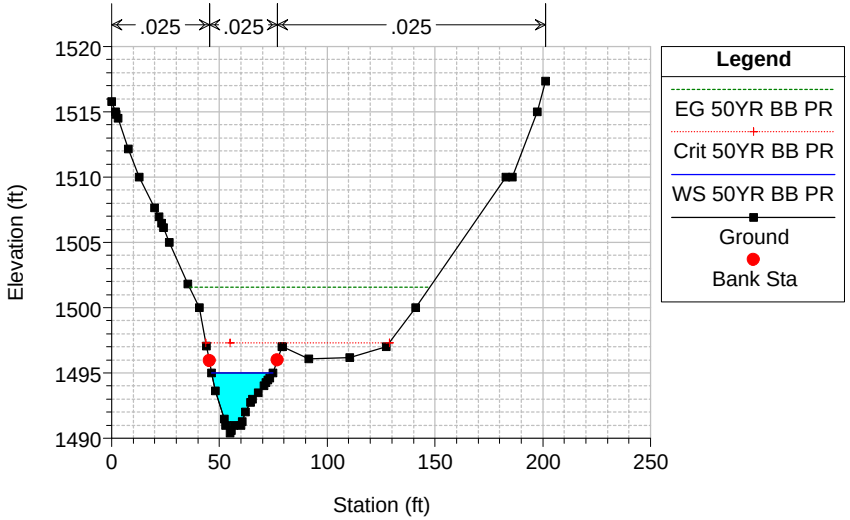
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1010



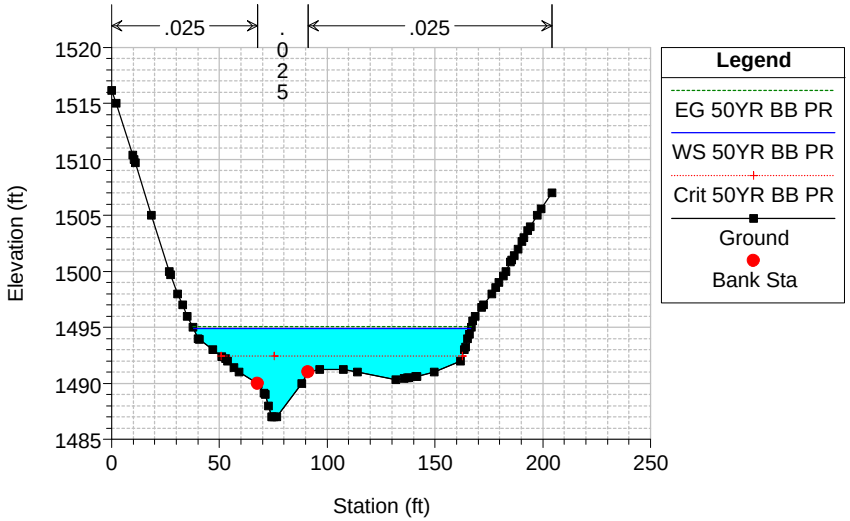
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 928



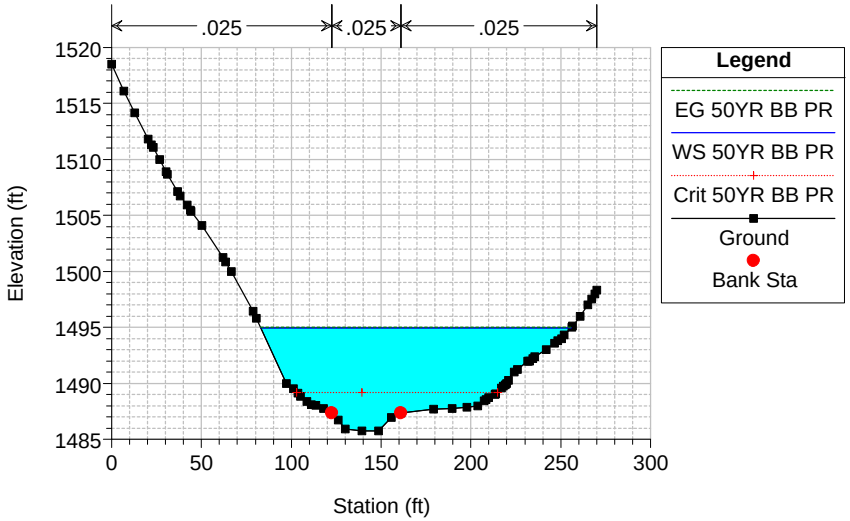
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 853



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 753



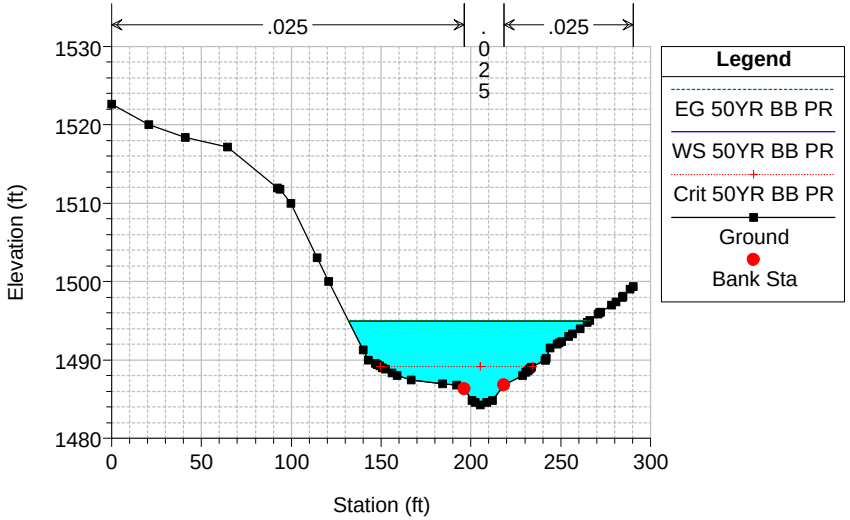
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 647



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

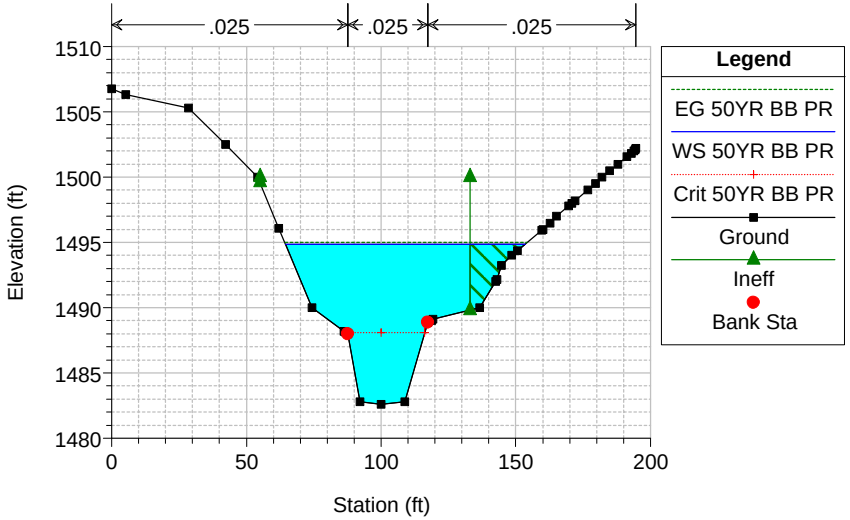
River = w02 Reach = WICKHAM_PR RS = 571



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

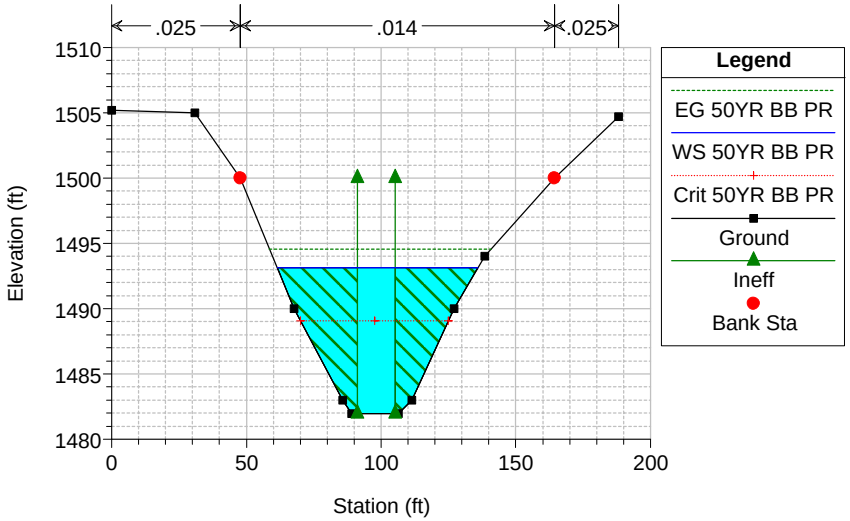
River = w02 Reach = WICKHAM_PR RS = 504



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

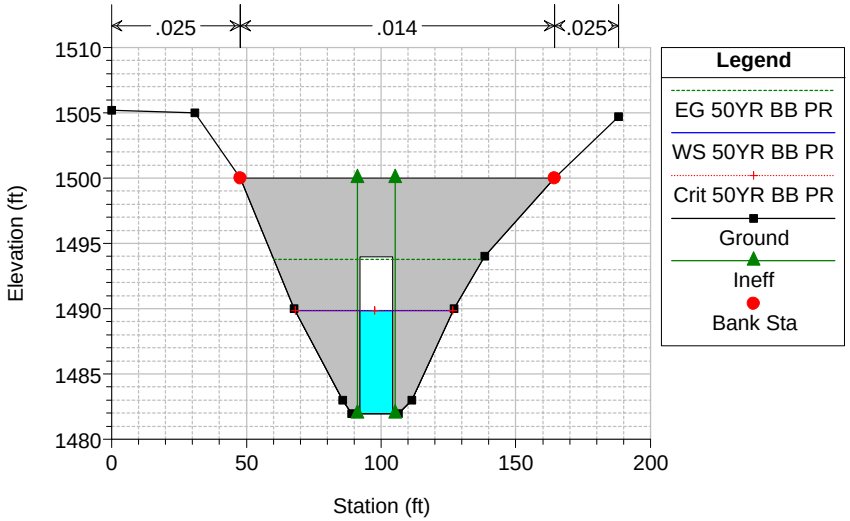
River = w02 Reach = WICKHAM_PR RS = 465 U/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

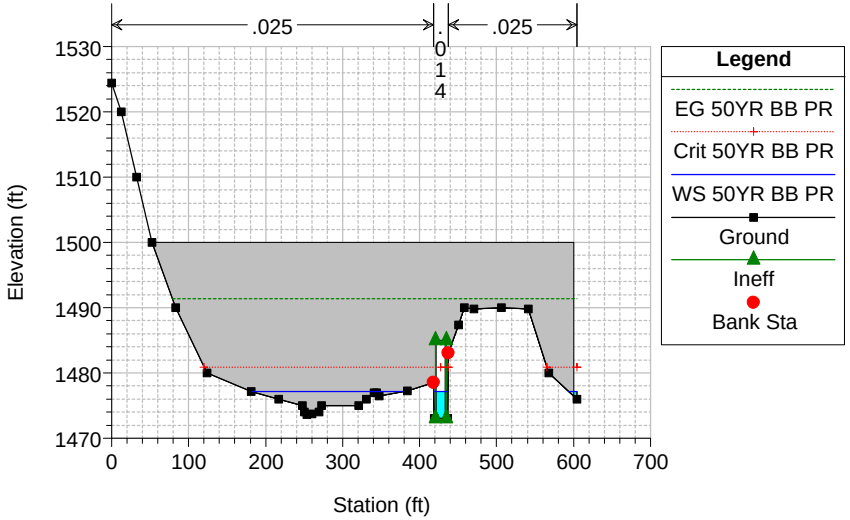
River = w02 Reach = WICKHAM_PR RS = 322.5 Culv Single 12'W x 12'H RCB at "A" St



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

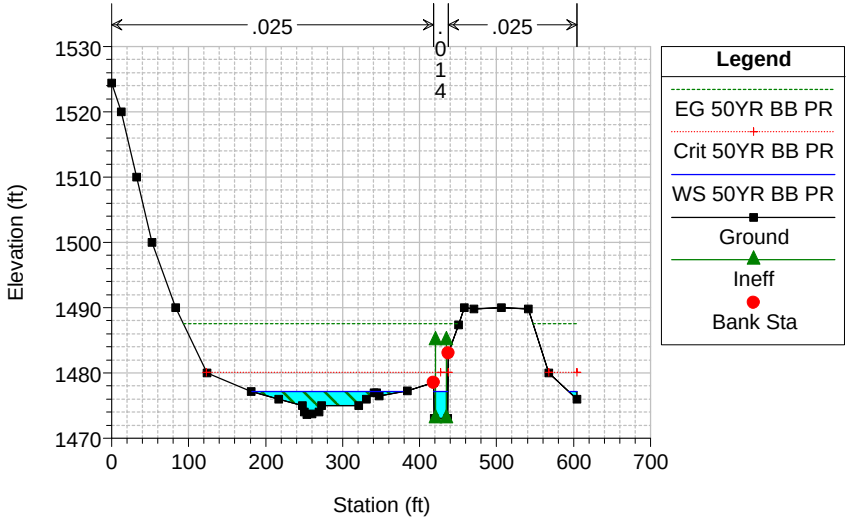
River = w02 Reach = WICKHAM_PR RS = 322.5 Culv Single 12'W x 12'H RCB at "A" St



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

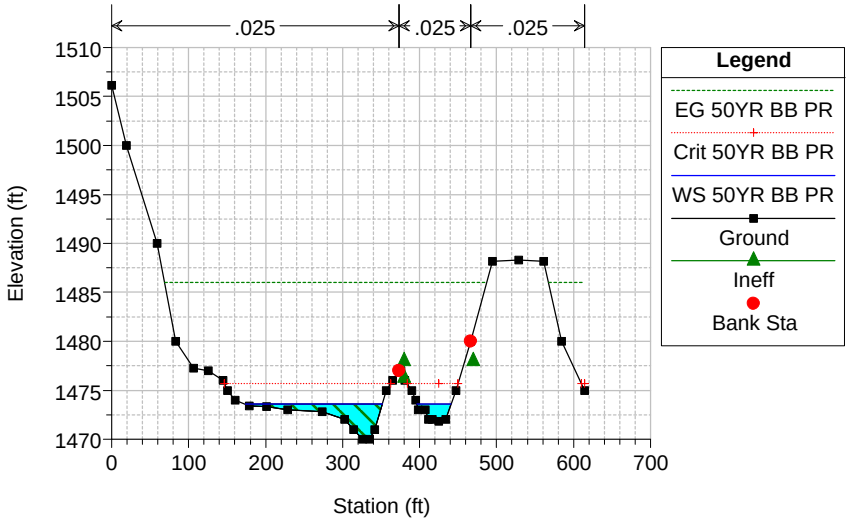
River = w02 Reach = WICKHAM_PR RS = 248 D/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

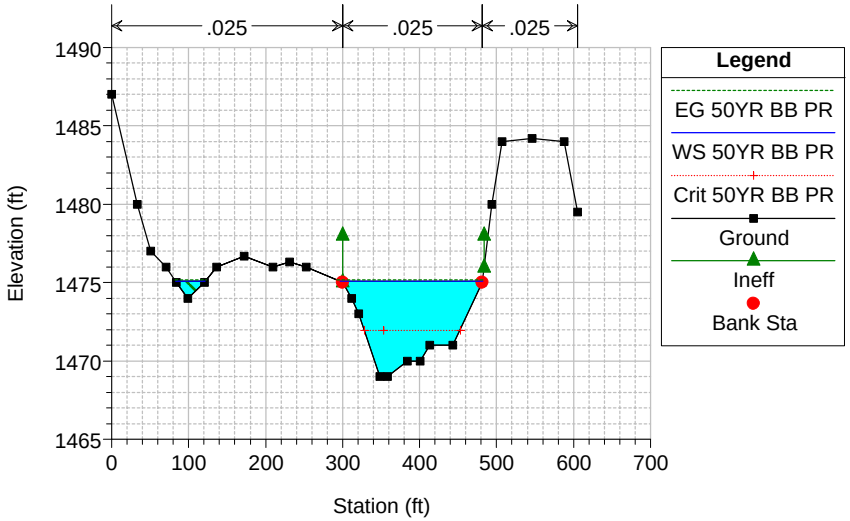
River = w02 Reach = WICKHAM_PR RS = 192



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.025 10/17/2014

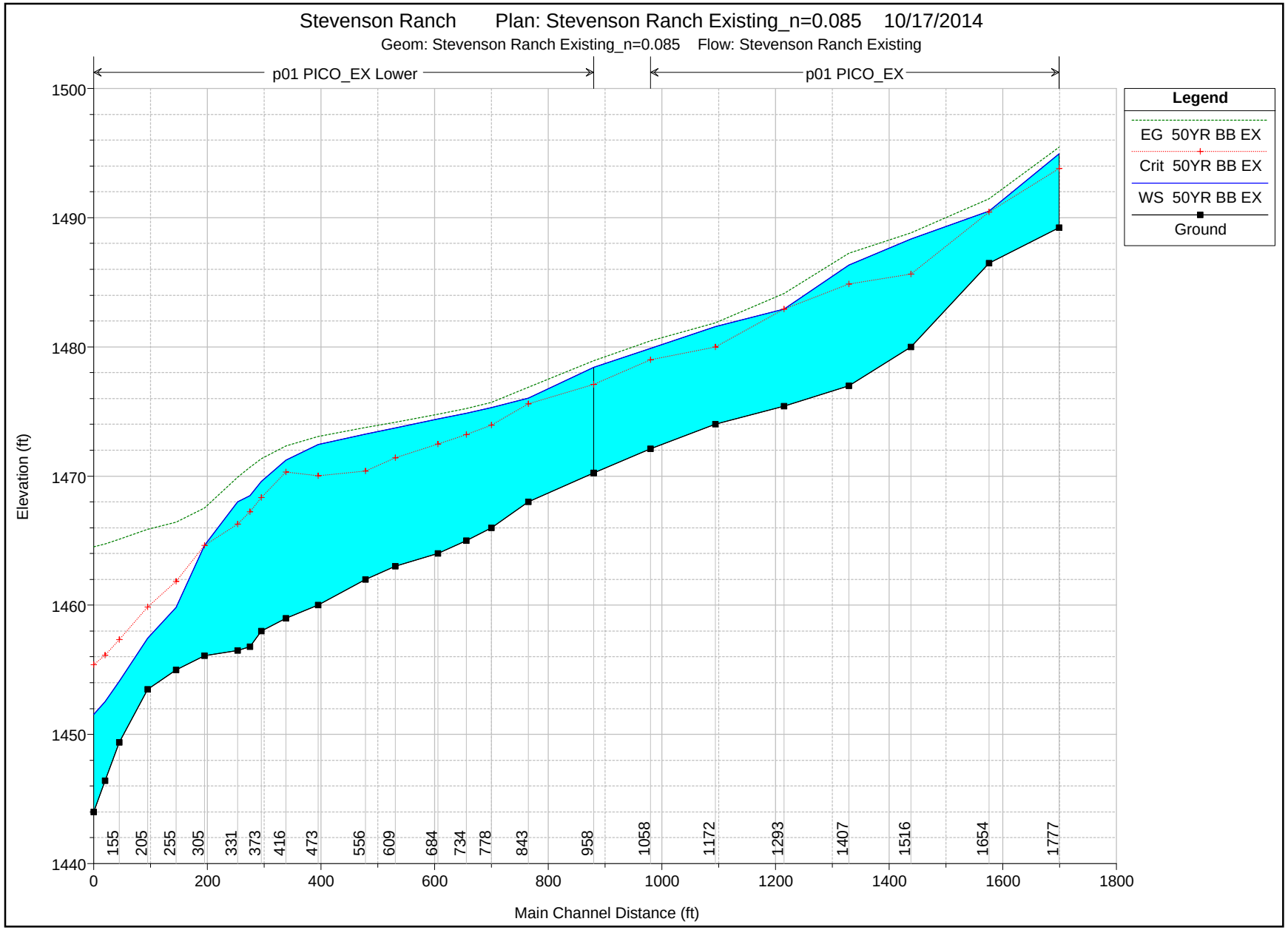
Geom: Stevenson Ranch Proposed_n=0.025 Flow: Stevenson Ranch Proposed

River = w02 Reach = WICKHAM_PR RS = 154 Most D/S Section - Junction w Pico Canyon Creek

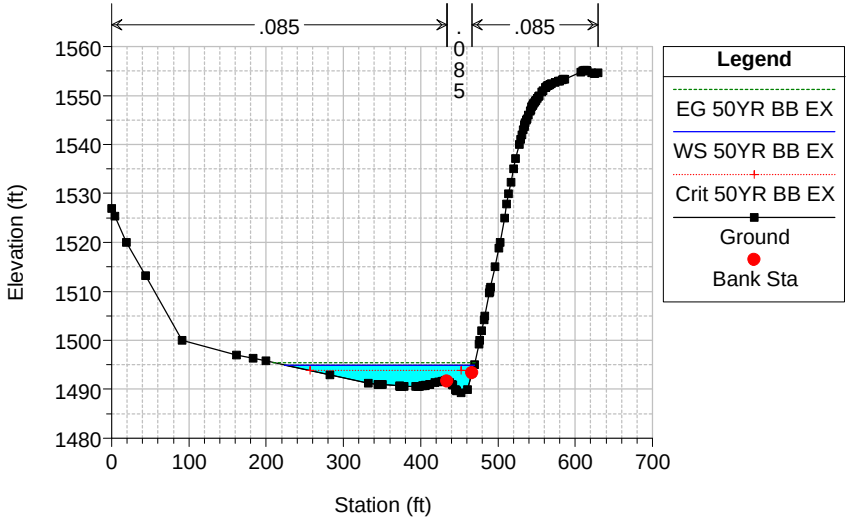


HEC-RAS Plan: EX_n=0.085 Profile: 50YR BB EX

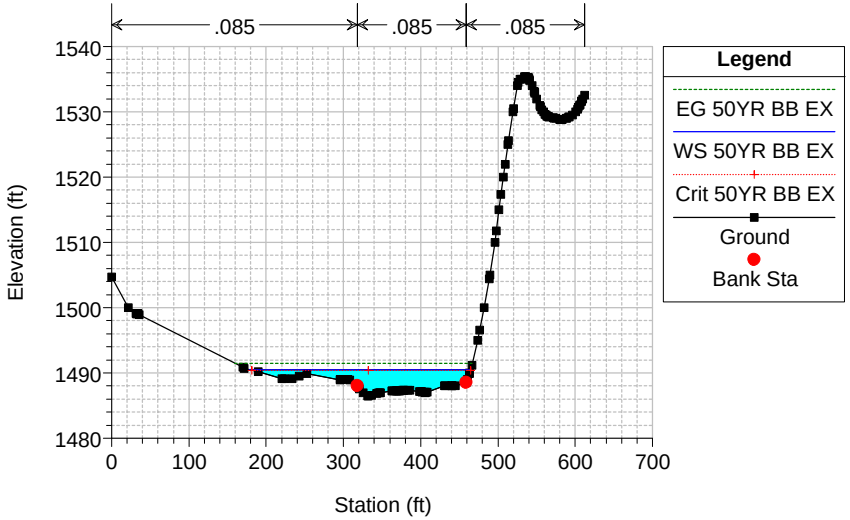
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PICO_EX	1777	50YR BB EX	4320.00	1489.24	1494.94	1493.81	1495.47	0.022677	7.01	760.73	245.31	0.58
PICO_EX	1654	50YR BB EX	4320.00	1486.47	1490.52	1490.43	1491.47	0.049213	8.31	600.43	286.33	0.83
PICO_EX	1516	50YR BB EX	4320.00	1480.00	1488.36	1485.65	1488.82	0.009318	5.53	827.58	185.74	0.40
PICO_EX	1407	50YR BB EX	4320.00	1477.00	1486.32	1484.86	1487.26	0.023038	9.00	606.45	255.09	0.60
PICO_EX	1293	50YR BB EX	4320.00	1475.40	1482.91	1482.91	1484.13	0.032666	10.19	591.78	233.72	0.73
PICO_EX	1172	50YR BB EX	4320.00	1474.00	1481.57	1480.00	1481.87	0.008630	5.55	1102.53	338.68	0.39
PICO_EX	1058	50YR BB EX	5230.00	1472.10	1479.88	1479.00	1480.46	0.017015	8.08	992.19	326.41	0.55
PICO_EX Lower	958	50YR BB EX	5230.00	1470.25	1478.40	1477.09	1478.93	0.013632	6.67	985.85	271.46	0.48
PICO_EX Lower	843	50YR BB EX	5230.00	1468.00	1476.02	1475.60	1476.87	0.023480	8.48	815.27	274.45	0.63
PICO_EX Lower	778	50YR BB EX	5230.00	1466.00	1475.29	1473.95	1475.70	0.011584	6.40	1109.31	308.17	0.44
PICO_EX Lower	734	50YR BB EX	5230.00	1465.00	1474.85	1473.22	1475.23	0.009569	6.22	1142.22	284.11	0.41
PICO_EX Lower	684	50YR BB EX	5230.00	1464.00	1474.41	1472.46	1474.77	0.008464	6.02	1162.38	282.50	0.39
PICO_EX Lower	609	50YR BB EX	5230.00	1463.00	1473.71	1471.41	1474.16	0.007865	5.99	1055.41	244.31	0.38
PICO_EX Lower	556	50YR BB EX	5230.00	1462.00	1473.24	1470.39	1473.75	0.007418	6.22	982.96	265.37	0.37
PICO_EX Lower	473	50YR BB EX	5230.00	1460.00	1472.44	1470.03	1473.05	0.009256	6.92	938.83	314.82	0.41
PICO_EX Lower	416	50YR BB EX	5230.00	1459.00	1471.24	1470.32	1472.31	0.017463	9.03	720.56	290.47	0.55
PICO_EX Lower	373	50YR BB EX	5230.00	1458.00	1469.58	1468.34	1471.32	0.027062	11.15	527.12	269.54	0.68
PICO_EX Lower	353	50YR BB EX	5230.00	1456.80	1468.48	1467.25	1470.68	0.032433	11.95	450.98	206.31	0.76
PICO_EX Lower	331	50YR BB EX	5230.00	1456.50	1468.01	1466.28	1469.92	0.028659	11.11	470.94	210.50	0.71
PICO_EX Lower	305	50YR BB EX	5230.00	1456.10	1464.63	1464.63	1467.52	0.058946	13.75	384.03	170.05	0.99
PICO_EX Lower	255	50YR BB EX	5230.00	1455.00	1459.83	1461.83	1466.43	0.006247	20.97	325.17	104.19	1.85
PICO_EX Lower	205	50YR BB EX	5230.00	1453.50	1457.43	1459.87	1465.86	0.009504	23.45	246.66	76.78	2.21
PICO_EX Lower	155	50YR BB EX	5230.00	1449.40	1454.12	1457.33	1465.10	0.010608	26.60	196.60	46.88	2.29
PICO_EX Lower	130	50YR BB EX	5230.00	1446.40	1452.52	1456.13	1464.73	0.009721	28.05	186.48	32.37	2.06
PICO_EX Lower	110	50YR BB EX	5230.00	1444.00	1451.54	1455.39	1464.52	0.005022	28.91	180.88	25.75	1.86


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
p01 PICO_EX Lower
p01 PICO_EX
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Elevation (ft)
1500
1490
1480
1470
1460
1450
1440
155
205
255
305
331
373
416
473
556
609
684
734
778
843
958
1058
1172
1293
1407
1516
1654
1777
0
200
400
600
800
1000
1200
1400
1600
1800
Main Channel Distance (ft)

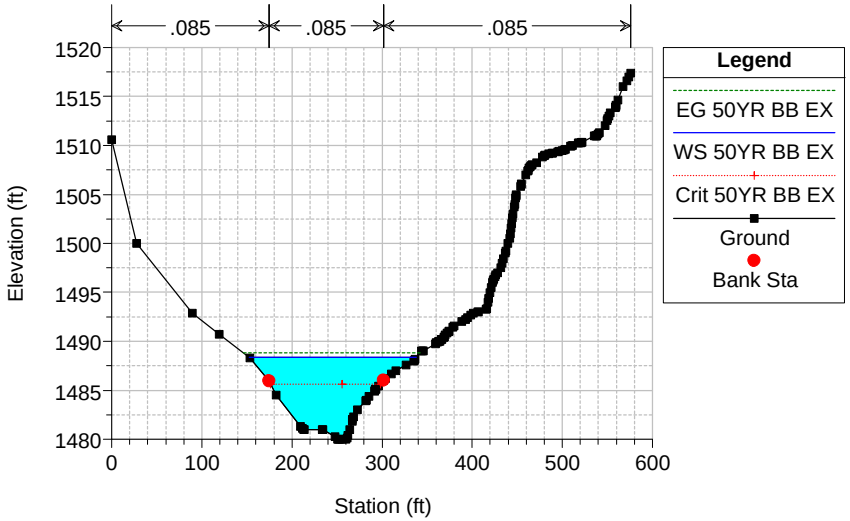
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1777 Most U/S Section



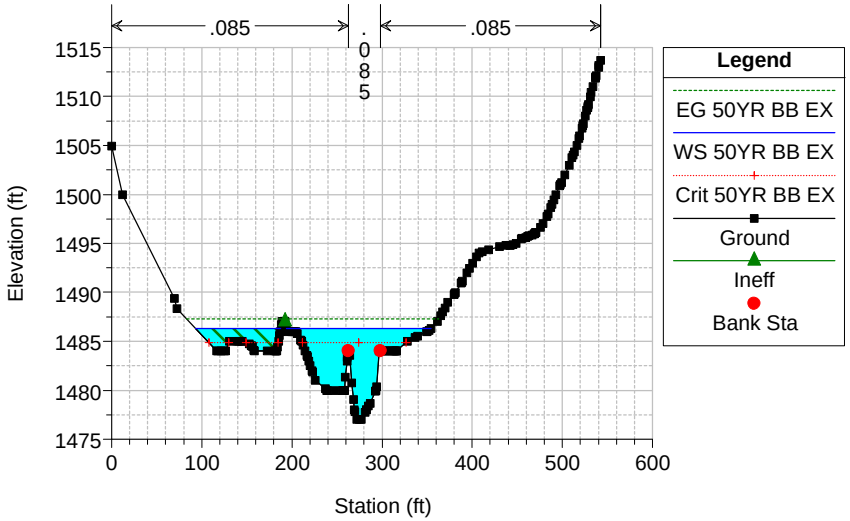
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1654



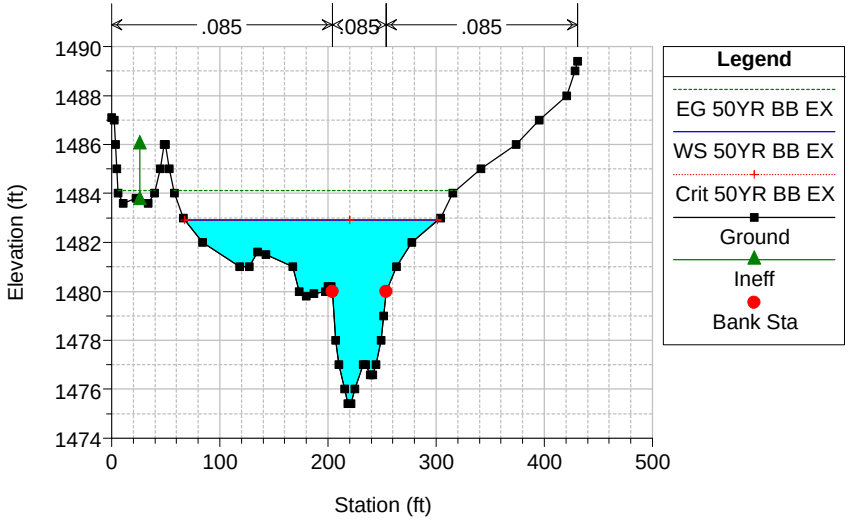
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1516



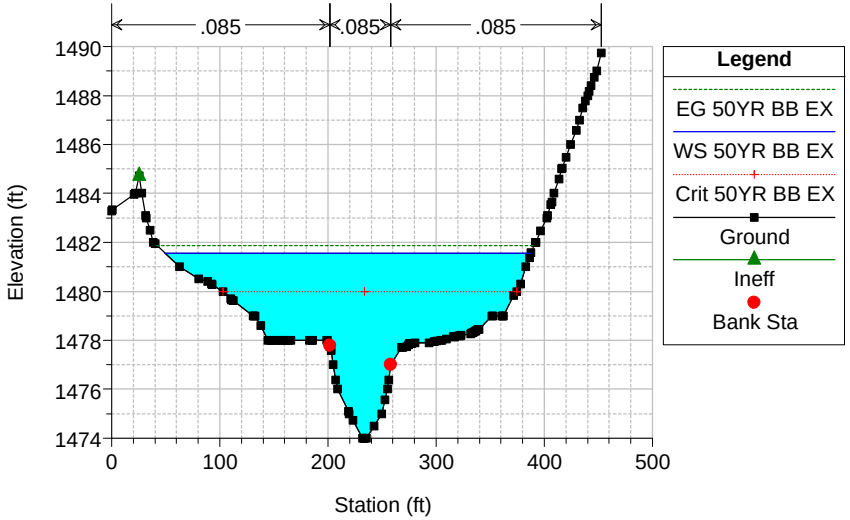
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1407



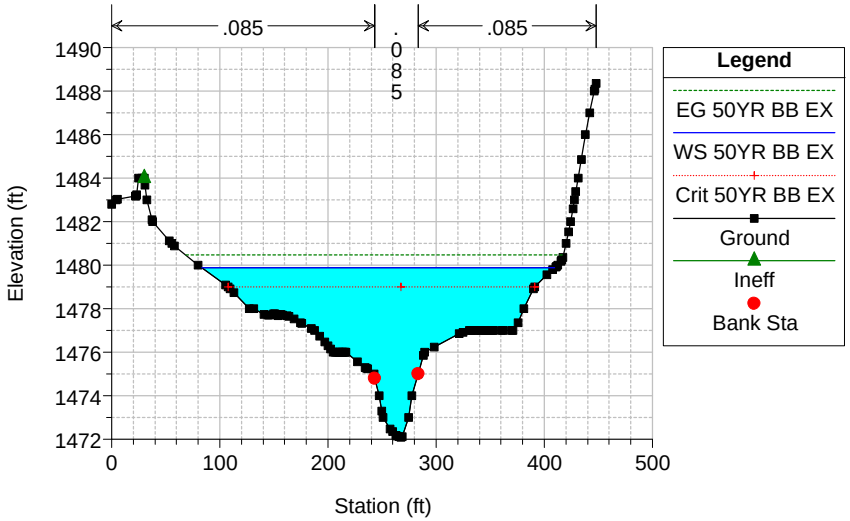
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1293



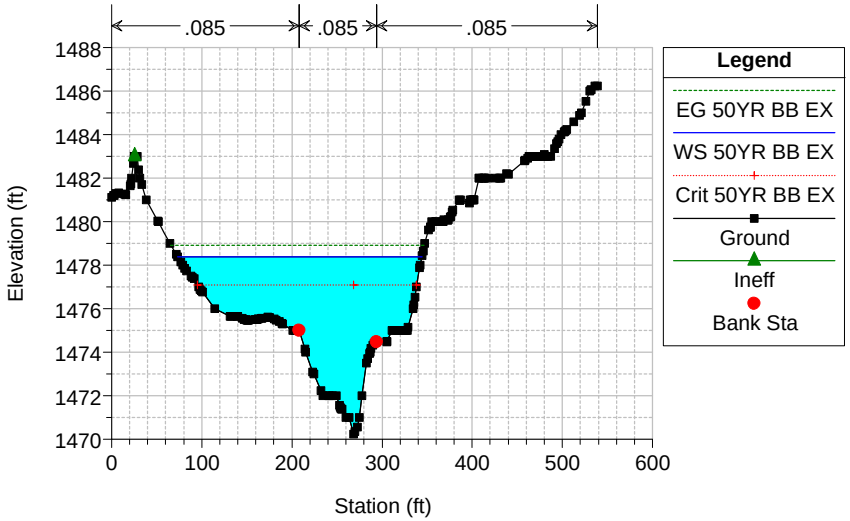
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1172

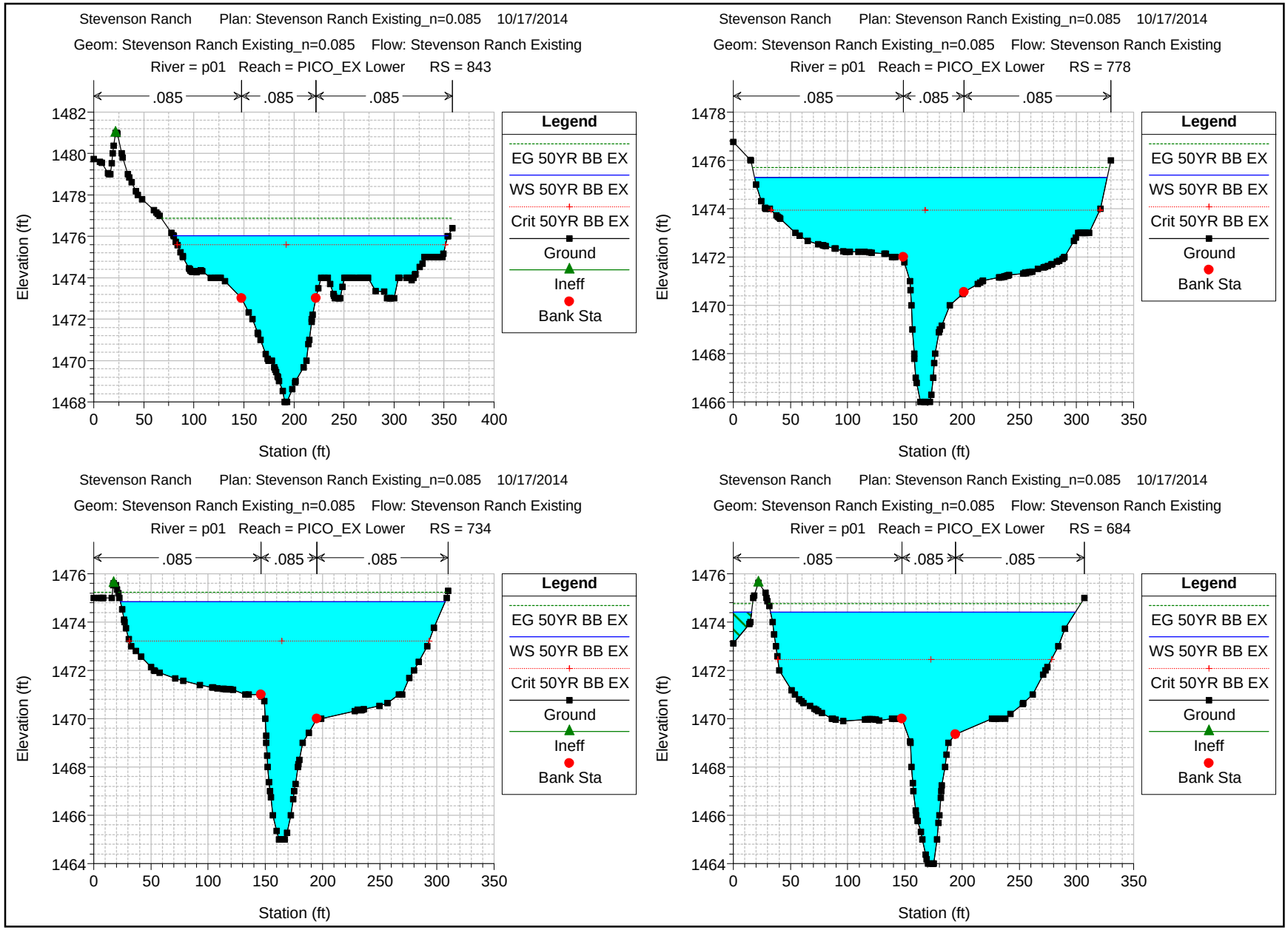


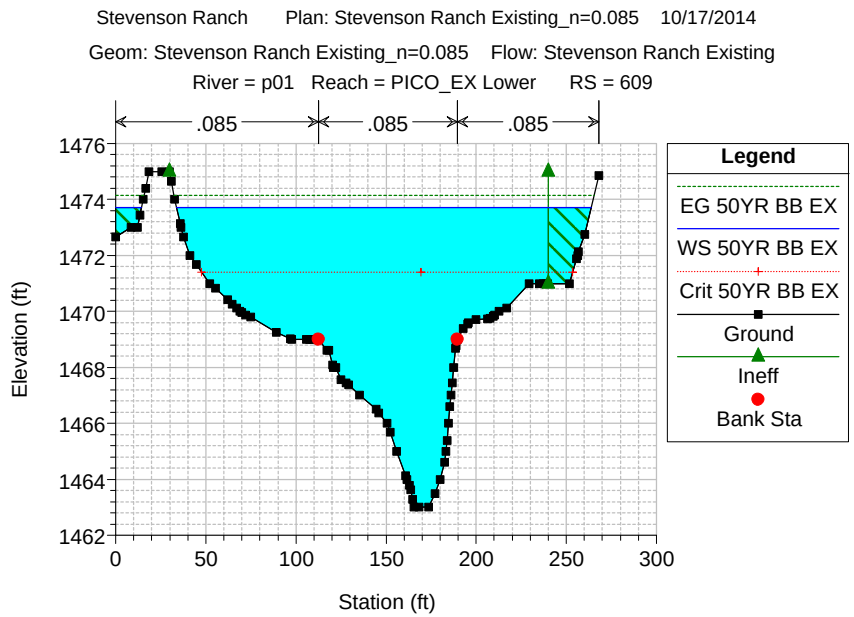
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX RS = 1058

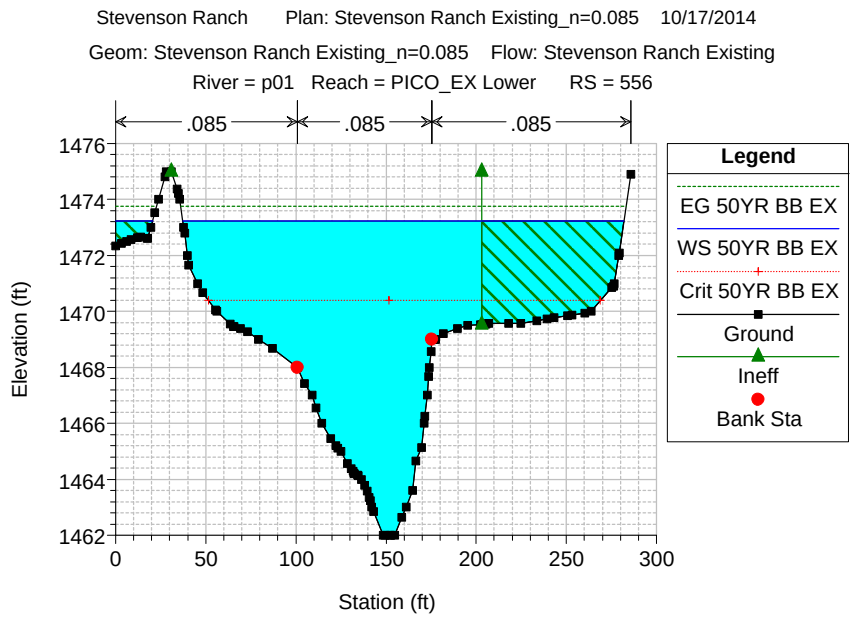


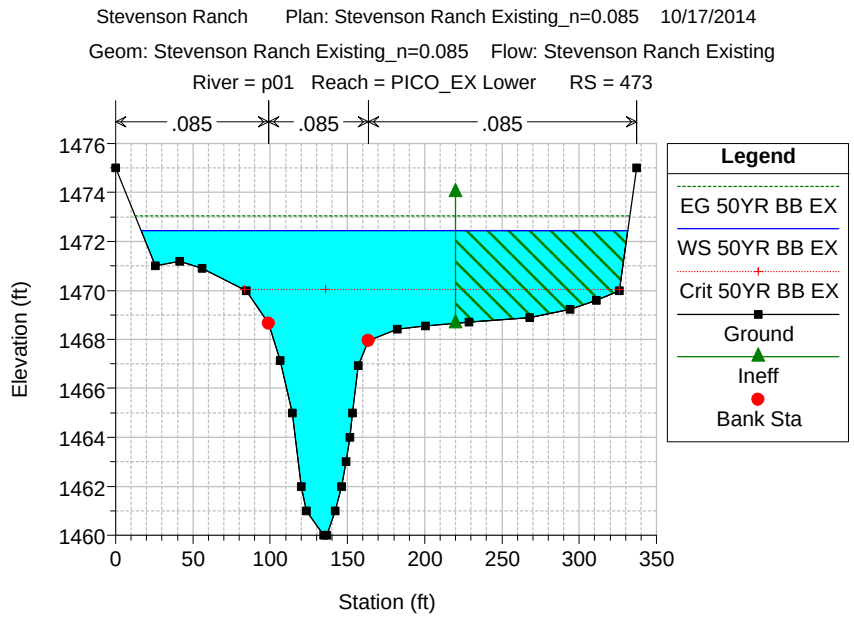
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 958

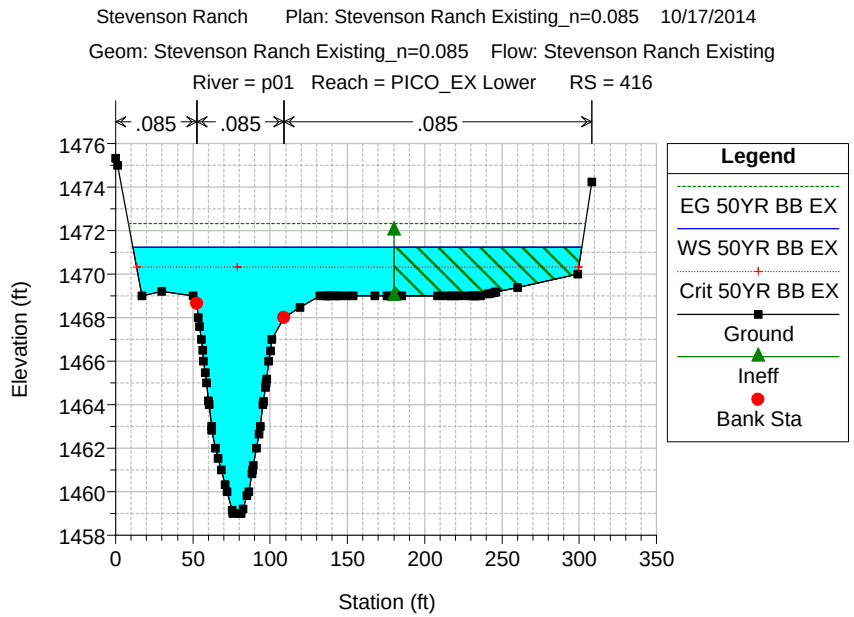



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 843
.085 .085 .085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 778
.085 .085 .085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 734
.085 .085 .085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 684
.085 .085 .085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 609
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 556
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta

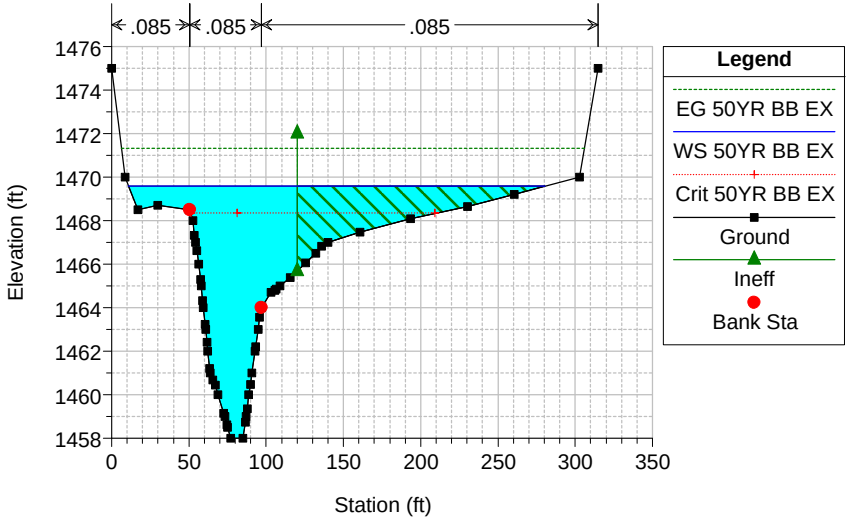

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 473
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = p01 Reach = PICO_EX Lower RS = 416
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Ineff
Bank Sta

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

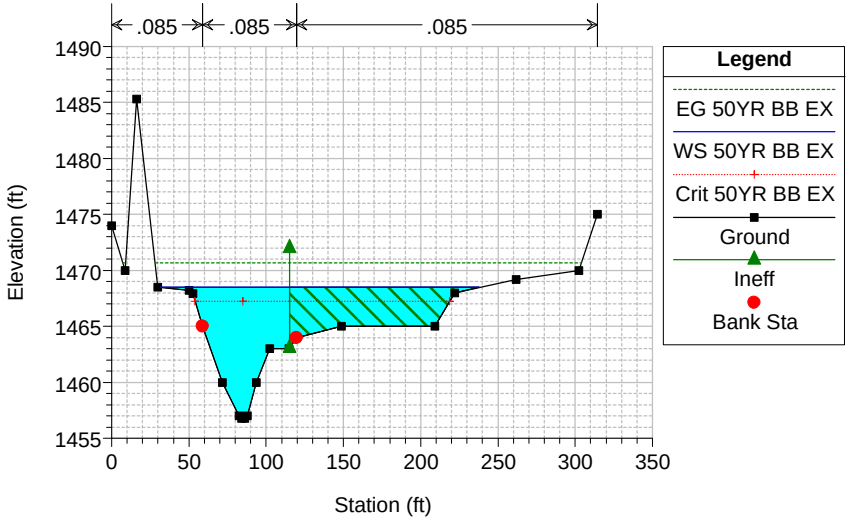
River = p01 Reach = PICO_EX Lower RS = 373



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

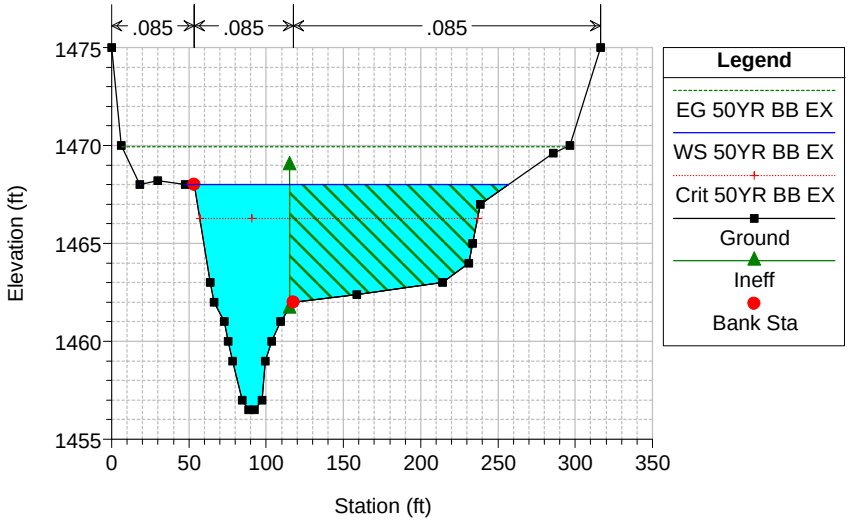
River = p01 Reach = PICO_EX Lower RS = 353



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

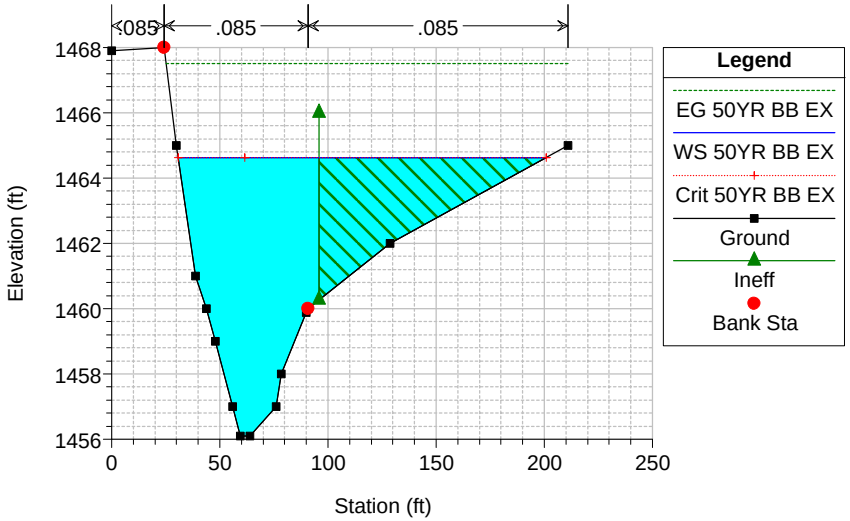
River = p01 Reach = PICO_EX Lower RS = 331



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

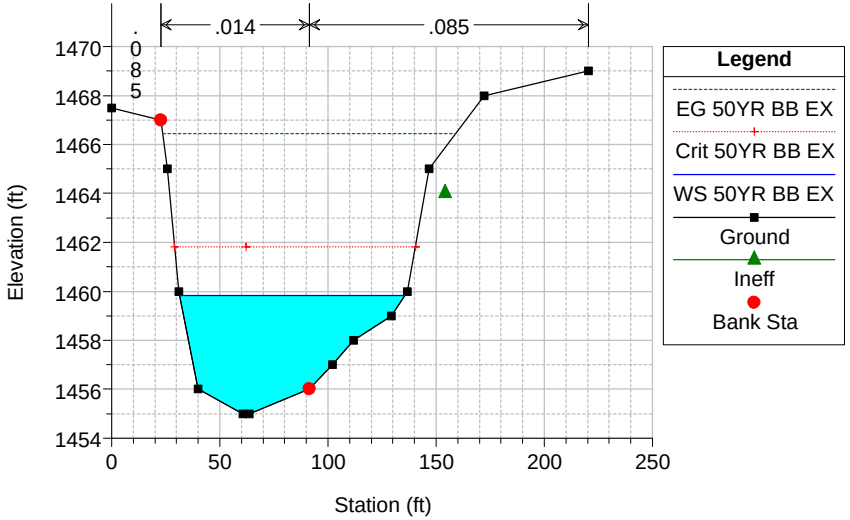
River = p01 Reach = PICO_EX Lower RS = 305 Section is at location of RS 39+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

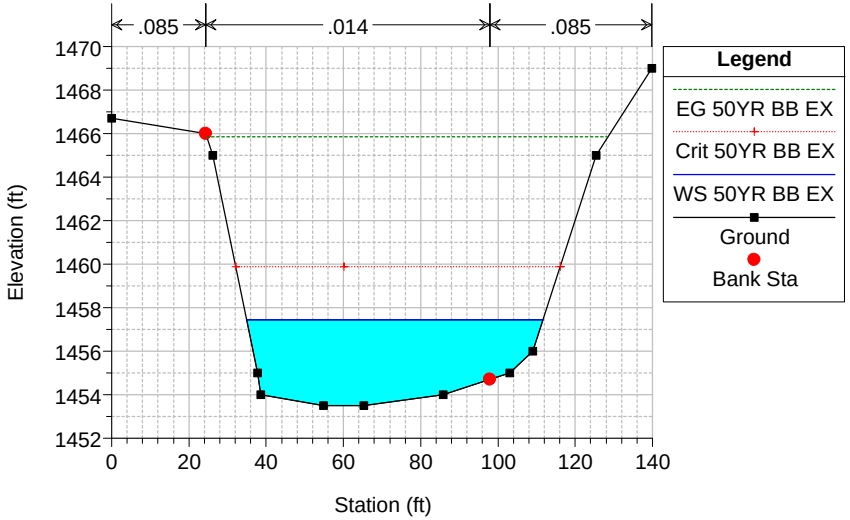
River = p01 Reach = PICO_EX Lower RS = 255 Section is at location of RS 39+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

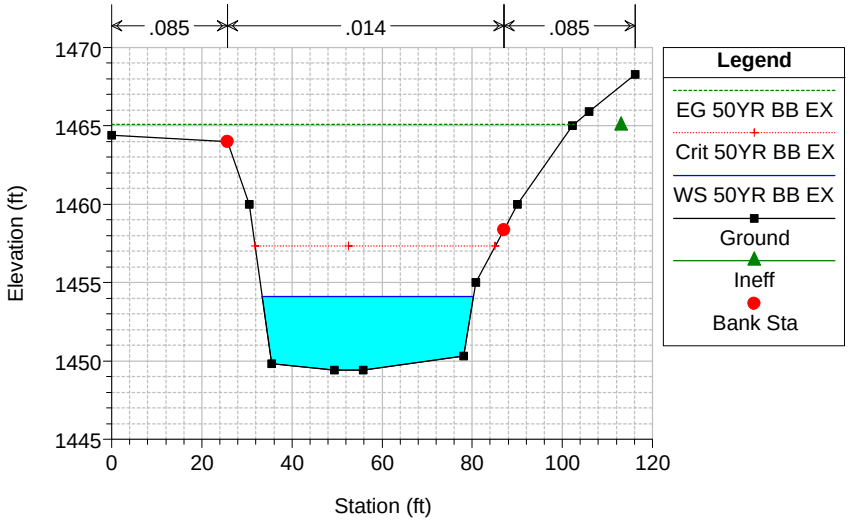
River = p01 Reach = PICO_EX Lower RS = 205 Section is at location of RS 38+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

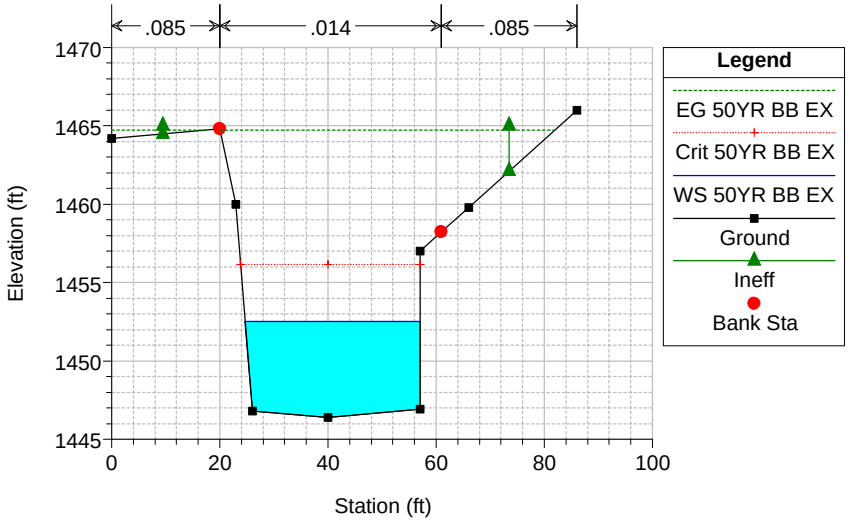
River = p01 Reach = PICO_EX Lower RS = 155 Section is at location of RS 38+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

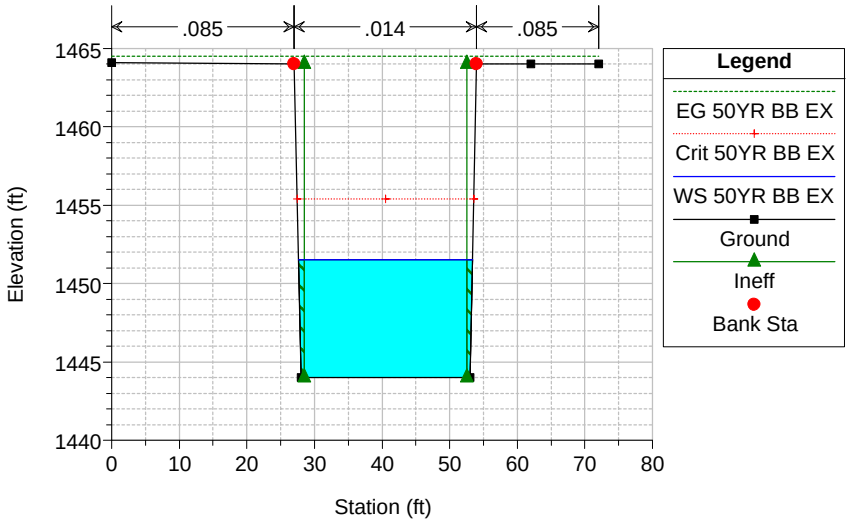
River = p01 Reach = PICO_EX Lower RS = 130 Section is at location of RS 38+00 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

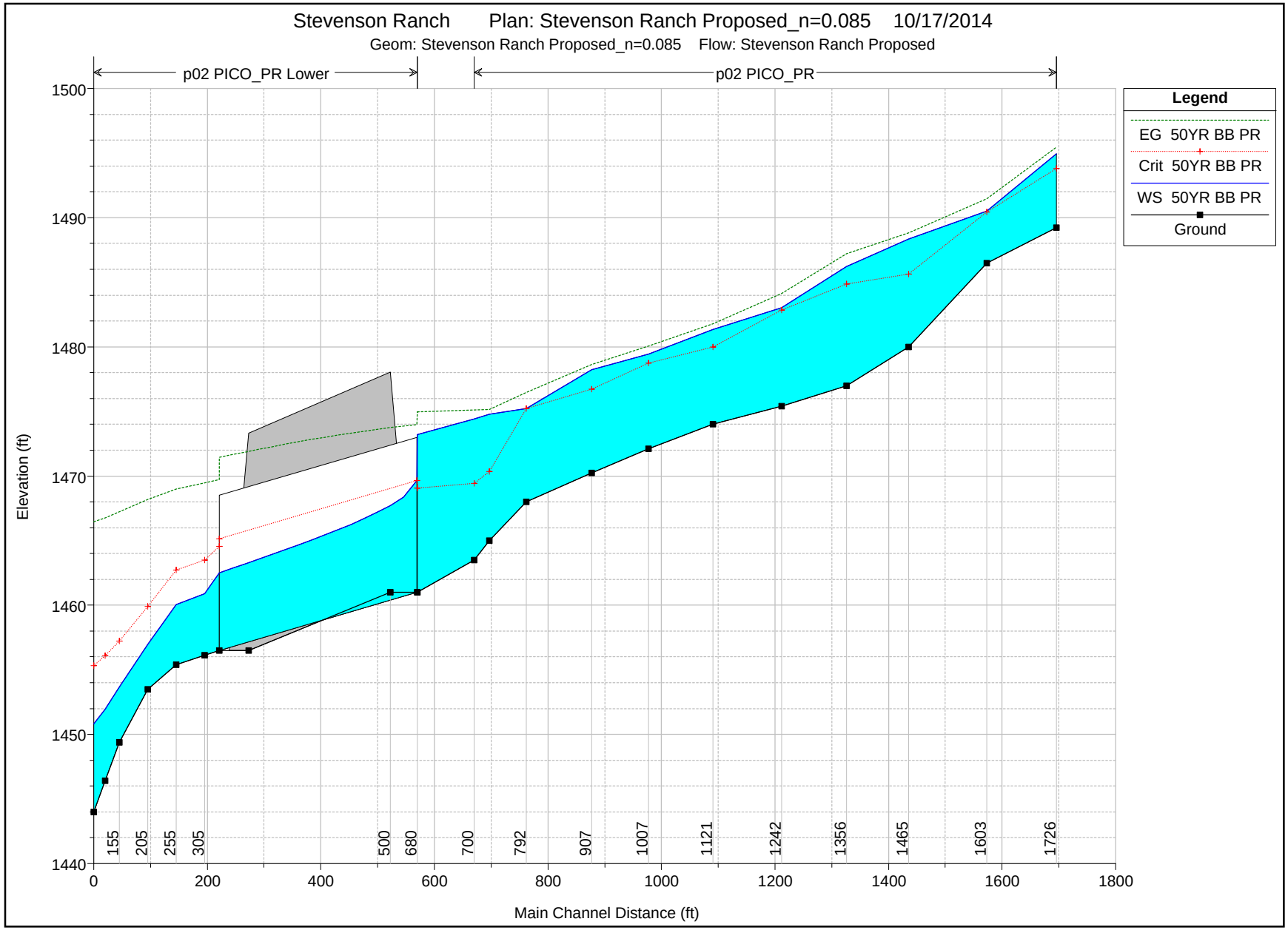
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

River = p01 Reach = PICO_EX Lower RS = 110 Inlet to 24' x14' RCB. Section is at location of RS 37+80...

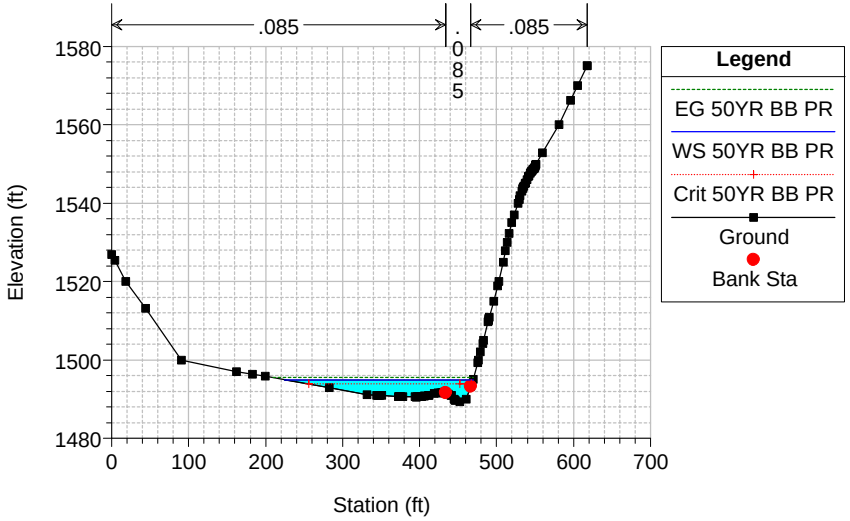


HEC-RAS Plan: PR_n=0.085 Profile: 50YR BB PR

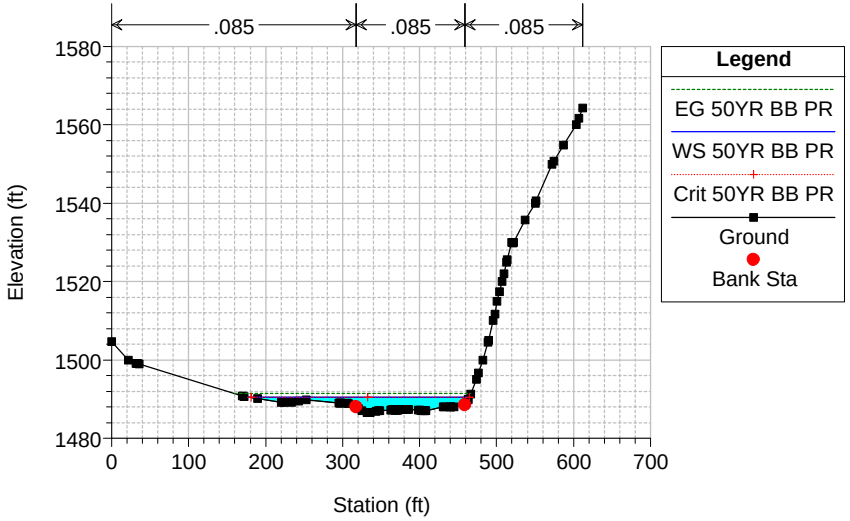
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PICO_PR	1726	50YR BB PR	4320.00	1489.24	1494.94	1493.81	1495.47	0.022680	7.01	760.70	245.31	0.58
PICO_PR	1603	50YR BB PR	4320.00	1486.47	1490.52	1490.43	1491.47	0.049198	8.31	600.50	286.34	0.83
PICO_PR	1465	50YR BB PR	4320.00	1480.00	1488.36	1485.65	1488.82	0.009324	5.53	827.38	185.72	0.40
PICO_PR	1356	50YR BB PR	4320.00	1477.00	1486.20	1484.86	1487.20	0.024928	9.26	588.52	251.86	0.62
PICO_PR	1242	50YR BB PR	4320.00	1475.40	1483.03	1482.86	1484.13	0.028966	9.73	608.72	213.99	0.69
PICO_PR	1121	50YR BB PR	4320.00	1474.00	1481.33	1480.00	1481.77	0.012117	6.42	919.27	281.92	0.46
PICO_PR	1007	50YR BB PR	4320.00	1472.10	1479.44	1478.76	1480.07	0.018486	8.06	787.67	263.11	0.56
PICO_PR	907	50YR BB PR	4320.00	1470.25	1478.23	1476.73	1478.63	0.010606	5.77	940.24	268.07	0.42
PICO_PR	792	50YR BB PR	4320.00	1468.00	1475.22	1475.22	1476.46	0.037498	9.69	553.31	212.13	0.77
PICO_PR	727	50YR BB PR	5190.00	1465.00	1474.79	1470.35	1475.14	0.004646	4.76	1089.88	191.23	0.30
PICO_PR	700	50YR BB PR	5190.00	1463.50	1474.41	1469.42	1475.10	0.000181	6.71	828.81	161.98	0.37
PICO_PR Lower	680	50YR BB PR	5190.00	1461.00	1473.21	1469.07	1474.97	0.000356	10.62	488.47	49.83	0.54
PICO_PR Lower	500		Culvert									
PICO_PR Lower	331	50YR BB PR	5190.00	1456.50	1462.51	1464.57	1469.74	0.003780	21.58	240.52	43.58	1.55
PICO_PR Lower	305	50YR BB PR	5190.00	1456.12	1460.88	1463.50	1469.47	0.008177	23.52	220.64	52.55	2.02
PICO_PR Lower	255	50YR BB PR	5190.00	1455.40	1460.06	1462.71	1469.00	0.009380	24.00	216.22	58.96	2.21
PICO_PR Lower	205	50YR BB PR	5190.00	1453.50	1456.99	1459.90	1468.19	0.014685	26.88	196.68	65.85	2.70
PICO_PR Lower	155	50YR BB PR	5190.00	1449.40	1453.67	1457.21	1467.22	0.014814	29.54	175.70	46.44	2.68
PICO_PR Lower	130	50YR BB PR	5190.00	1446.40	1451.95	1456.08	1466.75	0.013036	30.87	168.12	32.23	2.38
PICO_PR Lower	110	50YR BB PR	5190.00	1444.00	1450.81	1455.33	1466.48	0.006941	31.76	163.39	25.68	2.15


Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
p02 PICO_PR Lower
p02 PICO_PR
Legend
EG 50YR BB PR
Crit 50YR BB PR
WS 50YR BB PR
Ground
Elevation (ft)
1500
1490
1480
1470
1460
1450
1440
0
200
400
600
800
1000
1200
1400
1600
1800
Main Channel Distance (ft)
155
205
255
305
500
680
700
792
907
1007
1121
1242
1356
1465
1603
1726

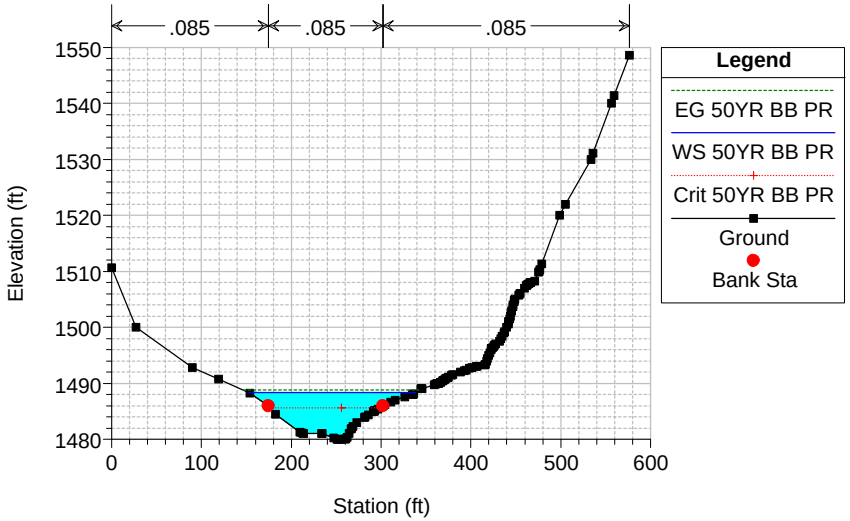
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1726 Most U/S Section



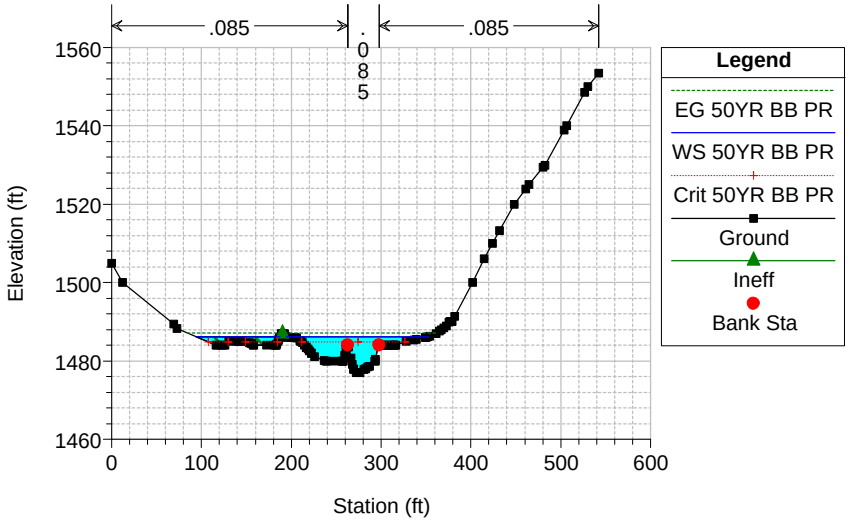
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1603



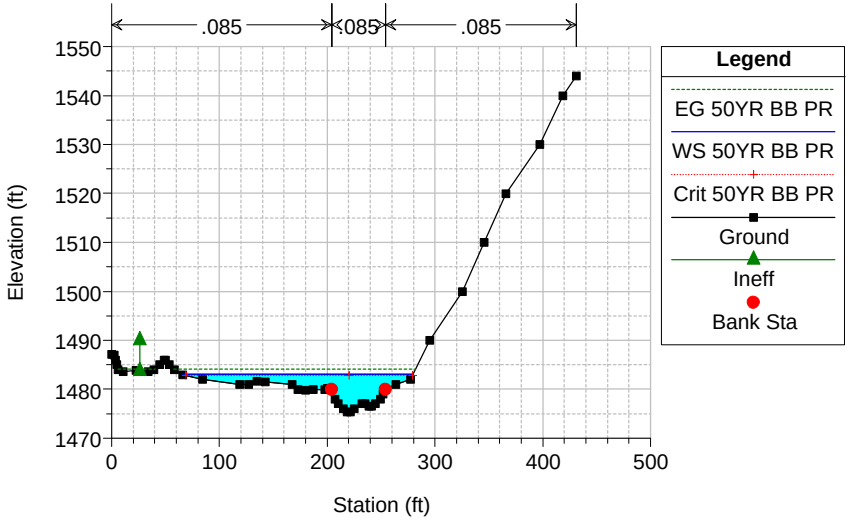
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1465



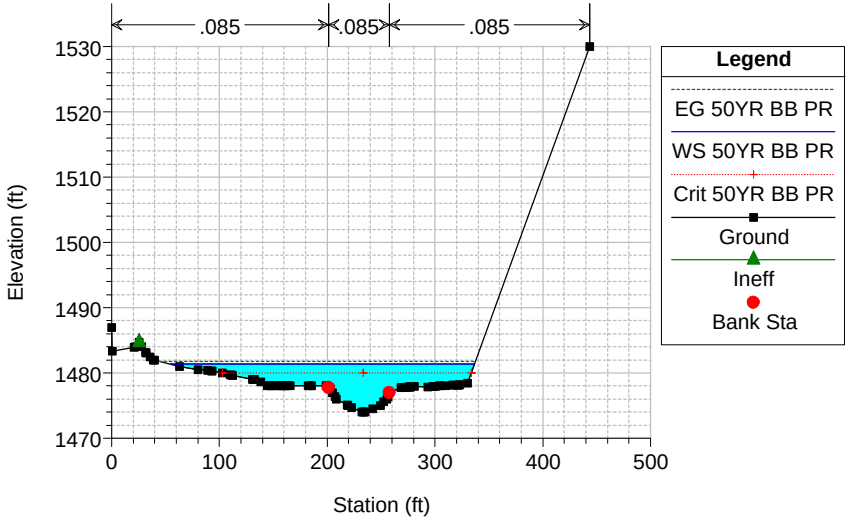
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1356



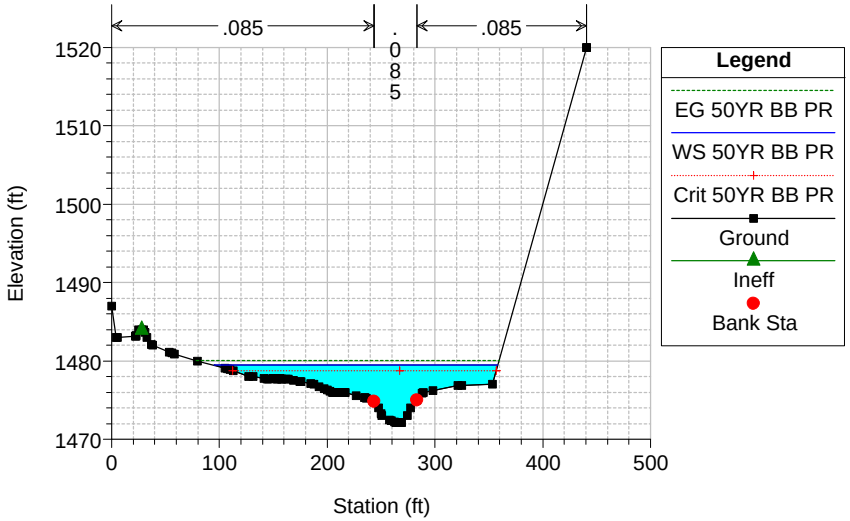
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1242



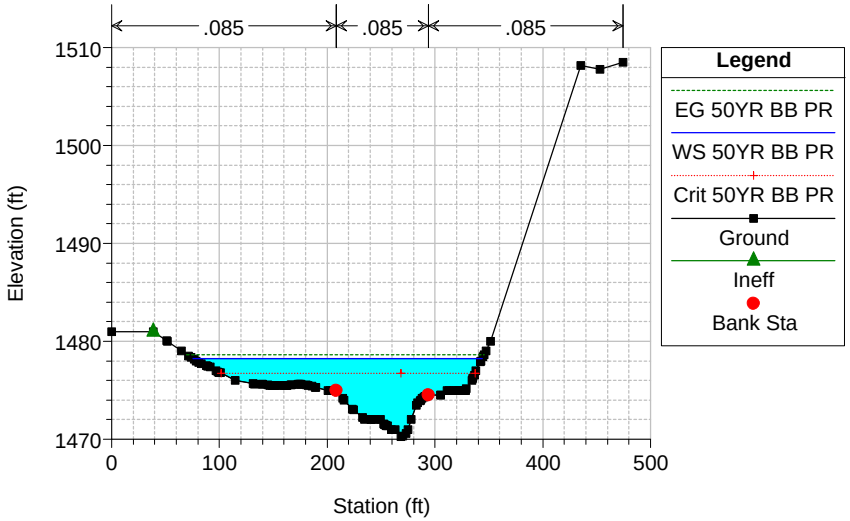
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1121



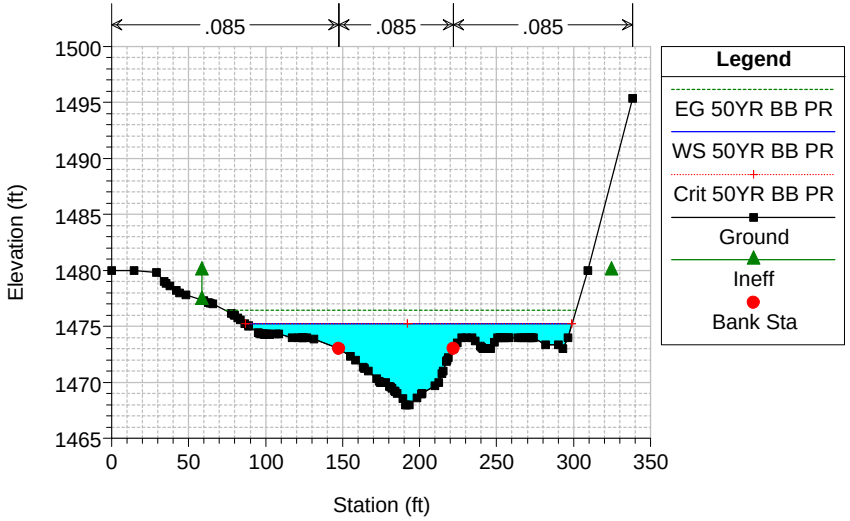
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 1007



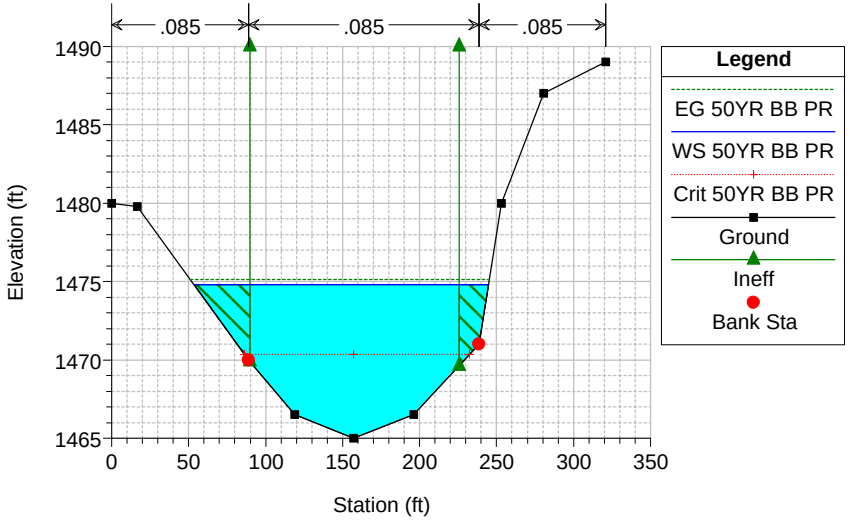
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 907



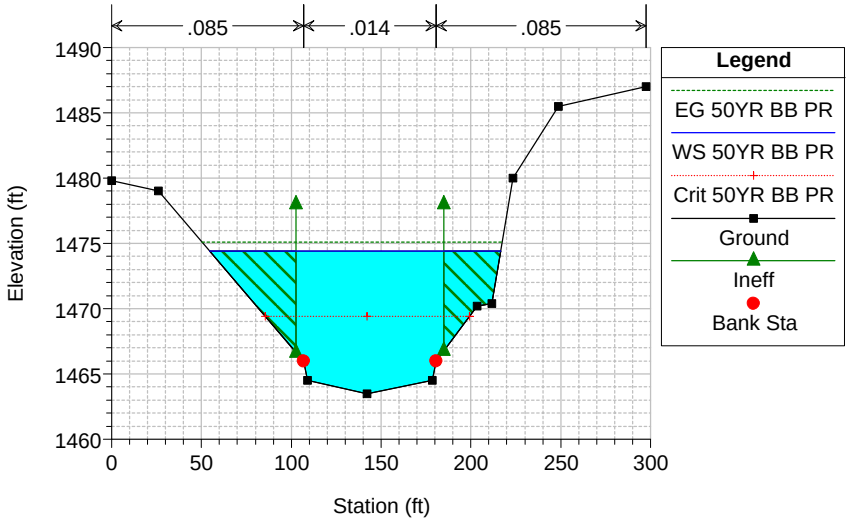
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 792



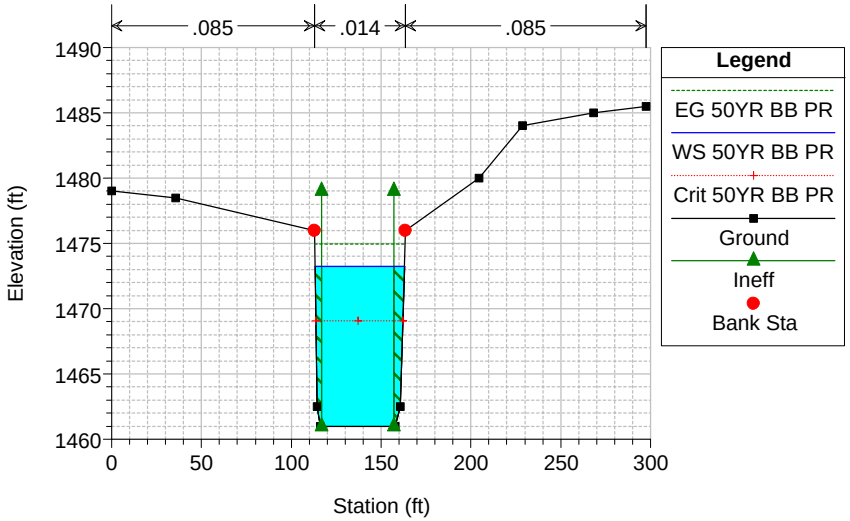
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 727



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR RS = 700



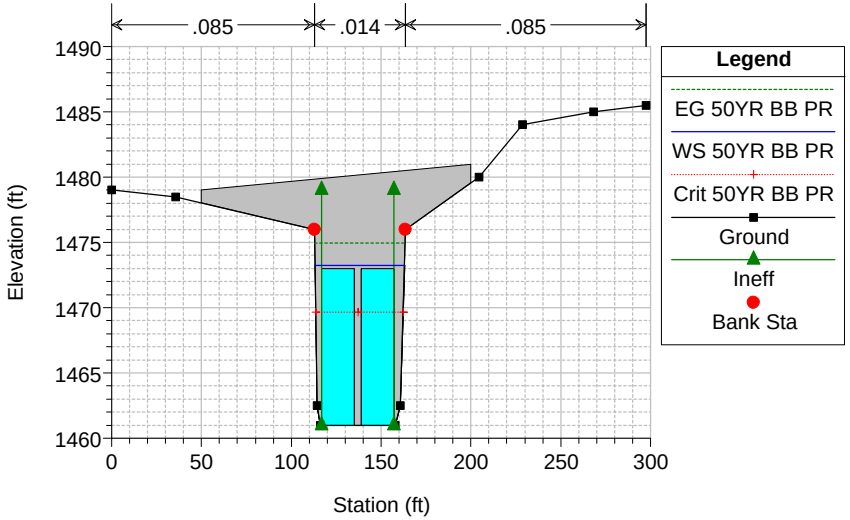
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = p02 Reach = PICO_PR Lower RS = 680 U/S Pico Canyon Rd Culvert



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

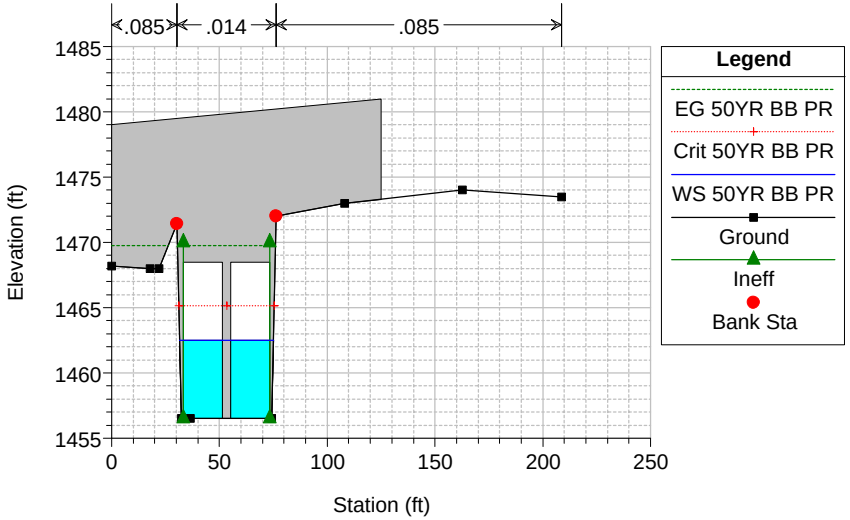
River = p02 Reach = PICO_PR Lower RS = 500 Culv Double 20'W x 12'H RCB at Pico Canyon Road



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

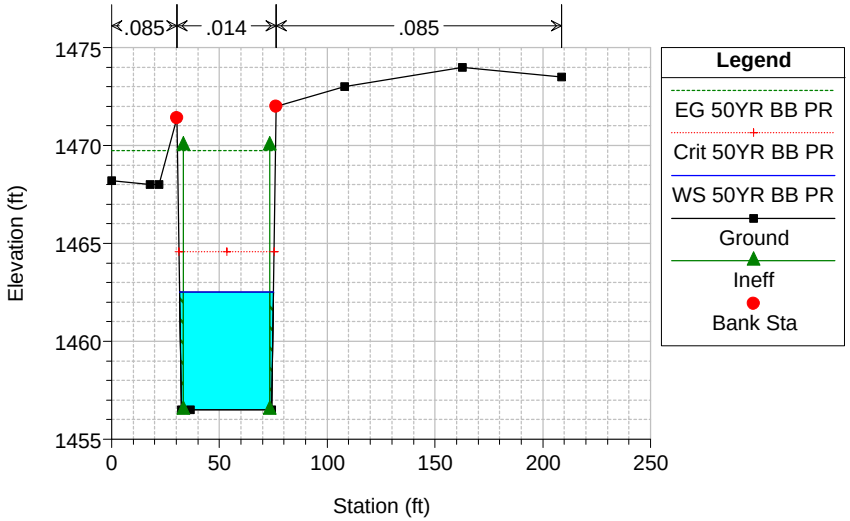
River = p02 Reach = PICO_PR Lower RS = 500 Culv Double 20'W x 12'H RCB at Pico Canyon Road



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

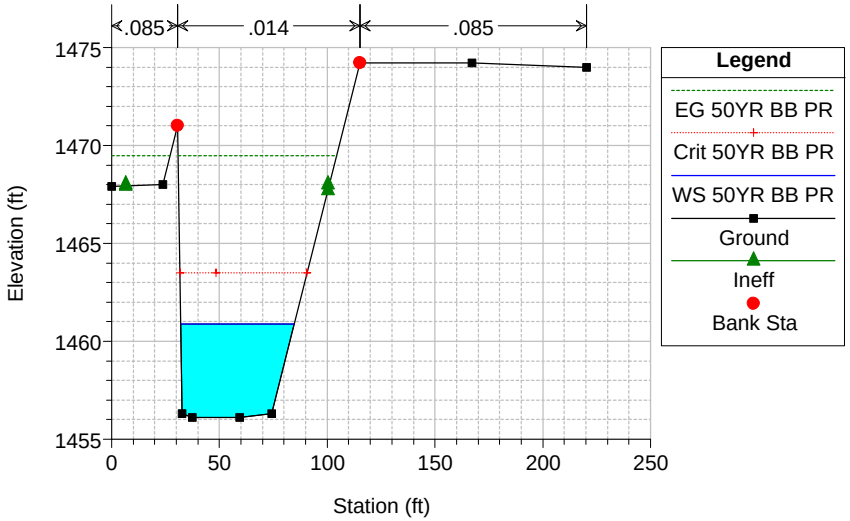
River = p02 Reach = PICO_PR Lower RS = 331 D/S Pico Canyon Rd Culvert



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

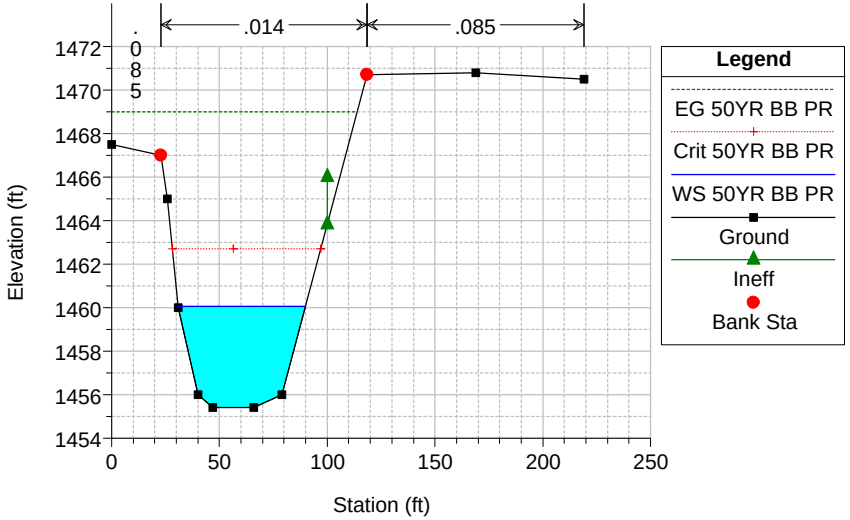
River = p02 Reach = PICO_PR Lower RS = 305 Section is at location of RS 39+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

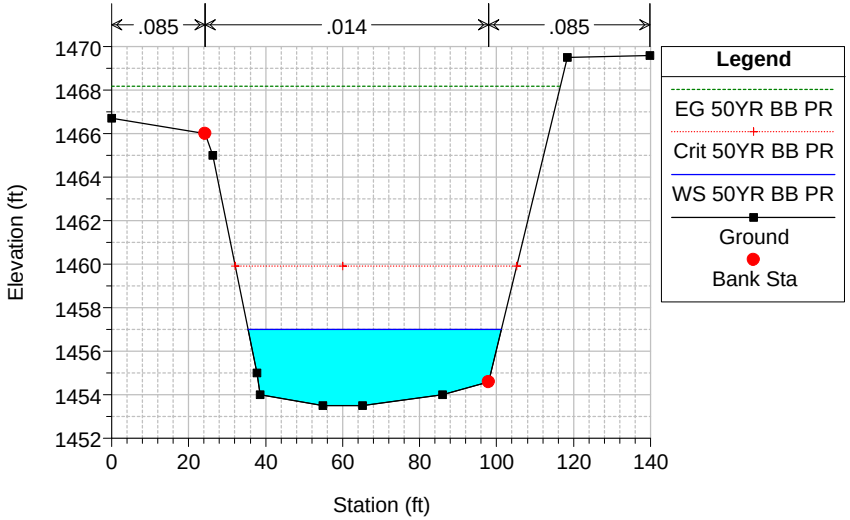
River = p02 Reach = PICO_PR Lower RS = 255 Section is at location of RS 39+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

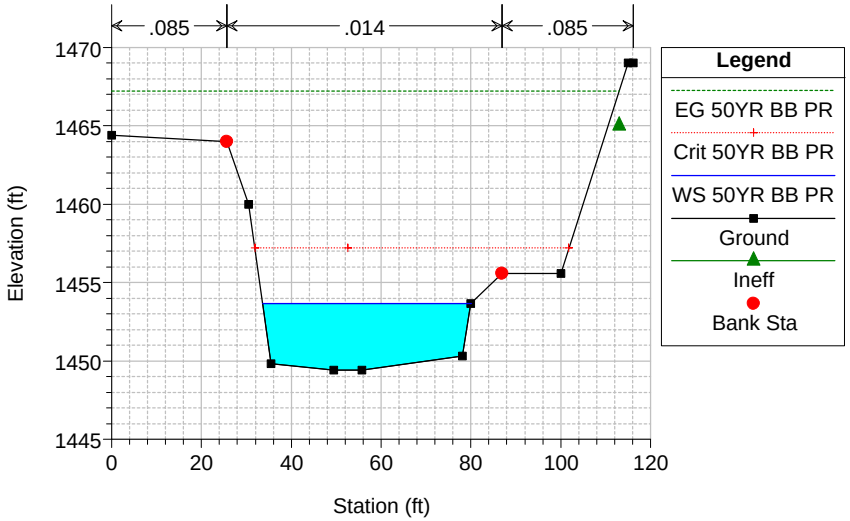
River = p02 Reach = PICO_PR Lower RS = 205 Section is at location of RS 38+75 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

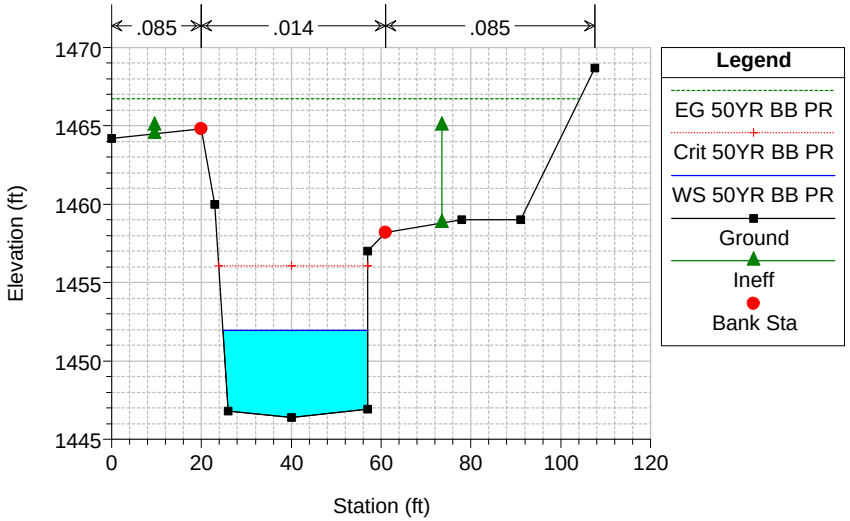
River = p02 Reach = PICO_PR Lower RS = 155 Section is at location of RS 38+25 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

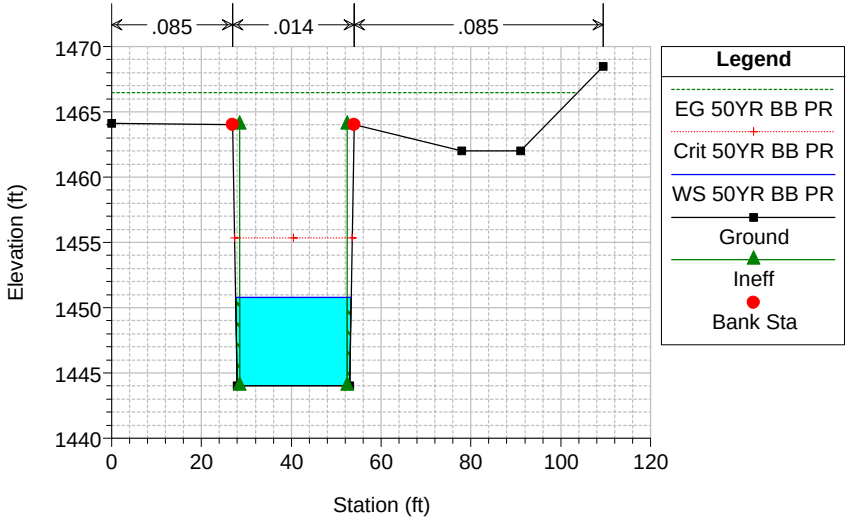
River = p02 Reach = PICO_PR Lower RS = 130 Section is at location of RS 38+00 per PD No 2495



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

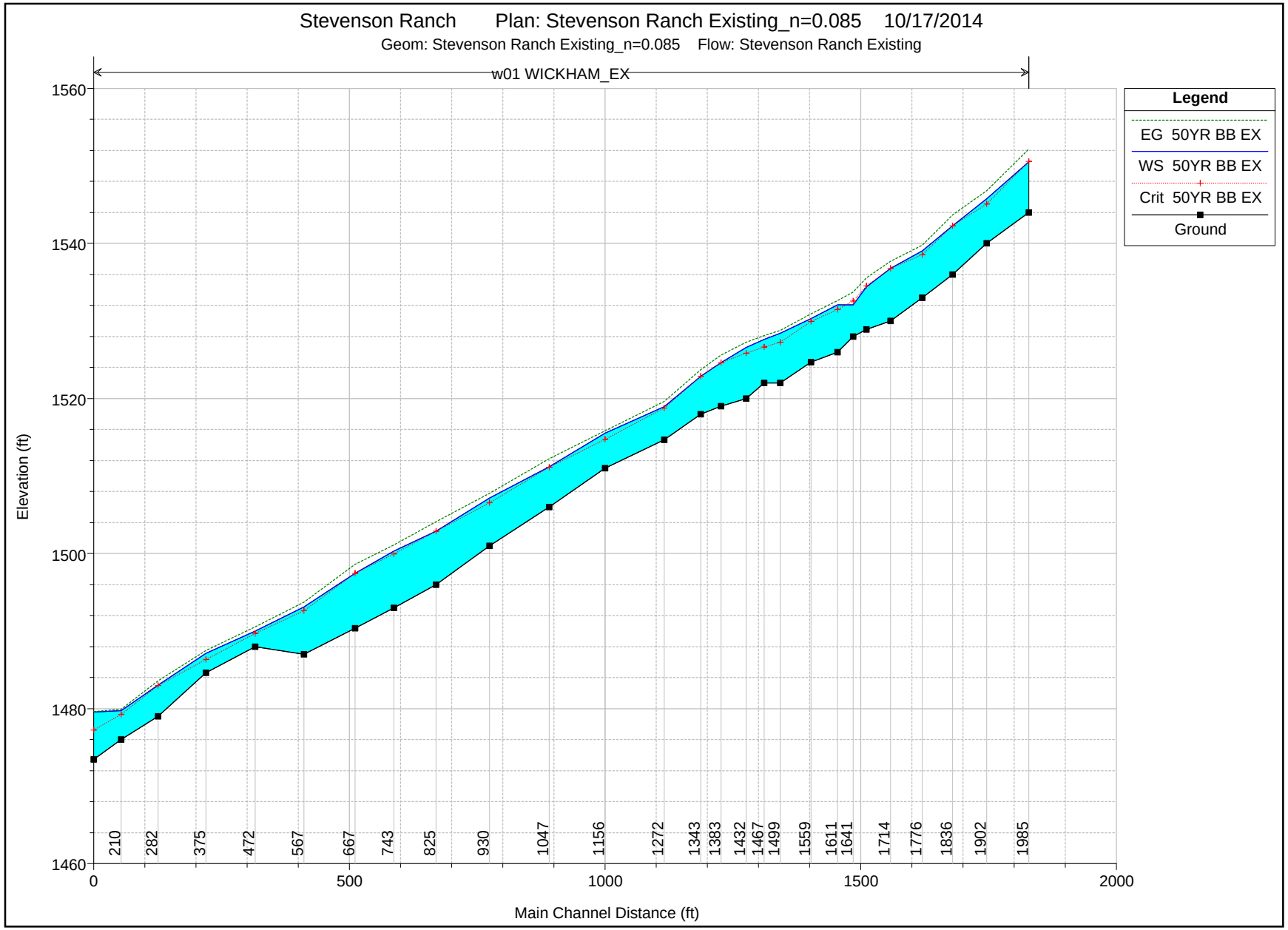
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

River = p02 Reach = PICO_PR Lower RS = 110 Inlet to 24' x14' RCB. Section is at location of RS 37+80...

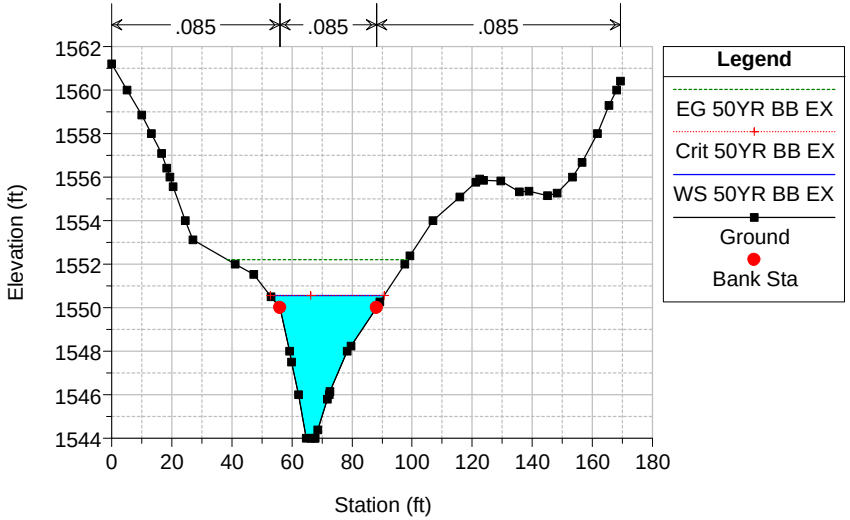


HEC-RAS Plan: EX_n=0.085 River: w01 Reach: WICKHAM_EX Profile: 50YR BB EX

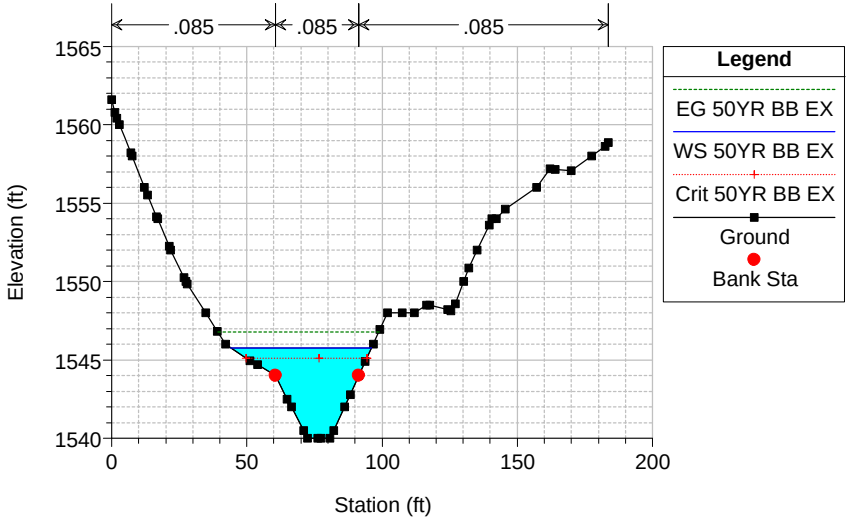
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
WICKHAM_EX	1985	50YR BB EX	1160.00	1544.00	1550.55	1550.56	1552.21	0.074044	10.34	113.45	37.84	0.98
WICKHAM_EX	1902	50YR BB EX	1160.00	1540.00	1545.77	1545.11	1546.79	0.033712	8.27	152.60	52.11	0.70
WICKHAM_EX	1836	50YR BB EX	1160.00	1536.00	1542.30	1542.30	1543.71	0.066675	9.53	124.69	59.05	0.93
WICKHAM_EX	1776	50YR BB EX	1160.00	1533.00	1539.07	1538.54	1539.77	0.027289	7.86	201.75	88.07	0.64
WICKHAM_EX	1714	50YR BB EX	1160.00	1530.00	1536.76	1536.76	1537.70	0.040759	9.32	178.83	88.62	0.74
WICKHAM_EX	1667	50YR BB EX	1160.00	1528.92	1534.38	1534.55	1535.55	0.050636	10.13	158.39	77.66	0.83
WICKHAM_EX	1641	50YR BB EX	1160.00	1528.00	1532.07	1532.56	1533.70	0.099407	11.82	135.56	92.37	1.17
WICKHAM_EX	1611	50YR BB EX	1160.00	1526.00	1532.08	1531.44	1532.61	0.023558	6.93	217.16	84.79	0.58
WICKHAM_EX	1559	50YR BB EX	1160.00	1524.69	1530.33	1529.92	1530.92	0.047520	6.13	189.18	90.85	0.75
WICKHAM_EX	1499	50YR BB EX	1160.00	1522.00	1528.42	1527.27	1528.81	0.025697	5.02	231.24	94.69	0.57
WICKHAM_EX	1467	50YR BB EX	1160.00	1522.00	1527.62	1526.62	1528.10	0.018936	6.13	224.11	86.60	0.53
WICKHAM_EX	1432	50YR BB EX	1510.00	1520.00	1526.59	1525.86	1527.28	0.026373	7.38	241.17	85.40	0.61
WICKHAM_EX	1383	50YR BB EX	1510.00	1519.00	1524.63	1524.63	1525.61	0.043951	9.70	218.59	101.70	0.81
WICKHAM_EX	1343	50YR BB EX	1510.00	1518.00	1522.85	1522.88	1523.73	0.048973	9.64	232.24	123.15	0.84
WICKHAM_EX	1272	50YR BB EX	1510.00	1514.68	1518.96	1518.79	1519.60	0.047409	8.61	251.58	134.32	0.80
WICKHAM_EX	1156	50YR BB EX	1510.00	1511.00	1515.52	1514.74	1515.84	0.022527	5.01	331.82	149.85	0.54
WICKHAM_EX	1047	50YR BB EX	1510.00	1506.00	1511.22	1511.12	1512.21	0.051938	9.97	206.89	90.24	0.86
WICKHAM_EX	930	50YR BB EX	1510.00	1501.00	1507.14	1506.53	1507.80	0.027495	8.28	251.11	89.33	0.63
WICKHAM_EX	825	50YR BB EX	1510.00	1496.00	1502.87	1502.87	1504.10	0.045056	10.17	193.82	77.09	0.81
WICKHAM_EX	743	50YR BB EX	1510.00	1493.00	1500.30	1499.94	1501.12	0.026817	8.25	241.20	94.07	0.63
WICKHAM_EX	667	50YR BB EX	1510.00	1490.38	1497.44	1497.44	1498.62	0.040285	9.21	200.26	92.87	0.76
WICKHAM_EX	567	50YR BB EX	1510.00	1487.00	1493.12	1492.63	1493.70	0.027551	7.50	274.74	117.83	0.63
WICKHAM_EX	472	50YR BB EX	1510.00	1488.00	1490.02	1489.72	1490.54	0.040743	4.09	271.23	143.53	0.64
WICKHAM_EX	375	50YR BB EX	1510.00	1484.62	1487.14	1486.35	1487.52	0.023976	4.45	313.01	143.17	0.54
WICKHAM_EX	282	50YR BB EX	1510.00	1479.00	1483.04	1482.99	1483.58	0.093335	5.87	257.07	221.34	0.96
WICKHAM_EX	210	50YR BB EX	1510.00	1476.00	1479.73	1479.27	1479.93	0.030348	3.60	419.52	324.23	0.56
WICKHAM_EX	156	50YR BB EX	1580.00	1473.46	1479.55	1477.23	1479.59	0.002288	1.52	1041.08	423.06	0.17


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
w01 WICKHAM_EX
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Elevation (ft)
1460
1480
1500
1520
1540
1560
0
500
1000
1500
2000
Main Channel Distance (ft)
210
282
375
472
567
667
743
825
930
1047
1156
1272
1343
1383
1432
1467
1499
1559
1611
1641
1714
1776
1836
1902
1985

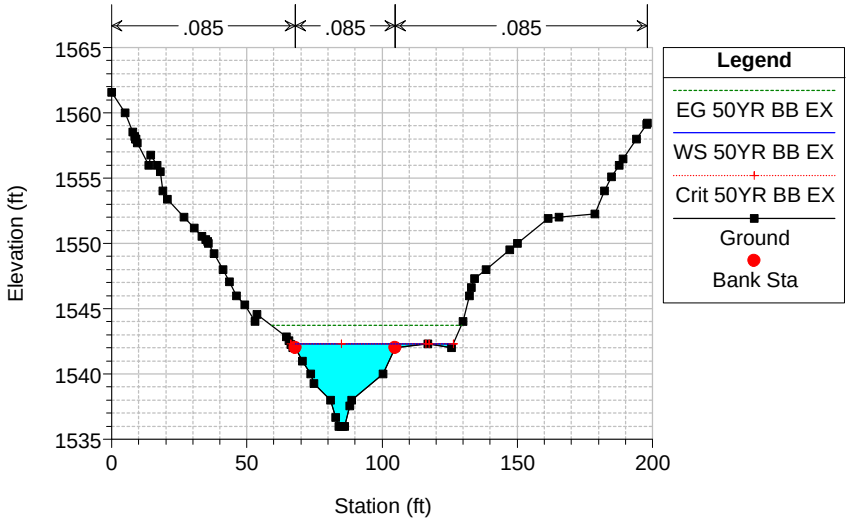
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1985 Most U/S Section



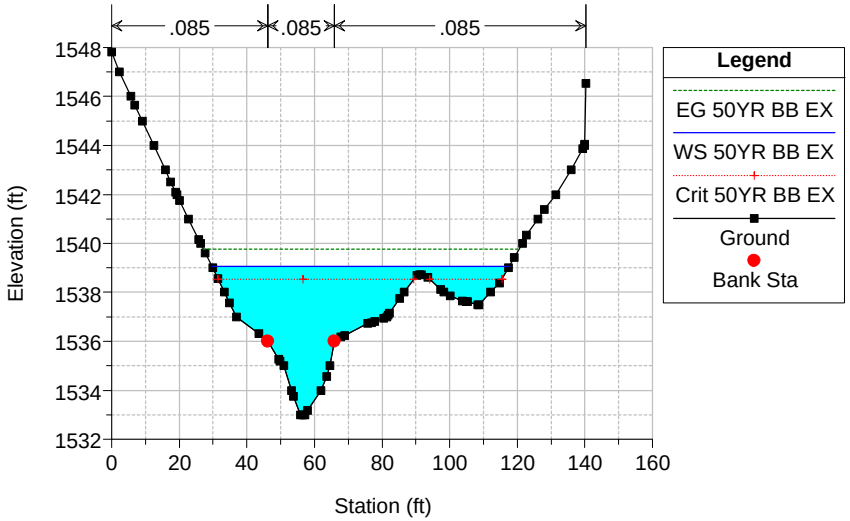
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1902

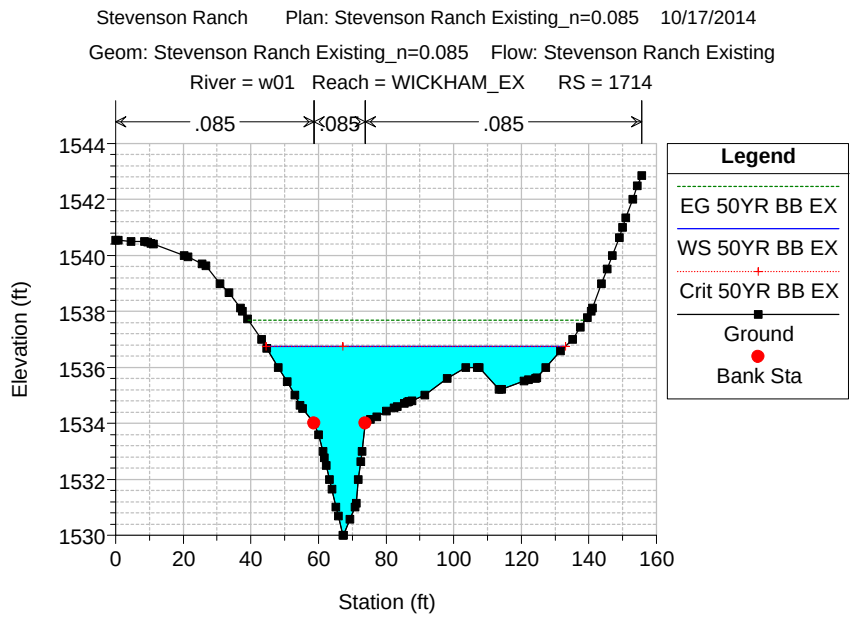


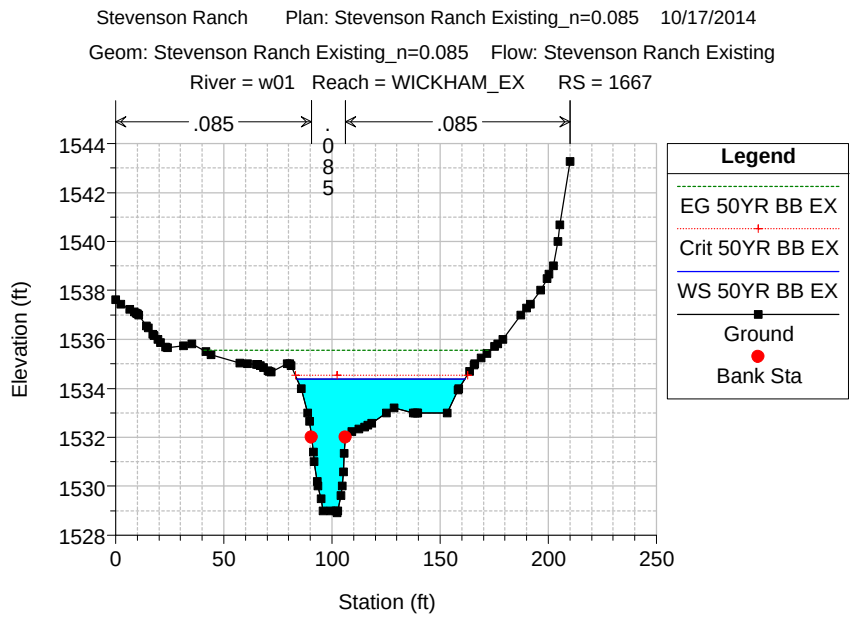
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1836

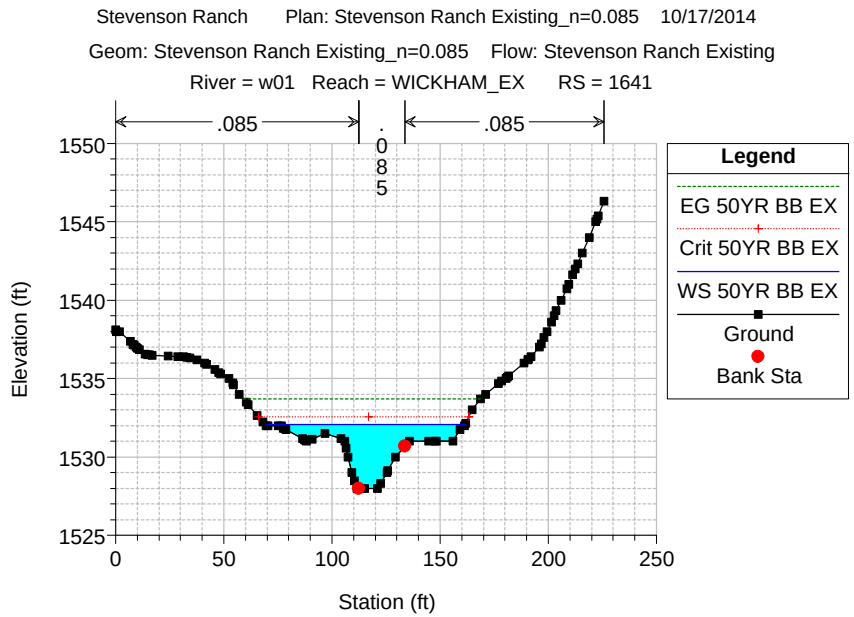


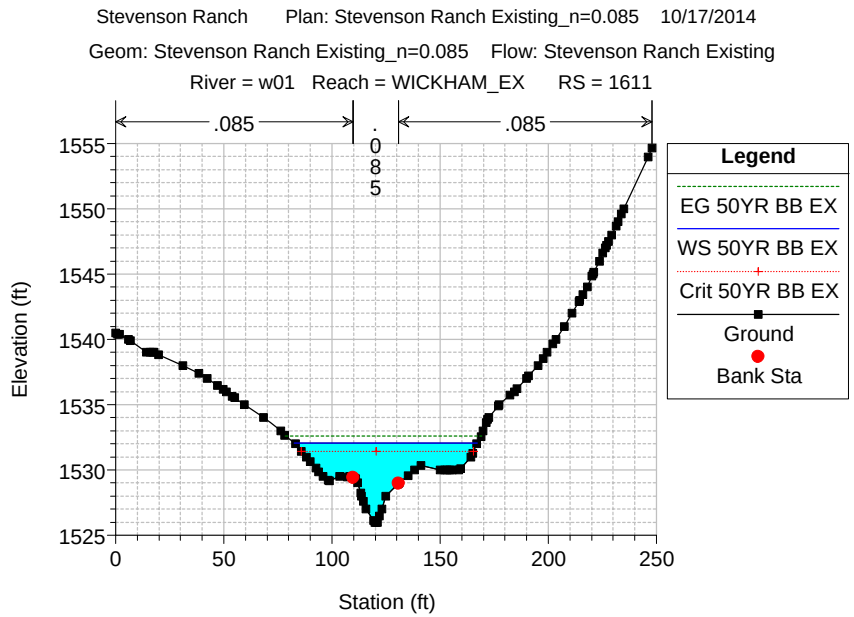
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1776



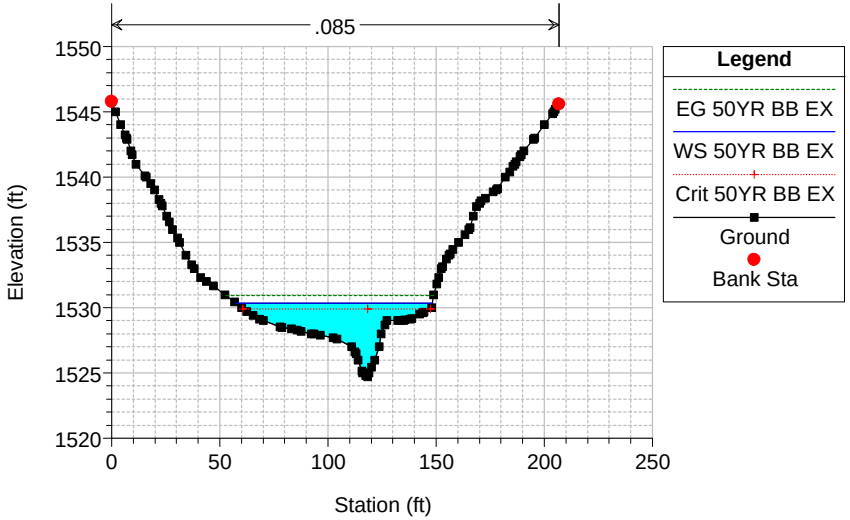

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1714
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1667
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta

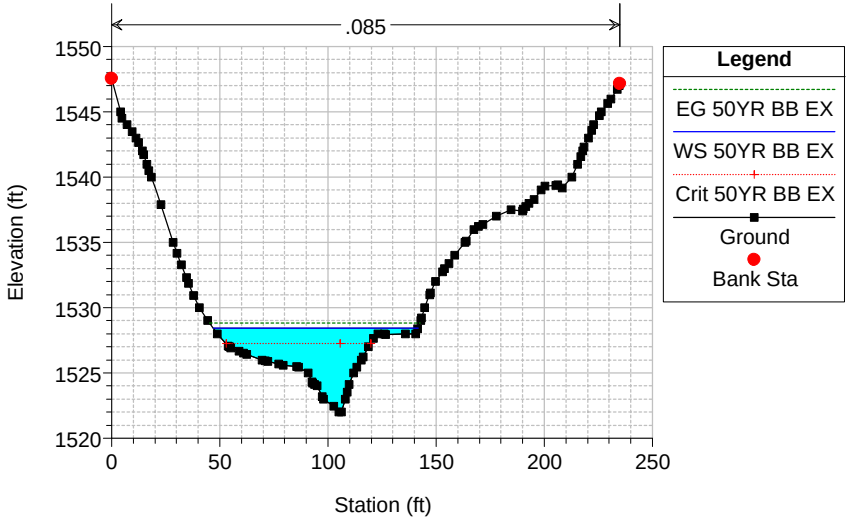

Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1641
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
Crit 50YR BB EX
WS 50YR BB EX
Ground
Bank Sta


Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1611
.085
.085
.085
Elevation (ft)
Station (ft)
Legend
EG 50YR BB EX
WS 50YR BB EX
Crit 50YR BB EX
Ground
Bank Sta

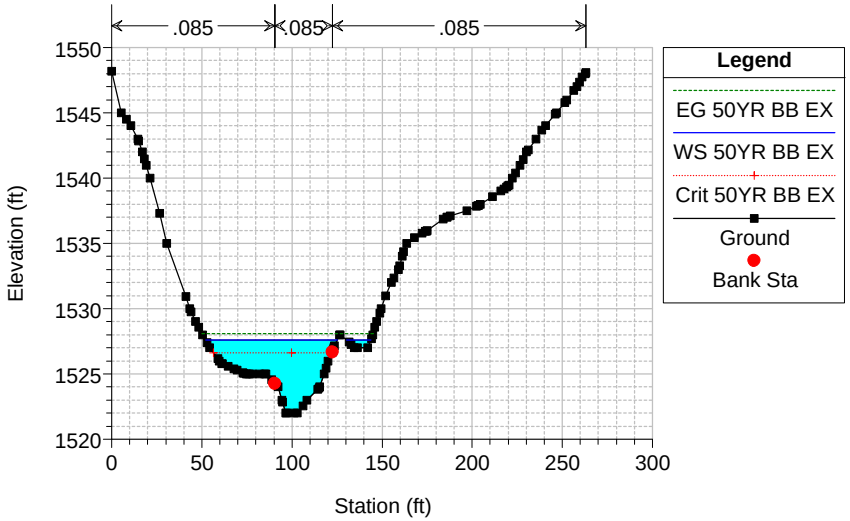
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1559



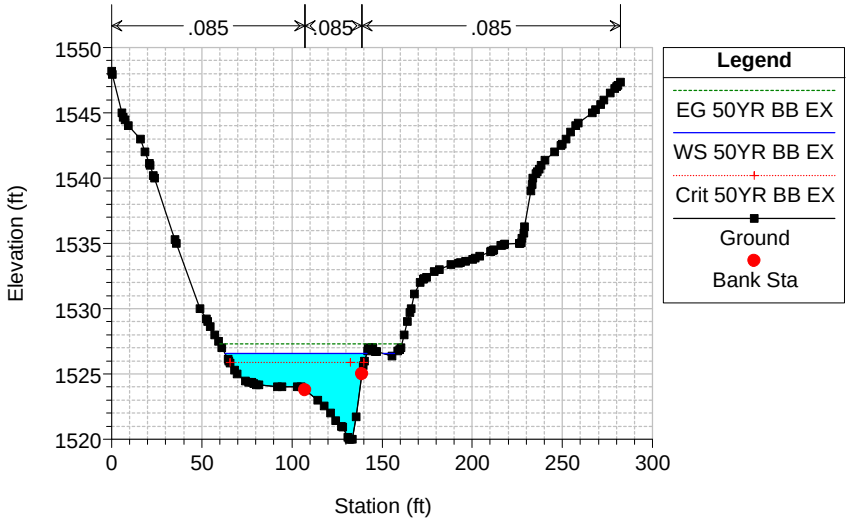
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1499



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1467



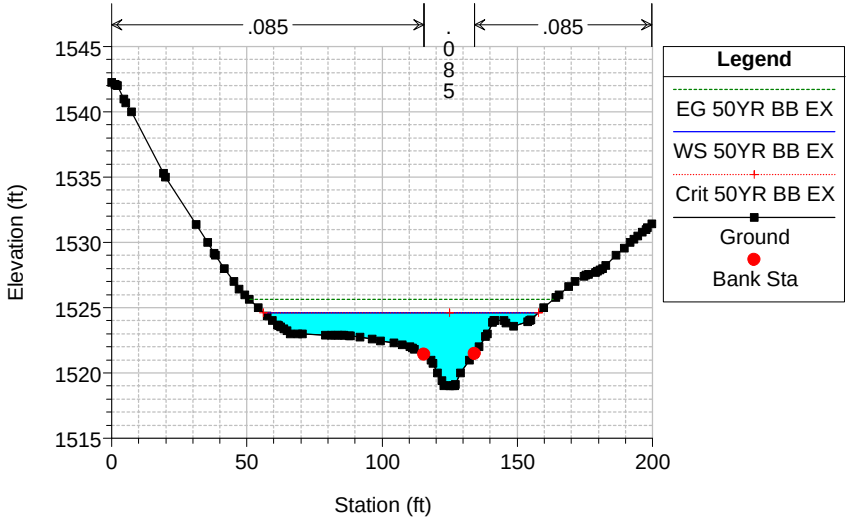
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1432



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

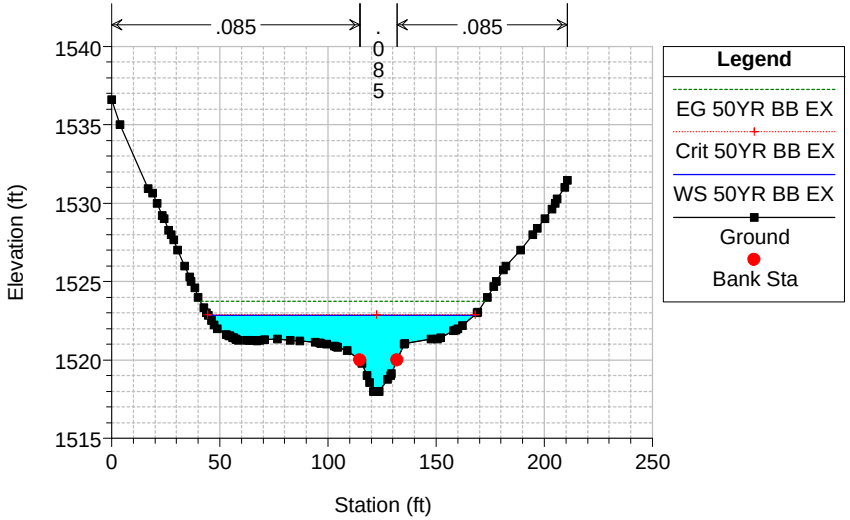
River = w01 Reach = WICKHAM_EX RS = 1383



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

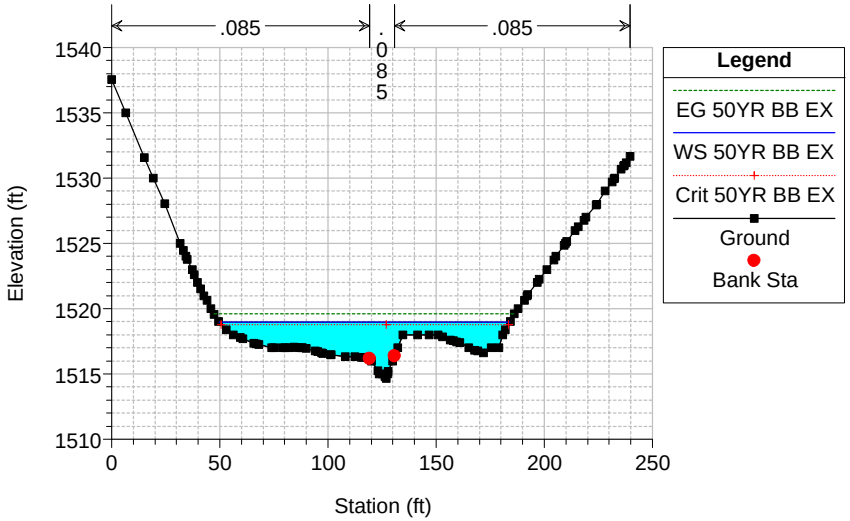
River = w01 Reach = WICKHAM_EX RS = 1343



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

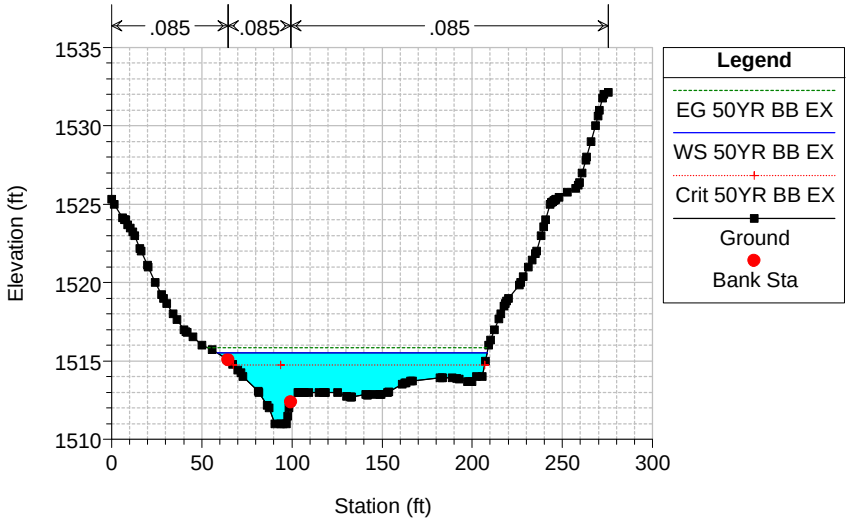
River = w01 Reach = WICKHAM_EX RS = 1272



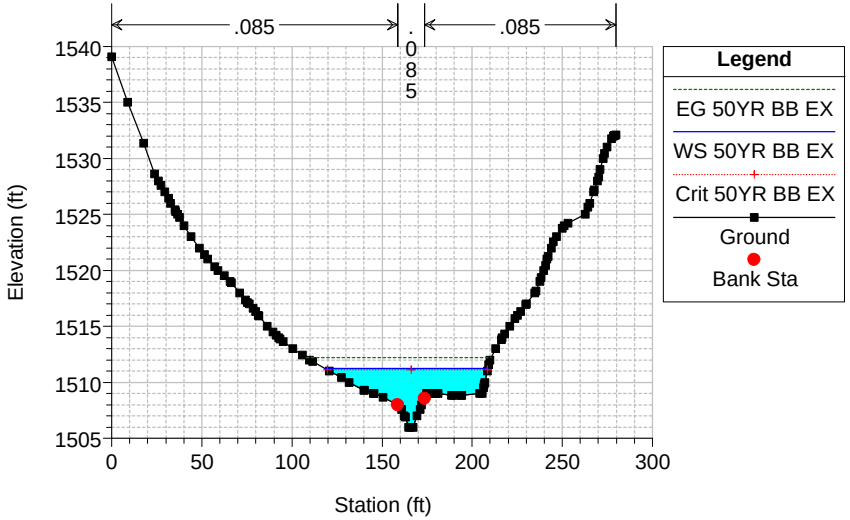
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

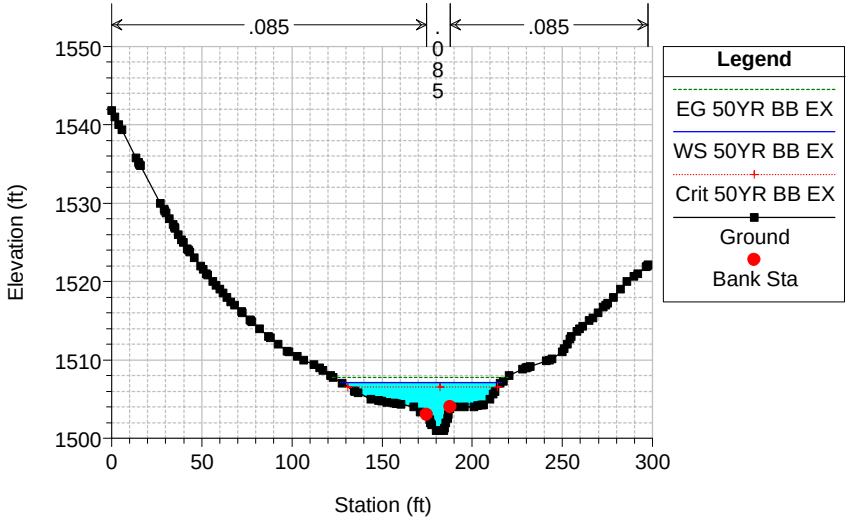
River = w01 Reach = WICKHAM_EX RS = 1156



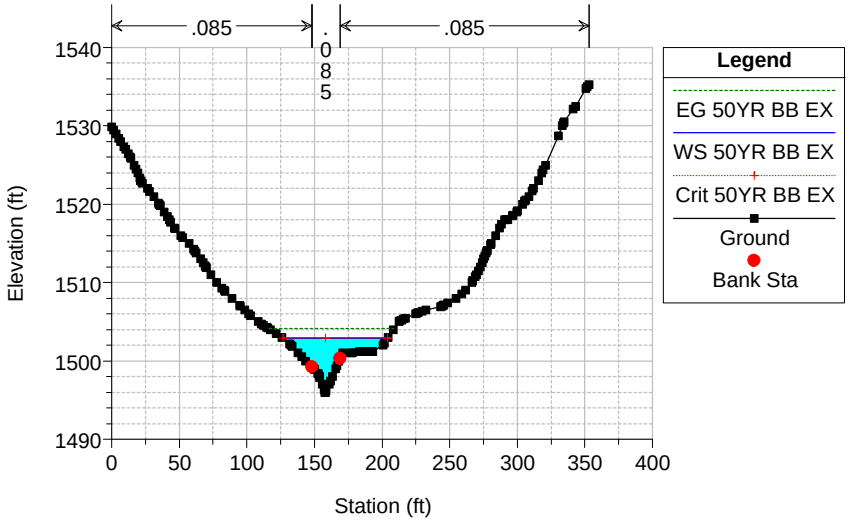
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 1047



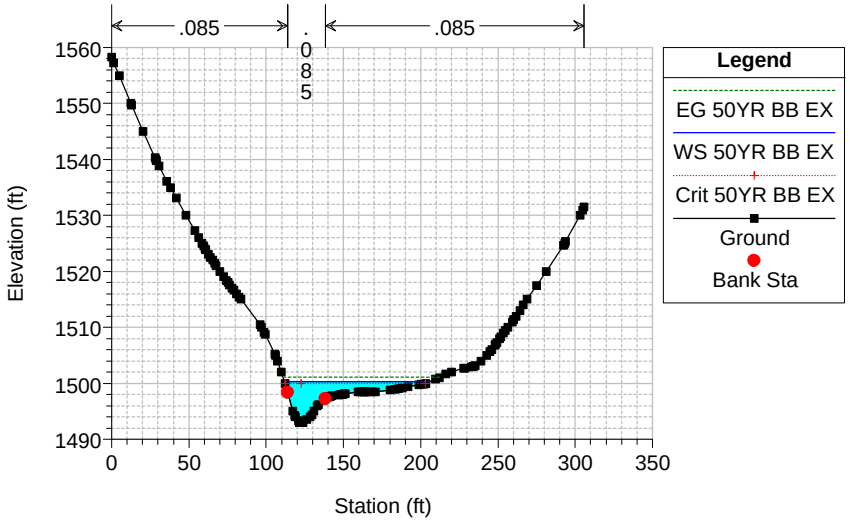
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 930



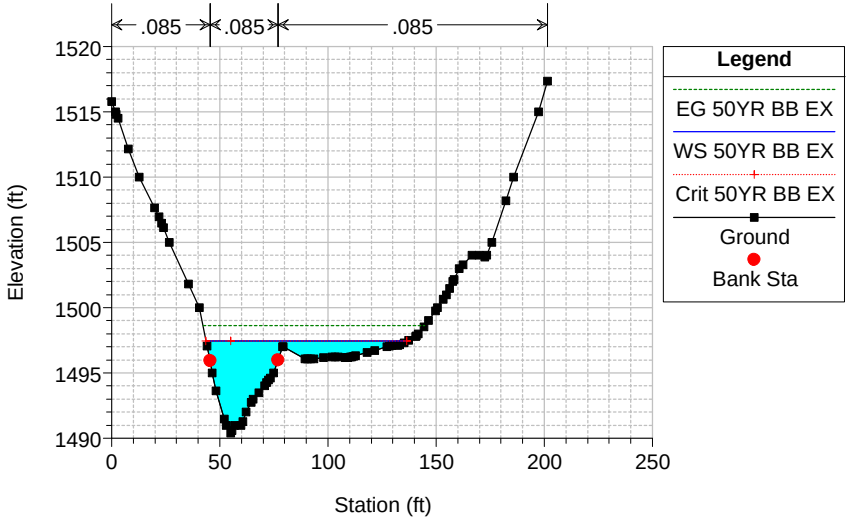
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 825



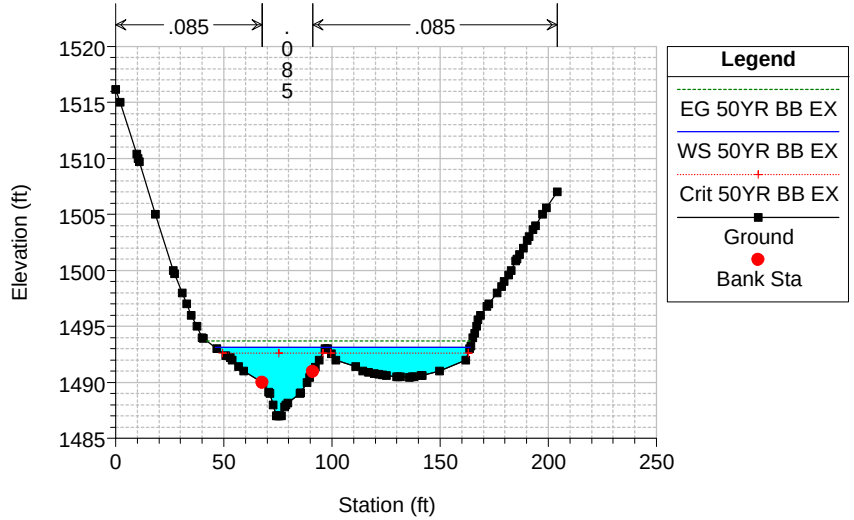
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 743



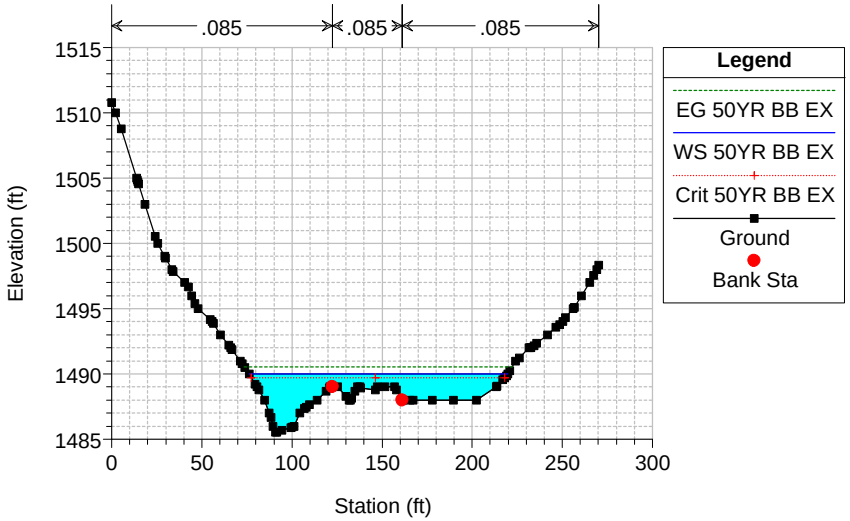
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 667



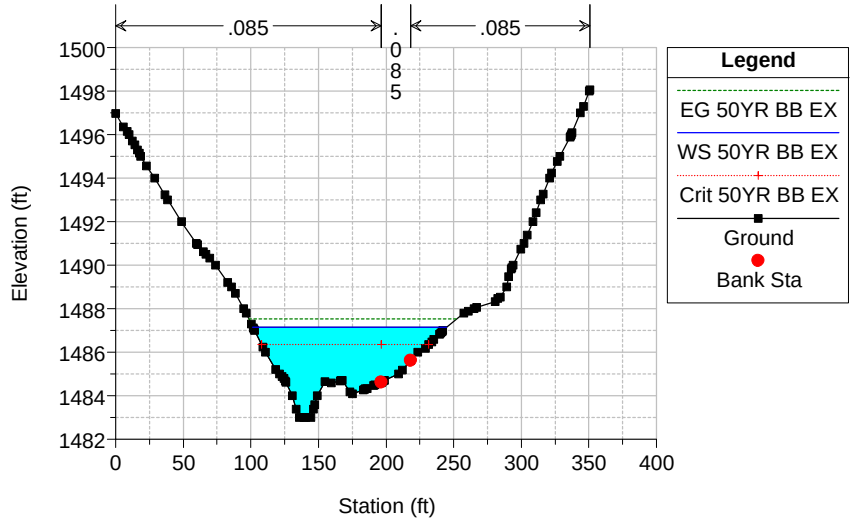
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 567



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 472



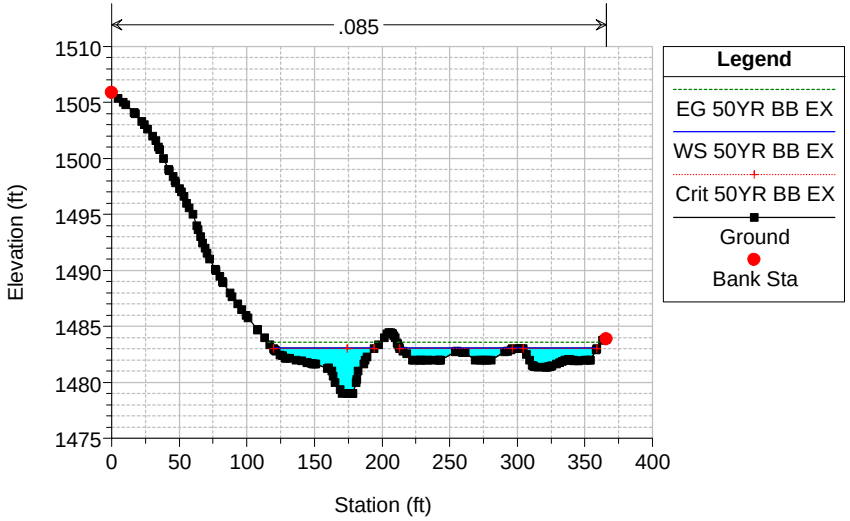
Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing
River = w01 Reach = WICKHAM_EX RS = 375



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

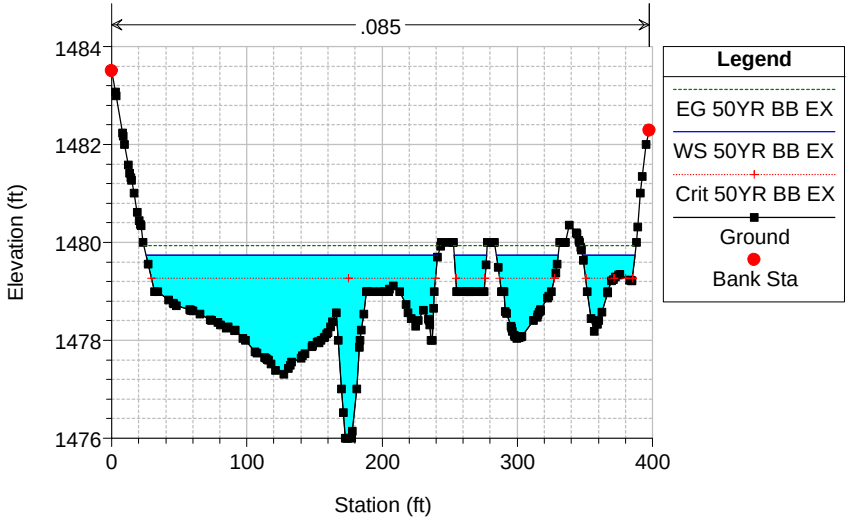
River = w01 Reach = WICKHAM_EX RS = 282



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

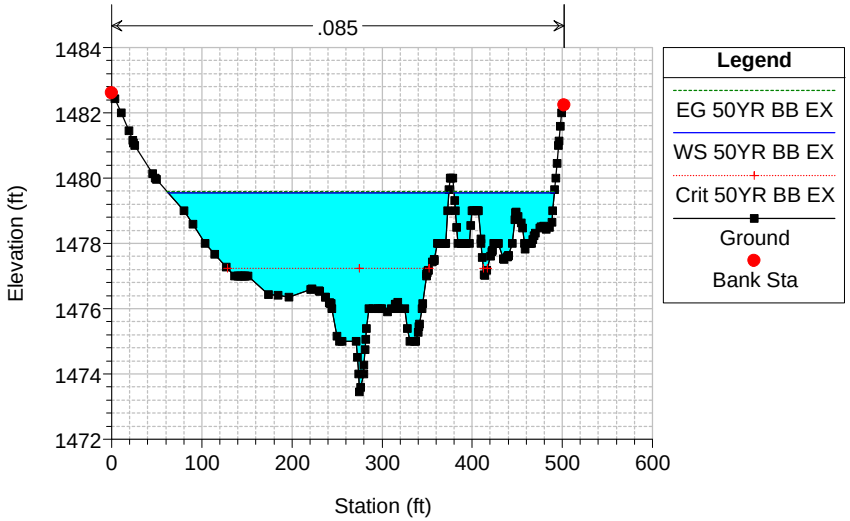
River = w01 Reach = WICKHAM_EX RS = 210



Stevenson Ranch Plan: Stevenson Ranch Existing_n=0.085 10/17/2014

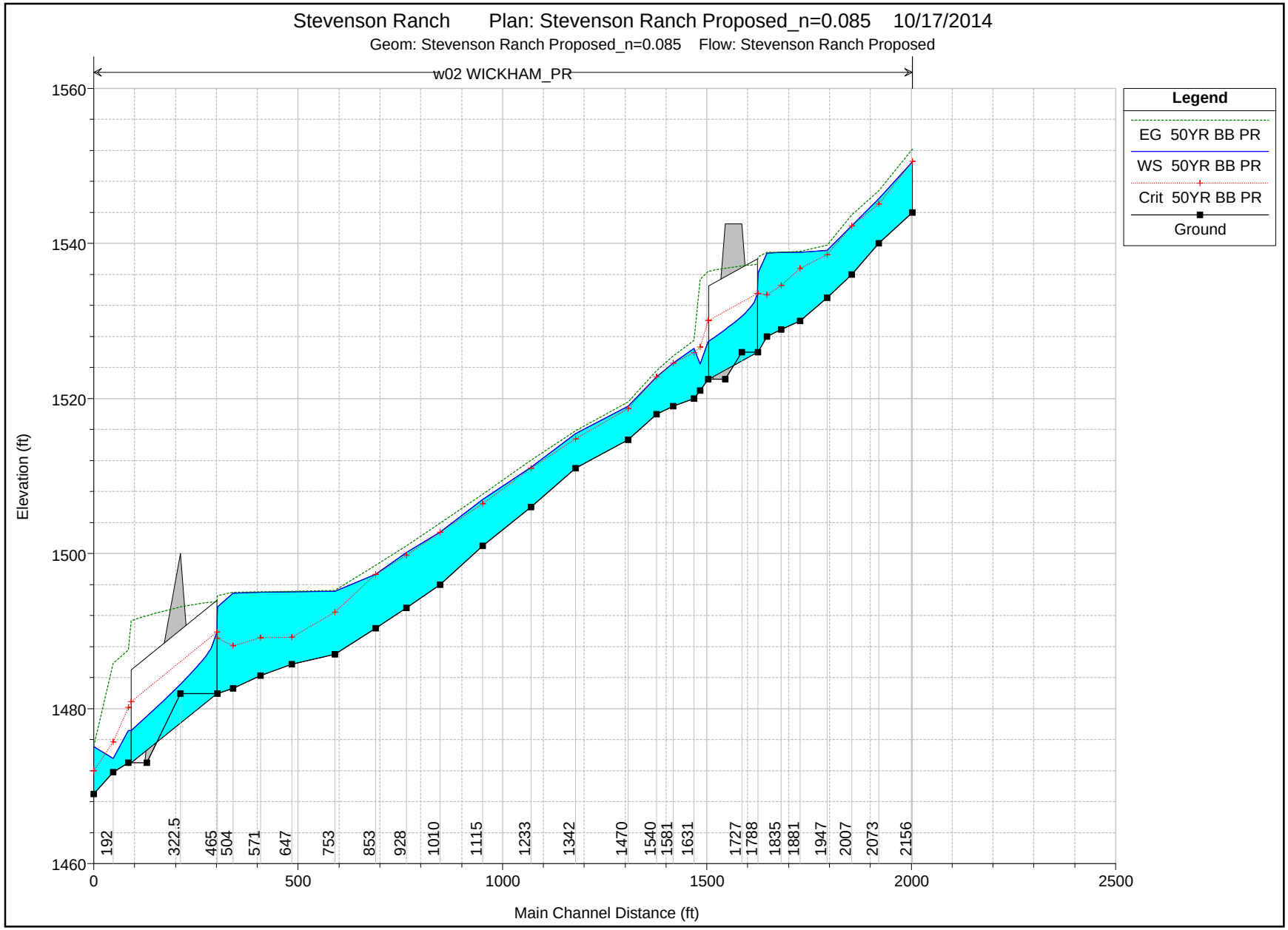
Geom: Stevenson Ranch Existing_n=0.085 Flow: Stevenson Ranch Existing

River = w01 Reach = WICKHAM_EX RS = 156 Most D/S Section - Junction w Pico Canyon Creek

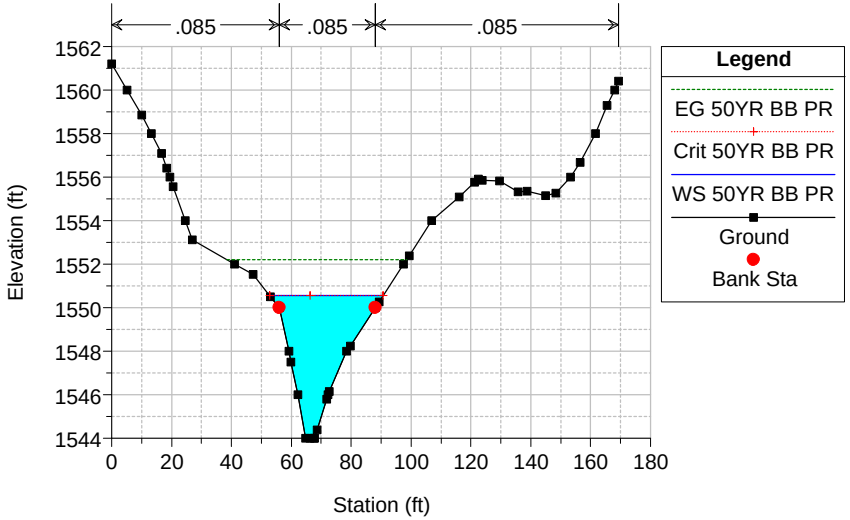


HEC-RAS Plan: PR_n=0.085 River: w02 Reach: WICKHAM_PR Profile: 50YR BB PR

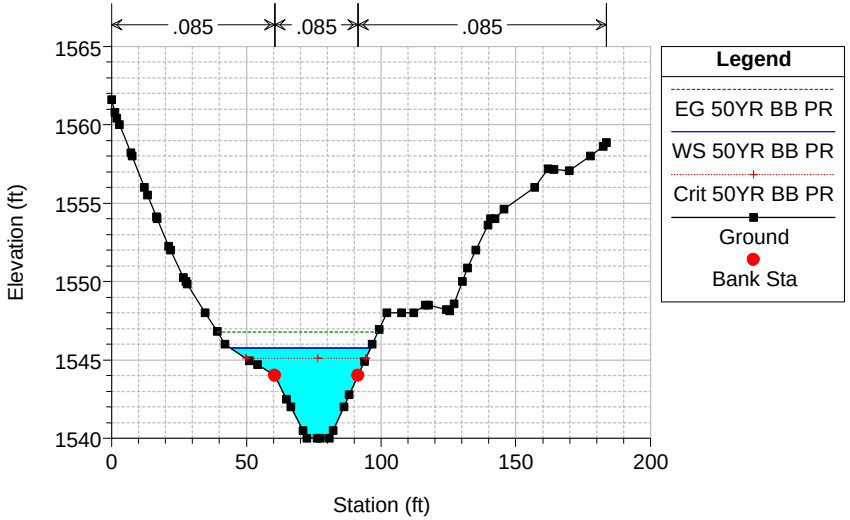
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
WICKHAM_PR	2156	50YR BB PR	1160.00	1544.00	1550.55	1550.56	1552.21	0.074044	10.34	113.45	37.84	0.98
WICKHAM_PR	2073	50YR BB PR	1160.00	1540.00	1545.77	1545.11	1546.79	0.033712	8.27	152.60	52.11	0.70
WICKHAM_PR	2007	50YR BB PR	1160.00	1536.00	1542.30	1542.30	1543.71	0.066675	9.53	124.69	59.05	0.93
WICKHAM_PR	1947	50YR BB PR	1160.00	1533.00	1539.14	1538.54	1539.79	0.025189	7.63	207.96	88.60	0.61
WICKHAM_PR	1881	50YR BB PR	1160.00	1530.00	1538.85	1536.77	1539.01	0.005017	4.14	388.79	111.27	0.27
WICKHAM_PR	1835	50YR BB PR	1160.00	1528.92	1538.84	1534.58	1538.89	0.000946	2.17	680.06	178.46	0.13
WICKHAM_PR	1810	50YR BB PR	1160.00	1528.00	1538.74	1533.36	1538.85	0.001399	2.83	447.07	155.38	0.16
WICKHAM_PR	1788	50YR BB PR	1410.00	1526.00	1536.16	1533.55	1538.24	0.000539	11.56	121.95	77.26	0.64
WICKHAM_PR	1727		Culvert									
WICKHAM_PR	1666	50YR BB PR	1410.00	1522.50	1527.37	1530.05	1536.42	0.006271	24.14	58.41	63.80	1.93
WICKHAM_PR	1646	50YR BB PR	1410.00	1521.00	1524.43	1526.64	1535.41	0.922890	26.78	54.92	39.84	3.26
WICKHAM_PR	1631	50YR BB PR	1410.00	1520.00	1526.45	1525.89	1527.50	0.037370	8.60	176.47	79.82	0.73
WICKHAM_PR	1581	50YR BB PR	1410.00	1519.00	1524.55	1524.55	1525.48	0.042061	9.39	211.13	100.94	0.79
WICKHAM_PR	1540	50YR BB PR	1410.00	1518.00	1522.77	1522.80	1523.61	0.048121	9.43	222.52	122.16	0.83
WICKHAM_PR	1470	50YR BB PR	1410.00	1514.68	1519.04	1518.72	1519.55	0.036697	7.68	261.66	134.93	0.71
WICKHAM_PR	1342	50YR BB PR	1410.00	1511.00	1515.46	1514.78	1515.82	0.024102	5.56	298.79	130.72	0.56
WICKHAM_PR	1233	50YR BB PR	1410.00	1506.00	1511.12	1511.01	1512.07	0.051207	9.75	198.02	88.98	0.85
WICKHAM_PR	1115	50YR BB PR	1410.00	1501.00	1506.99	1506.41	1507.64	0.027764	8.17	237.98	87.59	0.63
WICKHAM_PR	1010	50YR BB PR	1410.00	1496.00	1502.75	1502.75	1503.94	0.044564	9.94	184.50	75.77	0.81
WICKHAM_PR	928	50YR BB PR	1410.00	1493.00	1500.14	1499.79	1500.97	0.027342	8.17	226.65	92.58	0.63
WICKHAM_PR	853	50YR BB PR	1410.00	1490.38	1497.31	1497.31	1498.46	0.040535	9.05	185.95	85.04	0.76
WICKHAM_PR	753	50YR BB PR	1410.00	1487.00	1495.14	1492.42	1495.26	0.003076	3.24	546.40	129.66	0.22
WICKHAM_PR	647	50YR BB PR	1410.00	1485.72	1495.09	1489.20	1495.12	0.000507	1.68	1050.93	173.83	0.10
WICKHAM_PR	571	50YR BB PR	1410.00	1484.28	1495.03	1489.16	1495.08	0.000739	2.15	844.08	134.70	0.12
WICKHAM_PR	504	50YR BB PR	1410.00	1482.60	1494.86	1488.07	1495.00	0.001672	3.20	509.52	88.98	0.17
WICKHAM_PR	465	50YR BB PR	1510.00	1481.95	1493.13	1489.07	1494.58	0.000330	9.64	156.56	74.57	0.51
WICKHAM_PR	322.5		Culvert									
WICKHAM_PR	248	50YR BB PR	1510.00	1473.00	1477.17	1480.14	1487.56	0.008850	25.87	58.38	225.83	2.23
WICKHAM_PR	192	50YR BB PR	1510.00	1471.80	1473.58	1475.67	1485.82	2.043594	28.08	53.78	222.69	4.51
WICKHAM_PR	154	50YR BB PR	1510.00	1469.00	1475.10	1471.96	1475.17	0.002732	2.21	683.58	224.97	0.20


Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
w02 WICKHAM_PR
Legend
EG 50YR BB PR
WS 50YR BB PR
Crit 50YR BB PR
Ground
Elevation (ft)
1460
1480
1500
1520
1540
1560
0
500
1000
1500
2000
2500
Main Channel Distance (ft)
192
322.5
465
504
571
647
753
853
928
1010
1115
1233
1342
1470
1540
1581
1631
1727
1788
1835
1881
1947
2007
2073
2156

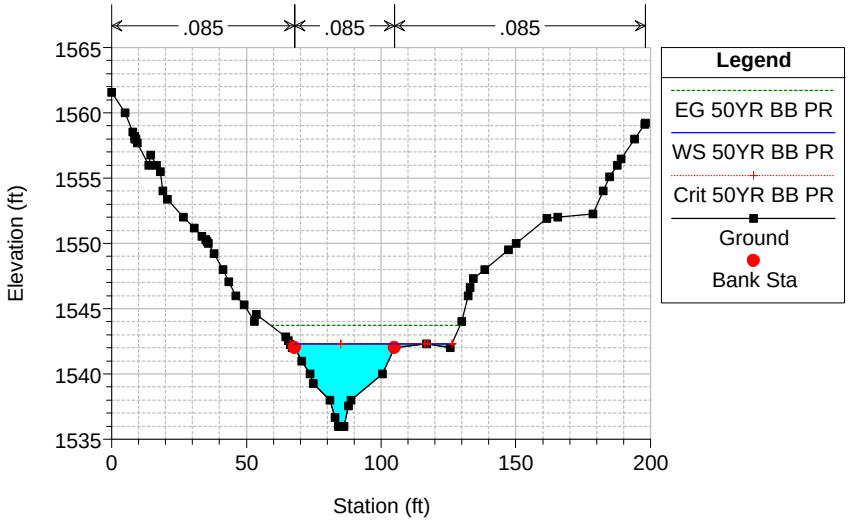
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2156 Most U/S Section



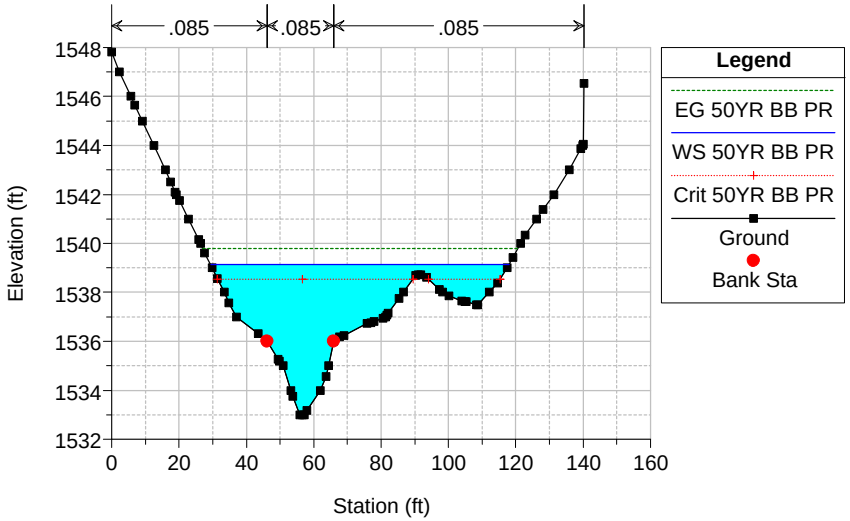
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2073



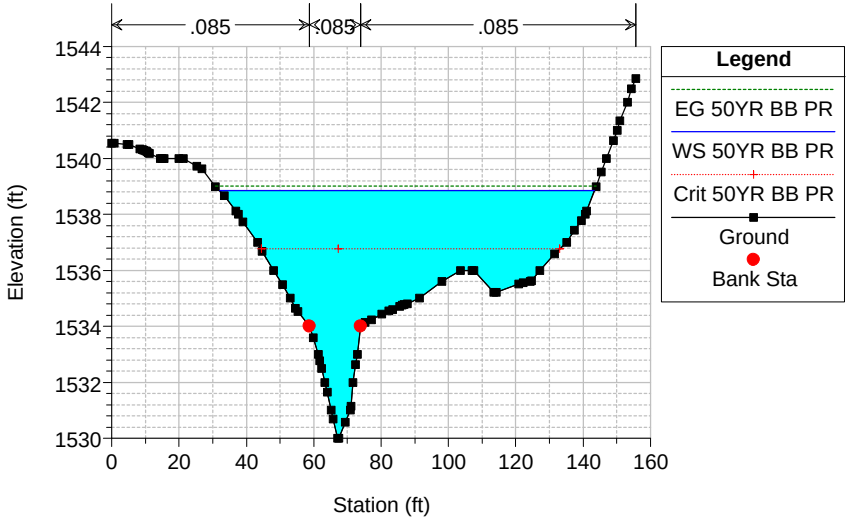
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 2007



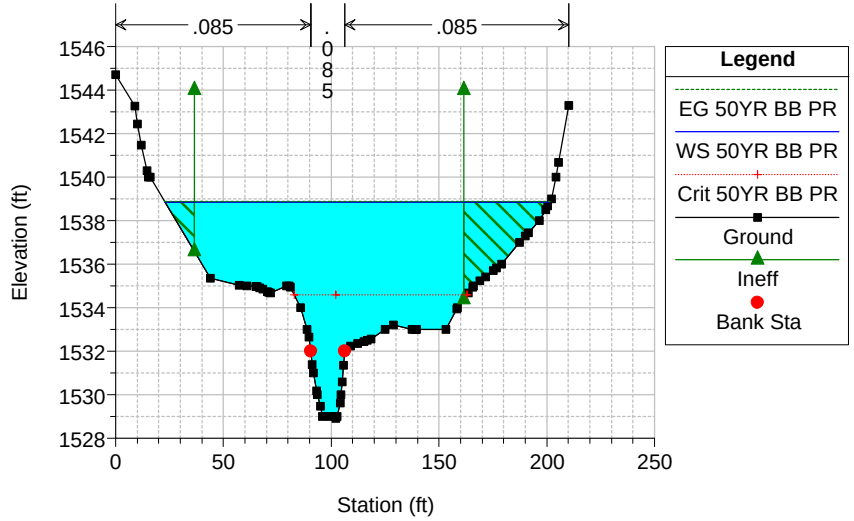
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1947



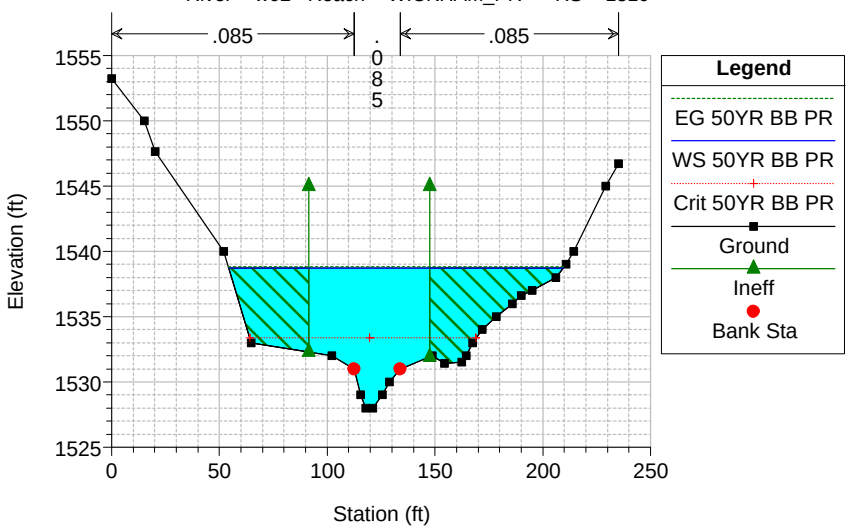
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1881



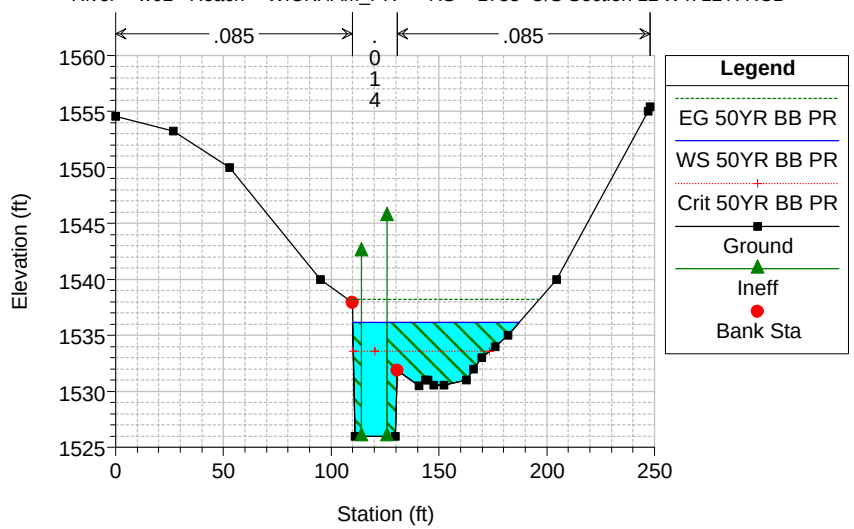
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1835



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1810



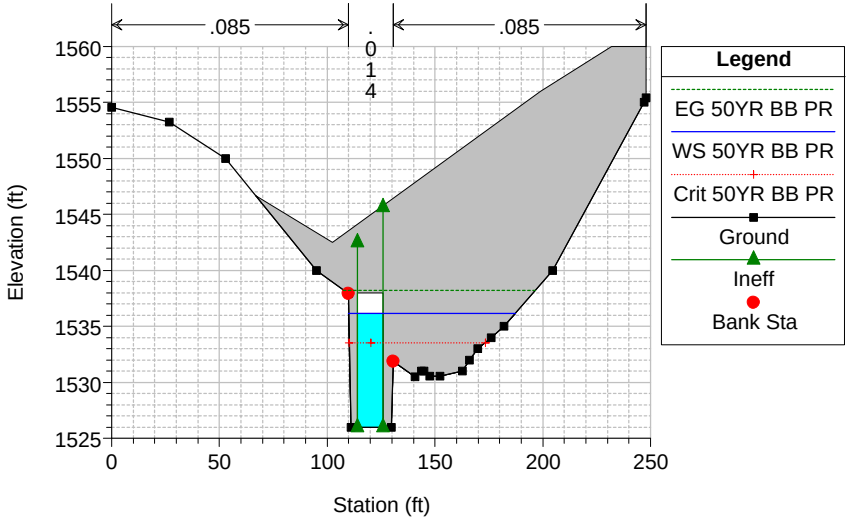
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1788 U/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

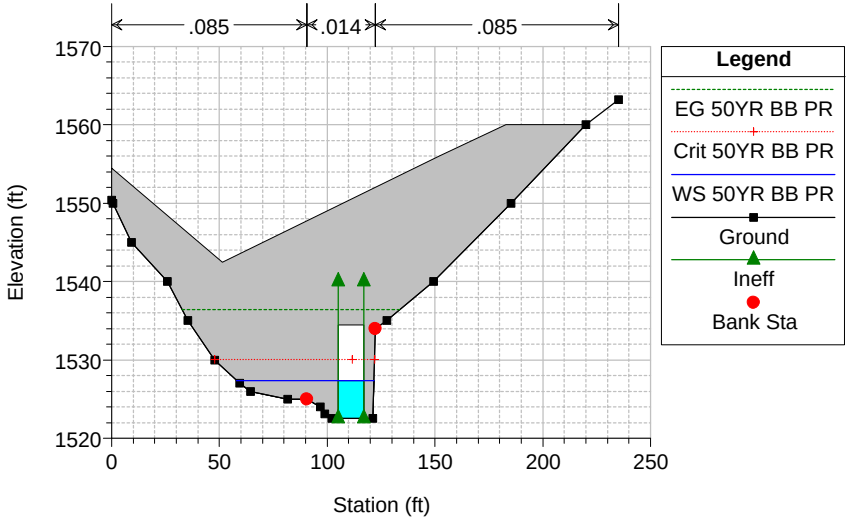
River = w02 Reach = WICKHAM_PR RS = 1727 Culv Single 12'W x 12'H RCB at Verandah Ct



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

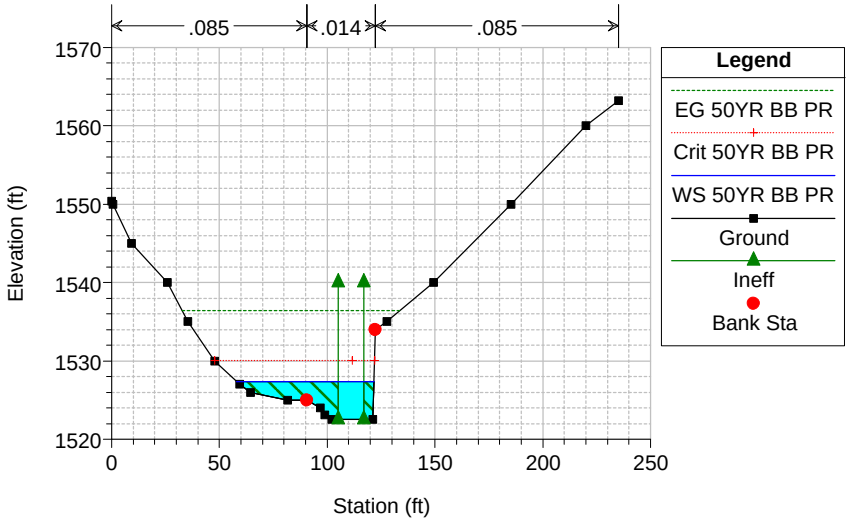
River = w02 Reach = WICKHAM_PR RS = 1727 Culv Single 12'W x 12'H RCB at Verandah Ct



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

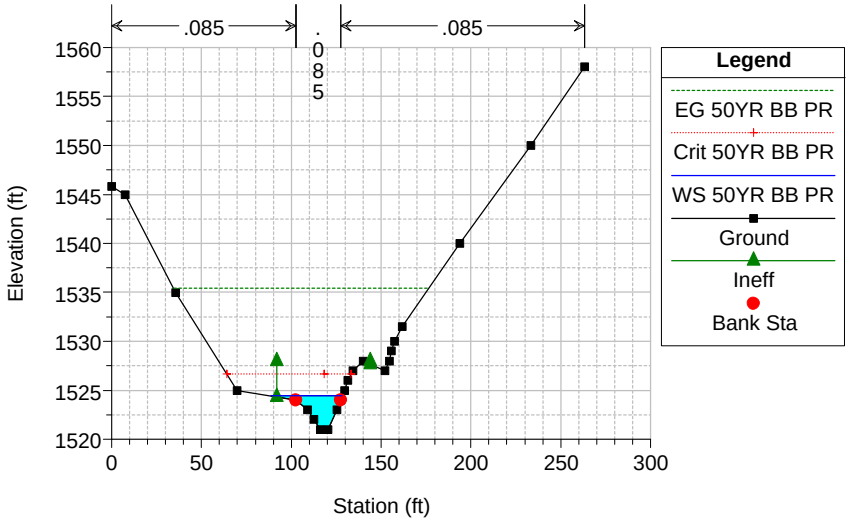
River = w02 Reach = WICKHAM_PR RS = 1666 D/S Section 12'W x 12'H RCB



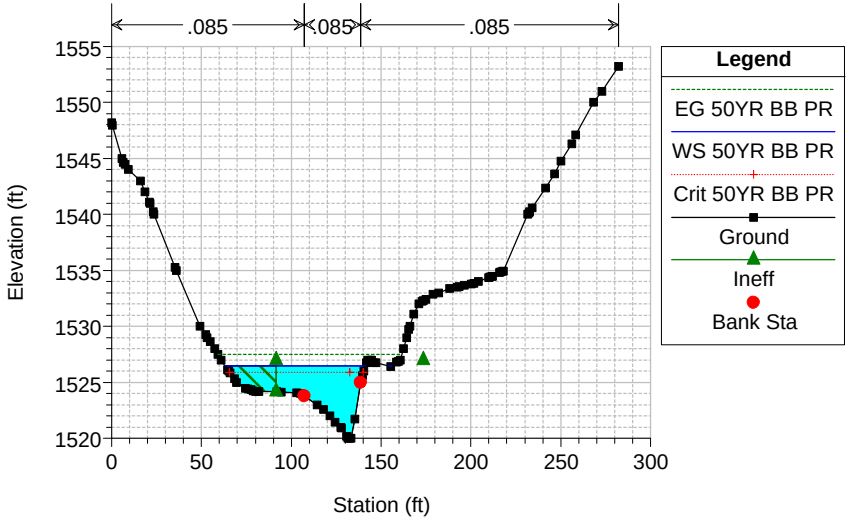
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

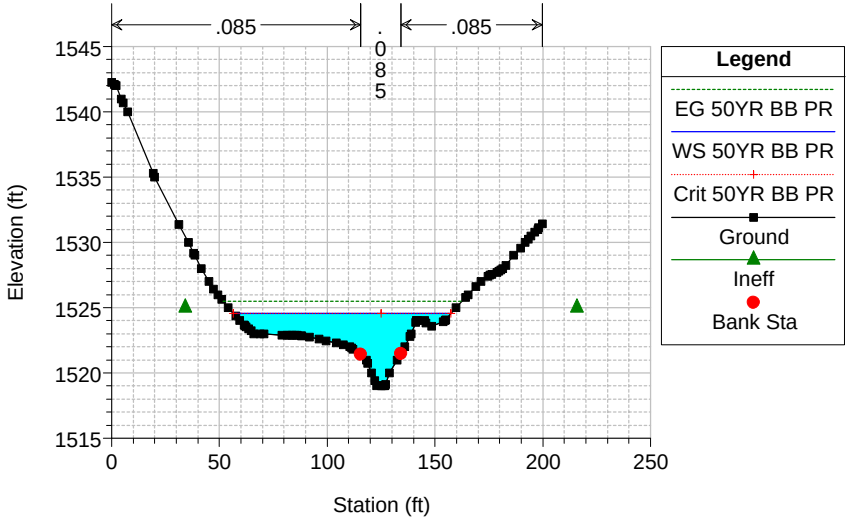
River = w02 Reach = WICKHAM_PR RS = 1646



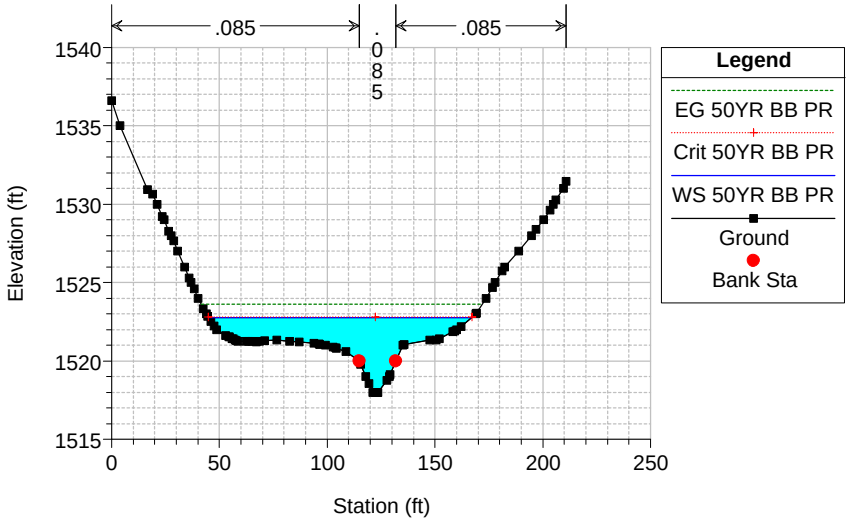
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1631



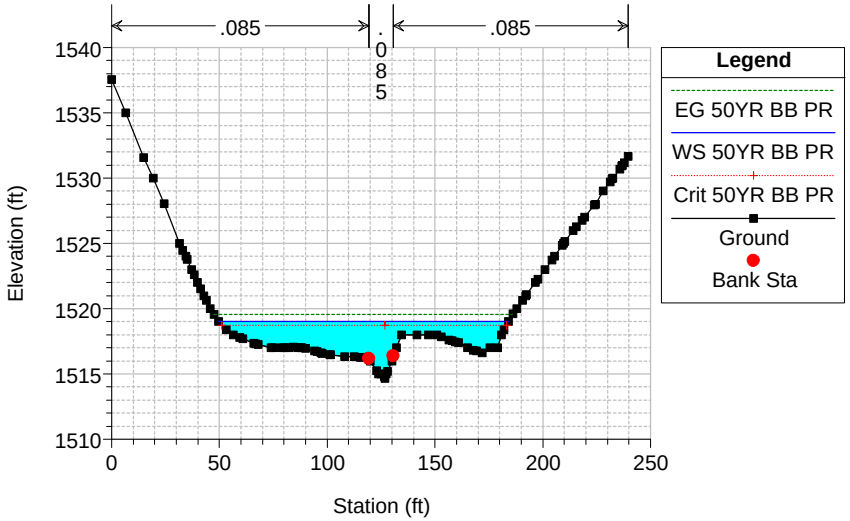
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1581



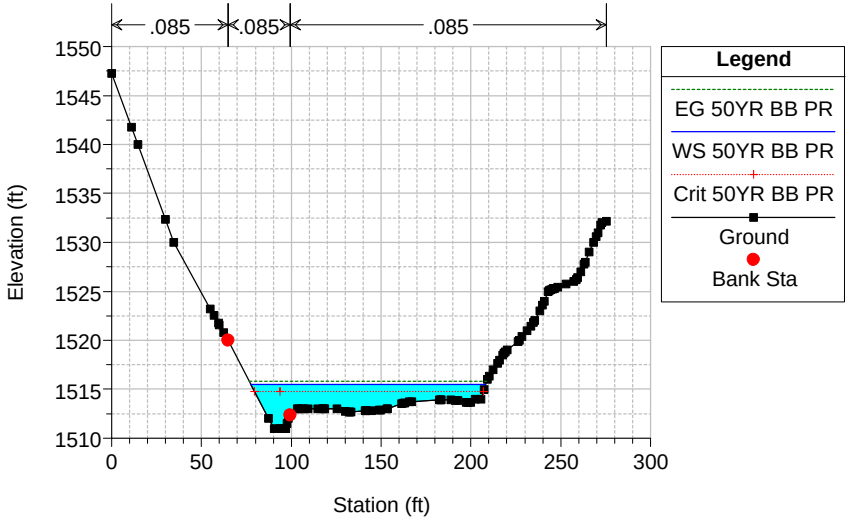
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1540



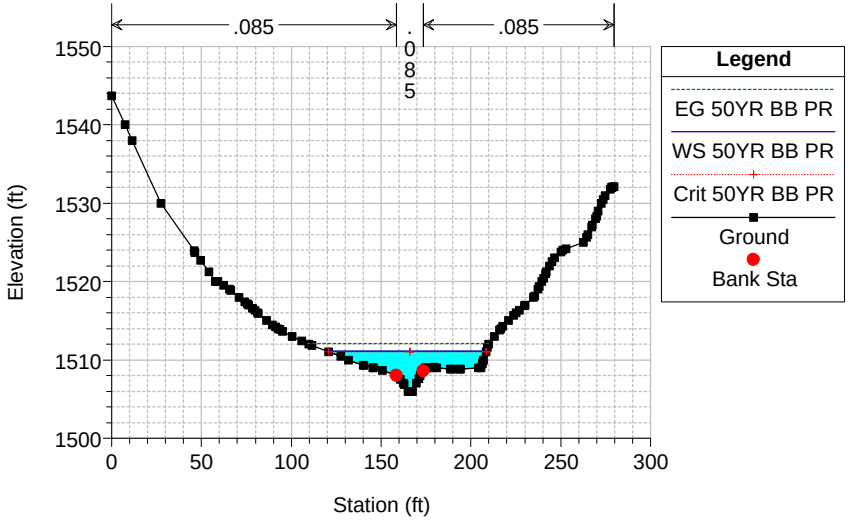
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1470



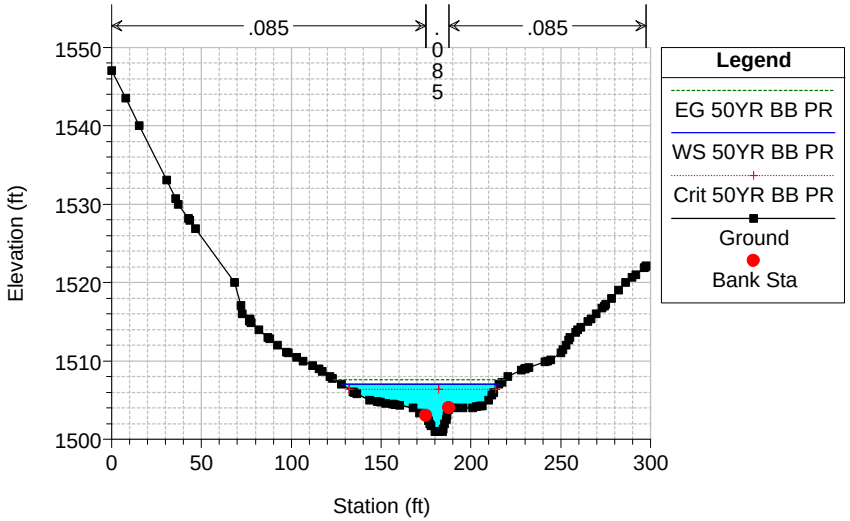
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1342



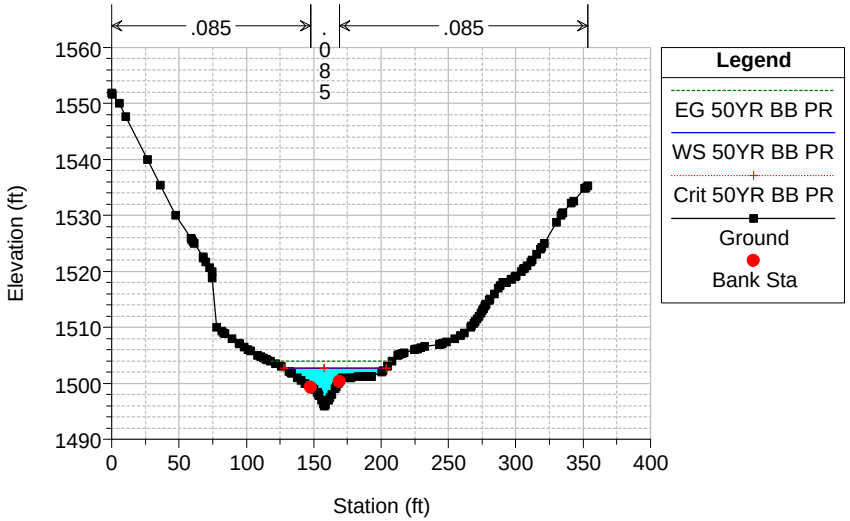
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1233



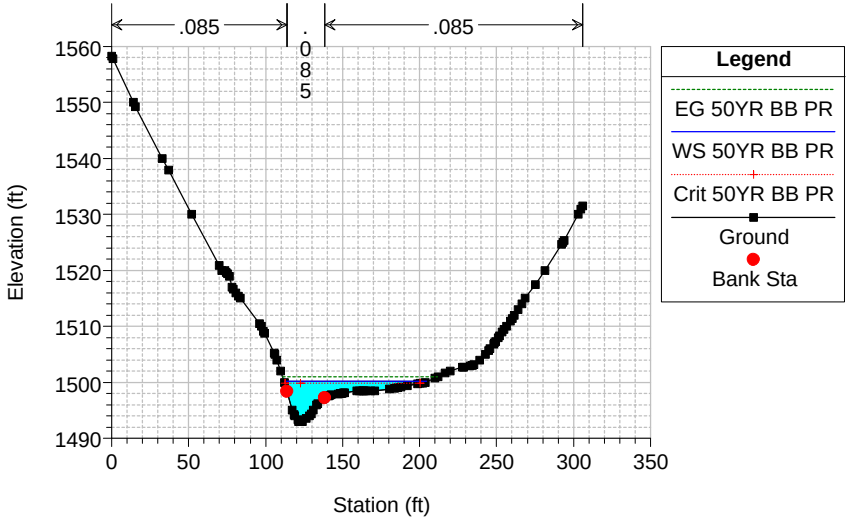
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1115



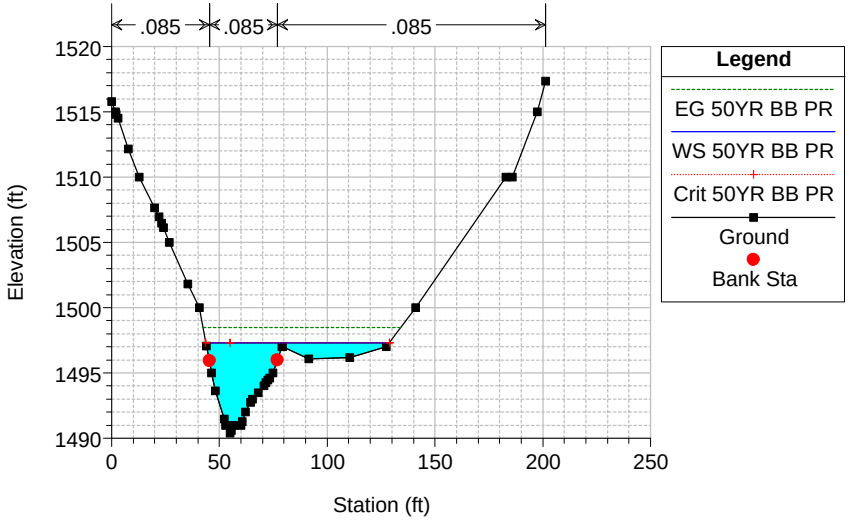
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 1010



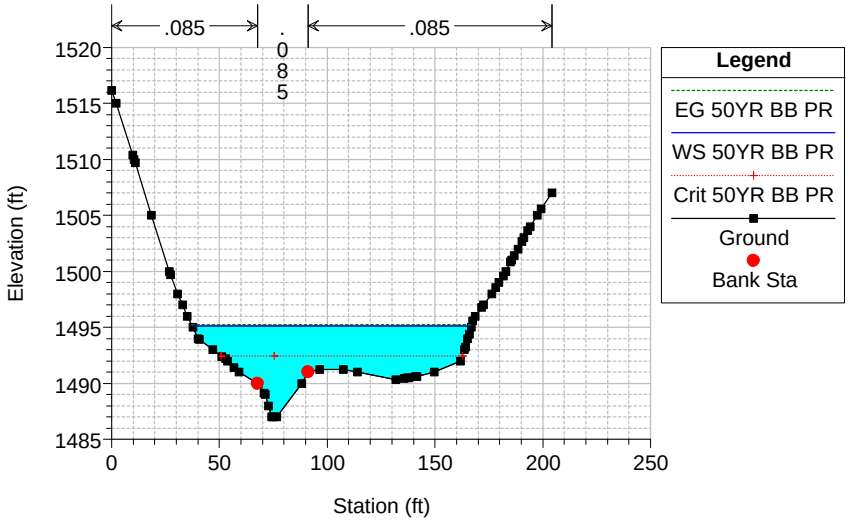
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 928



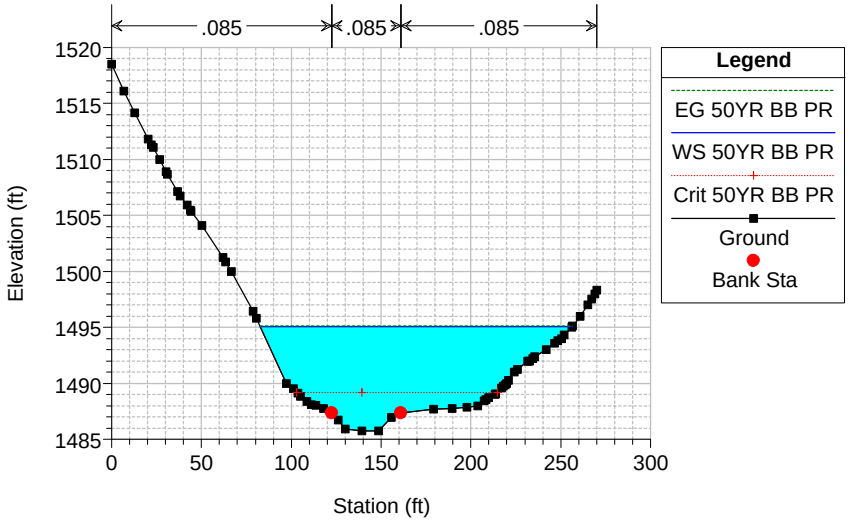
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 853



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 753



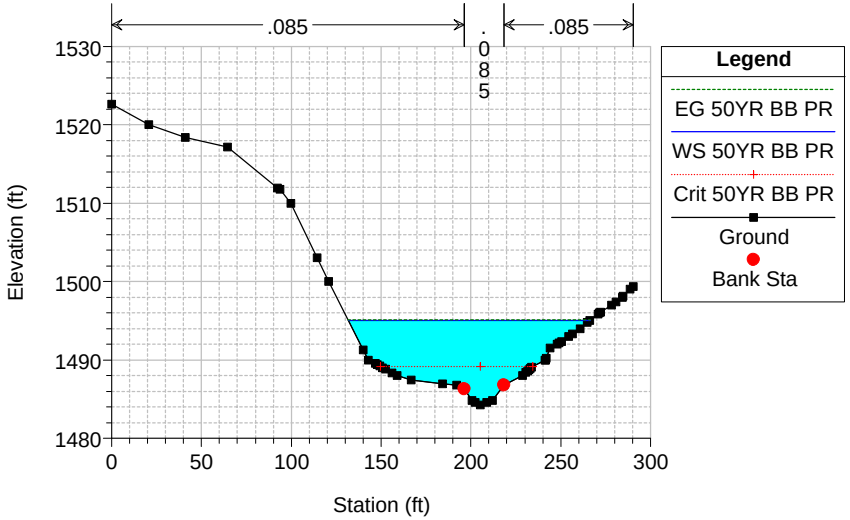
Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014
Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed
River = w02 Reach = WICKHAM_PR RS = 647



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

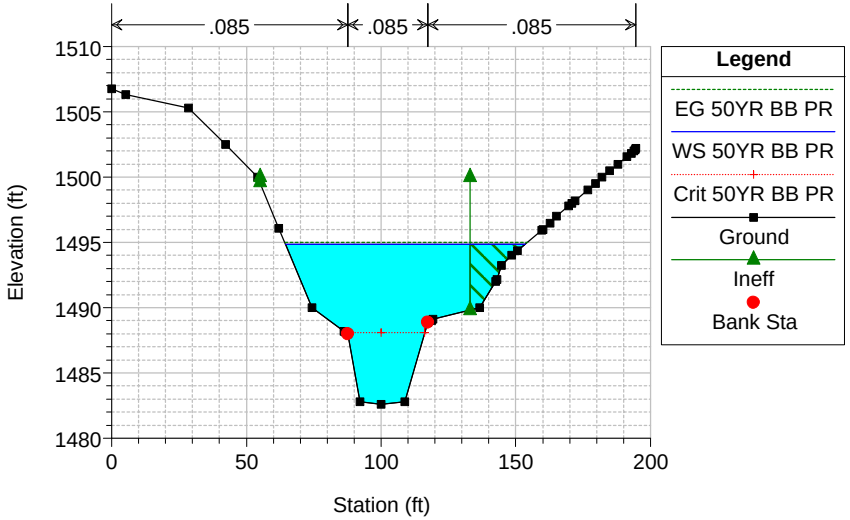
River = w02 Reach = WICKHAM_PR RS = 571



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

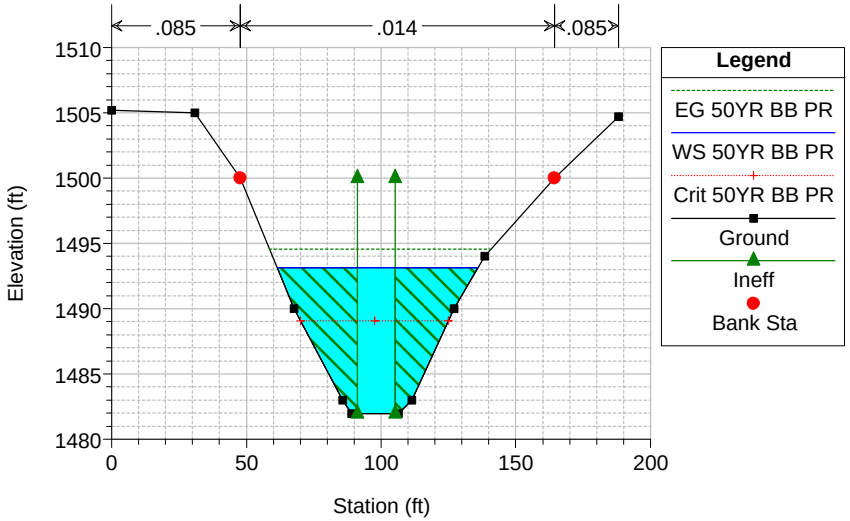
River = w02 Reach = WICKHAM_PR RS = 504



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

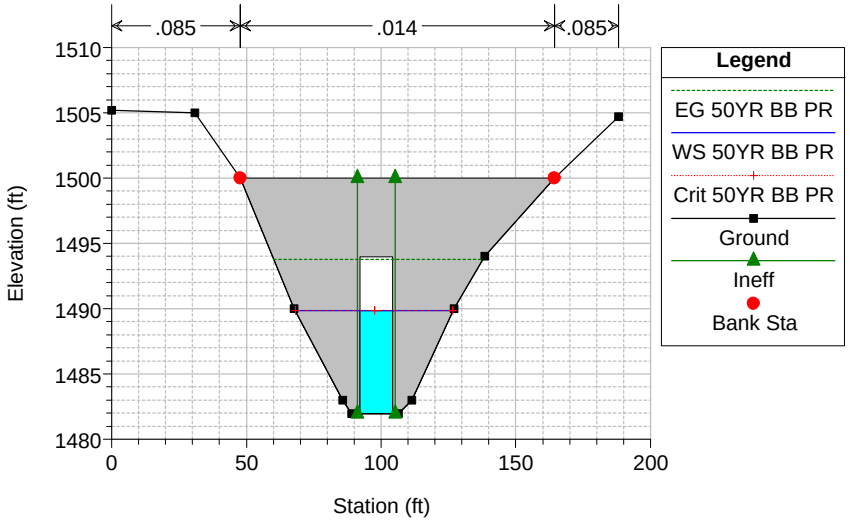
River = w02 Reach = WICKHAM_PR RS = 465 U/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

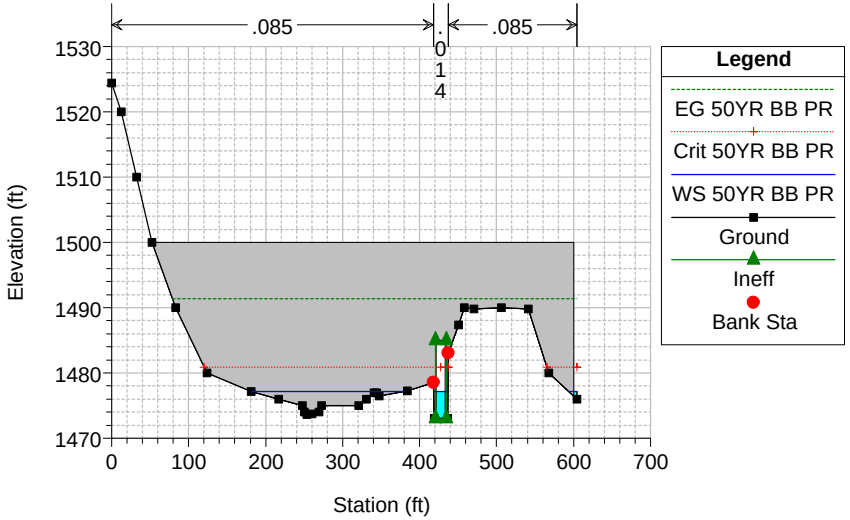
River = w02 Reach = WICKHAM_PR RS = 322.5 Culv Single 12'W x 12'H RCB at "A" St



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

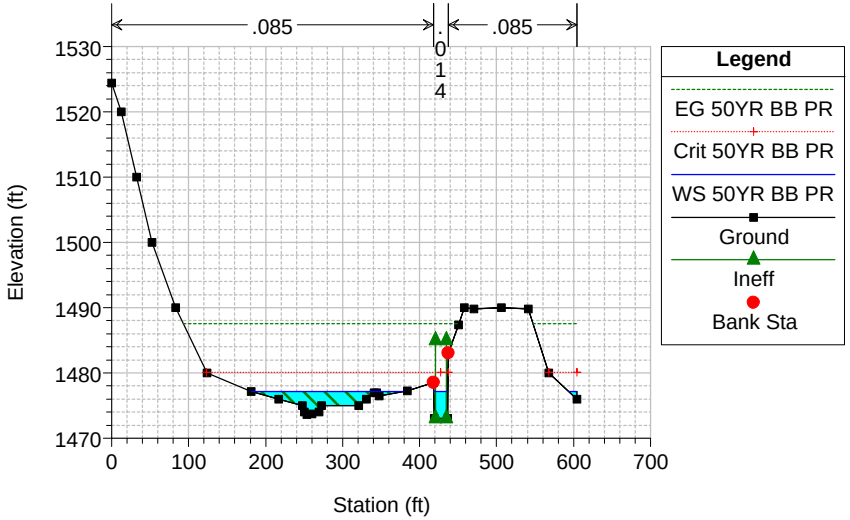
River = w02 Reach = WICKHAM_PR RS = 322.5 Culv Single 12'W x 12'H RCB at "A" St



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

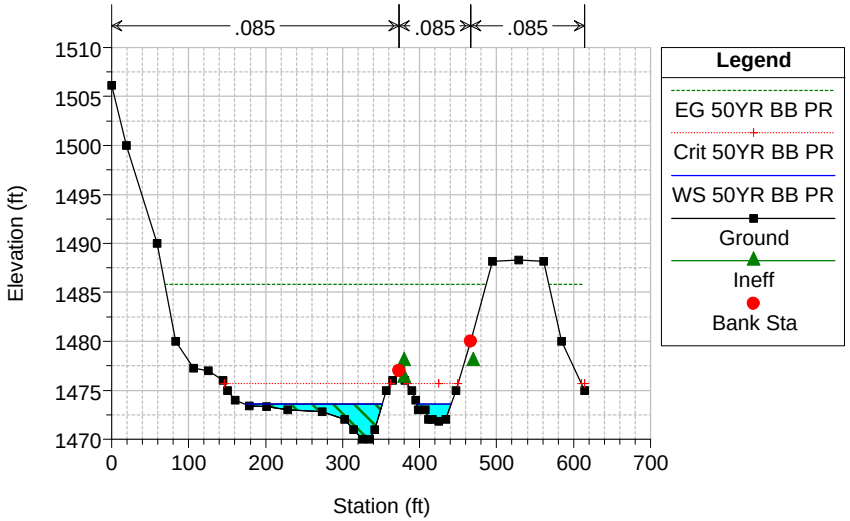
River = w02 Reach = WICKHAM_PR RS = 248 D/S Section 12'W x 12'H RCB



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

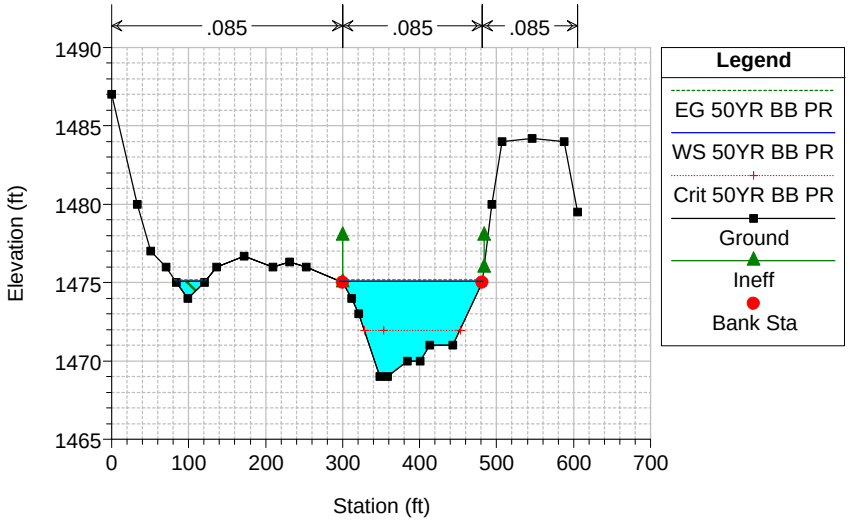
River = w02 Reach = WICKHAM_PR RS = 192



Stevenson Ranch Plan: Stevenson Ranch Proposed_n=0.085 10/17/2014

Geom: Stevenson Ranch Proposed_n=0.085 Flow: Stevenson Ranch Proposed

River = w02 Reach = WICKHAM_PR RS = 154 Most D/S Section - Junction w Pico Canyon Creek



HEC-RAS
ERRORS, WARNINGS, AND NOTES

Existing & Proposed Conditions

n = 0.025 & n = 0.085

Pico & Wickham Canyon Creek

Errors Warnings and Notes for Plan : EX_n=0.025

Location:	River: p01 Reach: PICO_EX RS: 1654 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX RS: 1516 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX RS: 1407 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1293 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1172 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1058 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 958 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	During supercritical flow calculations a junction was encountered. During standard step calculations
	the program used the stream with the greatest momentum to balance the energy equation.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.

Errors Warnings and Notes for Plan : EX_n=0.025 (Continued)

	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 843 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 778 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX Lower RS: 734 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 684 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 609 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 556 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 473 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 416 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 373 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Program found supercritical flow starting at this cross section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 353 Profile: 50YR BB EX

Errors Warnings and Notes for Plan : EX_n=0.025 (Continued)

Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 331 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 305 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 255 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 205 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: p01 Reach: PICO_EX Lower RS: 155 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 130 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 110 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w01 Reach: WICKHAM_EX RS: 1902 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1836 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.

Errors Warnings and Notes for Plan : EX_n=0.025 (Continued)

Location:	River: w01 Reach: WICKHAM_EX RS: 1776 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1714 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1667 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1641 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1611 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1559 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1499 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1467 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1343 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1272 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.

Errors Warnings and Notes for Plan : EX_n=0.025 (Continued)

Location:	River: w01 Reach: WICKHAM_EX RS: 1156 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1047 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 930 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 825 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 743 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 667 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 567 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 472 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 375 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 282 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 210 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.

Errors Warnings and Notes for Plan : EX_n=0.025 (Continued)

	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 156 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.

Errors Warnings and Notes for Plan : PR_n=0.025

Location:	River: p02 Reach: PICO_PR RS: 1603 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 1465 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 1356 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1242 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1121 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1007 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 907 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 792 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for

Errors Warnings and Notes for Plan : PR_n=0.025 (Continued)

	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 727 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 700 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 680 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 500 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 500 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: p02 Reach: PICO_PR Lower RS: 305 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 255 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 205 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: p02 Reach: PICO_PR Lower RS: 155 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 130 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 110 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 2073 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.

Errors Warnings and Notes for Plan : PR_n=0.025 (Continued)

Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 2007 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1947 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1881 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 1835 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1810 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1788 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1727 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1727 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: w02 Reach: WICKHAM_PR RS: 1646 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1631 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1581 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.

Errors Warnings and Notes for Plan : PR_n=0.025 (Continued)

Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1540 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1470 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1342 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1233 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1115 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1010 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 928 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 853 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 753 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 571 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 504 Profile: 50YR BB PR

Errors Warnings and Notes for Plan : PR_n=0.025 (Continued)

Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 322.5 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 322.5 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: w02 Reach: WICKHAM_PR RS: 192 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 154 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.

Errors Warnings and Notes for Plan : EX_n=0.085

Location:	River: p01 Reach: PICO_EX RS: 1777 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX RS: 1654 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX RS: 1516 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p01 Reach: PICO_EX RS: 1407 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1293 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1172 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX RS: 1058 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 958 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 843 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.

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Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 734 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 684 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The cross-section end points had to be extended vertically for the computed water surface.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 609 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The cross-section end points had to be extended vertically for the computed water surface.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 556 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The cross-section end points had to be extended vertically for the computed water surface.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 473 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 416 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 373 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 353 Profile: 50YR BB EX
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 331 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 305 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid

Errors Warnings and Notes for Plan : EX_n=0.085 (Continued)

	subcritical answer. The program defaulted to critical depth.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 255 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Program found supercritical flow starting at this cross section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 205 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: p01 Reach: PICO_EX Lower RS: 155 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p01 Reach: PICO_EX Lower RS: 130 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: p01 Reach: PICO_EX Lower RS: 110 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w01 Reach: WICKHAM_EX RS: 1985 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 1902 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1836 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.

Errors Warnings and Notes for Plan : EX_n=0.085 (Continued)

Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 1776 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1714 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 1667 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Program found supercritical flow starting at this cross section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1641 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1611 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1559 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1467 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1432 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1383 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 1343 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.

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Note:	Program found supercritical flow starting at this cross section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1272 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w01 Reach: WICKHAM_EX RS: 1156 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 1047 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 930 Profile: 50YR BB EX
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 825 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 743 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 667 Profile: 50YR BB EX
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w01 Reach: WICKHAM_EX RS: 567 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 472 Profile: 50YR BB EX
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 375 Profile: 50YR BB EX
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.

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	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 282 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 210 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Location:	River: w01 Reach: WICKHAM_EX RS: 156 Profile: 50YR BB EX
Warning:	Divided flow computed for this cross-section.

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Location:	River: p02 Reach: PICO_PR RS: 1726 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 1603 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 1465 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: p02 Reach: PICO_PR RS: 1356 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1242 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1121 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 1007 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 907 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 792 Profile: 50YR BB PR
Warning:	The energy equation could not be balanced within the specified number of iterations. The program

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	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: p02 Reach: PICO_PR RS: 727 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR RS: 700 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 680 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 500 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 500 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: p02 Reach: PICO_PR Lower RS: 305 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 255 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 205 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Location:	River: p02 Reach: PICO_PR Lower RS: 155 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 130 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: p02 Reach: PICO_PR Lower RS: 110 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for

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	additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 2156 Profile: 50YR BB PR
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w02 Reach: WICKHAM_PR RS: 2073 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 2007 Profile: 50YR BB PR
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w02 Reach: WICKHAM_PR RS: 1947 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1881 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1835 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1810 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1788 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.

Errors Warnings and Notes for Plan : PR_n=0.085 (Continued)

Location:	River: w02 Reach: WICKHAM_PR RS: 1727 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1727 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: w02 Reach: WICKHAM_PR RS: 1646 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1631 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1581 Profile: 50YR BB PR
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1540 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 1470 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 1342 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1233 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1115 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 1010 Profile: 50YR BB PR

Errors Warnings and Notes for Plan : PR_n=0.085 (Continued)

Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w02 Reach: WICKHAM_PR RS: 928 Profile: 50YR BB PR
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 853 Profile: 50YR BB PR
Warning:	The energy equation could not be balanced within the specified number of iterations. The program
	used critical depth for the water surface and continued on with the calculations.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Warning:	During the standard step iterations, when the assumed water surface was set equal to critical depth,
	the calculated water surface came back below critical depth. This indicates that there is not a valid
	subcritical answer. The program defaulted to critical depth.
Location:	River: w02 Reach: WICKHAM_PR RS: 753 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Location:	River: w02 Reach: WICKHAM_PR RS: 571 Profile: 50YR BB PR
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Location:	River: w02 Reach: WICKHAM_PR RS: 504 Profile: 50YR BB PR
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 322.5 Profile: 50YR BB PR
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, water
	surface was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 322.5 Profile: 50YR BB PR Culv: Culvert #1
Note:	The flow in the culvert is entirely supercritical.
Location:	River: w02 Reach: WICKHAM_PR RS: 192 Profile: 50YR BB PR
Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Warning:	The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7
	or greater than 1.4. This may indicate the need for additional cross sections.
Warning:	The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
	This may indicate the need for additional cross sections.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.
Location:	River: w02 Reach: WICKHAM_PR RS: 154 Profile: 50YR BB PR

Errors Warnings and Notes for Plan : PR_n=0.085 (Continued)

Warning:	Divided flow computed for this cross-section.
Warning:	The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for
	additional cross sections.
Note:	Hydraulic jump has occurred between this cross section and the previous upstream section.
Note:	Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy
	was used.

Appendix I

Noise Worksheets

Aidlin Hills
Draft EIR
Appendix I, Noise Worksheets

I.1 Ambient Noise Data

I.2 Construction Noise Calculations

I.3 Traffic Noise Model Calibration Results

I.4 Off-Site Traffic Noise Calculations

I.5 Off-Site Construction Traffic Noise Calculations

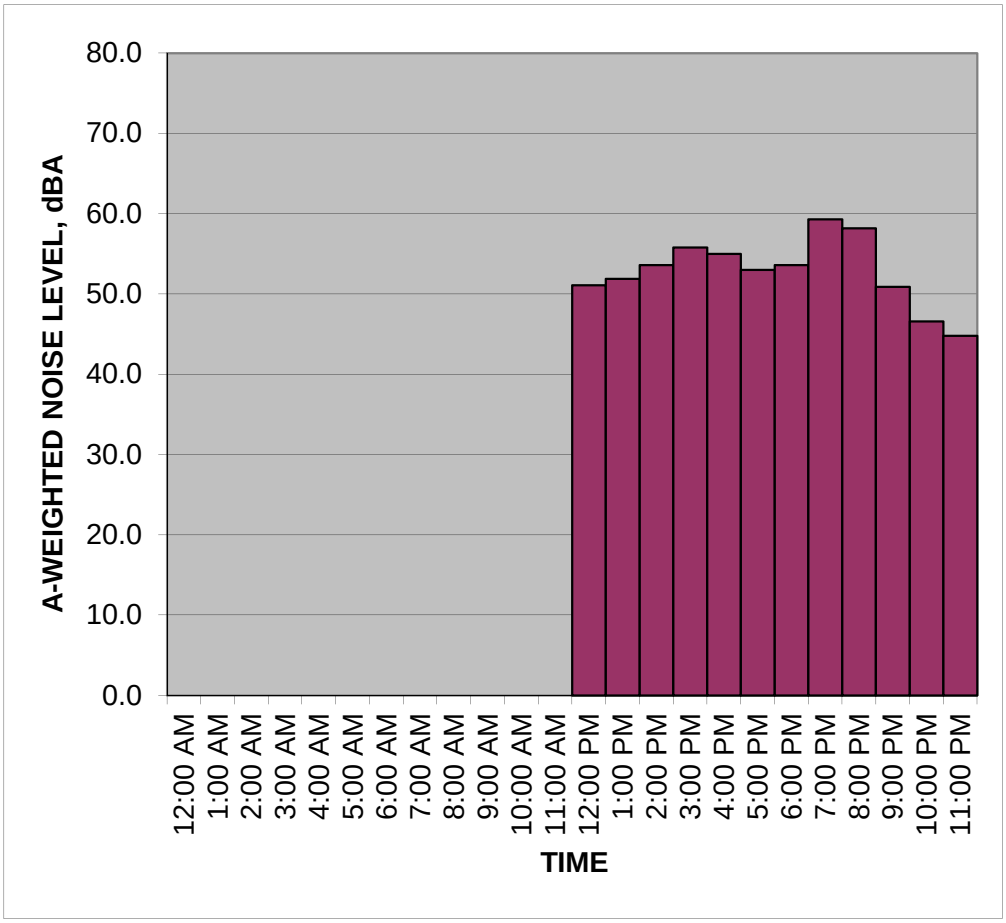
Appendix I.1
Ambient Noise Data

Measured Ambient Noise Levels

Project: Aidlin Hills Project
Location: R1 - Northeastern Property Line
Sources: Ambient

Date: July 15, 2014

TIME	HNL, dB(A)
12:00 AM	0.0
1:00 AM	0.0
2:00 AM	0.0
3:00 AM	0.0
4:00 AM	0.0
5:00 AM	0.0
6:00 AM	0.0
7:00 AM	0.0
8:00 AM	0.0
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	51.1
1:00 PM	51.9
2:00 PM	53.6
3:00 PM	55.8
4:00 PM	55.0
5:00 PM	53.0
6:00 PM	53.6
7:00 PM	59.3
8:00 PM	58.2
9:00 PM	50.9
10:00 PM	46.6
11:00 PM	44.8
CNEL, dB(A):	**58.0**



NOTES:

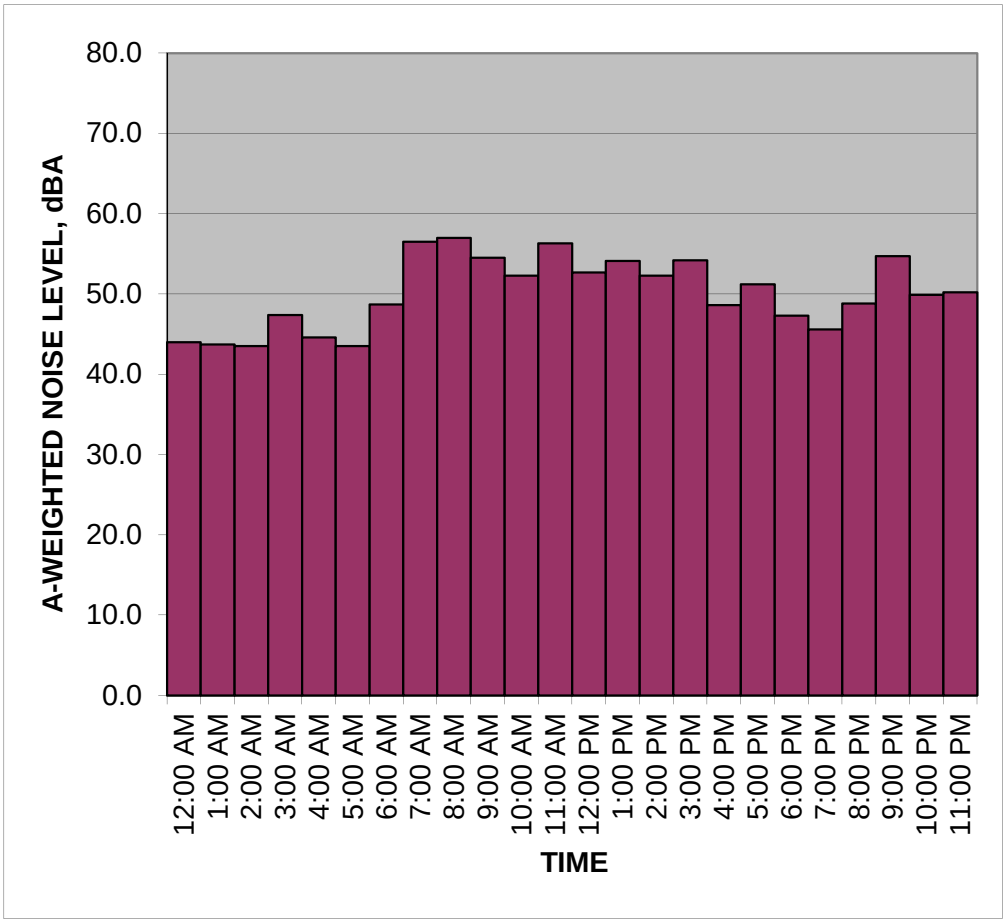
fieldcnel.xls

Measured Ambient Noise Levels

Project: Aidlin Hills Project
Location: R1 - Northeastern Property Line
Sources: Ambient

Date: July 16, 2014

TIME	HNL, dB(A)
12:00 AM	44.0
1:00 AM	43.7
2:00 AM	43.5
3:00 AM	47.4
4:00 AM	44.6
5:00 AM	43.5
6:00 AM	48.7
7:00 AM	56.5
8:00 AM	57.0
9:00 AM	54.5
10:00 AM	52.3
11:00 AM	56.3
12:00 PM	52.7
1:00 PM	54.1
2:00 PM	52.3
3:00 PM	54.2
4:00 PM	48.6
5:00 PM	51.2
6:00 PM	47.3
7:00 PM	45.6
8:00 PM	48.8
9:00 PM	54.7
10:00 PM	49.9
11:00 PM	50.2
CNEL, dB(A):	**55.6**



NOTES:

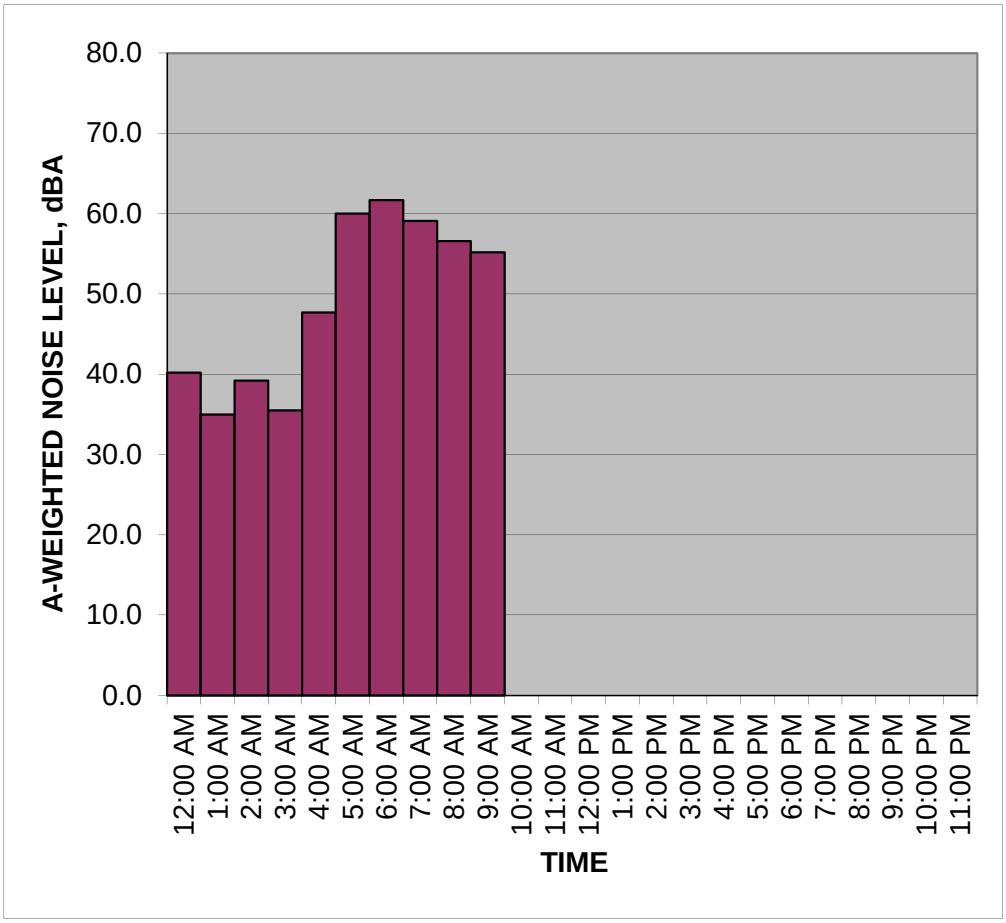
fieldcnel.xls

Measured Ambient Noise Levels

Project: Aidlin Hills Project
Location: R1 - Northeastern Property Line
Sources: Ambient

Date: July 16, 2014

TIME	HNL, dB(A)
12:00 AM	40.2
1:00 AM	35.0
2:00 AM	39.2
3:00 AM	35.5
4:00 AM	47.7
5:00 AM	60.0
6:00 AM	61.7
7:00 AM	59.1
8:00 AM	56.6
9:00 AM	55.2
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	0.0
1:00 PM	0.0
2:00 PM	0.0
3:00 PM	0.0
4:00 PM	0.0
5:00 PM	0.0
6:00 PM	0.0
7:00 PM	0.0
8:00 PM	0.0
9:00 PM	0.0
10:00 PM	0.0
11:00 PM	0.0
CNEL, dB(A):	**64.4**



NOTES:

fieldcnel.xls

Appendix I.2
Construction Noise Calculations

Project: Aidlin Hills Project

Construction Phase: **Phase 1**
Grading/Excavation

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	70	8
Graders	1	85	40%	70	8
Tractor/Loader/Backhoe	1	80	25%	70	8
Scrapers	1	84	40%	70	8
Dozer	1	82	40%	70	8
Dump/Haul Trucks	1	76	20%	70	8

Receptor: ***R1***

Construction Hour:

12	Hours during daytime (7 am to 7 pr
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **74**
Leq: **75**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 2**
Utilities

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Forklift	1	75	10%	550	8
Generator Sets	1	81	50%	550	8
Pumps	1	81	50%	550	8
Tractor/Loader/Backhoe	1	80	25%	550	8
Other Equipment (Trencher)	1	85	50%	550	8

Receptor: ***R1***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **56**
Leq: **56**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 3**
Building Construction

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	40%	550	8
Forklift	1	75	10%	550	8
Generator Sets	1	81	50%	550	8
Tractor/Loader/Backhoe	1	80	25%	550	8
Welders	1	74	40%	550	8

Receptor: ***R1***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **52**
Leq: **53**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 4**
Architectural Coating

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pavement Scarifier	1	90	20%	550	8
Paver	1	77	50%	550	8
Roller	1	80	20%	550	8

Receptor: ***R1***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **61**
Leq: **54**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 1**
Grading/Excavation

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	140	10
Graders	1	85	40%	140	10
Tractor/Loader/Backhoe	1	80	25%	140	10
Scrapers	1	84	40%	140	10
Dozer	1	82	40%	140	10
Dump/Haul Trucks	1	76	20%	140	10

Receptor: ***R2***

Construction Hour:

12	Hours during daytime (7 am to 7 pr
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **66**
Leq: **67**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 2**
Utilities

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Forklift	1	75	10%	1000	20
Generator Sets	1	81	50%	1000	20
Pumps	1	81	50%	1000	20
Tractor/Loader/Backhoe	1	80	25%	1000	20
Other Equipment (Trencher)	1	85	50%	1000	20

Receptor: ***R2***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **39**
Leq: **39**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 3**
Building Construction

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cranes	1	81	40%	1000	20
Forklift	1	75	10%	1000	20
Generator Sets	1	81	50%	1000	20
Tractor/Loader/Backhoe	1	80	25%	1000	20
Welders	1	74	40%	1000	20

Receptor: ***R2***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **35**
Leq: **36**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Aidlin Hills Project

Construction Phase: **Phase 4**
Architectural Coating

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pavement Scarifier	1	90	20%	1000	20
Paver	1	77	50%	1000	20
Roller	1	80	20%	1000	20

Receptor: ***R2***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **44**
Leq: **37**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Appendix I.3
Traffic Noise Model Calibration Results

Aidlin Hills Project

Traffic Noise Model Calibration

Existing									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	10 Feet	20 Feet	ROW	10 Feet	20 Feet
Verandah Court			241	46.9	45.5	44.4	44.0	42.6	41.5
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

Future No Project									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	10 Feet	20 Feet	ROW	10 Feet	20 Feet
Verandah Court			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

Future With Project									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	10 Feet	20 Feet	ROW	10 Feet	20 Feet
Verandah Court			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

	CNEL			
Summary	10 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Verandah Court	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Appendix I.4
Off-Site Traffic Noise Calculations

Project: Aidlin Hills Project

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	1460	2215	0	71.4	69.3	67.8	72.6	70.5	69.0
Pico Canyon between Old Road and Stevenson Ranch	45	1080	1240	0	68.9	66.7	65.3	70.1	67.9	66.5
Pico Canyon between Stevenson Ranch and Southern Oaks	45	385	300	0	64.1	61.9	60.4	65.3	63.1	61.6
Pico Canyon between Southern Oaks and Whispering Oaks	45	165	140	0	60.1	58.0	56.5	61.3	59.2	57.8
Pico Canyon between Whispering Oaks and A Street	45	20	20	0	50.9	48.8	47.4	52.2	50.0	48.6
Future No Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	2967	2430	0	72.7	70.5	69.1	73.9	71.7	70.3
Pico Canyon between Old Road and Stevenson Ranch	45	2080	1700	0	71.1	69.0	67.6	72.3	70.2	68.8
Pico Canyon between Stevenson Ranch and Southern Oaks	45	409	293	0	64.4	62.1	60.6	65.6	63.3	61.9
Pico Canyon between Southern Oaks and Whispering Oaks	45	169	143	0	60.2	58.1	56.7	61.4	59.3	57.9
Pico Canyon between Whispering Oaks and A Street	45	24	18	0	51.7	49.6	48.2	53.0	50.8	49.4
Future With Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	2990	2460	0	72.7	70.6	69.1	73.9	71.8	70.3
Pico Canyon between Old Road and Stevenson Ranch	45	2110	1745	0	71.2	69.0	67.6	72.4	70.3	68.8
Pico Canyon between Stevenson Ranch and Southern Oaks	45	485	395	0	65.1	62.9	61.4	66.3	64.1	62.6
Pico Canyon between Southern Oaks and Whispering Oaks	45	245	245	0	61.8	59.7	58.3	63.0	60.9	59.5
Pico Canyon between Whispering Oaks and A Street	45	98	121	0	58.8	56.6	55.2	60.0	57.8	56.4

Summary	CNEL			
	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Pico Canyon between Lyons and Old Road	0.1	1.3	0.0	1.3
Pico Canyon between Old Road and Stevenson Ranch	0.1	2.4	0.1	2.3
Pico Canyon between Stevenson Ranch and Southern Oaks	0.8	1.0	0.7	1.0
Pico Canyon between Southern Oaks and Whispering Oaks	1.6	1.7	1.6	1.7
Pico Canyon between Whispering Oaks and A Street	7.0	7.8	7.0	7.8

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Aidlin Hills Project

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1125	1940	0	71.1	68.3	66.6	72.3	69.5	67.8
Lyons east of I-5 NB Ramp	40	2180	2700	0	72.9	69.9	68.2	74.1	71.2	69.4
Stevenson Ranch between Old Road and Pico Canyon	40	1205	1660	0	70.8	67.8	66.1	72.0	69.0	67.3
Southern Oaks south of Pico Canyon	35	230	160	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5
Future No Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1272	2507	0	72.2	69.4	67.7	73.4	70.6	68.9
Lyons east of I-5 NB Ramp	40	2829	3156	0	73.6	70.6	68.9	74.8	71.8	70.1
Stevenson Ranch between Old Road and Pico Canyon	40	1373	2135	0	71.9	68.9	67.2	73.1	70.1	68.4
Southern Oaks south of Pico Canyon	35	230	170	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5
Future With Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1275	2515	0	72.2	69.4	67.7	73.4	70.7	69.0
Lyons east of I-5 NB Ramp	40	2840	3170	0	73.6	70.6	68.9	74.8	71.9	70.1
Stevenson Ranch between Old Road and Pico Canyon	40	1395	2165	0	72.0	69.0	67.2	73.2	70.2	68.4
Southern Oaks south of Pico Canyon	35	230	170	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Old Road between Stevenson Ranch and Pico Canyon	0.1	1.2	0.0	1.1
Lyons east of I-5 NB Ramp	0.1	0.7	0.0	0.7
Stevenson Ranch between Old Road and Pico Canyon	0.1	1.2	0.1	1.2
Southern Oaks south of Pico Canyon	0.0	0.0	0.0	0.0
Whispering Oaks south of Pico Canyon	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Aidlin Hills Project

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	1460	2215	0	71.4	69.3	67.8	72.6	70.5	69.0
Pico Canyon between Old Road and Stevenson Ranch	45	1080	1240	0	68.9	66.7	65.3	70.1	67.9	66.5
Pico Canyon between Stevenson Ranch and Southern Oaks	45	385	300	0	64.1	61.9	60.4	65.3	63.1	61.6
Pico Canyon between Southern Oaks and Whispering Oaks	45	165	140	0	60.1	58.0	56.5	61.3	59.2	57.8
Pico Canyon between Whispering Oaks A Street	45	20	20	0	50.9	48.8	47.4	52.2	50.0	48.6
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	1483	2245	0	71.4	69.3	67.9	72.7	70.5	69.1
Pico Canyon between Old Road and Stevenson Ranch	45	1141	1281	0	69.0	66.9	65.4	70.2	68.1	66.7
Pico Canyon between Stevenson Ranch and Southern Oaks	45	461	402	0	64.9	62.6	61.2	66.1	63.9	62.4
Pico Canyon between Southern Oaks and Whispering Oaks	45	241	247	0	61.9	59.7	58.3	63.1	60.9	59.5
Pico Canyon between Whispering Oaks A Street	45	96	122	0	58.8	56.7	55.2	60.0	57.9	56.5
Future With Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon between Lyons and Old Road	45	2990	2460	0	72.7	70.6	69.1	73.9	71.8	70.3
Pico Canyon between Old Road and Stevenson Ranch	45	2110	1745	0	71.2	69.0	67.6	72.4	70.3	68.8
Pico Canyon between Stevenson Ranch and Southern Oaks	45	485	395	0	65.1	62.9	61.4	66.3	64.1	62.6
Pico Canyon between Southern Oaks and Whispering Oaks	45	245	245	0	61.8	59.7	58.3	63.0	60.9	59.5
Pico Canyon between Whispering Oaks A Street	45	98	121	0	58.8	56.6	55.2	60.0	57.8	56.4

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Pico Canyon between Lyons and Old Road	0.0	1.3	0.1	1.3
Pico Canyon between Old Road and Stevenson Ranch	0.2	2.4	0.1	2.3
Pico Canyon between Stevenson Ranch and Southern Oaks	0.8	1.0	0.8	1.0
Pico Canyon between Southern Oaks and Whispering Oaks	1.7	1.7	1.8	1.7
Pico Canyon between Whispering Oaks A Street	7.9	7.8	7.8	7.8

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Aidlin Hills Project

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1125	1940	0	71.1	68.3	66.6	72.3	69.5	67.8
Lyons east of I-5 NB Ramp	40	2180	2700	0	72.9	69.9	68.2	74.1	71.2	69.4
Stevenson Ranch between Old Road and Pico Canyon	40	1205	1660	0	70.8	67.8	66.1	72.0	69.0	67.3
Southern Oaks south of Pico Canyon	35	230	160	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1128	1944	0	71.1	68.3	66.6	72.3	69.5	67.8
Lyons east of I-5 NB Ramp	40	2191	2714	0	73.0	70.0	68.2	74.2	71.2	69.4
Stevenson Ranch between Old Road and Pico Canyon	40	1198	1690	0	70.9	67.9	66.2	72.1	69.1	67.4
Southern Oaks south of Pico Canyon	35	230	170	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5
Future With Project (2034)										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Old Road between Stevenson Ranch and Pico Canyon	40	1275	2515	0	72.2	69.4	67.7	73.4	70.7	69.0
Lyons east of I-5 NB Ramp	40	2840	3170	0	73.6	70.6	68.9	74.8	71.9	70.1
Stevenson Ranch between Old Road and Pico Canyon	40	1395	2165	0	72.0	69.0	67.2	73.2	70.2	68.4
Southern Oaks south of Pico Canyon	35	230	170	0	60.9	57.9	56.1	62.1	59.1	57.3
Whispering Oaks south of Pico Canyon	35	150	120	0	59.0	56.0	54.3	60.2	57.2	55.5

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Old Road between Stevenson Ranch and Pico Canyon	0.0	1.2	0.0	1.1
Lyons east of I-5 NB Ramp	0.0	0.7	0.1	0.7
Stevenson Ranch between Old Road and Pico Canyon	0.1	1.2	0.1	1.2
Southern Oaks south of Pico Canyon	0.0	0.0	0.0	0.0
Whispering Oaks south of Pico Canyon	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Appendix I.5

Off-Site Construction Traffic Noise Calculations

Aidlin Hills Project

Off-Site Truck Trip Noise									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon Road			103	49.3	46.3	44.6	46.4	43.4	41.7
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
Future No Project									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon Road			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
Future With Project									
	Traffic Volumes			Leq			CNEL		
Roadway/Segment	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Pico Canyon Road			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Pico Canyon Road	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Appendix J

Public Service and Utility Correspondence

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

November 4, 2014

Brian J. Allee, Senior Planner
PCR Services Corporation
Planning Section
2121 Alton Parkway, Suite 100
Irvine, CA 92606

Dear Mr. Allee:

REQUEST FOR INFORMATION REGARDING FIRE PROTECTION FACILITIES AND SERVICES, "THE STEVENSON RANCH PROJECT," TO DEVELOP 120 SINGLE-FAMILY DWELLINGS AND ASSOCIATED SUPPORTING INFRASTRUCTURE INCLUDING LOCAL ROADWAY, WATER TANK AND A PUMP STATION, WATER QUALITY TREATMENT BASIN, AND A FIRE ACCESS ROAD, NORTHERN FOOTHILL OF THE SANTA SUSANA MOUNTAINS, STEVENSON RANCH (FFER #201400195)

The request for information regarding fire protection facilities and services has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. Fire Station(s) and/or other facilities providing fire protection services to the Project site;

   Fire Station 124 is the jurisdictional station (1st-due) for the project site. It is located at 25870 Hemingway Avenue, Stevenson Ranch, CA 91381.

2. Most recent data on yearly emergency incidents for each station serving the Project area (broken up by type) and associated average response times; What is the Department's goal for response time to the Project site? Are current response times at or under the response time goals for the Department? Please provide anticipated response time to the Project site.

   During 2013, Fire Station 124 responded to a total of 1,766 emergency incidents, of which 24 were fire, 1,454 were medical and 288 were other with an average emergency response time was 5:43 minutes.

   The Fire Department uses national guidelines of a 5-minute response time for the 1st-arriving unit for fire and EMS responses and 8 minutes for the advanced life support (paramedic) unit in urban areas, and 8-minute response time for the 1st-arriving unit and 12 minutes for advanced life support (paramedic) unit in suburban areas. The Project site is located within a mix of urban/suburban area so the current response time of 5:43 minutes is well within the Department's response time goals.

   Based on the information provided (no actual road network), it is estimated that Fire Station 124 would have a response time of 5-7 minutes to the edge of the Project boundary at Pico Canyon Road.

3. Service boundaries and population served by the fire station(s) serving the site;

   Fire Station 124 has a jurisdictional service boundary of 33.54 square miles, however, the Los Angeles County Fire Department operates under a regional concept in its approach to providing fire protection and emergency medical services, wherein emergency response units are dispatched as needed to an incident anywhere in the District's service territory based on distance and availability, without regard to jurisdictional or municipal boundaries.

4. Equipment and staffing of the stations serving the Project site (e.g., engines, trucks, squads, total full-time and part-time staff, number of firefighters on 24-hour duty, paramedic staff and services, etc.);

   Fire Station 124 is staffed with a 3-person engine company (1-Captain, 1-Fire Fighter Specialist and 1-Fire Fighter/Paramedic) and a 2-person paramedic squad (2-Fire Fighter/Paramedics) for each 24-hour shift.

5. Describe any mutual aid-agreements, particularly relevant to the Project's service area;

   There are no mutual aid agreements in effect in the Project area, the Project and the surrounding area is served by LACoFD.

6. Planned improvements to the fire protection facilities in the service area for the Project site (i.e., expansion, new facilities, additional staffing etc.), if applicable;

   There are no planned improvements in the immediate area of the Project site, however, the Department's five-year Developer Fee Detailed Fire Station Plan identifies one replacement station for temporary Fire Station 104 and six additional fire stations for the Santa Clarita Valley.

7. Please note any relevant LACFD development requirements relevant to the Project including, but not limited to:

   a. Fire flow;

      To be answered by Land Development Division.

   b. Fire protection devices (e.g., sprinklers, alarms);

      To be answered by Land Development Division.

   c. Fire access (including ingress/egress, turning radii, driveway width, grading, etc.);

      To be answered by Land Development Division.

   d. Fire hydrants and spacing; and

      To be answered by Land Development Division.

   e. Fuel Modification.

      To be answered by Forestry Division.

8. Any special fire protection requirements, concerns or necessary measures due to the location or other attributes of the Project.

   We have no further comments.

LAND DEVELOPMENT UNIT:

1. Question #7: Please nota any relevant LACFD development requirements relevant to the Project including, but not limited to:

   a. Fire flow
   b. Fire protection devices (e.g., sprinklers, alarms)
   c. Fire access
   d. Fire hydrants and spacing
   e. Fuel Modification

   Answers: This development is served by public streets, which need to comply with the Department of Public Works. The only fire access road required for this development is the Emergency Access Road providing a secondary access. The Emergency Access Road shall provide a minimum paved width of 24 feet, clear- to-sky, and shall maintain all-weather access capabilities with a bridge or culvert to cross the existing water course. The Emergency Access Road shall comply with standards road requirements: maximum grade of 15%, grade differential shall not exceed 10% in 10 feet, maximum 32 feet centerline turning radius, and maintain a minimum 10 feet brush clearance on each side of the road. The Emergency Access Road will be gated with the following requirements: the gate(s) shall not encroach into the required access width, shall be constructed with a material as designated in the Fire Code, and be equipped with an approved locking device. Required fire hydrants shall be spaced 600 feet apart with a required fire flow of 1250 gallons per minute at 20 pounds per square inch for a 2-hour duration. An approved residential fire sprinkler system will be required for each future residential unit. A Fuel Modification Plan is required since this development is within an area classified as Very High Fire Hazards Severity Zone.

2. Question #8: Any special fire protection requirements, concerns, or necessary measures due to the location or other attributes of the Project.

   Answer: This development is located within an area described as Very High Fire Hazards Severity Zone, more restrictive building requirements for each residential unit will be enforced. This development shall comply with all applicable Fire Code and Ordinance requirements for brush clearance and fuel modification plans.

3. The Fire Prevention Division, Land Development Unit, has addressed specific requirements and comments for this development during the Tentative Map

review of the subdivision process (TR 52796). Attached is the latest Fire Department Tentative Map report for this development distributed during the latest Subdivision Committee Meeting for your reference.

4. Should any questions arise regarding the above comments or the attached report, please contact Juan Padilla at (323) 890-4243 or at Juan.Padilla@fire.lacounty.gov.

5. The County of Los Angeles Fire Department, Land Development Unit, appreciates the opportunity to comment on this project.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance.

2. Oak trees are known to exist in the proposed project area. Further field studies should be conducted to determine the presence of this species on the project site.

3. Under the Los Angeles County Oak tree Ordinance, a permit is required to cut, destroy, remove, relocate, inflict damage or encroach into the protected zone of any tree of the Oak genus, which is 25 inches or more in circumference (eight inches in diameter), as measured 4½ feet above mean natural grade. Specific questions regarding oak tree permit requirements should be directed to the Los Angeles County Department of Regional Planning at (213) 974-6411.

4. A fuel management/modification and fire hazard reduction plan should be developed and implemented prior to construction.

5. This property is located within the area described by the Forester and Fire Warden as a Very High Fire Hazard Severity Zone. The development of this project must comply with all Very High Fire Hazard Severity Zone codes and ordinance requirements for fuel modification. Specific questions regarding fuel modification requirements should be directed to the Fuel Modification Office at (626) 969-2375.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. Prior to the development of the subject property, a Phase I study should be completed to identify historical site use. If the site's historical use indicate use/storage of hazardous materials, agricultural and/or or oil field activities, the site must be assessed/mitigated under oversight of an authorized local or State agency prior to grading.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

Frank Vidales

FRANK VIDALES, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV:jl

Enclosure

bc: ERU
Division III
Land Development
Planning
HHMD
#219
Edapts Upload

(FFER #201400195/Forestry Admin)

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

CONDITIONS OF APPROVAL FOR SUBDIVISION - UNINCORPORATED

Subdivision No: TR 52796 Map Date: January 29, 2014 - Ex A

C.U.P. _____ Vicinity _____

☐ **FIRE DEPARTMENT HOLD** on the tentative map shall remain until verification from the Los Angeles County Fire Dept. Planning Section is received, stating adequacy of service. Contact (323) 881–2404.

☒ Access shall comply with Title 21 (County of Los Angeles Subdivision Code) and Section 503 of the Fire Code, which requires all weather access. All weather access may require paving.

☒ Fire Department access shall be extended to within 150 feet distance of any exterior portion of all structures.

☒ Where driveways extend further than 150 feet and are of single access design, turnarounds suitable for fire protection equipment use shall be provided and shown on the final map. Turnarounds shall be designed, constructed and maintained to insure their integrity for Fire Department use. Where topography dictates, turnarounds shall be provided for driveways that extend over 150 feet in length.

☒ The private driveways shall be indicated on the final map as "Private Driveway and Firelane" with the widths clearly depicted. Driveways shall be maintained in accordance with the Fire Code.

☒ Vehicular access must be provided and maintained serviceable throughout construction to all required fire hydrants. All required fire hydrants shall be installed, tested and accepted prior to construction.

☒ This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). A "Fuel Modification Plan" shall be submitted and approved prior to Tentative Map clearance. (Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details).

☒ Provide Fire Department or City approved street signs and building access numbers prior to occupancy.

☐ Additional fire protection systems shall be installed in lieu of suitable access and/or fire protection water.

☐ The final concept map, which has been submitted to this department for review, has fulfilled the conditions of approval recommended by this department for access only.

☐ These conditions must be secured by a C.U.P. and/or Covenant and Agreement approved by the County of Los Angeles Fire Department prior to final map clearance.

☐ The Fire Department has no additional requirements for this division of land.

Comments: **The Fire Department has HOLDS on this development as presently submitted. See additional page for specific HOLDS, requirements and conditions of approval.**

By Inspector: *Juan C. Padilla* Date February 25, 2014

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

WATER SYSTEM REQUIREMENTS - UNICORPORATED

Subdivision No: TR 52796 Map Date: January 29, 2014 - Ex A

Revised Report _____

☐ The County Forester and Fire Warden is prohibited from setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted. However, water requirements may be necessary at the time of building permit issuance.

☒ The required fire flow for public fire hydrants at this location is **TBD** gallons per minute at 20 psi for a duration of **2** hours, over and above maximum daily domestic demand. **1** Hydrant(s) flowing simultaneously may be used to achieve the required fire flow.

☐ The required fire flow for private on-site hydrants is ____ gallons per minute at 20 psi. Each private on-site hydrant must be capable of flowing ____ gallons per minute at 20 psi with two hydrants flowing simultaneously, one of which must be the furthest from the public water source.

☒ Fire hydrant requirements are as follows:

Install **TBD** public fire hydrant(s). Upgrade / Verify existing ____ public fire hydrant(s).

Install ____ private on-site fire hydrant(s).

☒ All hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal. All on-site hydrants shall be installed a minimum of 25' feet from a structure or protected by a two (2) hour rated firewall.
- ☒ Location: As per map on file with the office.
- ☐ Other location: ____

☒ All required fire hydrants shall be installed, tested and accepted or bonded for prior to Final Map approval. Vehicular access shall be provided and maintained serviceable throughout construction.

☐ The County of Los Angeles Fire Department is not setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted.

☒ Additional water system requirements will be required when this land is further subdivided and/or during the building permit process.

☐ Hydrants and fire flows are adequate to meet current Fire Department requirements.

☐ Fire hydrant upgrade is not necessary, if existing hydrant(s) meet(s) fire flow requirements. Submit original water availability form to our office.

Comments: **Provide the location of all existing public fire hydrants within 300 feet of lot frontages on the Tentative/Exhibit Map. The Fire Department will determine the location of all required public fire hydrants prior to the Public Hearing.**

All hydrants shall be installed in conformance with Title 20, County of Los Angeles Government Code and County of Los Angeles Fire Code, or appropriate city regulations. This shall include minimum six-inch diameter mains. Arrangements to meet these requirements must be made with the water purveyor serving the area.

By Inspector *Juan C. Padilla* Date February 25, 2014

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

LAND DEVELOPMENT UNIT REQUIREMENTS
ADDITIONAL PAGE

Subdivision No: TR 52796 Map Date: January 29, 2014 - Ex A

TENTATIVE/EXHIBIT MAP – HOLDS

1 Prior to acceptance of the proposed Emergency Vehicle Access road or secondary access road, submit the following information:
- A cross section clearly depicting the pavement limits
- A grade profile clearly depicting the different grades
- Show the location of any gates or type of limited access device or provide a note indicating no gate being proposed.

2 No parking will be allowed on "F" Street due to the proposed cross section. Provide a note indicating compliance on the cross section.

3 Show all existing public fire hydrants within 300 feet of the lot frontage on Pico Canyon Road for fire hydrant spacing within the proposed development.

4 Submit verification of the approved Preliminary Fuel Modificaion Plan to our office prior to Tentative Map clearance.

5 Submit a Preliminary Water System Design Report or equivalent from the Valencia Water Company indicating the extension of the water system will comply with the required fire flow for the development. Compliance required prior to Tentative Map clearance.

TENTATIVE/EXHIBIT MAP – CONDITIONS OF APPROVAL

6 The proposed water tank access shall provide a minimum paved width of 20 feet. The access maybe reduced to a minimum width of 15 feet if accepted by the jurisdictional water company.

7 The proposed culvert shall be designed and constructed to comply with section 503.2.6 of the County of Los Angeles Fire Code and with the Department of Public Works Road Standards.

By Inspector: *Juan C. Padilla* Date: February 25, 2014

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

4761551N25A-SH-AD32A (2/72) -PS9-85

COUNTY OF LOS ANGELES

SHERIFF'S DEPARTMENT

"A Tradition of Service"

DATE: March 6, 2014
FILE NO:

OFFICE CORRESPONDENCE

FROM: ROOSEVELT JOHNSON, CAPTAIN
SANTA CLARITA VALLEY STATION

TO: GARY T.K. TSE, DIRECTOR
FACILITIES PLANNING BUREAU

SUBJECT: **REQUEST FOR INFORMATION REGARDING POLICE PROTECTION FACILITIES AND SERVICES FOR THE STEVENSON RANCH PROJECT**

The following information is provided by the Santa Clarita Valley Sheriff's Station (Station) in response to a Request for Information, dated February 27, 2014, from PCR Services Corporation (PCR). PCR is preparing an Environmental Impact Report (EIR) for the Stevenson Ranch Project (Project). The proposed Project will construct 102 single-family dwellings and associated supporting infrastructure on a 230-acre site in the Stevenson Ranch area of Santa Clarita Valley.

Police station(s) and/or other facilities providing police protection services to the Project site:

The Station, located at 23740 Magic Mountain Parkway in Valencia, is the primary law enforcement service provider to the area within which the proposed Project is located. The Station currently deploys one to two patrol cars, per shift, to the proposed Project site.

Staffing and equipment for each police station/facility serving the Project site (e.g., patrol cars, total full-time and part-time staff, number of officers on 24-hr. duty, etc.):

The Station is currently staffed by 189 sworn deputies and 38 civilian employees. The Station provides 24-hour field deployment via multiple shifts, utilizing patrol cars, helicopters, emergency operations personnel, search and rescue personnel, and a mounted posse. For security reasons, the Station will not disclose the total number of vehicles, or specify the types of equipment utilized for law enforcement purposes.

Most recent data on associated response times for emergency, non-emergency, etc. calls (or otherwise named by the LASCSD) for the station/facility serving the Project site. What is the Department's goal for response time to the Project site? Are current response times at or under the response time goals for the Department? Please provide anticipated time to the Project site:

The Station's forecasted response times to the proposed Project site for emergent, priority, and routine calls, are 2 to 4 minutes, 5 to 10 minutes, and 10 to 20 minutes respectively (please note these are approximate time ranges only, and could be affected by traffic conditions and the deployment of radio cars when the call for service is received). Optimal response times for emergent, priority, and routine calls are 10 minutes, 20 minutes, and 60 minutes, respectively.

Service boundaries and population served by the police station(s) serving the site:

The Station's service area encompasses approximately 656 square miles, and includes the City of Santa Clarita and unincorporated County territory between the City of Los Angeles to the south, the Kern County line to the north, the Ventura County line to the west, and the township of Agua Dulce to the east. The estimated resident population of the Station's service area is 270,000.

Who would be the back-up responders?

Various other law enforcement agencies within and beyond the limits of Los Angeles County provide additional law enforcement services and resources to the Department via existing mutual aid agreements.

Planned improvements to the police protection facilities in the service area of the Project site (i.e., expansion, new facilities, additional staffing, etc.), if applicable:

At this time, the Station is not aware of any approved plans for improvements, expansion, new facilities, additional staffing, etc.

Any special police protection requirements or necessary measures due to the location or other attributes of the Project:

Based on the limited amount of Project-related details and information available at this time, the Station is not aware of any special police protection requirements or measures that are necessary due to Project location or other attribute. The Station will review this matter further as additional Project-related details and information are developed and received.

Thank you for including the Station in the environmental review process for the proposed Project. Should you have any questions of the Station regarding this matter, feel free to contact me at (661) 255-1121 or Lieutenant Brenda Cambra at (661) 799-5815.

RJ:LM:eh

GTKT:LM:lm/jh

Attachments

c: Roosevelt Johnson, Captain, Santa Clarita Valley (SCV) Station
Brenda Cambra, Lieutenant, SCV Station
Eileen Hanie, Operations Assistant, SCV Station
David Culver, Assistant Director, Facilities Planning Bureau (FPB)
Meghan Wang, Principal Facilities Project Manager, FPB
Lester Miyoshi, Departmental Facilities Planner, FPB
Chrono
(EIR-PoliceProtection-StevensonRanchProj)

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

John E. Scott, Sheriff

March 25, 2013

Mike Harden
Principal Planner
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92616

Dear Mr. Harden:

RESPONSE TO REQUEST FOR INFORMATION REGARDING POLICE PROTECTION FACILITIES AND SERVICES STEVENSON RANCH PROJECT

Thank you for inviting the Los Angeles County Sheriff's Department (Department) to review and respond to your February 27, 2014, Request for Information regarding police protection facilities and services (Request) for the Stevenson Ranch Project (Project). The Project would construct 102 single-family dwellings and associated supporting infrastructure on the 230-acre site in Stevenson Ranch. The Request is part of your efforts to identify and assess the Project's potential impacts on the Department's facilities and services.

The Department's response to your Request was prepared by Roosevelt Johnson, Captain of the Santa Clarita Valley Sheriff's Station (see attached correspondence, dated March 6, 2014).

For future reference, all California Environmental Quality Act documents, requests for information, and other related correspondence should be directed to the Department's Facilities Planning Bureau at the following address:

Gary T.K. Tse, Director
Facilities Planning Bureau
Los Angeles County Sheriff's Department
1000 South Fremont Avenue
Building A9-East, Fifth Floor, Unit 47
Alhambra, California 91803
Attention: Lester Miyoshi, Departmental Facilities Planner

Should you have any questions regarding this matter, please contact Lester Miyoshi, of my staff, at (626) 300-3012, and refer to Facilities Planning Bureau Project No. E14-011. You may also contact Mr. Miyoshi, via email, at Lhmiyosh@lasd.org.

Sincerely,

JOHN L. SCOTT, SHERIFF

Gary T.K. Tse, Director
Facilities Planning Bureau

NEWHALL SCHOOL DISTRICT

nsd

April 20, 2014

Mike Harden
Principal Planner
PCR Services Corporation
One Venture, Suite 150
Irvine, CA 92618

Re: Stevenson Ranch Project
Location: 1.6 miles West of I-5, via Pico Canyon Road, in the northern foothills of the Santa Susanna Mountains

This is a response to your request for information for the preparation of the Environmental Impact Report (EIR) for one hundred two (102) single family residential lots. Newhall School District does not have a developer agreement for this project and will not accept a statutory fee agreement as mitigation for this project. In fact, we strongly object to the approval of any new projects in the vicinity of Stevenson Ranch. **The elementary school serving this area is overcrowded and a simple payment of fees will not mitigate the impact of this development nor will it assure adequate school housing for children from these homes. This is exactly the type of small development that the County has approved over the years, resulting in a piecemeal patchwork of small projects that overtax the school capacity of our district and preclude appropriate regional planning of school facilities. We will not be able to accommodate students from this development. The Environmental Impact Report should reflect the severe impact of this project on school facilities.**

Pico Canyon Elementary was built in the southern Stevenson Ranch area ten years ago and filled to capacity within one year. Due to the cap on enrollment, diverted students are assigned to various other schools in our district. While other district schools now have some excess capacity, due to the diligent efforts of the school district to construct new schools, the available sites are not in the vicinity of this development and the Newhall School District does not offer bus services in this situation. Therefore, this project cannot be served by the nearest schools and diversion of students will increase traffic as parents are required to enroll their students at distant sites.

This project will have a considerable negative effect on local elementary schools. Based on school attendance boundaries, students from this development would attend Pico Canyon Elementary School for grades TK-6. Student generation rates used by the district as of February 2014 are .363 for single family dwellings. Existing enrollments for this school as of February 3, 2014 of 961 students and enrollments already exceed designed capacity. Enrollments for 2017-2018 for this site are projected at 821 students. This school site is sized for 850 students and contains three portable classrooms used for the Special Day Class program at the site. There is currently not sufficient room to add more portable classrooms at the site. There are no plans currently for expansion of facilities at this site.

Sincerely,

Ronna Wolcott
Assistant Superintendent, Business Services

25375 Orchard Village Road, Valencia, California 91355-3000 • (661) 291-4000 • FAX (661) 291-4001

Brian Allee

From: Faith Parducho [fparducho@parks.lacounty.gov]
Sent: Thursday, May 01, 2014 4:45 PM
To: Brian Allee
Cc: James Barber; Clement Lau
Subject: FW: Request for information regarding parks and recreation facilities and services
Attachments: tr 52796 aerial.pdf; 2014-03-06scm_tr52796_trail report.pdf; 2014-03-06scm_tr52796_park report.pdf

Importance: High

Hi, Brian.

As requested, attached and below are the information you requested.

Faith Parducho
Executive Office
County of Los Angeles
Department of Parks and Recreation

PLEASE NOTE: THIS OFFICE IS CLOSED ON FRIDAYS.

WORK: 213-738-2811
CELL: 213-300-3421

PARKS MAKE LIFE BETTER

From: Clement Lau
Sent: Wednesday, April 30, 2014 4:28 PM
To: Faith Parducho
Cc: James Barber
Subject: FW: Request for information regarding parks and recreation facilities and services
Importance: High

Hi Faith,

Please find below my responses in red below the questions/items requested by Brian Allee:

1. The name, location, size, park classification (regional, community, neighborhood, or special use), and available facilities that would serve the Project site;
   The proposed project is in close proximity to the following County parks:
   - Pico Canyon Park: 25600 Pico Canyon Road, Stevenson Ranch, CA 91381; 21.28 acres; neighborhood park
   - Jake Kuredjian Park: 25265 Pico Canyon Road, Stevenson Ranch, CA 91381; 5.74 acres; neighborhood park
   - Dr. Richard Rioux Park: 26233 West Faulkner Drive, Stevenson Ranch, CA 91381; 16.68 acres; neighborhood park

   (Please see attached aerial map.)

2. Existing ratios of developed parkland per resident on a county-wide basis and, if available, for the area serving the Project site;

The proposed project is located in the Santa Clarita Valley Planning Area which has 14,497 acres of parkland, including 71 acres of local parkland and 14,425 acres of regional parkland. This translates to 0.75 acres of local parkland per 1,000 residents and 53.2 acres of regional parkland per 1,000 residents. Per Table 10.4 of the Parks and Recreation Element, the Santa Clarita Valley Planning Area has a deficit of 308 acres of local parkland and a surplus of 12,798 acres of regional parkland. These were calculated based on the County standards of 4 acres of local parkland per 1,000 residents and 6 acres of regional parkland per 1,000 residents.

3. Current capacity/level of use of parks and recreational facilities near the Project site;
   We do not have any quantifiable data, but have been informed by the North Agency that the nearby three parks are well used by community residents.

4. Future plans for construction or expansion of parks and recreational facilities in the Project vicinity;
   TR 61996 (Legacy Village), immediately north of the proposed project, will be developing a 22.00 net-acre community park in the future. When completed, it will be transferred to the Department and operated as a County park. The park will contain the following improvements: park plaza with seating, drinking fountain, group picnic shelter and building containing restrooms and a 12-foot x 20-foot park office; open turf play area with picnic tables barbeques, hot coal receptacles and trash containers with liners; maintenance yard; lighted, full-court basketball courts; lighted tennis courts; multi-purpose fields; drinking fountains at baseball field backstop and at the basketball courts; children's play areas with shade structures; park overlook area with shade structure, seating and drinking fountain; benches along concrete walks, playgrounds and basketball court; par course/fitness trail; ADA access to all par course stations; ADA path of travel around par course walkway; pedestrian bridge; security lighting at all walks, parking lot, playgrounds and group picnic shelter; parking lot with 93 spaces; dog waste receptacles; park walls/enclosure fencing and locking gates; landscaping and irrigation; and a water quality, bio-filtration treatment system in the park.

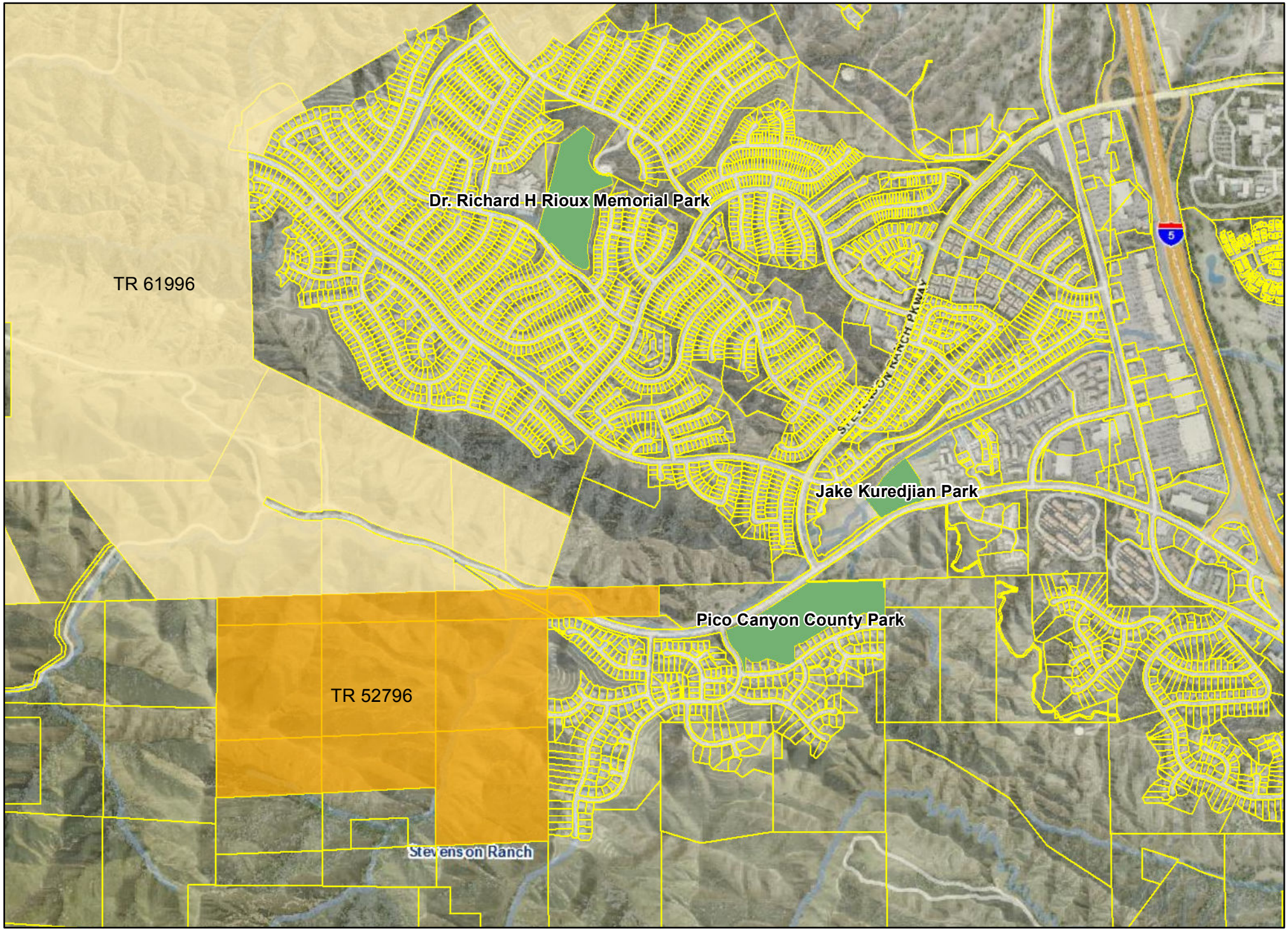
5. County-adopted parks and recreation standards and acreage goals to be used in analyzing the Project; and
   As specified in P/R Policy 3.1 of the Parks and Recreation Element, the County standard for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.

6. Any other relevant information or concerns regarding impacts to parks and recreation facilities that would serve the Project.
   Please review our Park and Trail reports for this project (see attached); these were submitted to the Subdivision Committee. Also refer to the Parks and Recreation Element of the Draft General Plan:
   http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

Thanks,

Clement

Clement Lau, AICP
Departmental Facilities Planner
County of Los Angeles
Department of Parks and Recreation
Land Acquisition and Development Section
510 S. Vermont Avenue
Los Angeles, CA 90020
Tel: (213) 351-5120
Fax: (213) 639-3959
E-mail: clau@parks.lacounty.gov
Please note that our office is closed on Fridays.



TR 52796-STEVENSON RANCH PROJECT

N

0.4 Miles

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
Russ Guiney, Director John Wicker, Chief Deputy Director

February 25, 2014

Sent via email: jsackett@planning.lacounty.gov

TO: Jodie Sackett
Department of Regional Planning

FROM: Frank Moreno *Ofruano on behalf of F.M.*
Research & Trail Planning Section

SUBJECT: **VESTING TENTATIVE TRACT MAP NO. 52796**
(MAP STAMPED BY REGIONAL PLANNING ON JANUARY 29, 2014)

The Department of Parks and Recreation (Department) has completed the trail review for Vesting Tentative Tract Map No. 52796 (map stamped by Regional Planning on January 29, 2014). The Applicant is required to dedicate a twelve foot (12') wide multi-use (hiking, mountain biking, and equestrian) trail easement and trail construction for Pico Canyon Trail, an adopted proposed trail alignment, which traverses the northeastern corner of the project site, across APNs 2826-097-003 and 2826-020-020, and is positioned parallel to and on the south side of Pico Canyon Road (see attached trail map for proposed trail alignment). The Department has a hold on the map and requests that the Applicant make the revisions outlined below.

Because of the necessity to show the trail alignment and other related information as it pertains to topographical lines, all information pertaining to trail requirements must be shown on the tentative map, prior to final map recordation.

X **Map on hold.**

Map Revisions

1. Show on map a twelve foot (12') wide multi-use (hiking, mountain biking and equestrian) trail easement dedication to the County of Los Angeles for the purposes of the Pico Canyon Trail. **(Second request).**

2. Show section detail for trail-road crossing at the intersection of "A" Street and Pico Canyon Road. **(Second request).**

3. Label map with details and/or material type for trail and surface. **(Second request).**

4. On Sheet 1, add "LA County Multi-Use Trail Easement" and symbology to Legend.

5. Replace "Public Works" with "Parks and Recreation" on "Pico Canyon Road (R/W = 100') Public" section.

6. Show trail connection to existing Pico Canyon Trail recorded per adjacent subdivision (tract map #43896). Please see attached aerial map.

7. Show trail connection to proposed Pico Canyon Trail per pending subdivision (tract map #61996). Please see attachment aerial map.

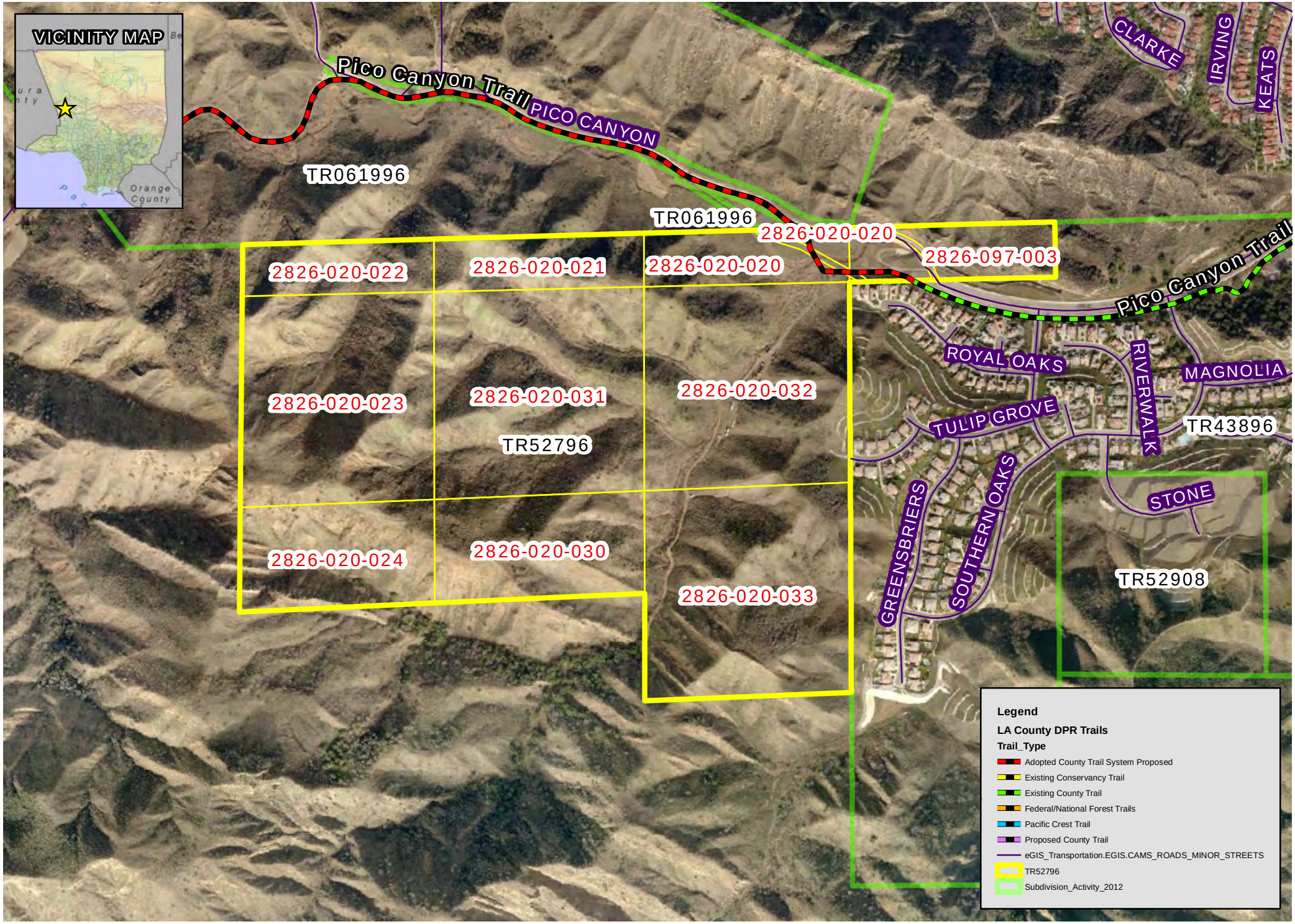
8. Trail easement must be outside road right-of-way and any other easements.

9. Full public access shall be provided for the trail easement.

10. The Applicant will be required to construct a segment of the proposed Pico Canyon Trail within the twelve foot (12') wide multi-use (hiking, mountain biking and equestrian) trail easement in a manner consistent with County of Los Angeles Trails Manual. **(Second request).**

For questions or concerns regarding the preferred location of the trail alignment and/or any trail related inquiries, please contact Ms. Olga Ruano, Park Planning Assistant, by phone at (213) 738-2014 or by e-mail at oruano@parks.lacounty.gov.

c: Parks and Recreation (N. E. Garcia, K. King, J. Barber, S. Kleinknecht, F. Moreno, O. Ruano)



TRAIL REVIEW: VESTING TENTATIVE TRACT MAP NO. 52796

County of Los Angeles | Department of Parks & Recreation

1,000 Feet

Date: 02/24/14
Prepared By: Planning
LACounty_Cache/LACounty_Aerial
Trails: EGIS.DPR_TRAILS
Parcels: EGIS.ASSR_PARCELS
Subdivision Activity: DRP
Roads: Thomas Brothers (All rights reserved)

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION REPORT

Tentative Map #	**52796**	DRP Map Date: **01/29/2014**	SCM Date: **03/06/2014**	Report Date: **02/24/2014**
Park Planning Area #	**35A**	**NEWHALL / VALENCIA**		Map Type: **TENTATIVE**

Total Units **102** = Proposed Units **102** + Exempt Units **0**

Sections 21.24.340, 21.24.350, 21.28.120, 21.28.130, and 21.28.140, the County of Los Angeles Code, Title 21, Subdivision Ordinance provide that the County will determine whether the development's park obligation is to be met by:

1) the dedication of land for public or private park purpose or,
2) the payment of in-lieu fees or,
3) the provision of amenities or any combination of the above.

The specific determination of how the park obligation will be satisfied will be based on the conditions of approval by the advisory agency as recommended by the Department of Parks and Recreation.

Park land obligation in acres or in-lieu fees:

ACRES:	**1.03**
IN-LIEU FEES:	**$325,796**

Conditions of the map approval:

The park obligation for this development will be met by:

The payment of $325,796 in-lieu fees.

Trails:

See also attached Trail Report.

Comments:

*****Advisory:**

The Representative Land Value (RLVs) in Los Angeles County Code (LACC) Section 21.28.140 are used to calculate park fees and are adjusted annually, based on changes in the Consumer Price Index. The new RLVs become effective July 1st of each year and may apply to this subdivision map if first advertised for hearing before either a hearing officer or the Regional Planning Commission on or after July 1st pursuant to LACC Section 21.28.140, subsection 3. Accordingly, the park fee in this report is subject to change depending upon when the subdivision is first advertised for public hearing.

Please contact Clement Lau at (213) 351-5120 or Sheela Mathai at (213) 351-5121, Department of Parks and Recreation, 510 South Vermont Avenue, Los Angeles, CA 90020 for further information or to schedule an appointment to make an in-lieu fee payment.

For information on Hiking and Equestrian Trail requirements, please contact the Trails Coordinator at (213) 351-5134.

By: James Barber

James Barber, Land Acquisition & Development Section

Supv D 5th
February 24, 2014 13:23:20
QMB02F.FRX

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION WORKSHEET

Tentative Map # **52796**	DRP Map Date: **01/29/2014**	SMC Date: **03/06/2014**	Report Date: **02/24/2014**
Park Planning Area # **35A**	**NEWHALL / VALENCIA**		Map Type: **TENTATIVE**

The formula for calculating the acreage obligation and or In-lieu fee is as follows:

(P)eople x (0.003) Ratio x (U)nits = (X) acres obligation

(X) acres obligation x RLV/Acre = In-Lieu Base Fee

Where: P = Estimate of number of People per dwelling unit according to the type of dwelling unit as determined by the 2000 U.S. Census*. Assume * people for detached single-family residences; Assume * people for attached single-family (townhouse) residences, two-family residences, and apartment houses containing fewer than five dwelling units; Assume * people for apartment houses containing five or more dwelling units; Assume * people for mobile homes.

Ratio = The subdivision ordinance provides a ratio of 3.0 acres of park land for each 1,000 people generated by the development. This ratio is calculated as "0.0030" in the formula.

U = Total approved number of Dwelling Units.

X = Local park space obligation expressed in terms of acres.

RLV/Acre = Representative Land Value per Acre by Park Planning Area.

Total Units **102** = Proposed Units **102** + Exempt Units **0**

	People*	Ratio 3.0 Acres / 1000 People	Number of Units	Acre Obligation
Detached S.F. Units	**3.36**	**0.0030**	**102**	**1.03**
M.F. < 5 Units	2.52	0.0030	0	0.00
M.F. >= 5 Units	2.19	0.0030	0	0.00
Mobile Units	1.18	0.0030	0	0.00
Exempt Units			0	
			Total Acre Obligation =	**1.03**

Park Planning Area = **35A NEWHALL / VALENCIA**

Ratio	Acre Obligation	RLV / Acre	In-Lieu Base Fee
@(0.0030)	1.03	$316,307	**$325,796**

Lot #	Provided Space	Provided Acres	Credit (%)	Acre Credit	Land
None					
			Total Provided Acre Credit:	**0.00**	

Acre Obligation	Public Land Crdt.	Priv. Land Crdt.	Net Obligation	RLV / Acre	**In-Lieu Fee Due**
1.03	0.00	0.00	1.03	$316,307	**$325,796**

Supv D 5th
February 24, 2014 13:23:25
QMB01F.FRX

County of Los Angeles Public Library
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7400 East Imperial Hwy., Downey, CA 90242 ■ (562) 940-8400

"Enriching Lives"

Margaret Donnellan Todd
County Librarian

May 19, 2014

Mike Harden
Principal Planner
PCR Services Corporation
One Venture, Suite 150
Irvine, CA 92618

Dear Mr. Harden:

REQUEST FOR LIBRARY SERVICE INFORMATION
STEVENSON RANCH PROJECT

This is to respond to your request for library service information for the Stevenson Ranch Project No. 00-136. Attached is the Library's response to your questions.

If you have any questions or need additional information, please contact Elsa Muñoz at (562) 940-8450 or emunoz@library.lacounty.gov.

Sincerely,

Yolanda De Ramus
Chief Deputy

YDR:AC:EM:MB:vl
U:\STAFFSERVICES\DEVELOPER FEE\EIR\Stevenson Ranch Project No. 00-136 - Cover Letter.doc

c: Brian J. Allee, Senior Planner, PCR Services Corporation
Pat McGee, Interim Assistant Director,
Capital Projects & Facilities Services, Public Library
Elsa Muñoz, Head, Support Services, Public Library
Beth Wilson, Library Administrator, Public Library

COUNTY OF LOS ANGELES PUBLIC LIBRARY

RESPONSE TO REQUEST FOR INFORMATION REGARDING LIBRARY FACILITIES AND SERVICES FOR THE STEVENSON RANCH PROJECT

1) Please provide the following information for the County library facilities serving the Project site: (1) size of library buildings (square footage); (2) personnel/staff; (3) collection size and amenities; (4) programmed or target service population (please indicate the basis for the population); (5) actual population served, including assigned census tracts upon which service population is determined; and (6) hours of operation.

   The Stevenson Ranch Express Library (Library) located at 26233 W Faulkner Drive, Stevenson Ranch, CA 91391 currently serves the Project site. The Library is 200 sq. ft. and has a collection of 6,090 books and other library materials as of March 31, 2014. (latest data available) The Library has one (1) full-time and two (2) part-time employees. The estimated service area population is 10,970. (2000 Census)

   The Library hours of operation are:

   Monday – Closed
   Tuesday – 3:00 p.m. - 7:00 p.m.
   Wednesday – 1:00 p.m. - 5:00 p.m.
   Thursday - 1:00 p.m. - 5:00 p.m.
   Friday – 10:00 a.m. – 12:00 p.m. and 1:00 p.m. – 4:00 p.m.
   Saturday – 10:00 a.m. – 12:00 p.m. and 1:00 p.m. – 4:00 p.m.
   Sunday - Closed

2) Would the Project be located within a service area of any other libraries?

   No, the Project will only be located within the Stevenson Ranch Library service area.

3) Please identify any planned, funded, and/or scheduled service improvements or expansions to County library facilities that would serve the Project.

   The County of Los Angeles Public Library is planning to build a new 12,000 sq. ft. library to replace the existing 200 sq. ft. facility. The construction of the new library is scheduled to begin August 2014.

4) Please provide the County Library standards and goals used to assess the adequacy of library facilities from Project development.

   The County Library uses service level guidelines for planning purposes are a minimum of 0.50 gross square foot of library facility space per capita, 2.75 items (books and other library materials) per capita, and 1.0 public access computer per 1,000 people served.

In order to mitigate the impact of this Project on library services, the applicant or its successor in interest will be required to pay the library facilities mitigation fee (*Los Angeles County Code*, Chapter 22.72) at the time the building permits for the project are issued. The proposed Project is located in the Library's Planning Area 1 (Santa Clarita Valley). The current mitigation fee for this area, which may be adjusted annually based on changes in the Consumer Price Index, is $857 per residential unit. Therefore, the total mitigation fee that would be required is $87,414 ($857 x 102 residential units). The actual fee obligation for this project may be higher because the fee per residential unit will be that in effect at the time the building permits are issued.

Brian Allee

From: Cris Perez [CPerez@valenciawater.com]
Sent: Tuesday, July 01, 2014 4:48 PM
To: Brian Allee
Cc: Erin Stanley; Denise.williams-montagna@lennar.com; Daryl Koutnik; Mike Harden
Subject: RE: Aidlin Hills Water Information Request
Attachments: doc11604420140617104103.pdf

See answers below in red and attached exhibit which I believe you already have.

Thanks,
Cris

From: Brian Allee [mailto:B.Allee@pcrnet.com]
Sent: Tuesday, June 17, 2014 11:44 AM
To: Cris Perez
Cc: Erin Stanley; Denise.williams-montagna@lennar.com; Daryl Koutnik; Mike Harden
Subject: RE: Aidlin Hills Water Information Request

Thanks for the prompt response.

Brian J. Allee
Senior Planner

PCR Services Corporation • ***40 Years of Service***
Santa Monica • Irvine • Pasadena
One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 | www.pcrnet.com

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From: Cris Perez [mailto:CPerez@valenciawater.com]
Sent: Tuesday, June 17, 2014 11:43 AM
To: Brian Allee
Cc: Erin Stanley; Denise.williams-montagna@lennar.com; Daryl Koutnik; Mike Harden
Subject: RE: Aidlin Hills Water Information Request

Yes I received and had forwarded to my engineers. We need a couple of weeks.

Thanks,
Cris

From: Brian Allee [mailto:B.Allee@pcrnet.com]
Sent: Tuesday, June 17, 2014 11:39 AM
To: Cris Perez
Cc: Erin Stanley; Denise.williams-montagna@lennar.com; Daryl Koutnik; Mike Harden
Subject: RE: Aidlin Hills Water Information Request

Good morning Cris,

I wanted to check in to make sure you received our water information request for Aidlin Hills? Please confirm you have received this email. Also, could you give us a sense of timing for when you will have this information for us? Thanks in advance.

Brian J. Allee
Senior Planner

PCR Services Corporation • ***40 Years of Service***
Santa Monica • Irvine • Pasadena
One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 | www.pcrnet.com

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From: Brian Allee
Sent: Thursday, June 12, 2014 2:43 PM
To: 'CPerez@valenciawater.com'
Cc: 'Erin Stanley'; 'Denise.williams-montagna@lennar.com'; Daryl Koutnik; Mike Harden
Subject: Aidlin Hills Water Information Request

Good afternoon Cris,

Per our discussion during the conference call this morning, please find our water related questions of which we need to incorporate into the EIR. Please take a look and let me know if you have any questions. Thanks in advance!

1. What is the projected water demand for the Project? Please include generation factors (i.e., for single-family homes). Also, please include rate or formula for landscaping.

   900 gpd for estate homes, no recycled water –therefore no formula for landscaping. MDD = 2.31 x ADD

2. Please indicate any existing facilities (i.e., reclaimed water lines) on/near the Project area. Also, indicate capacity of existing facilities, if available.

   No recycled water facilities for many miles. The proposed pipelines are shown.

3. Planned improvements to the water facilities in the service area of the Project site (i.e., expansion, new facilities, etc.), if applicable;

   All proposed new facilities are shown on exhibit.

4. Will the Project require new facilities/infrastructure or additions to existing facilities? If so, please describe.

   Shown on the map, 2 – 253,000 gallon storage tanks, one booster station, 2 pressure regulating stations, 12- inch pipeline in Pico Canyon and two points of connection.

5. Will the Valencia Water Company assume management/operation of the Project water tanks?

   Yes.

6. Is the 50,000 gallon capacity sufficient? Or growth inducing?

506,000 gallon – just right for this project only.

7. Please identify whether the demand created by the Project has been considered in your agency's most recently adopted water management plan. Also, indicate whether the water demand associated with the Project can be served by your agency's supplies available during "normal, single-dry, and multiple-dry waters years", in addition to the demand for water from existing and other planned uses.

   Yes – there is adequate supply.

8. Any special requirements, assessment fees or necessary mitigation measures due to the location or other attributes of the Project.

   Castaic Lake Water Agency (CLWA) has a facility capacity fee.

9. Is there any other relevant information regarding potential Project impacts?

   Not aware of any.

Brian J. Allee
Senior Planner

PCR Services Corporation • ***40 Years of Service***
Santa Monica • Irvine • Pasadena
One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 | www.pcrnet.com

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Brian Allee

From: Cris Perez [CPerez@valenciawater.com]
Sent: Wednesday, July 02, 2014 9:49 AM
To: Brian Allee
Subject: RE: Aidlin Hills Water Information Request

MDD 212,058 GPD
ADD 91,800 PGD

-----Original Message-----
From: Brian Allee [mailto:B.Allee@pcrnet.com]
Sent: Tuesday, July 01, 2014 6:26 PM
To: Cris Perez
Subject: Re: Aidlin Hills Water Information Request

Maximum Daily Demand and Average Daily Demand? Can you give us the MDD and ADD for the entire project?

Sent from my iPhone

> On Jul 1, 2014, at 4:48 PM, "Cris Perez" <CPerez@valenciawater.com> wrote:
>
> See answers below in red and attached exhibit which I believe you already have.
>
> Thanks,
> Cris
>
> From: Brian Allee [mailto:B.Allee@pcrnet.com]
> Sent: Tuesday, June 17, 2014 11:44 AM
> To: Cris Perez
> Cc: Erin Stanley; Denise.williams-montagna@lennar.com; Daryl Koutnik;
> Mike Harden
> Subject: RE: Aidlin Hills Water Information Request
>
> Thanks for the prompt response.
>
> Brian J. Allee
> Senior Planner
>
>
>
>
>
>
> PCR Services Corporation * 40 Years of Service Santa Monica *
> Irvine * Pasadena
> One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 |
www.pcrnet.com
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dissemination, forwarding, printing or copying of this email is strictly prohibited. If you have received this email in error, please immediately notify the sender and discard all copies.
>
> From: Cris Perez [mailto:CPerez@valenciawater.com]
> Sent: Tuesday, June 17, 2014 11:43 AM
> To: Brian Allee
> Cc: Erin Stanley;
> Denise.williams-montagna@lennar.com<mailto:Denise.williams-montagna@le
> nnar.com>; Daryl Koutnik; Mike Harden
> Subject: RE: Aidlin Hills Water Information Request
>
> Yes I received and had forwarded to my engineers. We need a couple of weeks.
>
> Thanks,
> Cris
>
> From: Brian Allee [mailto:B.Allee@pcrnet.com]
> Sent: Tuesday, June 17, 2014 11:39 AM
> To: Cris Perez
> Cc: Erin Stanley;
> Denise.williams-montagna@lennar.com<mailto:Denise.williams-montagna@le
> nnar.com>; Daryl Koutnik; Mike Harden
> Subject: RE: Aidlin Hills Water Information Request
>
> Good morning Cris,
>
> I wanted to check in to make sure you received our water information request for Aidlin Hills? Please confirm you have received this email. Also, could you give us a sense of timing for when you will have this information for us? Thanks in advance.
>
> Brian J. Allee
> Senior Planner
>
>
>
>
>
>
> PCR Services Corporation * 40 Years of Service Santa Monica *
> Irvine * Pasadena
> One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 |
www.pcrnet.com
> Email Disclaimer: This email and any files transmitted with it may be confidential and are intended solely for the use of the individual or entity to which they are addressed. If you are not the intended recipient or the person responsible for delivering this email to the intended recipient, be advised that you have received this email in error and that any use, dissemination, forwarding, printing or copying of this email is strictly prohibited. If you have received this email in error, please immediately notify the sender and discard all copies.
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> From: Brian Allee
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> Cc: 'Erin Stanley'; 'Denise.williams-montagna@lennar.com'; Daryl
> Koutnik; Mike Harden
> Subject: Aidlin Hills Water Information Request

>
> Good afternoon Cris,
>
> Per our discussion during the conference call this morning, please find our water related questions of which we need to incorporate into the EIR. Please take a look and let me know if you have any questions. Thanks in advance!
>
>
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> 1. What is the projected water demand for the Project? Please include generation factors (i.e., for single-family homes). Also, please include rate or formula for landscaping.
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> 900 gpd for estate homes, no recycled water -therefore no formula for
> landscaping. MDD = 2.31 x ADD
>
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>
> No recycled water facilities for many miles. The proposed pipelines are shown.
>
> 3. Planned improvements to the water facilities in the service area of the Project site (i.e., expansion, new facilities, etc.), if applicable;
>
> All proposed new facilities are shown on exhibit.
>
> 4. Will the Project require new facilities/infrastructure or additions to existing facilities? If so, please describe.
>
> Shown on the map, 2 - 253,000 gallon storage tanks, one booster station, 2 pressure regulating stations, 12- inch pipeline in Pico Canyon and two points of connection.
>
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>
> Yes.
>
> 6. Is the 50,000 gallon capacity sufficient? Or growth inducing?
>
> 506,000 gallon - just right for this project only.
>
> 7. Please identify whether the demand created by the Project has been considered in your agency's most recently adopted water management plan. Also, indicate whether the water demand associated with the Project can be served by your agency's supplies available during "normal, single-dry, and multiple-dry waters years", in addition to the demand for water from existing and other planned uses.
>
> Yes - there is adequate supply.
>
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>
> Castaic Lake Water Agency (CLWA) has a facility capacity fee.
>
> 9. Is there any other relevant information regarding potential Project impacts?
>
> Not aware of any.

>
> Brian J. Allee
> Senior Planner
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> PCR Services Corporation * 40 Years of Service Santa Monica *
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> One Venture, Suite 150 | Irvine, California 92618 | T: 949.753.7001 x2113 |
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>
> <doc11604420140617104103.pdf>

Appendix K

Traffic Impact Analysis

Aidlin Hills VTTM 52796 Traffic Impact Analysis

Los Angeles County

Prepared for:
Lennar Homes

Prepared by:
Stantec Consulting Services Inc.

November 24, 2014

Sign-off Sheet

This report, entitled Aidlin Hills VTTM 52796 Traffic Impact Analysis, was produced by the following individuals:

Prepared by

Cathy Lawrence, PE _____
(949) 923-6064 (signature)

Daryl Zerfass, PE, PTP _____
(949) 923-6058 (signature)

Reviewed by

Melissa Dugan, PTP, ENV SP _____
(949) 923-6058 (signature)

DRAFT

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1.0 INTRODUCTION

Aidlin Hills VTTM 52796 is a proposed residential community within unincorporated Los Angeles County in the westernmost portion of the Santa Clarita Valley. More specifically, VTTM 52796 is located south of Pico Canyon Road and west of existing/builtout VTTM 43896 in Stevenson Ranch.

1.1 PROPOSED PROJECT

Figure 1-1 illustrates the location of the project site. The proposed project consists of 102 single family dwelling units on approximately 230 acres. The proposed site plan is provided in Figure 1-2.

Access to the project will be provided by a single entry from Pico Canyon Road. Secondary emergency vehicle access will be provided by a connection to Whispering Oaks Road or Southern Oaks Drive via Tulip Grove Road and Verandah Court to the east.

The site is currently undeveloped, but at buildout the development will result in approximately 970 daily trip ends. Detailed trip generation and trip distribution data is provided in Chapter 3.0, Project Description.

1.2 STUDY AREA

Based in part upon consultation with the Los Angeles County Department of Public Works (DPW), the study area includes the roadways and intersections within the project site as well as locations off-site where project-generated traffic could potentially cause a significant impact. The study area is presented in Figure 1-3.

1.3 METHODOLOGY

The Los Angeles County DPW has established guidelines for the analysis of traffic impacts based on project opening year and cumulative conditions. These guidelines specify that project impacts are to be evaluated based on opening year traffic conditions, and cumulative impacts are evaluated based on opening year with related (i.e., cumulative) projects to determine the project's fair share of future improvements.

The area to the northwest of the project site is largely undeveloped; however, there are no related projects in the vicinity that will be constructed by the project's build out date of 2017. Therefore, the DPW has specified that the project impacts are to be identified based on an existing plus project analysis. This methodology is also consistent with a ground to plan analysis in accordance with the California Environmental Quality Act (CEQA).

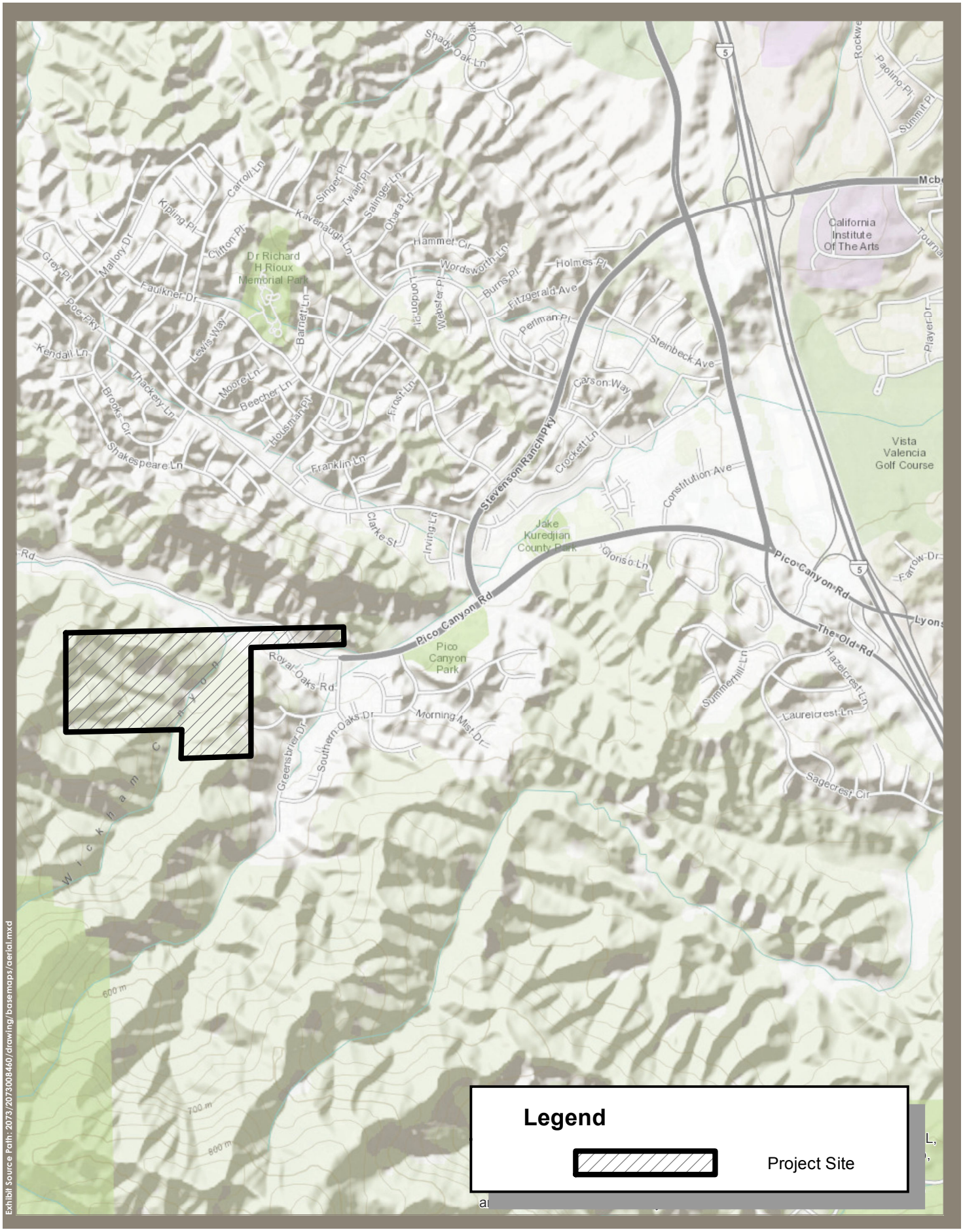

Exhibit Source Path: 2073/207300840/drawing/basemaps/aerial.mxd

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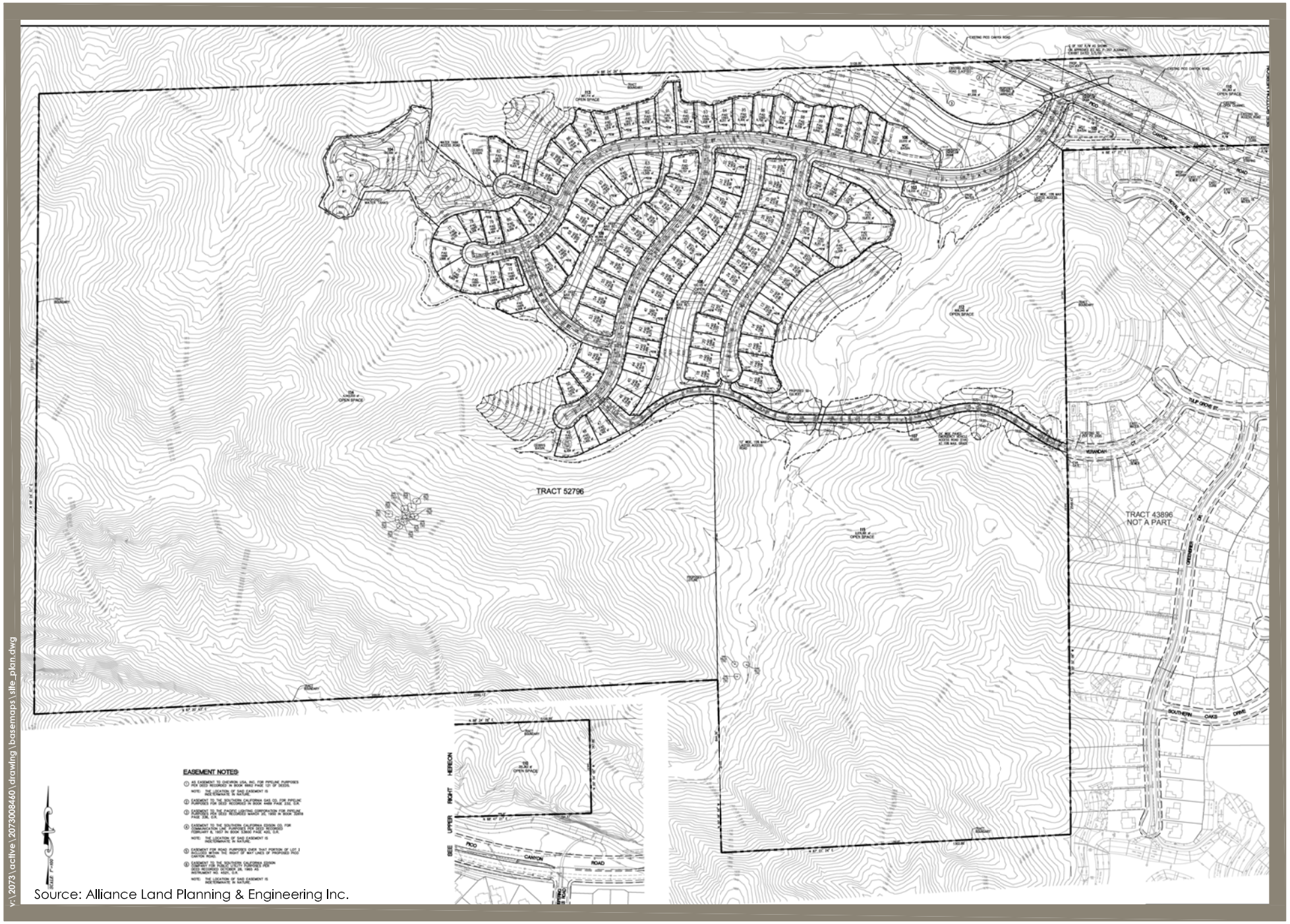
N

Figure 1-1

Project Site Location

1.2



Source: Alliance Land Planning & Engineering Inc.

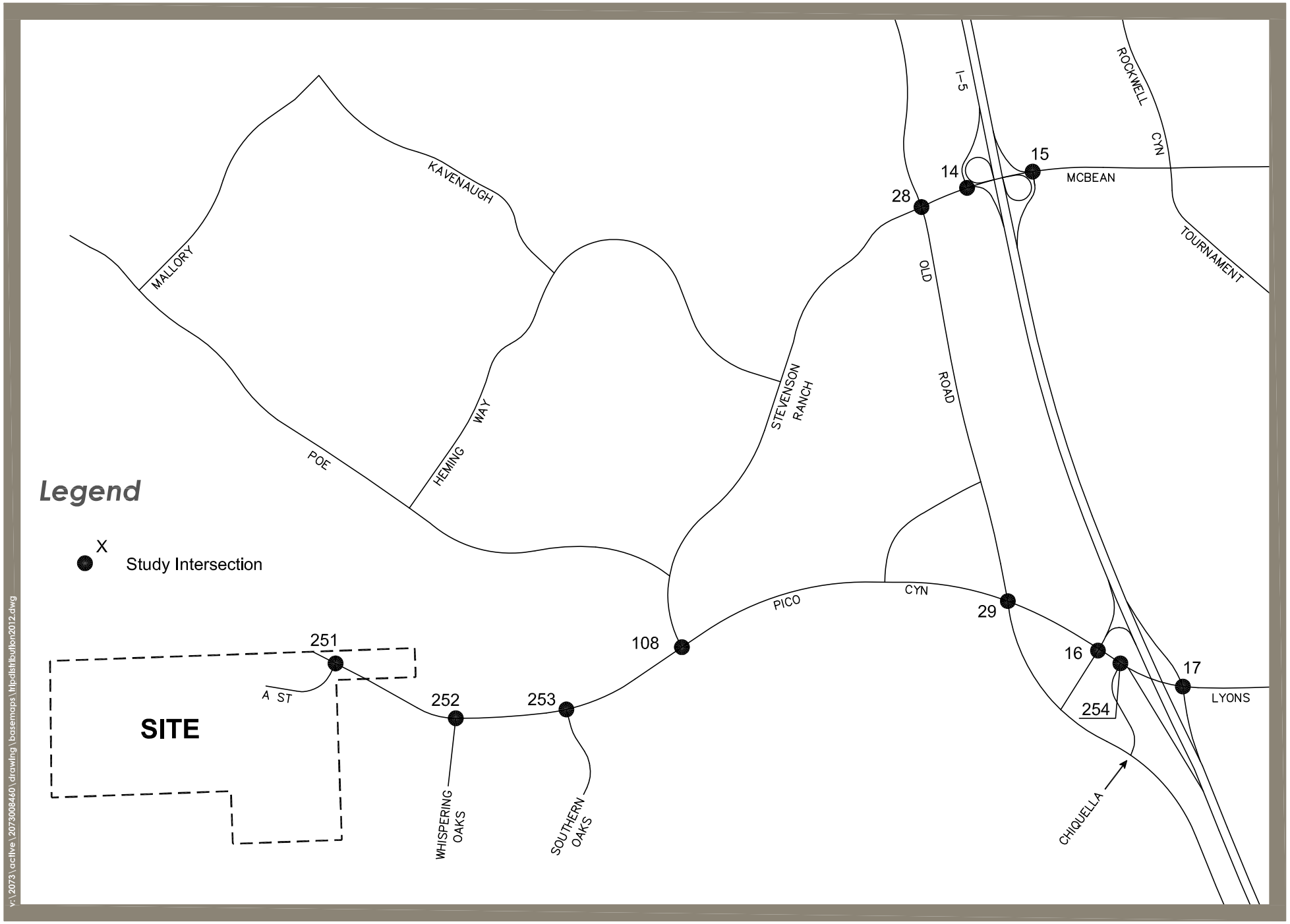
Stantec

N

Figure 1-2

Project Site Plan

1.3



v:\2073\active\207308460\drawing\basemaps\tripdistribution2012.dwg

Stantec

Figure 1-3

Project Location Study Area - Intersection Location Map

1.4

There are several related projects in the vicinity of the project site that are expected to be developed after the project has been constructed, and which have their own buildout dates up to as much as 20 years in the future. Since these cumulative conditions projects will not be constructed until after the project is constructed, the DPW has agreed that the approach for this project's EIR cumulative analysis is to include each of the known related projects for a long-range buildout horizon in lieu of the standard opening year "existing plus project plus related project" approach. Cumulative impacts will be identified for locations where the project's traffic exceeds the specified impact threshold and the project's fair-share percentage of the necessary mitigation will be determined. This methodology is also consistent with City of Santa Clarita guidelines.

1.3.1 Project Impact Analysis

Since the Santa Clarita Valley is a rapidly growing area with numerous proposed, approved and pending projects (i.e., "Related Projects"), the Cumulative Conditions Scenarios are based on forecasts derived using the Santa Clarita Valley Consolidated Traffic Model (SCVCTM) as that model has the capability of forecasting the complex interaction of vehicle trips between existing and future land uses.

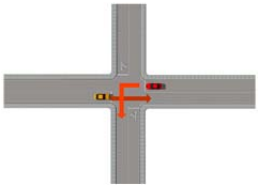
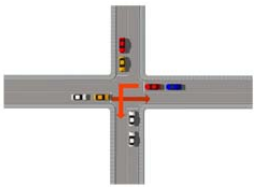
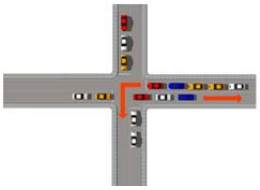
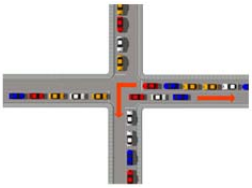
The SCVCTM was developed jointly by the County of Los Angeles Department of Public Works and the City of Santa Clarita and is the primary tool used for forecasting traffic volumes for the Santa Clarita Valley. The SCVCTM has the ability to provide traffic volume forecasts for a long-range setting, which represents buildout conditions (generally considered as year 2035 or later), as well as Interim Year forecasts that are based on a defined list of planned, approved, and pending projects. The Related Projects referred to in Section 1.3.1, above, along with additional growth consistent with the General Plan, are included in the SCVCTM land use database used to forecast future conditions, and detailed descriptions of each related project are provided in Section 2.2.2, below. The SCVCTM is regularly updated and is based on the currently approved General Plans of each jurisdiction.

1.3.2 Performance Criteria

For CEQA purposes, defined performance criteria are utilized to determine if a proposed project causes a significant impact. Performance criteria are based on two primary measures. The first is "capacity", which establishes the vehicle carrying ability of a roadway and the second is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. The ratio between the volume and the capacity gives a volume/capacity (V/C) ratio and based on that V/C ratio, a corresponding level of service (LOS) is defined. Traffic LOS is designated A through F with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Traffic flow quality for each LOS is described in Table 1-1 for arterial roadways and intersections.

The V/C ranges listed for arterial roads and intersections within the study area are those used by the County of Los Angeles and the City of Santa Clarita.

Table 1-1 Level of Service Description – Arterial Roadways and Intersections

LOS	Traffic Flow Description		V/C or ICU
A		Minimal or no vehicle delay.	0.00 – 0.60
B		Slight delay to vehicles.	0.61 – 0.70
C		Moderate vehicle delays, traffic flow remains stable.	0.71 – 0.80
D		More extensive delays at intersections.	0.81 – 0.90
E		Long queues create lengthy delays.	0.91 – 1.00
F		Severe delays and congestion.	> 1.00

Sources: HCM 2010, Congestion Management Program of Los Angeles County
V/C = Volume to Capacity ratio
ICU = Intersection Capacity Utilization

Both the V/C ratio and the LOS are used in determining impact significance. Certain LOS values are deemed unacceptable, and increases in the V/C ratio which cause or contribute to the LOS being unacceptable are defined as a significant impact. Note that while the Caltrans guidelines for the preparation of traffic studies (see Reference 2 in Section 1.5) recommend the HCM method for the evaluation of State highway facilities, those guidelines do not include a threshold of significance criteria for the determination of a significant project impact that is based on the HCM methodologies. While the Caltrans guidelines do not identify specific impact criteria due to differences between rural and urban areas of the State, as well as differences between the northern, central, and southern regions, the local Caltrans Districts will determine the impact criteria based on the appropriate requirements of that District. As such, the thresholds of significance criteria specified by the local agencies (i.e., Caltrans District 7, County of Los Angeles, City of Santa Clarita, and the LA County CMP) are utilized in this analysis.

In establishing V/C based performance criteria, there are certain items that need to be addressed to obtain suitable V/C estimates and relate them to LOS. For instance, while average daily traffic (ADT) is a useful measure to show general levels of traffic on a facility and to provide data for other related aspects such as noise and air quality, highway congestion is largely a peak hour or peak period occurrence and ADT does not reflect peak period conditions very effectively.

Because of this, ADT is not used here as the basis for capacity evaluation, but instead this evaluation focuses on those parts of the day when such congestion can occur, specifically the AM and PM peak hours.

For the arterial system, the peak hour is the accepted time period used for impact evaluation, and a number of techniques are available to establish suitable V/C ratios and define the corresponding LOS. These definitions and procedures are established by individual local jurisdictions, such as the County, the City of Santa Clarita, or by regional programs such as the Congestion Management Program (CMP).

The analysis of the arterial road system is based on intersection capacity since this is the defining capacity limitation on an arterial highway system. There may be exceptions where certain facilities have long distances between signalized intersections; however, that is not the case within the traffic analysis study area here, and, as such, peak hour intersection performance is the most representative measure for evaluating the study area arterial road system.

Levels of service for arterial roadway intersections are determined based on operating conditions during the AM and PM peak hours. For intersections, the intersection capacity utilization (ICU) methodology is applied, providing a planning level basis for determining V/C and LOS. This methodology sums the V/C ratios for the critical movements of an intersection and is the preferred procedure for intersection analysis by the City of Santa Clarita and the County of Los Angeles. The ICU methodology is generally compatible with the intersection capacity analysis methodology outlined in the HCM 2010.

The ICU calculation methodology and associated impact criteria for the study area arterial system are summarized in Table 1-2. The County utilizes a variable scale of ICU impact amounts that are based on the pre-project LOS. As shown in the previously referenced Table 1-2, the higher the pre-project LOS, the smaller the threshold for determining a significant impact. For long-range planning purposes when a specific project increment is not applicable, LOS D (ICU not to exceed 0.90) is a commonly accepted target level of service for the design of future intersections, as well as for existing intersections. The City of Santa Clarita strives to maintain LOS D for existing and future conditions. However, several intersections in both the City and the County have been identified as operating at LOS E for General Plan Buildout Conditions as part of the General Plan/Area Plan update (see Reference 6 in Section 1.5).

1.4 DEFINITIONS

Certain terms used throughout this report are defined below to clarify their intended meaning:

ADT	Average Daily Traffic. Generally used to measure the total two-directional traffic volumes passing a given point on a roadway.
CMP	Congestion Management Program. A state mandated program administered by the Los Angeles County Metropolitan Transportation Authority (MTA) that provides a mechanism for coordinating land use and development decisions.
ICU	Intersection Capacity Utilization. A measure of the volume to capacity ratio for an intersection. Typically used to determine the peak hour level of service for a given set of intersection volumes.
LOS	Level of Service. A scale used to evaluate circulation system performance based on intersection ICU values or volume/capacity ratios of arterial segments.
Peak Hour	This refers to the hour during the AM peak period (typically 7 AM - 9 AM) or the PM peak period (typically 3 PM - 6 PM) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway.
Tripend	A trip generation measure which represents the total trips entering and leaving a location.
V/C	Volume to Capacity Ratio. This is typically used to describe the percentage of capacity utilized by existing or projected traffic on a segment of an arterial or intersection.
VTTM	Vesting Tentative Tract Map.
VPH	Vehicles per Hour. Used for roadway volumes (counts or forecasts) and trip generation estimates. Measures the number of vehicles in a one-hour period, typically the AM and PM peak hour.

Table 1-2 Arterial Intersection Performance Criteria

V/C Calculation Methodology

Level of service to be based on peak hour intersection capacity utilization (ICU) values calculated using the following assumptions:

Saturation Flow Rates:

County Methodology: 1,600 vehicles/hour/lane for through lanes, right-turn lanes, and single left-turn lanes
2,880 vehicles/hour for dual left-turn lanes (total of both lanes)

City Methodology: 1,750 vehicles/hour/lane for all lanes

Clearance Interval: 0.10

Impact Thresholds

An intersection is considered to be significantly impacted if compared to the ICU in the no-project scenario, the ICU in the with-project scenario increases the ICU by the following:

	Pre-Project ICU	Project Increment
County Thresholds:	0.71 - 0.80 (LOS C)[1]	greater than or equal to 0.04
	0.81 - 0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E & F)	greater than or equal to 0.01

	With-Project ICU	Project Increment
City Thresholds:	0.81 - 0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E & F)	greater than or equal to 0.01

[1]Note: The County guidelines do not address situations where pre-project conditions are less than 0.71. In that situation, County staff has interpreted the guidelines to mean that an increase resulting in a with-project condition of 0.75 or more is considered significant. The interpretation is based on the following scenario, which is addressed by the guidelines: 0.71 (pre-project) + 0.04 (project increment) = 0.75 and is a significant impact.

Abbreviations:
V/C – Volume/Capacity Ratio
LOS – Level of Service
ICU – Intersection Capacity Utilization

1.5 REFERENCES

1. "Trip Generation 9th Edition," Institute of Transportation Engineers, 2012.

2. "Highway Capacity Manual 2010," Transportation Research Board, National Research Council, 2010.

3. "Traffic Impact Analysis Report Guidelines," County of Los Angeles Department of Public Works, January 1997.

4. "Preliminary Traffic Impact Report Guidelines," City of Santa Clarita, August 1990.

5. "Guide for the Preparation of Traffic Impact Studies," Caltrans, December 2002.

6. "One Valley One Vision Valley-Wide Traffic Study," Austin-Foust Associates, Inc., June 2010.

7. "I-5 HOV/Truck Lanes Project SR-14 to Parker Road Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact" (SCH No. 2007051028), State of California Department of Transportation, September 2009.

8. "I-5 HOT Lane Project Supplemental EIR/Environmental Reevaluation" (SCH No. 2007051028), State of California Department of Transportation, May 2013.

9. "Westside Bridge and Major Thoroughfare Construction Fee District Report," Los Angeles County Department of Public Works, February 2011.

2.0 TRANSPORTATION SETTING

This chapter describes the transportation setting for the traffic analysis. Existing conditions are first discussed, followed by a description of the buildout of the circulation system.

2.1 EXISTING CONDITIONS

The following section describes the existing traffic conditions in the study area. It includes a description of the study area roadway system, existing traffic volumes, and corresponding levels of service as defined by the performance criteria outlined in the previous chapter.

2.1.1 Existing Roadway System

The existing roadway network in the study area is illustrated in Figure 2-1. Existing intersection lane configurations are illustrated in Figure 2-2.

The Interstate 5 (I-5) Freeway, located east of the project site, provides for regional travel in the north/south direction. Additional freeways in the area include SR-14, which provides access to the Antelope Valley, and I-210 and I-405, which along with I-5 provide access to the region south of the Newhall Pass. Regional access is also provided via State Route 126 (SR-126), which runs north of the project site in an east/west direction.

2.1.2 Existing Traffic Volumes and Levels of Service

Existing conditions ADT volumes (2014) for the study area are provided in Figure 2-3. Illustrations of peak hour turning movement volumes for the study intersections can be found in Figure 2-4 for the AM peak hour and in Figure 2-5 for the PM peak hour. Traffic count data was collected throughout the study area during the critical AM and PM peak hours on various dates in February, March, and April 2014 while local schools were in session. Printouts of the traffic count data sheets are provided in Appendix B.

As discussed in the section on performance criteria in Section 1.4, LOS is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the HCM 2010, six grades are used to denote the various LOS. The six are denoted A through F and a discussion on these was given in Section 1.4.

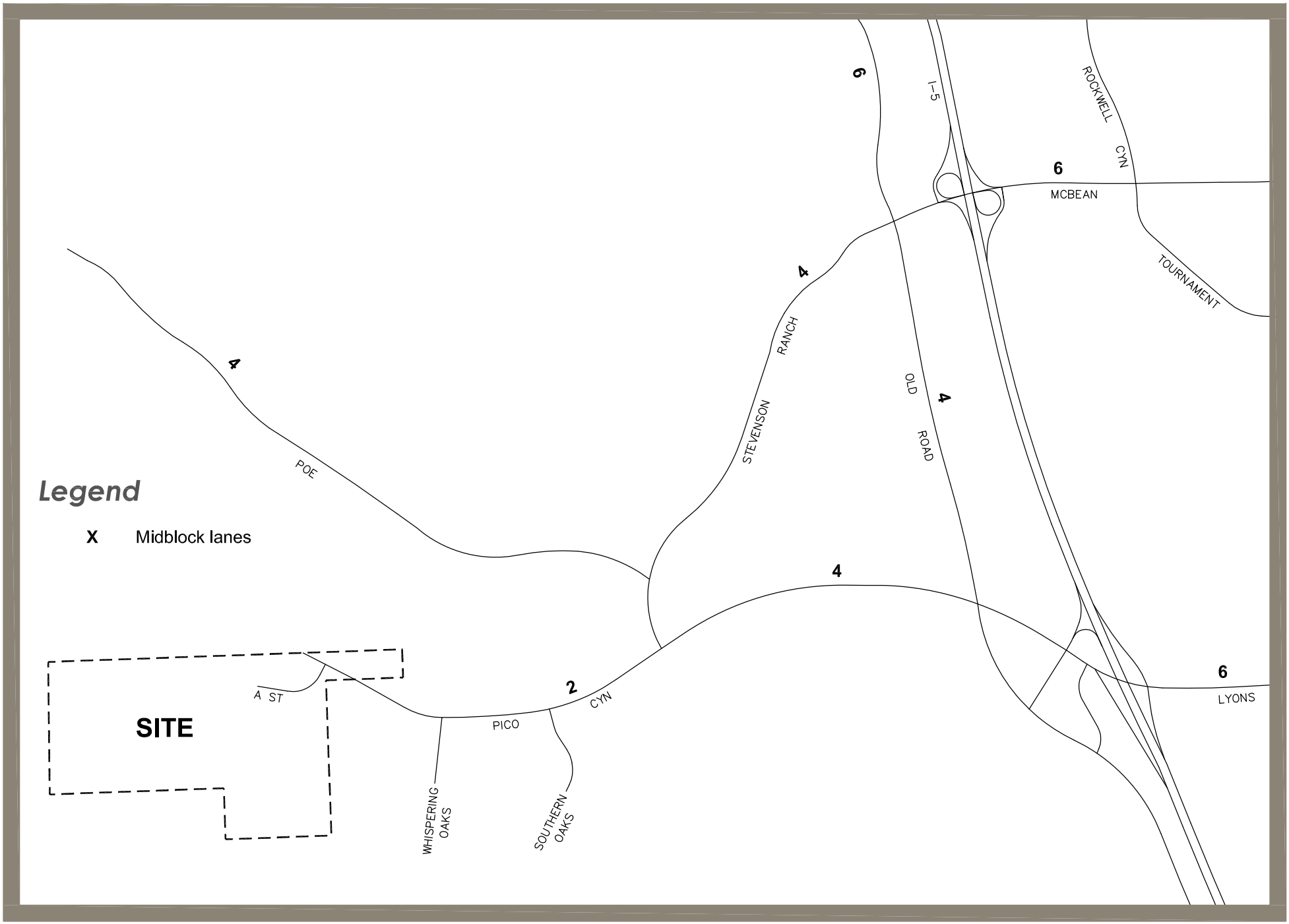


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Figure 2-1

Existing Roadway System

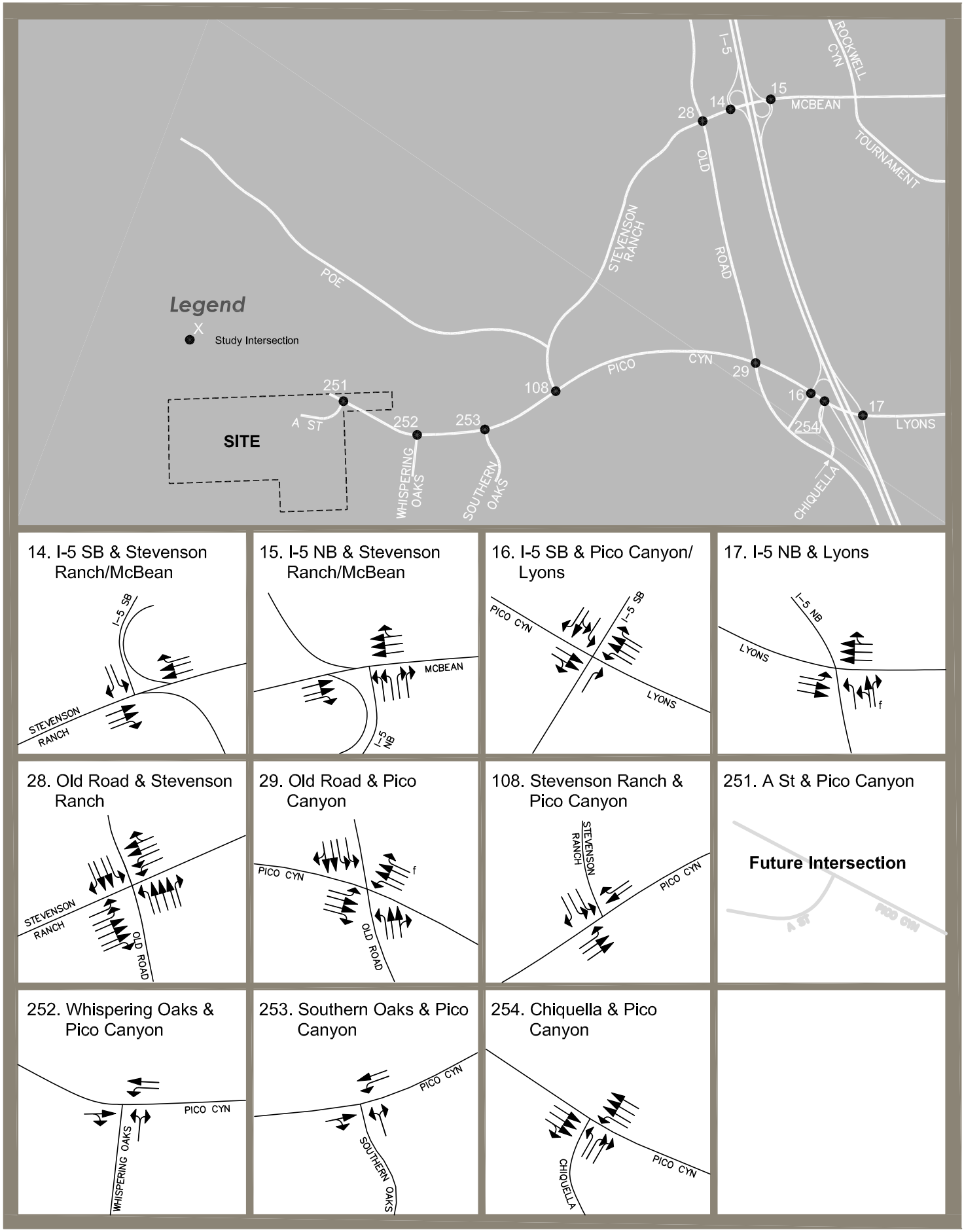

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Figure 2-2

Existing Intersection Lane Configurations

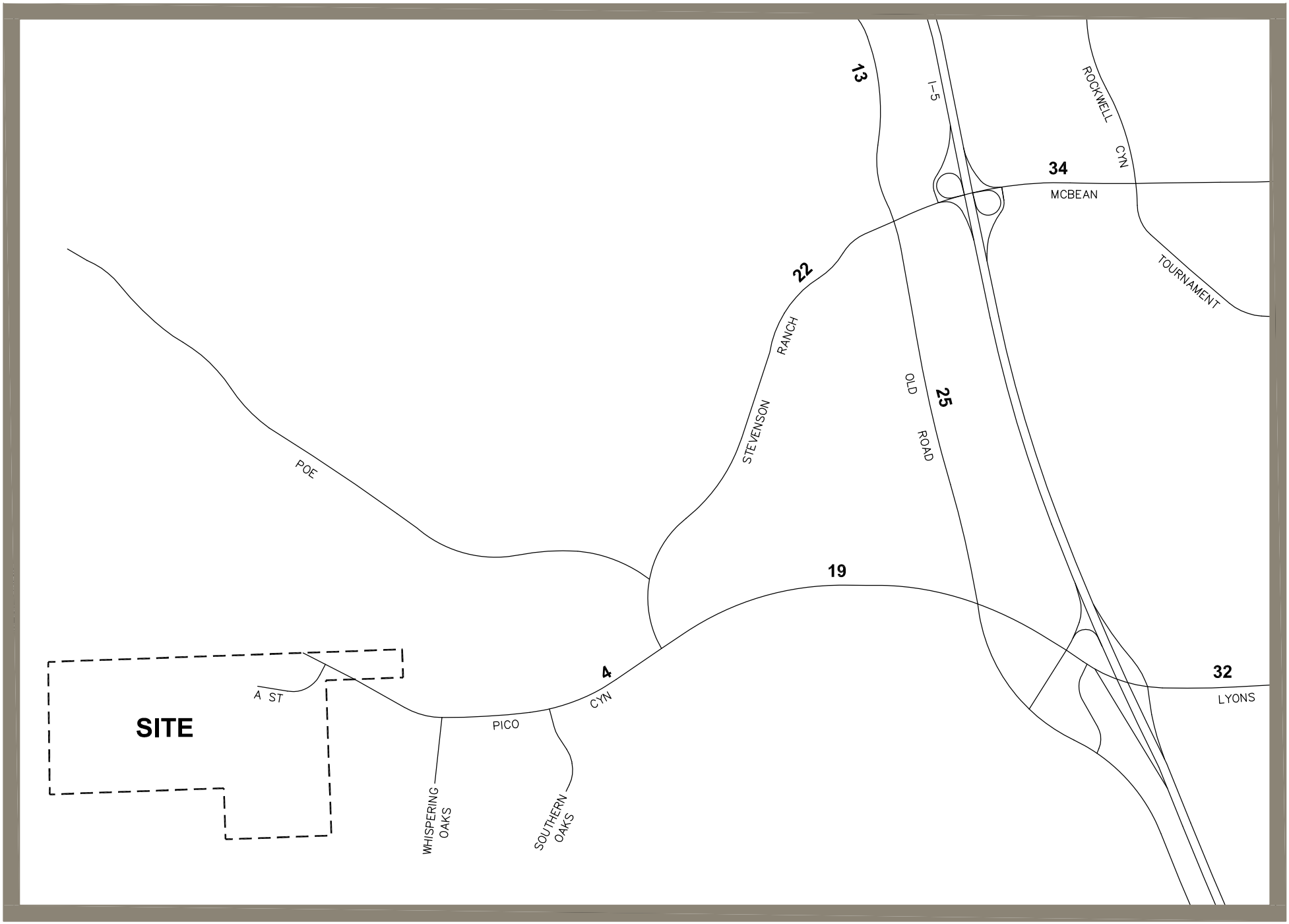

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Figure 2-3

ADT Volumes (000s) - Existing Conditions

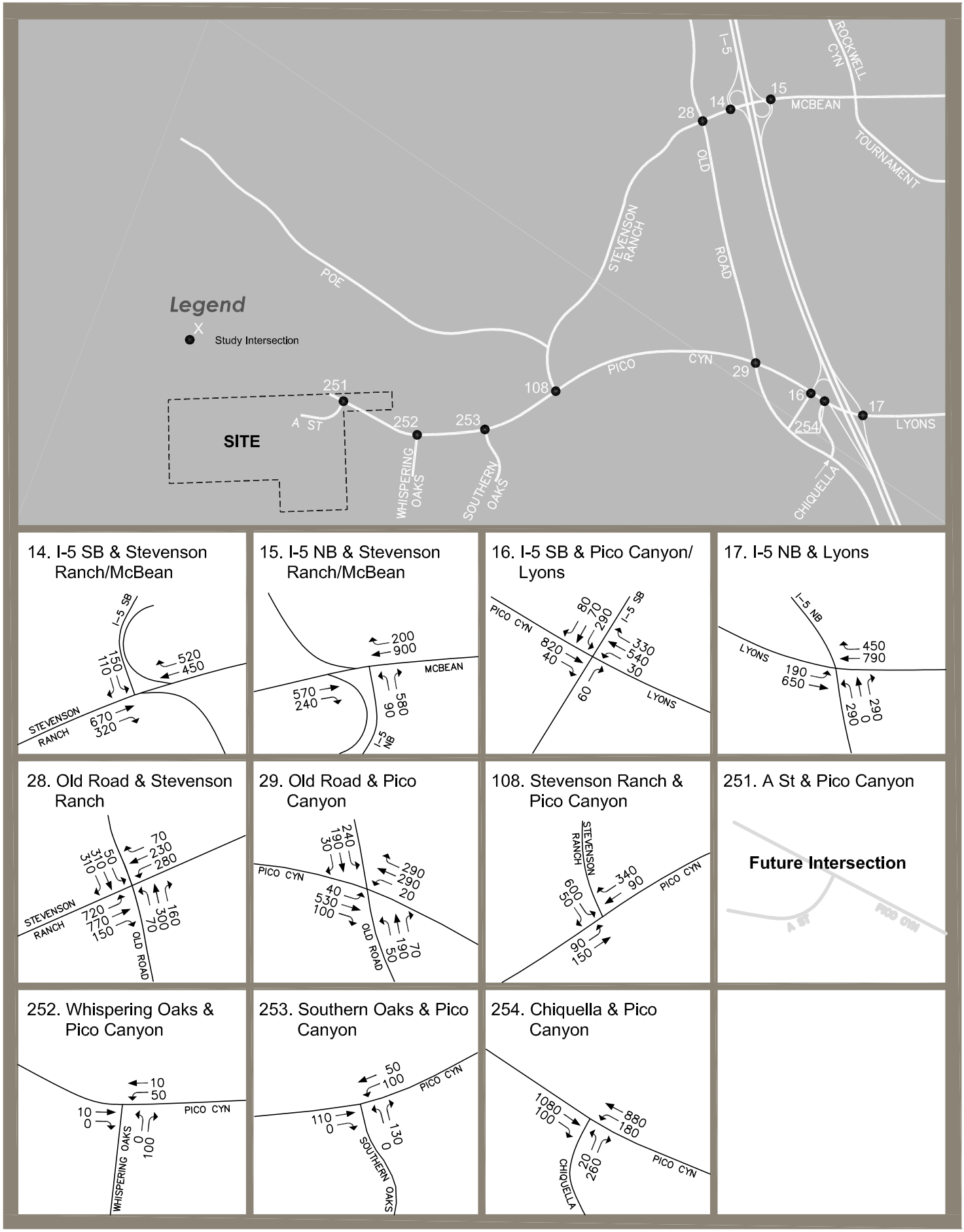

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Figure 2-4

AM Peak Hour Turning Movement Volumes
Existing Conditions

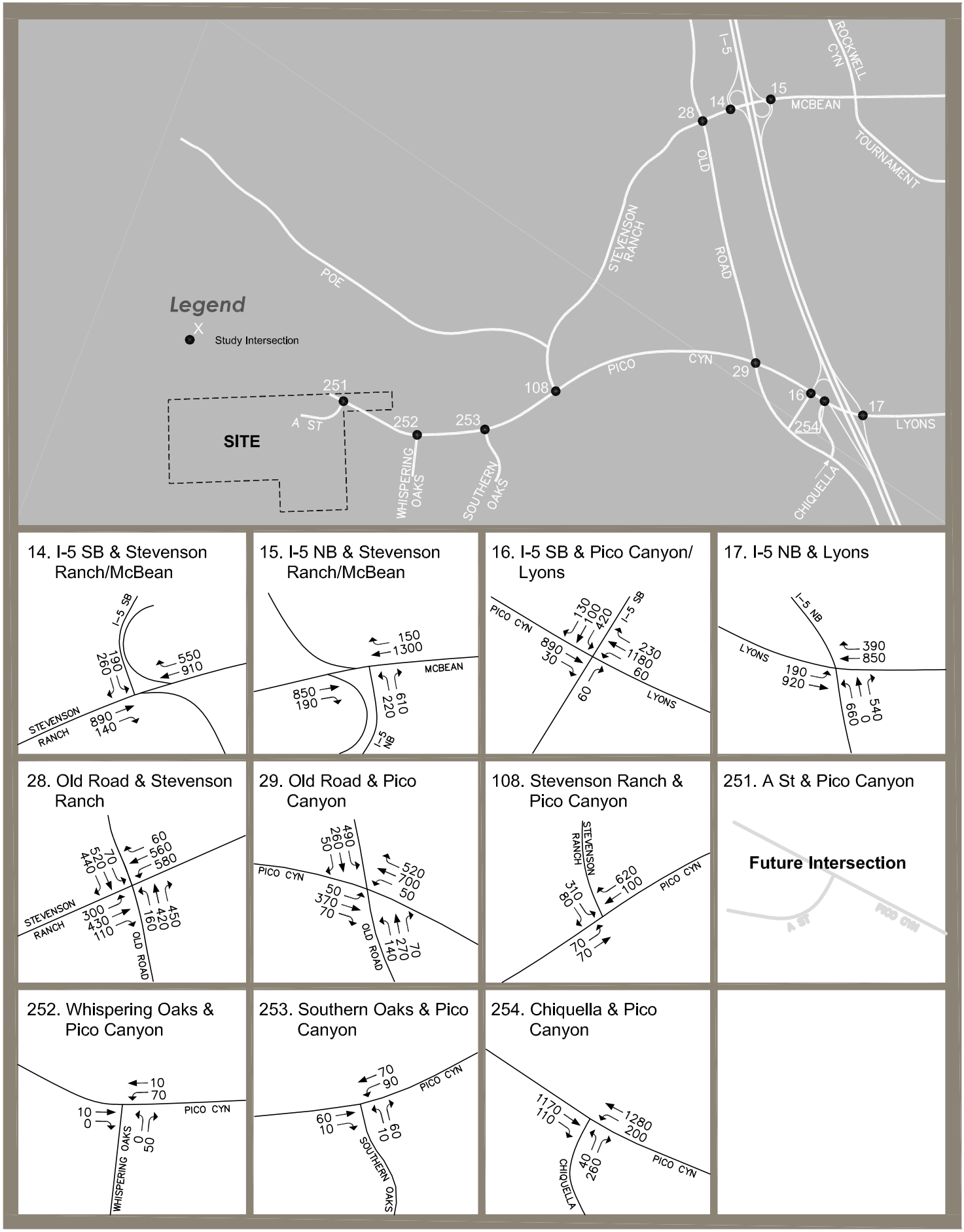

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Figure 2-5

PM Peak Hour Turning Movement Volumes
Existing Conditions

The results of the ICU LOS analyses for project area intersections are shown in Table 2-1(detailed ICU worksheets are provided in Appendix A). The table shows that the intersections currently operate at LOS C or better.

2.1.3 Public Transportation

City of Santa Clarita Transit (SCT) currently does not operate any fixed route transit lines within close proximity (typically defined as ¼ mile) to the project site. The nearest fixed-route transit lines are Routes 5 and 6. SCT Routes 5 and 6 provide service between Newhall/Stevenson Ranch and Canyon Country (Shadow Pines and north of Sierra Highway) with stops at the Newhall and Santa Clarita (Soledad) Metrolink Stations.

Additional routes, accessible from these routes, provide service to the greater Santa Clarita Valley area.

SCT Commuter Express offers express commuter bus travel to Los Angeles, Warner Center, Van Nuys, Century City and the Antelope Valley. Three Metrolink stations exist within the City of Santa Clarita, which serve the Antelope Valley line. This line travels between Lancaster and Union Station, Los Angeles.

The City of Santa Clarita also operates approximately 20 supplemental school day service routes to serve students. The supplemental school day service routes provide transit service to various areas within the Santa Clarita Valley and are available on school days during peak morning and afternoon travel times.

Future bus transit routes are anticipated to be extended along Pico Canyon Road in the project area by Santa Clarita Transit as part of a comprehensive valley-wide transit system.

2.1.4 Active Transportation

Sidewalks are provided on both sides of Pico Canyon Road from approximately 500 feet east of the project site to Stevenson Ranch Road. A short gap without a sidewalk of approximately 125 feet exists on the south side of Pico Canyon Road approaching Stevenson Ranch. East of Stevenson Ranch Road, sidewalks exist only on the north side of Pico Canyon Road.

Bike lanes are not currently provided on Pico Canyon Road, however it is designated in the County Bicycle Master Plan to have Class II bike lanes in each direction. Stevenson Ranch Road currently has Class II bike lanes in each direction north of Poe Parkway, but currently there are no bike lanes on Stevenson Ranch Road south of Poe Parkway.

Table 2-1 ICU and LOS Summary – Existing Conditions

Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour		Count Date
		ICU	LOS	ICU	LOS	
14. I-5 SB & Stevenson Ranch/McBean	County/Caltrans	.43	A	.54	A	3/13/2014
15. I-5 NB Ramps & McBean	City/Caltrans	.44	A	.52	A	3/11/2014
16. I-5 SB/Marriott & Pico/Lyons	County/Caltrans	.52	A	.63	B	3/11/2104
17. I-5 NB Ramps & Lyons	City/Caltrans	.55	A	.64	B	3/11/2014
28. The Old Road & Stevenson Ranch	County	.58	A	.69	B	3/5/2014
29. The Old Road & Pico Canyon	County	.44	A	.63	B	3/5/2014
108. Stevenson Ranch & Pico Canyon	County	.43	A	.56	A	2/25/2014
252. Whispering Oaks & Pico Canyon	County	.20	A	.18	A	4/15/2014
253. Southern Oaks & Pico Canyon	County	.31	A	.24	A	4/15/2014
254. Chiquella & Pico Canyon	County	.47	A	.53	A	4/15/2014

2.2 FUTURE CONDITIONS

The following section describes the cumulative conditions in the study area. It includes a description of the planned roadway system in the vicinity of the project site and a summary of the anticipated increase of land use.

2.2.1 Future Roadway System

The Los Angeles County Highway Plan and the Newhall Ranch Specific Plan include future roadways near the project site.

The project is located along Pico Canyon Road, at the location where the road transitions from a fully-improved four-lane divided roadway east of the site (currently striped as two lanes in the vicinity) to a two-lane unimproved roadway to the west. The extension of Pico Canyon Road as a four-lane road east and north of the project site to the extension of Valencia Boulevard is designated on the County Highway Plan. However, there is no time frame identified for the construction of the roadway extension; therefore, the extension of Pico Canyon Road east of the project site is not assumed for this analysis.

Other primary roadways (i.e., designated on the County Highway Plan) will be constructed northeast of the project site. These roadways will be constructed in connection with the Homestead South, Mission Village, Landmark Village, Entrada South, and Legacy Village projects. The roads are included within the Westside B&T District, which will provide the necessary funding for the roads.

Long Canyon Road will run in a generally north/south direction and will provide access to SR-126 to the north. Long Canyon Road is classified as a Secondary Highway in the adopted Newhall Ranch Specific Plan. Magic Mountain Parkway will run in a generally east/west direction and will provide access to the City of Santa Clarita as well as I-5 to the east. Magic Mountain Parkway is classified as a Secondary Highway in the Newhall Ranch Specific Plan. Valencia Boulevard, which will intersect with Magic Mountain Parkway at Long Canyon Road, will run in a generally east/west direction. In the Newhall Ranch Specific Plan, Valencia Boulevard is classified as a Secondary Highway.

The I-5 Freeway is currently built to eight lanes in the project study area, and Caltrans and the Metropolitan Transportation Authority (Metro) are in the process of expanding the freeway to provide additional capacity. In September 2009, Caltrans approved a Final Environmental Impact Report/Environmental Assessment for the I-5 High Occupancy Vehicle (HOV)/Truck Lanes Project SR-14 to Parker Road. The project would add: (1) one HOV lane in each direction on I-5 from the SR-14 interchange north to Parker Road; (2) truck climbing lanes in each direction from the SR-14 interchange to Calgrove Boulevard (northbound) and Pico Canyon Road/Lyons Avenue (southbound); and (3) full auxiliary lanes within portions of the Project study area. In May 2013, Caltrans approved a Supplemental EIR/Environmental Reevaluation (EIR/ER) for the

improvement project that replaces the planned HOV lanes with high occupancy toll (HO/T) lanes (See References 7 and 8 in Section 1.5). According to the EIR/ER, Caltrans estimates completion of the truck lanes in 2014 and the HOT lanes in 2018.

2.2.2 Future Land Use Development

Future land development is anticipated for the Santa Clarita Valley as quantified in the SCVCTM. The SCVCTM includes a land use database prepared by Los Angeles County and the City of Santa Clarita that is based on the approved General Plans of each jurisdiction. This database is regularly updated as specific projects are proposed and thus is a comprehensive listing of cumulative projects. In addition, the land use database has also been updated based on the One Valley One Vision (OVOV) plan (See Reference 6 in Section 1.5). Trips to and from the Santa Clarita Valley, as well as through-trips, are included in the forecasts; thus, regional growth, which is traffic volume increases occurring outside of the SCVCTM area, is incorporated into the model.

As noted above, the SCVCTM is regularly updated as specific development projects are proposed. Pending, recorded and approved projects are incorporated into the Long-range Buildout/Cumulative database.

A listing of the known cumulative projects in the vicinity that have been included within the Buildout/Cumulative database is provided in Table 2-2 and are illustrated in Figure 2-6. These projects are planned to be built out by the year 2034.

2.2.3 Future Traffic Volumes

Future condition traffic volumes are derived by the SCVCTM. As noted above, a cumulative conditions analysis has been prepared for the 2034 buildout year of the related projects discussed in the previous section.

The SCVCTM forecasts the complex interaction of vehicle trips between existing and future land uses. As such, the future condition forecasts reflect the change in existing travel patterns that occur due to changes in land use (e.g., the introduction of new development). The SCVCTM employs a process in which modeled future volumes are compared to modeled existing condition volumes, and the net change from existing to future is then applied to the actual observed traffic count in a post-processing procedure. Post-processing is applied to each of the intersection's 12 possible turning movements while controlling to the net change at each of the intersection's four legs (both entering and departure volumes). In that regard, the traffic forecasts presented here utilize existing traffic conditions as the foundation and build upon that foundation with the forecast change in volume (both increases and decreases) as derived by the model. As a result of changing traffic patterns, there are instances where specific turning movement volumes may go down in the future.

Table 2-2 Defined Related Projects Included in the Cumulative Database

No.	Project	Description
1	Mission Village (TR 61105)	4,055 Residential Units; 1,555,100 sq. ft. Commercial Business Park/Office/Retail
2	Landmark Village (TR 53108)	1,444 Residential Units, 1,030,000 sq. ft. Commercial Office/Retail
3	Legacy Village (TR 61996)	3,457 Residential Units; 884,000 sq. ft. Commercial Office/Retail
4	Entrada South (VTTM 53295)	1,574 Residential Units; 730,000 sq. ft. Commercial Office/Retail
5	Homestead South (VTTM 060678)	3,617 Residential Units; 66,400 sq. ft. Commercial/ Retail; 900 student elementary school; 1,200 student middle school; 2,500 student high school
6	Entrada North (VTTM 071377)	1,510 Residential Units; 2,380,000 sq. ft. Commercial Office/Retail/Industrial
7	Potrero Village (VTTM 061911)	4,296 Residential Units; 250,000 sq. ft. Commercial Office/Retail
8	Homestead North	1,818 Residential Units, 1,250,000 sq. ft. Commercial Office/Retail
9	Valencia Commerce Center Phase III (PM 26363)	664,000 sq. ft. Commercial Industrial/Retail
10	Valencia Commerce Center Phase IV (TR 18108)	3,227,068 sq. ft. Commercial Business Park/Office/Industrial
11	Chiquita Canyon Landfill Expansion	Expansion of landfill operations by approximately 143 acres (net increase of approximately 600 trucks on peak day). Relocation of access roadway from SR-126 to Wolcott Way.
12	Tract 18654	30,000 sq. ft. Commercial Retail
13	Lyons Canyon Ranch (TR 53653)	95 Single Family Detached Residential Units and 95 Active Senior Units
14	UCLA Film Archives	250,000 sq. ft. Office/Archiving
15	Henry Mayo Newhall Memorial Hospital Master Plan	127,000 sq. ft. Hospital Expansion and 200,000 sq. ft. Medical Office Buildings (net increases)
16	Town Center Mall Expansion	203,500 sq. ft. Retail Commercial (Phase II) and 75,000 sq. ft. Retail Office (Phase III)
17	Valencia Sheraton	200 Room Hotel
18	Valencia Town Center Square	Mixed-use Residential, Retail & Office development consisting of 10 residential units and 40,000 sq. ft. of commercial retail and office

See Figure 2-6 for locations.

Sources: LA County DPW Traffic and Lighting Division (March 2014); LA County Dept. of Regional Planning GIS-NET3 (accessed March 2014); Mission Village Traffic Impact Analysis (March 2011); Castaic Bridge and Major Thoroughfare Construction Fee District Update Report (June 2009); discussions with City of Santa Clarita staff (April 2013), Homestead South Traffic Impact Analysis (December 2013).

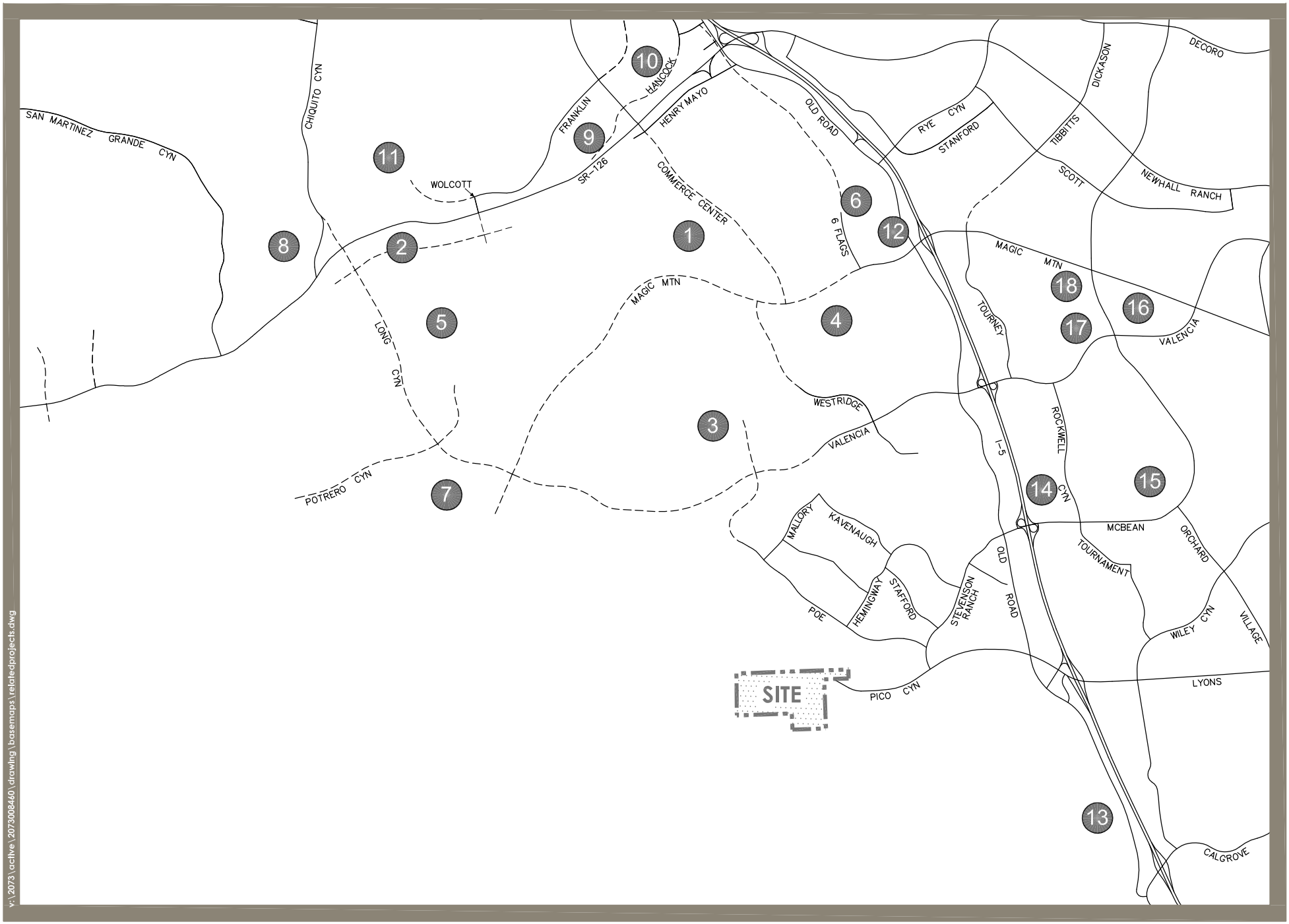

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Figure 2-6

Related Projects Location Map

3.0 PROJECT DESCRIPTION

This section describes the project site in terms of its transportation characteristics. Trip generation is summarized and the distribution of project trips on the adjoining roadway network is presented.

3.1 PROJECT OVERVIEW

The proposed project consists of 102 single family dwelling units. Site access will be provided by a single entry from Pico Canyon Road.

3.2 PROJECT TRIP GENERATION

Trip generation rates for the proposed residential project were obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition (see Reference 1 in Section 1.5). The trip rates used for this analysis and the resulting trip generation estimates are listed in Table 3-1. As shown, the project would generate approximately 971 average daily tripends, with approximately 76 tripends during the AM peak hour and 102 tripends during the PM peak hour.

Table 3-1 Land Use and Trip Generation Summary

Category	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Tripends
			In	Out	Total	In	Out	Total	
Trip Generation									
Single Family Detached	102	DU	19	57	76	64	38	102	971
Trip Rates									
Single Family Detached (ITE 210)		DU	.19	.56	.75	.63	.37	1.00	9.52

Source: "Trip Generation Manual, 9th Edition", Institute of Transportation Engineers

DU = Dwelling unit

3.3 PROJECT TRIP DISTRIBUTION

The geographic distribution of project-generated trips was derived by the SCVCTM. The SCVCTM is a computerized travel demand model that utilizes a sophisticated trip distribution function to derive the distribution of vehicle trips, and which has previously been calibrated to the existing conditions of the Santa Clarita Valley. The SCVCTM is jointly maintained by City of Santa Clarita and County of Los Angeles staff, and is utilized for all major transportation planning efforts within the Santa Clarita Valley. Production and attraction trip data is generated by the model based on five separate trip purposes, and trip distribution patterns are then derived by the model. As a final step, the model assigns these trips to the roadway network based on the derived distribution patterns.

Illustrations of the project's trip distribution patterns are provided in Figure 3-1 based on the SCVCTM select zone run. Approximately 52 percent of the project's traffic is distributed to Stevenson Ranch Road northeast of the project site, and approximately 48 percent is distributed to Pico Canyon Road east of the project site. Approximately 34 percent of the project's traffic is distributed to I-5 Freeway (18 percent to the north and 16 percent to the south).

3.4 PROJECT TRAFFIC FORECASTS

Project generated ADT volumes are provided in Figure 3-2, and the corresponding project generated peak hour turning movement volumes are provided in Figure 3-3 for the AM peak hour and in Figure 3-4 for the PM peak hour.

The project is forecast to add less than 200 ADT and less than 12 peak hour trips (by direction) to the I-5 freeway.

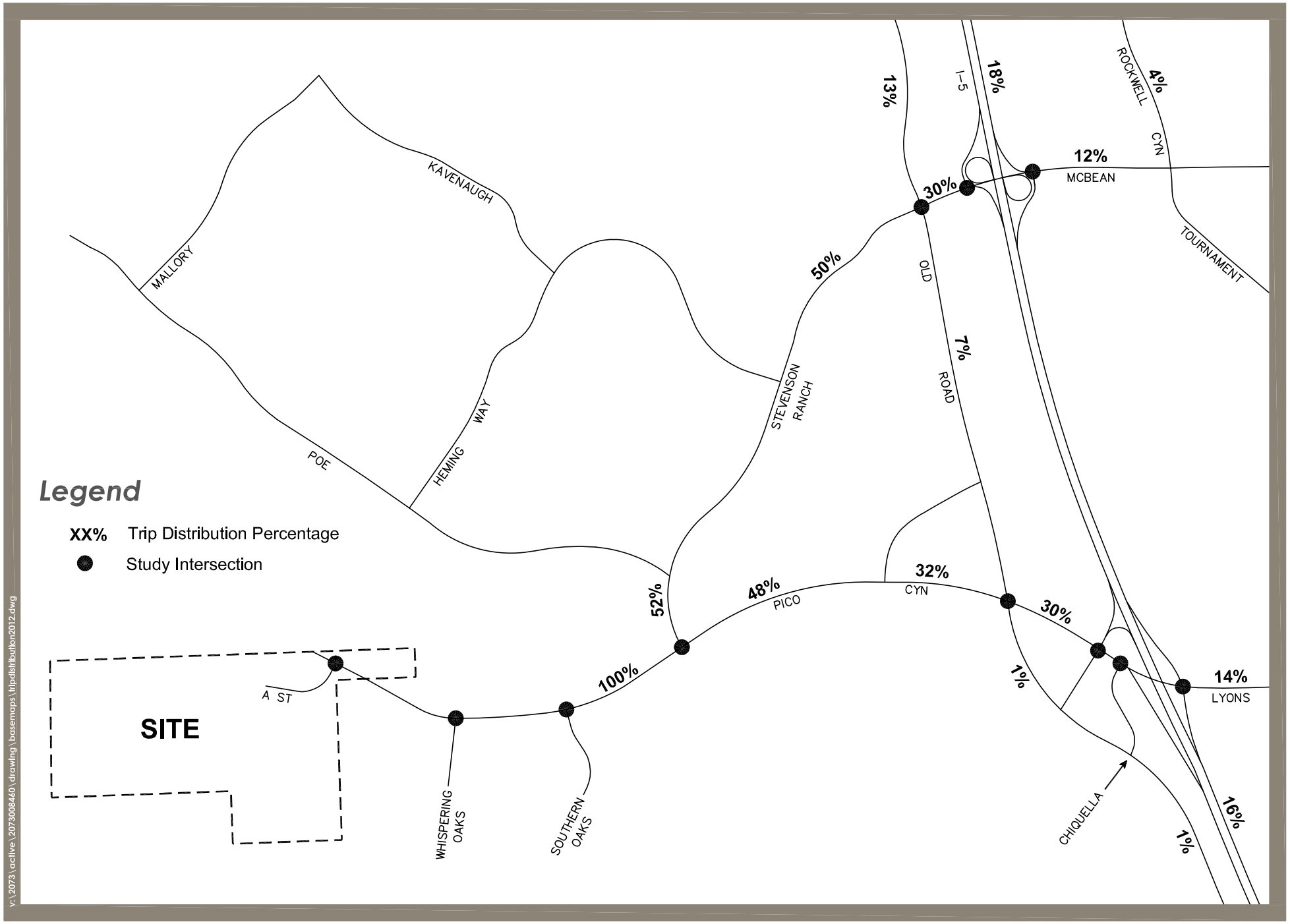

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Figure 3-1

Project Trip Distribution

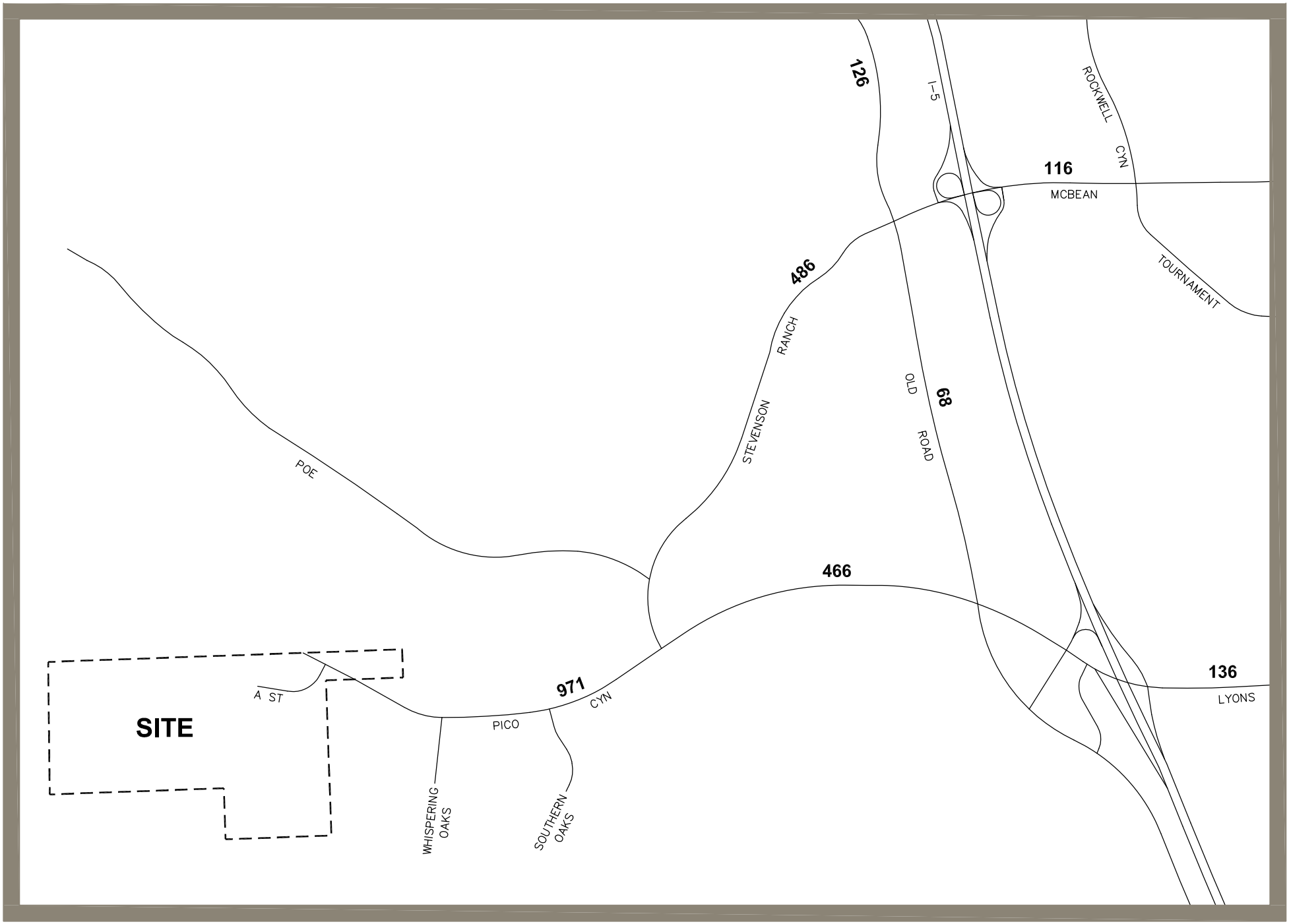

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Figure 3-2

ADT Volumes - Project Only

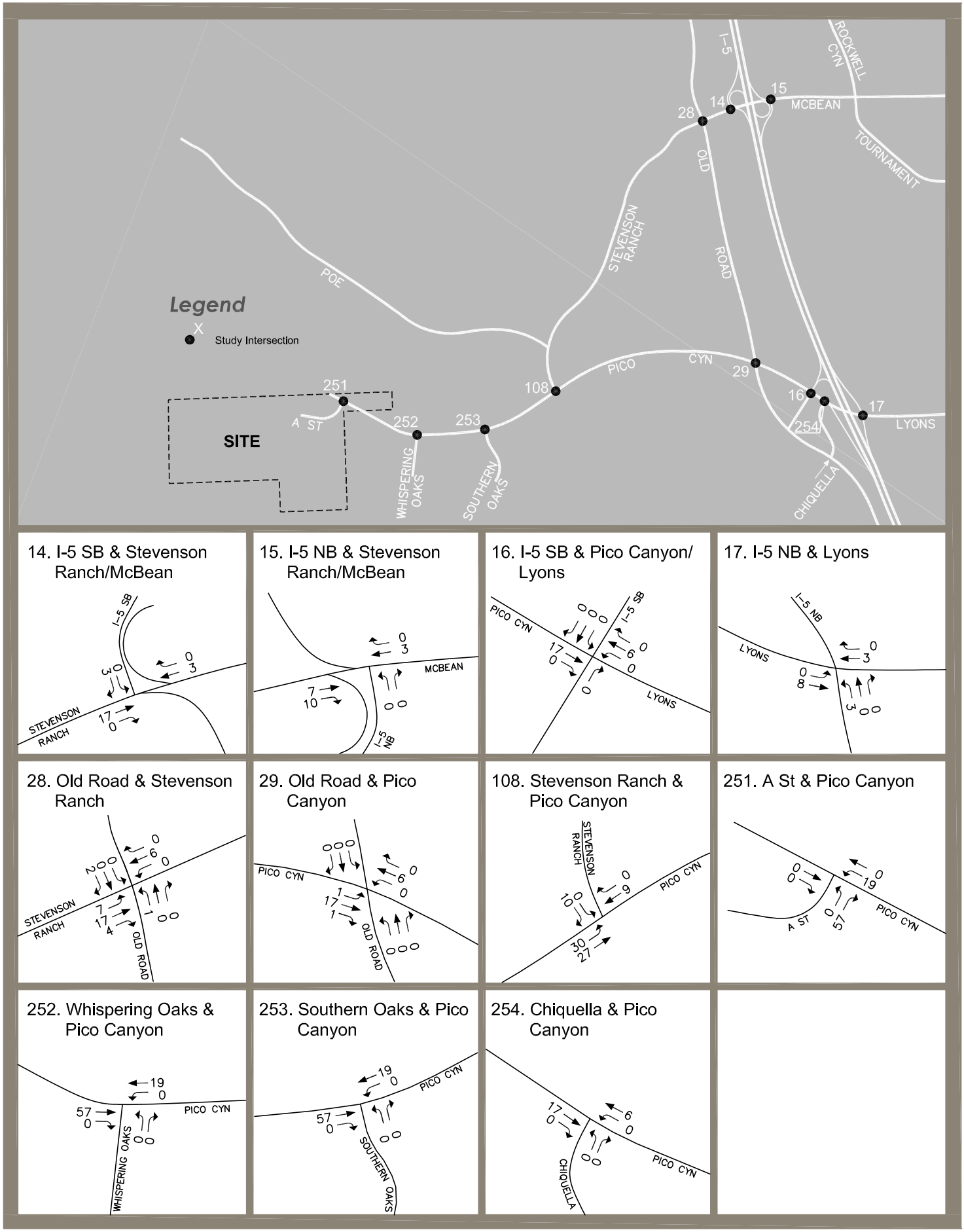

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Figure 3-3

AM Peak Hour Volumes - Project Only

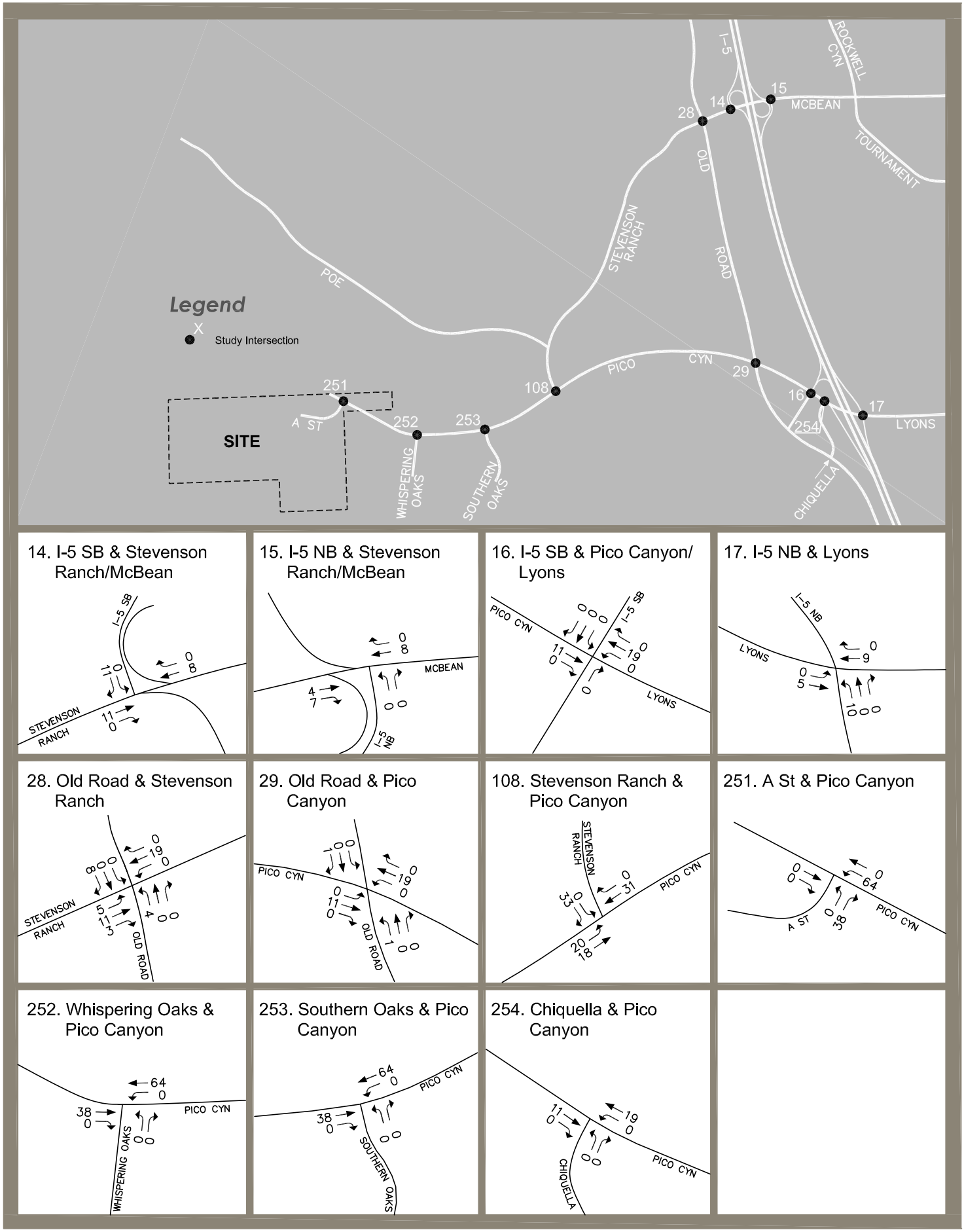

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Figure 3-4

PM Peak Hour Volumes - Project Only

4.0 IMPACT ANALYSIS

This chapter addresses the traffic impacts of the proposed project. Existing and future conditions with project traffic and with traffic from cumulative projects are described in the following sections, and project impacts and cumulative impacts are identified using the criteria outlined in Chapter 1.0.

4.1 PROJECT IMPACTS ANALYSIS

Project occupancy is expected by 2017; however, as discussed previously, no new development is expected in the study area by 2017. Therefore, in accordance with the instructions from the County of Los Angeles DPW, existing conditions are utilized to evaluate the direct project impacts (impacts under cumulative conditions are addressed in Section 4.2, below).

Existing plus project ADT volumes are provided in Figure 4-1. The corresponding existing plus project peak hour turning movement volumes are provided in Figure 4-2 for the AM Peak Hour and in Figure 4-3 for the PM peak hour.

Peak hour ICU values that correspond with the existing traffic conditions can be found in Table 4-1, which provides a comparison between the no-project and the with-project conditions. As this table shows, the study intersections are forecast to operate at LOS C or better under existing plus project conditions, and the project has no significant impact on the study intersections.

Four study intersections are under joint County or City and Caltrans jurisdiction. Caltrans uses the Highway Capacity Manual average intersection delay methodology for analyzing intersections and determining project impacts. Caltrans strives to maintain LOS C. The Caltrans intersections would operate at LOS C or better with the proposed project under existing conditions based on the HCM delay methodology. The HCM delay calculation worksheets are included in Appendix C.

4.2 CUMULATIVE CONDITIONS ANALYSIS

As noted in the previous section, the existing volumes are utilized to evaluate project impacts. Cumulative impacts are based on buildout conditions for the related projects listed in Table 2-2 (year 2034). Year 2034 cumulative conditions (i.e., with approved, planned, and pending projects reasonably anticipated to be in place within this horizon) have been derived as previously discussed in Section 2.2.3.

Year 2034 cumulative conditions ADT volumes for the study area for the no-project condition are provided in Figure 4-4. The corresponding 2034 no-project peak hour turning movement volumes are provided in Figure 4-5 for the AM peak hour and in Figure 4-6 for the PM peak hour.

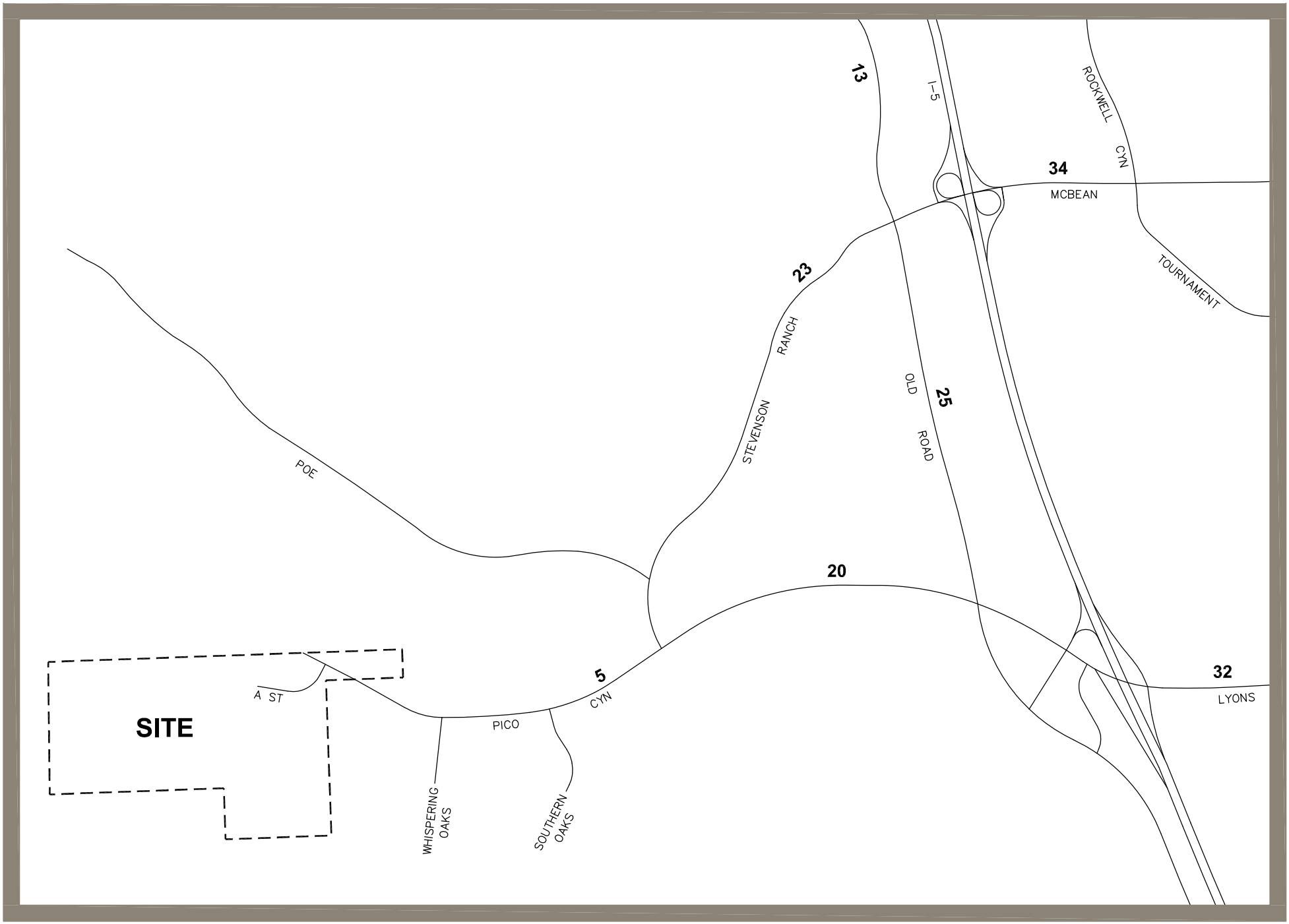

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Figure 4-1

ADT Volumes (000s) - Existing plus Project

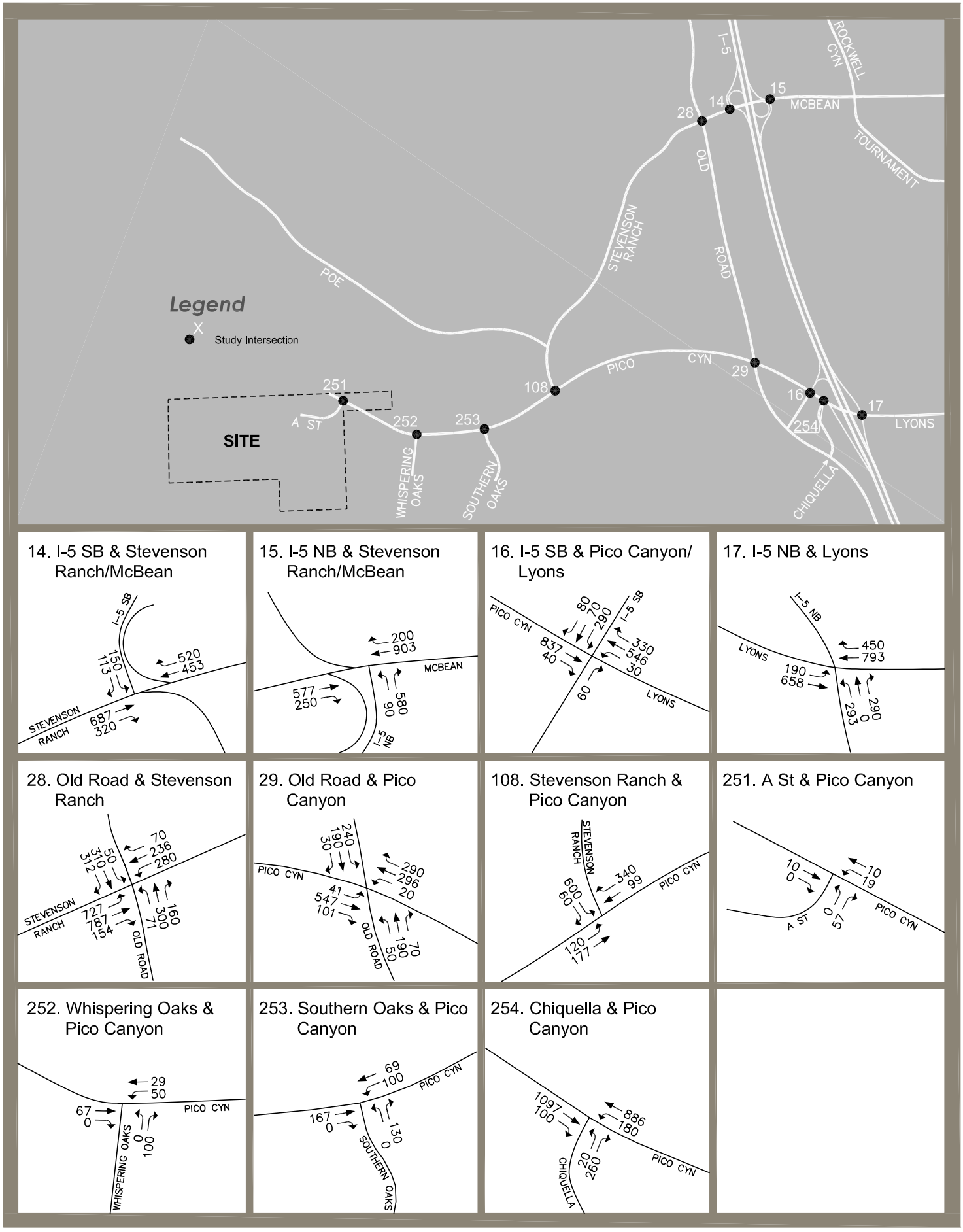

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Figure 4-2

AM Peak Hour Turning Movement Volumes
Existing-plus-Project

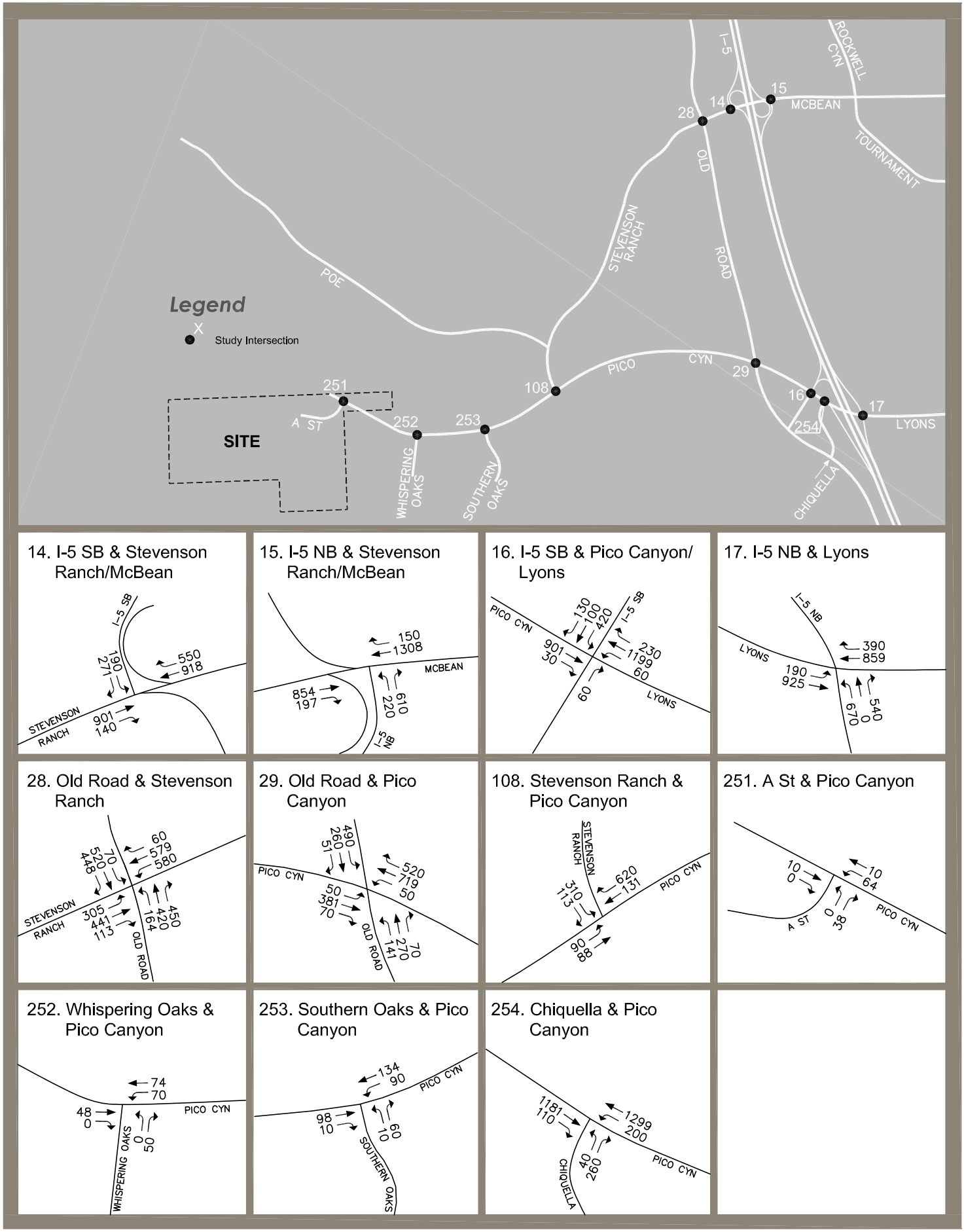

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Figure 4-3

PM Peak Hour Turning Movement Volumes Existing-plus-Project

Table 4-1 ICU Summary – Existing Conditions with and without Project

Intersection	Jurisdiction	Existing				Existing-plus-Project				Increase	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Joint Caltrans/County Intersections											
14. I-5 SB & Stevenson Ranch/McBean	County/Caltrans	.43	A	.54	A	.43	A	.56	A	.00	.02
16. I-5 SB/Marriott & Pico/Lyons	County/Caltrans	.52	A	.63	B	.52	A	.63	B	.00	.00
Joint Caltrans/City Intersections											
15. I-5 NB Ramps & McBean	City/Caltrans	.44	A	.52	A	.44	A	.52	A	.00	.00
17. I-5 NB Ramps & Lyons	City/Caltrans	.55	A	.64	B	.55	A	.64	B	.00	.00
County Intersections											
28. The Old Road & Stevenson Ranch	County	.58	A	.69	B	.59	A	.71	C	.01	.02
29. The Old Road & Pico Canyon	County	.44	A	.63	B	.44	A	.63	B	.00	.00
108. Stevenson Ranch & Pico Canyon	County	.43	A	.56	A	.45	A	.58	A	.02	.02
251. "A" St. (VTTM 52796) & Pico Canyon	County	--		--		.16	A	.17	A	.16	.17
252. Whispering Oaks & Pico Canyon	County	.20	A	.18	A	.23	A	.20	A	.03	.02
253. Southern Oaks & Pico Canyon	County	.31	A	.24	A	.34	A	.27	A	.03	.03
254. Chiquella & Pico Canyon	County	.47	A	.53	A	.47	A	.53	A	.00	.00

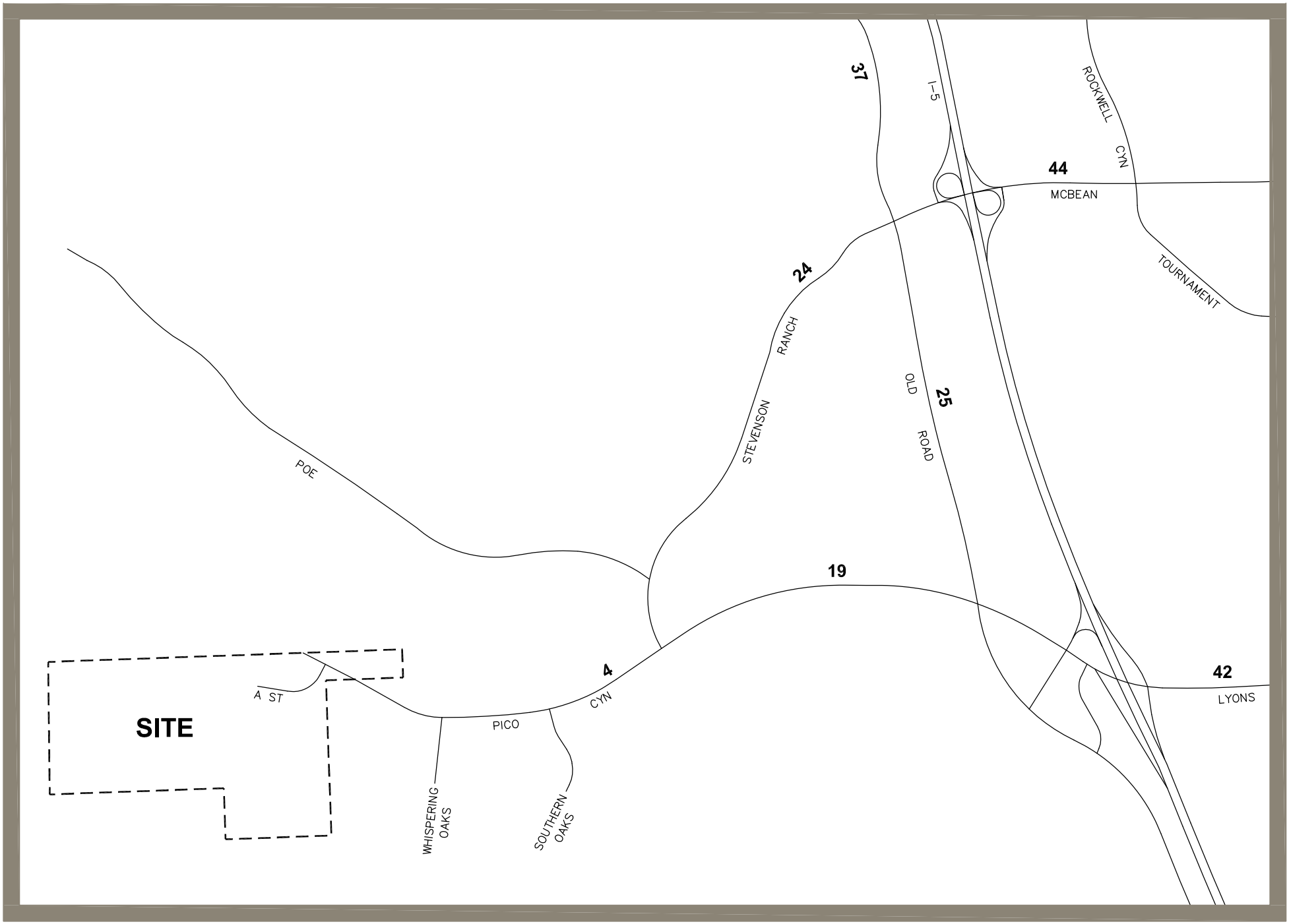

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Figure 4-4

ADT Volumes (000s) - Cumulative Conditions without Project (2034)

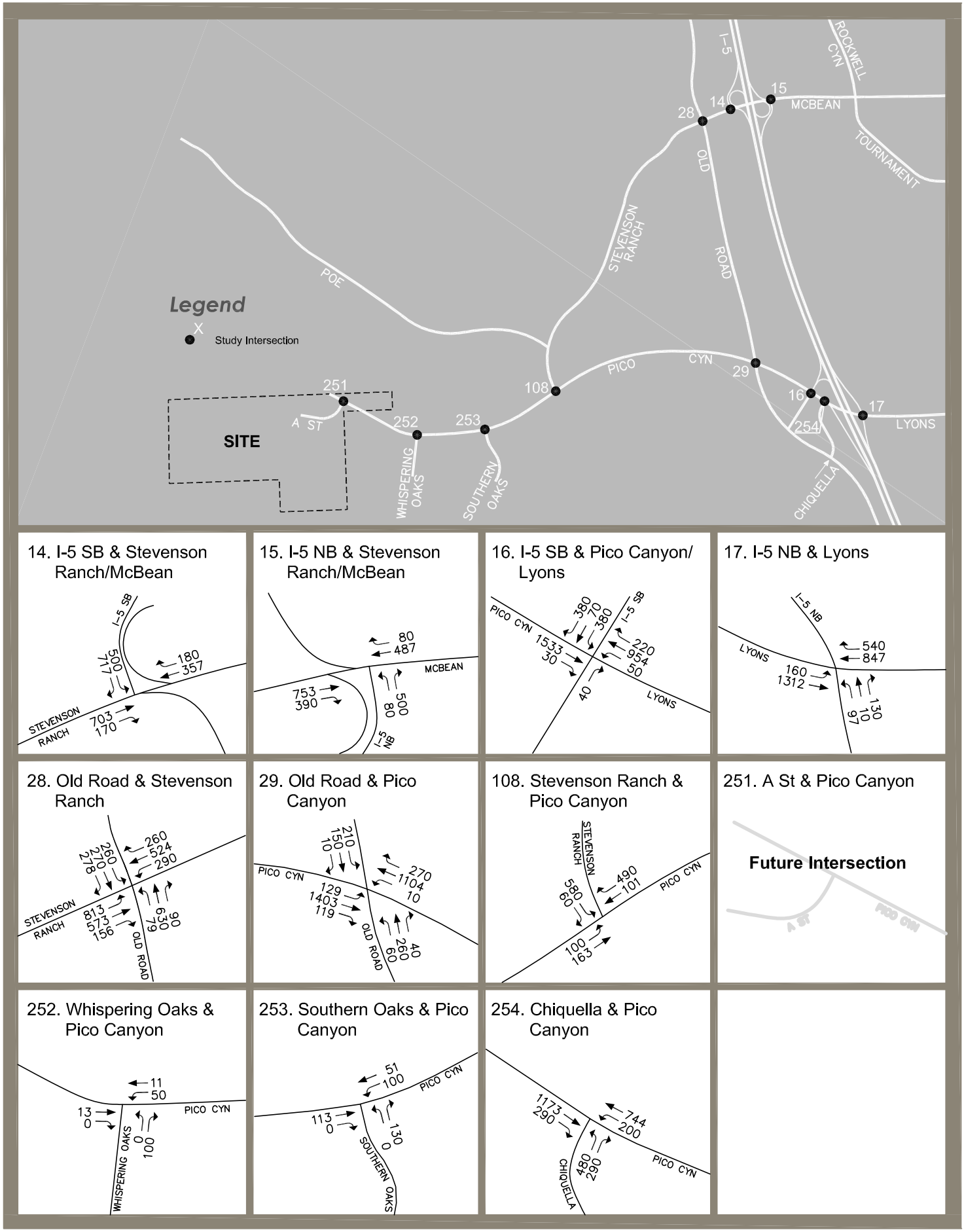

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Figure 4-5

AM Peak Hour Turning Movement Volumes
Cumulative Conditions without Project (2034)

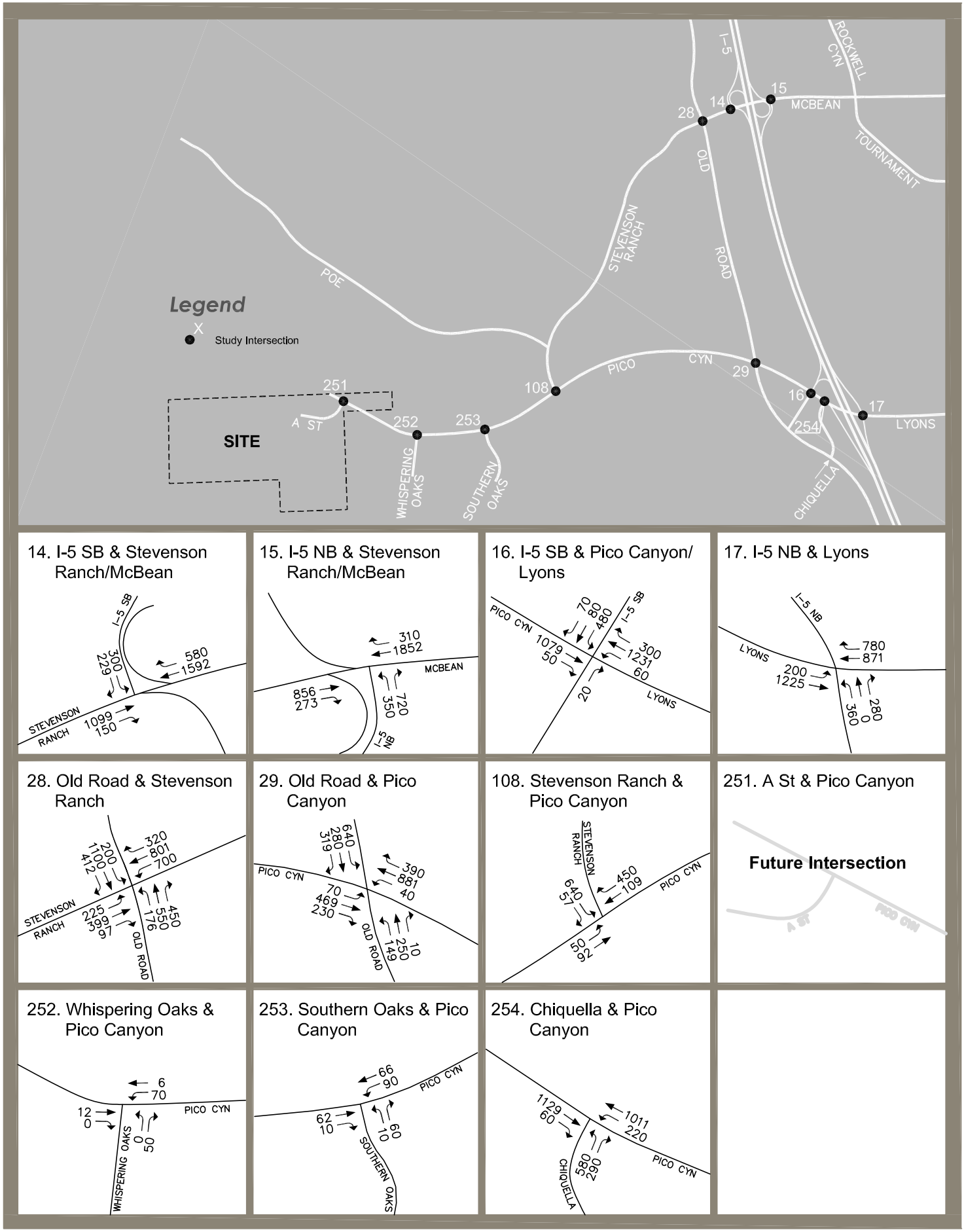

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Figure 4-6

PM Peak Hour Turning Movement Volumes
Cumulative Conditions without Project (2034)

Year 2034 cumulative conditions ADT volumes for the with-project condition are provided in Figure 4-7. The corresponding 2034 with-project peak hour turning movement volumes are provided in Figure 4-8 for the AM peak hour and in Figure 4-9 for the PM peak hour.

4.2.1 Cumulative Conditions Impact Analysis

Peak hour ICU values that correspond with the 2034 cumulative conditions traffic forecasts referenced above can be found in Table 4-2, which provides a comparison between the no-project and the with-project condition. As shown in the table, the project would contribute to a cumulative impact at the intersection of The Old Road and Stevenson Ranch Road during the PM peak hour by increasing LOS E conditions by 0.01. The table indicates that the project does not contribute to a significant impact on the other study intersections under 2034 cumulative conditions. Mitigation that addresses the cumulative impact is presented in the following section.

The Caltrans intersections would operate at LOS C or better with the proposed project under 2034 cumulative conditions based on the HCM delay methodology preferred by Caltrans. The HCM delay calculation worksheets are included in Appendix C.

4.2.2 Cumulative Conditions Mitigation

Improvements to mitigate the cumulative impact at the intersection of The Old Road and Stevenson Ranch Road consist of the following:

- The Old Road/Stevenson Ranch Road: Stripe a westbound right-turn lane, resulting in a total of two left-turn lanes, two through lanes, and one right-turn lane. Provide an overlap phase for the westbound right turn. This mitigation can be implemented without widening the roadway.

The project's fair-share contribution to the mitigation is four percent based on the project's share of the increase in traffic at this location. This improvement would result in LOS D during the AM and PM peak hour, as shown in the previously referenced Table 4-2, and it fully mitigates the project's contribution to the cumulative impact.

4.2.3 CMP Analysis

The Los Angeles County Congestion Management Program (CMP) requires that a proposed development address two major subject areas with respect to traffic impacts. These are the project's impacts on the CMP highway system and the project's impacts on the local and regional transit systems.

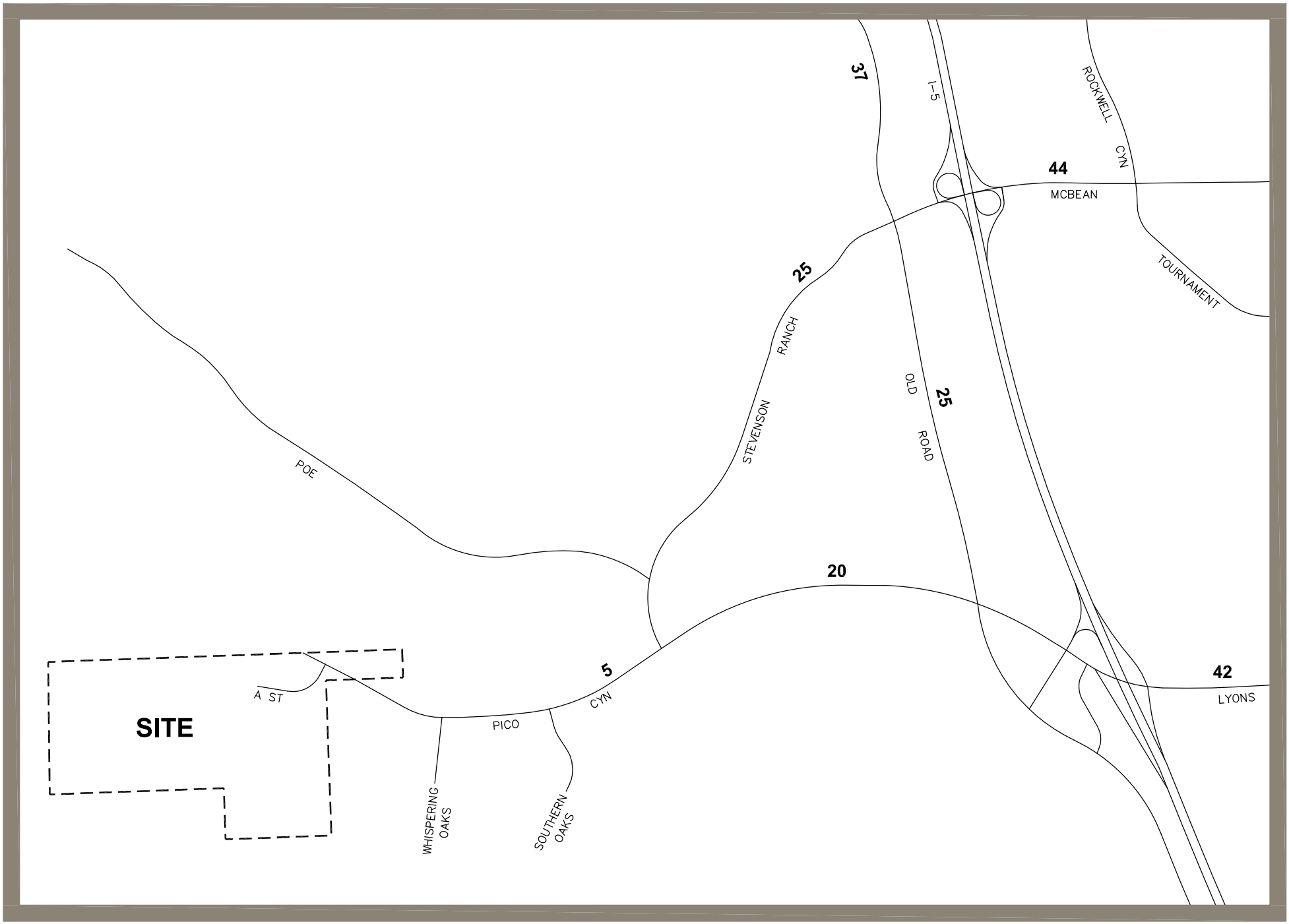

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Figure 4-7

ADT Volumes (000s) - Cumulative Conditions with Project (2034)

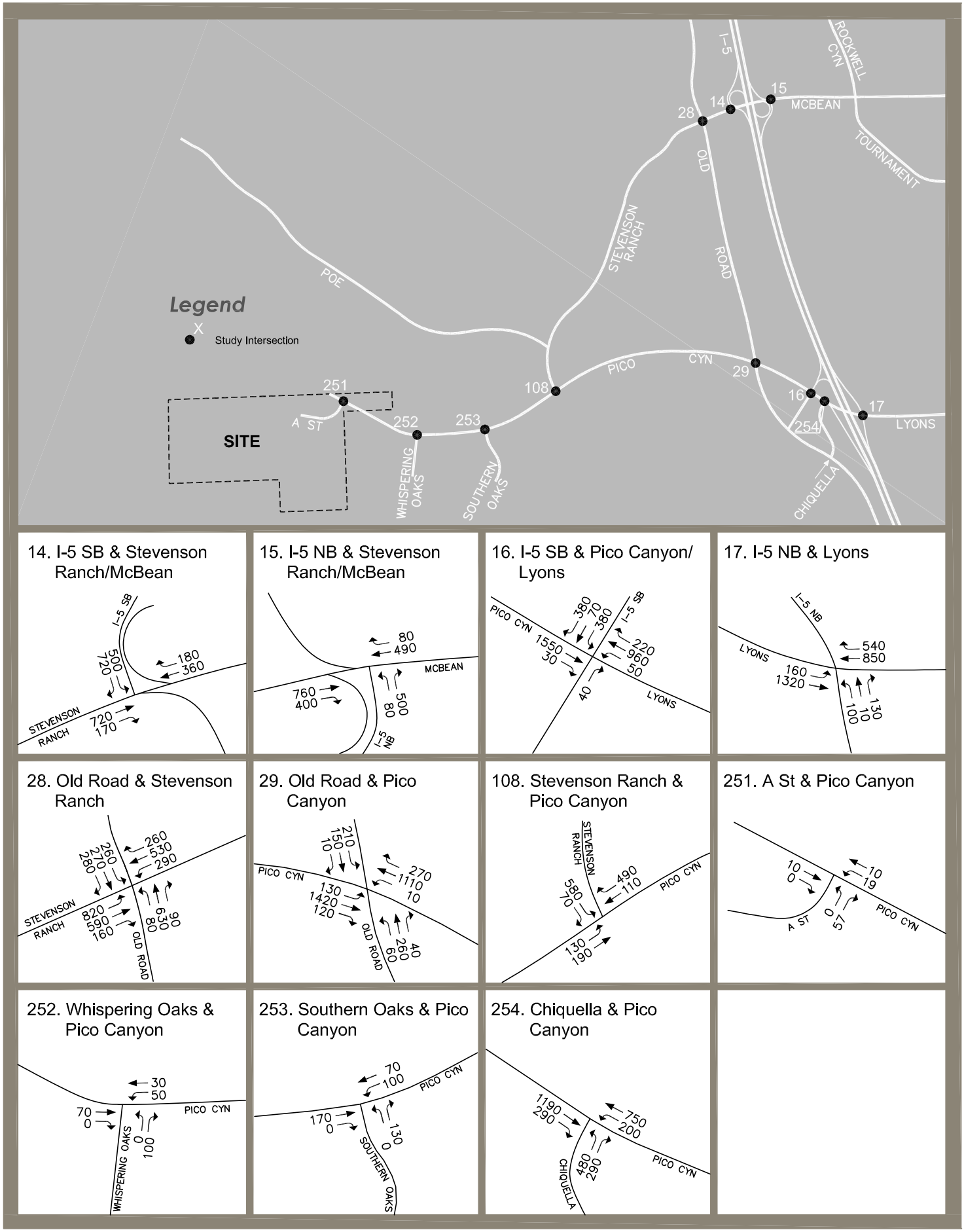

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Figure 4-8

AM Peak Hour Turning Movement Volumes
Cumulative Conditions with Project (2034)

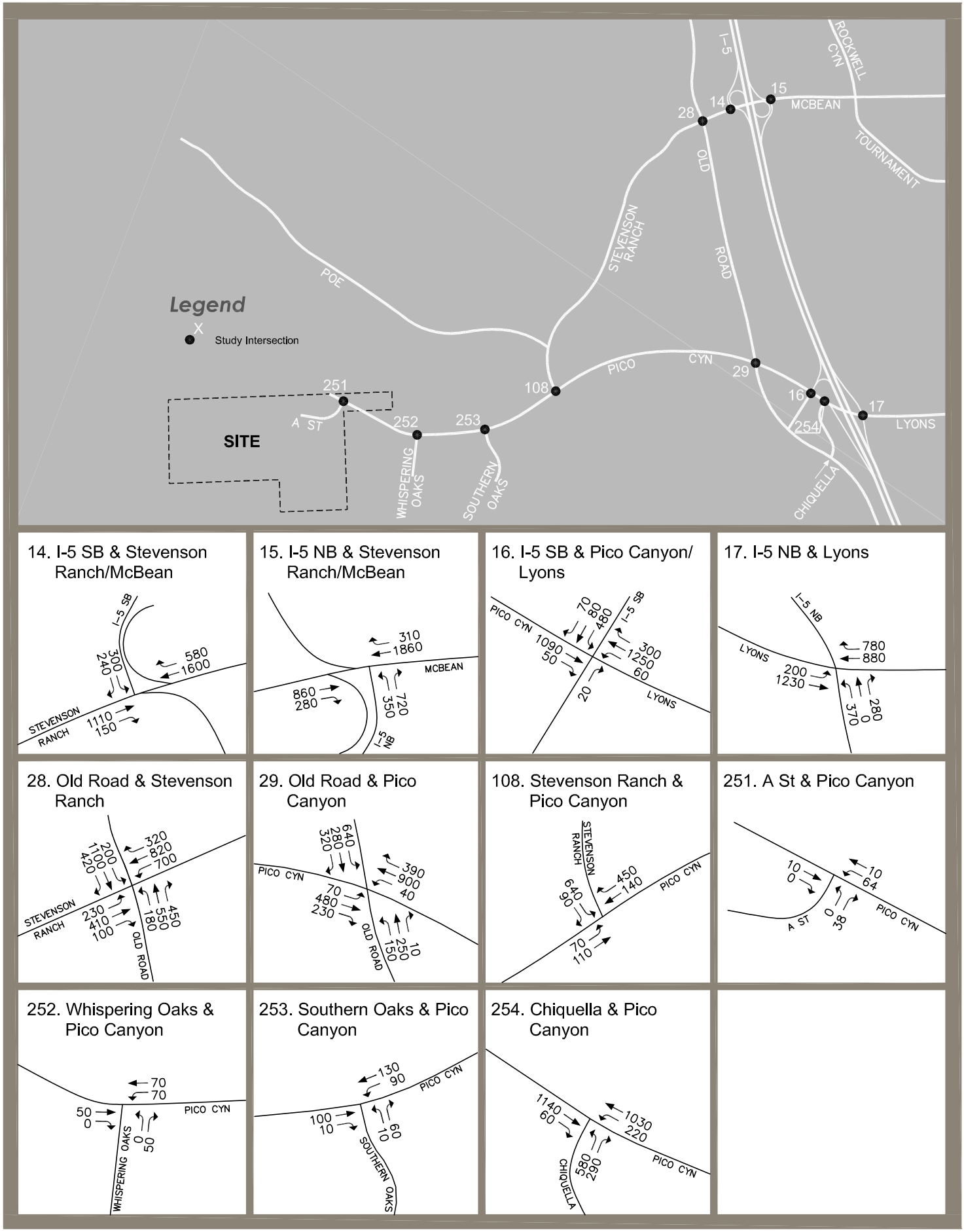

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Figure 4-9

PM Peak Hour Turning Movement Volumes
Cumulative Conditions with Project (2034)

Table 4-2 ICU Summary – Cumulative Conditions (2034) with and without Project

Intersection	Jurisdiction	Cumulative without Project				Cumulative with Project				Increase	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Joint Caltrans/County Intersections											
14. I-5 SB & Stevenson Ranch/McBean	County/Caltrans	.69	B	.79	C	.69	B	.79	C	.00	.00
16. I-5 SB/Marriott & Pico/Lyons	County/Caltrans	.77	C	.67	B	.77	C	.68	B	.00	.01
Joint Caltrans/City Intersections											
15. I-5 NB Ramps & McBean	City/Caltrans	.46	A	.61	B	.46	A	.61	B	.00	.00
17. I-5 NB Ramps & Lyons	City/Caltrans	.53	A	.76	C	.53	A	.77	C	.00	.01
County Intersections											
28. The Old Road & Stevenson Ranch	County	.92	E	.98	E	.92 (.84)	E D	.99 (.89)	E D	.00 (-.08)	**.01** (-.09)
29. The Old Road & Pico Canyon	County	.71	C	.72	C	.71	C	.72	C	.00	.00
108. Stevenson Ranch & Pico Canyon	County	.52	A	.46	A	.54	A	.47	A	.02	.01
251. "A" St. (VTTM 52796) & Pico Canyon	County	--		--		.16	A	.17	A	.16	.17
252. Whispering Oaks & Pico Canyon	County	.20	A	.18	A	.23	A	.21	A	.03	.03
253. Southern Oaks & Pico Canyon	County	.31	A	.25	A	.35	A	.27	A	.04	.02
254. Chiquella & Pico Canyon	County	.83	D	.85	D	.84	D	.85	D	.01	.00

Bold = Significant Impact
(XX) = ICU and LOS with Mitigation (see discussion in Section 4.2.2)

CMP Highway System

According to the CMP guidelines, the geographical area to be examined in a CMP traffic impact analysis (TIA) consists of the CMP monitoring locations that meet the following criteria:

- CMP intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (determined based on adjacent street traffic).

- Mainline freeway locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The CMP intersections nearest to the project site are the following:

- Valencia Boulevard & Magic Mountain Parkway (City)
- Chiquito Canyon Road & SR-126 (County)
- Railroad Avenue (formerly named San Fernando Road) & Lyons Avenue (County)

As shown by the project traffic distribution figures presented in Section 3.3, the number of trips to and from the proposed project is not forecast to exceed 50 peak hour trips at any of the nearby CMP intersections.

With respect to the mainline freeway, the CMP monitoring locations nearest to the project site are the following:

- I-5 north of SR-126
- I-5 north of SR-14
- I-5 north of Osborne Street

As shown by the project traffic distribution figures presented in Section 3.3, the number of trips to and from the proposed project is not forecast to exceed 50 peak hour trips on any of these monitoring locations.

Local and Regional Transit Systems

Another component of the CMP transportation impact analysis is a review of transit impacts. Public transit in the Santa Clarita Valley includes both bus and commuter rail service. The CMP review is to include evidence that transit operators received the Notice of Preparation, identification of existing transit services near the project, estimation of the number of project trips assigned to transit, information on facilities and/or programs that will encourage public transit use, and an analysis of project impacts on transit service.

With respect to the Notice of Preparation, the project's environmental documentation will include evidence that the applicable transit operators (i.e., SCT, Metro, and Metrolink) received the Notice of Preparation.

As to existing bus transit services, Section 2.1.3 provides a summary of the existing transit services in the vicinity of the project site; however, there currently are no transit lines within ¼ mile of the project site.

Since there are no transit lines currently within ¼ mile of the project site, the amount of transit trips to be generated by the project is expected to be negligible. However, SCT regularly reevaluates its transit routes as areas experience new development. Should SCT expand transit service to within ¼ mile of the project site, the project would generate approximately 48 daily transit trips as discussed below.

To estimate the number of project trips that would use public transit, the number of project vehicle trips (971 ADT) is multiplied by an occupancy factor (1.4), which is provided in the CMP, to determine total person trips. The number of person trips is then multiplied by the applicable MTA factor (3.5%), which is also provided in the CMP, to determine the number of transit trips generated by the project. Based on this calculation, the project is anticipated to generate approximately 48 daily transit trips.

With respect to the project's impacts on transit service, while the County does not have LOS standards applicable to future development such as the proposed project, the demand for transit service that would result from the project (approximately 48 daily transit trips, or approximately five peak hour trips) is not anticipate to impact transit services.

With respect to commuter rail, Metrolink, governed by the Southern California Regional Rail Authority (SCRAA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with transfer service between the bus and rail systems. The Metrolink station closest to the project site is located along Railroad Avenue just south of Lyons Canyon Road. A second Metrolink station is also located along Soledad Canyon Road east of Bouquet Canyon Road.

The proposed project has been designed for pedestrian connectivity and includes facilities for bicycle use, including, for example, room to accommodate the installation Class II bicycle lanes on Pico Canyon Road. Additionally, the proposed project would not conflict with the Metro Bicycle Transportation Strategic Plan to make cycling a viable travel choice by promoting links between bicycle facilities and the transit network.

Appendix A ICU WORKSHEETS

Peak hour intersection volume/capacity ratios are calculated by means of intersection capacity utilization (ICU) values. ICU calculations were performed for the intersections shown in Figure A-1. For simplicity, signalization is assumed at each intersection. Precise ICU calculations of existing non-signalized intersections would require a more detailed analysis.

The procedure is based on the critical movement methodology, and shows the amount of capacity utilized by each critical move. A capacity of 1600 vehicles per hour (VPH) per lane is assumed for County intersections (1750 vph per lane for City intersections) together with a .10 clearance interval. A "de-facto" right-turn lane is used in the ICU calculation for cases where a curb lane is wide enough to separately serve both through and right-turn traffic (typically with a width of 19 feet from curb to outside of through-lane with parking prohibited during peak periods). Such lanes are treated the same as striped right-turn lanes during the ICU calculations, but they are denoted on the ICU calculation worksheets using the letter "d" in place of a numerical entry for right-turn lanes.

The methodology also incorporates a check for right-turn capacity utilization. Both right-turn-on-green (RTOG) and right-turn-on-red (RTOR) capacity availability are calculated and checked against the total right-turn capacity need. If insufficient capacity is available, then an adjustment is made to the total capacity utilization value. The following example shows how this adjustment is made.

Example for Northbound Right

1. Right-Turn-On-Green (RTOG)

If NBT is critical move, then:

RTOG = V/C (NBT)

Otherwise,

RTOG = V/C (NBL) + V/C (SBT) - V/C (SBL)

2. Right-Turn-On-Red (RTOR)

If WBL is critical move, then:

RTOR = V/C (WBL)

Otherwise,

RTOR = V/C (EBL) + V/C (WBT) - V/C (EBT)

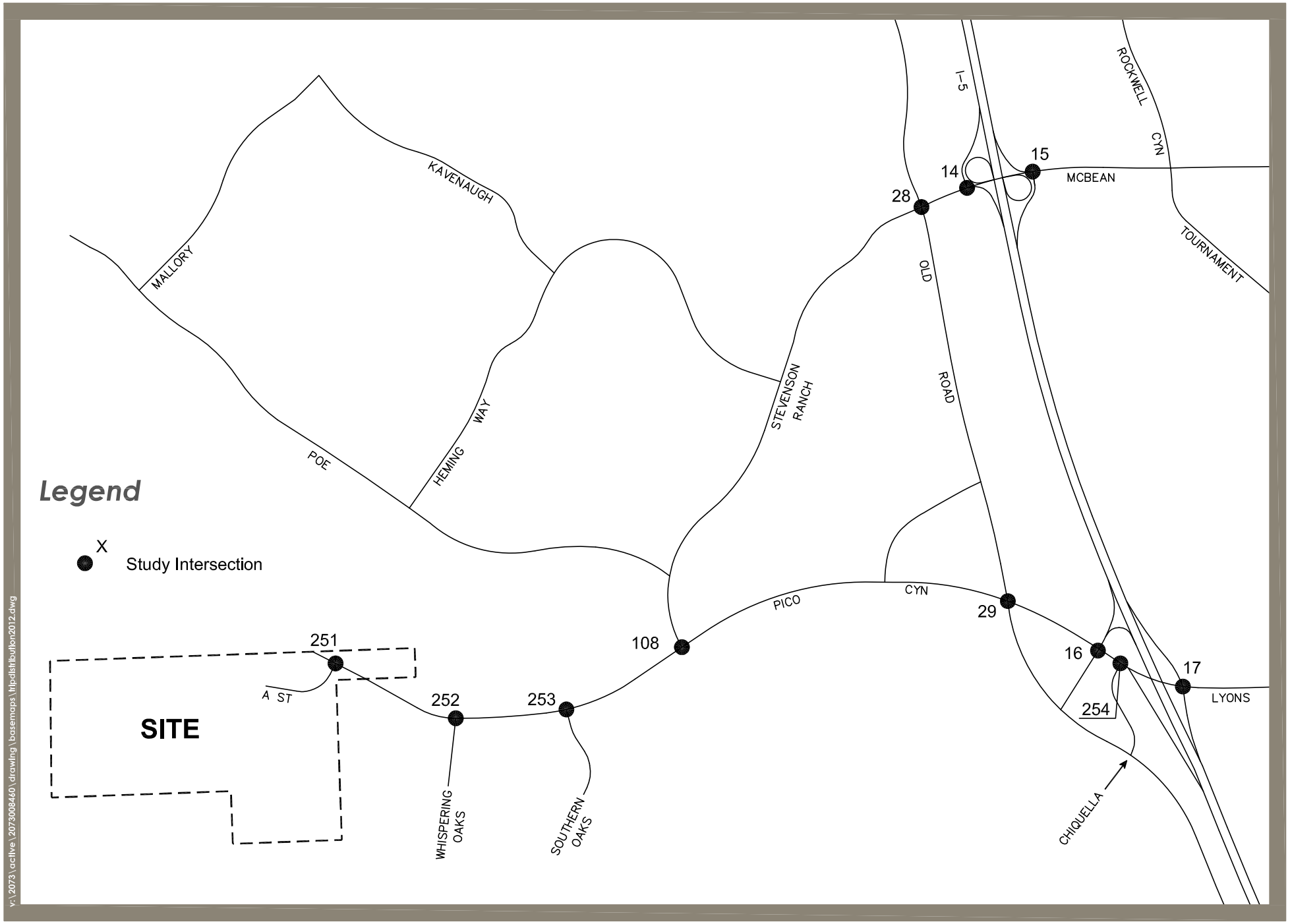

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Figure A-1

Intersection Location Map

A.2

3. Right-Turn Overlap Adjustment

If the northbound right is assumed to overlap with the adjacent westbound left, adjustments to the RTOG and RTOR values are made as follows:

RTOG = RTOG + V/C (WBL)

RTOR = RTOR - V/C (WBL)

4. Total Right-Turn Capacity (RTC) Availability for NBR

RTC = RTOG + factor x RTOR

Where factor = RTOR saturation flow factor (75%)

Right-turn adjustment is then as follows:

Additional ICU = V/C (NBR) - RTC

A zero or negative value indicates that adequate capacity is available and no adjustment is necessary. A positive value indicates that the available RTOR and RTOG capacity does not adequately accommodate the right-turn V/C; therefore, the right-turn is essentially considered to be a critical movement. In such cases, the right-turn adjustment is noted on the ICU worksheet and it is included in the total capacity utilization value. When it is determined that a right-turn adjustment is required for more than one right-turn movement, the word "multi" is printed on the worksheet instead of an actual right-turn movement reference, and the right-turn adjustments are cumulatively added to the total capacity utilization value. In such cases, further operational evaluation is typically carried out to determine if under actual operational conditions, the critical right-turns would operate simultaneously, and therefore a right-turn adjustment credit should be applied.

Shared Lane V/C Methodology

For intersection approaches where shared usage of a lane is permitted by more than one turn movement (e.g., left/through, through/right, left/through/right), the individual turn volumes are evaluated to determine whether dedication of the shared lane is warranted to any one given turn movement. The following example demonstrates how this evaluation is carried out:

Example for Shared Left/Through Lane

1. Average Lane Volume (ALV)

$$ALV = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Lanes (including shared lane)}}$$

2. ALV for Each Approach

$$\text{ALV (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Lanes (including shared lane)}}$$

$$\text{ALV (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Lanes (including shared lane)}}$$

3. Lane Dedication is Warranted

If ALV (Left) is greater than ALV, then full dedication of the shared lane to the left-turn approach is warranted. Left-turn and through V/C ratios for this case are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (including shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (excluding shared lane)}}$$

Similarly, if ALV (Through) is greater than ALV then full dedication to the through approach is warranted, and left-turn and through V/C ratios are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (excluding shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (including shared lane)}}$$

4. Lane Dedication is not Warranted

If ALV (Left) and ALV (Through) are both less than ALV, the left/through lane is assumed to be truly shared and each left, left/through or through approach lane carries an evenly distributed volume of traffic equal to ALV. A combined left/through V/C ratio is calculated as follows:

$$\text{V/C (Left/Through)} = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Capacity (including shared lane)}}$$

This V/C (Left/Through) ratio is assigned as the V/C (Through) ratio for the critical movement analysis and ICU summary listing.

If split phasing has not been designated for this approach, the relative proportion of V/C (Through) that is attributed to the left-turn volume is estimated as follows:

If approach has more than one left-turn lane (including shared lane), then:

V/C (Left) = V/C (Through)

If approach has only one left-turn lane (shared lane), then:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Single Approach Lane Capacity}}$$

If this left-turn movement is determined to be a critical movement, the V/C (Left) value is posted in brackets on the ICU summary printout.

These same steps are carried out for shared through/right lanes. If full dedication of a shared through/right lane to the right-turn movement is warranted, the right-turn V/C value calculated in step three is checked against the RTOR and RTOG capacity availability if the option to include right-turns in the V/C ratio calculations is selected. If the V/C value that is determined using the shared lane methodology described here is reduced due to RTOR and RTOG capacity availability, the V/C value for the through/right lanes is posted in brackets.

When an approach contains more than one shared lane (e.g., left/through and through/right), steps one and two listed above are carried out for the three turn movements combined. Step four is carried out if dedication is not warranted for either of the shared lanes. If dedication of one of the shared lanes is warranted to one movement or another, step three is carried out for the two movements involved, and then steps one through four are repeated for the two movements involved in the other shared lane.

14. I-5 SB ON/OFF Ramps & McBean

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1600	150	.09*	190	.12*
SBT	0	0	0		0	
SBR	1	1600	110	.07	260	.16
EBL	0	0	0		0	
EBT	2	3200	670	.21*	890	.28
EBR	1	1600	320	.20	140	.09
WBL	0	0	0		0	
WBT	2	3200	450	.14	910	.28*
WBR	1	1600	520	.33	550	.34
Right Turn Adjustment			WBR	.03*	SBR	.04*
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION .43 .54

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1600	150	.09*	190	.12*
SBT	0	0	0		0	
SBR	1	1600	113	.07	271	.17
EBL	0	0	0		0	
EBT	2	3200	687	.21*	901	.28
EBR	1	1600	320	.20	140	.09
WBL	0	0	0		0	
WBT	2	3200	453	.14	918	.29*
WBR	1	1600	520	.33	550	.34
Right Turn Adjustment			WBR	.03*	SBR	.05*
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION .43 .56

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1600	500	.31*	300	.19*
SBT	0	0	0		0	
SBR	1	1600	717	.45	229	.14
EBL	0	0	0		0	
EBT	2	3200	703	.22*	1099	.34
EBR	1	1600	170	.11	150	.09
WBL	0	0	0		0	
WBT	2	3200	357	.11	1592	.50*
WBR	1	1600	180	.11	580	.36
Right Turn Adjustment			SBR	.06*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .69 .79

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1600	500	.31*	300	.19*
SBT	0	0	0		0	
SBR	1	1600	720	.45	240	.15
EBL	0	0	0		0	
EBT	2	3200	720	.23*	1110	.35
EBR	1	1600	170	.11	150	.09
WBL	0	0	0		0	
WBT	2	3200	360	.11	1600	.50*
WBR	1	1600	180	.11	580	.36
Right Turn Adjustment			SBR	.05*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .69 .79

15. I-5 NB ON/OFF Ramps & McBean

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3500	90	.03*	220	.06*
NBT	0	0	0		0	
NBR	2	3500	580	.17	610	.17
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	570	.16	850	.24
EBR	1	1750	240	.14	190	.11
WBL	0	0	0		0	
WBT	3	5250	900	.21*	1300	.28*
WBR	0	0	200		150	
Right Turn Adjustment			NBR	.10*	NBR	.08*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .44 .52

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3500	90	.03*	220	.06*
NBT	0	0	0		0	
NBR	2	3500	580	.17	610	.17
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	577	.16	854	.24
EBR	1	1750	250	.14	197	.11
WBL	0	0	0		0	
WBT	3	5250	903	.21*	1308	.28*
WBR	0	0	200		150	
Right Turn Adjustment			NBR	.10*	NBR	.08*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .44 .52

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3500	80	.02*	350	.10*
NBT	0	0	0		0	
NBR	2	3500	500	.14	720	.21
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	753	.22*	856	.24
EBR	1	1750	390	.22	273	.16
WBL	0	0	0		0	
WBT	3	5250	487	.11	1852	.41*
WBR	0	0	80		310	
Right Turn Adjustment			NBR	.12*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .46 .61

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3500	80	.02*	350	.10*
NBT	0	0	0		0	
NBR	2	3500	500	.14	720	.21
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	760	.22*	860	.25
EBR	1	1750	400	.23	280	.16
WBL	0	0	0		0	
WBT	3	5250	490	.11	1860	.41*
WBR	0	0	80		310	
Right Turn Adjustment			NBR	.12*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .46 .61

16. I-5 SB ON/OFF Ramps & Pico Canyon/Lyons

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	1	1600	60	.04	60	.04
SBL	1.5		290		420	
SBT	0.5	3200	70	.11*	100	.16*
SBR	1	1600	80	.05	130	.08
EBL	0	0	0		0	
EBT	2	3200	820	.27*	890	.29
EBR	0	0	40		30	
WBL	1	1600	30	.02*	60	.04
WBT	2	3200	540	.17	1180	.37*
WBR	1	1600	330	.21	230	.14
Right Turn Adjustment			NBR	.02*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .52 .63

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	1	1600	60	.04	60	.04
SBL	1.5		290		420	
SBT	0.5	3200	70	.11*	100	.16*
SBR	1	1600	80	.05	130	.08
EBL	0	0	0		0	
EBT	2	3200	837	.27*	901	.29
EBR	0	0	40		30	
WBL	1	1600	30	.02*	60	.04
WBT	2	3200	546	.17	1199	.37*
WBR	1	1600	330	.21	230	.14
Right Turn Adjustment			NBR	.02*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .52 .63

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	1	1600	40	.03	20	.01
SBL	1.5		380		480	
SBT	0.5	3200	70	.14*	80	.18*
SBR	1	1600	380	.24	70	.04
EBL	0	0	0		0	
EBT	2	3200	1533	.49*	1079	.35*
EBR	0	0	30		50	
WBL	1	1600	50	.03*	60	.04*
WBT	2	3200	954	.30	1231	.38
WBR	1	1600	220	.14	300	.19
Right Turn Adjustment			NBR	.01*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .77 .67

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	1	1600	40	.03	20	.01
SBL	1.5		380		480	
SBT	0.5	3200	70	.14*	80	.18*
SBR	1	1600	380	.24	70	.04
EBL	0	0	0		0	
EBT	2	3200	1550	.49*	1090	.36*
EBR	0	0	30		50	
WBL	1	1600	50	.03*	60	.04*
WBT	2	3200	960	.30	1250	.39
WBR	1	1600	220	.14	300	.19
Right Turn Adjustment			NBR	.01*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .77 .68

17. I-5 NB ON/OFF Ramps & Lyons

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		290	{.08}*	660	{.19}*
NBT	0.5	3500	0	.08	0	.19
NBR	f		290		540	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1750	190	.11*	190	.11*
EBT	2	3500	650	.19	920	.26
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5250	790	.23*	850	.24*
WBR	0	0	450	.26	390	
Right Turn Adjustment			WBR	.03*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.55**		**.64**

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		293	{.08}*	670	{.19}*
NBT	0.5	3500	0	.08	0	.19
NBR	f		290		540	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1750	190	.11*	190	.11*
EBT	2	3500	658	.19	925	.26
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5250	793	.23*	859	.24*
WBR	0	0	450	.26	390	
Right Turn Adjustment			WBR	.03*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.55**		**.64**

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		97	{.03}*	360	{.10}*
NBT	0.5	3500	10	.03	0	.10
NBR	f		130		280	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1750	160	.09	200	.11*
EBT	2	3500	1312	.37*	1225	.35
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5250	847	.24	871	.25*
WBR	0	0	540	.31	780	.45
Right Turn Adjustment			WBR	.03*	WBR	.20*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.53**		**.76**

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		100	{.03}*	370	{.11}*
NBT	0.5	3500	10	.03	0	.11
NBR	f		130		280	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1750	160	.09	200	.11*
EBT	2	3500	1320	.38*	1230	.35
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5250	850	.24	880	.25*
WBR	0	0	540	.31	780	.45
Right Turn Adjustment			WBR	.02*	WBR	.20*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.53**		**.77**

28. Old Road & Stevenson Ranch

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	70	.04*	160	.10*
NBT	3	4800	300	.06	420	.09
NBR	1	1600	160	.10	450	.28
SBL	1	1600	50	.03	70	.04
SBT	2	3200	310	.10*	520	.16*
SBR	1	1600	310	.19	440	.28
EBL	2	2880	720	.25*	300	.10
EBT	3	4800	770	.16	430	.09*
EBR	1	1600	150	.09	110	.07
WBL	2	2880	280	.10	580	.20*
WBT	2	3200	230	.09*	560	.19
WBR	0	0	70		60	
Right Turn Adjustment					SBR	.04*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.58**		**.69**

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	71	.04*	164	.10*
NBT	3	4800	300	.06	420	.09
NBR	1	1600	160	.10	450	.28
SBL	1	1600	50	.03	70	.04
SBT	2	3200	310	.10*	520	.16*
SBR	1	1600	312	.20	448	.28
EBL	2	2880	727	.25*	305	.11*
EBT	3	4800	787	.16	441	.09
EBR	1	1600	154	.10	113	.07
WBL	2	2880	280	.10	580	.20
WBT	2	3200	236	.10*	579	.20*
WBR	0	0	70		60	
Right Turn Adjustment					SBR	.04*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.59**		**.71**

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	79	.05	176	.11*
NBT	3	4800	630	.13*	550	.11
NBR	1	1600	90	.06	450	.28
SBL	1	1600	260	.16*	200	.13
SBT	2	3200	270	.08	1100	.34*
SBR	1	1600	278	.17	412	.26
EBL	2	2880	813	.28*	225	.08*
EBT	3	4800	573	.12	399	.08
EBR	1	1600	156	.10	97	.06
WBL	2	2880	290	.10	700	.24
WBT	2	3200	524	.25*	801	.35*
WBR	0	0	260		320	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.92**		**.98**

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	80	.05	180	.11*
NBT	3	4800	630	.13*	550	.11
NBR	1	1600	90	.06	450	.28
SBL	1	1600	260	.16*	200	.13
SBT	2	3200	270	.08	1100	.34*
SBR	1	1600	280	.18	420	.26
EBL	2	2880	820	.28*	230	.08*
EBT	3	4800	590	.12	410	.09
EBR	1	1600	160	.10	100	.06
WBL	2	2880	290	.10	700	.24
WBT	2	3200	530	.25*	820	.36*
WBR	0	0	260		320	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.92**		**.99**

28. Old Road & Stevenson Ranch

Cumulative Conditions with Project (2034) with Mitigation

			AM PK HOUR		PM PK HOUR	
	LANES	CAPACITY	VOL	V/C	VOL	V/C
NBL	1	1600	80	.05	180	.11*
NBT	3	4800	630	.13*	550	.11
NBR	1	1600	90	.06	450	.28
SBL	1	1600	260	.16*	200	.13
SBT	2	3200	270	.08	1100	.34*
SBR	1	1600	280	.18	420	.26
EBL	2	2880	820	.28*	230	.08*
EBT	3	4800	590	.12	410	.09
EBR	1	1600	160	.10	100	.06
WBL	2	2880	290	.10	700	.24
WBT	2	3200	530	.17*	820	.26*
WBR	1	1600	260	.16	320	.20
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION .84 .89

29. Old Road & Pico Canyon

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	50	.03	140	.09
NBT	2	3200	190	.08*	270	.11*
NBR	0	0	70		70	
SBL	2	2880	240	.08*	490	.17*
SBT	2	3200	190	.07	260	.10
SBR	0	0	30		50	
EBL	1	1600	40	.03	50	.03*
EBT	2	3200	530	.17*	370	.12
EBR	1	1600	100	.06	70	.04
WBL	1	1600	20	.01*	50	.03
WBT	2	3200	290	.09	700	.22*
WBR	f		290		520	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .44 .63

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	50	.03	141	.09
NBT	2	3200	190	.08*	270	.11*
NBR	0	0	70		70	
SBL	2	2880	240	.08*	490	.17*
SBT	2	3200	190	.07	260	.10
SBR	0	0	30		51	
EBL	1	1600	41	.03	50	.03*
EBT	2	3200	547	.17*	381	.12
EBR	1	1600	101	.06	70	.04
WBL	1	1600	20	.01*	50	.03
WBT	2	3200	296	.09	719	.22*
WBR	f		290		520	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .44 .63

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	60	.04	149	.09
NBT	2	3200	260	.09*	250	.08*
NBR	0	0	40		10	
SBL	2	2880	210	.07*	640	.22*
SBT	2	3200	150	.05	280	.18
SBR	0	0	10		319	.20
EBL	1	1600	129	.08	70	.04*
EBT	2	3200	1403	.44*	469	.15
EBR	1	1600	119	.07	230	.14
WBL	1	1600	10	.01*	40	.03
WBT	2	3200	1104	.35	881	.28*
WBR	f		270		390	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .71 .72

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	60	.04	150	.09
NBT	2	3200	260	.09*	250	.08*
NBR	0	0	40		10	
SBL	2	2880	210	.07*	640	.22*
SBT	2	3200	150	.05	280	.18
SBR	0	0	10		320	.20
EBL	1	1600	130	.08	70	.04*
EBT	2	3200	1420	.44*	480	.15
EBR	1	1600	120	.08	230	.14
WBL	1	1600	10	.01*	40	.03
WBT	2	3200	1110	.35	900	.28*
WBR	f		270		390	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .71 .72

108. Stevenson Ranch & Pico Canyon

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	2880	600	.21*	310	.11*
SBT	0	0	0		0	
SBR	1	1600	50	.03	80	.05
EBL	1	1600	90	.06*	70	.04*
EBT	2	3200	150	.05	70	.02
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	90	.06*	100	.06*
WBR	1	1600	340	.21	620	.39
Right Turn Adjustment					WBR	.25*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .43 .56

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	2880	600	.21*	310	.11*
SBT	0	0	0		0	
SBR	1	1600	60	.04	113	.07
EBL	1	1600	120	.08*	90	.06*
EBT	2	3200	177	.06	88	.03
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	99	.06*	131	.08*
WBR	1	1600	340	.21	620	.39
Right Turn Adjustment					WBR	.23*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .45 .58

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	2880	580	.20*	640	.22*
SBT	0	0	0		0	
SBR	1	1600	60	.04	57	.04
EBL	1	1600	100	.06*	50	.03*
EBT	2	3200	163	.05	92	.03
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	101	.06*	109	.07*
WBR	1	1600	490	.31	450	.28
Right Turn Adjustment			WBR	.10*	WBR	.04*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .52 .46

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	2880	580	.20*	640	.22*
SBT	0	0	0		0	
SBR	1	1600	70	.04	90	.06
EBL	1	1600	130	.08*	70	.04*
EBT	2	3200	190	.06	110	.03
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	110	.07*	140	.09*
WBR	1	1600	490	.31	450	.28
Right Turn Adjustment			WBR	.09*	WBR	.02*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .54 .47

251. A St & Pico Canyon

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.04*	0	.02*
NBR	0	0	57		38	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	10	.01*	10	.01*
EBR	0	0	0		0	
WBL	1	1600	19	.01*	64	.04*
WBT	1	1600	10	.01	10	.01
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.16**		**.17**

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.04*	0	.02*
NBR	0	0	57		38	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	10	.01*	10	.01*
EBR	0	0	0		0	
WBL	1	1600	19	.01*	64	.04*
WBT	1	1600	10	.01	10	.01
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.16**		**.17**

252. Whispering Oaks & Pico Canyon

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.06*	0	.03*
NBR	0	0	100		50	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	10	.01*	10	.01*
EBR	0	0	0		0	
WBL	1	1600	50	.03*	70	.04*
WBT	1	1600	10	.01	10	.01
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.20**		**.18**

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.06*	0	.03*
NBR	0	0	100		50	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	67	.04*	48	.03*
EBR	0	0	0		0	
WBL	1	1600	50	.03*	70	.04*
WBT	1	1600	29	.02	74	.05
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.23**		**.20**

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.06*	0	.03*
NBR	0	0	100		50	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	13	.01*	12	.01*
EBR	0	0	0		10	
WBL	1	1600	50	.03*	70	.04*
WBT	1	1600	11	.01	6	.00
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.20**		**.18**

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	0	.06*	0	.03*
NBR	0	0	100		50	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	70	.04*	50	.04*
EBR	0	0	0		10	
WBL	1	1600	50	.03*	70	.04*
WBT	1	1600	30	.02	70	.04
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.23**		**.21**

253. Southern Oaks & Pico Canyon

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		10	
NBT	1	1600	0	.08*	0	.04*
NBR	0	0	130		60	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	110	.07*	60	.04*
EBR	0	0	0		10	
WBL	1	1600	100	.06*	90	.06*
WBT	1	1600	50	.03	70	.04
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .31 .24

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		10	
NBT	1	1600	0	.08*	0	.04*
NBR	0	0	130		60	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	167	.10*	98	.07*
EBR	0	0	0		10	
WBL	1	1600	100	.06*	90	.06*
WBT	1	1600	69	.04	134	.08
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .34 .27

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		10	
NBT	1	1600	0	.08*	0	.04*
NBR	0	0	130		60	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	113	.07*	62	.05*
EBR	0	0	0		10	
WBL	1	1600	100	.06*	90	.06*
WBT	1	1600	51	.03	66	.04
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .31 .25

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		10	
NBT	1	1600	0	.08*	0	.04*
NBR	0	0	130		60	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	170	.11*	100	.07*
EBR	0	0	0		10	
WBL	1	1600	100	.06*	90	.06*
WBT	1	1600	70	.04	130	.08
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION .35 .27

254. Chiquella & Pico Canyon

Existing

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	20	.01*	40	.03*
NBT	0	0	10		0	
NBR	2	3200	260	.08	260	.08
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	10		10	
EBL	0	0	10		10	
EBT	3	4800	1080	.25*	1170	.27*
EBR	0	0	100		110	
WBL	1	1600	180	.11*	200	.13*
WBT	3	4800	880	.19	1280	.27
WBR	0	0	20		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.47**		**.53**

Existing + Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	20	.01*	40	.03*
NBT	0	0	10		0	
NBR	2	3200	260	.08	260	.08
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	10		10	
EBL	0	0	10		10	
EBT	3	4800	1097	.25*	1181	.27*
EBR	0	0	100		110	
WBL	1	1600	180	.11*	200	.13*
WBT	3	4800	886	.19	1299	.27
WBR	0	0	20		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.47**		**.53**

Cumulative Conditions No-Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	480	.30*	580	.36*
NBT	0	0	0		0	
NBR	2	3200	290	.09	290	.09
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	4800	1173	.30*	1129	.25*
EBR	0	0	290		60	
WBL	1	1600	200	.13*	220	.14*
WBT	3	4800	744	.16	1011	.21
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.83**		**.85**

Cumulative Conditions with Project (2034)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	480	.30*	580	.36*
NBT	0	0	0		0	
NBR	2	3200	290	.09	290	.09
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	4800	1190	.31*	1140	.25*
EBR	0	0	290		60	
WBL	1	1600	200	.13*	220	.14*
WBT	3	4800	750	.16	1030	.21
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.84**		**.85**

Appendix B TRAFFIC COUNT WORKSHEETS

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : h1402127
Site Code : 00003873
Start Date : 3/13/2014
Page No : 1

Groups Printed- Turning Movements

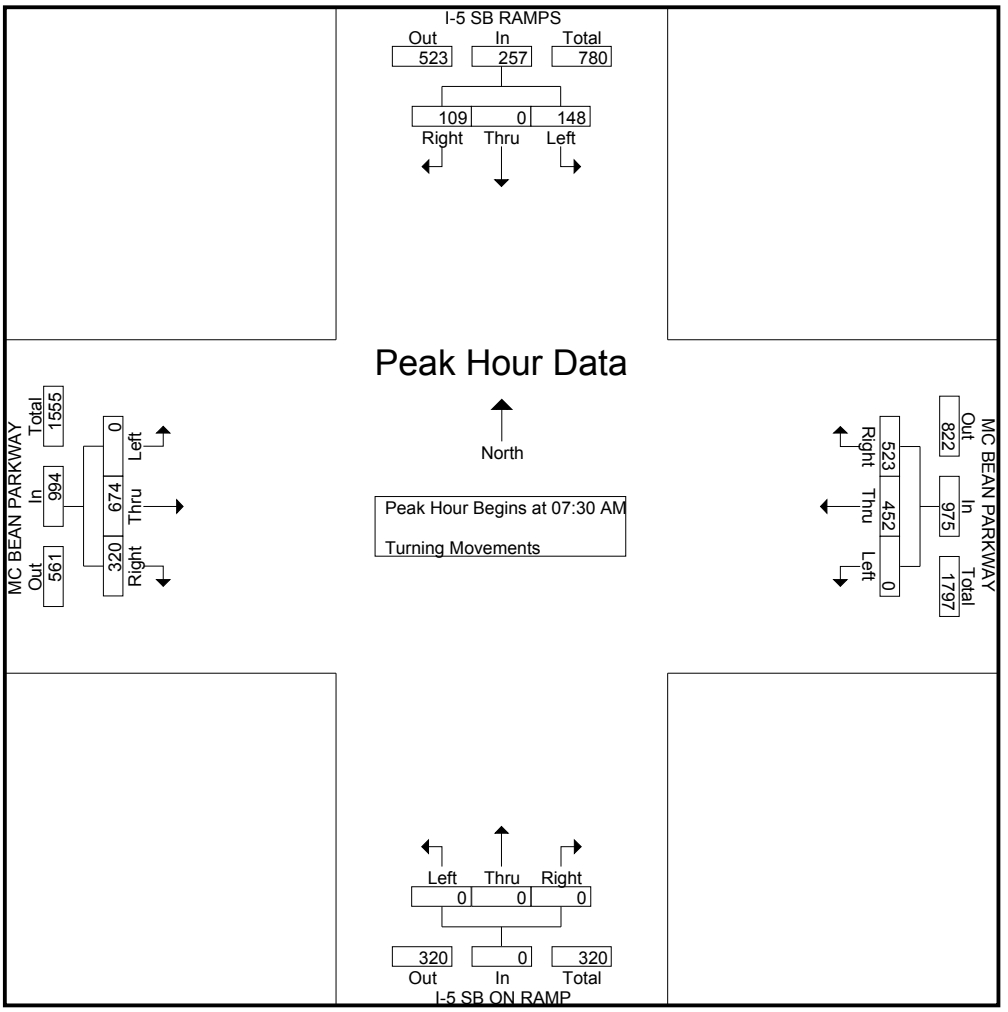
	I-5 SB RAMPS Southbound			MC BEAN PARKWAY Westbound			I-5 SB ON RAMP Northbound			MC BEAN PARKWAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	9	0	24	139	85	0	0	0	0	71	108	0	436
07:15 AM	19	0	14	162	83	0	0	0	0	82	96	0	456
07:30 AM	25	0	25	129	96	0	0	0	0	81	131	0	487
07:45 AM	27	0	47	136	107	0	0	0	0	88	203	0	608
Total	80	0	110	566	371	0	0	0	0	322	538	0	1987
08:00 AM	27	0	42	136	146	0	0	0	0	73	172	0	596
08:15 AM	30	0	34	122	103	0	0	0	0	78	168	0	535
08:30 AM	26	0	32	107	93	0	0	0	0	64	109	0	431
08:45 AM	28	0	25	102	89	0	0	0	0	69	129	0	442
Total	111	0	133	467	431	0	0	0	0	284	578	0	2004
*** BREAK ***													
04:30 PM	55	0	38	106	180	0	0	0	0	32	211	0	622
04:45 PM	44	0	46	127	230	0	0	0	0	33	213	0	693
Total	99	0	84	233	410	0	0	0	0	65	424	0	1315
05:00 PM	67	0	40	147	212	0	0	0	0	37	215	0	718
05:15 PM	63	0	55	149	236	0	0	0	0	32	222	0	757
05:30 PM	89	0	53	124	234	0	0	0	0	38	235	0	773
05:45 PM	54	0	44	99	222	0	0	0	0	40	208	0	667
Total	273	0	192	519	904	0	0	0	0	147	880	0	2915
06:00 PM	59	0	48	98	212	0	0	0	0	32	263	0	712
06:15 PM	43	0	36	97	217	0	0	0	0	29	222	0	644
Grand Total	665	0	603	1980	2545	0	0	0	0	879	2905	0	9577
Apprch %	52.4	0	47.6	43.8	56.2	0	0	0	0	23.2	76.8	0	
Total %	6.9	0	6.3	20.7	26.6	0	0	0	0	9.2	30.3	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : h1402127
Site Code : 00003873
Start Date : 3/13/2014
Page No : 2

	I-5 SB RAMPS Southbound				MC BEAN PARKWAY Westbound				I-5 SB ON RAMP Northbound				MC BEAN PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	25	0	25	50	129	96	0	225	0	0	0	0	81	131	0	212	487
07:45 AM	27	0	**47**	**74**	**136**	107	0	243	0	0	0	0	**88**	**203**	0	**291**	**608**
08:00 AM	27	0	42	69	136	**146**	0	**282**	0	0	0	0	73	172	0	245	596
08:15 AM	**30**	0	34	64	122	103	0	225	0	0	0	0	78	168	0	246	535
Total Volume	109	0	148	257	523	452	0	975	0	0	0	0	320	674	0	994	2226
% App. Total	42.4	0	57.6		53.6	46.4	0		0	0	0		32.2	67.8	0		
PHF	.908	.000	.787	.868	.961	.774	.000	.864	.000	.000	.000	.000	.909	.830	.000	.854	.915

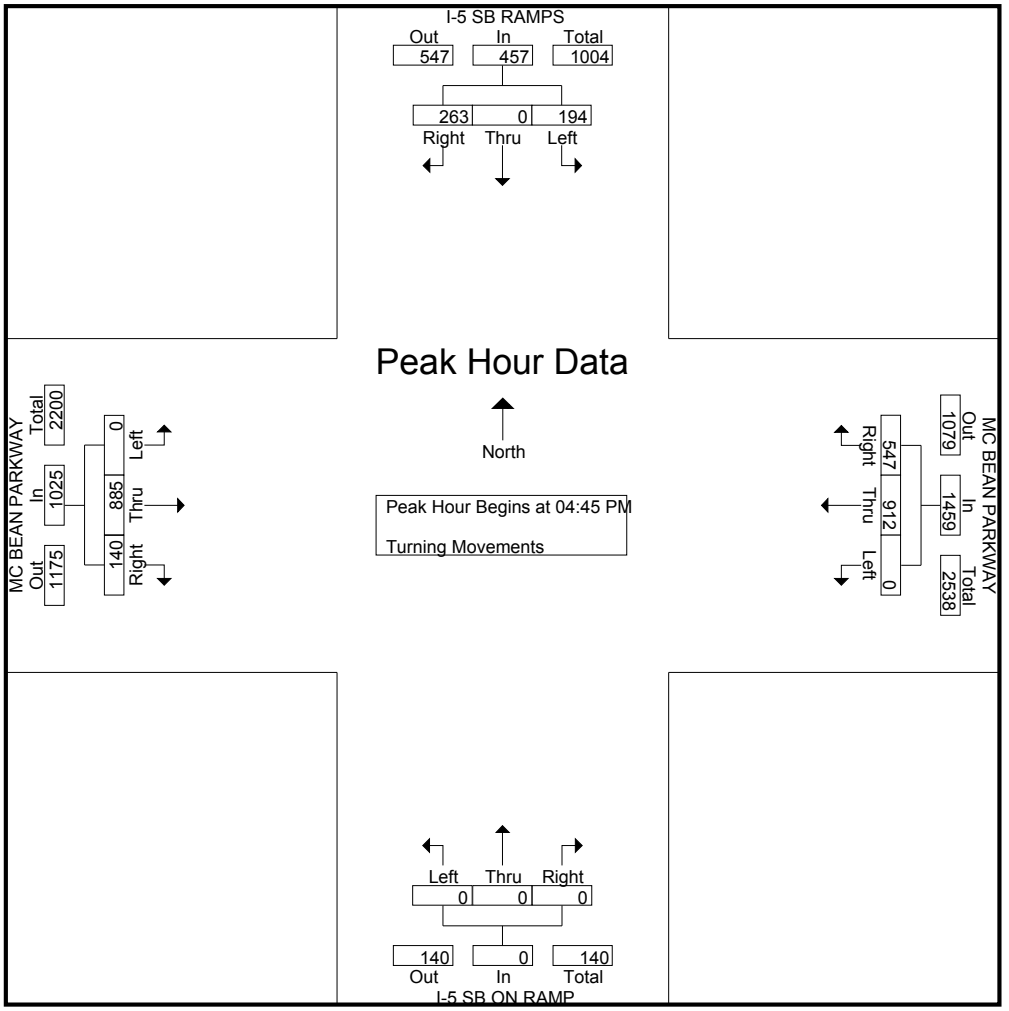


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : h1402127
Site Code : 00003873
Start Date : 3/13/2014
Page No : 3

	I-5 SB RAMPS Southbound				MC BEAN PARKWAY Westbound				I-5 SB ON RAMP Northbound				MC BEAN PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	44	0	46	90	127	230	0	357	0	0	0	0	33	213	0	246	693
05:00 PM	67	0	40	107	147	212	0	359	0	0	0	0	37	215	0	252	718
05:15 PM	63	0	**55**	118	**149**	**236**	0	**385**	0	0	0	0	32	222	0	254	757
05:30 PM	**89**	0	53	**142**	124	234	0	358	0	0	0	0	**38**	**235**	0	**273**	**773**
Total Volume	263	0	194	457	547	912	0	1459	0	0	0	0	140	885	0	1025	2941
% App. Total	57.5	0	42.5		37.5	62.5	0		0	0	0		13.7	86.3	0		
PHF	.739	.000	.882	.805	.918	.966	.000	.947	.000	.000	.000	.000	.921	.941	.000	.939	.951



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : H1402128
Site Code : 00003873
Start Date : 3/11/2014
Page No : 1

Groups Printed- Turning Movements

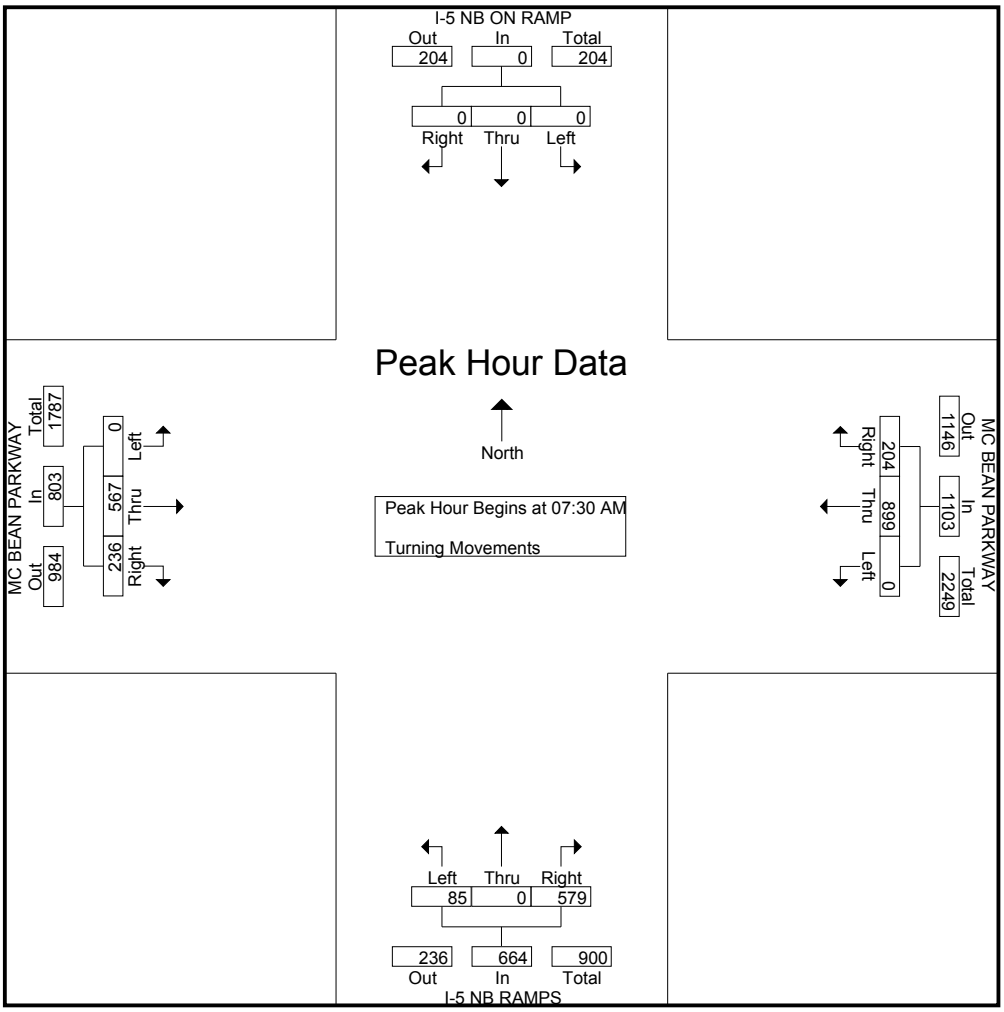
	I-5 NB ON RAMP Southbound			MC BEAN PARKWAY Westbound			I-5 NB RAMPS Northbound			MC BEAN PARKWAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	34	197	0	78	0	11	22	83	0	425
07:15 AM	0	0	0	27	224	0	87	0	12	33	93	0	476
07:30 AM	0	0	0	40	226	0	128	0	11	51	116	0	572
07:45 AM	0	0	0	66	229	0	185	0	23	61	185	0	749
Total	0	0	0	167	876	0	478	0	57	167	477	0	2222
08:00 AM	0	0	0	56	247	0	169	0	25	68	144	0	709
08:15 AM	0	0	0	42	197	0	97	0	26	56	122	0	540
08:30 AM	0	0	0	48	179	0	127	0	18	33	121	0	526
08:45 AM	0	0	0	32	193	0	166	0	21	32	140	0	584
Total	0	0	0	178	816	0	559	0	90	189	527	0	2359
*** BREAK ***													
04:30 PM	0	0	0	34	226	0	113	0	37	51	198	0	659
04:45 PM	0	0	0	36	324	0	153	0	62	42	208	0	825
Total	0	0	0	70	550	0	266	0	99	93	406	0	1484
05:00 PM	0	0	0	44	332	0	167	0	38	43	197	0	821
05:15 PM	0	0	0	41	355	0	134	0	61	48	233	0	872
05:30 PM	0	0	0	31	284	0	159	0	62	53	211	0	800
05:45 PM	0	0	0	20	221	0	167	0	61	56	214	0	739
Total	0	0	0	136	1192	0	627	0	222	200	855	0	3232
06:00 PM	0	0	0	28	231	0	160	0	70	48	223	0	760
06:15 PM	0	0	0	28	279	0	178	0	64	71	213	0	833
Grand Total	0	0	0	607	3944	0	2268	0	602	768	2701	0	10890
Apprch %	0	0	0	13.3	86.7	0	79	0	21	22.1	77.9	0	
Total %	0	0	0	5.6	36.2	0	20.8	0	5.5	7.1	24.8	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : H1402128
Site Code : 00003873
Start Date : 3/11/2014
Page No : 2

	I-5 NB ON RAMP Southbound				MC BEAN PARKWAY Westbound				I-5 NB RAMPS Northbound				MC BEAN PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	40	226	0	266	128	0	11	139	51	116	0	167	572
07:45 AM	0	0	0	0	**66**	229	0	295	**185**	0	23	**208**	61	**185**	0	**246**	**749**
08:00 AM	0	0	0	0	56	**247**	0	**303**	169	0	25	194	**68**	144	0	212	709
08:15 AM	0	0	0	0	42	197	0	239	97	0	**26**	123	56	122	0	178	540
Total Volume	0	0	0	0	204	899	0	1103	579	0	85	664	236	567	0	803	2570
% App. Total	0	0	0		18.5	81.5	0		87.2	0	12.8		29.4	70.6	0		
PHF	.000	.000	.000	.000	.773	.910	.000	.910	.782	.000	.817	.798	.868	.766	.000	.816	.858

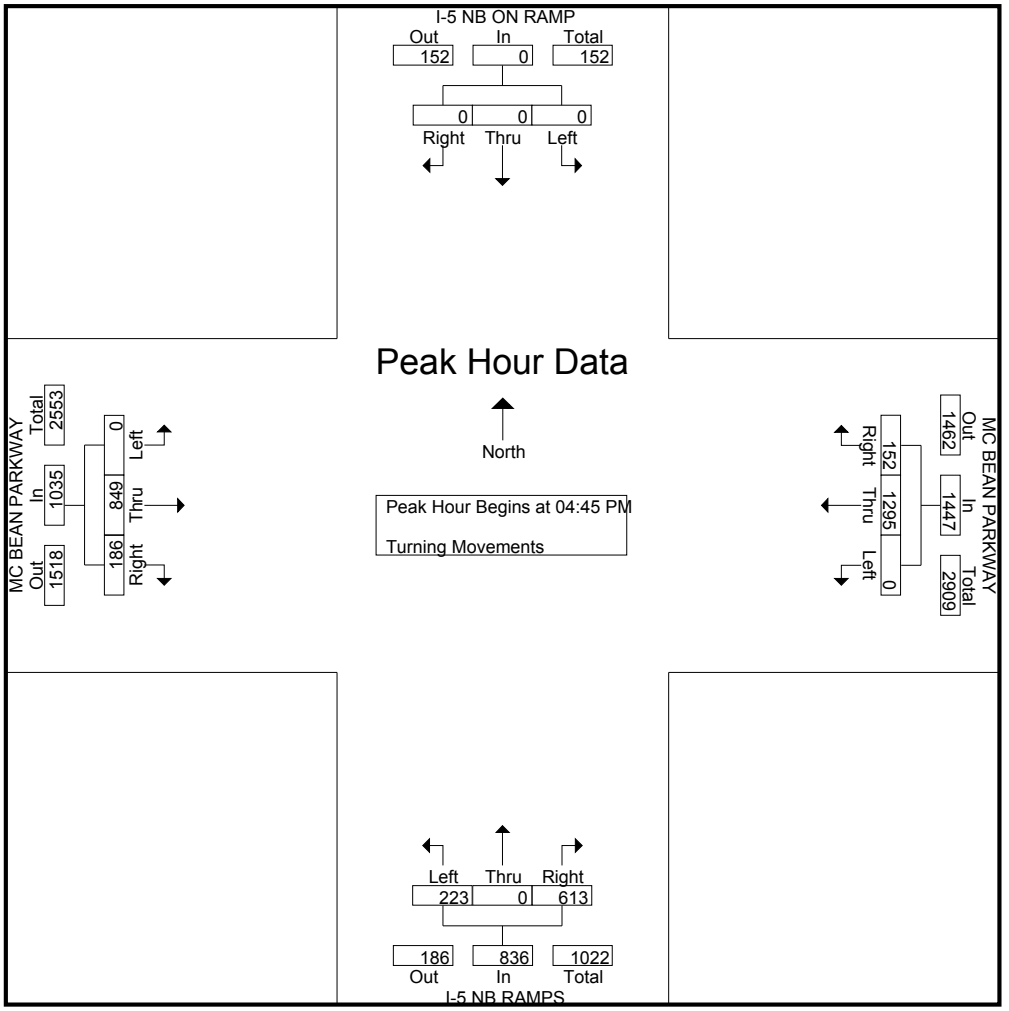


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: MCBEAN PARKWAY

File Name : H1402128
Site Code : 00003873
Start Date : 3/11/2014
Page No : 3

	I-5 NB ON RAMP Southbound				MC BEAN PARKWAY Westbound				I-5 NB RAMPS Northbound				MC BEAN PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	36	324	0	360	153	0	**62**	215	42	208	0	250	825
05:00 PM	0	0	0	0	**44**	332	0	376	**167**	0	38	205	43	197	0	240	821
05:15 PM	0	0	0	0	41	**355**	0	**396**	134	0	61	195	48	**233**	0	**281**	**872**
05:30 PM	0	0	0	0	31	284	0	315	159	0	62	**221**	**53**	211	0	264	800
Total Volume	0	0	0	0	152	1295	0	1447	613	0	223	836	186	849	0	1035	3318
% App. Total	0	0	0		10.5	89.5	0		73.3	0	26.7		18	82	0		
PHF	.000	.000	.000	.000	.864	.912	.000	.914	.918	.000	.899	.946	.877	.911	.000	.921	.951



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402129
Site Code : 00000000
Start Date : 3/11/2014
Page No : 1

Groups Printed- Turning Movements

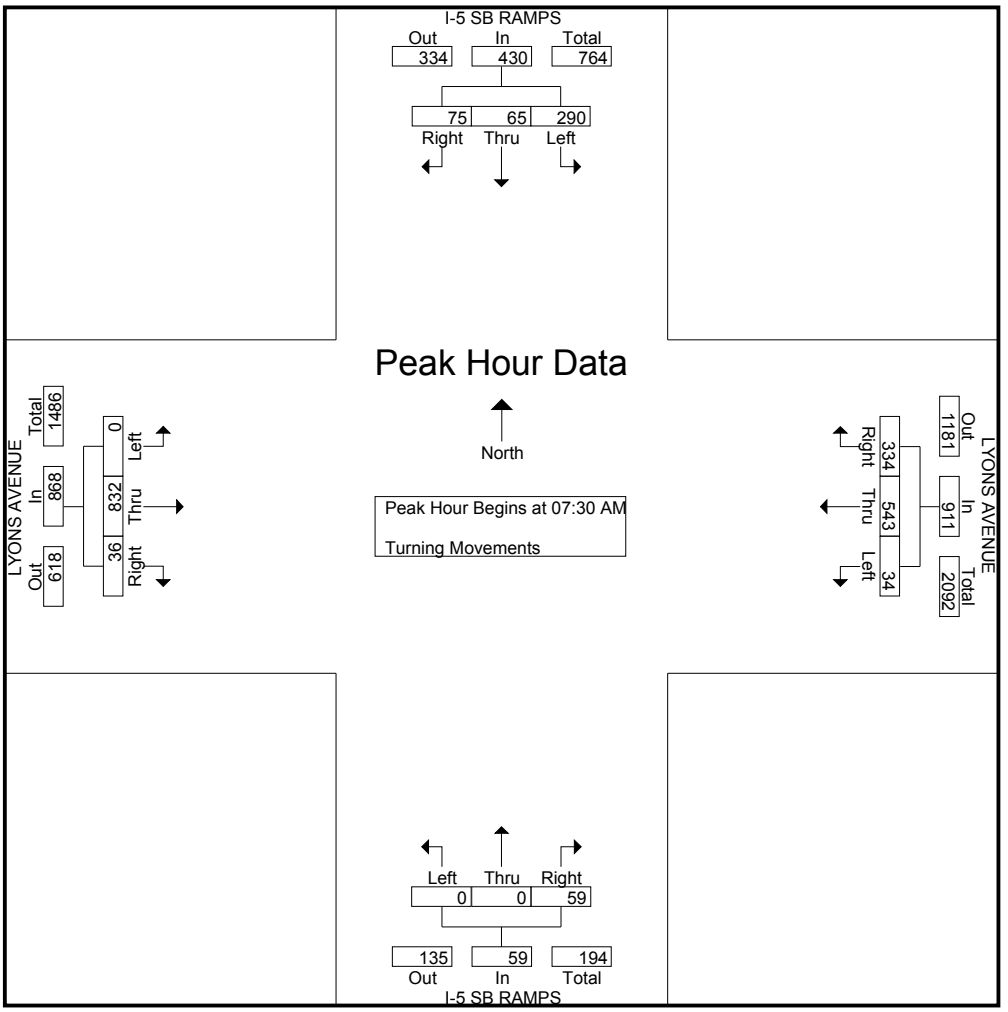
	I-5 SB RAMPS Southbound			LYONS AVENUE Westbound			I-5 SB RAMPS Northbound			LYONS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	13	15	61	94	81	8	16	0	0	6	168	0	462
07:15 AM	10	14	43	78	92	14	11	0	0	7	145	0	414
07:30 AM	14	13	74	84	111	8	13	0	0	9	211	0	537
07:45 AM	29	16	74	90	177	5	17	0	0	8	223	0	639
Total	66	58	252	346	461	35	57	0	0	30	747	0	2052
08:00 AM	13	14	70	88	141	13	13	0	0	11	223	0	586
08:15 AM	19	22	72	72	114	8	16	0	0	8	175	0	506
08:30 AM	20	21	83	82	90	4	11	0	0	12	184	0	507
08:45 AM	27	14	74	63	124	8	11	0	0	8	173	0	502
Total	79	71	299	305	469	33	51	0	0	39	755	0	2101
*** BREAK ***													
04:30 PM	23	19	118	59	263	10	9	0	0	14	198	0	713
04:45 PM	21	23	106	50	266	5	8	0	0	3	213	0	695
Total	44	42	224	109	529	15	17	0	0	17	411	0	1408
05:00 PM	28	23	116	64	272	13	10	0	0	12	222	0	760
05:15 PM	32	29	105	50	307	15	24	0	0	9	225	0	796
05:30 PM	30	27	110	72	296	16	11	0	0	6	229	0	797
05:45 PM	39	17	85	43	305	13	10	0	0	5	210	0	727
Total	129	96	416	229	1180	57	55	0	0	32	886	0	3080
06:00 PM	21	24	86	45	285	4	13	0	0	9	199	0	686
06:15 PM	28	27	88	42	260	14	11	0	0	5	198	0	673
Grand Total	367	318	1365	1076	3184	158	204	0	0	132	3196	0	10000
Apprch %	17.9	15.5	66.6	24.4	72.1	3.6	100	0	0	4	96	0	
Total %	3.7	3.2	13.6	10.8	31.8	1.6	2	0	0	1.3	32	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402129
Site Code : 00000000
Start Date : 3/11/2014
Page No : 2

	I-5 SB RAMPS Southbound				LYONS AVENUE Westbound				I-5 SB RAMPS Northbound				LYONS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	13	**74**	101	84	111	8	203	13	0	0	13	9	211	0	220	537
07:45 AM	**29**	16	74	**119**	**90**	**177**	5	**272**	**17**	0	0	**17**	8	**223**	0	231	**639**
08:00 AM	13	14	70	97	88	141	**13**	242	13	0	0	13	**11**	223	0	**234**	586
08:15 AM	19	**22**	72	113	72	114	8	194	16	0	0	16	8	175	0	183	506
Total Volume	75	65	290	430	334	543	34	911	59	0	0	59	36	832	0	868	2268
% App. Total	17.4	15.1	67.4		36.7	59.6	3.7		100	0	0		4.1	95.9	0		
PHF	.647	.739	.980	.903	.928	.767	.654	.837	.868	.000	.000	.868	.818	.933	.000	.927	.887

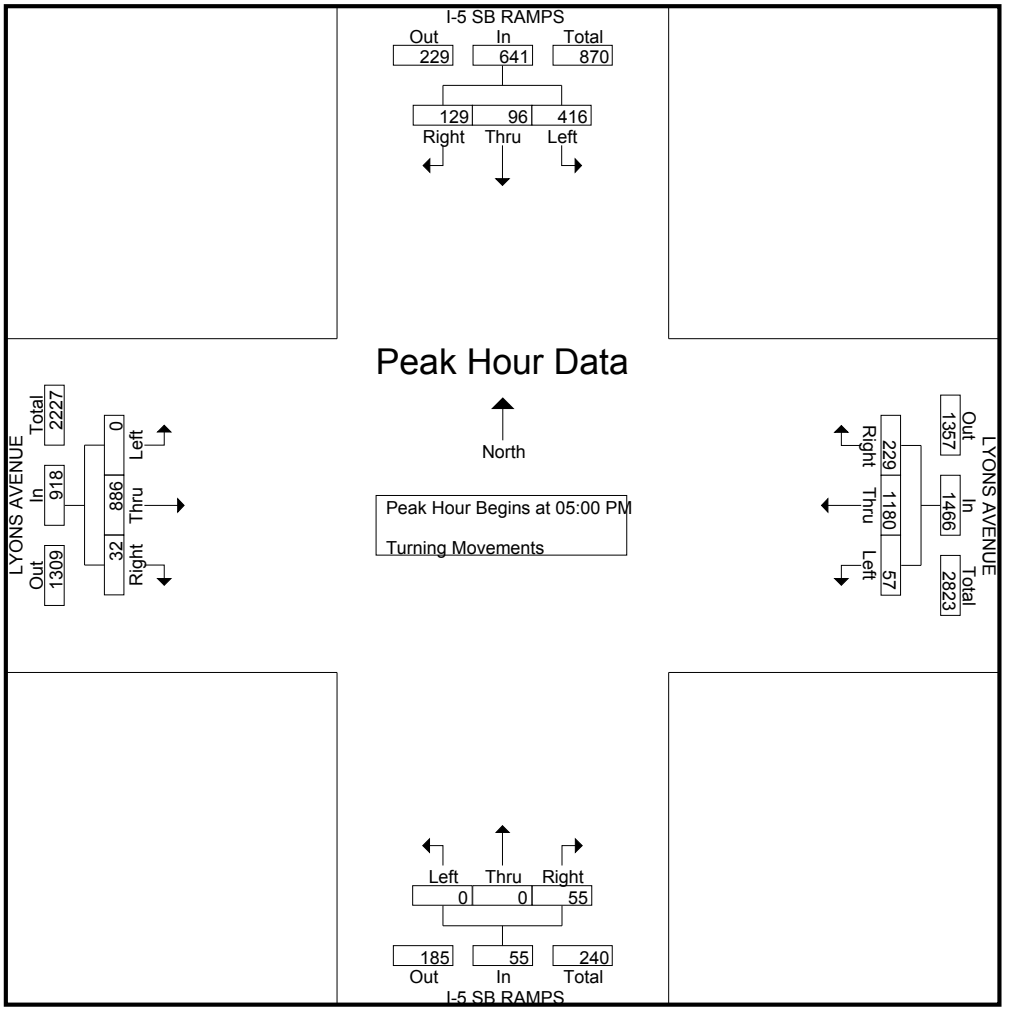


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 SB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402129
Site Code : 00000000
Start Date : 3/11/2014
Page No : 3

	I-5 SB RAMPS Southbound				LYONS AVENUE Westbound				I-5 SB RAMPS Northbound				LYONS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	28	23	**116**	**167**	64	272	13	349	10	0	0	10	**12**	222	0	234	760
05:15 PM	32	**29**	105	166	50	**307**	15	372	**24**	0	0	**24**	9	225	0	234	796
05:30 PM	30	27	110	167	**72**	296	**16**	**384**	11	0	0	11	6	**229**	0	**235**	**797**
05:45 PM	**39**	17	85	141	43	305	13	361	10	0	0	10	5	210	0	215	727
Total Volume	129	96	416	641	229	1180	57	1466	55	0	0	55	32	886	0	918	3080
% App. Total	20.1	15	64.9		15.6	80.5	3.9		100	0	0		3.5	96.5	0		
PHF	.827	.828	.897	.960	.795	.961	.891	.954	.573	.000	.000	.573	.667	.967	.000	.977	.966



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402130
Site Code : 00001944
Start Date : 3/11/2014
Page No : 1

Groups Printed- Turning Movements

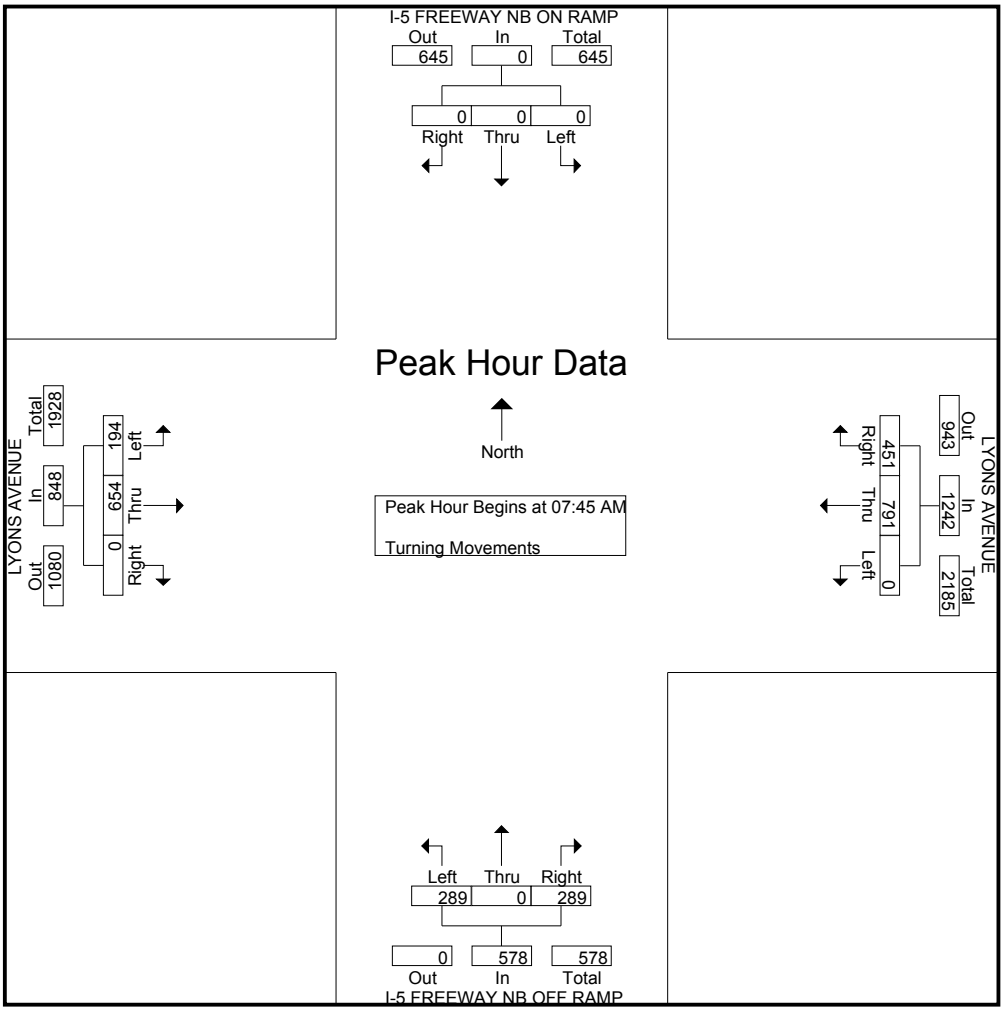
	I-5 FREEWAY NB ON RAMP Southbound			LYONS AVENUE Westbound			I-5 FREEWAY NB OFF RAMP Northbound			LYONS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	66	150	0	32	0	53	0	79	22	402
07:15 AM	0	0	0	76	116	0	41	0	44	0	99	38	414
07:30 AM	0	0	0	83	143	0	59	0	60	8	114	30	497
07:45 AM	0	0	0	135	175	0	65	0	67	0	218	57	717
Total	0	0	0	360	584	0	197	0	224	8	510	147	2030
08:00 AM	0	0	0	102	227	0	89	0	77	0	184	35	714
08:15 AM	0	0	0	121	202	0	66	0	67	0	123	47	626
08:30 AM	0	0	0	93	187	0	69	0	78	0	129	55	611
08:45 AM	0	0	0	78	154	0	77	0	76	0	136	40	561
Total	0	0	0	394	770	0	301	0	298	0	572	177	2512
*** BREAK ***													
04:30 PM	0	0	0	80	208	0	116	0	109	0	212	82	807
04:45 PM	0	0	0	93	216	0	144	0	149	0	217	57	876
Total	0	0	0	173	424	0	260	0	258	0	429	139	1683
05:00 PM	0	0	0	78	217	0	126	0	155	0	212	36	824
05:15 PM	0	0	0	110	215	0	122	0	162	0	270	56	935
05:30 PM	0	0	0	81	217	0	145	0	157	0	237	34	871
05:45 PM	0	0	0	81	233	0	133	0	157	0	213	60	877
Total	0	0	0	350	882	0	526	0	631	0	932	186	3507
06:00 PM	0	0	0	113	180	0	136	0	186	0	201	43	859
06:15 PM	0	0	0	74	204	0	149	0	140	0	199	37	803
Grand Total	0	0	0	1464	3044	0	1569	0	1737	8	2843	729	11394
Apprch %	0	0	0	32.5	67.5	0	47.5	0	52.5	0.2	79.4	20.4	
Total %	0	0	0	12.8	26.7	0	13.8	0	15.2	0.1	25	6.4	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402130
Site Code : 00001944
Start Date : 3/11/2014
Page No : 2

	I-5 FREEWAY NB ON RAMP Southbound				LYONS AVENUE Westbound				I-5 FREEWAY NB OFF RAMP Northbound				LYONS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	**135**	175	0	310	65	0	67	132	0	**218**	**57**	**275**	**717**
08:00 AM	0	0	0	0	102	**227**	0	**329**	**89**	0	77	**166**	0	184	35	219	714
08:15 AM	0	0	0	0	121	202	0	323	66	0	67	133	0	123	47	170	626
08:30 AM	0	0	0	0	93	187	0	280	69	0	**78**	147	0	129	55	184	611
Total Volume	0	0	0	0	451	791	0	1242	289	0	289	578	0	654	194	848	2668
% App. Total	0	0	0		36.3	63.7	0		50	0	50		0	77.1	22.9		
PHF	.000	.000	.000	.000	.835	.871	.000	.944	.812	.000	.926	.870	.000	.750	.851	.771	.930

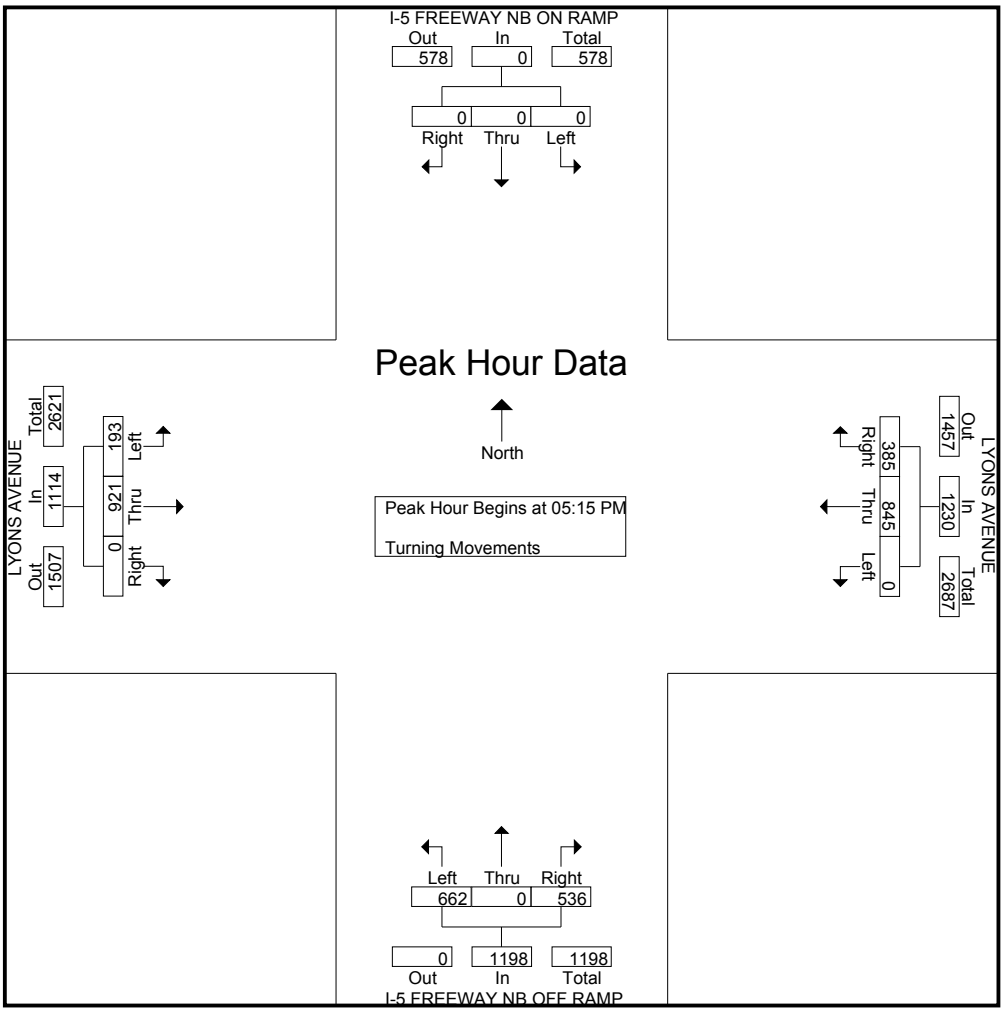


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: I-5 NB RAMPS
E-W Direction: LYONS AVENUE

File Name : H1402130
Site Code : 00001944
Start Date : 3/11/2014
Page No : 3

	I-5 FREEWAY NB ON RAMP Southbound				LYONS AVENUE Westbound				I-5 FREEWAY NB OFF RAMP Northbound				LYONS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	0	0	0	110	215	0	**325**	122	0	162	284	0	**270**	56	**326**	**935**
05:30 PM	0	0	0	0	81	217	0	298	**145**	0	157	302	0	237	34	271	871
05:45 PM	0	0	0	0	81	**233**	0	314	133	0	157	290	0	213	**60**	273	877
06:00 PM	0	0	0	0	**113**	180	0	293	136	0	**186**	**322**	0	201	43	244	859
Total Volume	0	0	0	0	385	845	0	1230	536	0	662	1198	0	921	193	1114	3542
% App. Total	0	0	0		31.3	68.7	0		44.7	0	55.3		0	82.7	17.3		
PHF	.000	.000	.000	.000	.852	.907	.000	.946	.924	.000	.890	.930	.000	.853	.804	.854	.947



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: STEVENSON RANCH PARKWAY

File Name : H1402136
Site Code : 00000000
Start Date : 3/5/2014
Page No : 1

Groups Printed- Turning Movements

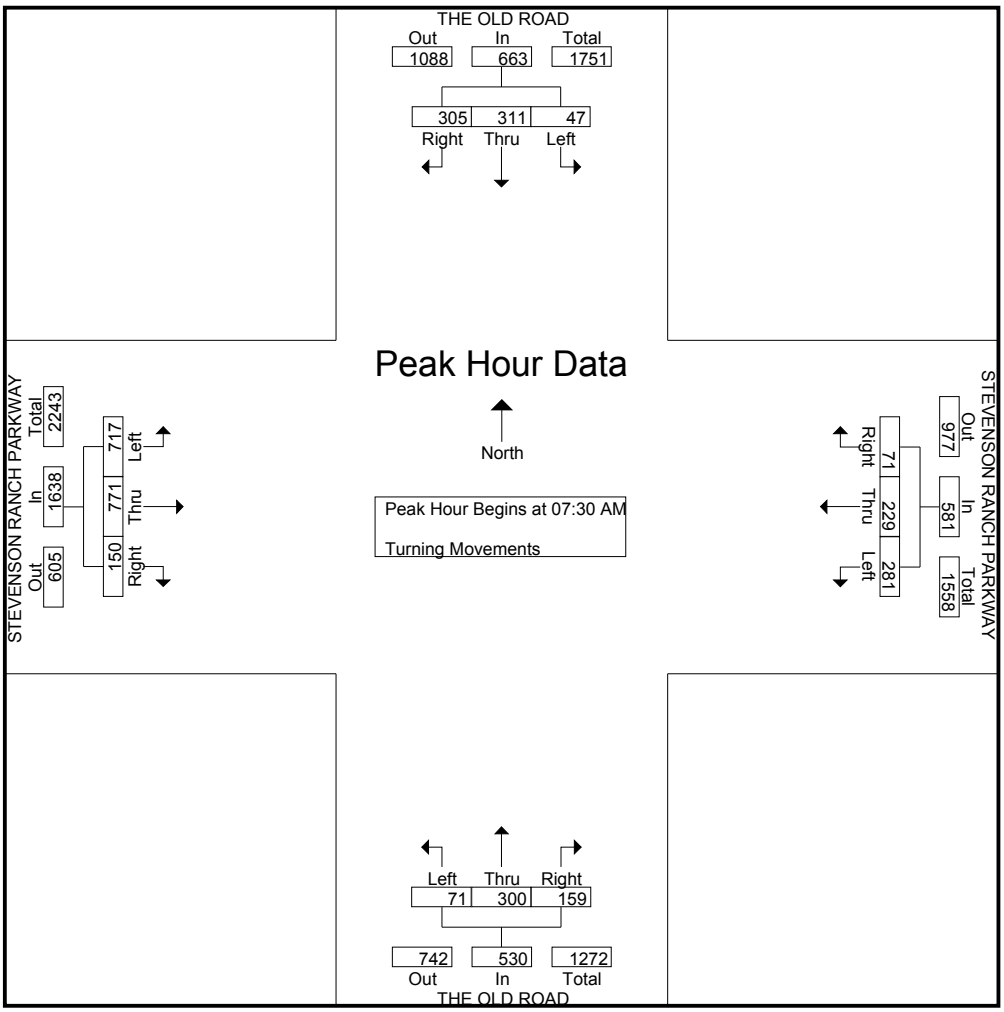
	THE OLD ROAD Southbound			STEVENSON RANCH PARKWAY Westbound			THE OLD ROAD Northbound				STEVENSON RANCH PARKWAY Eastbound					
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	69	61	6	10	33	37	32	31	6	0	16	144	63	0	508	508
07:15 AM	26	52	9	14	41	52	22	43	8	1	29	135	71	1	502	503
07:30 AM	28	68	13	16	60	68	37	79	13	1	38	213	139	1	772	773
07:45 AM	58	81	8	26	66	94	46	64	21	0	45	211	221	0	941	941
Total	181	262	36	66	200	251	137	217	48	2	128	703	494	2	2723	2725
08:00 AM	108	75	16	17	51	61	34	79	17	0	38	194	219	0	909	909
08:15 AM	111	87	10	12	52	58	42	78	20	1	29	153	138	1	790	791
08:30 AM	96	70	12	8	45	64	54	50	20	1	28	137	67	1	651	652
08:45 AM	44	50	11	10	44	101	57	52	16	0	15	128	55	0	583	583
Total	359	282	49	47	192	284	187	259	73	2	110	612	479	2	2933	2935
*** BREAK ***																
04:30 PM	70	119	19	8	75	116	96	103	34	0	26	86	60	0	812	812
04:45 PM	74	111	21	18	129	122	102	97	29	0	27	98	55	0	883	883
Total	144	230	40	26	204	238	198	200	63	0	53	184	115	0	1695	1695
05:00 PM	110	133	21	10	144	162	119	102	42	2	27	104	80	2	1054	1056
05:15 PM	119	134	22	17	148	158	101	76	42	1	18	108	68	1	1011	1012
05:30 PM	103	139	9	7	124	119	121	118	33	2	35	113	77	2	998	1000
05:45 PM	106	116	18	21	144	144	111	120	47	0	34	108	73	0	1042	1042
Total	438	522	70	55	560	583	452	416	164	5	114	433	298	5	4105	4110
06:00 PM	77	107	14	12	118	111	109	124	44	1	28	106	66	1	916	917
06:15 PM	80	83	18	7	130	138	113	94	44	1	25	106	51	1	889	890
Grand Total	1279	1486	227	213	1404	1605	1196	1310	436	11	458	2144	1503	11	13261	13272
Apprch %	42.7	49.7	7.6	6.6	43.6	49.8	40.7	44.5	14.8		11.2	52.2	36.6			
Total %	9.6	11.2	1.7	1.6	10.6	12.1	9	9.9	3.3		3.5	16.2	11.3	0.1	99.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: STEVENSON RANCH PARKWAY

File Name : H1402136
Site Code : 00000000
Start Date : 3/5/2014
Page No : 2

	THE OLD ROAD Southbound				STEVENSON RANCH PARKWAY Westbound				THE OLD ROAD Northbound				STEVENSON RANCH PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	28	68	13	109	16	60	68	144	37	**79**	13	129	38	**213**	139	390	772
07:45 AM	58	81	8	147	**26**	**66**	**94**	**186**	**46**	64	**21**	131	**45**	211	**221**	**477**	**941**
08:00 AM	108	75	**16**	199	17	51	61	129	34	79	17	130	38	194	219	451	909
08:15 AM	**111**	**87**	10	**208**	12	52	58	122	42	78	20	**140**	29	153	138	320	790
Total Volume	305	311	47	663	71	229	281	581	159	300	71	530	150	771	717	1638	3412
% App. Total	46	46.9	7.1		12.2	39.4	48.4		30	56.6	13.4		9.2	47.1	43.8		
PHF	.687	.894	.734	.797	.683	.867	.747	.781	.864	.949	.845	.946	.833	.905	.811	.858	.906

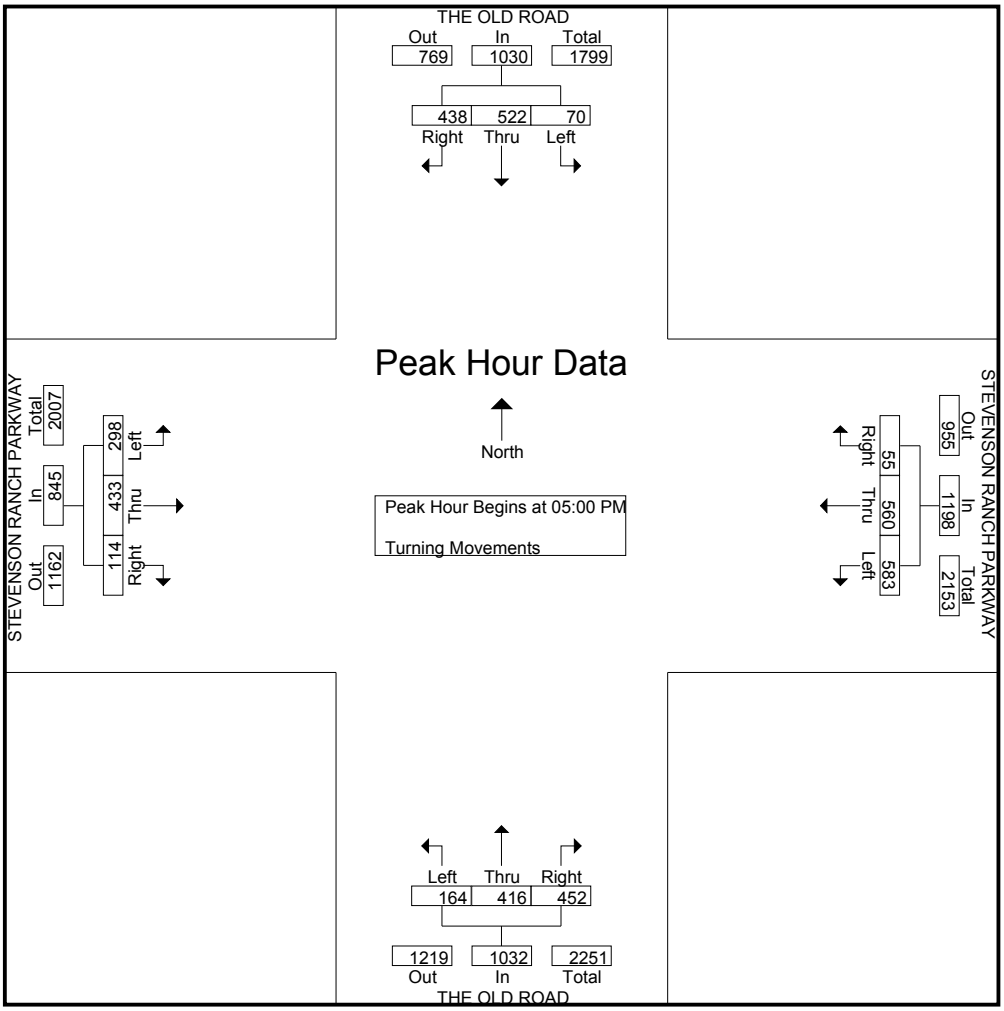


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: STEVENSON RANCH PARKWAY

File Name : H1402136
Site Code : 00000000
Start Date : 3/5/2014
Page No : 3

	THE OLD ROAD Southbound				STEVENSON RANCH PARKWAY Westbound				THE OLD ROAD Northbound				STEVENSON RANCH PARKWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	110	133	21	264	10	144	**162**	316	119	102	42	263	27	104	**80**	211	**1054**
05:15 PM	**119**	134	**22**	**275**	17	**148**	158	**323**	101	76	42	219	18	108	68	194	1011
05:30 PM	103	**139**	9	251	7	124	119	250	**121**	118	33	272	**35**	**113**	77	**225**	998
05:45 PM	106	116	18	240	**21**	144	144	309	111	**120**	**47**	**278**	34	108	73	215	1042
Total Volume	438	522	70	1030	55	560	583	1198	452	416	164	1032	114	433	298	845	4105
% App. Total	42.5	50.7	6.8		4.6	46.7	48.7		43.8	40.3	15.9		13.5	51.2	35.3		
PHF	.920	.939	.795	.936	.655	.946	.900	.927	.934	.867	.872	.928	.814	.958	.931	.939	.974



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: PICO CANYON ROAD

File Name : H1402137
Site Code : 00000000
Start Date : 3/5/2014
Page No : 1

Groups Printed- Turning Movements

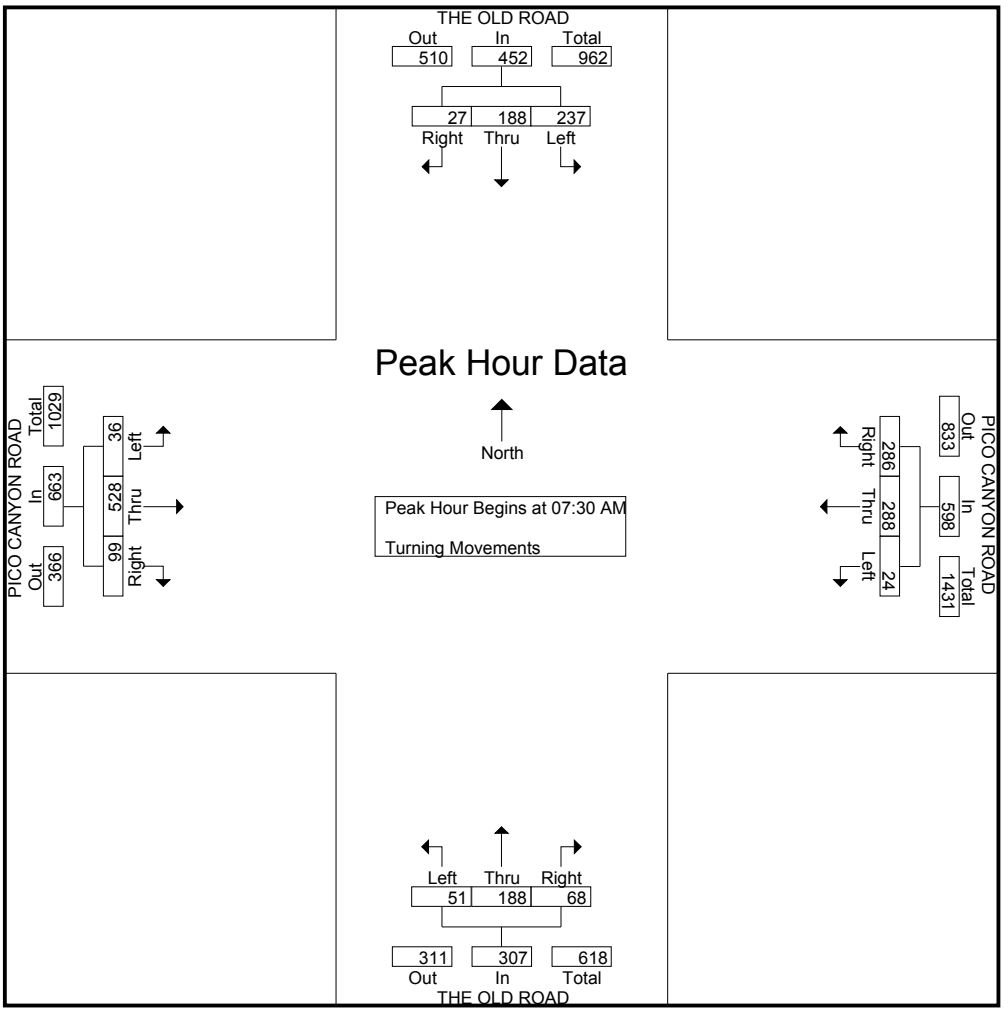
	THE OLD ROAD Southbound			PICO CANYON ROAD Westbound			THE OLD ROAD Northbound			PICO CANYON ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	4	34	37	45	51	11	15	28	8	26	160	6	425
07:15 AM	5	34	49	52	50	4	9	56	9	27	110	7	412
07:30 AM	5	52	58	55	71	9	24	46	10	26	138	15	509
07:45 AM	7	52	59	83	87	5	18	60	22	30	150	11	584
Total	21	172	203	235	259	29	66	190	49	109	558	39	1930
08:00 AM	8	39	67	64	71	4	17	30	9	31	144	6	490
08:15 AM	7	45	53	84	59	6	9	52	10	12	96	4	437
08:30 AM	2	33	65	68	52	4	20	38	10	16	129	7	444
08:45 AM	8	39	66	84	48	28	28	53	14	10	99	7	484
Total	25	156	251	300	230	42	74	173	43	69	468	24	1855
*** BREAK ***													
04:30 PM	10	64	84	140	137	10	5	55	24	14	101	7	651
04:45 PM	9	87	118	133	132	12	11	63	35	9	67	7	683
Total	19	151	202	273	269	22	16	118	59	23	168	14	1334
05:00 PM	12	84	124	134	145	11	21	60	33	14	78	9	725
05:15 PM	9	104	123	133	137	10	19	64	42	23	74	10	748
05:30 PM	11	69	137	128	194	11	21	71	48	17	104	14	825
05:45 PM	7	72	115	143	145	9	20	60	35	18	62	12	698
Total	39	329	499	538	621	41	81	255	158	72	318	45	2996
06:00 PM	14	56	109	121	195	10	19	84	20	18	105	16	767
06:15 PM	14	66	131	132	163	18	13	58	33	18	95	9	750
Grand Total	132	930	1395	1599	1737	162	269	878	362	309	1712	147	9632
Apprch %	5.4	37.9	56.8	45.7	49.7	4.6	17.8	58.2	24	14.3	79	6.8	
Total %	1.4	9.7	14.5	16.6	18	1.7	2.8	9.1	3.8	3.2	17.8	1.5	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: PICO CANYON ROAD

File Name : H1402137
Site Code : 00000000
Start Date : 3/5/2014
Page No : 2

	THE OLD ROAD Southbound				PICO CANYON ROAD Westbound				THE OLD ROAD Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	**52**	58	115	55	71	**9**	135	**24**	46	10	80	26	138	**15**	179	509
07:45 AM	7	52	59	**118**	83	**87**	5	**175**	18	**60**	**22**	**100**	30	**150**	11	**191**	**584**
08:00 AM	**8**	39	**67**	114	64	71	4	139	17	30	9	56	**31**	144	6	181	490
08:15 AM	7	45	53	105	**84**	59	6	149	9	52	10	71	12	96	4	112	437
Total Volume	27	188	237	452	286	288	24	598	68	188	51	307	99	528	36	663	2020
% App. Total	6	41.6	52.4		47.8	48.2	4		22.1	61.2	16.6		14.9	79.6	5.4		
PHF	.844	.904	.884	.958	.851	.828	.667	.854	.708	.783	.580	.768	.798	.880	.600	.868	.865

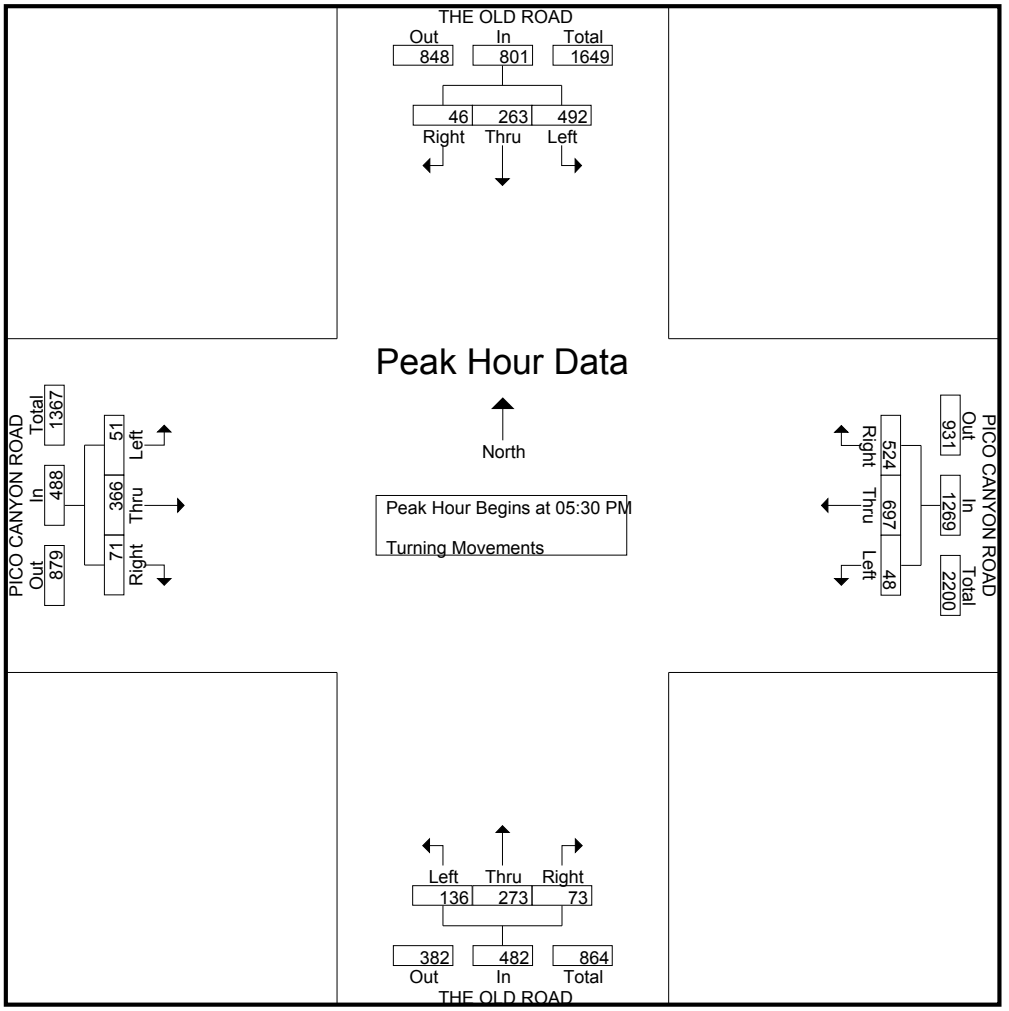


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: THE OLD ROAD
E-W Direction: PICO CANYON ROAD

File Name : H1402137
Site Code : 00000000
Start Date : 3/5/2014
Page No : 3

	THE OLD ROAD Southbound				PICO CANYON ROAD Westbound				THE OLD ROAD Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:30 PM																	
05:30 PM	11	69	**137**	**217**	128	194	11	**333**	**21**	71	**48**	**140**	17	104	14	135	**825**
05:45 PM	7	**72**	115	194	**143**	145	9	297	20	60	35	115	**18**	62	12	92	698
06:00 PM	**14**	56	109	179	121	**195**	10	326	19	**84**	20	123	18	**105**	**16**	**139**	767
06:15 PM	14	66	131	211	132	163	**18**	313	13	58	33	104	18	95	9	122	750
Total Volume	46	263	492	801	524	697	48	1269	73	273	136	482	71	366	51	488	3040
% App. Total	5.7	32.8	61.4		41.3	54.9	3.8		15.1	56.6	28.2		14.5	75	10.5		
PHF	.821	.913	.898	.923	.916	.894	.667	.953	.869	.813	.708	.861	.986	.871	.797	.878	.921



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: STEVENSON RANCH
E-W Direction: PICO CANYON ROAD

File Name : H1402164
Site Code : 00005423
Start Date : 2/25/2014
Page No : 1

Groups Printed- Turning Movements

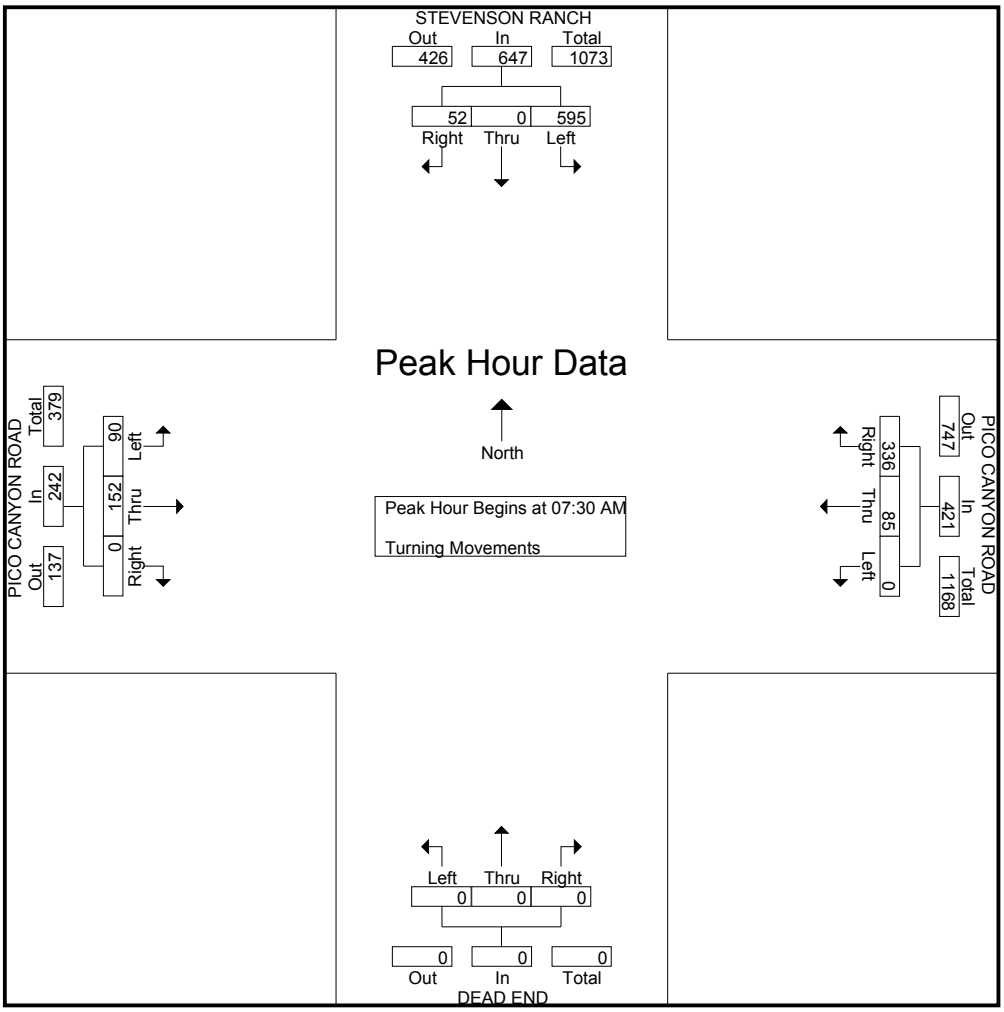
	STEVENSON RANCH Southbound			PICO CANYON ROAD Westbound			DEAD END Northbound			PICO CANYON ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	8	0	91	28	4	0	0	0	0	0	12	11	154
07:15 AM	2	0	110	35	9	0	0	0	0	0	18	8	182
07:30 AM	8	0	124	39	14	0	0	0	0	0	28	11	224
07:45 AM	8	0	203	88	21	0	0	0	0	0	56	27	403
Total	26	0	528	190	48	0	0	0	0	0	114	57	963
08:00 AM	16	0	145	150	38	0	0	0	0	0	47	20	416
08:15 AM	20	0	123	59	12	0	0	0	0	0	21	32	267
08:30 AM	21	0	81	53	10	0	0	0	0	0	18	16	199
08:45 AM	8	0	80	40	9	0	0	0	0	0	26	9	172
Total	65	0	429	302	69	0	0	0	0	0	112	77	1054
*** BREAK ***													
04:30 PM	20	0	72	111	23	0	0	0	0	0	17	17	260
04:45 PM	11	0	74	106	23	0	0	0	0	0	18	17	249
Total	31	0	146	217	46	0	0	0	0	0	35	34	509
05:00 PM	17	0	72	110	32	0	0	0	0	0	16	6	253
05:15 PM	23	0	75	124	19	0	0	0	0	0	14	17	272
05:30 PM	10	0	60	170	23	0	0	0	0	0	27	14	304
05:45 PM	17	0	97	154	19	0	0	0	0	0	12	15	314
Total	67	0	304	558	93	0	0	0	0	0	69	52	1143
06:00 PM	29	0	74	148	27	0	0	0	0	0	15	20	313
06:15 PM	19	0	82	145	28	0	0	0	0	0	12	18	304
Grand Total	237	0	1563	1560	311	0	0	0	0	0	357	258	4286
Apprch %	13.2	0	86.8	83.4	16.6	0	0	0	0	0	58	42	
Total %	5.5	0	36.5	36.4	7.3	0	0	0	0	0	8.3	6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: STEVENSON RANCH
E-W Direction: PICO CANYON ROAD

File Name : H1402164
Site Code : 00005423
Start Date : 2/25/2014
Page No : 2

	STEVENSON RANCH Southbound				PICO CANYON ROAD Westbound				DEAD END Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	0	124	132	39	14	0	53	0	0	0	0	0	28	11	39	224
07:45 AM	8	0	**203**	**211**	88	21	0	109	0	0	0	0	0	**56**	27	**83**	403
08:00 AM	16	0	145	161	**150**	**38**	0	**188**	0	0	0	0	0	47	20	67	**416**
08:15 AM	**20**	0	123	143	59	12	0	71	0	0	0	0	0	21	**32**	53	267
Total Volume	52	0	595	647	336	85	0	421	0	0	0	0	0	152	90	242	1310
% App. Total	8	0	92		79.8	20.2	0		0	0	0		0	62.8	37.2		
PHF	.650	.000	.733	.767	.560	.559	.000	.560	.000	.000	.000	.000	.000	.679	.703	.729	.787

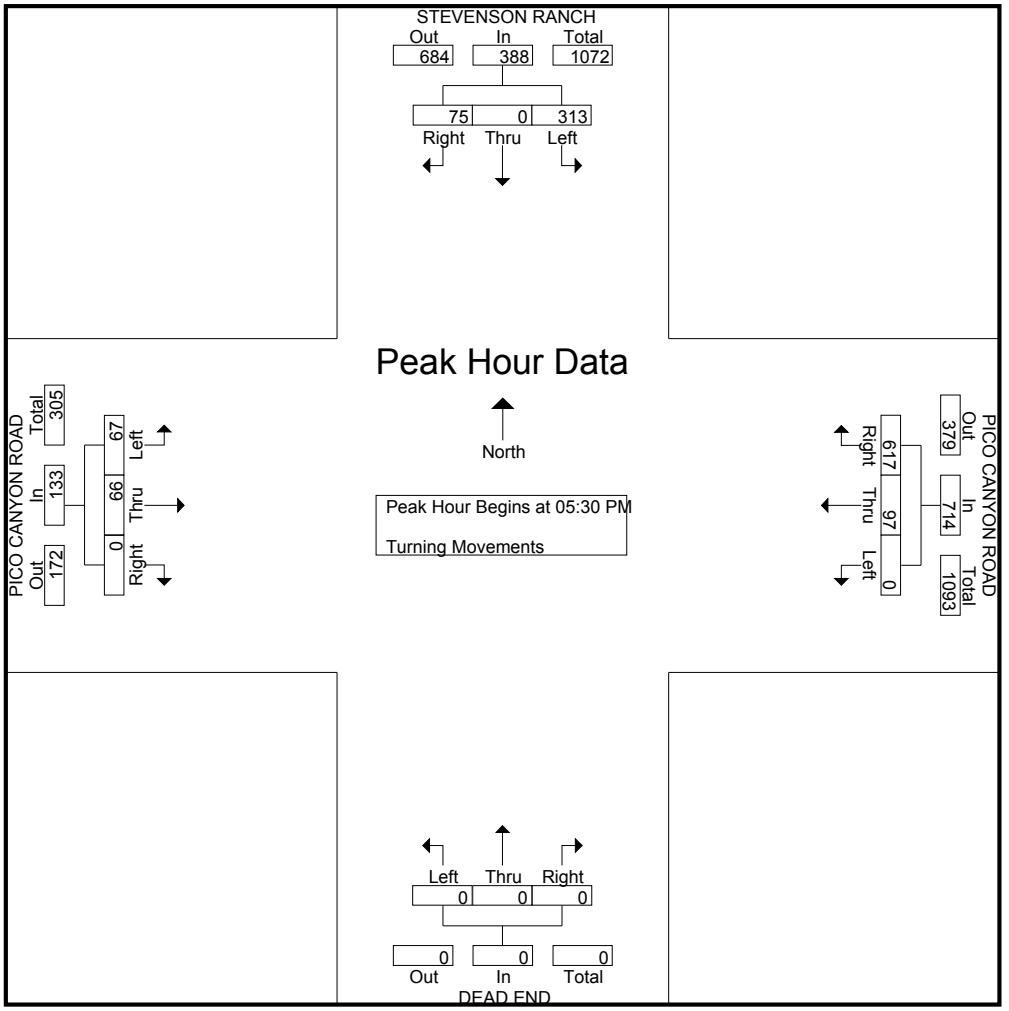


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: STEVENSON RANCH
E-W Direction: PICO CANYON ROAD

File Name : H1402164
Site Code : 00005423
Start Date : 2/25/2014
Page No : 3

	STEVENSON RANCH Southbound				PICO CANYON ROAD Westbound				DEAD END Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:30 PM																	
05:30 PM	10	0	60	70	**170**	23	0	**193**	0	0	0	0	0	**27**	14	**41**	304
05:45 PM	17	0	**97**	**114**	154	19	0	173	0	0	0	0	0	12	15	27	**314**
06:00 PM	**29**	0	74	103	148	27	0	175	0	0	0	0	0	15	**20**	35	313
06:15 PM	19	0	82	101	145	**28**	0	173	0	0	0	0	0	12	18	30	304
Total Volume	75	0	313	388	617	97	0	714	0	0	0	0	0	66	67	133	1235
% App. Total	19.3	0	80.7		86.4	13.6	0		0	0	0		0	49.6	50.4		
PHF	.647	.000	.807	.851	.907	.866	.000	.925	.000	.000	.000	.000	.000	.611	.838	.811	.983



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: WHISPERING OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : h1404053
Site Code : 00000000
Start Date : 4/15/2014
Page No : 1

Groups Printed- Turning Movements

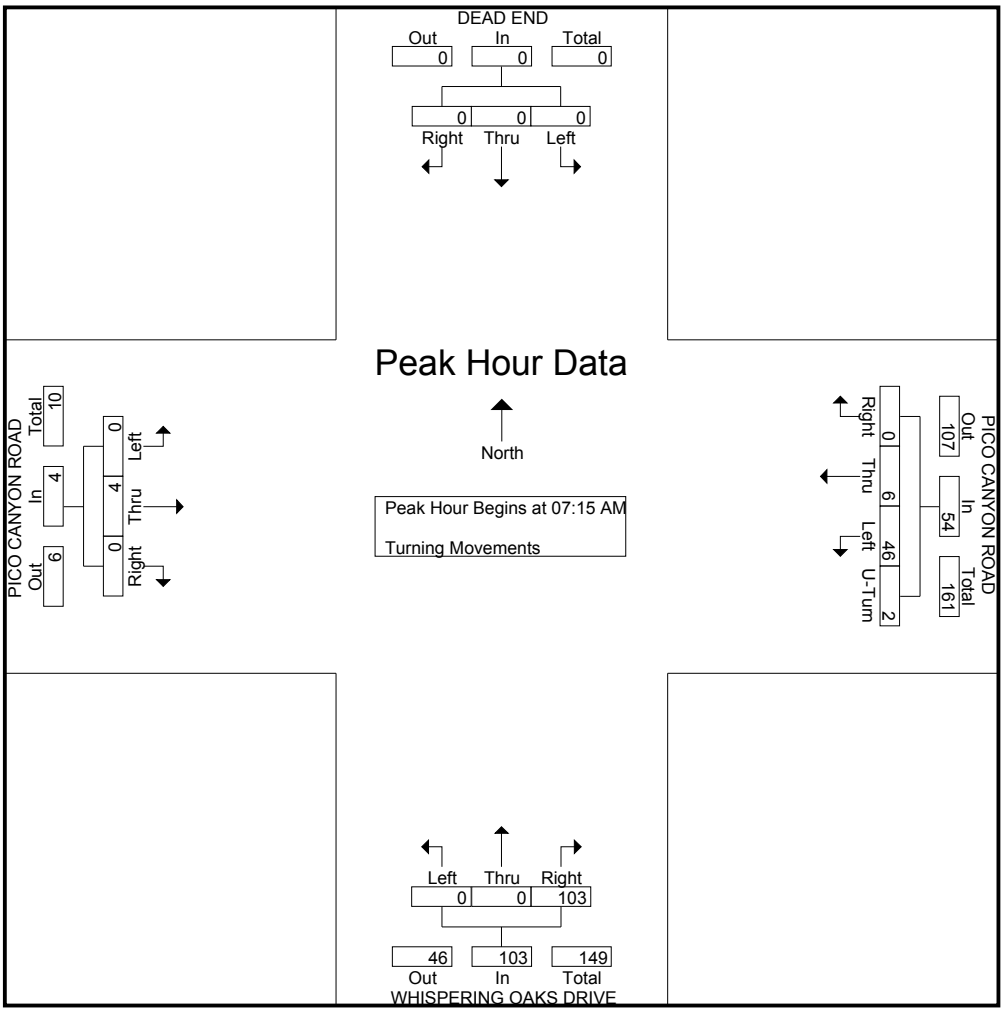
	DEAD END Southbound			PICO CANYON ROAD Westbound				WHISPERING OAKS DRIVE Northbound			PICO CANYON ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	0	0	6	0	9	0	0	0	0	0	15
07:15 AM	0	0	0	0	3	10	0	24	0	0	0	1	0	38
07:30 AM	0	0	0	0	2	13	2	32	0	0	0	1	0	50
07:45 AM	0	0	0	0	1	12	0	29	0	0	0	0	0	42
Total	0	0	0	0	6	41	2	94	0	0	0	2	0	145
08:00 AM	0	0	0	0	0	11	0	18	0	0	0	2	0	31
08:15 AM	0	0	0	0	0	10	0	16	0	0	0	0	0	26
08:30 AM	0	0	0	0	3	8	0	13	0	0	0	2	0	26
08:45 AM	0	0	0	0	1	5	1	8	0	0	1	0	0	16
Total	0	0	0	0	4	34	1	55	0	0	1	4	0	99
*** BREAK ***														
04:00 PM	0	0	0	0	0	9	0	13	0	0	0	0	0	22
04:15 PM	0	0	0	0	1	19	1	11	0	0	0	1	0	33
04:30 PM	0	0	0	0	2	13	0	12	0	0	0	5	0	32
04:45 PM	0	0	0	0	3	18	0	11	0	0	0	2	0	34
Total	0	0	0	0	6	59	1	47	0	0	0	8	0	121
05:00 PM	0	0	0	0	2	23	0	11	0	0	0	2	0	38
05:15 PM	0	0	0	0	2	12	1	11	0	0	0	2	0	28
05:30 PM	0	0	0	0	1	9	0	14	0	0	0	2	0	26
05:45 PM	0	0	0	0	0	23	2	14	0	0	0	0	0	39
Total	0	0	0	0	5	67	3	50	0	0	0	6	0	131
Grand Total	0	0	0	0	21	201	7	246	0	0	1	20	0	496
Apprch %	0	0	0	0	9.2	87.8	3.1	100	0	0	4.8	95.2	0	
Total %	0	0	0	0	4.2	40.5	1.4	49.6	0	0	0.2	4	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: WHISPERING OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : h1404053
Site Code : 00000000
Start Date : 4/15/2014
Page No : 2

	DEAD END Southbound				PICO CANYON ROAD Westbound					WHISPERING OAKS DRIVE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	0	0	0	0	**3**	10	0	13	24	0	0	24	0	1	0	1	38
07:30 AM	0	0	0	0	0	2	**13**	**2**	**17**	**32**	0	0	**32**	0	1	0	1	**50**
07:45 AM	0	0	0	0	0	1	12	0	13	29	0	0	29	0	0	0	0	42
08:00 AM	0	0	0	0	0	0	11	0	11	18	0	0	18	0	**2**	0	**2**	31
Total Volume	0	0	0	0	0	6	46	2	54	103	0	0	103	0	4	0	4	161
% App. Total	0	0	0		0	11.1	85.2	3.7		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.885	.250	.794	.805	.000	.000	.805	.000	.500	.000	.500	.805

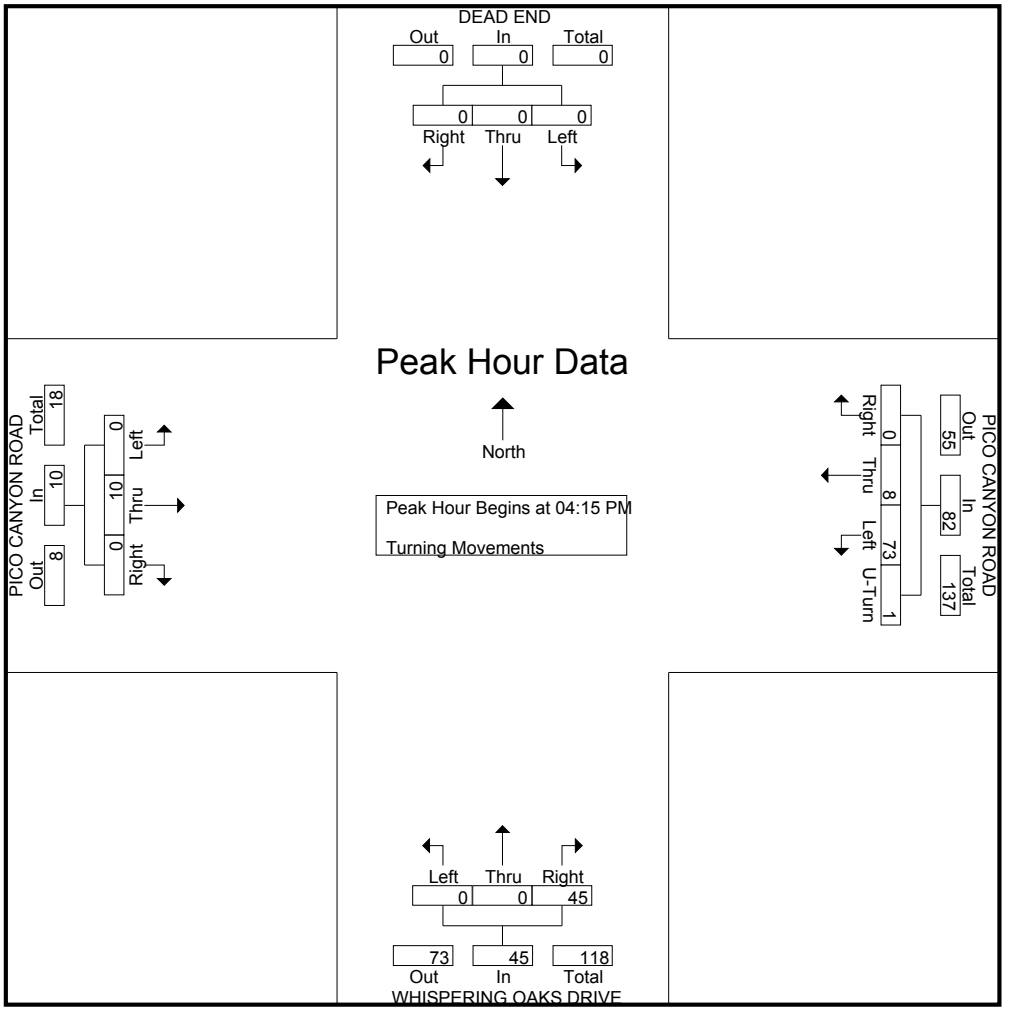


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: WHISPERING OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : h1404053
Site Code : 00000000
Start Date : 4/15/2014
Page No : 3

	DEAD END Southbound				PICO CANYON ROAD Westbound					WHISPERING OAKS DRIVE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:15 PM																		
04:15 PM	0	0	0	0	0	1	19	**1**	21	11	0	0	11	0	1	0	1	33
04:30 PM	0	0	0	0	0	2	13	0	15	**12**	0	0	**12**	0	**5**	0	**5**	32
04:45 PM	0	0	0	0	0	**3**	18	0	21	11	0	0	11	0	2	0	2	34
05:00 PM	0	0	0	0	0	2	**23**	0	**25**	11	0	0	11	0	2	0	2	**38**
Total Volume	0	0	0	0	0	8	73	1	82	45	0	0	45	0	10	0	10	137
% App. Total	0	0	0		0	9.8	89	1.2		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.667	.793	.250	.820	.938	.000	.000	.938	.000	.500	.000	.500	.901



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: SOUTHERN OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : H1404054
Site Code : 00000000
Start Date : 4/15/2014
Page No : 1

Groups Printed- Turning Movements

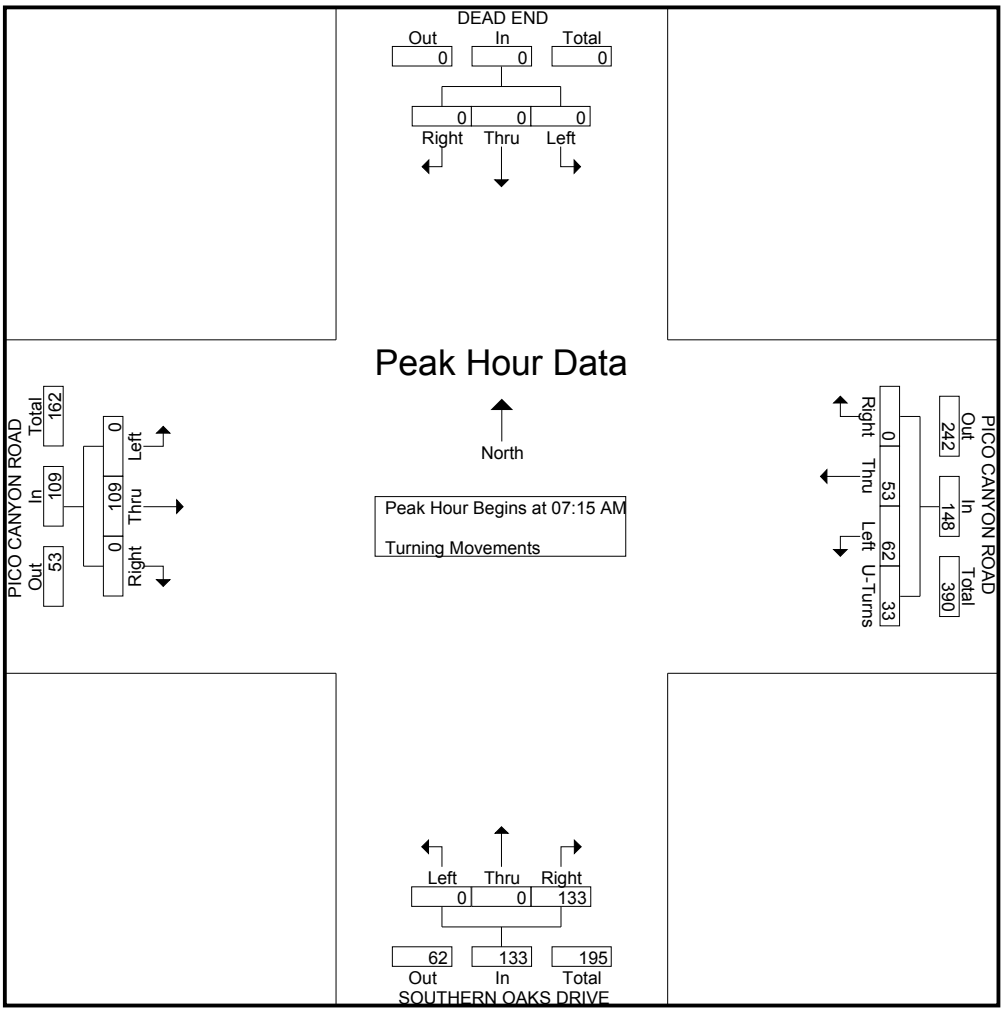
	DEAD END Southbound			PICO CANYON ROAD Westbound				SOUTHERN OAKS DRIVE Northbound			PICO CANYON ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	U-Turns	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	0	3	9	3	10	0	0	0	10	0	35
07:15 AM	0	0	0	0	15	6	0	17	0	0	0	27	0	65
07:30 AM	0	0	0	0	12	18	5	48	0	0	0	33	0	116
07:45 AM	0	0	0	0	18	19	20	41	0	0	0	29	0	127
Total	0	0	0	0	48	52	28	116	0	0	0	99	0	343
08:00 AM	0	0	0	0	8	19	8	27	0	0	0	20	0	82
08:15 AM	0	0	0	0	11	14	1	17	0	0	1	15	0	59
08:30 AM	0	0	0	0	9	12	2	18	0	0	0	14	0	55
08:45 AM	0	0	0	0	7	11	4	17	0	0	1	9	0	49
Total	0	0	0	0	35	56	15	79	0	0	2	58	0	245
*** BREAK ***														
04:00 PM	0	0	0	0	11	23	1	7	0	0	0	14	0	56
04:15 PM	0	0	0	0	20	17	2	16	0	0	1	12	0	68
04:30 PM	0	0	0	0	12	17	0	15	0	0	1	15	0	60
04:45 PM	0	0	0	0	21	15	1	8	0	0	0	13	0	58
Total	0	0	0	0	64	72	4	46	0	0	2	54	0	242
05:00 PM	0	0	0	0	22	20	5	14	0	0	0	14	0	75
05:15 PM	0	0	0	0	12	15	5	18	0	1	1	13	0	65
05:30 PM	0	0	0	0	14	21	3	14	0	0	0	14	0	66
05:45 PM	0	0	0	0	21	13	6	15	0	1	0	14	0	70
Total	0	0	0	0	69	69	19	61	0	2	1	55	0	276
Grand Total	0	0	0	0	216	249	66	302	0	2	5	266	0	1106
Apprch %	0	0	0	0	40.7	46.9	12.4	99.3	0	0.7	1.8	98.2	0	
Total %	0	0	0	0	19.5	22.5	6	27.3	0	0.2	0.5	24.1	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: SOUTHERN OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : H1404054
Site Code : 00000000
Start Date : 4/15/2014
Page No : 2

	DEAD END Southbound				PICO CANYON ROAD Westbound					SOUTHERN OAKS DRIVE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	0	0	0	0	15	6	0	21	17	0	0	17	0	27	0	27	65
07:30 AM	0	0	0	0	0	12	18	5	35	**48**	0	0	**48**	0	**33**	0	**33**	116
07:45 AM	0	0	0	0	0	**18**	**19**	**20**	**57**	41	0	0	41	0	29	0	29	**127**
08:00 AM	0	0	0	0	0	8	19	8	35	27	0	0	27	0	20	0	20	82
Total Volume	0	0	0	0	0	53	62	33	148	133	0	0	133	0	109	0	109	390
% App. Total	0	0	0		0	35.8	41.9	22.3		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.736	.816	.413	.649	.693	.000	.000	.693	.000	.826	.000	.826	.768

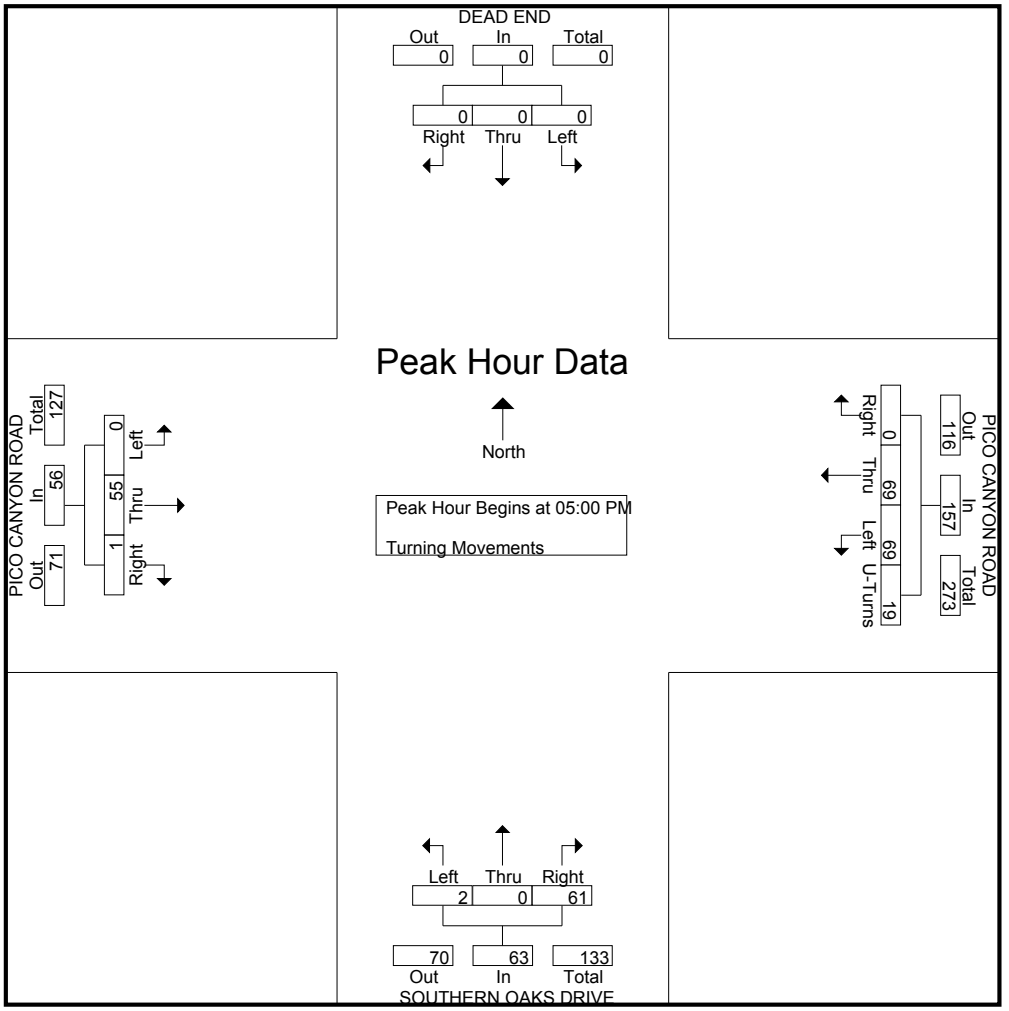


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: SOUTHERN OAKS DRIVE
E-W Direction: PICO CANYON ROAD

File Name : H1404054
Site Code : 00000000
Start Date : 4/15/2014
Page No : 3

	DEAD END Southbound				PICO CANYON ROAD Westbound					SOUTHERN OAKS DRIVE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 05:00 PM																		
05:00 PM	0	0	0	0	0	**22**	20	5	**47**	14	0	0	14	0	**14**	0	**14**	**75**
05:15 PM	0	0	0	0	0	12	15	5	32	**18**	0	**1**	**19**	**1**	13	0	14	65
05:30 PM	0	0	0	0	0	14	**21**	3	38	14	0	0	14	0	14	0	14	66
05:45 PM	0	0	0	0	0	21	13	**6**	40	15	0	1	16	0	14	0	14	70
Total Volume	0	0	0	0	0	69	69	19	157	61	0	2	63	1	55	0	56	276
% App. Total	0	0	0		0	43.9	43.9	12.1		96.8	0	3.2		1.8	98.2	0		
PHF	.000	.000	.000	.000	.000	.784	.821	.792	.835	.847	.000	.500	.829	.250	.982	.000	1.00	.920



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: CHIQUELLA LANE
E-W Direction: PICO CANYON ROAD

File Name : h1404055
Site Code : 00000000
Start Date : 4/15/2014
Page No : 1

Groups Printed- Turning Movements

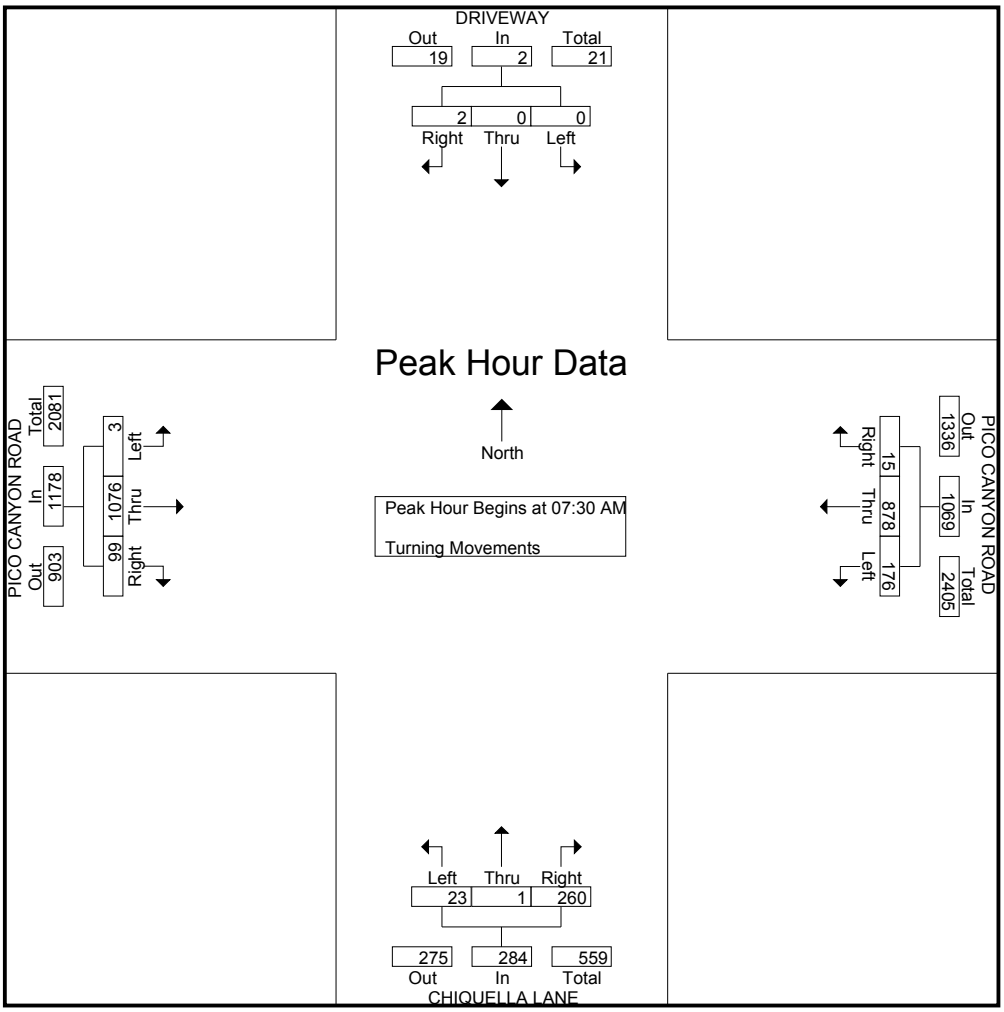
	DRIVEWAY Southbound			PICO CANYON ROAD Westbound			CHIQUELLA LANE Northbound			PICO CANYON ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	2	0	0	7	157	33	48	0	3	16	208	1	475
07:15 AM	0	0	0	5	159	20	65	0	2	14	182	1	448
07:30 AM	0	0	0	1	170	34	61	0	6	29	284	1	586
07:45 AM	2	0	0	4	223	43	76	0	4	27	278	0	657
Total	4	0	0	17	709	130	250	0	15	86	952	3	2166
08:00 AM	0	0	0	4	254	56	64	1	7	23	262	1	672
08:15 AM	0	0	0	6	231	43	59	0	6	20	252	1	618
08:30 AM	0	0	0	4	191	39	59	1	8	16	254	0	572
08:45 AM	0	0	0	5	228	42	64	0	15	23	240	0	617
Total	0	0	0	19	904	180	246	2	36	82	1008	2	2479
*** BREAK ***													
04:00 PM	0	0	0	2	279	31	41	0	3	24	291	0	671
04:15 PM	0	0	0	1	273	39	67	0	12	21	285	1	699
04:30 PM	1	0	0	3	293	44	76	0	9	21	267	1	715
04:45 PM	2	0	0	7	268	54	59	0	11	18	287	0	706
Total	3	0	0	13	1113	168	243	0	35	84	1130	2	2791
05:00 PM	1	0	0	4	312	37	77	0	10	28	312	1	782
05:15 PM	2	0	0	2	322	51	61	0	6	24	326	0	794
05:30 PM	0	0	0	2	307	58	57	0	11	31	264	0	730
05:45 PM	0	0	0	2	342	55	69	0	16	22	270	0	776
Total	3	0	0	10	1283	201	264	0	43	105	1172	1	3082
Grand Total	10	0	0	59	4009	679	1003	2	129	357	4262	8	10518
Apprch %	100	0	0	1.2	84.5	14.3	88.4	0.2	11.4	7.7	92.1	0.2	
Total %	0.1	0	0	0.6	38.1	6.5	9.5	0	1.2	3.4	40.5	0.1	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: CHIQUELLA LANE
E-W Direction: PICO CANYON ROAD

File Name : h1404055
Site Code : 00000000
Start Date : 4/15/2014
Page No : 2

	DRIVEWAY Southbound				PICO CANYON ROAD Westbound				CHIQUELLA LANE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	1	170	34	205	61	0	6	67	**29**	**284**	**1**	**314**	586
07:45 AM	**2**	0	0	**2**	4	223	43	270	**76**	0	4	**80**	27	278	0	305	657
08:00 AM	0	0	0	0	4	**254**	**56**	**314**	64	**1**	**7**	72	23	262	1	286	**672**
08:15 AM	0	0	0	0	**6**	231	43	280	59	0	6	65	20	252	1	273	618
Total Volume	2	0	0	2	15	878	176	1069	260	1	23	284	99	1076	3	1178	2533
% App. Total	100	0	0		1.4	82.1	16.5		91.5	0.4	8.1		8.4	91.3	0.3		
PHF	.250	.000	.000	.250	.625	.864	.786	.851	.855	.250	.821	.888	.853	.947	.750	.938	.942

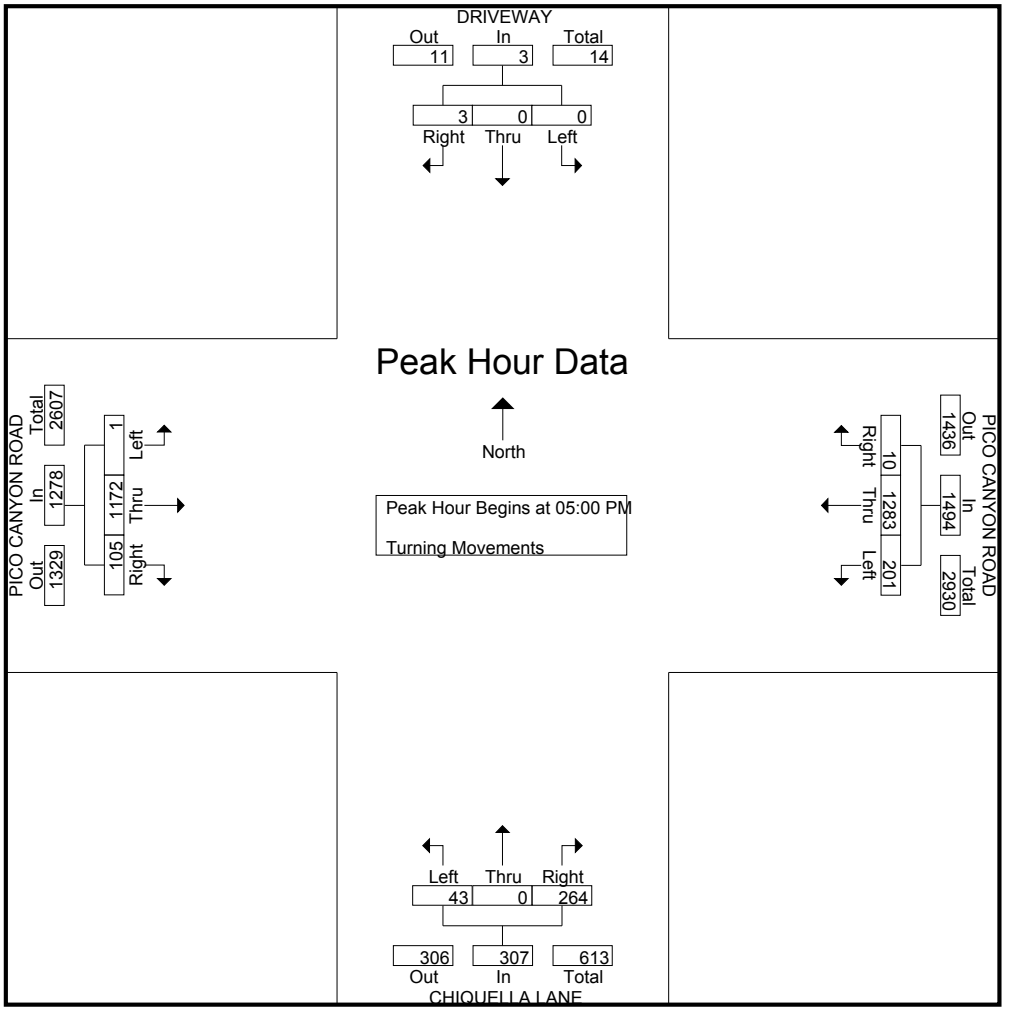


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S Direction: CHIQUELLA LANE
E-W Direction: PICO CANYON ROAD

File Name : h1404055
Site Code : 00000000
Start Date : 4/15/2014
Page No : 3

	DRIVEWAY Southbound				PICO CANYON ROAD Westbound				CHIQUELLA LANE Northbound				PICO CANYON ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	0	1	**4**	312	37	353	**77**	0	10	**87**	28	312	**1**	341	782
05:15 PM	**2**	0	0	**2**	2	322	51	375	61	0	6	67	24	**326**	0	**350**	**794**
05:30 PM	0	0	0	0	2	307	**58**	367	57	0	11	68	**31**	264	0	295	730
05:45 PM	0	0	0	0	2	**342**	55	**399**	69	0	**16**	85	22	270	0	292	776
Total Volume	3	0	0	3	10	1283	201	1494	264	0	43	307	105	1172	1	1278	3082
% App. Total	100	0	0		0.7	85.9	13.5		86	0	14		8.2	91.7	0.1		
PHF	.375	.000	.000	.375	.625	.938	.866	.936	.857	.000	.672	.882	.847	.899	.250	.913	.970



Appendix C HCM DELAY WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	670	320	0	450	520	150	0	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.95		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.92		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4450		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4450		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	705	337	0	474	547	158	0	116	0	0
RTOR Reduction (vph)	0	0	157	0	255	0	0	0	76	0	0
Lane Group Flow (vph)	0	705	180	0	766	0	158	0	40	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		42.7	42.7		42.7		27.5		27.5		
Effective Green, g (s)		42.7	42.7		42.7		27.5		27.5		
Actuated g/C Ratio		0.53	0.53		0.53		0.34		0.34		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1888	844		2375		608		544		
v/s Ratio Prot		c0.20			0.17						
v/s Ratio Perm			0.11				c0.09		0.03		
v/c Ratio		0.37	0.21		0.32		0.26		0.07		
Uniform Delay, d1		10.9	9.8		10.5		18.9		17.7		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		0.6	0.6		0.4		1.0		0.3		
Delay (s)		11.4	10.4		10.9		20.0		17.9		
Level of Service		B	B		B		B		B		
Approach Delay (s)		11.1			10.9			19.1		0.0	
Approach LOS		B			B			B		A	

Intersection Summary

HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	570	240	0	1100	90	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	253	0	1158	95	611
RTOR Reduction (vph)	0	121	0	0	0	214
Lane Group Flow (vph)	600	132	0	1158	95	397
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	41.7	41.7		41.7	29.5	29.5
Effective Green, g (s)	41.7	41.7		41.7	29.5	29.5
Actuated g/C Ratio	0.52	0.52		0.52	0.37	0.37
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1844	766		2650	1265	1027
v/s Ratio Prot	0.17			c0.23	0.03	
v/s Ratio Perm		0.09				c0.14
v/c Ratio	0.33	0.17		0.44	0.08	0.39
Uniform Delay, d1	11.0	10.1		11.9	16.4	18.6
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5		0.5	0.1	1.1
Delay (s)	11.5	10.6		12.4	16.5	19.7
Level of Service	B	B		B	B	B
Approach Delay (s)	11.2			12.4	19.3	
Approach LOS	B			B	B	

Intersection Summary

HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	820	40	30	540	330	0	0	60	290	70	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3515		1770	3539	1360			1611	1681	1717	1486
Flt Permitted		1.00		0.22	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3515		406	3539	1360			1611	1681	1717	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	863	42	32	568	347	0	0	63	305	74	84
RTOR Reduction (vph)	0	3	0	0	0	178	0	0	54	0	0	62
Lane Group Flow (vph)	0	902	0	32	568	169	0	0	9	189	190	22
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		68.1		68.1	68.1	68.1			20.1	37.1	37.1	37.1
Effective Green, g (s)		68.1		68.1	68.1	68.1			20.1	37.1	37.1	37.1
Actuated g/C Ratio		0.49		0.49	0.49	0.49			0.14	0.27	0.27	0.27
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1709		197	1721	661			231	445	455	393
v/s Ratio Prot		c0.26			0.16					c0.11	0.11	
v/s Ratio Perm				0.08		0.12			c0.01			0.01
v/c Ratio		0.53		0.16	0.33	0.26			0.04	0.42	0.42	0.06
Uniform Delay, d1		24.8		20.0	22.0	21.1			51.6	42.6	42.5	38.4
Progression Factor		1.00		0.89	0.87	1.83			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.2		1.2	0.4	0.6			0.3	3.0	2.8	0.3
Delay (s)		26.0		19.0	19.4	39.2			52.0	45.6	45.3	38.7
Level of Service		C		B	B	D			D	D	D	D
Approach Delay (s)		26.0			26.7			52.0			44.2	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	650	0	0	790	450	290	0	290	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.96		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4624		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4624		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	684	0	0	832	474	305	0	305	0	0	0
RTOR Reduction (vph)	0	0	0	0	147	0	0	0	0	0	0	0
Lane Group Flow (vph)	200	684	0	0	1159	0	152	153	305	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Effective Green, g (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Actuated g/C Ratio	0.10	0.44			0.29		0.44	0.44	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	177	1567			1321		744	744	1541			
v/s Ratio Prot	c0.11	0.19			c0.25		0.09	0.09				
v/s Ratio Perm									c0.20			
v/c Ratio	1.13	0.44			0.88		0.20	0.21	0.20			
Uniform Delay, d1	31.5	13.5			23.8		11.9	12.0	0.0			
Progression Factor	1.66	0.47			1.00		1.00	1.00	1.00			
Incremental Delay, d2	103.1	0.8			8.4		0.1	0.1	0.3			
Delay (s)	155.3	7.1			32.3		12.1	12.1	0.3			
Level of Service	F	A			C		B	B	A			
Approach Delay (s)		40.6			32.3			6.2			0.0	
Approach LOS		D			C			A			A	

Intersection Summary

HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	890	140	0	910	550	190	0	260	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.97		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.94		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4634		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4634		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	937	147	0	958	579	200	0	274	0	0
RTOR Reduction (vph)	0	0	67	0	137	0	0	0	57	0	0
Lane Group Flow (vph)	0	937	80	0	1400	0	200	0	217	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		43.7	43.7		43.7		26.5		26.5		
Effective Green, g (s)		43.7	43.7		43.7		26.5		26.5		
Actuated g/C Ratio		0.55	0.55		0.55		0.33		0.33		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1933	864		2531		586		524		
v/s Ratio Prot		0.26			c0.30						
v/s Ratio Perm			0.05				0.11		c0.14		
v/c Ratio		0.48	0.09		0.55		0.34		0.41		
Uniform Delay, d1		11.2	8.7		11.8		20.2		20.7		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		0.9	0.2		0.9		1.6		2.4		
Delay (s)		12.1	8.9		12.7		21.8		23.1		
Level of Service		B	A		B		C		C		
Approach Delay (s)		11.6			12.7			22.6		0.0	
Approach LOS		B			B			C		A	

Intersection Summary

HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	850	190	0	1450	220	610
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	895	200	0	1526	232	642
RTOR Reduction (vph)	0	96	0	0	0	98
Lane Group Flow (vph)	895	104	0	1526	232	544
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	41.7	41.7		41.7	29.5	29.5
Effective Green, g (s)	41.7	41.7		41.7	29.5	29.5
Actuated g/C Ratio	0.52	0.52		0.52	0.37	0.37
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1844	766		2650	1265	1027
v/s Ratio Prot	0.25			c0.30	0.07	
v/s Ratio Perm		0.07				c0.20
v/c Ratio	0.49	0.14		0.58	0.18	0.53
Uniform Delay, d1	12.3	9.9		13.1	17.1	19.8
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.9	0.3	2.0
Delay (s)	13.2	10.2		14.0	17.4	21.8
Level of Service	B	B		B	B	C
Approach Delay (s)	12.7			14.0	20.6	
Approach LOS	B			B	C	

Intersection Summary

HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	890	30	60	1180	230	0	0	60	420	100	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3522		1770	3539	1360			1611	1681	1716	1486
Flt Permitted		1.00		0.20	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3522		372	3539	1360			1611	1681	1716	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	937	32	63	1242	242	0	0	63	442	105	137
RTOR Reduction (vph)	0	1	0	0	0	105	0	0	56	0	0	99
Lane Group Flow (vph)	0	968	0	63	1242	137	0	0	7	270	277	38
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		70.1		70.1	70.1	70.1			16.1	39.1	39.1	39.1
Effective Green, g (s)		70.1		70.1	70.1	70.1			16.1	39.1	39.1	39.1
Actuated g/C Ratio		0.50		0.50	0.50	0.50			0.12	0.28	0.28	0.28
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1763		186	1772	680			185	469	479	415
v/s Ratio Prot		0.27			c0.35					0.16	c0.16	
v/s Ratio Perm				0.17		0.10			c0.00			0.03
v/c Ratio		0.55		0.34	0.70	0.20			0.04	0.58	0.58	0.09
Uniform Delay, d1		24.1		21.0	26.9	19.4			55.1	43.3	43.4	37.3
Progression Factor		1.00		0.43	0.46	0.72			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.2		3.5	1.7	0.5			0.4	5.1	5.0	0.4
Delay (s)		25.3		12.6	14.0	14.5			55.5	48.4	48.4	37.8
Level of Service		C		B	B	B			E	D	D	D
Approach Delay (s)		25.3			14.0			55.5			46.3	
Approach LOS		C			B			E			D	

Intersection Summary

HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	920	0	0	850	390	660	0	540	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.94		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4553		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4553		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	968	0	0	895	411	695	0	568	0	0	0
RTOR Reduction (vph)	0	0	0	0	59	0	0	0	0	0	0	0
Lane Group Flow (vph)	200	968	0	0	1247	0	347	348	568	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	28.0	86.0			54.0		46.0	46.0	140.0			
Effective Green, g (s)	28.0	86.0			54.0		46.0	46.0	140.0			
Actuated g/C Ratio	0.20	0.61			0.39		0.33	0.33	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	354	2173			1756		552	552	1541			
v/s Ratio Prot	c0.11	0.27			c0.27		0.21	c0.21				
v/s Ratio Perm									0.37			
v/c Ratio	0.56	0.45			0.71		0.63	0.63	0.37			
Uniform Delay, d1	50.5	14.3			36.4		39.8	39.8	0.0			
Progression Factor	1.00	0.94			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.8	0.6			2.5		2.2	2.3	0.7			
Delay (s)	52.2	14.1			38.8		42.0	42.1	0.7			
Level of Service	D	B			D		D	D	A			
Approach Delay (s)		20.6			38.8			23.5			0.0	
Approach LOS		C			D			C			A	

Intersection Summary

HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	687	320	0	453	520	150	0	113	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.95		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.92		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4452		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4452		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	723	337	0	477	547	158	0	119	0	0
RTOR Reduction (vph)	0	0	157	0	255	0	0	0	78	0	0
Lane Group Flow (vph)	0	723	180	0	769	0	158	0	41	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		42.7	42.7		42.7		27.5		27.5		
Effective Green, g (s)		42.7	42.7		42.7		27.5		27.5		
Actuated g/C Ratio		0.53	0.53		0.53		0.34		0.34		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1888	844		2376		608		544		
v/s Ratio Prot		c0.20			0.17						
v/s Ratio Perm			0.11				c0.09		0.03		
v/c Ratio		0.38	0.21		0.32		0.26		0.08		
Uniform Delay, d1		10.9	9.8		10.5		18.9		17.7		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		0.6	0.6		0.4		1.0		0.3		
Delay (s)		11.5	10.4		10.9		20.0		18.0		
Level of Service		B	B		B		B		B		
Approach Delay (s)		11.2			10.9			19.1		0.0	
Approach LOS		B			B			B		A	

Intersection Summary

HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	577	250	0	1103	90	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	607	263	0	1161	95	611
RTOR Reduction (vph)	0	126	0	0	0	210
Lane Group Flow (vph)	607	137	0	1161	95	401
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	41.7	41.7		41.7	29.5	29.5
Effective Green, g (s)	41.7	41.7		41.7	29.5	29.5
Actuated g/C Ratio	0.52	0.52		0.52	0.37	0.37
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1844	766		2650	1265	1027
v/s Ratio Prot	0.17			c0.23	0.03	
v/s Ratio Perm		0.09				c0.14
v/c Ratio	0.33	0.18		0.44	0.08	0.39
Uniform Delay, d1	11.1	10.1		11.9	16.4	18.6
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5		0.5	0.1	1.1
Delay (s)	11.5	10.6		12.4	16.5	19.7
Level of Service	B	B		B	B	B
Approach Delay (s)	11.3			12.4	19.3	
Approach LOS	B			B	B	

Intersection Summary

HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	837	40	30	546	330	0	0	60	290	70	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3515		1770	3539	1360			1611	1681	1717	1486
Flt Permitted		1.00		0.21	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3515		393	3539	1360			1611	1681	1717	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	881	42	32	575	347	0	0	63	305	74	84
RTOR Reduction (vph)	0	3	0	0	0	178	0	0	54	0	0	62
Lane Group Flow (vph)	0	920	0	32	575	169	0	0	9	189	190	22
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		68.1		68.1	68.1	68.1			20.1	37.1	37.1	37.1
Effective Green, g (s)		68.1		68.1	68.1	68.1			20.1	37.1	37.1	37.1
Actuated g/C Ratio		0.49		0.49	0.49	0.49			0.14	0.27	0.27	0.27
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1709		191	1721	661			231	445	455	393
v/s Ratio Prot		c0.26			0.16					c0.11	0.11	
v/s Ratio Perm				0.08		0.12			c0.01			0.01
v/c Ratio		0.54		0.17	0.33	0.26			0.04	0.42	0.42	0.06
Uniform Delay, d1		25.0		20.1	22.0	21.1			51.6	42.6	42.5	38.4
Progression Factor		1.00		0.89	0.87	1.82			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.2		1.3	0.4	0.6			0.3	3.0	2.8	0.3
Delay (s)		26.2		19.2	19.5	39.1			52.0	45.6	45.3	38.7
Level of Service		C		B	B	D			D	D	D	D
Approach Delay (s)		26.2			26.6			52.0			44.2	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	658	0	0	793	450	293	0	290	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.96		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4625		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4625		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	693	0	0	835	474	308	0	305	0	0	0
RTOR Reduction (vph)	0	0	0	0	146	0	0	0	0	0	0	0
Lane Group Flow (vph)	200	693	0	0	1163	0	154	154	305	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Effective Green, g (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Actuated g/C Ratio	0.10	0.44			0.29		0.44	0.44	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	177	1567			1321		744	744	1541			
v/s Ratio Prot	c0.11	0.20			c0.25		0.09	0.09				
v/s Ratio Perm									c0.20			
v/c Ratio	1.13	0.44			0.88		0.21	0.21	0.20			
Uniform Delay, d1	31.5	13.5			23.9		12.0	12.0	0.0			
Progression Factor	1.67	0.48			1.00		1.00	1.00	1.00			
Incremental Delay, d2	102.9	0.8			8.7		0.1	0.1	0.3			
Delay (s)	155.4	7.3			32.5		12.1	12.1	0.3			
Level of Service	F	A			C		B	B	A			
Approach Delay (s)		40.5			32.5			6.2			0.0	
Approach LOS		D			C			A			A	

Intersection Summary

HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	901	140	0	918	550	190	0	271	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.97		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.94		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4637		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4637		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	948	147	0	966	579	200	0	285	0	0
RTOR Reduction (vph)	0	0	67	0	135	0	0	0	56	0	0
Lane Group Flow (vph)	0	948	80	0	1410	0	200	0	229	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		43.7	43.7		43.7		26.5		26.5		
Effective Green, g (s)		43.7	43.7		43.7		26.5		26.5		
Actuated g/C Ratio		0.55	0.55		0.55		0.33		0.33		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1933	864		2532		586		524		
v/s Ratio Prot		0.27			c0.30						
v/s Ratio Perm			0.05				0.11		c0.14		
v/c Ratio		0.49	0.09		0.56		0.34		0.44		
Uniform Delay, d1		11.2	8.7		11.8		20.2		20.9		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		0.9	0.2		0.9		1.6		2.6		
Delay (s)		12.1	8.9		12.7		21.8		23.6		
Level of Service		B	A		B		C		C		
Approach Delay (s)		11.7			12.7			22.8		0.0	
Approach LOS		B			B			C		A	

Intersection Summary

HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	854	197	0	1458	220	610
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	899	207	0	1535	232	642
RTOR Reduction (vph)	0	99	0	0	0	97
Lane Group Flow (vph)	899	108	0	1535	232	545
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	41.7	41.7		41.7	29.5	29.5
Effective Green, g (s)	41.7	41.7		41.7	29.5	29.5
Actuated g/C Ratio	0.52	0.52		0.52	0.37	0.37
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1844	766		2650	1265	1027
v/s Ratio Prot	0.25			c0.30	0.07	
v/s Ratio Perm		0.07				c0.20
v/c Ratio	0.49	0.14		0.58	0.18	0.53
Uniform Delay, d1	12.3	9.9		13.1	17.1	19.8
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.9	0.3	2.0
Delay (s)	13.2	10.3		14.1	17.4	21.8
Level of Service	B	B		B	B	C
Approach Delay (s)	12.7			14.1	20.6	
Approach LOS	B			B	C	

Intersection Summary

HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	901	30	60	1199	230	0	0	60	420	100	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3522		1770	3539	1360			1611	1681	1716	1486
Flt Permitted		1.00		0.20	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3522		365	3539	1360			1611	1681	1716	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	948	32	63	1262	242	0	0	63	442	105	137
RTOR Reduction (vph)	0	1	0	0	0	103	0	0	56	0	0	99
Lane Group Flow (vph)	0	979	0	63	1262	139	0	0	7	270	277	38
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		70.1		70.1	70.1	70.1			16.1	39.1	39.1	39.1
Effective Green, g (s)		70.1		70.1	70.1	70.1			16.1	39.1	39.1	39.1
Actuated g/C Ratio		0.50		0.50	0.50	0.50			0.12	0.28	0.28	0.28
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1763		182	1772	680			185	469	479	415
v/s Ratio Prot		0.28			c0.36					0.16	c0.16	
v/s Ratio Perm				0.17		0.10			c0.00			0.03
v/c Ratio		0.56		0.35	0.71	0.20			0.04	0.58	0.58	0.09
Uniform Delay, d1		24.2		21.1	27.1	19.4			55.1	43.3	43.4	37.3
Progression Factor		1.00		0.43	0.46	0.69			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.3		3.7	1.8	0.5			0.4	5.1	5.0	0.4
Delay (s)		25.4		12.8	14.1	13.8			55.5	48.4	48.4	37.8
Level of Service		C		B	B	B			E	D	D	D
Approach Delay (s)		25.4			14.0			55.5			46.3	
Approach LOS		C			B			E			D	

Intersection Summary

HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	925	0	0	859	390	670	0	540	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.94		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4557		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4557		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	974	0	0	904	411	705	0	568	0	0	0
RTOR Reduction (vph)	0	0	0	0	59	0	0	0	0	0	0	0
Lane Group Flow (vph)	200	974	0	0	1256	0	352	353	568	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	28.0	86.0			54.0		46.0	46.0	140.0			
Effective Green, g (s)	28.0	86.0			54.0		46.0	46.0	140.0			
Actuated g/C Ratio	0.20	0.61			0.39		0.33	0.33	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	354	2173			1757		552	552	1541			
v/s Ratio Prot	c0.11	0.28			c0.28		0.21	c0.21				
v/s Ratio Perm									0.37			
v/c Ratio	0.56	0.45			0.71		0.64	0.64	0.37			
Uniform Delay, d1	50.5	14.4			36.5		39.9	40.0	0.0			
Progression Factor	0.99	0.94			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.7	0.6			2.5		2.4	2.4	0.7			
Delay (s)	51.9	14.0			39.0		42.3	42.4	0.7			
Level of Service	D	B			D		D	D	A			
Approach Delay (s)		20.5			39.0			23.8			0.0	
Approach LOS		C			D			C			A	

Intersection Summary

HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	703	170	0	357	180	500	0	717	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.97		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.95		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4684		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4684		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	740	179	0	376	189	526	0	755	0	0
RTOR Reduction (vph)	0	0	119	0	113	0	0	0	79	0	0
Lane Group Flow (vph)	0	740	60	0	452	0	526	0	676	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		26.7	26.7		26.7		43.5		43.5		
Effective Green, g (s)		26.7	26.7		26.7		43.5		43.5		
Actuated g/C Ratio		0.33	0.33		0.33		0.54		0.54		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1181	528		1563		962		860		
v/s Ratio Prot		c0.21			0.10						
v/s Ratio Perm			0.04				0.30		c0.43		
v/c Ratio		0.63	0.11		0.29		0.55		0.79		
Uniform Delay, d1		22.5	18.5		19.7		11.8		14.5		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		2.5	0.4		0.5		2.2		7.1		
Delay (s)		25.0	18.9		20.1		14.1		21.7		
Level of Service		C	B		C		B		C		
Approach Delay (s)		23.8			20.1			18.6		0.0	
Approach LOS		C			C			B		A	

Intersection Summary

HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	753	390	0	567	80	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	793	411	0	597	84	526
RTOR Reduction (vph)	0	176	0	0	0	170
Lane Group Flow (vph)	793	235	0	597	84	356
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	45.7	45.7		45.7	25.5	25.5
Effective Green, g (s)	45.7	45.7		45.7	25.5	25.5
Actuated g/C Ratio	0.57	0.57		0.57	0.32	0.32
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2021	839		2904	1094	888
v/s Ratio Prot	c0.22			0.12	0.02	
v/s Ratio Perm		0.16				c0.13
v/c Ratio	0.39	0.28		0.21	0.08	0.40
Uniform Delay, d1	9.5	8.8		8.3	19.0	21.3
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.8		0.2	0.1	1.3
Delay (s)	10.1	9.6		8.5	19.2	22.6
Level of Service	B	A		A	B	C
Approach Delay (s)	9.9			8.5	22.2	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1533	30	50	954	220	0	0	40	380	70	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3529		1770	3539	1360			1611	1681	1711	1486
Flt Permitted		1.00		0.06	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3529		118	3539	1360			1611	1681	1711	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1614	32	53	1004	232	0	0	42	400	74	400
RTOR Reduction (vph)	0	1	0	0	0	94	0	0	37	0	0	213
Lane Group Flow (vph)	0	1645	0	53	1004	138	0	0	5	236	238	187
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		83.1		83.1	83.1	83.1			16.1	26.1	26.1	26.1
Effective Green, g (s)		83.1		83.1	83.1	83.1			16.1	26.1	26.1	26.1
Actuated g/C Ratio		0.59		0.59	0.59	0.59			0.12	0.19	0.19	0.19
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2094		70	2100	807			185	313	318	277
v/s Ratio Prot		c0.47			0.28					c0.14	0.14	
v/s Ratio Perm				0.45		0.10			c0.00			0.13
v/c Ratio		0.79		0.76	0.48	0.17			0.03	0.75	0.75	0.67
Uniform Delay, d1		21.7		21.0	16.1	12.9			55.0	53.9	53.8	53.0
Progression Factor		1.00		0.85	0.66	0.72			1.00	1.00	1.00	1.00
Incremental Delay, d2		3.1		41.3	0.6	0.3			0.3	15.5	14.9	12.4
Delay (s)		24.7		59.3	11.2	9.6			55.3	69.4	68.7	65.4
Level of Service		C		E	B	A			E	E	E	E
Approach Delay (s)		24.7			12.9			55.3			67.4	
Approach LOS		C			B			E			E	

Intersection Summary

HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	1312	0	0	847	540	97	10	130	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.96		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.94		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.96	1.00			
Satd. Flow (prot)	1770	3539			4592		1681	1701	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.96	1.00			
Satd. Flow (perm)	1770	3539			4592		1681	1701	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	1381	0	0	892	568	102	11	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	164	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	1381	0	0	1296	0	56	57	137	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Effective Green, g (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Actuated g/C Ratio	0.10	0.44			0.29		0.44	0.44	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	177	1567			1312		744	753	1541			
v/s Ratio Prot	0.09	c0.39			c0.28		0.03	0.03				
v/s Ratio Perm									c0.09			
v/c Ratio	0.95	0.88			0.99		0.08	0.08	0.09			
Uniform Delay, d1	31.3	17.8			24.9		11.2	11.2	0.0			
Progression Factor	0.88	0.74			1.00		1.00	1.00	1.00			
Incremental Delay, d2	39.2	4.8			22.1		0.0	0.0	0.1			
Delay (s)	66.9	18.0			46.9		11.3	11.3	0.1			
Level of Service	E	B			D		B	B	A			
Approach Delay (s)		23.3			46.9			5.2			0.0	
Approach LOS		C			D			A			A	

Intersection Summary

HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	1099	150	0	1592	580	300	0	229	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.98		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.96		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4763		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4763		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1157	158	0	1676	611	316	0	241	0	0
RTOR Reduction (vph)	0	0	66	0	82	0	0	0	22	0	0
Lane Group Flow (vph)	0	1157	92	0	2205	0	316	0	219	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		46.7	46.7		46.7		23.5		23.5		
Effective Green, g (s)		46.7	46.7		46.7		23.5		23.5		
Actuated g/C Ratio		0.58	0.58		0.58		0.29		0.29		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		2065	924		2780		519		465		
v/s Ratio Prot		0.33			c0.46						
v/s Ratio Perm			0.06				c0.18		0.14		
v/c Ratio		0.56	0.10		0.79		0.61		0.47		
Uniform Delay, d1		10.3	7.4		12.9		24.3		23.2		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		1.1	0.2		2.4		5.2		3.4		
Delay (s)		11.4	7.6		15.3		29.5		26.6		
Level of Service		B	A		B		C		C		
Approach Delay (s)		10.9			15.3			28.2		0.0	
Approach LOS		B			B			C		A	

Intersection Summary

HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	856	273	0	2162	350	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	901	287	0	2276	368	758
RTOR Reduction (vph)	0	123	0	0	0	131
Lane Group Flow (vph)	901	164	0	2276	368	627
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	45.7	45.7		45.7	25.5	25.5
Effective Green, g (s)	45.7	45.7		45.7	25.5	25.5
Actuated g/C Ratio	0.57	0.57		0.57	0.32	0.32
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2021	839		2904	1094	888
v/s Ratio Prot	0.25			c0.45	0.11	
v/s Ratio Perm		0.11				c0.22
v/c Ratio	0.45	0.20		0.78	0.34	0.71
Uniform Delay, d1	9.9	8.3		13.3	20.8	24.0
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.5		2.2	0.8	4.7
Delay (s)	10.6	8.8		15.5	21.6	28.6
Level of Service	B	A		B	C	C
Approach Delay (s)	10.1			15.5	26.3	
Approach LOS	B			B	C	

Intersection Summary

HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1079	50	60	1231	300	0	0	20	480	80	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3516		1770	3539	1360			1611	1681	1708	1486
Flt Permitted		1.00		0.13	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3516		250	3539	1360			1611	1681	1708	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1136	53	63	1296	316	0	0	21	505	84	74
RTOR Reduction (vph)	0	2	0	0	0	131	0	0	19	0	0	54
Lane Group Flow (vph)	0	1187	0	63	1296	185	0	0	2	293	296	20
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		72.0		72.0	72.0	72.0			16.1	37.2	37.2	37.2
Effective Green, g (s)		72.0		72.0	72.0	72.0			16.1	37.2	37.2	37.2
Actuated g/C Ratio		0.51		0.51	0.51	0.51			0.12	0.27	0.27	0.27
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1808		128	1820	699			185	446	453	394
v/s Ratio Prot		0.34			c0.37					c0.17	0.17	
v/s Ratio Perm				0.25		0.14			c0.00			0.01
v/c Ratio		0.66		0.49	0.71	0.26			0.01	0.66	0.65	0.05
Uniform Delay, d1		24.9		22.1	26.1	19.1			54.9	45.7	45.7	38.2
Progression Factor		1.00		0.71	0.68	0.40			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.9		11.2	2.1	0.8			0.1	7.4	7.2	0.2
Delay (s)		26.8		26.8	19.7	8.3			55.0	53.1	52.8	38.5
Level of Service		C		C	B	A			E	D	D	D
Approach Delay (s)		26.8			17.8			55.0			51.4	
Approach LOS		C			B			E			D	

Intersection Summary

HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	1225	0	0	871	780	360	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.91		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.93		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4298		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4298		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1289	0	0	917	821	379	0	295	0	0	0
RTOR Reduction (vph)	0	0	0	0	115	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	1289	0	0	1623	0	189	190	295	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	26.0	101.0			71.0		31.0	31.0	140.0			
Effective Green, g (s)	26.0	101.0			71.0		31.0	31.0	140.0			
Actuated g/C Ratio	0.19	0.72			0.51		0.22	0.22	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	328	2553			2179		372	372	1541			
v/s Ratio Prot	c0.12	0.36			c0.38		0.11	c0.11				
v/s Ratio Perm									0.19			
v/c Ratio	0.64	0.50			0.96dr		0.51	0.51	0.19			
Uniform Delay, d1	52.7	8.5			27.3		47.8	47.8	0.0			
Progression Factor	0.90	0.60			1.00		1.00	1.00	1.00			
Incremental Delay, d2	3.3	0.5			2.4		1.1	1.2	0.3			
Delay (s)	50.7	5.7			29.7		48.9	49.0	0.3			
Level of Service	D	A			C		D	D	A			
Approach Delay (s)		12.0			29.7			27.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary

HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	720	170	0	360	180	500	0	720	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.97		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.95		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4686		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4686		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	758	179	0	379	189	526	0	758	0	0
RTOR Reduction (vph)	0	0	119	0	113	0	0	0	78	0	0
Lane Group Flow (vph)	0	758	60	0	455	0	526	0	680	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		26.7	26.7		26.7		43.5		43.5		
Effective Green, g (s)		26.7	26.7		26.7		43.5		43.5		
Actuated g/C Ratio		0.33	0.33		0.33		0.54		0.54		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		1181	528		1563		962		860		
v/s Ratio Prot		c0.21			0.10						
v/s Ratio Perm			0.04				0.30		c0.43		
v/c Ratio		0.64	0.11		0.29		0.55		0.79		
Uniform Delay, d1		22.6	18.5		19.7		11.8		14.6		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		2.7	0.4		0.5		2.2		7.3		
Delay (s)		25.3	18.9		20.1		14.1		21.9		
Level of Service		C	B		C		B		C		
Approach Delay (s)		24.1			20.1			18.7		0.0	
Approach LOS		C			C			B		A	

Intersection Summary

HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	760	400	0	570	80	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	421	0	600	84	526
RTOR Reduction (vph)	0	181	0	0	0	168
Lane Group Flow (vph)	800	240	0	600	84	358
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	45.7	45.7		45.7	25.5	25.5
Effective Green, g (s)	45.7	45.7		45.7	25.5	25.5
Actuated g/C Ratio	0.57	0.57		0.57	0.32	0.32
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2021	839		2904	1094	888
v/s Ratio Prot	c0.23			0.12	0.02	
v/s Ratio Perm		0.16				c0.13
v/c Ratio	0.40	0.29		0.21	0.08	0.40
Uniform Delay, d1	9.5	8.8		8.3	19.0	21.3
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.9		0.2	0.1	1.4
Delay (s)	10.1	9.7		8.5	19.2	22.7
Level of Service	B	A		A	B	C
Approach Delay (s)	9.9			8.5	22.2	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1550	30	50	960	220	0	0	40	380	70	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3529		1770	3539	1360			1611	1681	1711	1486
Flt Permitted		1.00		0.06	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3529		112	3539	1360			1611	1681	1711	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1632	32	53	1011	232	0	0	42	400	74	400
RTOR Reduction (vph)	0	1	0	0	0	94	0	0	37	0	0	212
Lane Group Flow (vph)	0	1663	0	53	1011	138	0	0	5	236	238	188
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		83.1		83.1	83.1	83.1			16.1	26.1	26.1	26.1
Effective Green, g (s)		83.1		83.1	83.1	83.1			16.1	26.1	26.1	26.1
Actuated g/C Ratio		0.59		0.59	0.59	0.59			0.12	0.19	0.19	0.19
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		2094		66	2100	807			185	313	318	277
v/s Ratio Prot		0.47			0.29					c0.14	0.14	
v/s Ratio Perm				c0.47		0.10			c0.00			0.13
v/c Ratio		0.79		0.80	0.48	0.17			0.03	0.75	0.75	0.68
Uniform Delay, d1		21.9		22.1	16.2	12.9			55.0	53.9	53.8	53.1
Progression Factor		1.00		0.86	0.66	0.72			1.00	1.00	1.00	1.00
Incremental Delay, d2		3.2		50.3	0.6	0.3			0.3	15.5	14.9	12.7
Delay (s)		25.1		69.2	11.3	9.6			55.3	69.4	68.7	65.8
Level of Service		C		E	B	A			E	E	E	E
Approach Delay (s)		25.1			13.3			55.3			67.6	
Approach LOS		C			B			E			E	

Intersection Summary

HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	1320	0	0	850	540	100	10	130	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.96		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.94		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.96	1.00			
Satd. Flow (prot)	1770	3539			4593		1681	1701	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.96	1.00			
Satd. Flow (perm)	1770	3539			4593		1681	1701	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	1389	0	0	895	568	105	11	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	163	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	1389	0	0	1300	0	58	58	137	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Effective Green, g (s)	7.0	31.0			20.0		31.0	31.0	70.0			
Actuated g/C Ratio	0.10	0.44			0.29		0.44	0.44	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	177	1567			1312		744	753	1541			
v/s Ratio Prot	0.09	c0.39			c0.28		0.03	0.03				
v/s Ratio Perm									c0.09			
v/c Ratio	0.95	0.89			0.99		0.08	0.08	0.09			
Uniform Delay, d1	31.3	17.9			24.9		11.3	11.2	0.0			
Progression Factor	0.89	0.75			1.00		1.00	1.00	1.00			
Incremental Delay, d2	38.8	5.0			22.8		0.0	0.0	0.1			
Delay (s)	66.6	18.3			47.7		11.3	11.3	0.1			
Level of Service	E	B			D		B	B	A			
Approach Delay (s)		23.5			47.7			5.2			0.0	
Approach LOS		C			D			A			A	

Intersection Summary

HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	1110	150	0	1600	580	300	0	240	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3	5.3		5.3		4.5		4.5		
Lane Util. Factor		0.95	1.00		0.91		1.00		1.00		
Frpb, ped/bikes		1.00	1.00		0.98		1.00		1.00		
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00		
Frt		1.00	0.85		0.96		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583		4765		1770		1583		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583		4765		1770		1583		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1168	158	0	1684	611	316	0	253	0	0
RTOR Reduction (vph)	0	0	66	0	82	0	0	0	22	0	0
Lane Group Flow (vph)	0	1168	92	0	2213	0	316	0	231	0	0
Confl. Peds. (#/hr)						45					
Turn Type		NA	Perm		NA		Perm		Perm		
Protected Phases		2			6						
Permitted Phases			2				4		4		
Actuated Green, G (s)		46.7	46.7		46.7		23.5		23.5		
Effective Green, g (s)		46.7	46.7		46.7		23.5		23.5		
Actuated g/C Ratio		0.58	0.58		0.58		0.29		0.29		
Clearance Time (s)		5.3	5.3		5.3		4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0		
Lane Grp Cap (vph)		2065	924		2781		519		465		
v/s Ratio Prot		0.33			c0.46						
v/s Ratio Perm			0.06				c0.18		0.15		
v/c Ratio		0.57	0.10		0.80		0.61		0.50		
Uniform Delay, d1		10.3	7.4		12.9		24.3		23.4		
Progression Factor		1.00	1.00		1.00		1.00		1.00		
Incremental Delay, d2		1.1	0.2		2.5		5.2		3.8		
Delay (s)		11.5	7.6		15.4		29.5		27.1		
Level of Service		B	A		B		C		C		
Approach Delay (s)		11.0			15.4			28.5		0.0	
Approach LOS		B			B			C		A	

Intersection Summary

HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	860	280	0	2170	350	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.3	3.5	3.5
Lane Util. Factor	0.95	1.00		0.91	0.97	0.88
Frpb, ped/bikes	1.00	0.93		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1470		5085	3433	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1470		5085	3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	905	295	0	2284	368	758
RTOR Reduction (vph)	0	126	0	0	0	130
Lane Group Flow (vph)	905	169	0	2284	368	628
Confl. Peds. (#/hr)		45				
Turn Type	NA	Perm		NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2				8
Actuated Green, G (s)	45.7	45.7		45.7	25.5	25.5
Effective Green, g (s)	45.7	45.7		45.7	25.5	25.5
Actuated g/C Ratio	0.57	0.57		0.57	0.32	0.32
Clearance Time (s)	5.3	5.3		5.3	3.5	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2021	839		2904	1094	888
v/s Ratio Prot	0.26			c0.45	0.11	
v/s Ratio Perm		0.11				c0.23
v/c Ratio	0.45	0.20		0.79	0.34	0.71
Uniform Delay, d1	9.9	8.3		13.4	20.8	24.0
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.5		2.2	0.8	4.7
Delay (s)	10.6	8.8		15.6	21.6	28.7
Level of Service	B	A		B	C	C
Approach Delay (s)	10.2			15.6	26.4	
Approach LOS	B			B	C	

Intersection Summary

HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1090	50	60	1250	300	0	0	20	480	80	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Lane Util. Factor		0.95		1.00	0.95	1.00			1.00	0.95	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.86			1.00	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		0.99		1.00	1.00	0.85			0.86	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (prot)		3516		1770	3539	1360			1611	1681	1708	1486
Flt Permitted		1.00		0.13	1.00	1.00			1.00	0.95	0.97	1.00
Satd. Flow (perm)		3516		244	3539	1360			1611	1681	1708	1486
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1147	53	63	1316	316	0	0	21	505	84	74
RTOR Reduction (vph)	0	2	0	0	0	129	0	0	19	0	0	54
Lane Group Flow (vph)	0	1198	0	63	1316	187	0	0	2	293	296	20
Confl. Peds. (#/hr)						30						30
Turn Type		NA		Perm	NA	Perm			Perm	Split	NA	Perm
Protected Phases		2			6					4	4	
Permitted Phases				6		6			8			4
Actuated Green, G (s)		72.0		72.0	72.0	72.0			16.1	37.2	37.2	37.2
Effective Green, g (s)		72.0		72.0	72.0	72.0			16.1	37.2	37.2	37.2
Actuated g/C Ratio		0.51		0.51	0.51	0.51			0.12	0.27	0.27	0.27
Clearance Time (s)		4.9		4.9	4.9	4.9			4.9	4.9	4.9	4.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1808		125	1820	699			185	446	453	394
v/s Ratio Prot		0.34			c0.37					c0.17	0.17	
v/s Ratio Perm				0.26		0.14			c0.00			0.01
v/c Ratio		0.66		0.50	0.72	0.27			0.01	0.66	0.65	0.05
Uniform Delay, d1		25.0		22.3	26.3	19.1			54.9	45.7	45.7	38.2
Progression Factor		1.00		0.71	0.68	0.39			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.9		11.9	2.2	0.8			0.1	7.4	7.2	0.2
Delay (s)		27.0		27.7	19.9	8.4			55.0	53.1	52.8	38.5
Level of Service		C		C	B	A			E	D	D	D
Approach Delay (s)		27.0			18.0			55.0			51.4	
Approach LOS		C			B			E			D	

Intersection Summary

HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	1230	0	0	880	780	370	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.91		1.00	1.00	0.97			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.93		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			4301		1681	1681	1541			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			4301		1681	1681	1541			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1295	0	0	926	821	389	0	295	0	0	0
RTOR Reduction (vph)	0	0	0	0	114	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	1295	0	0	1633	0	194	195	295	0	0	0
Confl. Peds. (#/hr)			50			50			50			
Turn Type	Prot	NA			NA		Prot	NA	Free			
Protected Phases	5	2			6		3	8				
Permitted Phases									Free			
Actuated Green, G (s)	26.0	101.0			71.0		31.0	31.0	140.0			
Effective Green, g (s)	26.0	101.0			71.0		31.0	31.0	140.0			
Actuated g/C Ratio	0.19	0.72			0.51		0.22	0.22	1.00			
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	328	2553			2181		372	372	1541			
v/s Ratio Prot	c0.12	0.37			c0.38		0.12	c0.12				
v/s Ratio Perm									0.19			
v/c Ratio	0.64	0.51			0.96dr		0.52	0.52	0.19			
Uniform Delay, d1	52.7	8.6			27.4		48.0	48.0	0.0			
Progression Factor	0.90	0.60			1.00		1.00	1.00	1.00			
Incremental Delay, d2	3.2	0.5			2.4		1.3	1.3	0.3			
Delay (s)	50.7	5.7			29.8		49.3	49.3	0.3			
Level of Service	D	A			C		D	D	A			
Approach Delay (s)		12.0			29.8			28.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary

HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Appendix L

Sewer Area Study

SEWER AREA STUDY
PC 12218AS

AIDLIN HILLS
TRACT NO. 52796
Santa Clarita, CA

Prepared For:
Newhall Land & Farming
25124 Springfield Court, Suite 300
Valencia, CA 91355
(661) 255-4000

Prepared By:
Alliance Land Planning & Engineering, Inc.
2248 Faraday Ave.
Carlsbad, CA 92008
(760) 431-9896

SEWER AREA STUDY
APPROVED

APPROVED BY: Tony Hui RCE NO. 53018 DATE 8/12/2014

CHECKED BY: Tony Hui DATE 8/12/2014

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

THIS APPROVAL EXPIRES TWO YEARS FROM THE DATE OF APPROVAL

JUNE 2014

REGISTERED PROFESSIONAL ENGINEER
CARLA M. WHITTAKER
NO. 51929
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

ALLIANCE
LAND PLANNING & ENGINEERING INC.

CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

June 17, 2014

Los Angeles County Department of Public Works (LACDPW)
Attn: Land Development Division, Care of: Tony Hui
909 S. Fremont Ave.
Alhambra, CA 91803

Re: 'Master Area Study' Recertification
Tract #: 52796
Project #: PC 12218AS, Aidlin Hills Sewer Area Study

Dear Tony,

The purpose of this letter is to recertify the Sewer Area Study performed by SR Consultants for Tract No. 43896 previously approved by LACDPW back in 2001.

The SR Consultant Area Study is referred to as the 'Master Area Study' in the recently submitted Sewer Area Study (PC 12218AS) performed by Alliance Land Planning & Engineering for the proposed Aidlin Hills, TM 52796 development. The Master Area Study is used as the basis for the Aidlin Hills Sewer Area Study due to previous establishment of ultimate condition sewer flows for the overall sewer system within this area of the Stevenson Ranch community.

An analysis of current aerial imagery and current zoning maps has been performed to substantiate the continued relevance of the Master Area Study. Space inspection to TM 52796 and the surrounding area has also been conducted to verify accuracy of the Master Area Study.

Since 2001, only the sewer sub-basins for Aidlin Hills, TM 52796 (Area #7 per Master Area Study) and Legacy Village, VTTM 061996 (Area #5 per Master Area Study) have zoning coefficients which now differ from those defined within the Master Area Study. Changes within these two sub-basins are described in detail in the Aidlin Hills Sewer Area Study (PC 12281AS).

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Outside of the Aidlin Hills (Area #7) and Legacy Village (Area #5) sub- basins, there has been no new development, nor changes in zoning, nor changes to the tributary sewer system that would affect the zoning coefficients and/or sewer drainage sub-basins from those already defined within the Master Area Study.

Therefore, the Master Area Study has been verified as accurate and suitable for the basis of the Aidlin Hills (TM 52796) Sewer Area Study.

Sincerely,

Craig Whitteker, PE
RCE 51929

REGISTERED PROFESSIONAL ENGINEER
CRAIG M. WHITTEKER
No. 51929
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

March 18, 2014

Ref File No.: 2922320

Ms. Shannyn Henkel, Project Coordinator
Alliance Land Planning and Engineering, Inc.
2248 Faraday Avenue
Carlsbad, CA 92008

Dear Ms. Henkel:

Tract Map No. 52796, Stevenson Ranch

This is in response to your request for a will serve letter for the subject project, which was received by the Santa Clarita Valley Sanitation District (District) on February 11, 2014. We offer the following comments regarding sewerage service:

1. The project area is outside the jurisdictional boundaries of the District and will require annexation into the District before sewerage service can be provided to the proposed development. For a copy of the District's Annexation Information and Processing Fee sheets, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the appropriate link. For more specific information regarding the annexation procedure and fees, please contact Ms. Donna Kitt at extension 2708.

2. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the District, for conveyance to either or both the District's Valencia Trunk Sewer, located in Orchard Village Road at Mill Valley Road, or the District No. 32 Main Trunk Sewer, Section 2, located in a private right of way southeast of the intersection of Orchard Village Road and Wiley Canyon Road. The 24–inch diameter Valencia Trunk Sewer has a design capacity of 4.8 million gallons per day (mgd) and is nearing capacity. The 18–inch diameter District No. 32 Main Trunk Sewer, Section 2 has a design capacity of 3.3 mgd and conveyed a peak flow of 2.9 mgd when last measured in 2012. Although there is no relief sewer scheduled for construction at this time, the District is monitoring all proposed developments that would be tributary to the Valencia Trunk Sewer and will undertake improvements so that sewer capacity does not become limited. Prior to the Valencia Trunk Sewer reaching capacity, the design and construction of a relief sewer will be scheduled. Therefore, the availability of capacity within the District's sewerage system should be confirmed as the development of the proposed project proceeds.

3. The District operates two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities have a combined design capacity of 28.1 mgd and currently process an average flow of 19.8 mgd.

Recycled Paper

4. The expected average wastewater flow from the project site is 26,520 gallons per day. For a copy of the District's average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

5. The District is empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the District's Sewerage System for increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the appropriate link. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the District to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of District wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of District facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of District treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the District intends to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of District facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Grace Robinson Hyde

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: D. Kitt
M. Tremblay
J. Ganz

DOC: #2922526.D99SCVSD

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INTRODUCTION

This Sewer Area Study has been prepared for the proposed Aidlin Hills project, Tentative Map No. 52796, as required by Los Angeles County Department of Public Works (LACDPW). Developed condition sewer flows, sewer flow routing, and impacts upon existing sewer system capacity are included within. Accompanying this report are sewer area exhibits and maps, relevant data tables, and reference sewer calculation data.

PROJECT DESCRIPTION

Located due east of the 5 Freeway near the City of Santa Clarita in Los Angeles County, the Aidlin Hills project, TM 52796, is a 230.5 acre development along Pico Canyon Road in the community of Aidlin Hills. Approximately 20.8 acres of the project will consist of 102 Single Family Residential lots, while 200.1 acres will remain Open Space as natural landscaped area, water quality basin, or fire access road. 9.6 acres will be paved public streets. The project is currently in planning stages under LACDPW purview.

METHODOLOGY

MASTER AREA STUDY

The basis for this study is the "Master Area Study" performed by SR Consultants for Tract No. 43896 that is currently on file with the LACDPW. Originally approved by LACDPW in 2001 and recertified in June of 2014 by Alliance Land Planning & Engineering and LACDPW, the Master Area Study (MAS) establishes ultimate future condition sewer flows for the overall sewer drainage system of which Aidlin Hills, TM 52796 is already a part of. All sewer basin areas tributary to this drainage system, per topography and proposed future development, have been accounted for within the baseline MAS (See Exhibit 1 in Appendix A). Throughout the remainder of this report and on attached Exhibits, the Master Area Study will be shortly referred to at the "MAS".

Within the MAS, seventeen (17) sewer basin areas have been delineated. Except for Aidlin Hills, TM 52796 (Area #7), and future Legacy Village, VTTM 061996 (Area #5), all basin area delineations, land use, and zoning coefficients are considered established within the MAS and are being held constant within this current study.

Consequently, sewer flows from areas downstream of Aidlin Hills (Area #7) and downstream of future Legacy Village (Area #5) are also being held constant. Sewer flows originating from the offsite area (Area #6) immediately to the south of Aidlin Hills are also being held constant. Only sewer flows within Aidlin Hills, TM 52796, and future Legacy Village, VTTM 061996, are calculated herein.

Lastly, mainline routing paths for ALL areas, including those of Aidlin Hills and Legacy Village are held constant as shown per the MAS Exhibit 1 and Routing Maps in Appendix C.

PROPOSED LAND USE & FLOW GENERATION

Land use for all areas within the Master Area Study (MAS) are based upon existing development or ultimate future development per tentative tract maps and plans that were currently in process at that time. Per LACDPW procedures, zoning coefficients were used to quantify sewer flows within the MAS on either a 'cfs/acre' or on a 'cfs/unit' basis. LACDPW Zoning coefficients used herein can be seen in Appendix D.

Within this current study, two (2) major sewer areas have been analyzed for sewer flow generation. Only Land Uses within these two areas have changed from when the MAS was originally done.

1. Aidlin Hills, TM 52796 (Area # 7 per MAS)
2. Legacy Village, VTTM 061996 (Area # 5 per MAS)

These two major sewer areas are the hydraulically most remote areas tributary to the existing sewer system in this study. No further development upstream of Aidlin Hills (Area #7) or Legacy Village (Area #5) is anticipated in the foreseeable future. To the west and to the south, the Aidlin Hills area is currently bordered by land protected under the Mountain Conservancy and State of California. To the west and to the north, high elevation ridgelines border both Aidlin Hills and Legacy Village areas. Exhibit 1 and Exhibit 2 in Appendix A respectively detail Land Uses in the overall sewer drainage basin area and the detailed basin area of Aidlin Hills.

Aidlin Hills (Area #7) consists of 102 Single Family Residential units and Open Space land use. An LACDPW zoning coefficients of 0.001 cfs/unit has been applied per LA County procedures to generate current study sewer flows of 0.102 cfs from this site. The MAS previously had assessed a flow of 0.203 cfs to be generated from the Aidlin Hills area. This reduction is believed to arise from a more precise 'cfs/unit' coefficient now being utilized versus a broad 'cfs/acre' coefficient used in the MAS. Aidlin Hills (Area #7) has also been divided into four (4) separate subareas for pipe analysis purposes and is discussed further in the 'Routing' section of this report.

The offsite Legacy Village (Area #5) has recently been deemed as all Open Space by LACDPW. The MAS previously had assessed a flow of 0.036 cfs to be generated from the Legacy Village area. Due to this Open Space declaration, the offsite Legacy Village (Area #5) will now contribute no additional sewer flow to the existing sewer system within this analysis.

Offsite Area #6 is located immediately to the south of the proposed Aidlin Hills development. Sewer flows generated within the MAS for Area #6 will carry over into this current study at 0.046 cfs for Future Residential development.

A summary of the prescribed zoning coefficients and resulting sewage flows can be seen below in Table 1 for the onsite areas of Aidlin Hills (Area #7) and the offsite areas of Legacy Village (Area #5) and Area #6.

ONSITE AREA #7 SUBAREA	LAND USE	DWELLING UNITS	Q/UNIT (cfs)	TOTAL Q (cfs)	CUMULATIVE Q (cfs)
1	SINGLE FAMILY	16	0.001	0.016	0.016
2	SINGLE FAMILY	13	0.001	0.013	0.029
3	SINGLE FAMILY	38	0.001	0.038	0.067
4	SINGLE FAMILY	35	0.001	0.035	0.102
TOTAL		**102**			
OFFSITE AREA #5 - VTTM 061996 NOW DEEMED 'OPEN SPACE'				0.000	0.102
OFFSITE AREA #6 - FUTURE R-1 PER ' MASTER AREA STUDY'				0.046	0.148
				TOTAL	**0.250**

TABLE 1 - LAND USE/SEWER FLOW GENERATION SUMMARY

SEWER FLOW ROUTING

The routing path utilized within the MAS for the overall sewer drainage system will also be used in this current study. Flow paths through existing sewer lines to a trunk line outlet shown on the Overall MAS Exhibit have been confirmed as accurate via currently available Sewer Maintenance District (SMD) maps. See Appendix C for SMD Routing Maps.

Aidlin Hills onsite sewer flows have been divided into four (4) separate subareas for routing and pipe capacity analysis purposes. Sewer flows are cumulatively added at concentration points located at the downstream end of each of these four subareas and out to the existing sewer system within Pico Canyon Rd.

It is proposed that the Aidlin Hills (Area #7) sewer flows will connect to existing 15" VCP sewer pipe just downstream of the project site in Pico Canyon Road. Per record sewer plans (PC-11548), an existing 15" VCP pipe segment is currently believed to be capped just upstream of SMD Manhole #610 (SMD Map N-1258) also at Pico Canyon Rd. It is proposed that an 8" sewer line will convey flow from the Aidlin Hills development to a proposed 15" sewer pipe extension segment in Pico Canyon Rd at the 'A' St intersection. The proposed 15" pipe segment will then run approximately 443' downstream in Pico Canyon Rd and connect to the existing 15" pipe shown in the PC 11548 record plans. The system is intended to be conveyed entirely via gravity flow and without the use of any pump stations.

Offsite Area #6 is intended to connect directly to the proposed 15" sewer pipe at the intersection of Pico Canyon Rd and 'A' St. The 8" sewer pipe system within the proposed Aidlin Hills (Area #7) has not been analyzed for accommodation of these Area #6 offsite flows.

Downstream of SMD Manhole #610, the existing sewer system will ultimately route sewage flows to sewer trunk line, CSD 32-P-12. This outlet point is located inside City of Santa Clarita limits at Orchard Village Rd and Mill Valley Rd. SMD Maps N-1258 and N-1297 in Appendix C show this routing path in detail.

See Appendix C for SMD Manhole Number maps, SMD PC Number maps, and record drawings of MH610 to MH609 pipe segment.

SEWER CAPACITY ANALYSIS

A detailed sewer capacity analysis was performed for onsite Aidlin Hills subareas and the offsite Area #6. This analysis contains the system upstream of the 'capped' point of existing 15" sewer infrastructure at Pico Canyon Road and extends two pipe segments downstream to SMD manhole #609.

Existing 15" VCP sewer pipe runs upstream of SMD Manhole #609 to SMD manhole #610 and then continues approximately 125' upstream into a capped section of 15" VCP per PC 11548 record plans. Upstream of this capped section, another 15" pipe section is proposed to run to the intersection of Pico Canyon Rd and 'A' St of Aidlin Hills development. At or near this intersection, the proposed 8" sewer lines systems of Aidlin Hills (Area #7) and the proposed 8" sewer line of offsite Area #6 are assumed to connect.

Proposed mainline sewer pipe running through Aidlin Hills subareas are assumed to operate under gravity flow. Relatively steep topography will result in proposed pipe elevations with approximately 220 feet of fall through a distance of 2500 ft for an overall average slope of 8.5%. Initial pipe elevations follow proposed street alignment and have been set approximately 10' below proposed street elevations. All segments have been sized as 8" pipe. Exhibit 2 in Appendix A shows this system in detail.

Table 3 and Table 4 in Appendix B have been developed to summarize pipe capacity analysis per LACDPW procedures. Table 3 attempts to estimate pipe capacity per the actual, yet approximate, pipe slopes that will exist in post-development per plan. The second table attempts to estimate pipe capacity for a conservative condition where pipe slopes are held at 1.00%.

FlowMaster software was used in this pipe capacity analysis. Model pipe runs can be seen in Appendix E and Appendix F. Kutter's friction factor was used during modeling procedures as referenced in Appendix D. Within this output can be seen the model runs used to obtain the 50% full pipe flowrates used in Table 3 and Table 4 for both 8" and 15" pipes at each respective slope.

CONCLUSION

Due to a 'cfs/unit' analysis of the proposed TM 52796 for Aidlin Hills (Area #7) and revisions in Land Use to the proposed VTTM 061996 for Legacy Village (Area #5), a sewer flow net reduction of 0.137 cfs on the existing system has been calculated. This net reduction reduces sewer flows for all points downstream of the Aidlin Hills (Area #7) and Legacy Village (Area #5). At the Orchard Village Rd sewer trunk line outlet point, a cumulative total sewer flow reduction from 9.301 cfs to 9.164 cfs has been calculated. Holding all prior assumptions within the Master Area Study mentioned above, the proposed Aidlin Hills development is considered to have no impact on the existing sewer system.

Table 2 below summarizes sewer flows generated from the original Master Area Study as compared to sewer flows generated by updated land use within this current sewer area study.

SEWER AREA	M.A.S. Q Peak (cfs)	Current Study Q peak (cfs)	Δ Q Peak (cfs)
1	2.303	2.303	0
2	1.642	1.642	0
3	0.154	0.154	0
4	0.706	0.706	0
5	**0.036**	**0.000**	**-0.036**
6	0.046	0.046	0
7	**0.203**	**0.102**	**-0.101**
8	0.019	0.019	0
9	0.280	0.280	0
10	0.045	0.045	0
11	0.066	0.066	0
12	0.046	0.046	0
13	0.285	0.285	0
14	0.63	0.63	0
15	1.3	1.3	0
16	0.909	0.909	0
17	0.631	0.631	0
TOTAL	**9.301**	**9.164**	***-0.137***

Note: Sewer Area numbering per Master Area Study Overall Exhibit 1

TABLE 2 - CHANGE IN SEWER FLOWS FROM MASTER AREA STUDY TO THIS CURRENT STUDY

Also, pipe capacities within the Aidlin Hills development itself are considered to be adequate. Given the proposed 8" Aidlin Hills (Area #7) onsite pipe system, all pipe segments studied appear to run below the 50% full threshold as prescribed by LACDPW methods. While considering a conservative approach where pipe segments are designed using 1.00% pipe slope, all pipe 8" segments also appear to run below the 50% full threshold. Further downstream in Pico Canyon Rd, pipe capacity analysis of the proposed 443 ft segment of 15" pipe, and the existing 15" VCP sewer pipe segments down to MH#610 also result in capacities that run below the 50% full threshold. It is assumed that all pipe segments further downstream of MH #610 also run within acceptable capacity limits due to the net decrease in upstream sewer flows as compared to previously calculated values within the MAS.

APPENDIX A

Exhibits

STEVENSON RANCH AND VICINITY

SEWER AREA STUDY

TRACT NO. 43896 -P.C. 11476

SEWER AREA STUDY
TRACT 43896
SUMMARY

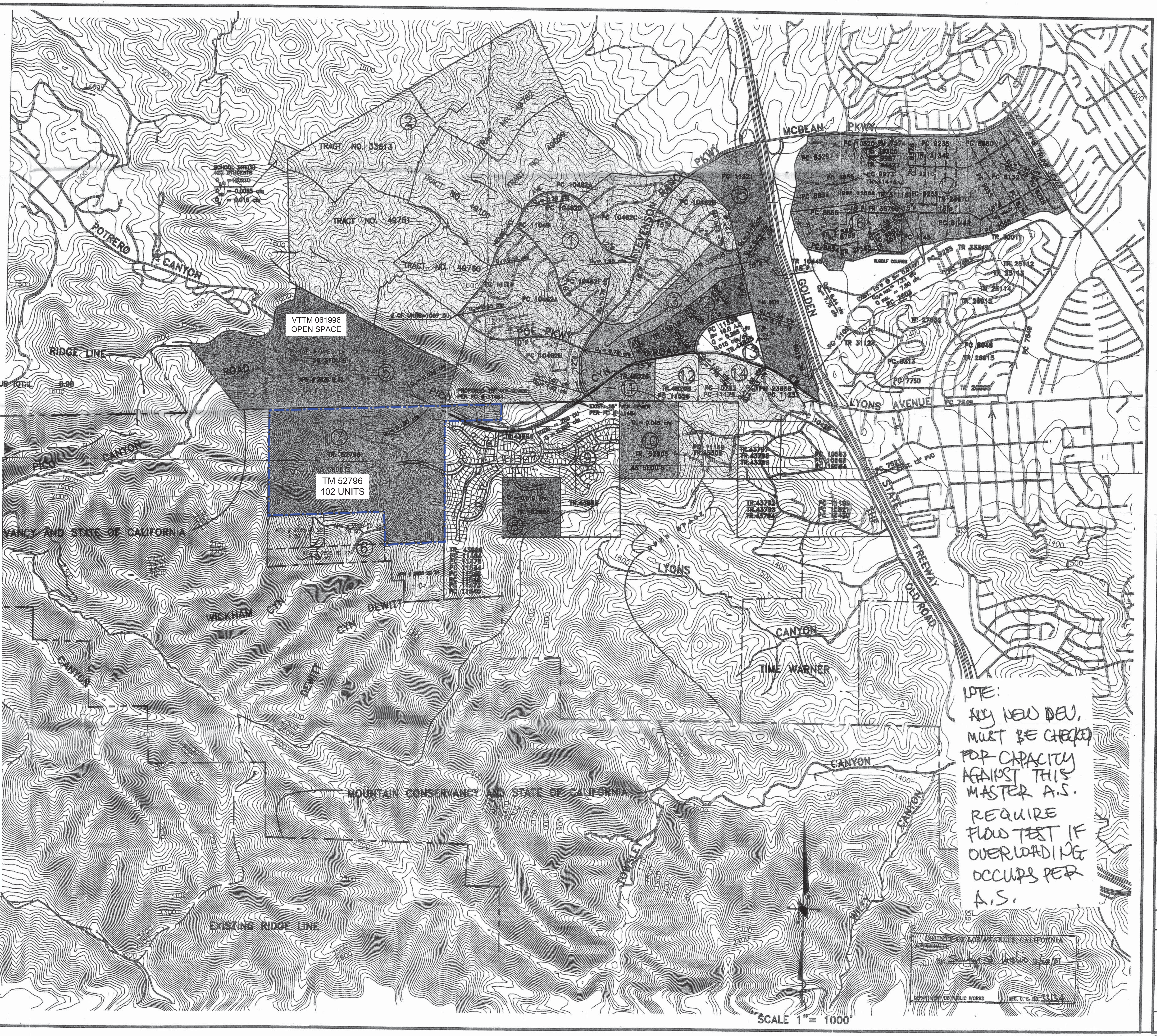
AREA	Q peak (cfs)	REMARKS
1	2.303	(EXISTING)
2	1.642	(EXISTING)
3	0.154	APPROVED TENT. TRACT 33608
4	0.706	APPROVED TENT. TRACT 33608-1
5	0.036	LENNAR HOMES FUTURE
6	0.046	FUTURE
7	0.203	PROPOSED TENT. TRACT 52796
8	0.019	APPROVED TENT. TRACT 52908
9	0.280	(EXISTING)
10	0.045	PROPOSED TENT. TRACT 52905
11	0.066	TENT. TR. 48026
12	0.046	APPROVED TENT. TRACT 48208
13	0.285	(EXISTING)
14	0.63	(EXISTING)
15	1.30	(EXISTING)
16	0.909	(EXISTING)
Exist. Peak Q(Qe) = 7.35 cfs (1,2,9,13, 14, 15 & 16) Ultimate Peak Q (Qu) = 8.85 cfs (1 Thr 16)		
17	0.631	(EXISTING)
TOTAL Qe	7.98	Flow to existing 24" trunk sewer
TOTAL Qu	9.28	

6/20/01
N/R
N/R
10/3/01

SEWER AREA STUDY
WITH CURRENT LAND USE
FOR TM 52796 AND VTTM 061996

AREA	Q peak (cfs)	REMARKS
1	2.303	UNCHANGED
2	1.642	UNCHANGED
3	0.154	UNCHANGED
4	0.706	UNCHANGED
5	**0.000**	***OPEN SPACE***
6	0.046	UNCHANGED
7	**0.102**	***102 UNIT Q***
8	0.019	UNCHANGED
9	0.28	UNCHANGED
10	0.045	UNCHANGED
11	0.066	UNCHANGED
12	0.046	UNCHANGED
13	0.285	UNCHANGED
14	0.63	UNCHANGED
15	1.3	UNCHANGED
16	0.909	UNCHANGED
Exist. Peak Q(Qe) = 7.35 cfs (1,2,9,13,14,15 & 16) Ultimate Peak Q (Qu) = **8.53 cfs** (1 thru 16)		
17	0.631	UNCHANGED
TOTAL Qe	7.98	Flows to existing 24" trunk sewer
TOTAL Qu	**9.16**	

TABLE PER ALLIANCE LAND PLANNING AND ENGINEERING
APRIL 7, 2014



No.	REVISION DESCRIPTION	BY	DATE

SR CONSULTANTS

SEWER AREA STUDY

TRACT NO. 43896 -P.C. 11476

SR CONSULTANTS, INC.
LAND PLANNING • ENGINEERING • SURVEYING
2898 MATARO STREET, PASADENA, CA. 91107
Phone : (626) 683-0430, Fax : (626) 683-9058

DESIGNED:	H.HARIRCHI
DRAWN:	H.HARIRCHI
CHECKED:	H.HARIRCHI
SUPERVISED:	H.HARIRCHI
PROJ. ENGINEER:	H.HARIRCHI
DATE:	03/27/2001
SCALE:	1"=1000'
JOB NUMBER:	591-001

REGISTERED PROFESSIONAL ENGINEER HASSAN HARIRCHI No. 40006 EXP. 6/30/04 CIVIL STATE OF CALIFORNIA

SHEET NO.
1
OF 1 SHEET

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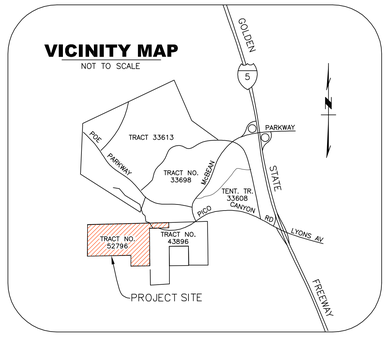
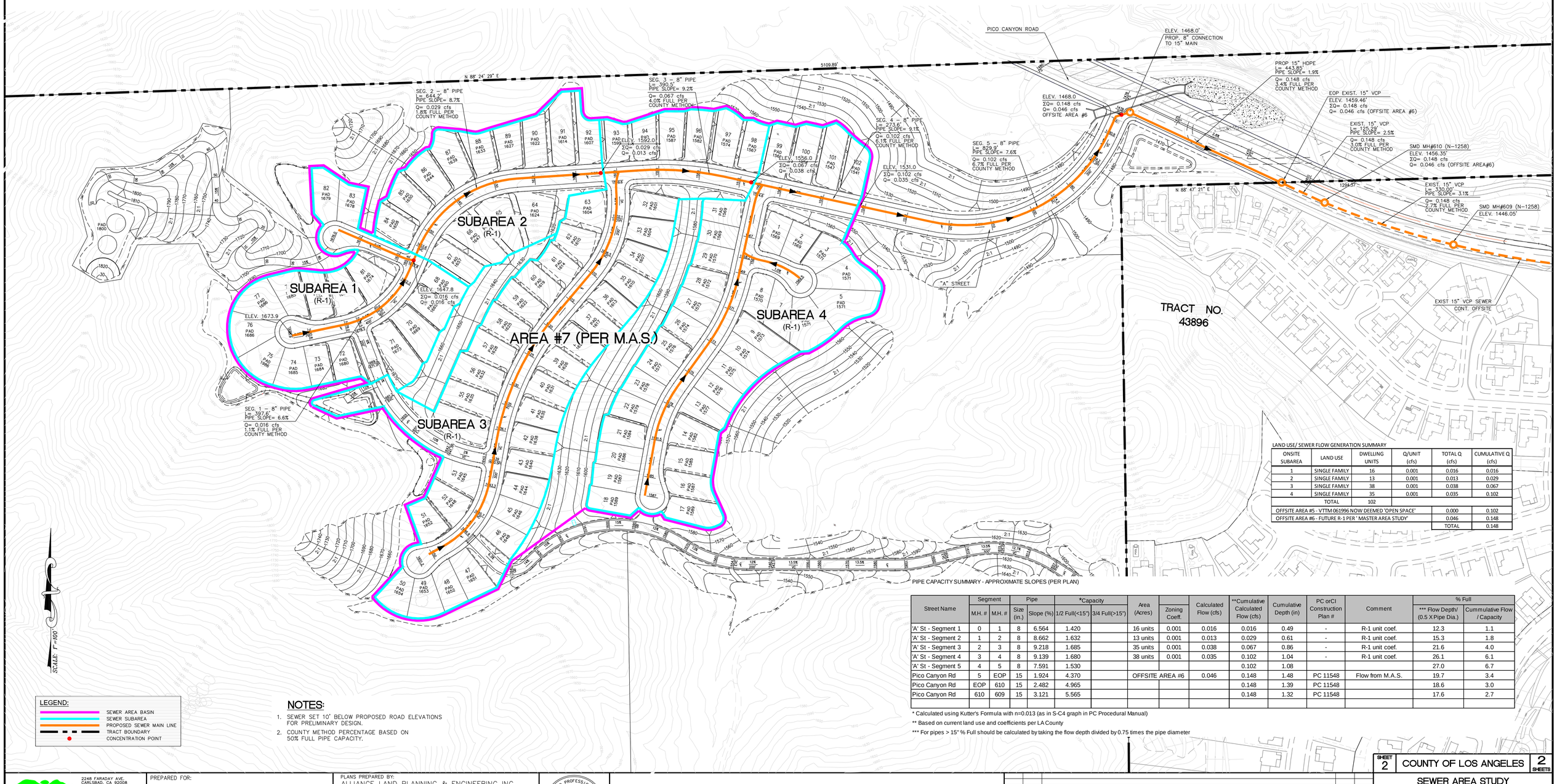
SEWER AREA STUDY
FOR
AIDLIN HILLS
TM 52796
DEVELOPED CONDITION





LAND USE/ SEWER FLOW GENERATION SUMMARY

ONSITE SUBAREA	LAND USE	DWELLING UNITS	Q/UNIT (cfs)	TOTAL Q (cfs)	CUMULATIVE Q (cfs)
1	SINGLE FAMILY	16	0.001	0.016	0.016
2	SINGLE FAMILY	13	0.001	0.013	0.029
3	SINGLE FAMILY	38	0.001	0.038	0.067
4	SINGLE FAMILY	35	0.001	0.035	0.102
TOTAL		102			
OFFSITE AREA #5 - VTTM 061996 NOW DEEMED 'OPEN SPACE'				0.000	0.102
OFFSITE AREA #6 - FUTURE R-1 PER ' MASTER AREA STUDY'				0.046	0.148
				TOTAL	0.148

PIPE CAPACITY SUMMARY - APPROXIMATE SLOPES (PER PLAN)

Street Name	Segment		Pipe		*Capacity		Area (Acres)	Zoning Coeff.	Calculated Flow (cfs)	**Cumulative Calculated Flow (cfs)	Cumulative Depth (in)	PC orCI Construction Plan #	Comment	% Full	
	M.H. #	M.H. #	Size (in.)	Slope (%)	1/2 Full(<15")	3/4 Full(>15")								*** Flow Depth/ (0.5 X Pipe Dia.)	Cummulative Flow / Capacity
'A' St - Segment 1	0	1	8	6.564	1.420		16 units	0.001	0.016	0.016	0.49	-	R-1 unit coef.	12.3	1.1
'A' St - Segment 2	1	2	8	8.662	1.632		13 units	0.001	0.013	0.029	0.61	-	R-1 unit coef.	15.3	1.8
'A' St - Segment 3	2	3	8	9.218	1.685		35 units	0.001	0.038	0.067	0.86	-	R-1 unit coef.	21.6	4.0
'A' St - Segment 4	3	4	8	9.139	1.680		38 units	0.001	0.035	0.102	1.04	-	R-1 unit coef.	26.1	6.1
'A' St - Segment 5	4	5	8	7.591	1.530					0.102	1.08			27.0	6.7
Pico Canyon Rd	5	EOP	15	1.924	4.370		OFFSITE AREA #6		0.046	0.148	1.48	PC 11548	Flow from M.A.S.	19.7	3.4
Pico Canyon Rd	EOP	610	15	2.482	4.965					0.148	1.39	PC 11548		18.6	3.0
Pico Canyon Rd	610	609	15	3.121	5.565					0.148	1.32	PC 11548		17.6	2.7

* Calculated using Kutter's Formula with n=0.013 (as in S-C4 graph in PC Procedural Manual)

** Based on current land use and coefficients per LA County

*** For pipes > 15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

LEGEND:
- SEWER AREA BASIN
- SEWER SUBAREA
- PROPOSED SEWER MAIN LINE
- TRACT BOUNDARY
- CONCENTRATION POINT

NOTES:

1. SEWER SET 10' BELOW PROPOSED ROAD ELEVATIONS FOR PRELIMINARY DESIGN.
2. COUNTY METHOD PERCENTAGE BASED ON 50% FULL PIPE CAPACITY.

ALLIANCE
LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431-9896
FAX: (760) 431-8802
27451 TOURNEY ROAD
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VALENCIA, CA 91355
TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PREPARED FOR:
LENNAR HOMES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
(951)817-3542
REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 6/4/14 DATE
REGISTERED PROFESSIONAL ENGINEER CRAIG M. WHITTEKER NO. 51929 EXP 6-30-16 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 2 — COUNTY OF LOS ANGELES — 2 SHEETS

SEWER AREA STUDY
FOR
AIDLIN HILLS
TM 52796
AREA # 7 PER M.A.S.
LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

I:\CAD\1352\SEWER AREA STUDY\1352-SAS-SHEET-2.dwg

APPENDIX B

Tables

TABLE 1 - LAND USE/ SEWER FLOW GENERATION SUMMARY

ONSITE AREA #7 SUBAREA	LAND USE	DWELLING UNITS	Q/UNIT (cfs)	TOTAL Q (cfs)	CUMULATIVE Q (cfs)
1	SINGLE FAMILY	16	0.001	0.016	0.016
2	SINGLE FAMILY	13	0.001	0.013	0.029
3	SINGLE FAMILY	38	0.001	0.038	0.067
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TABLE 2 - CHANGE IN SEWER FLOWS FROM MASTER AREA STUDY TO THIS CURRENT STUDY

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5	**0.036**	**0.000**	**-0.036**
6	0.046	0.046	0
7	**0.203**	**0.102**	**-0.101**
8	0.019	0.019	0
9	0.280	0.280	0
10	0.045	0.045	0
11	0.066	0.066	0
12	0.046	0.046	0
13	0.285	0.285	0
14	0.63	0.63	0
15	1.30	1.30	0
16	0.909	0.909	0
17	0.631	0.631	0
TOTAL	**9.301**	**9.164**	***-0.137***

Note: Sewer Area numbering per Master Area Study Overall Exhibit

TABLE 3 - PIPE CAPACITY SUMMARY - APPROXIMATE SLOPES (PER PLAN)

Street Name	Segment		Pipe		*Capacity		Area (Acres)	Zoning Coeff.	Calculated Flow (cfs)	**Cumulative Calculated Flow (cfs)	Cumulative Depth (in)	PC orCI Construction Plan #	Comment	% Full	
	M.H. #	M.H. #	Size (in.)	Slope (%)	1/2 Full(<15")	3/4 Full(>15")								*** Flow Depth/ (0.5 X Pipe Dia.)	Cummulative Flow / Capacity
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'A' St - Segment 4	3	4	8	9.139	1.680		35 units	0.001	0.035	0.102	1.04	-	R-1 unit coef.	26.1	6.1
'A' St - Segment 5	4	5	8	7.591	1.530					0.102	1.08			27.0	6.7
Pico Canyon Rd	5	EOP	15	1.924	4.370		OFFSITE AREA #6		0.046	0.148	1.48	PC 11548	Flow from M.A.S.	19.7	3.4
Pico Canyon Rd	EOP	610	15	2.482	4.965					0.148	1.39	PC 11548		18.6	3.0
Pico Canyon Rd	610	609	15	3.121	5.565					0.148	1.32	PC 11548		17.6	2.7

* Calculated using Kutter's Formula with n=0.013 (as in S-C4 graph in PC Procedural Manual)

** Based on current land use and coefficients per LA County, (Attach supporting calculations)

*** For pipes > 15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

TABLE 4 - PIPE CAPACITY SUMMARY - CONSERVATIVE SLOPES (1.0 %)

Street Name	Segment		Pipe		*Capacity		Area (Acres)	Zoning Coeff.	Calculated Flow (cfs)	**Cumulative Calculated Flow (cfs)	Cumulative Depth (in)	PC orCI Construction Plan #	Comment	% Full	
	M.H. #	M.H. #	Size (in.)	Slope (%)	1/2 Full(<15")	3/4 Full(>15")								*** Flow Depth/ (0.5 X Pipe Dia.)	Cummulative Flow / Capacity
'A' St - Segment 1	0	1	8	1.00	0.554		16 units	0.001	0.016	0.016	0.76	-	R-1 unit coef.	18.9	2.9
'A' St - Segment 2	1	2	8	1.00	0.554		13 units	0.001	0.013	0.029	0.97	-	R-1 unit coef.	24.3	5.2
'A' St - Segment 3	2	3	8	1.00	0.554		38 units	0.001	0.038	0.067	1.42	-	R-1 unit coef.	35.4	12.1
'A' St - Segment 4	3	4	8	1.00	0.554		35 units	0.001	0.035	0.102	1.72	-	R-1 unit coef.	42.9	18.4
'A' St - Segment 5	4	5	8	1.00	0.554					0.102	1.72			42.9	18.4
Pico Canyon Rd	5	EOP	15	1.00	3.144		OFFSITE AREA #6		0.046	0.148	1.70	PC 11548	Flow from M.A.S.	22.7	4.7
Pico Canyon Rd	EOP	610	15	1.00	3.144					0.148	1.70	PC 11548		22.7	4.7
Pico Canyon Rd	610	609	15	1.00	3.144					0.148	1.70	PC 11548		22.7	4.7

* Calculated using Kutter's Formula with n=0.013 (as in S-C4 graph in PC Procedural Manual)

** Based on current land use and coefficients per LA County, (Attach supporting calculations)

*** For pipes > 15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

APPENDIX C

Maps and Plans

ZONING MAP
AIDLIN HILLS
SEWER AREA STUDY

NOTES:

ZONING FOR UNINCORPORATED LA COUNTY PER:
"LOS ANGELES COUNTY GENERAL PLAN –
SANTA CLARITA VALLEY AREA PLAN –
ZONING MAP, SEPTEMBER 2012"

ZONING FOR CITY OF SANTA CLARITA PER:
"CITY OF SANTA CLARITA GENERAL PLAN, JANUARY 2014"

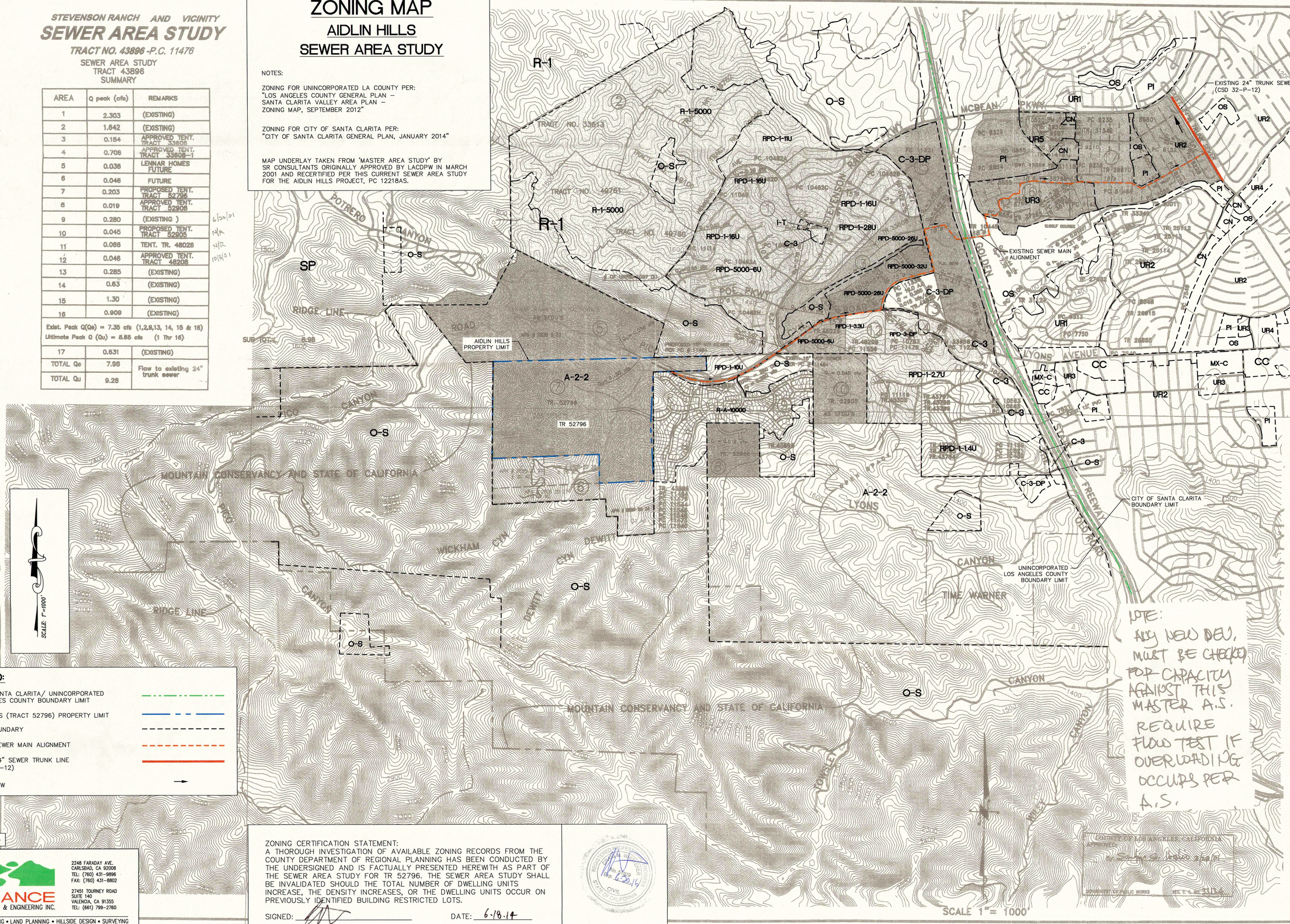
MAP UNDERLAY TAKEN FROM 'MASTER AREA STUDY' BY SR CONSULTANTS ORIGINALLY APPROVED BY LACDPW IN MARCH 2001 AND RECERTIFIED PER THIS CURRENT SEWER AREA STUDY FOR THE AIDLIN HILLS PROJECT, PC 12218AS.

STEVENSON RANCH AND VICINITY
SEWER AREA STUDY
TRACT NO. 43896 -P.C. 11476

SEWER AREA STUDY
TRACT 43896
SUMMARY

AREA	Q peak (cfs)	REMARKS
1	2.303	(EXISTING)
2	1.642	(EXISTING)
3	0.154	APPROVED TENT. TRACT 33608
4	0.706	APPROVED TENT. TRACT 33608-1
5	0.036	LENNAR HOMES FUTURE
6	0.046	FUTURE
7	0.203	PROPOSED TENT. TRACT 52796
8	0.019	APPROVED TENT. TRACT 52908
9	0.280	(EXISTING)
10	0.045	PROPOSED TENT. TRACT 52905
11	0.066	TENT. TR. 48026
12	0.046	APPROVED TENT. TRACT 48208
13	0.285	(EXISTING)
14	0.63	(EXISTING)
15	1.30	(EXISTING)
16	0.909	(EXISTING)
Exist. Peak Q(Qe) = 7.35 cfs (1,2,9,13, 14, 15 & 16)		
Ultimate Peak Q (Qu) = 8.85 cfs (1 Thr 16)		
17	0.631	(EXISTING)
TOTAL Qe	7.98	Flow to existing 24" trunk sewer
TOTAL Qu	9.28	

6/23/01
N/A
N/A
10/3/01



NOTE:
ANY NEW DEV. MUST BE CHECKED FOR CAPACITY AGAINST THIS MASTER A.S.
REQUIRE FLOW TEST IF OVERLOADING OCCURS PER A.S.

LEGEND:

- CITY OF SANTA CLARITA/ UNINCORPORATED LOS ANGELES COUNTY BOUNDARY LIMIT
- AIDLIN HILLS (TRACT 52796) PROPERTY LIMIT
- ZONING BOUNDARY
- EXISTING SEWER MAIN ALIGNMENT
- EXISTING 24" SEWER TRUNK LINE (CSD 32-P-12)
- FLOW ARROW

DATE: JUNE 2014

ALLIANCE
LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431-9896
FAX: (760) 431-8802
27451 TOURNEY ROAD
SUITE 140
VALENCIA, CA 91355
TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

I:\CAD\1352\SEWER AREA STUDY\1352-SAS-LAND USE.dwg

ZONING CERTIFICATION STATEMENT:
A THOROUGH INVESTIGATION OF AVAILABLE ZONING RECORDS FROM THE COUNTY DEPARTMENT OF REGIONAL PLANNING HAS BEEN CONDUCTED BY THE UNDERSIGNED AND IS FACTUALLY PRESENTED HEREWITH AS PART OF THE SEWER AREA STUDY FOR TR 52796. THE SEWER AREA STUDY SHALL BE INVALIDATED SHOULD THE TOTAL NUMBER OF DWELLING UNITS INCREASE, THE DENSITY INCREASES, OR THE DWELLING UNITS OCCUR ON PREVIOUSLY IDENTIFIED BUILDING RESTRICTED LOTS.

SIGNED: _____ DATE: 6.18.14

REGISTERED PROFESSIONAL ENGINEER No. 61823 Exp. 6.30.14 CIVIL STATE OF CALIFORNIA

COUNTY OF LOS ANGELES, CALIFORNIA
APPROVED:
DEPARTMENT OF PUBLIC WORKS REG. C-6-NO. 33134

No.	REVISION DESCRIPTION	BY	DATE

SR CONSULTANTS

SEWER AREA STUDY
TRACT NO. 43896 -P.C. 11476

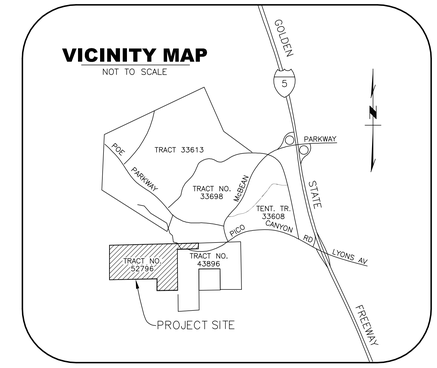
SR CONSULTANTS, INC.
LAND PLANNING • ENGINEERING • SURVEYING
2888 MAYLAND STREET, PASADENA, CA. 91107
PHONE: 1 (626) 795-0434, FAX: 1 (626) 683-8868

DESIGNED:	H.HARIRCHI
DRAWN:	H.HARIRCHI
CHECKED:	H.HARIRCHI
SUPERVISED:	H.HARIRCHI
PROJ. ENGINEER:	H.HARIRCHI
DATE:	03/27/2001
SCALE:	1"=1000'
JOB NUMBER:	991-001

REGISTERED PROFESSIONAL ENGINEER HAMID HARIRCHI No. 33134 CIVIL STATE OF CALIFORNIA

SHEET NO.
1
OF 1 SHEET

FILE: I:\Mission\color-SEWER-STUDY.dwg



GENERAL NOTES

1. GRADE ELEVATIONS SHOWN ON THIS VTTM ARE APPROXIMATE. THE ELEVATIONS MAY CHANGE BY 3 FEET. ELEVATION CHANGES MAY BE GREATER THAN 3 FEET BUT ONLY IF DETERMINED BY DPW AND DRP THAT THE REVISIONS ARE CONSISTENT WITH THE INTENT OF THE SUBDIVISION MAP APPROVAL.
2. LOT LINES CAN BE ADJUSTED TO THE SATISFACTION OF DRP PROVIDED NO ADDITIONAL DEVELOPMENT LOTS ARE CREATED. THE DEGREE OF ADJUSTMENT SHALL BE CONSISTENT WITH THE INTENT OF THE SUBDIVISION MAP ACT.
3. ALIGNMENT AND GEOMETRICS OF STREETS AND TRAILS ARE APPROXIMATE. ADJUSTMENTS TO TRAILS CAN BE MADE WITH APPROVAL BY DRP AND THE PARKS AND RECREATION DEPARTMENT.
4. THE RECORDATION OF A "LARGE LOT" PARCEL MAP WHERE ALL PARCELS ARE LARGER THAN 20 ACRES SHALL NOT REQUIRE THE OBLIGATION OF CONSTRUCTING IMPROVEMENTS OR INFRASTRUCTURE AS MAY BE OTHERWISE REQUIRED FOR THE SUBDIVISION, EXCEPT AS MAY BE REQUIRED BY CHAPTER 21.32 OF THE SUBDIVISION CODE.
5. THE RECORDATION OF A "LARGE LOT" PARCEL MAP SHALL NOT REQUIRE THE OBLIGATION OF FEES, DEDICATIONS (E.G. RIGHTS-OF-WAY OR PARKS), EXACTIONS, OR INFRASTRUCTURE AS MAY BE OTHERWISE REQUIRED FOR THE SUBDIVISION, EXCEPT AS MAY BE REQUIRED BY CHAPTER 21.32 OF THE SUBDIVISION CODE.
6. THE RECORDATION OF A "LARGE LOT" PARCEL MAP SHALL BE CONSIDERED THE FILING OF THE FIRST UNIT FOR THE PURPOSE OF TIME EXTENSIONS PURSUANT TO THE SUBDIVISION MAP ACT.
7. PERMISSION IS REQUESTED FOR UNIT PHASING.
8. PERMISSION IS REQUESTED TO COMBINE LOTS.
9. PERMISSION IS REQUESTED TO RECORD ADDITIONAL OPEN SPACE LOTS.
10. PERMISSION IS REQUESTED TO RECORD ADDITIONAL UTILITY LOTS AND PROVIDE MAINTENANCE EASEMENTS TO THE SATISFACTION OF THE DPW AND DRP.
11. PERMISSION IS REQUESTED TO MASS GRADE.
12. PROPOSED STREET GRADING IS APPROXIMATE ONLY AND SUBJECT TO ADJUSTMENTS PENDING DETERMINATION OF FINAL DEVELOPMENT LAYOUT AND PLANS.
13. PERMISSION IS REQUESTED TO PROVIDE RIGHT OF WAY RETURN RADII OF 15 FT. AT ALL LOCAL STREET INTERSECTIONS AND 27 FT WHERE ALL PLANNED HIGHWAYS INTERSECT OR WHERE ONE OF THE ROADS SERVES A COMMERCIAL OR INDUSTRIAL DEVELOPMENT.
14. MODIFIED STREET CROSS-SECTIONS AS SHOWN ON VESTING TENTATIVE TRACT MAP ARE REQUESTED. HOWEVER, PERMISSION IS SOUGHT TO CONSTRUCT STANDARD AND ALTERNATE STREET CROSS-SECTIONS AT THE DISCRETION OF THE SUBDIVIDER.
15. ALL DIMENSIONS SHOWN ARE APPROXIMATE.
16. TOPO COMPILED FROM DATA FLOWN DECEMBER, 2013.
17. ADDITIONAL RIGHT OF WAY MAY BE DEDICATED AS REQUIRED TO THE SATISFACTION OF PUBLIC WORKS.
18. MODIFICATIONS OF REQUIRED STREET FRONTAGE IS REQUESTED PER SECTION 21.24.040 OF THE LOS ANGELES COUNTY CODE.
19. HOMEOWNERS ASSOCIATION TO BE ESTABLISHED TO MAINTAIN COMMON AREA OPEN SPACE.

EASEMENT NOTES:

(1) AS EASEMENT TO CHEVRON USA, INC. FOR PIPELINE PURPOSES PER DEED RECORDED IN BOOK 6662 PAGE 121 OF DEEDS.
NOTE: THE LOCATION OF SAID EASEMENT IS INDETERMINATE IN NATURE.

(2) EASEMENT TO THE SOUTHERN CALIFORNIA GAS CO. FOR PIPELINE PURPOSES FOR DEED RECORDED IN BOOK 4489 PAGE 232, O.R.

(3) EASEMENT TO THE PACIFIC LIGHTING CORPORATION FOR PIPELINE PURPOSES PER DEED RECORDED MARCH 20, 1950 IN BOOK 32618 PAGE 336, O.R.

(4) EASEMENT TO THE SOUTHERN CALIFORNIA EDISON CO. FOR COMMUNICATION LINE PURPOSES PER DEED RECORDED FEBRUARY 8, 1957 IN BOOK 53600 PAGE 420, O.R.
NOTE: THE LOCATION OF SAID EASEMENT IS INDETERMINATE IN NATURE.

(5) EASEMENT FOR ROAD PURPOSES OVER THAT PORTION OF LOT 2 INCLUDED WITHIN THE RIGHT OF WAY LINES OF PROPOSED PICO CANYON ROAD.

(6) EASEMENT TO THE SOUTHERN CALIFORNIA EDISON COMPANY FOR PUBLIC UTILITY PURPOSES PER DEED RECORDED OCTOBER 28, 1965 AS INSTRUMENT NO. 4521, O.R.
NOTE: THE LOCATION OF SAID EASEMENT IS INDETERMINATE IN NATURE.

UTILITIES & SERVICES:

SEWER	L.A. COUNTY SANITARY DISTRICT #32
WATER	VALENCIA WATER COMPANY
GAS	SO. CALIFORNIA GAS CO.
ELECTRICAL	SO. CALIFORNIA EDISON CO.
TELEPHONE	AT&T
SCHOOLS	NEWHALL ELEMENTARY SCHOOL DISTRICT HART HIGH SCHOOL DISTRICT
FIRE	L.A. COUNTY FIRE DEPARTMENT
POLICE	L.A. COUNTY SHERIFF
T.V.	STEVENSON RANCH CABLE

RECORD OWNER

ADLIN GENERAL TRUST
TRACY WOODFORD, TRUSTEE
5143 SUNSET BLVD.
LOS ANGELES, CA 90027-5715
323-666-1910
JA51430@PACBELL.NET

APPLICANT

LENNAR COMMUNITIES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
(951)817-3542

ENGINEER:

ALLIANCE LAND PLANNING & ENGINEERING
2248 FARADAY AVENUE
CARLSBAD, CAD 92008
PHONE (760) 431-9896 FAX (760) 431-8802

LEGAL DESCRIPTION:

LOTS 1, 2, 3, 4, 5 AND A PORTION OF LOT 6, AND PORTIONS OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, NORTHWEST QUARTER AND SOUTHWEST QUARTER, ALL IN SECTION 6, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO MERIDAN, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA.

SPECIAL NOTES

1. WATER QUALITY BASINS WILL PROVIDE FOR TREATMENT OF STORM WATER RUN OFF PER THE APPROVED DRAINAGE CONCEPT.

PROJECT SUMMARY:

GROSS AREA:	230.5 Acres
NET AREA (GROSS-PICO CANYON ROAD)	228.8 Acres
TOTAL LOTS:	115
TOTAL RESIDENTIAL D.U.:	102 DU
TOTAL OFFICE/COMMERCIAL:	NONE
EXISTING ZONING:	A-2-2
PROPOSED ZONING:	A-2-2
EXISTING LAND USE:	U-2, HM, W
PROPOSED LAND USE:	U-2, HM, W
APN:	2826-020-020, 021, 022, 023, 024 2826-020-030, 031, 032, 033 2826-097-003
ESTIMATED EARTHWORK:	1,300,000 CY CUT 1,300,000 CY FILL
OVEREXCAVATION:	300,000 CY

OAK TREES TO BE REMOVED: 1 TREE
OAK TREES TO BE ENCROACHED: 0 TREE
OAK TREES TO REMAIN: 14 TREES
TOTAL OAK TREES: 15

RELATED ENTITLEMENTS

CONDITIONAL USE PERMIT NO. 00-136
OAK TREE PERMIT NO. 00-136

LOT SUMMARY

LOT NUMBERS	NO. OF LOTS	TYPE	TOTAL ACREAGE
1-102	102	SINGLE FAMILY	20.8 AC
103-104	2	WATER TANK/ PUMP STATION	3.9 AC
105-106	2	OPEN SPACE (WQT BASINS)	1.5 AC
107	1	OPEN SPACE (FIRE ACCESS ROAD)	1.4 AC
108-115	8	OPEN SPACE (LANDSCAPE & NATURAL)	193.3 AC
PUBLIC STREETS	N/A	N/A	9.6 AC
TOTAL	115		230.5 AC

LEGEND:

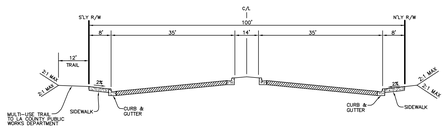
1 / PAD 1510 / 6,500 sf — LOT NO. / PAD ELEVATION / LOT AREA (SQUARE FEET)

- PROJECT BOUNDARY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1000 — PROPOSED CONTOUR
- PROPOSED DAYLIGHT LINE
- D — PROPOSED STORM DRAIN
- SS — PROPOSED SANITARY SEWER
- W — PROPOSED WATER
- D — PROPOSED STORM DRAIN INLET/OUTLET
- PROPOSED CATCH BASIN
- SD — EXISTING STORM DRAIN LINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE
- O — EXISTING OIL LINE
- G — EXISTING GAS LINE
- OE — EXISTING OVERHEAD POWER LINE
- EXISTING POWER POLE
- PROPOSED RETAINING WALL
- RW — 6' HIGH MAX. RETAINING WALL
- SEA — SEA LINE
- FP — FEMA FLOODPLAIN
- CDFG — CDFG LIMIT LINE
- ACOE — ACOE LIMIT LINE
- OAK NO. XX (TRE) — OAK TREE (TO BE ENCROACHED)
- OAK NO. XX (TBR) — OAK TREE (TO BE REMOVED)
- OAK NO. XX (TR) — OAK TREE (TO REMAIN)

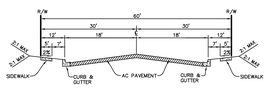
BENCHMARK

R.D.B.M. TAG IN S CB 8.2M W/O BCR @ SW CORN. LYONS AVE. & WILEY CANYON RD. 30.5M W/O & 12.2M S/O C/L INT (NR W END CB)

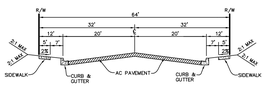
NEWHALL 1995 ELEV.= 1265.296



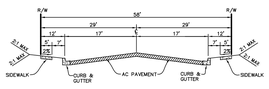
PICO CANYON ROAD (R/W= 100') PUBLIC



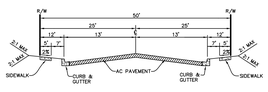
RESIDENTIAL CUL-DE-SAC STREET (R/W= 60') PUBLIC
'C' & 'D' STREET



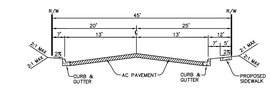
RESIDENTIAL COLLECTOR STREET (R/W= 64') PUBLIC
'A' STREET



RESIDENTIAL CUL-DE-SAC STREET (R/W= 58') PUBLIC
'E' STREET



RESIDENTIAL COLLECTOR STREET (R/W= 50') PUBLIC
'B' STREET



RESIDENTIAL CUL-DE-SAC STREET (R/W= 45') PUBLIC
'F' STREET

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431-9896 FAX: (760) 431-8802
27451 TOURNEY ROAD SUITE 140 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PREPARED FOR:
LENNAR HOMES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
(951)817-3542
REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896

PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 1/28/14 DATE

REGISTERED PROFESSIONAL ENGINEER CRAIG M. WHITTEKER NO. 51929 EXP. 6-30-14 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 — COUNTY OF LOS ANGELES — 2 SHEETS

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 52796

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

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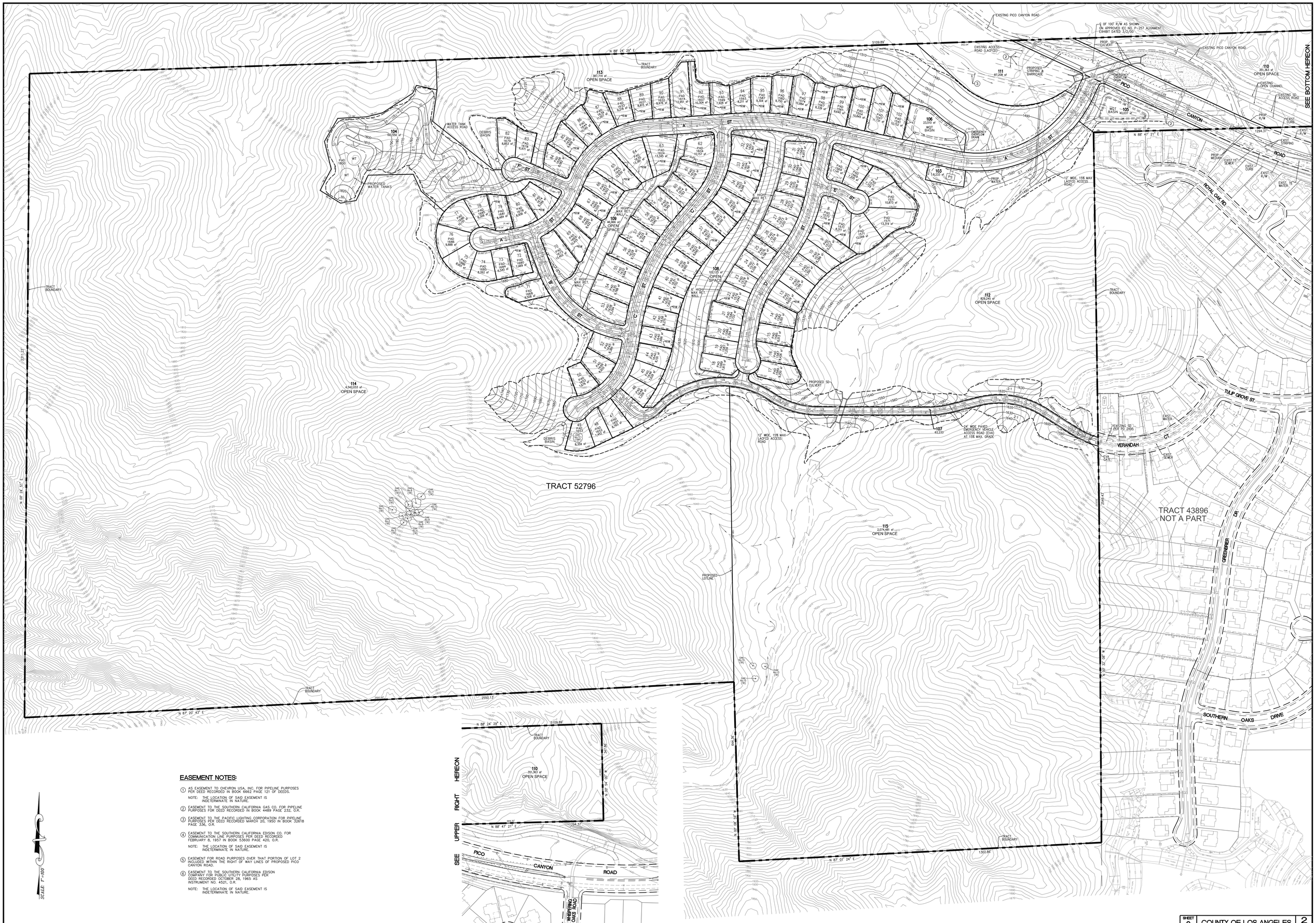

EASEMENT NOTES:

1. AS EASEMENT TO CHEVRON USA, INC. FOR PIPELINE PURPOSES PER DEED RECORDED IN BOOK 6662 PAGE 121 OF DEEDS.
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3. EASEMENT TO THE PACIFIC LIGHTING CORPORATION FOR PIPELINE PURPOSES PER DEED RECORDED MARCH 20, 1950 IN BOOK 32618 PAGE 336, O.R.
4. EASEMENT TO THE SOUTHERN CALIFORNIA EDISON CO. FOR COMMUNICATION LINE PURPOSES PER DEED RECORDED FEBRUARY 8, 1957 IN BOOK 53600 PAGE 420, O.R.
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REPRESENTATIVE: CHERRYL THOMPSON

PLANS PREPARED BY:
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2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896

PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER — 1/28/14
CRAIG M. WHITTEKER R.C.E. 51929 — DATE

REGISTERED PROFESSIONAL ENGINEER — CRAIG M. WHITTEKER — NO. 51929 — EXP. 6-30-14 — CIVIL — STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR.

SHEET 2 | COUNTY OF LOS ANGELES | 2 SHEETS

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 52796

LOCATED IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

I:\CAD\1352\TENTATIVE MAP\1352_TENTATIVE-MAP_SHEET-02.dwg

N-1258

A-42
A-47

SEE SHT. NO. N-1257

SEE SHT. NO. 1219

SEE SHT. NO. N-1297

SEE SHT. NO. N-1259

N 4,249,000

E 4,107,000

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

N

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 746

MAP REV
03-07-11

DATA BASE REV
05-16-88

N-1258

CONSOLIDATED S.M.D.

N-1258

T: 4550 C-7

2307.2409.1258

N-1297

A-41
A-42
A-47
A-48
X-48

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 923

MAP REV
03-29-11

DATA BASE REV
06-02-88

N-1297

CONSOLIDATED S.M.D.

N-1297

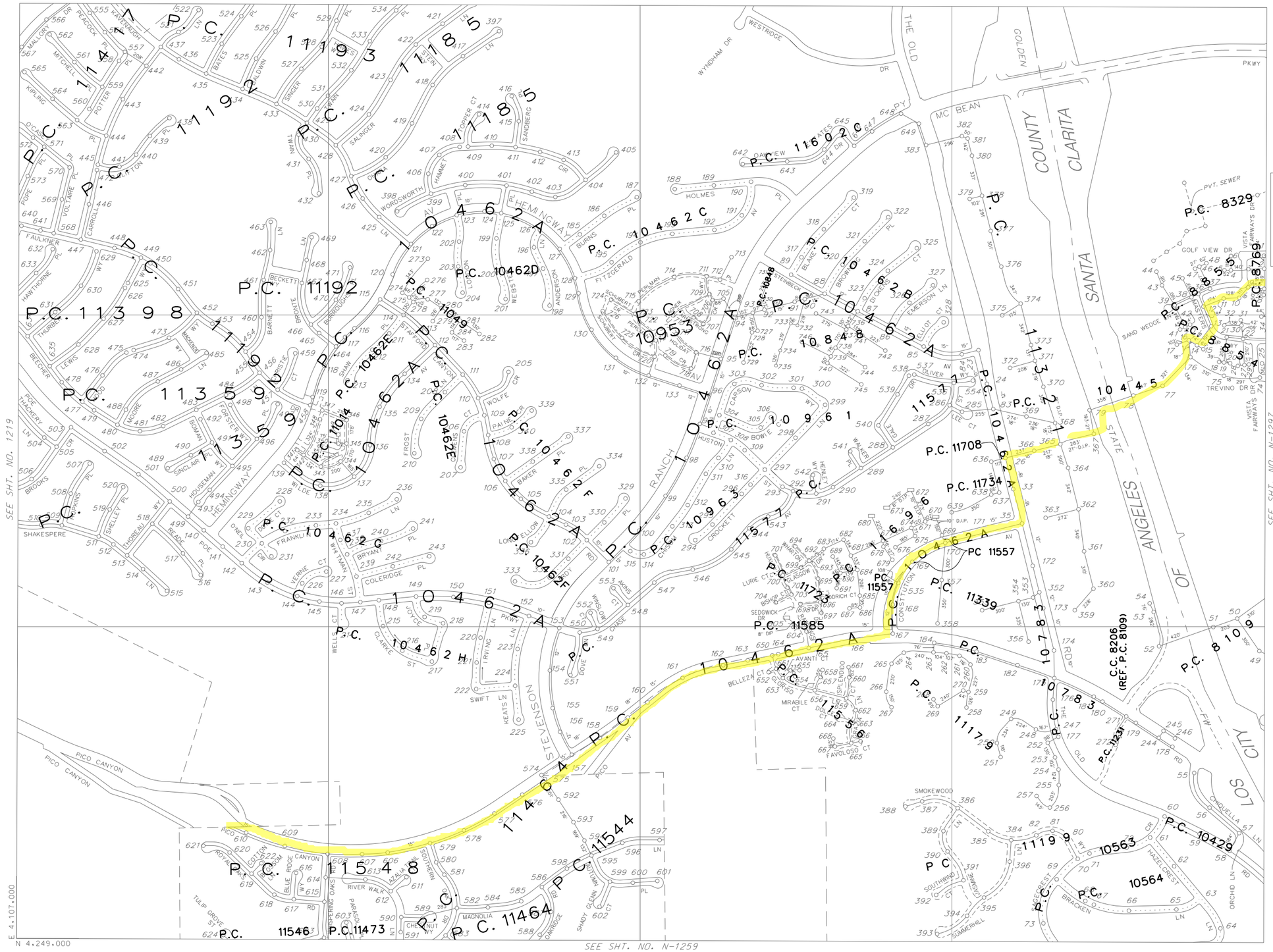
T: 4550 F-7

2311-2411-1297

N-1258

A-42
A-47

SEE SHT. NO. N-1257



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03-07-11

N-1258

MAP REV
03-07-11

DATA BASE REV
05-16-88

CONSOLIDATED S.M.D.

N-1258

T: 4550 C-7

2307.2409.1258

N-1297

A-41
A-42
A-47
A-48
X-48

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0 200 400 600 800 FEET

LEGEND

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TOTAL MH'S THIS MAP: 923

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MAP REV
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DATA BASE REV
06-02-88

CONSOLIDATED S.M.D.

N-1297

T: 4550 F-7

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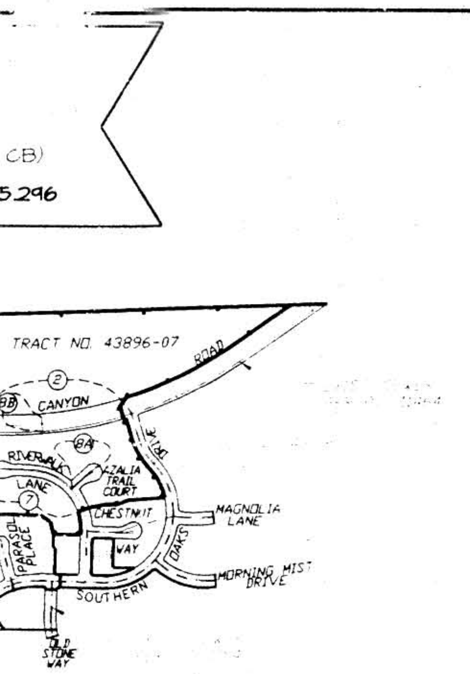


INDEX MAP - 1259

P.C. 11540 TRACT NO. 43896-07
SCALE: 1" = 600'
THOMAS GUIDE INDEX: 4640-B2
INDEX 1259

NOTE: NUMBER IN CIRCLE DENOTES PAGE NOS.

BUILDING AND SAFETY
SANTA CLARITA OFFICE

REVISED BY	APPROVED BY	DATE

STORMWATER POLLUTION CONTROL REQUIREMENTS FOR SEWER CONSTRUCTION

1. Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses, or wind.
2. Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
3. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
4. Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
5. Trash and construction-related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
6. Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
7. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.

CA001 – DEWATERING OPERATIONS
CA002 – PAVING OPERATIONS
CA003 – STRUCTURE CONSTRUCTION AND PAINTING
CA010 – MATERIAL DELIVERY AND STORAGE
CA020 – SOLID WASTE MANAGEMENT
CA021 – HAZARDOUS WASTE MANAGEMENT
CA023 – CONCRETE WASTE MANAGEMENT
CA024 – SANITARY/SEPTIC WASTE MANAGEMENT
CA030 – VEHICLE AND EQUIPMENT CLEANING
CA031 – VEHICLE AND EQUIPMENT FUELING
CA032 – VEHICLE AND EQUIPMENT MAINTENANCE
ESC01 – SCHEDULING
ESC02 – PRESERVATION OF EXISTING VEGETATION

ESC10 – SEEDING AND PLANTING
ESC11 – MULCHING
ESC20 – GEOTEXTILES AND MATS
ESC21 – DUST CONTROLS
ESC22 – TEMPORARY STREAM CROSSING
ESC23 – CONSTRUCTION ROAD STABILIZATION
ESC24 – STABILIZED CONSTRUCTION ENTRANCE
ESC54 – STORM DRAIN INLET PROTECTION

STANDARD PLANS

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF THE FOLLOWING DEPARTMENT SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

APWA 208-0	BREAKING INTO EXISTING MANHOLES
APWA 222-0	HOUSE CONNECTION SEWER
APWA 223-0	HOUSE CONNECTION REMODELING
220-1	CHIMNEYS
2000-0	LEGEND FOR SANITARY SEWER PLANS AND PROFILES AND DISTRICT MAPS
2021-0	BEDDING FOR SEWER PIPE
2024-0	WYE OR TEE SUPPORT
2027-0	ALLOWABLE TRENCH WIDTHS

~~NOTE: ISSUE NO HOUSE LATERAL CONNECTION PERMITS UNTIL OUTLET P.C. 11464 IS ACCEPTED FOR PUBLIC USE BY THE COUNTY OF LOS ANGELES.~~

LOTS 67 THROUGH 72 AND 74 ARE RESTRICTED TO NO CONSTRUCTION OF RESIDENTIAL BUILDINGS AND WILL NOT BE SERVED BY THIS SEWER.

THIS SEWER PRIVATE CONTRACT ACCEPTED FOR PUBLIC USE
05/31/2005
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS LAND DEVELOPMENT DIVISION

RECORD PLANS

BEFORE BREAKING INTO OR CONSTRUCTION ON A COUNTY SANITATION DISTRICT SEWER AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, SANITATION DISTRICT INSPECTOR SHALL BE NOTIFIED BY PHONE (661) 266-4683 SO THAT REQUIRED INSPECTION CAN BE MADE.

NO CONNECTION FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS UNTIL A PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE HAS BEEN ISSUED BY THE SANITATION DISTRICTS FOR SAID CONNECTION.

PRIVATE CONTRACT SEWER GENERAL NOTES

The following general notes are to be included on Page 1 of all Private Contract sewer plans.

1. A sewer construction permit shall be obtained and a fee paid for construction inspection and sewer plans to the Department of Public Works at the Permit Counter, 900 South Fremont Avenue, Alhambra, at least 72 hours prior to starting work. [illegible] permits, such as Road Excavation, Caltrans, etc. [illegible] with the permit application.
2. Prior to issuance of any permit, the contractor shall [illegible] permit for excavations and trenches from the State of California Division of Industrial Safety and a certificate of Worker's Compensation Insurance [illegible] with the Department of Public Works [illegible] cancellation of policy.
3. If work is to be in a State Highway, a permit must be obtained from the State of [illegible] Highways, [illegible] South Spring Street, Los Angeles [illegible].
4. When work is within a contract city, the contractor must contact the Director of Public Works of that city to determine the location [illegible] the inspection fee.
5. The contractor shall contact the district office listed in the "Approval" [illegible] to arrange for an acceptable construction start [illegible].
6. Approval of this plan by the County of Los Angeles does not constitute a representation [illegible] of the location of or the existence or non-existence of any underground utility pipe or structure within the limits of this project. This note applies to all pages.
7. All work shall be in accordance with the latest approved edition of the "Standard Specifications for Public Works Construction, including supplements and the latest Special Provisions for the Construction of Sanitary Sewers and shall be prosecuted only in the presence of the [illegible] of Public Works.
8. The contractor's attention is directed to Section 7-10.4.1 of the Standard Specifications for Public Works Construction in regard to safety [illegible] "Minimum Safety [illegible] Requirements" as shown on Los Angeles Department of Public Works Standard [illegible].
9. Elevations are in feet above U.S.C. & G.S. sea level datum [illegible].
10. No revisions shall be made in these plans without the approval of the Director of Public Works.
11. No representative of the Department of Public Works will [illegible].
12. Grades to which this improvement is to be constructed are shown on plans and profiles. Grade points for top of curbs, centerline of streets, or centerline of [illegible] shown by [illegible] between designated points. The grade shall be established [illegible] between said designated points.
13. The private engineer shall furnish the Department of Public Works with grade sheets and stationing for all house laterals and "Y" or "T" branches and shall provide stakes for them at their proper location with stationing plainly marked. All house laterals shall be constructed on a straight alignment at right angles from the main line sewer except as shown on the plans. House laterals from [illegible] shall have an angle of less than 45 degrees with the M.L. sewer. Any change in alignment shall be requested in writing by the private engineer.
14. The private engineer shall furnish the house lateral depth at the property line below the [illegible] elevation for each house lateral on the grade sheet.

CONSTRUCTION NOTES

1. Provide survey stakes on the property line or property lines produced at right angles to the sewer line at the centerline of each manhole.
2. Vitrified clay pipe joints shall be type [illegible] standard specification section [illegible].
3. If a powerpole is within three feet of the sewer, the sewer shall be encased [illegible] each side from the point of interference.
4. All joints between cast iron pipe and vitrified clay pipe shall be made with a rubber sleeve [illegible] (where necessary) per standard specifications section 208-2.
5. House laterals to be constructed with inverts at the property line [illegible] feet below curb grade except as noted.
6. Wye or tee branches may be used for connections to the mainline sewers except [illegible].
7. If during the course of construction, it is determined that there is less than four feet of cover over the top of [illegible] or house lateral V.C.P. sewer which is not indicated on the plans, the pipe shall be encased per standard [illegible] case [illegible] unless otherwise approved by the director of Public Works.
8. All structures shall be either brick sewer manholes per standard plan [illegible] or precast concrete sewer manholes per standard plan 2-36, or reinforced precast concrete manhole per standard plan [illegible] as noted.
9. Resurface all trenches within paved areas to meet Los Angeles County Public Works or California State [illegible] requirements in accordance with the permits.
10. Full compliance with section 306-1.3.4 of the standard specification will be required for backfill in street [illegible] backfill compaction and sand equivalents by a qualified civil engineer shall be provided by the permittee prior to the issuance of a certificate of partial acceptance.
11. All backfill and fill outside of the street right of way shall be compacted to 90% of the maximum density as determined by ASTM soil compaction test D 1557-78 method "D" unless otherwise specified. This shall be certified by a qualified [illegible] This certification shall be submitted to the Construction Division of the Department of Public Works prior to the acceptance of the work by the county.
12. Manhole tops in unimproved rights of way to be six inches above finished grade.
13. Sewers to be tested for leakage per section 306-1.4 of the standard specifications and special provisions.

PROFILE, ALIGNMENT AND GRADE OF SANITARY SEWERS

TO BE CONSTRUCTED IN

TRACT NO. 43896-07 PC NO. 11548

4 SHEETS: 8 PAGES

COUNTY OF LOS ANGELES CALIFORNIA

INDEX 1259

JAMES A. NOYES, DIRECTOR OF PUBLIC WORKS

APPROVED BY LAND DEVELOPMENT DIVISION

BY Thomas W. Hoagland, DIVISION ENGINEER — DATE 4/12/01

SUBMITTED BY [signature], SUBDIVISION PLAN CHECKING SECTION — DATE 4/12/01

APPROVED: COUNTY SANITATION DISTRICT
OF LOS ANGELES CALIF.
JAMES F. STAHL – CHIEF ENGINEER and GENERAL MANAGER

COUNTY SANITATION DISTRICT NO. 32

BY [signature] for OFFICE ENGINEER — DATE 4/13/01

PRIVATE ENGINEERS NOTICE TO CONTRACTORS:

[illegible]

[signature] Warren L. Smith — RCE NO. 13818 — DATE April 12, 2001

TRACT NO. 43896-07

P.C. 11548

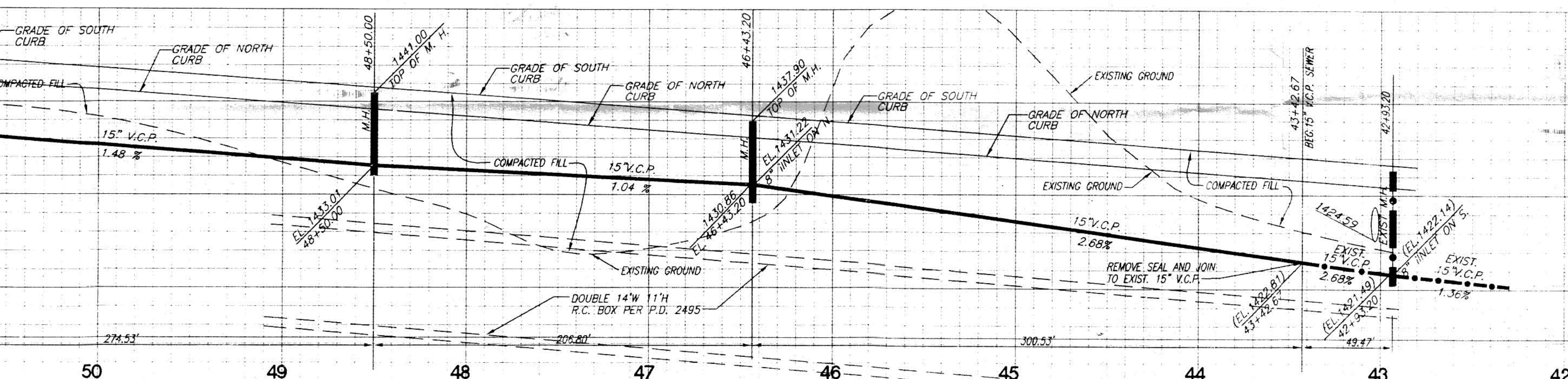
P.C. 11548 PAGE 2

NO L.A. CO. CHARGES FOR CONNECTION

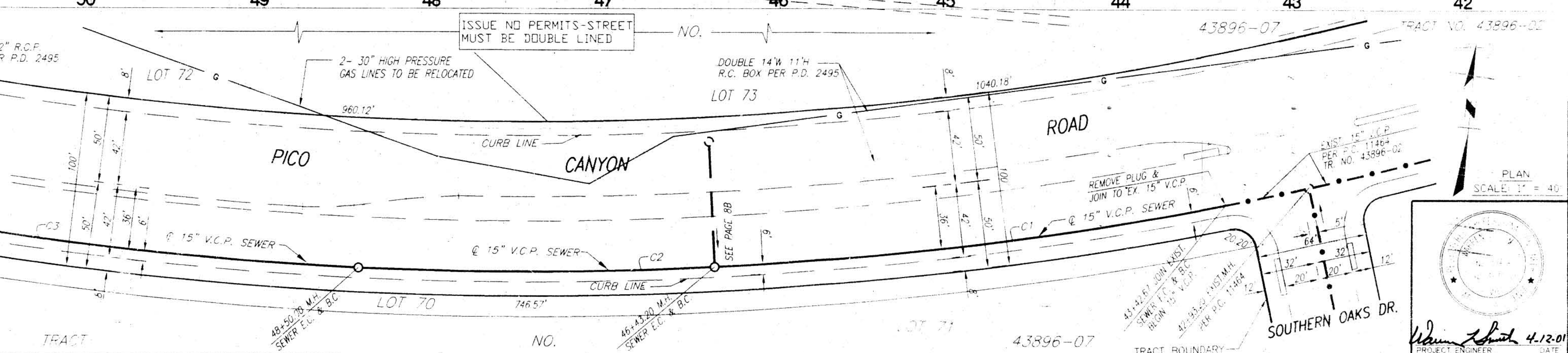
SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES

TEL. (562) 699-7411 EX. 2727

DOUBLE SCALE



RECORD PLANS



CURVE DATA

CURVE	DELTA	RADIUS	LENGTH	TANGENT
C1	08°03'41"	2136.00'	300.53'	150.51'
C2	05°32'50"	2136.00'	206.80'	103.48'
C3	07°21'50"	2136.00'	274.53'	137.45'

PLAN
SCALE: 1" = 40'

[signature] Warren L. Smith 4-12-01
PROJECT ENGINEER — DATE

SANITARY SEWER PLANS IN
TRACT NO. 43896-07 PC NO. 11548

REVIEWED BY LAND DEVELOPMENT DIVISION
BY [signature] 4/12/01

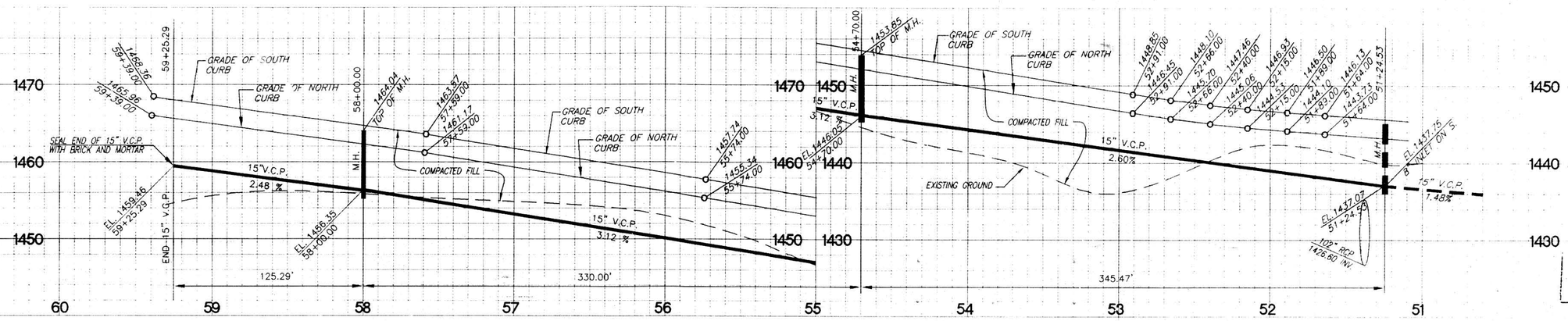
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SR
SR CONSULTANTS, INC.
ENGINEERING · LAND PLANNING · LAND SURVEYING

TRACT NO. 43896-07

TRACT NO. 43896-07 P.C. 11548

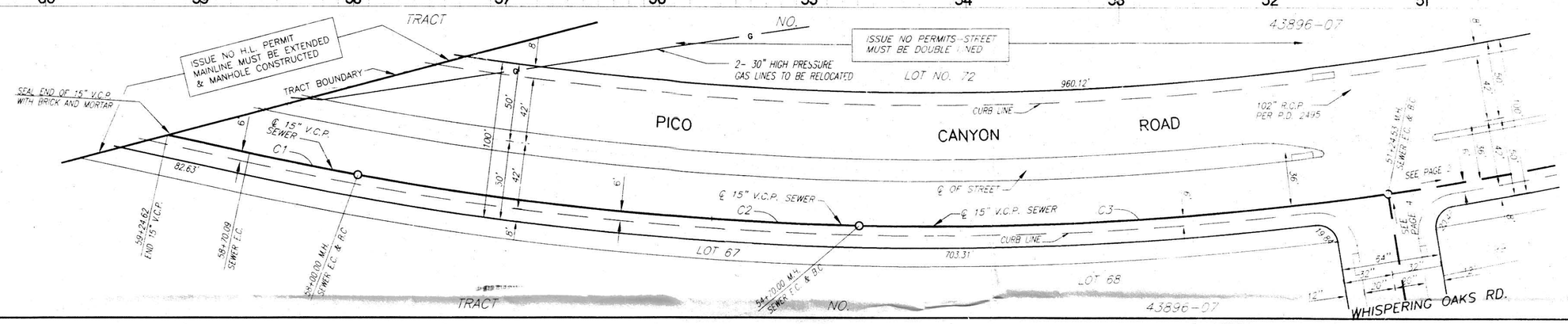
TRACT NO. 43896-07



RECORD PLANS

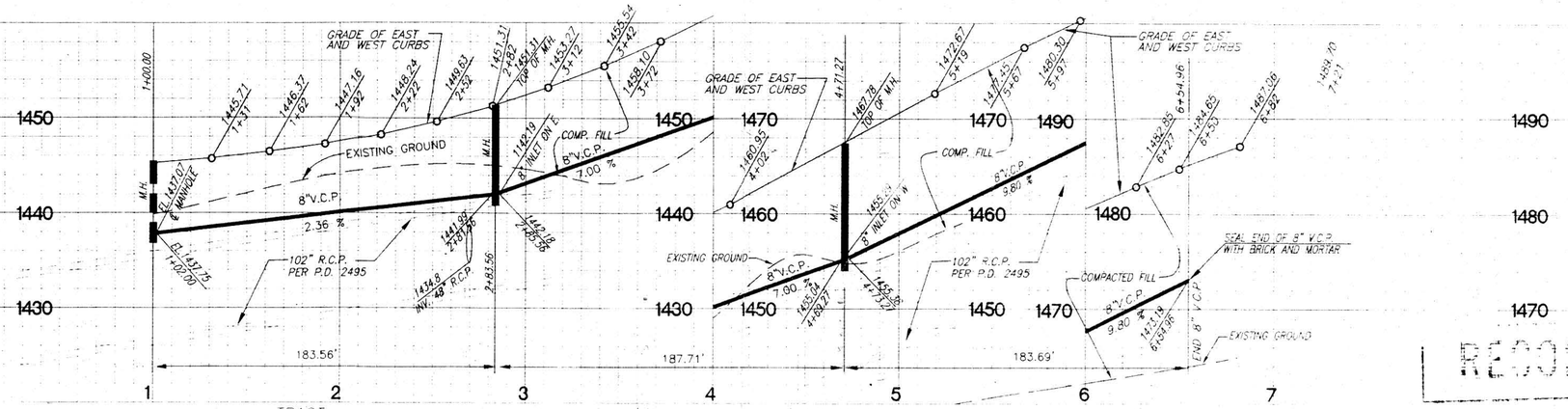
CURVE DATA

CURVE	DELTA	RADIUS	LENGTH	TANGENT
C1	2°56'01"	2136.00'	109.4'	76.05
C2	08°51'06"	2136.00'	330.00'	165.33
C3	09°16'01"	2136.00'	345.47'	173.[illegible]

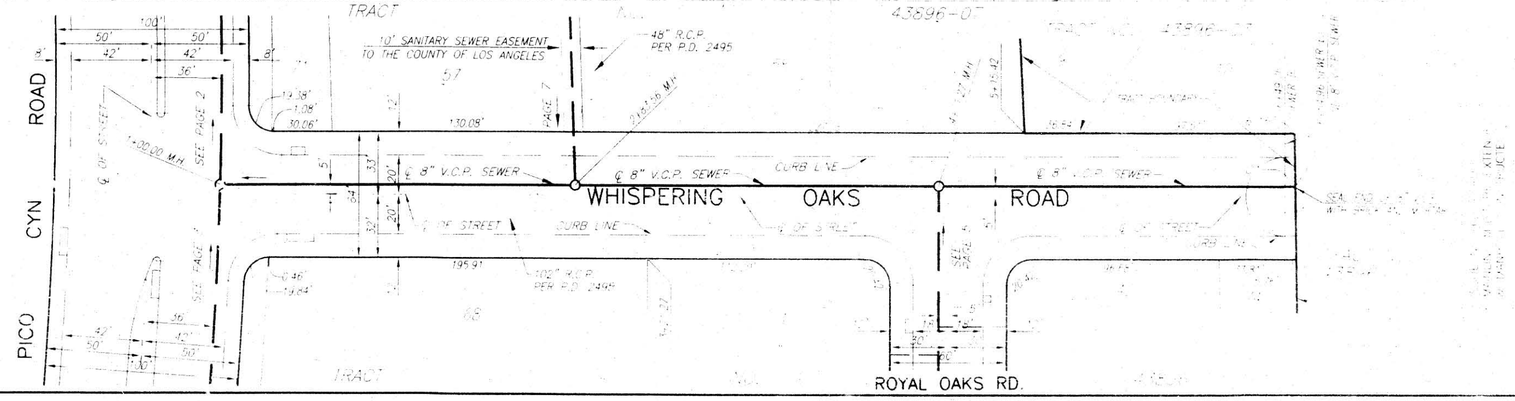


Warren L. Smith 4-12-01

4/12/01



RECORD PLANS



Warren L. Smith 4-12-01

4/12/01

APPENDIX D

ZONING COEFFICIENTS & FLOW DIAGRAM

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

AREA STUDY

An area study must be made for all private contract sewer projects. See attached sample. The area study must include the following items:

1. Area being served - In Acres
2. Determined Tributary area to main line being designed (incl. areas of future deval.) - In Acres
3. Existing and Land Use Zoning
4. Anticipated Sewer Discharge in cfs of total area based on zoning, and/or heavy water users
5. Existing or proposed utilities if in conflict
6. Existing and proposed sewers showing pipe size and grade leading up to the trunk line in order for you to evaluate the impact of your proposed development on the existing system
7. Direction of sewer flow
8. Contour lines
9. Scale not to be less than 1"=600'
10. North arrow pointing up or to the left

ZONING COEFFICIENTS

ZONE	COEFFICIENT (cfs/Acre)
Agriculture	0.001
Residential	
R-1	0.004
R-2	0.008
R-3	0.012
R-4	0.016 *
Commerical	
C-1 through C-4	0.015 *
Heavy Industrial	
M-1 through M-4	0.021 *

use 0.001 cfs/unit for Condo ~~unit~~ and all residential per County direction

* Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown.

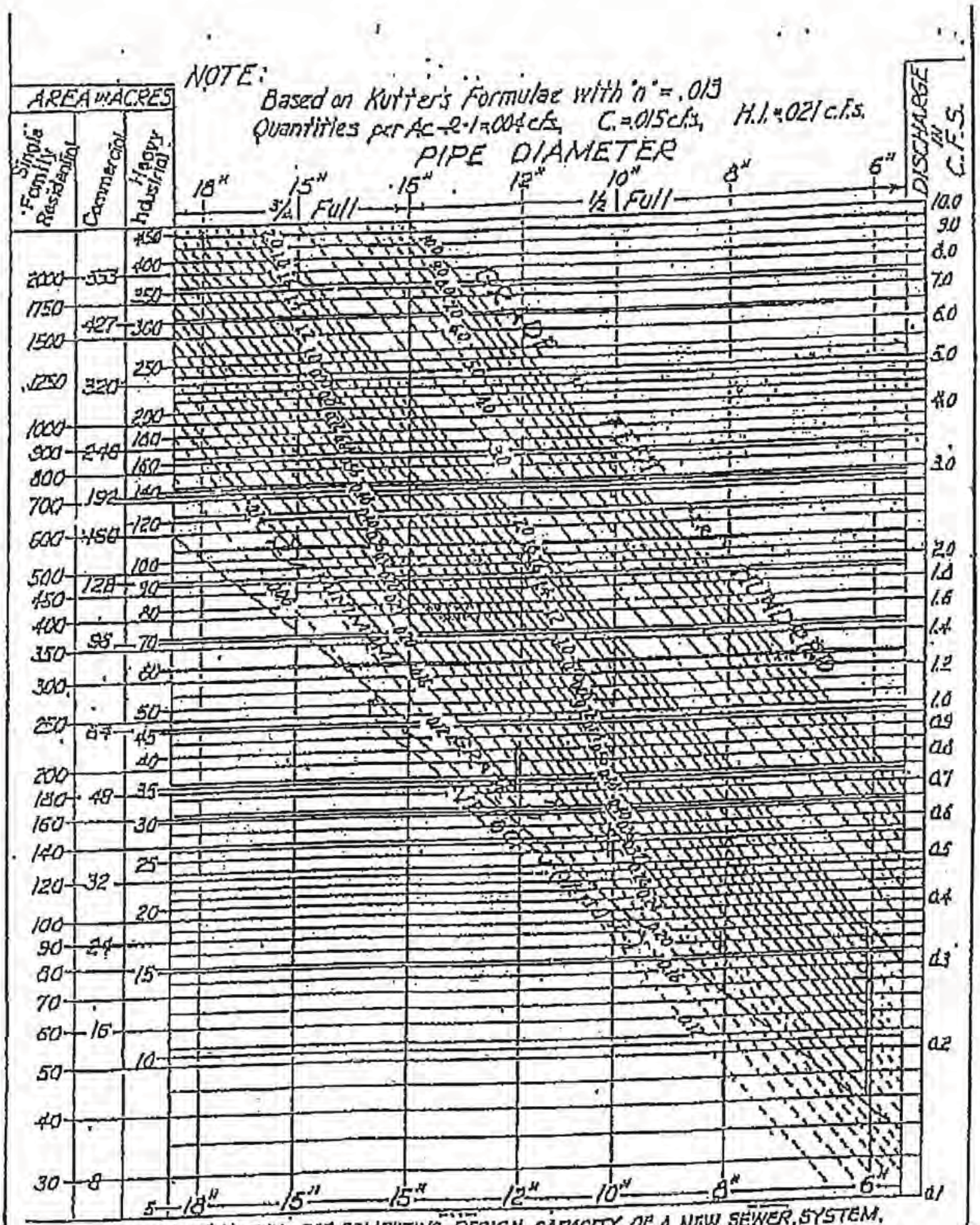
The coefficient to be used for any zoned areas not listed will be determined by the County based upon the intended development and use.

The County shall determine which of the coefficients or combination of coefficients shall be used for design as determined by the established or proposed zoning in the study area. Any modifications to these coefficients due to topography, development, or hazard areas, shall be approved by the Department of Public Works.

TABLE OF FLOW COEFFICIENTS

ZONE SYMBOL	ZONE USE	PEAK FLOW COEFFICIENT (cfs/acre)
R1	Single family residence	0.004
R2	Two family residential	0.006
R3	Mult. dwelling (apartment houses)	0.008
R4	Mult. dwelling (churches, hotels)	0.012
R5	Mult. dwelling (clubs, hospitals, lodges)	0.012
R6	Mult. dwelling (high rise residential)	0.012
RA	Single family agricultural	0.004
RTP	Residential trailer park	0.012
C1	Restricted neighborhood commercial	0.008
C2	Neighborhood commercial (community centers)	0.009
C3	General commercial	0.010
C4	Highway commercial (shopping malls)	0.011
C5	Specified highway comm. (high rise office)	0.012
M1	Light manufacturing	0.010
M2	General manufacturing	0.013
M3	Heavy manufacturing	0.016
M4	Unlimited manufacturing (slaughter houses)	0.020
A1	Light agricultural (parks, poultry)	0.004
A2	Heavy agricultural (packing houses)	0.006
E	Estates-residential (1/2 acre minimum)	0.001

NOTE: Parks use 0.001 CFS/Ac peak Flow rate for this project per County direction.



FLOW DIAGRAM FOR THE DESIGN
OF CIRCULAR SANITARY SEWERS

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

ASSISTANT DEPUTY

COUNTY ENGINEER

COUNTY ENGINEER
STANDARD S-C4
DATE: 3/80
DESIGN

APPENDIX E

FLOWMASTER OUTPUT

APPROXIMATE SLOPES

SEGMENT 1 * - 8" @ 0.016 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.06564	ft/ft
Diameter	0.667	ft
Discharge	0.016	ft^3/s

Results

Normal Depth	0.041	ft
Flow Area	0.01	ft^2
Wetted Perimeter	0.34	ft
Hydraulic Radius	0.027	ft
Top Width	0.32	ft
Critical Depth	0.06	ft
Percent Full	6.2	%
Critical Slope	0.01544	ft/ft
Velocity	1.78	ft/s
Velocity Head	0.05	ft
Specific Energy	0.09	ft
Froude Number	1.88	
Maximum Discharge	3.11	ft^3/s
Discharge Full	2.84	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	6.20	%
Downstream Velocity	Infinity	ft/s

SEGMENT 1 * - 8" @ 0.016 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.041	ft
Critical Depth	0.06	ft
Channel Slope	0.06564	ft/ft
Critical Slope	0.01544	ft/ft

HALF FULL CAPACITY - SEGMENT 1

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.06564	ft/ft
Diameter	0.667	ft
Discharge	1.420	ft^3/s

Results

Normal Depth	0.333	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.56	ft
Percent Full	50.0	%
Critical Slope	0.01505	ft/ft
Velocity	8.14	ft/s
Velocity Head	1.03	ft
Specific Energy	1.36	ft
Froude Number	2.80	
Maximum Discharge	3.11	ft^3/s
Discharge Full	2.84	ft^3/s
Slope Full	0.01639	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.95	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.333	ft
Critical Depth	0.56	ft
Channel Slope	0.06564	ft/ft
Critical Slope	0.01505	ft/ft

SEGMENT 2 * - 8" @ 0.029 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.08662	ft/ft
Diameter	0.667	ft
Discharge	0.029	ft^3/s

Results

Normal Depth	0.051	ft
Flow Area	0.01	ft^2
Wetted Perimeter	0.37	ft
Hydraulic Radius	0.033	ft
Top Width	0.35	ft
Critical Depth	0.08	ft
Percent Full	7.6	%
Critical Slope	0.01294	ft/ft
Velocity	2.39	ft/s
Velocity Head	0.09	ft
Specific Energy	0.14	ft
Froude Number	2.28	
Maximum Discharge	3.57	ft^3/s
Discharge Full	3.27	ft^3/s
Slope Full	0.00002	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	7.59	%
Downstream Velocity	Infinity	ft/s

SEGMENT 2 * - 8" @ 0.029 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.051	ft
Critical Depth	0.08	ft
Channel Slope	0.08662	ft/ft
Critical Slope	0.01294	ft/ft

HALF FULL CAPACITY - SEGMENT 2

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.08662	ft/ft
Diameter	0.667	ft
Discharge	1.635	ft^3/s

Results

Normal Depth	0.334	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.59	ft
Percent Full	50.0	%
Critical Slope	0.01863	ft/ft
Velocity	9.35	ft/s
Velocity Head	1.36	ft
Specific Energy	1.69	ft
Froude Number	3.22	
Maximum Discharge	3.57	ft^3/s
Discharge Full	3.27	ft^3/s
Slope Full	0.02173	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.02	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.334	ft
Critical Depth	0.59	ft
Channel Slope	0.08662	ft/ft
Critical Slope	0.01863	ft/ft

SEGMENT 3 * - 8" @ 0.067 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.09218	ft/ft
Diameter	0.667	ft
Discharge	0.067	ft^3/s

Results

Normal Depth	0.072	ft
Flow Area	0.02	ft^2
Wetted Perimeter	0.45	ft
Hydraulic Radius	0.045	ft
Top Width	0.41	ft
Critical Depth	0.12	ft
Percent Full	10.8	%
Critical Slope	0.01030	ft/ft
Velocity	3.30	ft/s
Velocity Head	0.17	ft
Specific Energy	0.24	ft
Froude Number	2.63	
Maximum Discharge	3.69	ft^3/s
Discharge Full	3.37	ft^3/s
Slope Full	0.00006	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	10.77	%
Downstream Velocity	Infinity	ft/s

SEGMENT 3 * - 8" @ 0.067 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.072	ft
Critical Depth	0.12	ft
Channel Slope	0.09218	ft/ft
Critical Slope	0.01030	ft/ft

HALF FULL CAPACITY - SEGMENT 3

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.09218	ft/ft
Diameter	0.667	ft
Discharge	1.685	ft^3/s

Results

Normal Depth	0.333	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.60	ft
Percent Full	50.0	%
Critical Slope	0.01960	ft/ft
Velocity	9.65	ft/s
Velocity Head	1.45	ft
Specific Energy	1.78	ft
Froude Number	3.32	
Maximum Discharge	3.69	ft^3/s
Discharge Full	3.37	ft^3/s
Slope Full	0.02307	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.99	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.333	ft
Critical Depth	0.60	ft
Channel Slope	0.09218	ft/ft
Critical Slope	0.01960	ft/ft

SEGMENT 4 * - 8" @ 0.102 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.09139	ft/ft
Diameter	0.667	ft
Discharge	0.102	ft^3/s

Results

Normal Depth	0.087	ft
Flow Area	0.03	ft^2
Wetted Perimeter	0.49	ft
Hydraulic Radius	0.054	ft
Top Width	0.45	ft
Critical Depth	0.15	ft
Percent Full	13.0	%
Critical Slope	0.00935	ft/ft
Velocity	3.83	ft/s
Velocity Head	0.23	ft
Specific Energy	0.31	ft
Froude Number	2.77	
Maximum Discharge	3.67	ft^3/s
Discharge Full	3.35	ft^3/s
Slope Full	0.00012	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	12.98	%
Downstream Velocity	Infinity	ft/s

SEGMENT 4 * - 8" @ 0.102 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.087	ft
Critical Depth	0.15	ft
Channel Slope	0.09139	ft/ft
Critical Slope	0.00935	ft/ft

HALF FULL CAPACITY - SEGMENT 4

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.09139	ft/ft
Diameter	0.667	ft
Discharge	1.680	ft^3/s

Results

Normal Depth	0.334	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.60	ft
Percent Full	50.0	%
Critical Slope	0.01951	ft/ft
Velocity	9.61	ft/s
Velocity Head	1.44	ft
Specific Energy	1.77	ft
Froude Number	3.31	
Maximum Discharge	3.67	ft^3/s
Discharge Full	3.35	ft^3/s
Slope Full	0.02294	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.03	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 4

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.334	ft
Critical Depth	0.60	ft
Channel Slope	0.09139	ft/ft
Critical Slope	0.01951	ft/ft

SEGMENT 5 * - 8" @ 0.102 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.07591	ft/ft
Diameter	0.667	ft
Discharge	0.102	ft^3/s

Results

Normal Depth	0.090	ft
Flow Area	0.03	ft^2
Wetted Perimeter	0.50	ft
Hydraulic Radius	0.056	ft
Top Width	0.46	ft
Critical Depth	0.15	ft
Percent Full	13.5	%
Critical Slope	0.00935	ft/ft
Velocity	3.60	ft/s
Velocity Head	0.20	ft
Specific Energy	0.29	ft
Froude Number	2.55	
Maximum Discharge	3.35	ft^3/s
Discharge Full	3.06	ft^3/s
Slope Full	0.00012	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	13.53	%
Downstream Velocity	Infinity	ft/s

SEGMENT 5 * - 8" @ 0.102 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.090	ft
Critical Depth	0.15	ft
Channel Slope	0.07591	ft/ft
Critical Slope	0.00935	ft/ft

HALF FULL CAPACITY - SEGMENT 5

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.07591	ft/ft
Diameter	0.667	ft
Discharge	1.530	ft^3/s

Results

Normal Depth	0.334	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.58	ft
Percent Full	50.0	%
Critical Slope	0.01679	ft/ft
Velocity	8.76	ft/s
Velocity Head	1.19	ft
Specific Energy	1.52	ft
Froude Number	3.02	
Maximum Discharge	3.35	ft^3/s
Discharge Full	3.06	ft^3/s
Slope Full	0.01902	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.01	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 5

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.334	ft
Critical Depth	0.58	ft
Channel Slope	0.07591	ft/ft
Critical Slope	0.01679	ft/ft

SEGMENT 6 - 15" @ 0.148 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01924	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.123	ft
Flow Area	0.06	ft^2
Wetted Perimeter	0.80	ft
Hydraulic Radius	0.078	ft
Top Width	0.74	ft
Critical Depth	0.15	ft
Percent Full	9.8	%
Critical Slope	0.00821	ft/ft
Velocity	2.38	ft/s
Velocity Head	0.09	ft
Specific Energy	0.21	ft
Froude Number	1.45	
Maximum Discharge	9.51	ft^3/s
Discharge Full	8.74	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	9.82	%
Downstream Velocity	Infinity	ft/s

SEGMENT 6 - 15" @ 0.148 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.123	ft
Critical Depth	0.15	ft
Channel Slope	0.01924	ft/ft
Critical Slope	0.00821	ft/ft

HALF FULL CAPACITY - SEGMENT 6

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01924	ft/ft
Diameter	1.250	ft
Discharge	4.370	ft^3/s

Results

Normal Depth	0.625	ft
Flow Area	0.61	ft^2
Wetted Perimeter	1.96	ft
Hydraulic Radius	0.312	ft
Top Width	1.25	ft
Critical Depth	0.85	ft
Percent Full	50.0	%
Critical Slope	0.00734	ft/ft
Velocity	7.12	ft/s
Velocity Head	0.79	ft
Specific Energy	1.41	ft
Froude Number	1.79	
Maximum Discharge	9.51	ft^3/s
Discharge Full	8.74	ft^3/s
Slope Full	0.00484	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.99	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - SEGMENT 6

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.625	ft
Critical Depth	0.85	ft
Channel Slope	0.01924	ft/ft
Critical Slope	0.00734	ft/ft

EOP to MH610 * - 15" @ 0.148 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02482	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.116	ft
Flow Area	0.06	ft^2
Wetted Perimeter	0.77	ft
Hydraulic Radius	0.074	ft
Top Width	0.73	ft
Critical Depth	0.15	ft
Percent Full	9.3	%
Critical Slope	0.00827	ft/ft
Velocity	2.59	ft/s
Velocity Head	0.10	ft
Specific Energy	0.22	ft
Froude Number	1.62	
Maximum Discharge	10.80	ft^3/s
Discharge Full	9.93	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	9.28	%
Downstream Velocity	Infinity	ft/s

EOP to MH610 * - 15" @ 0.148 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.116	ft
Critical Depth	0.15	ft
Channel Slope	0.02482	ft/ft
Critical Slope	0.00827	ft/ft

HALF FULL CAPACITY - EOP to MH610

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02482	ft/ft
Diameter	1.250	ft
Discharge	4.965	ft^3/s

Results

Normal Depth	0.625	ft
Flow Area	0.61	ft^2
Wetted Perimeter	1.96	ft
Hydraulic Radius	0.312	ft
Top Width	1.25	ft
Critical Depth	0.90	ft
Percent Full	50.0	%
Critical Slope	0.00796	ft/ft
Velocity	8.09	ft/s
Velocity Head	1.02	ft
Specific Energy	1.64	ft
Froude Number	2.04	
Maximum Discharge	10.80	ft^3/s
Discharge Full	9.93	ft^3/s
Slope Full	0.00623	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.99	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - EOP to MH610

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.625	ft
Critical Depth	0.90	ft
Channel Slope	0.02482	ft/ft
Critical Slope	0.00796	ft/ft

MH610 to MH609 - 15" @ 0.148 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03121	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.110	ft
Flow Area	0.05	ft^2
Wetted Perimeter	0.75	ft
Hydraulic Radius	0.070	ft
Top Width	0.71	ft
Critical Depth	0.15	ft
Percent Full	8.8	%
Critical Slope	0.00827	ft/ft
Velocity	2.79	ft/s
Velocity Head	0.12	ft
Specific Energy	0.23	ft
Froude Number	1.80	
Maximum Discharge	12.11	ft^3/s
Discharge Full	11.13	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	8.81	%
Downstream Velocity	Infinity	ft/s

MH610 to MH609 - 15" @ 0.148 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.110	ft
Critical Depth	0.15	ft
Channel Slope	0.03121	ft/ft
Critical Slope	0.00827	ft/ft

HALF FULL CAPACITY - MH610 to MH609

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.03121	ft/ft
Diameter	1.250	ft
Discharge	5.565	ft^3/s

Results

Normal Depth	0.625	ft
Flow Area	0.61	ft^2
Wetted Perimeter	1.96	ft
Hydraulic Radius	0.312	ft
Top Width	1.25	ft
Critical Depth	0.96	ft
Percent Full	50.0	%
Critical Slope	0.00874	ft/ft
Velocity	9.08	ft/s
Velocity Head	1.28	ft
Specific Energy	1.90	ft
Froude Number	2.28	
Maximum Discharge	12.11	ft^3/s
Discharge Full	11.13	ft^3/s
Slope Full	0.00782	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.97	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - MH610 to MH609

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.625	ft
Critical Depth	0.96	ft
Channel Slope	0.03121	ft/ft
Critical Slope	0.00874	ft/ft

APPENDIX F

FLOWMASTER OUTPUT

CONSERVATIVE SLOPES (1.0%)

SEGMENT 1 - 8" @ 0.016 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.016	ft^3/s

Results

Normal Depth	0.063	ft
Flow Area	0.02	ft^2
Wetted Perimeter	0.42	ft
Hydraulic Radius	0.040	ft
Top Width	0.39	ft
Critical Depth	0.06	ft
Percent Full	9.4	%
Critical Slope	0.01533	ft/ft
Velocity	0.97	ft/s
Velocity Head	0.01	ft
Specific Energy	0.08	ft
Froude Number	0.83	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	9.38	%
Downstream Velocity	Infinity	ft/s

SEGMENT 1 - 8" @ 0.016 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.063	ft
Critical Depth	0.06	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.01533	ft/ft

SEGMENT 2 - 8" @ 0.029 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.029	ft^3/s

Results

Normal Depth	0.081	ft
Flow Area	0.02	ft^2
Wetted Perimeter	0.47	ft
Hydraulic Radius	0.051	ft
Top Width	0.44	ft
Critical Depth	0.08	ft
Percent Full	12.1	%
Critical Slope	0.01278	ft/ft
Velocity	1.20	ft/s
Velocity Head	0.02	ft
Specific Energy	0.10	ft
Froude Number	0.90	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00002	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	12.13	%
Downstream Velocity	Infinity	ft/s

SEGMENT 2 - 8" @ 0.029 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.081	ft
Critical Depth	0.08	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.01278	ft/ft

SEGMENT 3 - 8" @ 0.067 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.067	ft^3/s

Results

Normal Depth	0.118	ft
Flow Area	0.04	ft^2
Wetted Perimeter	0.58	ft
Hydraulic Radius	0.072	ft
Top Width	0.51	ft
Critical Depth	0.12	ft
Percent Full	17.7	%
Critical Slope	0.01028	ft/ft
Velocity	1.61	ft/s
Velocity Head	0.04	ft
Specific Energy	0.16	ft
Froude Number	0.99	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00006	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	17.69	%
Downstream Velocity	Infinity	ft/s

SEGMENT 3 - 8" @ 0.067 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.118	ft
Critical Depth	0.12	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.01028	ft/ft

SEGMENT 4 - 8" @ 0.102 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.102	ft^3/s

Results

Normal Depth	0.143	ft
Flow Area	0.06	ft^2
Wetted Perimeter	0.64	ft
Hydraulic Radius	0.086	ft
Top Width	0.55	ft
Critical Depth	0.15	ft
Percent Full	21.5	%
Critical Slope	0.00938	ft/ft
Velocity	1.85	ft/s
Velocity Head	0.05	ft
Specific Energy	0.20	ft
Froude Number	1.03	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00012	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	21.46	%
Downstream Velocity	Infinity	ft/s

SEGMENT 4 - 8" @ 0.102 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.143	ft
Critical Depth	0.15	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00938	ft/ft

SEGMENT 5 - 8" @ 0.102 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.102	ft^3/s

Results

Normal Depth	0.143	ft
Flow Area	0.06	ft^2
Wetted Perimeter	0.64	ft
Hydraulic Radius	0.086	ft
Top Width	0.55	ft
Critical Depth	0.15	ft
Percent Full	21.5	%
Critical Slope	0.00938	ft/ft
Velocity	1.85	ft/s
Velocity Head	0.05	ft
Specific Energy	0.20	ft
Froude Number	1.03	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00012	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	21.46	%
Downstream Velocity	Infinity	ft/s

SEGMENT 5 - 8" @ 0.102 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.143	ft
Critical Depth	0.15	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00938	ft/ft

SEGMENT 6 - 15" @ 0.148 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.142	ft
Flow Area	0.08	ft^2
Wetted Perimeter	0.86	ft
Hydraulic Radius	0.090	ft
Top Width	0.79	ft
Critical Depth	0.15	ft
Percent Full	11.4	%
Critical Slope	0.00820	ft/ft
Velocity	1.92	ft/s
Velocity Head	0.06	ft
Specific Energy	0.20	ft
Froude Number	1.09	
Maximum Discharge	6.85	ft^3/s
Discharge Full	6.29	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	11.37	%
Downstream Velocity	Infinity	ft/s

SEGMENT 6 - 15" @ 0.148 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.142	ft
Critical Depth	0.15	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00820	ft/ft

EOP to MH610 - 15" @ 0.148cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.142	ft
Flow Area	0.08	ft^2
Wetted Perimeter	0.86	ft
Hydraulic Radius	0.090	ft
Top Width	0.79	ft
Critical Depth	0.15	ft
Percent Full	11.4	%
Critical Slope	0.00820	ft/ft
Velocity	1.92	ft/s
Velocity Head	0.06	ft
Specific Energy	0.20	ft
Froude Number	1.09	
Maximum Discharge	6.85	ft^3/s
Discharge Full	6.29	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	11.37	%
Downstream Velocity	Infinity	ft/s

EOP to MH610 - 15" @ 0.148cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.142	ft
Critical Depth	0.15	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00820	ft/ft

MH610 to MH609 - 15" @ 0.148 cfs

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	1.250	ft
Discharge	0.148	ft^3/s

Results

Normal Depth	0.142	ft
Flow Area	0.08	ft^2
Wetted Perimeter	0.86	ft
Hydraulic Radius	0.090	ft
Top Width	0.79	ft
Critical Depth	0.15	ft
Percent Full	11.4	%
Critical Slope	0.00820	ft/ft
Velocity	1.92	ft/s
Velocity Head	0.06	ft
Specific Energy	0.20	ft
Froude Number	1.09	
Maximum Discharge	6.85	ft^3/s
Discharge Full	6.29	ft^3/s
Slope Full	0.00001	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	11.37	%
Downstream Velocity	Infinity	ft/s

MH610 to MH609 - 15" @ 0.148 cfs

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.142	ft
Critical Depth	0.15	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00820	ft/ft

HALF FULL CAPACITY - 8" PIPE

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.667	ft
Discharge	0.554	ft^3/s

Results

Normal Depth	0.333	ft
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.167	ft
Top Width	0.67	ft
Critical Depth	0.35	ft
Percent Full	50.0	%
Critical Slope	0.00854	ft/ft
Velocity	3.17	ft/s
Velocity Head	0.16	ft
Specific Energy	0.49	ft
Froude Number	1.09	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00252	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.00	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - 8" PIPE

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.333	ft
Critical Depth	0.35	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00854	ft/ft

HALF FULL CAPACITY - 15" PIPE

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	1.250	ft
Discharge	3.144	ft^3/s

Results

Normal Depth	0.624	ft
Flow Area	0.61	ft^2
Wetted Perimeter	1.96	ft
Hydraulic Radius	0.312	ft
Top Width	1.25	ft
Critical Depth	0.71	ft
Percent Full	50.0	%
Critical Slope	0.00638	ft/ft
Velocity	5.13	ft/s
Velocity Head	0.41	ft
Specific Energy	1.03	ft
Froude Number	1.29	
Maximum Discharge	6.85	ft^3/s
Discharge Full	6.29	ft^3/s
Slope Full	0.00252	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.95	%
Downstream Velocity	Infinity	ft/s

HALF FULL CAPACITY - 15" PIPE

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.624	ft
Critical Depth	0.71	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00638	ft/ft

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