Appendix K

Preliminary Hydrology Study

PRELIMINARY
HYDROLOGY STUDY

FOR

Commercial Retail Lake Elsinore

NWC Mountain St. & Lake St.,
Lake Elsinore, CA 92530

Prepared By:
PLUMP ENGINEERING, INC.
914 E. Katella Avenue
Anaheim, CA 92805

This Drainage Report was prepared under my supervision:

By: _____ Date: 10/04/2019

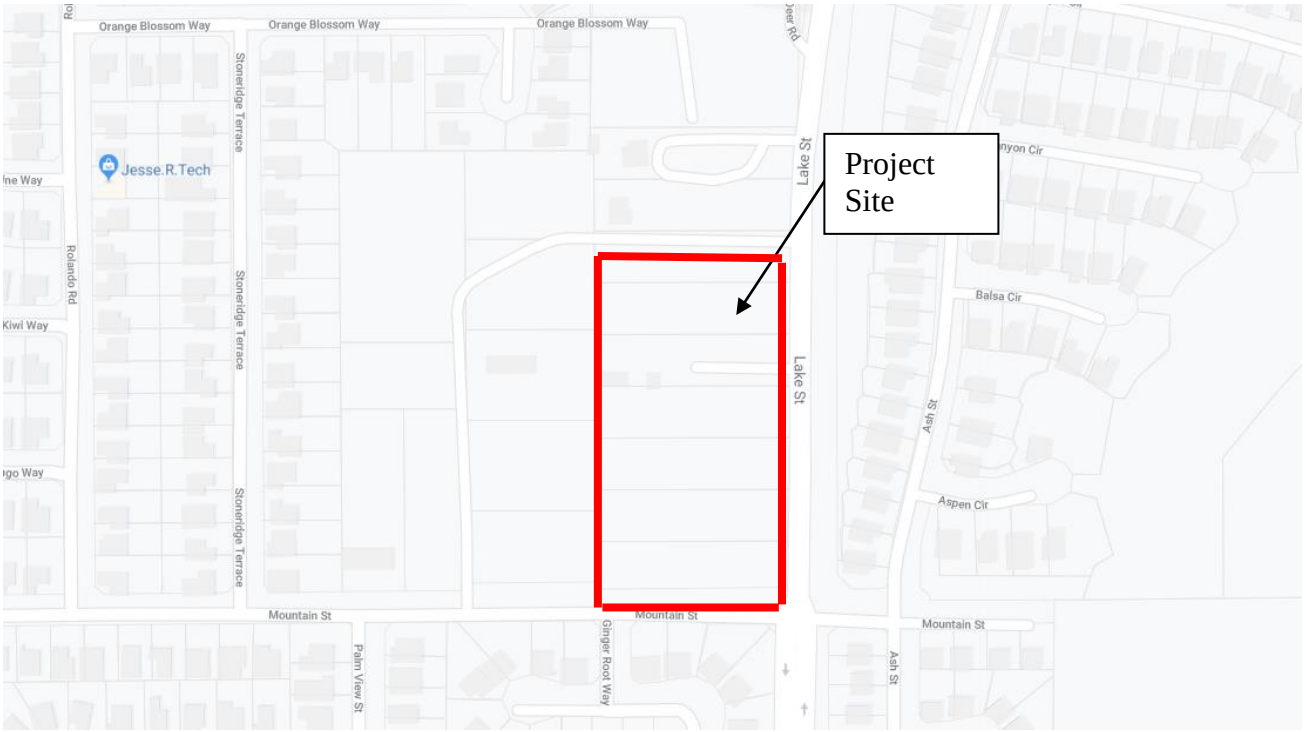
PEI Job No. 150647.CS

INTRODUCTION

The site is located at the northwest corner of the intersection of Mountain Street and Lake Street in the City of Lake Elsinore, California 92530. The site is bounded to the west by undeveloped lot, to the north by a private property, to the east by Lake Street and to the south by Mountain Street. The general location of the site is shown on the Site Vicinity Map included on page 2 this report. The subject site is a rectangular shaped, Property size is approximately 5.630± acres with disturbed area of 5.630± acres, presently vacant and undeveloped. Ground surface cover consists of sparse amounts of native grass and weed growth located at the entire site. Overhead electrical power lines are located along the western and southern perimeter of the property. Overall site topography slopes downward to the southwest at a gradient of approximately less than 8.50 percent. There was estimated to be 20± feet of elevation differential across the overall subject site.

The preliminary site plan for the proposed development indicates that the site will be developed with a gas station with car wash and store, four (4) retail buildings, two (2) restaurant buildings with drive-thru, and five (5) trash enclosures . The new gas station canopy will be 4,089± SF, the four new retail buildings will be 13,200± SF, The two restaurants will be 5,840± SF, the car wash will be 3,159± SF, the store will be 3,400± SF, and the trash enclosures will cover 463± SF. The site plan indicates that the proposed buildings will generally be surrounded by asphaltic concrete with some areas of concrete flatwork. Several landscape planters are proposed to be located around the perimeter and within the parking lot of the site.

VICINITY MAP



HYDROLOGY ANALYSIS

Hydrologic calculations were performed in accordance with Riverside County Hydrology Manual (April 1978) guidelines. The Hydrology Manual was used to determine the existing and proposed peak flows for the, 2-year, 10-year and 25-year storms as well as the runoff volumes generated for , 2-year, 10-year and 25-year storms as well as the runoff volumes generated for 100-year storm event. Figures and Tables below are referenced to that Manual. The previous pre-development use is a vacant land with pervious cover.

RUNOFF FLOWS

Table 1: Rational Method Peak Flow

Tributary Area	**DMA-1**	**DMA-2**	**Totals**
Acreage, acres Pre (Post)	5.63 (2.38)	- (3.25)	5.63
Time of Concentration; Tc (min) (Post)	21 (9.5)	- (8.5)	21 9
2 year Pre- Develop. Runoff; Q_2 (cfs)	0.03	-	0.03
2 year Post- Develop. Runoff; Q_2 (cfs)	0.76	1.04	1.79
10 year Pre- Develop. Runoff; Q_{10} (cfs)	0.05	-	0.05
10 year Post- Develop. Runoff; Q_{10} (cfs)	1.25	1.70	2.95
25 year Pre- Develop. Runoff; Q_{25} (cfs)	0.06	-	0.06
25 year Post- Develop. Runoff; Q_{25} (cfs)	1.56	2.13	3.68

RUNOFF VOLUMES

Table 2: Estimated Storm Runoff Volumes

Tributary Area	**Area 1**	**Area 2**	**Totals**
Acreage (Pre Development) Acres Acreage (Post Development) Acres	5.63 (2.38)	- (3.25)	5.63 (5.63)
24-hr. Precipitation Depth(inches) P_{24} (2 yr)	2.35	2.35	-
24-hr. Precipitation Depth(inches) P_{24} (10 yr)	3.88	3.88	-
24-hr. Precipitation Depth(inches) P_{24} (100 yr)	6.25	6.25	-
CN (AMC II) Pre Development	75	-	-
CN (AMC II) Post Development	96	96	-

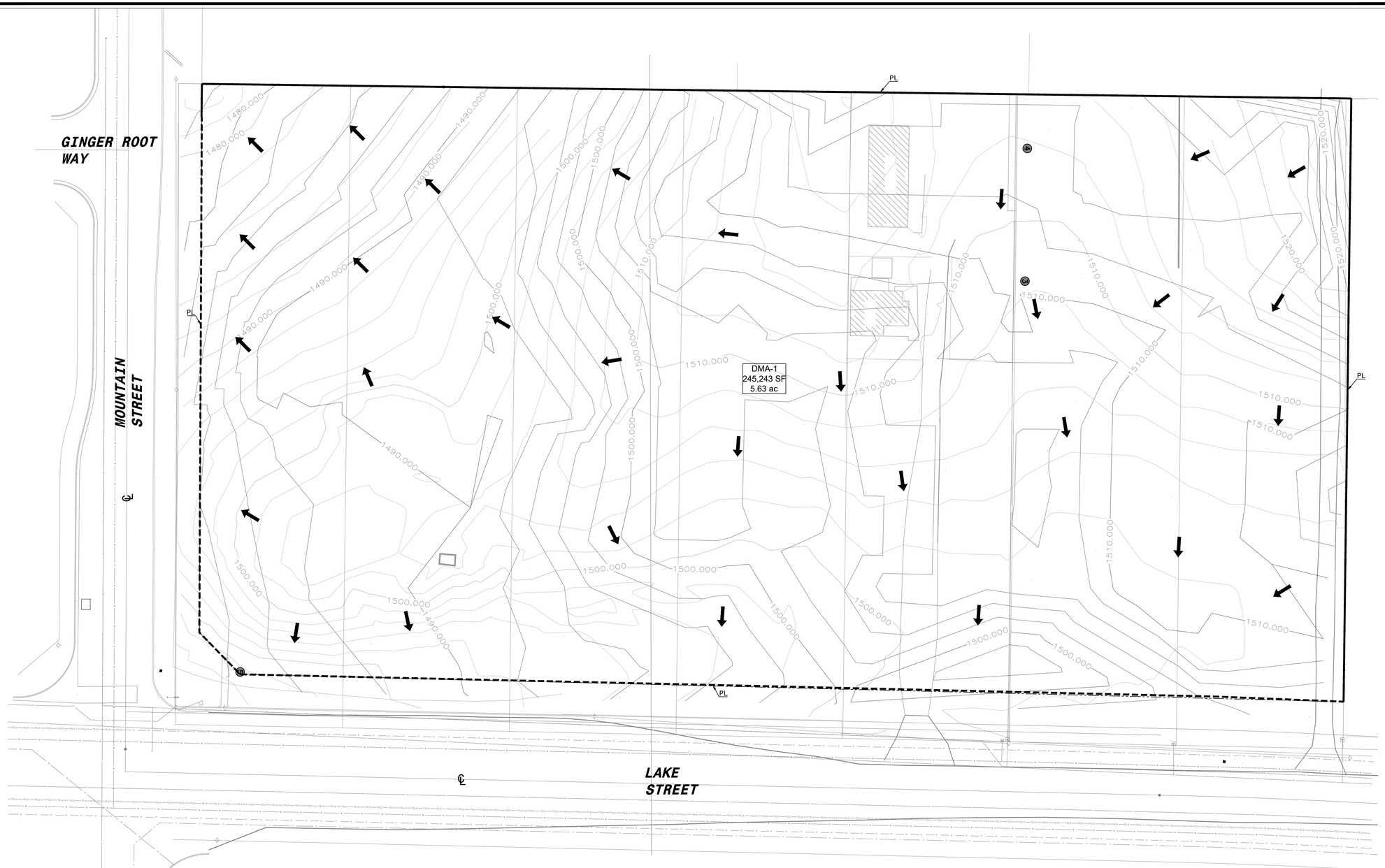
CN (AMC I) Pre Development	57	-	-
CN (AMC I) Post Development	78	78	-
CN (AMC III) Pre Development	88	-	-
CN (AMC III) Post Development	96	96	-
2 year Pre-Develop. Volume V_2 (Ac-ft)	0.04	-	-
2 year Post-Develop. Volume V_2 (Ac-ft)	0.137	0.188	0.325
10 year Pre-Develop. Volume V_{10} (Ac-ft)	1.228	-	-
10 year Post-Develop. Volume V_{10} (Ac-ft)	0.68	0.93	1.605
100 year Pre-Develop. Volume V_{100} (Ac-ft)	2.28	-	-
100 year Post-Develop. Volume V_{100} (Ac-ft)	1.15	1.56	2.710

CONCLUSION

The existing peak runoff from the project area was calculated to be 0.05 cfs, and 0.06 cfs for the 10-year and 25-year storms respectively. The proposed peak runoff from the project area after improvements was calculated to be 2.95 cfs, and 3.68 cfs for the 10-year and 25-year storms respectively. Therefore, outlet detention and retention will be necessary to replicate the pre-development condition in order to protect the downstream storm drains.

The existing runoff volumes from the project area was calculated to be 2.28 Ac-ft. for the 100-year storm and the proposed runoff volume from the project area after improvements was calculated to be 2.71 Ac-ft. for the 100-year storm. Post development condition is 16% higher that the pre development condition. Therefore, there are hydraulic conditions of concern (HCOC's) exist for this project. Excess amount will be retained and filtered on site via biofiltration with underdrain. HCOC Mitigation of the WQMP report will utilize accepted professional methodologies published by entities such as CASQA via biotreatment by means of biofiltration with underdrain.

Attachment A
Figures



LEGEND:

- LANDSCAPE AREA
- DRAINAGE FLOW DIRECTION
- DMA BOUNDARY
- PARCEL BOUNDARY
- DMA-X / X,XXX SF / XX.XX ac — DMA INFORMATION

RUN-OFF FLOW

Return Frequency = **2 years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	T_c (min)	$I_{1\,hr}$ (In/hr)	Q (cfs)
1	5.630	D	0.01	21	0.492	0.03
					TOTAL	**0.03**

Return Frequency = **10 years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	T_c (min)	$I_{1\,hr}$ (In/hr)	Q (cfs)
1	5.630	D	0.01	21	0.808	0.05
					TOTAL	**0.05**

Return Frequency = **25 years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	T_c (min)	$I_{1\,hr}$ (In/hr)	Q (cfs)
1	5.630	D	0.01	21	1.01	0.06
					TOTAL	**0.06**

RUN-OFF VOLUME

Return Frequency = **2 Years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	CN AMC II	CN AMC I	S	I_a	P_{24}	Y	V (Ac-ft)
1	5.630	D	75	57	7.54	1.51	2.35	0.04	0.040
								TOTAL	**0.040**

Return Frequency = **10 Years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	CN AMC II	CN AMC III	S	I_a	P_{24}	Y	V (Ac-ft)
1	5.630	D	75	88	1.36	0.27	3.88	0.67	1.23
								TOTAL	**1.228**

Return Frequency = **100 Years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	CN AMC II	CN AMC III	S	I_a	P_{24}	Y	V (Ac-ft)
1	5.630	D	75	88	1.36	0.27	6.25	0.78	2.28
								TOTAL	**2.283**

30' 0 30' 60' 90'

SCALE: 1" = 30'

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CLIENT:
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COMMERCIAL RETAIL
APN: 389-030-014,015,016,017,018
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CIVIL
STATE OF CALIFORNIA

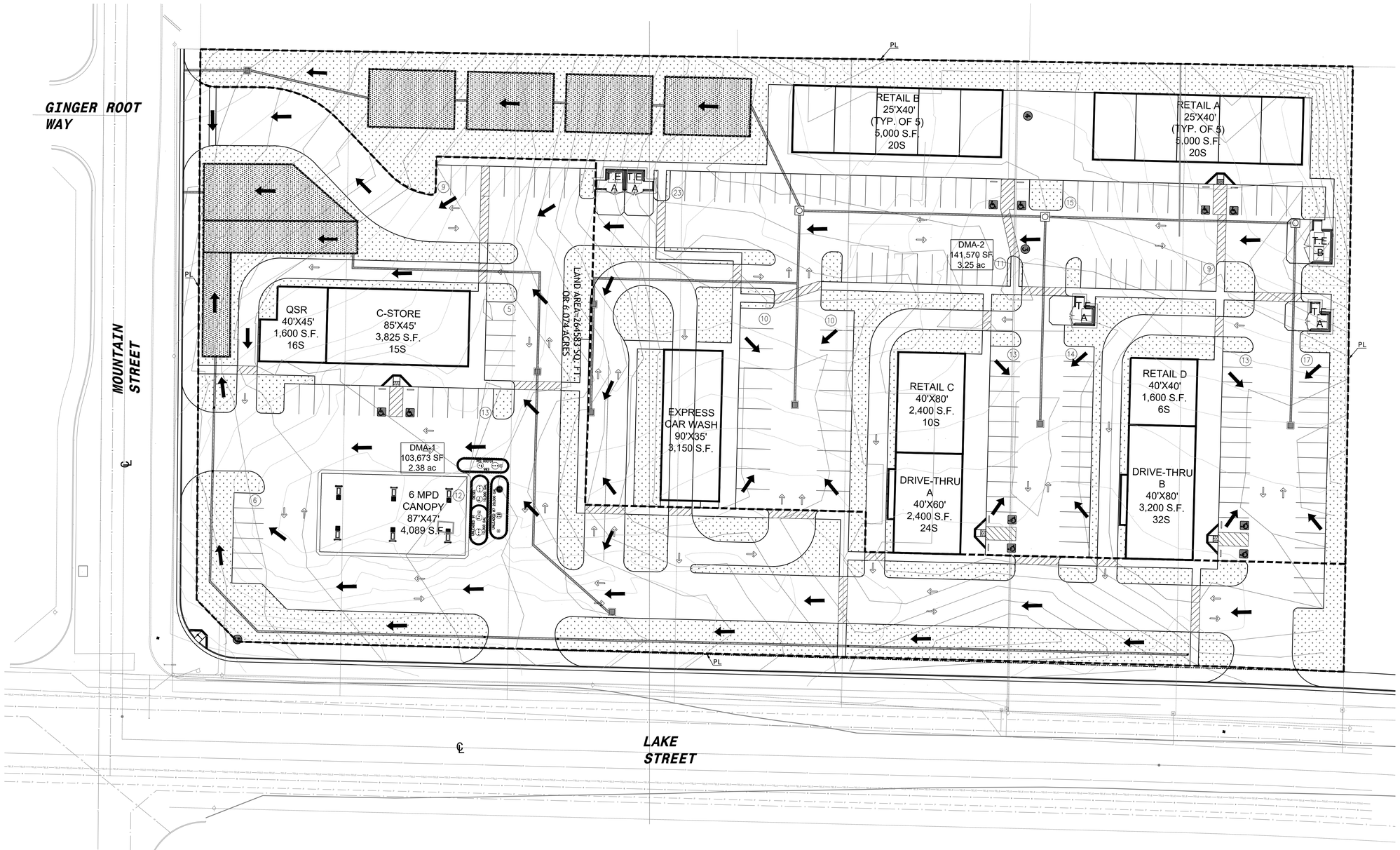
Date: 10-04-2019
Project Number: 1908033

NO.	DATE	REVISION DESCRIPTION

DESIGNED BY: TT
CHECKED BY: TT
DRAWN BY: AA/JT/NA

DRAWING TITLE:
HYDROLOGY
PRE-DEVELOPMENT

SHEET NO:
01



RUN-OFF FLOW

Return Frequency = **2 years**

POST-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	$T_{c\ (Final)}$ (min)	$I_{1\ hr}$ (In/hr)	Q (cfs)
1	2.380	D	0.648	9.5	0.492	0.76
2	3.250	D	0.648	8.5	0.492	1.04
					TOTAL	**1.79**

Return Frequency = **10 years**

POST-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	$T_{c\ (Final)}$ (min)	$I_{1\ hr}$ (In/hr)	Q (cfs)
1	2.380	D	0.648	9.5	0.808	1.25
2	3.250	D	0.648	8.5	0.808	1.70
					TOTAL	**2.95**

Return Frequency = **25 years**

POST-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	$T_{c\ (Final)}$ (min)	$I_{1\ hr}$ (In/hr)	Q (cfs)
1	2.380	D	0.648	9.5	1.01	1.56
2	3.250	D	0.648	8.5	1.01	2.13
					TOTAL	**3.68**

RUN-OFF VOLUME

Return Frequency = **2 Years**

POST-DEVELOPMENT

Drainage Area	A (Acres)	Soils Group	CN AMC II	CN AMC I	S	I_a	P_{24}	Y	V (Ac-ft)
1	2.380	D	90	78	2.82	0.56	2.35	0.29	0.137
2	3.250	D	90	78	2.82	0.56	2.35	0.29	0.188
								TOTAL	**0.325**

Return Frequency = **10 Years**

POST-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	CN AMC II	CN AMC III	S	I_a	P_{24}	Y	V (Ac-ft)
1	2.380	D	90	96	0.42	0.08	3.88	0.88	0.68
2	3.250	D	90	96	0.42	0.08	3.88	0.88	0.93
								TOTAL	**1.605**

Return Frequency = **100 Years**

POST-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	CN AMC II	CN AMC III	S	I_a	P_{24}	Y	V (Ac-ft)
1	2.380	D	90	96	0.42	0.08	6.25	0.92	1.15
2	3.250	D	90	96	0.42	0.08	6.25	0.92	1.56
								TOTAL	**2.710**

LEGEND:

- LANDSCAPE AREA
- DRAINAGE FLOW DIRECTION
- DMA BOUNDARY
- PARCEL BOUNDARY
- DMA-X / X,XXX SF / XX.XX ac — DMA INFORMATION

30' 0 30' 60' 90'

SCALE: 1" = 30'

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DESIGNED BY: TT
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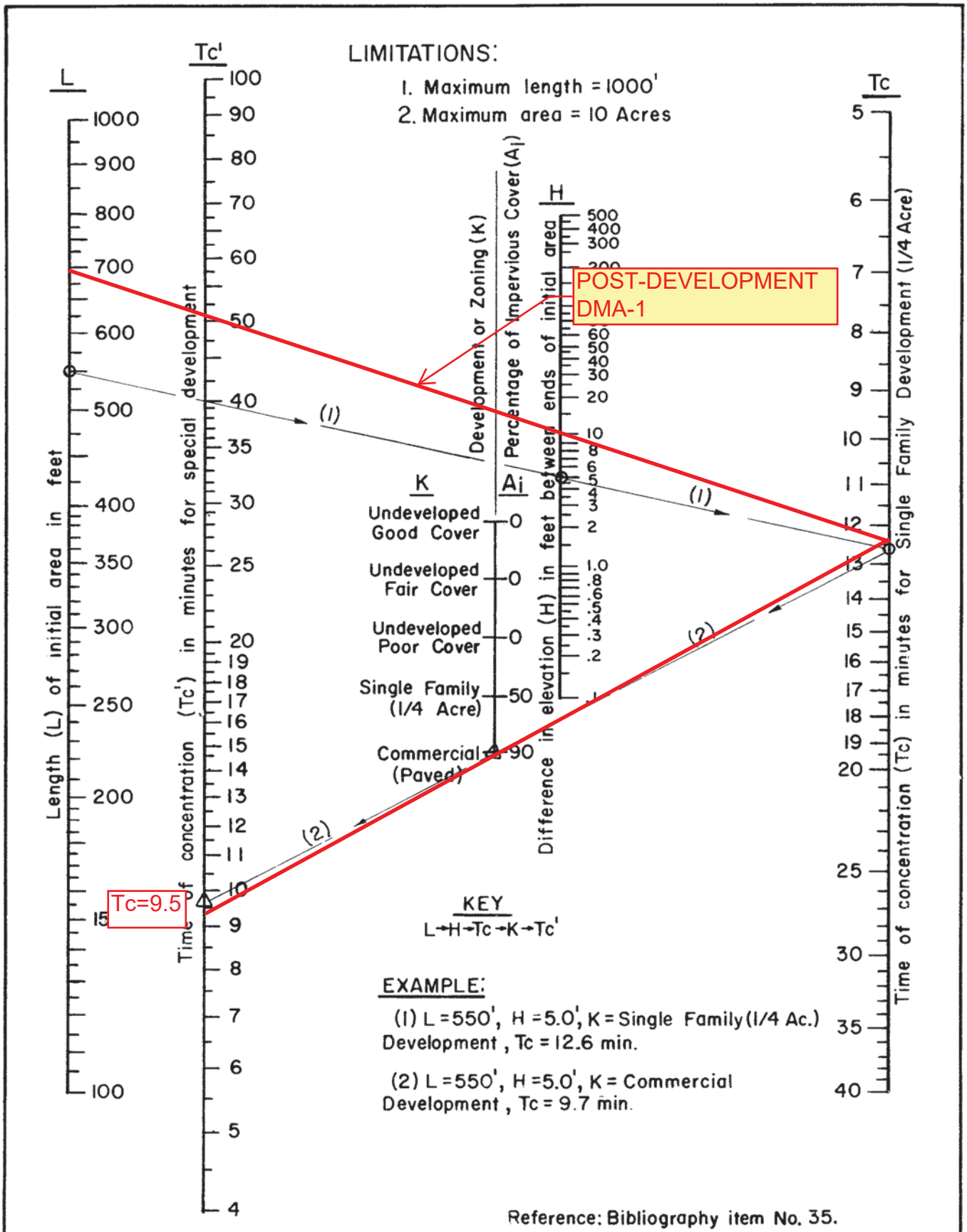
DRAWN BY: AA/JT/NA

DRAWING TITLE:
HYDROLOGY
POST-DEVELOPMENT

SHEET NO:
02

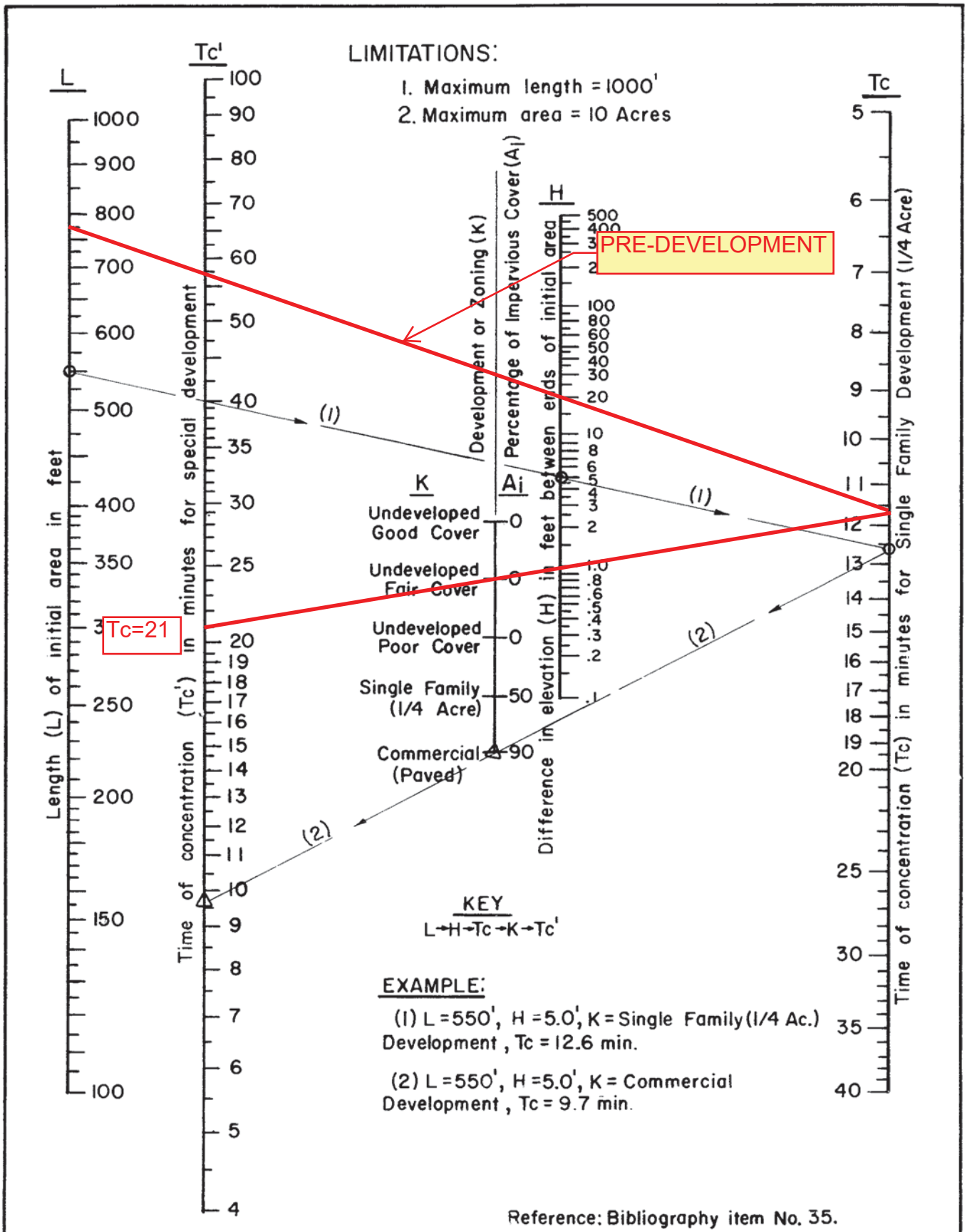


Reference: Bibliography item No. 35.

RCFC & WCD
HYDROLOGY MANUAL

TIME OF CONCENTRATION FOR INITIAL SUBAREA

PLATE D-3



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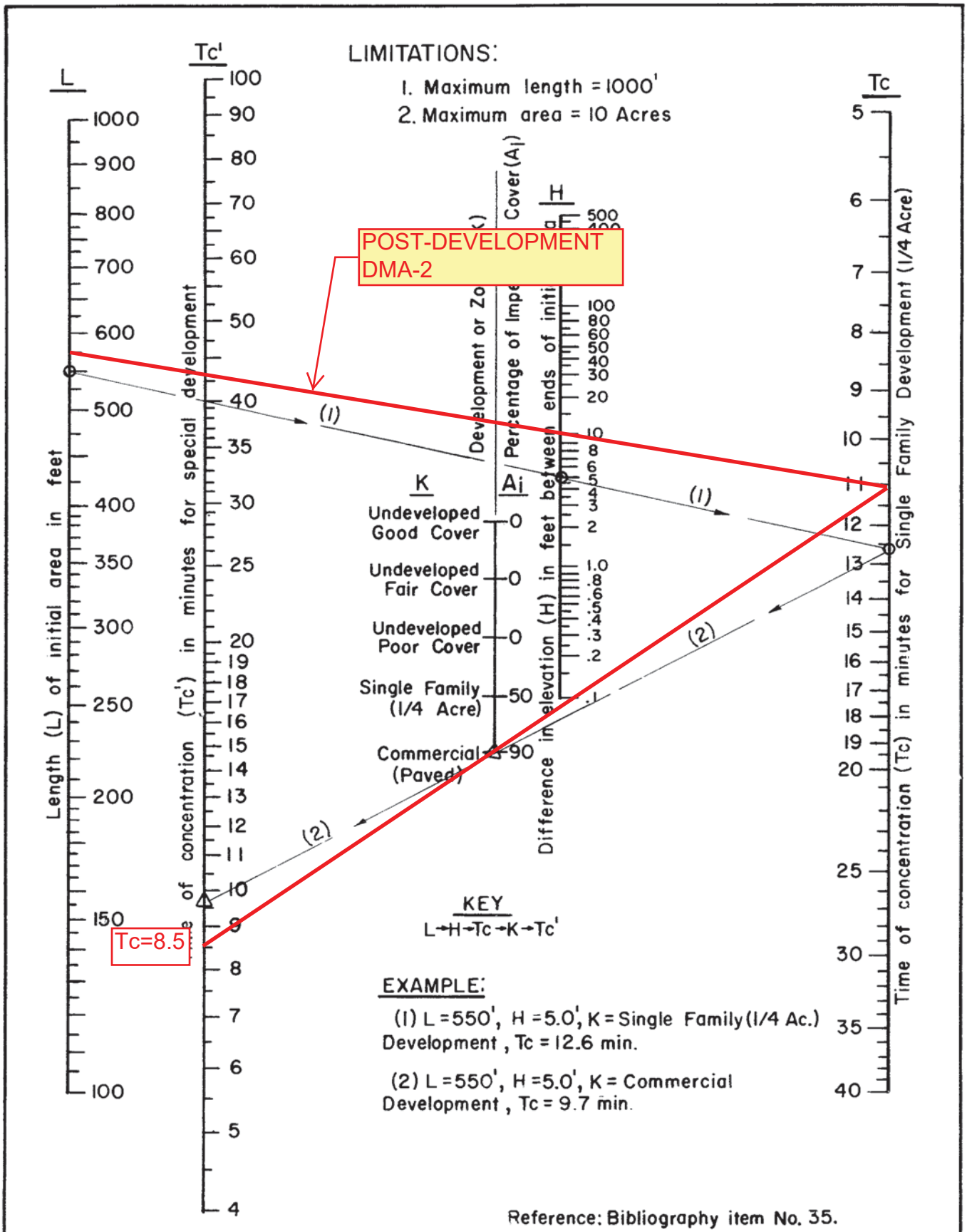
TIME OF CONCENTRATION FOR INITIAL SUBAREA

PLATE D-3



Reference: Bibliography item No. 35.

RCFC & WCD
HYDROLOGY MANUAL

TIME OF CONCENTRATION FOR INITIAL SUBAREA

PLATE D-3

RCFC & WCD

HYDROLOGY MANUAL

STANDARD INTENSITY – DURATION CURVES DATA

RAINFALL INTENSITY–INCHES PER HOUR

RIVERSIDE			RIVERSIDE (FOOTHILL AREAS)			RUBIDOUX			SAN JACINTO			SUN CITY		
DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR
5	2.75	3.92	5	3.14	4.71	5	3.18	4.71	5	2.81	4.16	5	3.25	4.85
6	2.48	3.55	6	2.84	4.26	6	2.87	4.26	6	2.56	3.79	6	2.95	4.40
7	2.28	3.26	7	2.61	3.91	7	2.64	3.91	7	2.37	3.51	7	2.72	4.06
8	2.12	3.03	8	2.42	3.63	8	2.45	3.63	8	2.22	3.29	8	2.53	3.78
9	1.99	2.84	9	2.27	3.41	9	2.30	3.41	9	2.09	3.10	9	2.38	3.55
10	1.88	2.68	10	2.14	3.21	10	2.17	3.21	10	1.98	2.94	10	2.25	3.36
11	1.78	2.54	11	2.03	3.05	11	2.06	3.05	11	1.89	2.80	11	2.14	3.19
12	1.70	2.42	12	1.94	2.91	12	1.96	2.91	12	1.81	2.68	12	2.04	3.05
13	1.62	2.32	13	1.86	2.78	13	1.88	2.78	13	1.74	2.58	13	1.96	2.92
14	1.56	2.23	14	1.78	2.67	14	1.80	2.67	14	1.68	2.48	14	1.88	2.81
15	1.50	2.14	15	1.71	2.57	15	1.74	2.57	15	1.62	2.40	15	1.81	2.71
16	1.45	2.07	16	1.66	2.48	16	1.68	2.48	16	1.57	2.32	16	1.75	2.62
17	1.40	2.00	17	1.60	2.40	17	1.62	2.40	17	1.52	2.25	17	1.70	2.54
18	1.36	1.94	18	1.55	2.33	18	1.57	2.33	18	1.48	2.19	18	1.65	2.46
19	1.32	1.88	19	1.51	2.26	19	1.52	2.26	19	1.44	2.13	19	1.60	2.39
20	1.28	1.83	20	1.46	2.20	20	1.48	2.20	20	1.40	2.08	20	1.56	2.33
22	1.22	1.74	22	1.39	2.08	22	1.41	2.08	22	1.34	1.98	22	1.48	2.21
24	1.16	1.66	24	1.32	1.99	24	1.34	1.99	24	1.28	1.90	24	1.41	2.11
26	1.11	1.58	26	1.27	1.90	26	1.28	1.90	26	1.23	1.82	26	1.36	2.03
28	1.06	1.52	28	1.22	1.82	28	1.23	1.82	28	1.19	1.76	28	1.30	1.95
30	1.02	1.46	30	1.17	1.76	30	1.19	1.76	30	1.15	1.70	30	1.26	1.88
32	.99	1.41	32	1.13	1.70	32	1.14	1.70	32	1.11	1.64	32	1.21	1.81
34	.96	1.37	34	1.09	1.64	34	1.11	1.64	34	1.08	1.59	34	1.18	1.76
36	.93	1.32	36	1.06	1.59	36	1.07	1.59	36	1.05	1.55	36	1.14	1.70
38	.90	1.29	38	1.03	1.54	38	1.04	1.54	38	1.02	1.51	38	1.11	1.66
40	.87	1.25	40	1.00	1.50	40	1.01	1.50	40	.99	1.47	40	1.08	1.61
45	.82	1.17	45	.94	1.41	45	.95	1.41	45	.94	1.39	45	1.01	1.51
50	.77	1.11	50	.88	1.33	50	.90	1.33	50	.89	1.31	50	.96	1.43
55	.73	1.05	55	.84	1.26	55	.85	1.26	55	.85	1.25	55	.91	1.36
60	.70	1.00	60	.80	1.20	60	.81	1.20	60	.81	1.20	60	.87	1.30
65	.67	.96	65	.77	1.15	65	.78	1.15	65	.78	1.15	65	.83	1.25
70	.64	.92	70	.73	1.10	70	.74	1.10	70	.75	1.11	70	.80	1.20
75	.62	.88	75	.71	1.06	75	.72	1.06	75	.72	1.07	75	.77	1.15
80	.60	.85	80	.68	1.02	80	.69	1.02	80	.70	1.04	80	.75	1.12
85	.58	.83	85	.66	.99	85	.67	.99	85	.68	1.01	85	.72	1.08
SLOPE = .550			SLOPE = .550			SLOPE = .550			SLOPE = .500			SLOPE = .530		

PLATE D-4.1(5 of 6)

Attachment B
Rational Method Calculations

HYDROLOGY CALCULATIONS

Plump Engineering, Inc.
914 E. Katella Avenue
Anaheim, CA 92805
By: NA

Runoff Flow Calculations

Q = CIA

Where :

Q = runoff in cubic feet per second (cfs) from a given area.
C= Coefficient of Runoff
I = the time-averaged rainfall intensity (inches/hour) - **1-hr Rainfall** corresponding to the time of concentration T_c (See Figures B-3, B-4 and D-1)
(See Hydrology Map for L, H and K factors)
A = Drainage area (acres)
Soils Maps are at:…\Projects\120374\Hydrology\Plate C-1.42

Return Frequency = **2 years**

PRE-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**T_c (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	5.630	D	0.01	21	0.492	0.03
					TOTAL	**0.03**

Return Frequency = **2 years**

POST-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**$T_{c\ (Final)}$ (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	2.380	D	0.648	9.5	0.492	0.76
2	3.250	D	0.648	8.5	0.492	1.04
					TOTAL	**1.79**

Return Frequency = **10 years**

PRE-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**T_c (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	5.630	D	0.01	21	0.808	0.05
					TOTAL	**0.05**

HYDROLOGY CALCULATIONS

Plump Engineering, Inc.
914 E. Katella Avenue
Anaheim, CA 92805
By: NA

Return Frequency = **10 years**

POST-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**$T_{c\ (Final)}$ (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	2.380	D	0.648	9.5	0.808	1.25
2	3.250	D	0.648	8.5	0.808	1.70
					TOTAL	**2.95**

Return Frequency = **25 years**

PRE-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**T_c (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	5.630	D	0.01	21	1.01	0.06
					TOTAL	**0.06**

Return Frequency = **25 years**

POST-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**$T_{c\ (Final)}$ (min)**	**$I_{1\ hr}$ (In/hr)**	**Q (cfs)**
1	2.380	D	0.648	9.5	1.01	1.56
2	3.250	D	0.648	8.5	1.01	2.13
					TOTAL	**3.68**

HYDROLOGY CALCULATIONS

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By: NA

Runoff Flow Calculations

Q = CIA

Where :

Q = runoff in cubic feet per second (cfs) from a given area.
C= Coefficient of Runoff
I = the time-averaged rainfall intensity (inches/hour) - **24-hr Rainfall** corresponding to the time of concentration $T_{c.}$ (See Plates D-3, D-4.1, D-4.3 and D
(See Hydrology Map for L, H and K factors)
A = Drainage area (acres)
Soils Maps are at:…\Projects\150647\Hydrology\Plate C-1.42

Return Frequency = **2 years**

PRE-DEVELOPMENT

Drainage Area	A (acres)	Soils Group	Coefficient C	T_c (min)	$I_{24\ hr}$ (In/hr)	Q (cfs)
1	5.630	D	0.01	21	0.098	0.006
					TOTAL	**0.006**

Return Frequency = **2 years**

POST-DEVELOPMENT (on-site)

Drainage Area	A (acres)	Soils Group	Coefficient C	$T_{c\ (Final)}$ (min)	$I_{24\ hr}$ (In/hr)	Q (cfs)
1	2.380	D	0.648	9.50	0.098	0.151
2	3.250	D	0.648	8.50	0.098	0.206
					Total	0.358

HYDROLOGY CALCULATIONS

Plump Engineering, Inc.
914 E. Katella Avenue
Anaheim, CA 92805
By: NA

Return Frequency = **10 years**

PRE-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**T_c (min)**	**$I_{24\ hr}$ (In/hr)**	**Q (cfs)**
1	5.630	D	0.01	21	0.162	0.009
					TOTAL	**0.009**

Return Frequency = **10 years**

POST-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**$T_{c\ (Final)}$ (min)**	**$I_{24\ hr}$ (In/hr)**	**Q (cfs)**
1	2.380	D	0.648	9.50	0.162	0.250
2	3.250	D	0.648	8.50	0.162	0.341
					TOTAL	**0.591**

Return Frequency = **25 years**

PRE-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**T_c (min)**	**$I_{24\ hr}$ (In/hr)**	**Q (cfs)**
A	5.630	D	0.01	21	0.201	0.011
					TOTAL	**0.011**

Return Frequency = **25 years**

POST-DEVELOPMENT						
Drainage Area	**A (acres)**	**Soils Group**	**Coefficient C**	**$T_{c\ (Final)}$ (min)**	**$I_{24\ hr}$ (In/hr)**	**Q (cfs)**
1	2.380	D	0.648	9.50	0.2001	0.309
2	3.250	D	0.648	8.50	0.2001	0.421
					TOTAL	**0.730**

HYDROLOGY CALCULATIONS

Plump Engineering, Inc.
914 E. Katella Avenue
Anaheim, CA 92805
By: NA

Runoff Volume Calculations

$$V = \frac{Y * A * P_{24}}{12}$$

Where :

V= Volume in acre-ft.

Y = 24-hour storm runnoff yield factor for subarea A

$$= \frac{(P_{24} - I_a)^2}{(P_{24} - I_a + S)P_{24}}$$ *Formula C.3*

P_{24} = 24-hour storm rainfall from NOAA Precipitation Frequency Server

I_a = initial abstraction

= 0.2S *Formula C.1*

$$S = \frac{1000}{CN} - 10$$ *Formula C.2*

A= Drainage area in acres

Return Frequency = **2 Years**

PRE-DEVELOPMENT									
Drainage Area	**A (acres)**	**Soils Group**	**CN AMC II**	**CN AMC I**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	5.630	D	75	57	7.54	1.51	2.35	0.04	0.040
								TOTAL	**0.040**

Return Frequency = **2 Years**

POST-DEVELOPMENT									
Drainage Area	**A (Acres)**	**Soils Group**	**CN AMC II**	**CN AMC I**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	2.380	D	90	78	2.82	0.56	2.35	0.29	0.137
2	3.250	D	90	78	2.82	0.56	2.35	0.29	0.188
								TOTAL	**0.325**

HYDROLOGY CALCULATIONS

Plump Engineering, Inc.
914 E. Katella Avenue
Anaheim, CA 92805
By: NA

Return Frequency = **10 Years**

PRE-DEVELOPMENT									
Drainage Area	**A (acres)**	**Soils Group**	**CN AMC II**	**CN AMC III**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	5.630	D	75	88	1.36	0.27	3.88	0.67	1.23
								TOTAL	**1.228**

Return Frequency = **10 Years**

POST-DEVELOPMENT									
Drainage Area	**A (acres)**	**Soils Group**	**CN AMC II**	**CN AMC III**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	2.380	D	90	96	0.42	0.08	3.88	0.88	0.68
2	3.250	D	90	96	0.42	0.08	3.88	0.88	0.93
								TOTAL	**1.605**

Return Frequency = **100 Years**

PRE-DEVELOPMENT									
Drainage Area	**A (acres)**	**Soils Group**	**CN AMC II**	**CN AMC III**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	5.630	D	75	88	1.36	0.27	6.25	0.78	2.28
								TOTAL	**2.283**

Return Frequency = **100 Years**

POST-DEVELOPMENT									
Drainage Area	**A (acres)**	**Soils Group**	**CN AMC II**	**CN AMC III**	**S**	**I_a**	**P_{24}**	**Y**	**V (Ac-ft)**
1	2.380	D	90	96	0.42	0.08	6.25	0.92	1.15
2	3.250	D	90	96	0.42	0.08	6.25	0.92	1.56
								TOTAL	**2.710**