

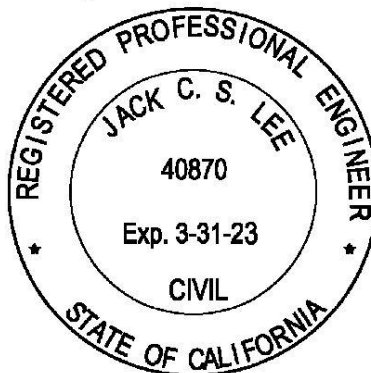
PRELIMINARY HYDROLOGY STUDY & DRAINAGE ANALYSIS

for

**11640-11730 VALLEY BLVD.,
EL MONTE, CA 91732**

Prepared for:

**NEW SWS SOUTHLAND REAL ESTATE LLC
CONTACT: AGNES SO
11730 VALLEY BLVD.,
EL MONTE, CA 91732**



Preparation Date

July 29, 2021

Introduction

The project site is located at the south side of Valley Blvd., City of El Monte, County of Los Angeles, State of California.

The project has an existing drainage pattern going north west direction toward the street and existing catch basin. Existing street drainage flow drains to west direction from east and south direction from North. There are existing retaining wall on the west and south side of the property and because of the retaining wall, there are no off-site drainage anticipated. The proposed development will follow the existing drainage pattern. Most of the storm water of will go through a proposed catch basin and then thru the curb or parkway drain before it goes to the street.

Existing Condition

The project site is approximately 122,137.38 ft² (2.804 acres) and 121,472.38 ft² (2.788 acres) after dedication with impervious area of 97%, Soil Type no. 6 and 50-yr Rainfall Depth of 6.25 inch. Existing Office Building, Carports and parking lot is located on site.

Proposed Condition

The project site is approximately 121,472.38 ft² (2.788 acres) after dedication. The proposed project is to consolidate the 6 existing lots into two proposed lots and proposed Apartment on Area 4 and Condominium on Area 3. All of the storm water will go through the Proposed Bio-filtration System before it goes to the street.

The methodology use in the calculation is based on the County of Los Angeles Department of Public Works Hydrology and Hydraulics Manual and the HydroCalc program developed by LADPW. A 50-year design storm event was used for this Onsite Hydrology Report. (See Summary below)

	EXISTING		PROPOSED	
Total lot (After Dedication)	A1 (Valley Blvd)	A2 (La Madera Ave)	A3 (Valley Blvd)	A4 (La Madera Ave)
	112,158.93 ft ² (2.574 acres)	9,313.45 ft ² (0.214 acres)	80,108.31 ft ² (1.839 acres)	41,364.07 ft ² (0.949 acres)
Pervious	0.085 acre	0.006 acre	0.299 acre	0.063 acre
Impervious	2.489 acres	0.208 acre	1.54 acres	0.886 acre
Q (cfs)	6.53 cfs	0.72 cfs	4.88 cfs	3.18 cfs

Conclusion

Valley Blvd.

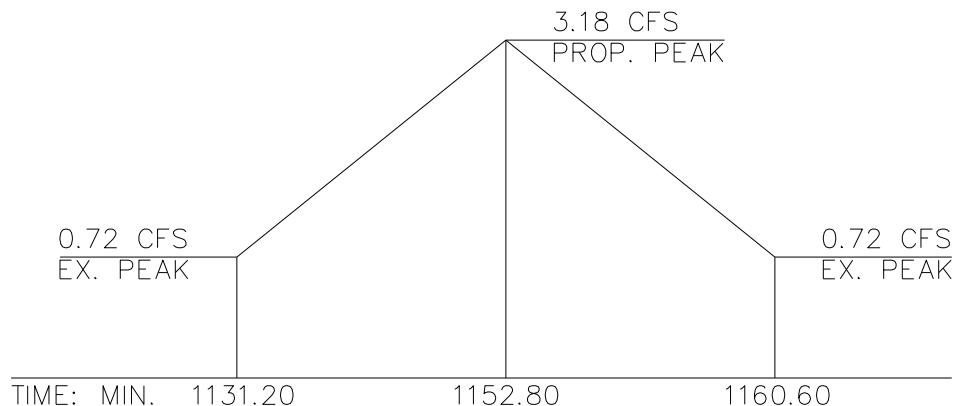
The existing flow (Q1=6.53 cfs) is greater than the proposed (Q3=4.88 cfs), after being subdivided. No other mitigation needed.

La Madera Blvd.

The proposed flow (Q4=3.18 cfs) and is greater than the existing condition (Q2=0.72 cfs). The difference of proposed and existing flow will be stored on site (please see flow reduction volume and storage tank calculation below).

Sump pump will be design to equivalent of existing condition to mimic the existing flow that is leaving the project site on La Madera Avenue.

Flow Reduction Volume



$$V \text{ Total} = (3.18 - 0.72) \times 29.4 \times 60 / 2 = 2,169.72 \text{ CF}$$

$$\text{Proposed Storage Tank} = 12 \text{ ft.} \times 50 \text{ ft.} \times 4 \text{ ft.} = \mathbf{2,400 \text{ CF} > 2,169.72 \text{ CF}}$$

LID

Valley Blvd.

Proposed storm water drains to proposed V-Gutter and area drain and then to the Bio-Filtration System. Storm water will be pump to proposed catch basin, before it drains to street. (Please see LID page 13 for calculation).

La Madera Blvd.

Proposed storm water drains to proposed V-Gutter and area drain and then to the Bio-Filtration System. Storm water will go through the sump pump and then to Storage Tank. Storm water will be pump to proposed catch basin, before it drains to street. (Please see LID page 13 for calculation).

Peak Flow Hydrologic Analysis

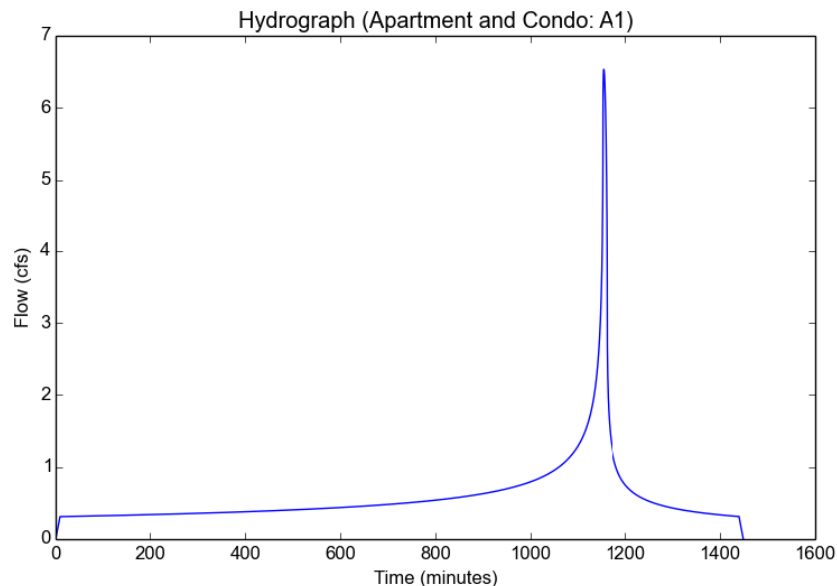
File location: C:/Users/peter/Desktop/Apartment and Condo - A1.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Apartment and Condo
Subarea ID	A1
Area (ac)	2.574
Flow Path Length (ft)	556.0
Flow Path Slope (vft/hft)	0.0032
50-yr Rainfall Depth (in)	6.25
Percent Impervious	0.97
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.25
Peak Intensity (in/hr)	2.8288
Undeveloped Runoff Coefficient (Cu)	0.8103
Developed Runoff Coefficient (Cd)	0.8973
Time of Concentration (min)	9.0
Clear Peak Flow Rate (cfs)	6.5336
Burned Peak Flow Rate (cfs)	6.5336
24-Hr Clear Runoff Volume (ac-ft)	1.1695
24-Hr Clear Runoff Volume (cu-ft)	50944.0818



Peak Flow Hydrologic Analysis

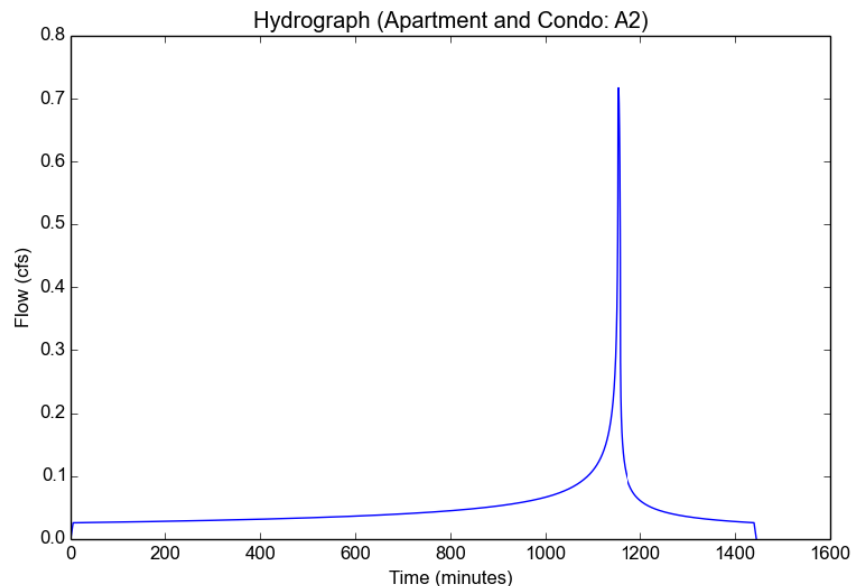
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	Apartment and Condo
Subarea ID	A2
Area (ac)	0.214
Flow Path Length (ft)	142.0
Flow Path Slope (vft/hft)	0.0074
50-yr Rainfall Depth (in)	6.25
Percent Impervious	0.97
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.25
Peak Intensity (in/hr)	3.7289
Undeveloped Runoff Coefficient (Cu)	0.8661
Developed Runoff Coefficient (Cd)	0.899
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.7174
Burned Peak Flow Rate (cfs)	0.7174
24-Hr Clear Runoff Volume (ac-ft)	0.0972
24-Hr Clear Runoff Volume (cu-ft)	4235.5971



Peak Flow Hydrologic Analysis

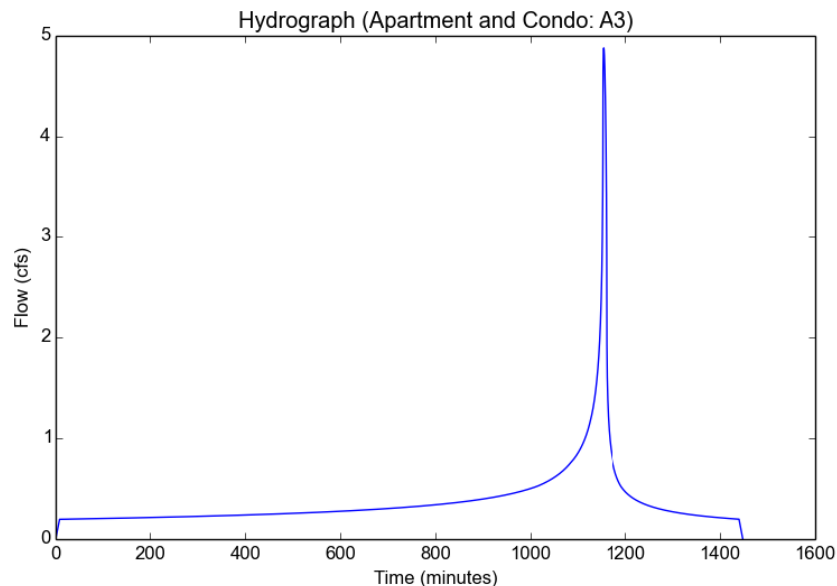
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	Apartment and Condo
Subarea ID	A3
Area (ac)	1.839
Flow Path Length (ft)	570.0
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	6.25
Percent Impervious	0.84
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.25
Peak Intensity (in/hr)	2.9898
Undeveloped Runoff Coefficient (Cu)	0.8216
Developed Runoff Coefficient (Cd)	0.8875
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	4.8795
Burned Peak Flow Rate (cfs)	4.8795
24-Hr Clear Runoff Volume (ac-ft)	0.7518
24-Hr Clear Runoff Volume (cu-ft)	32746.9945



Peak Flow Hydrologic Analysis

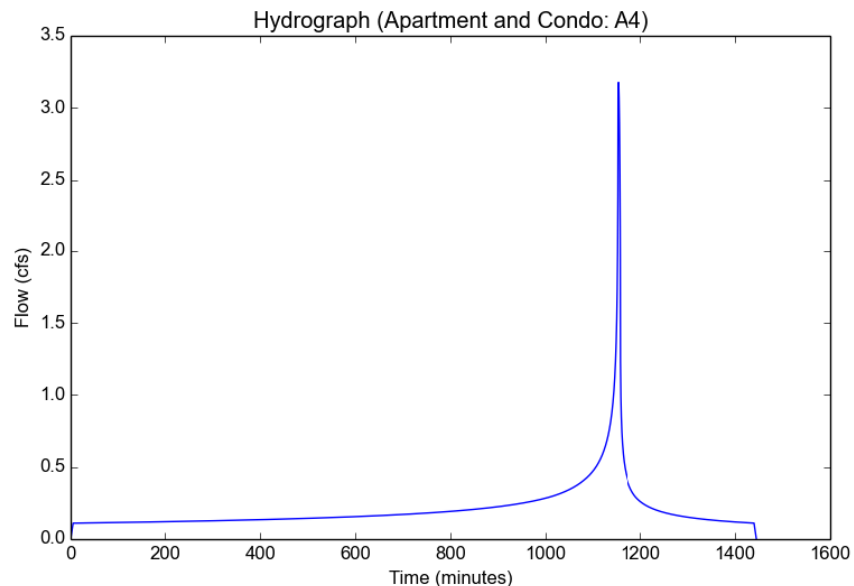
File location: C:/Users/peter/Desktop/Apartment and Condo - A4.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Apartment and Condo
Subarea ID	A4
Area (ac)	0.949
Flow Path Length (ft)	279.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.25
Percent Impervious	0.93
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.25
Peak Intensity (in/hr)	3.7289
Undeveloped Runoff Coefficient (Cu)	0.8661
Developed Runoff Coefficient (Cd)	0.8976
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.1765
Burned Peak Flow Rate (cfs)	3.1765
24-Hr Clear Runoff Volume (ac-ft)	0.4179
24-Hr Clear Runoff Volume (cu-ft)	18204.2059



EXISTING HYDROLOGY MAP

EXISTING HYDROLOGY MAP

Scale: 1 inch = 70 ft.

North Arrow

Area A1: 2.574

Area A2: 0.214

Key Features:

- Valley Blvd.
- LA Madera Ave.
- Various buildings and structures with elevations and dimensions.
- Drainage patterns and flow directions indicated by arrows.
- Topographic contours and spot elevations.

(IN FEET)
1 inch = 70 ft.

A2
0.214

A1
2.574

$$-1 = 556'$$
$$11 = 142$$

PN 8568-021-007
1527 FENNELL ST.
MONTE, CA. 91732

APN 8566-021-006
11533 FENNEL ST.
EL MONTE, CA. 91732

APN 8566-021-005
11539 FENNELL ST.
EL MONTE, CA 91732

APN 8566-021-004
11543 FENNEL ST.
EL MONTE CA 91732

APN 8566-021-003
11549 FENNEL ST.
EL MONTE, CA 91732

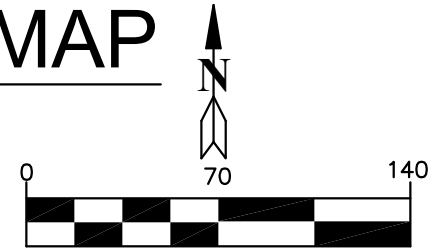
N 81°00'
APN 8566-021-002
11555 FENNELL ST.
EL MONTE, CA 91734

330.00 (N81°00'15"W 330.
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11559 FENNELL ST.

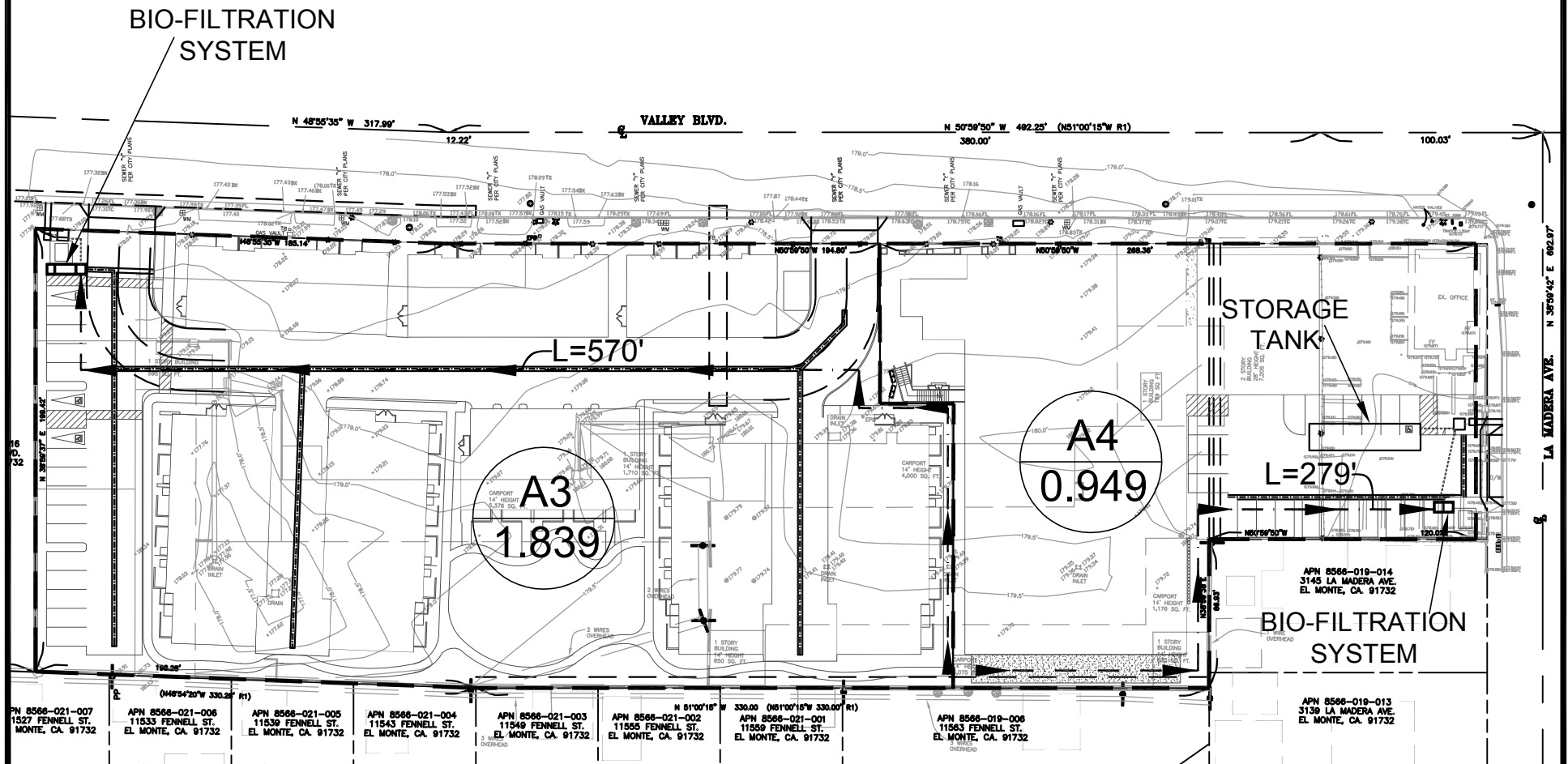
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11563 FENNEL ST.

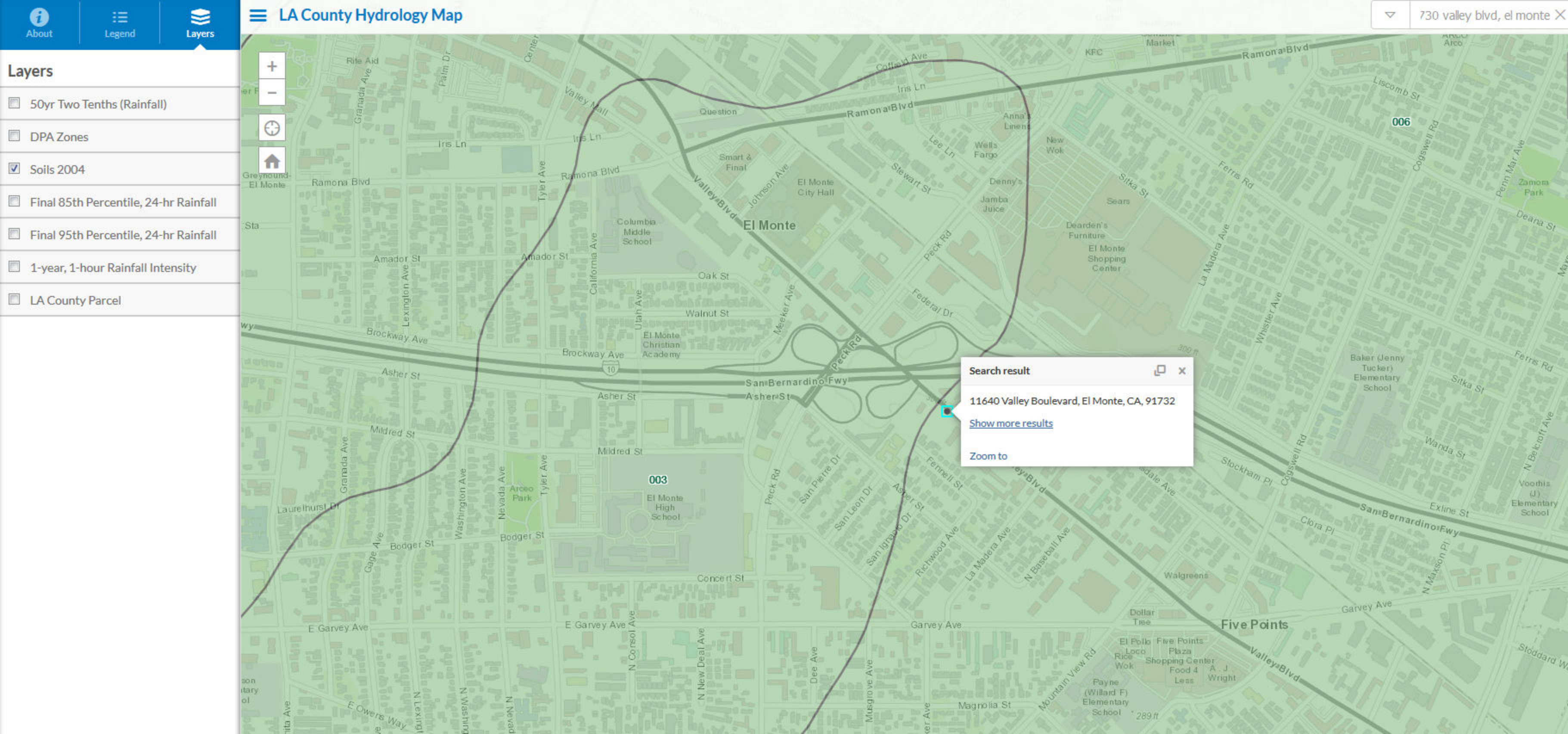
APN 8566-019-013
3139 LA MADERA AVE.
EL MONTE, CA. 91732

PROPOSED HYDROLOGY MAP



(IN FEET)
1 inch = 70 ft.





About

Legend

Layers

LA County Hydrology Map

730 valley blvd, el monte X

Layers

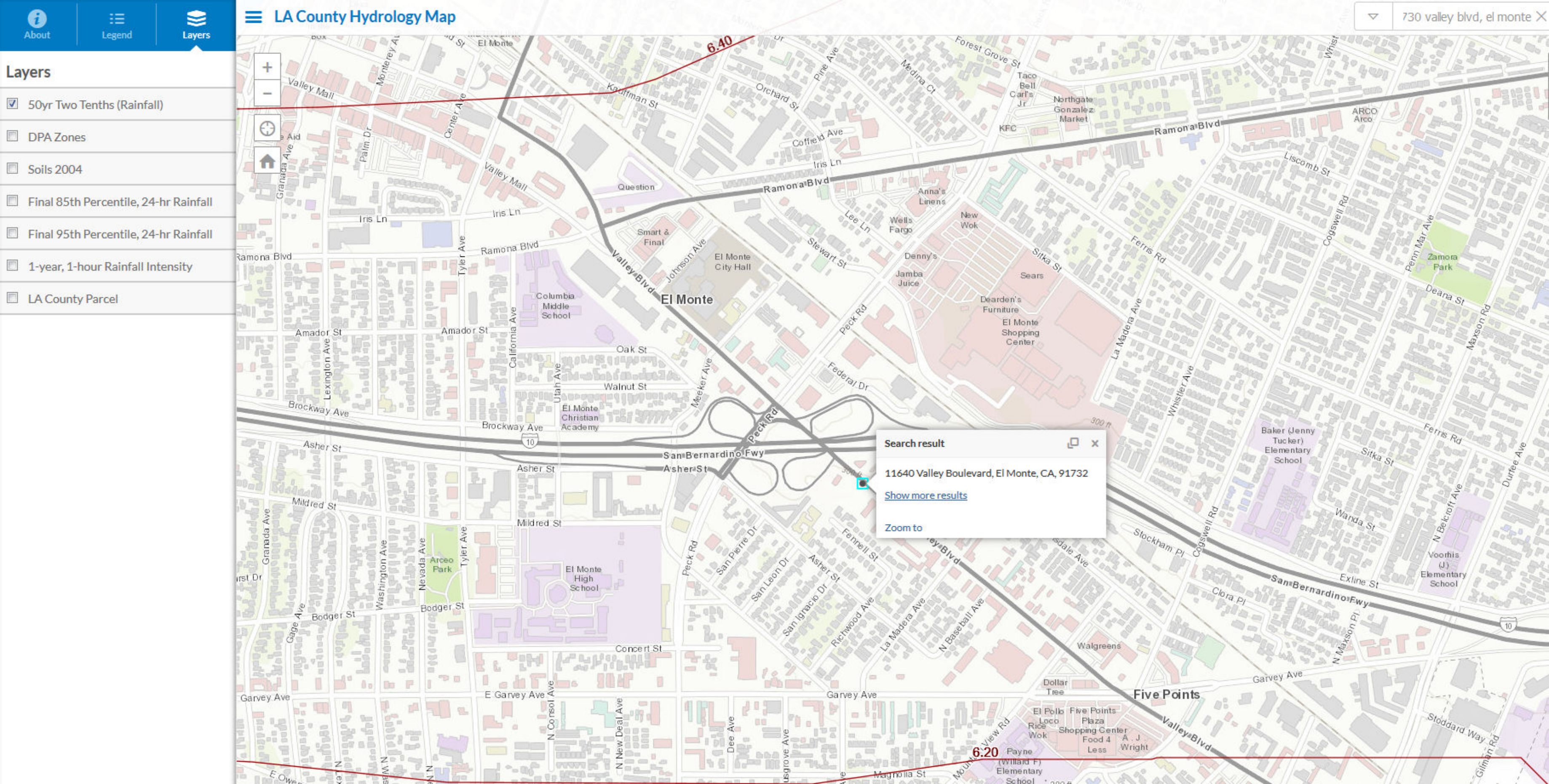
- ☐ 50yr Two Tenths (Rainfall)
- ☐ DPA Zones
- ☒ Soils 2004
- ☐ Final 85th Percentile, 24-hr Rainfall
- ☐ Final 95th Percentile, 24-hr Rainfall
- ☐ 1-year, 1-hour Rainfall Intensity
- ☐ LA County Parcel

Search result

11640 Valley Boulevard, El Monte, CA, 91732

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About



Legend



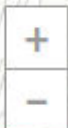
Layers

LA County Hydrology Map

730 valley blvd, el monte X

Layers

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