APPENDIX A
Preliminary Hydrology Analysis

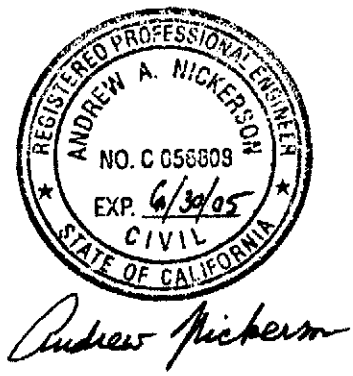
PSOMAS

Information and Engineering Solutions

PRELIMINARY HYDROLOGY ANALYSIS

2nd REVISED VTTM 53072

January 12, 2005



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BACKGROUND

VTTM 53072, 2nd revised, is a proposed 33 lot residential development in the Santa Monica Mountains adjacent to the existing Mountaingate residential community. The 33 lots consist of 29 hillside residential lots and 4 open space lots. Minimum residential lot size is proposed to be 17,800± square feet, and the minimum building pad area is proposed to be 10,900± square feet.

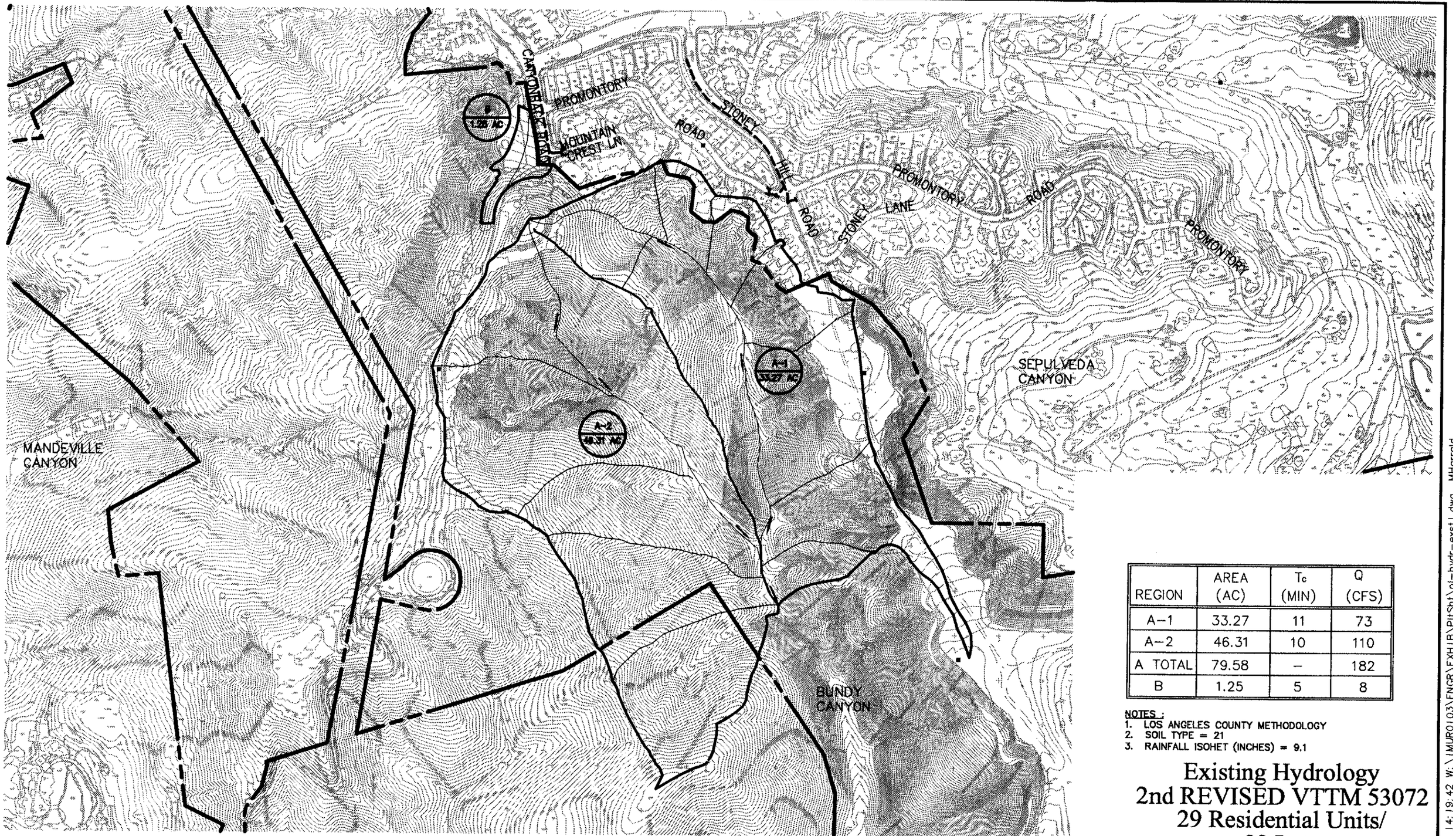
The analysis was done using the most recent County of Los Angeles hydrology method, using a 50-year storm recurrence interval. The area studied consisted of the tributary area upstream of the proposed detention basin and the development of lot number 29. The storm drain system will consist of a single system in each private street (Canyonback Road and Stoney Hill Road) which will gather runoff from the developed areas and convey it to the canyon bottom via storm drain pipes. At the terminus of each of these lines, the pipes will be fitted with an energy dissipater to reduce the velocities to a non-erosive state. Downstream of the dissipaters a detention basin will be constructed to offset the increased storm flows due to the proposed development.

9.7 acres of area will be added to the Bundy Canyon watershed due to the development. This area is comprised of the building pads fronting the proposed extensions of Canyonback and Stoney Hill Roads. 3.5 acres of the 9.7 acres will come from the adjacent watershed of Mandeville Canyon and 6.2 acres of the 9.7 acres will come from the watershed of Sepulveda Canyon via the Mission Canyon & Landfill. The addition of the 9.7 acres to the Bundy Canyon watershed is considered insignificant since it represents an increase of less than 4% to the 300+ acre Bundy Canyon watershed upstream of development.

SUMMARY OF FINDINGS

Peak pre-development Q_{50} = 182 cfs.
Peak post-development Q_{50} = 226 cfs.
Increase in peak Q_{50} = 44 cfs.
Required detention volume to offset increase in peak Q_{50} = 0.313 acre-foot.
Pre-development potential debris production = 8,256 CY.
Post-development potential debris production = 7,234 CY.
Decrease in debris production = 1,022 CY.

EXISTING CONDITION



REGION	AREA (AC)	Tc (MIN)	Q (CFS)
A–1	33.27	11	73
A–2	46.31	10	110
A TOTAL	79.58	–	182
B	1.25	5	8

NOTES :
1. LOS ANGELES COUNTY METHODOLOGY
2. SOIL TYPE = 21
3. RAINFALL ISOHET (INCHES) = 9.1

Existing Hydrology
2nd REVISED VTTM 53072
29 Residential Units/ 32 Lots

PSOMAS

DATE: 01–10–2000 REVISED ON: 12–16–04
JOB No:1MUR0103

SHEET 1 OF 2

Mountaingate

400' 200' 0' 400'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

LEGEND

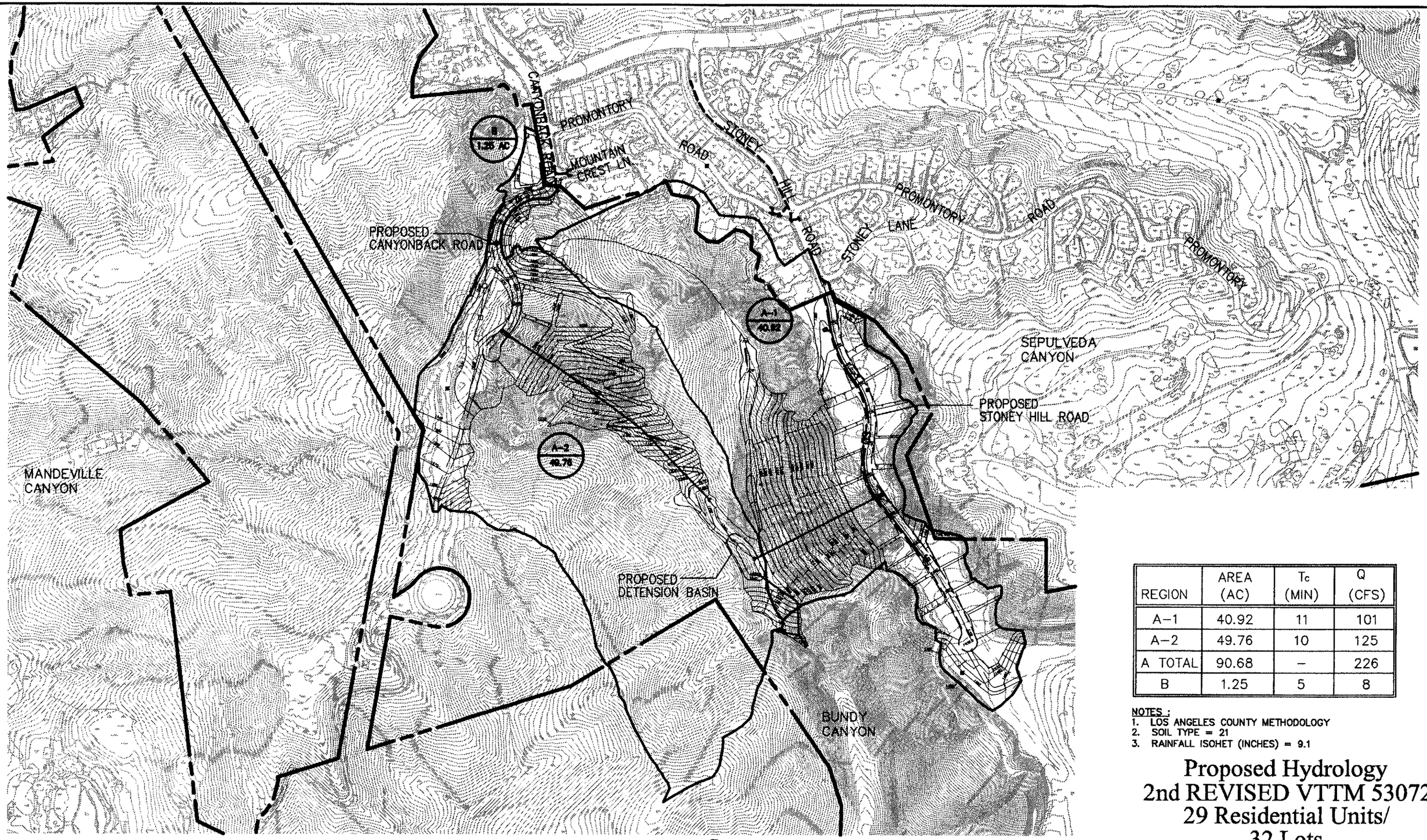
SUB–AREA I.D. NO.

WATERSHED AREA

A
5.00 AC
SUB–AREA #
AREA SIZE

Plotted: 12/16/04 14:19:42 W:\1MUR0103\FNGR\EXHIBIT\PltSht\pl-hydr-exst1.dwg MHarrold

PROPOSED CONDITION



REGION	AREA (AC)	Tc (MIN)	Q (CFS)
A–1	40.92	11	101
A–2	49.76	10	125
A TOTAL	90.68	–	226
B	1.25	5	8

NOTES :
1. LOS ANGELES COUNTY METHODOLOGY
2. SOIL TYPE = 21
3. RAINFALL ISOHET (INCHES) = 9.1

Proposed Hydrology
2nd REVISED VTTM 53072
29 Residential Units/ 32 Lots

PSOMAS

DATE: 01–10–2000 REVISED ON: 12–16–04
JOB No: 1MUR0103

SHEET 2 OF 2

Mountaingate

400' 200' 0' 400'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

LEGEND

SUB–AREA I.D. NO.

A
5.00 AC

SUB–AREA #

AREA SIZE

WATERSHED AREA

DEBRIS PRODUCTION

DEBRIS PRODUCTION

The debris volume tributary to the existing Bundy Canyon debris basin will decrease by approximately 20% with the implementation of new debris catchment area(s) as a result of the development. The site is located in L.A. County debris production zone DPA 4. The entire watershed above the detention basins in the existing condition is 79.6 acres, of which 1.9 acres is residential development which will not produce any debris.

After development the watershed will be 90.7 acres, of which 26.4 acres will be non-debris producing residential development.

The debris production rate for this existing watershed is 68,000 CY per square mile.

The debris production rate for this proposed watershed is 72,000 CY per square mile.

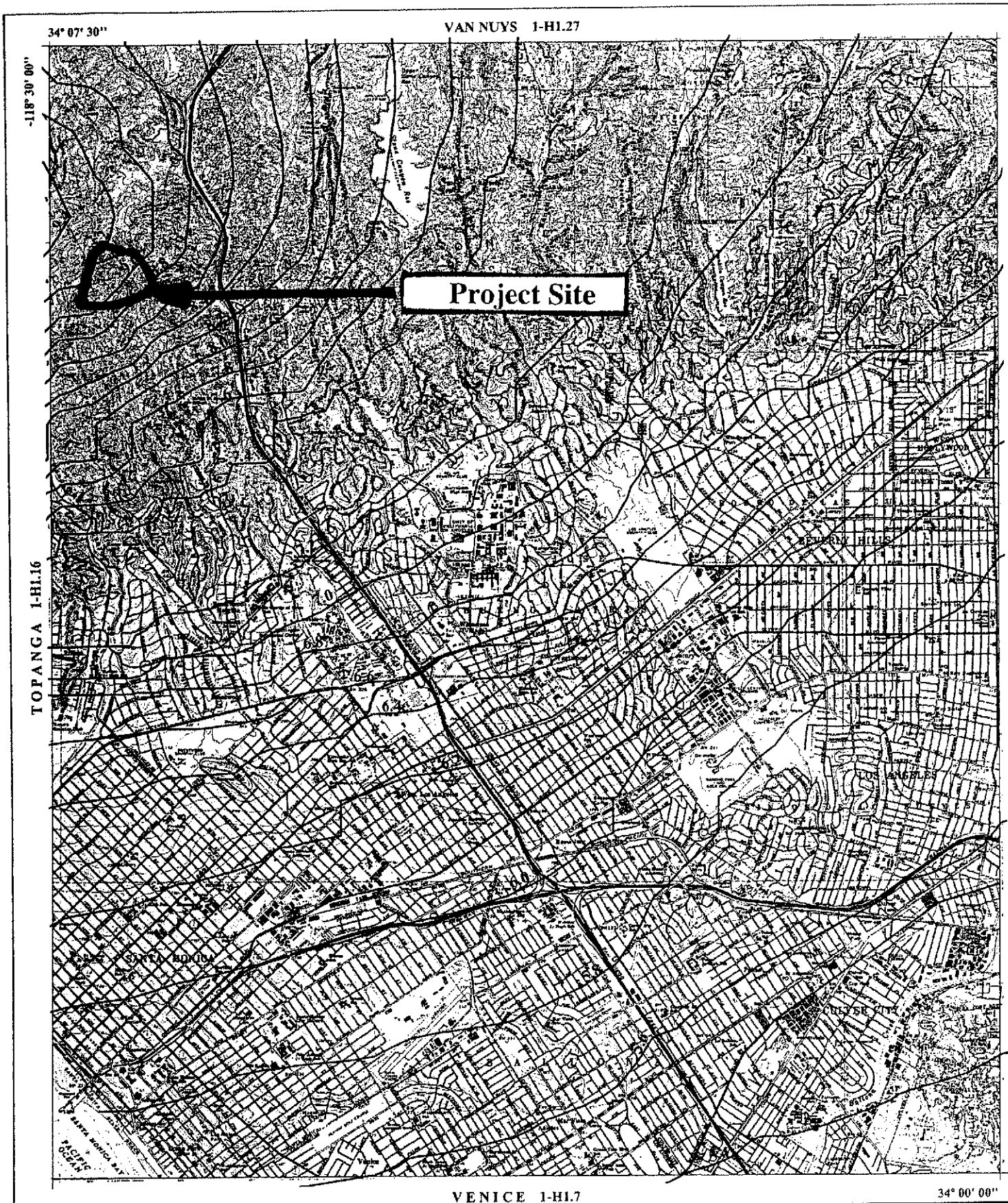
Under the existing condition the watershed has a potential debris production of:

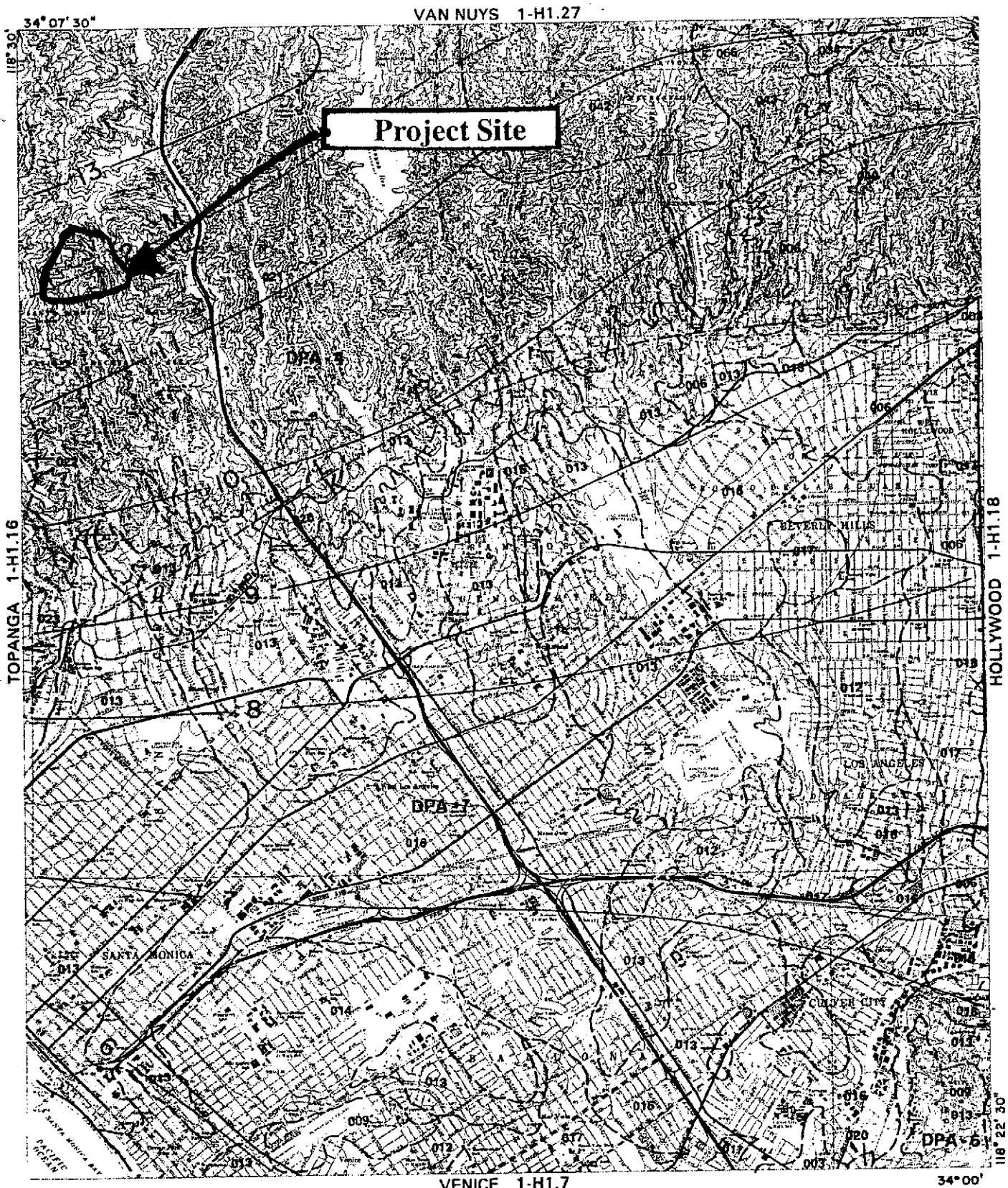
$[(79.6 - 1.9) / 640] \times 68{,}000 = 8{,}256$ CY

After development, the watershed will have a potential debris production of:

$[(90.7 - 1.9 - 24.5) / 640] \times 72{,}000 = 7{,}234$ CY

REFERENCES


34° 07' 30"
VAN NUYS 1-H1.27
-118° 30' 00"
Project Site
TOPANGA 1-H1.16
HOLLYWOOD 1-H1.18
-118° 22' 30"
VENICE 1-H1.7
34° 00' 00"
1 0 1 2 Miles
N
W E
S
7.2
INCHES OF RAINFALL
25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714
BEVERLY HILLS
50-YEAR 24-HOUR ISOHYET
1-H1.17
LOS ANGELES COUNTY
PUBLIC WORKS
Public Service That Works



LEGEND

——— SOIL CLASSIFICATION AREA

..... DEBRIS POTENTIAL AREA

-·-·-·- RAINFALL ZONE

—12— 50-YEAR ISOHYET (MAX. 24-HOUR AMOUNT)

L A C D P W

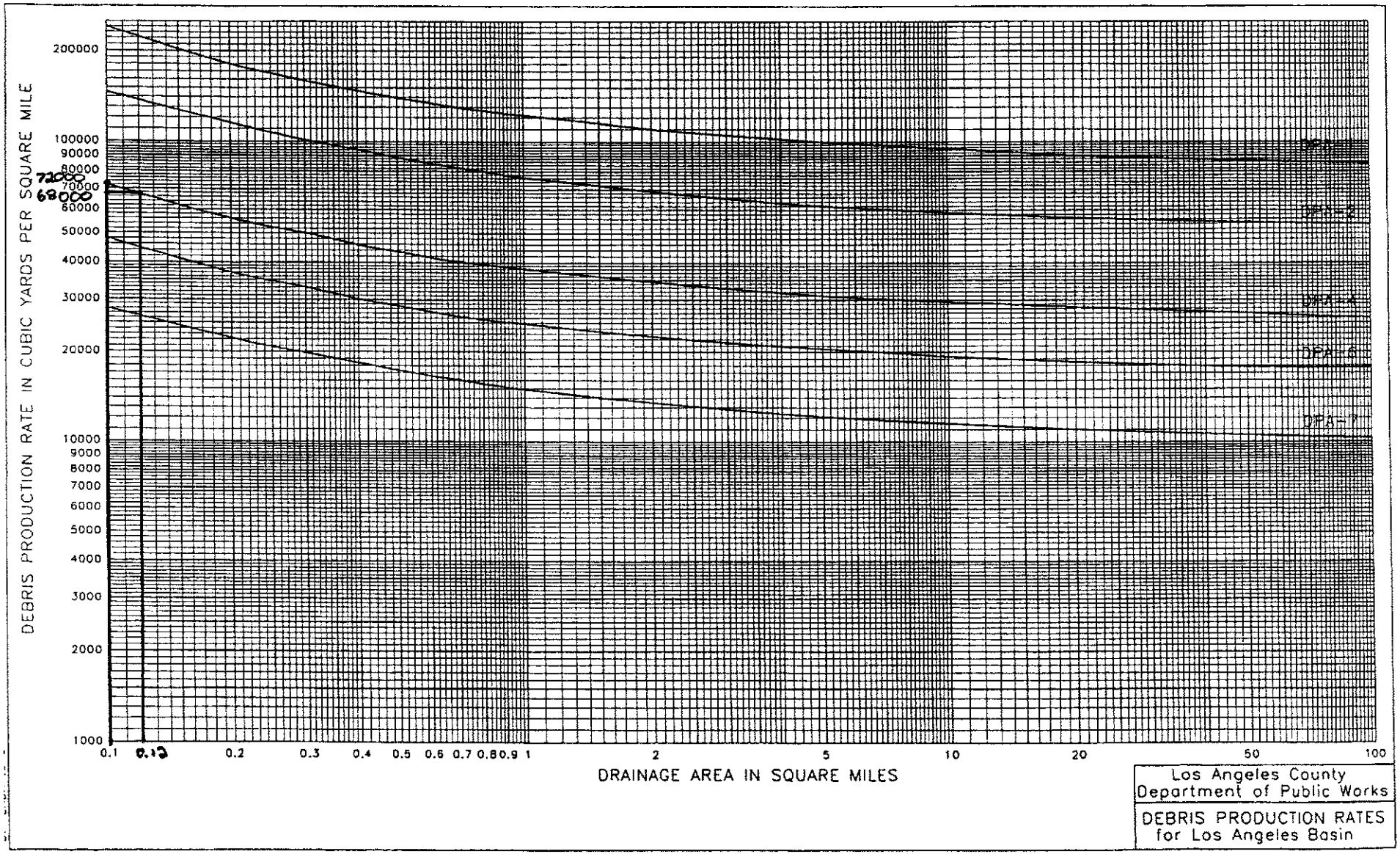
N

0 FEET 30000

BEVERLY HILLS **1981**

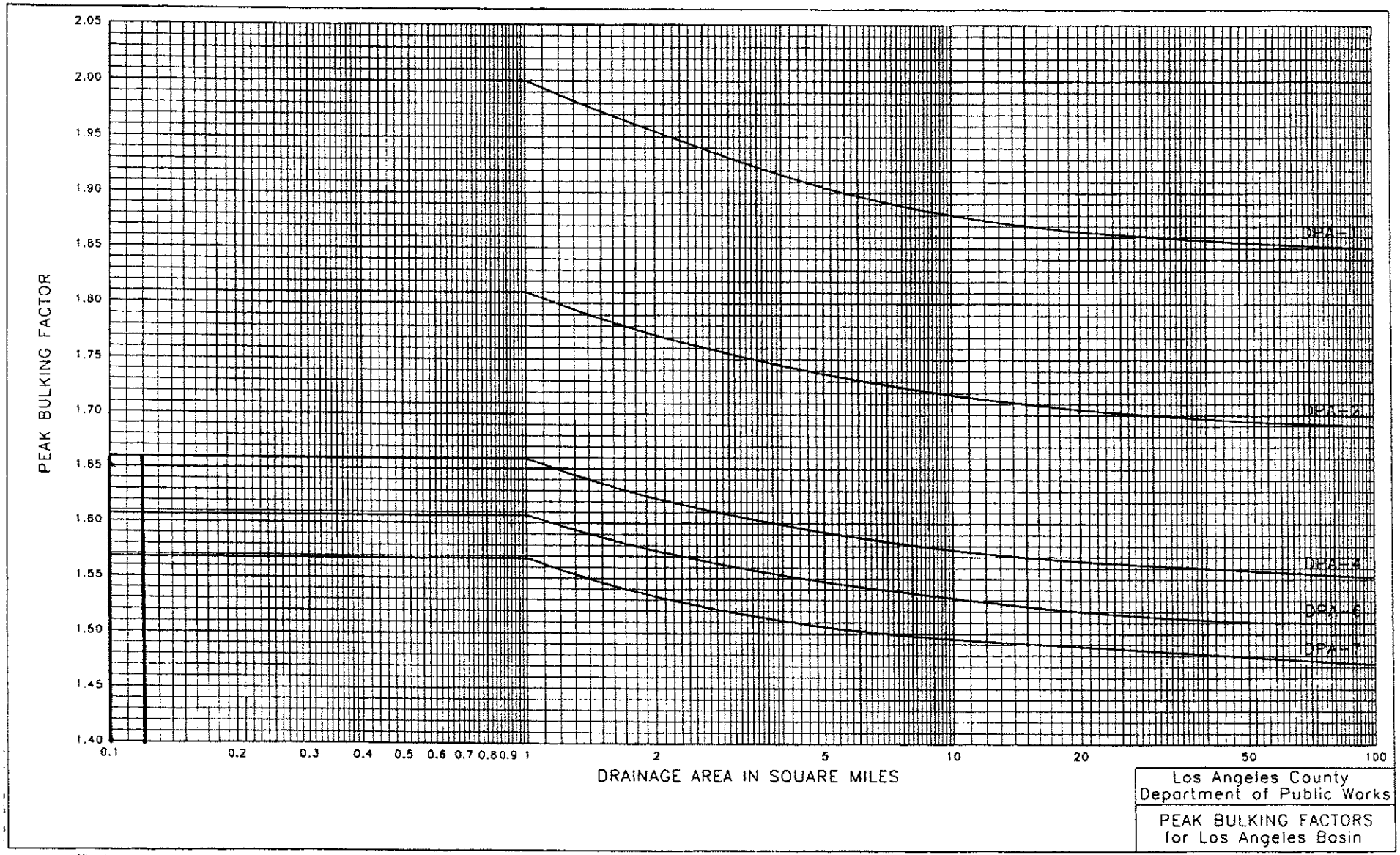
hydrologic map

1-H1-17



Los Angeles County
Department of Public Works

DEBRIS PRODUCTION RATES
for Los Angeles Basin



Los Angeles County
Department of Public Works

PEAK BULKING FACTORS
for Los Angeles Basin