



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 31, 2000

David Thompson, P.E.
Thompson Engineering Consultants, Inc.
2060 Main Street, NE Suite E
Los Lunas, NM 87031

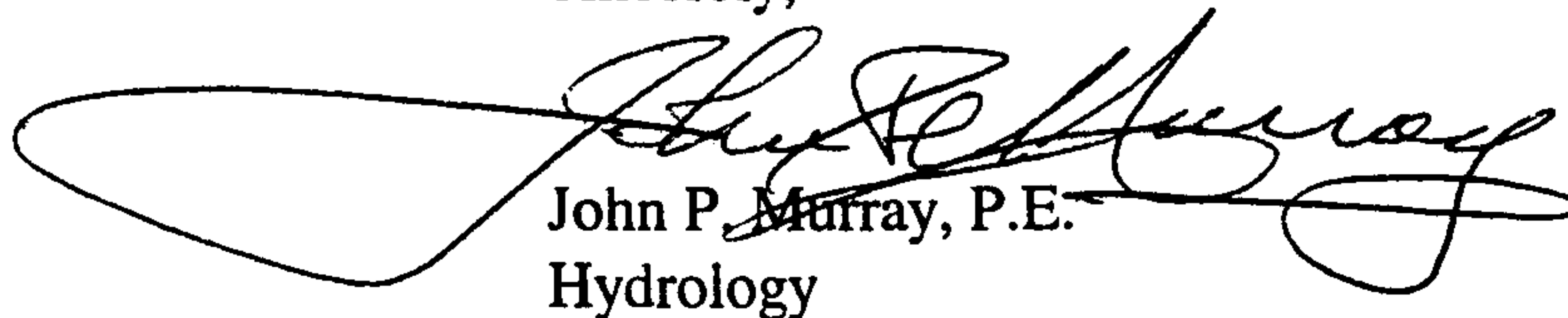
***RE: McDONALD'S RESTAURANT, FOURTH & HENDRIX NW (F14- D39).
ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
APPROVAL. ENGINEER'S STAMP DATED MARCH 22, 2000.***

Dear Mr. Thompson:

Based on the information provided on your March 22, 2000 submittal, the above referenced plan is approved for Certificate of Occupancy..

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,


John P. Murray, P.E.
Hydrology

c: Whitney Reiersen
✓ File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 20, 1999

Mr. Dave Thompson
Thompson Engineering Consultants Inc.
2060 Main St. NE, Suite E
Los Lunas, NM 87031

RE: MCDONALDS @ 4TH & HENDRIX (F14/D039) DRAINAGE & GRADING
SUBMITTAL FOR PRELIM. PLAT, GRADING/PAVING AND BUILDING PERMIT
APPROVAL. ENGINEER'S STAMP DATED 8-9-99

Dear Mr. Thompson:

Based upon the information provided in your 8-10-99 submittal, the referenced project is approved for Preliminary Plat, Grading/Paving Permit and Building Permit.

Please attach a copy of this approval letter to the construction drawings when submitting for Hydrology Division sign off. Separate permitting may be required for any work to be done within City right-of-way.

If I can be of further assistance, feel free to contact me at 768-2766.

Sincerely,

Scott Davis

PWD, Hydrology Division

c: file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 15, 1995

Kim R. Kemper
Kemper-Vaughan Consulting Engineers
3700 Coors Road NW
Albuquerque, NM 87120

**RE: FOURTH STREET MCDONALDS (F14-D39) DRAINAGE AND GRADING PLAN
SUBMITTAL FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP
DATED 9-8-95.**


Dear Mr. Kemper:

Based on the information provided on your on your September 8, 1995 submittal, the above referenced project is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification for the approved plans must be completed according to the DPM checklist.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

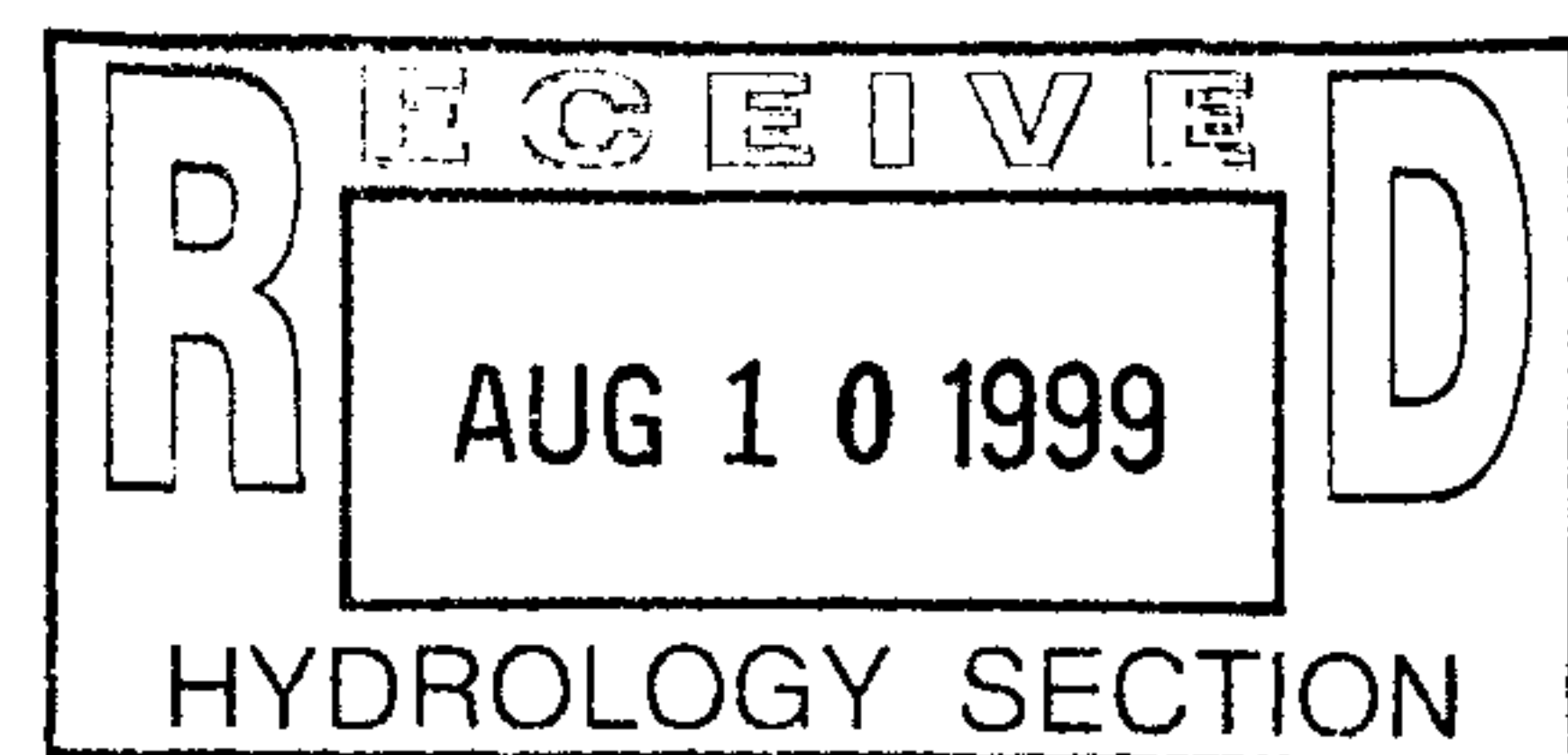


Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

**DRAINAGE REPORT
for
McDONALD'S SITE
at
4th and HENDRIX**

**Prepared for:
McDonald's Corporation
5251 D.T.C. Parkway
Suite 300
Englewood, CO 80111**



**Prepared by:
Thompson Engineering Consultants, Inc.
2060 Main Street N.E.
Suite E
Los Lunas, NM 87031**

August 1999

INTRODUCTION AND SITE LOCATION

A new McDonald's restaurant is proposed to be constructed at the southeast corner of the intersection of 4th Street and Hendrix Street. The 1.08 acre property currently has a McDonald's restaurant. The existing buildings and site improvements will be demolished to allow for the construction of the new facility. Hydrologic calculations for existing and proposed conditions show that there is no increase in peak runoff generated by the site. This report summarizes the results of the drainage analysis for this site.

METHODOLOGY

The hydrologic criteria in Section 22 of the City of Albuquerque Development Process Manual (DPM), entitled "Drainage, Flood Control, and Erosion Control," was followed to perform the analyses given in this report. The design storm used for both the existing undeveloped and fully developed conditions of the McDonald's site is the 100-year, 6-hour storm event (2.35 inches) for peak flow computations.

EXISTING DRAINAGE CONDITIONS

The site is currently developed with a McDonald's restaurant. According to the previously approved Grading and Drainage Plan (F14-D39) by Kemper-Vaughan Consulting Engineers and dated 9-8-95, the majority of flows drain to Hendrix Street with a minor amount of flows draining to 4th Street. According to the Kemper-Vaughan plan the peak discharge from the site under existing conditions is 4.91 cfs.

Table 1 Existing Drainage Conditions

Basin	Area (ac)	Peak Flow (cfs)	Land Treatments			
			A	B	C	D
C	1.08	4.91	0	0.01	0.09	0.98

According to the FEMA Flood Insurance Rate Map Number 35001C0119 D, effective date September 20, 1996, there are no flood hazard zones on or near the site. Please refer to Figure 1 on page 3.

DEVELOPED DRAINAGE CONDITIONS

Plate 2 shows that under developed conditions, the site drains to both 4th Street and Hendrix Street. Basins 100 and 200 drain to 4th Street, while basins 300 and 400 drain to Hendrix Street. Basin 100, which is 0.120 acres in size, drains to 4th Street through a driveway. A total of 0.50 cfs drains to 4th Street. Basin 200, which is 0.236 acres in size,

also drains to 4th Street through a driveway. A total of 1.03 cfs drains to 4th Street from this basin. Basin 300, which is 0.146 acres in size, drains to Hendrix Street through a driveway. A total of 0.63 cfs drains to Hendrix Street. Finally, Basin 400, which is 0.576 acres in size, drains to Hendrix Street through a 2' wide sidewalk culvert at the northeast corner of the site. A total of 2.55 cfs drains to Hendrix Street through the sidewalk culvert. The total runoff under developed conditions is 4.71 cfs. The following table shows the developed land treatments as well as the calculated peak runoff for each basin. Detailed calculations can be found in Appendix A.

Table 2 Developed Drainage Conditions

Basin	Area (ac)	Peak Flow (cfs)	Land Treatments			
			A	B	C	D
100	0.120	0.50	0	0.015	0.015	0.090
200	0.236	1.03	0	0.021	0.020	0.195
300	0.146	0.63	0	0.013	0.013	0.120
400	0.576	2.55	0	0.041	0.040	0.495

CONCLUSIONS

Peak flows generated from the site under developed conditions is less than the peak flows generated from the site under existing conditions. The existing peak flows are 4.91 cfs and the developed peak flows are 4.71 cfs. A total of 1.53 cfs drains to 4th Street and 3.18 cfs drains to Hendrix Street.

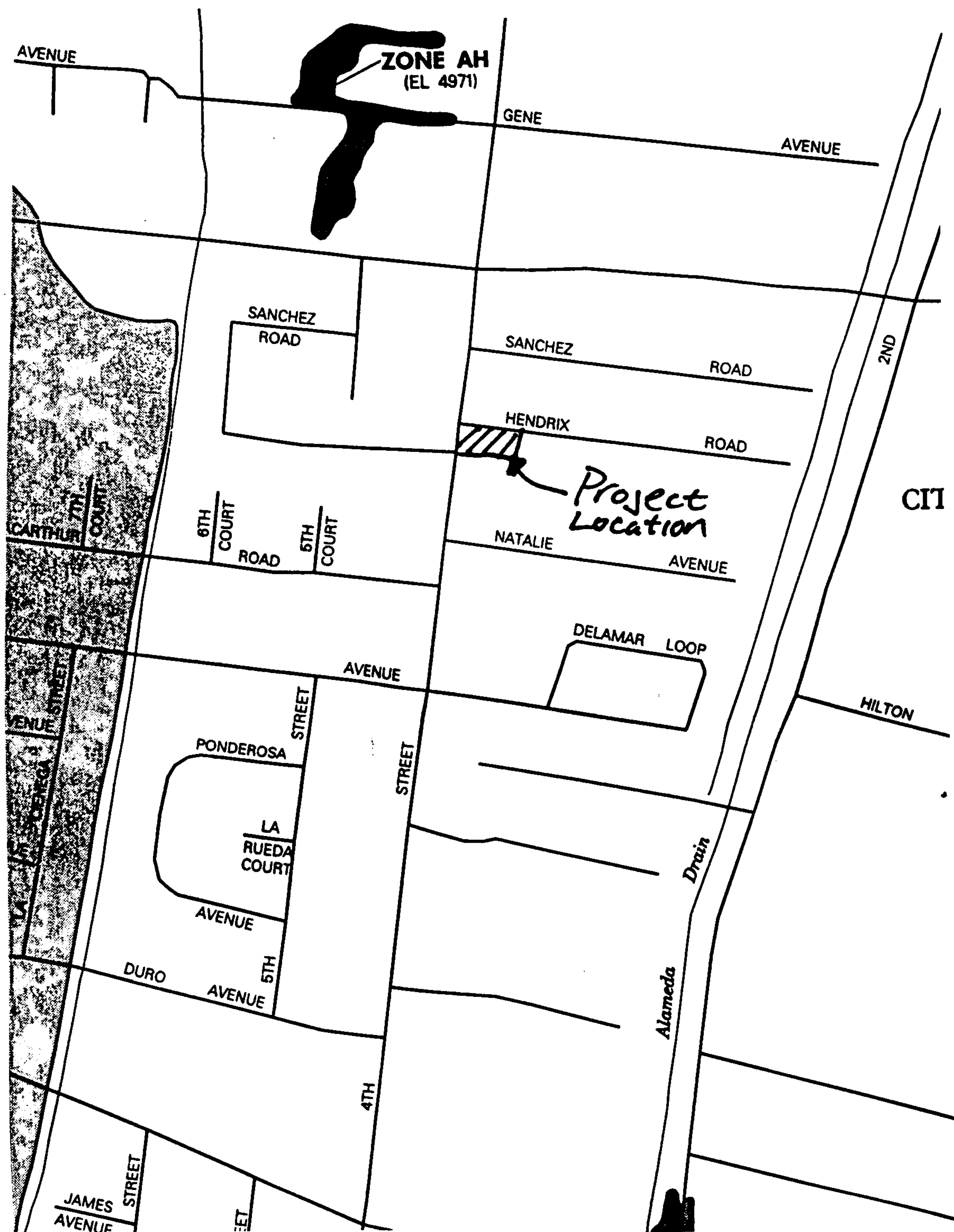


Figure 1 FEMA Floodplain Map

FEMA Flood Insurance Rate Map Number 35001C0119 D,
effective date September 20, 1996

McDONALD'S 4th and Hendrix HYDROLOGIC CALCULATIONS

The following calculations were based on the method found in the City of Albuquerque Development Process Manual Section 22.2, Hydrology. Precipitation zone for the site is Zone 2. The 100-year, 6-hour storm was used to calculate peak runoff for the site.

For Precipitation Zone 2, the 100-year, 6-hour storm is 2.35 inches and the 100-year, 24-hour storm is 2.75 inches.

The site has an area of 1.08 acres.

EXISTING CONDITIONS

Land Treatments for the existing site are:

Basin	Area (ac)	Land Treatments			
		A	B	C	D
A	1.08	0	0.01	0.09	0.98

From Table A-9, Peak Discharge for Zone 2 for a 6-hour storm

Type B – 2.28 cfs/ac

Type C – 3.14 cfs/ac

Type D – 4.70 cfs/ac

6-hour peak runoff calculation for each Basin

Basin A

$$(.01 \times 2.28) + (.09 \times 3.14) + (.98 \times 4.70) = 4.91 \text{ cfs}$$

Total Peak Runoff under existing conditions is 4.91 cfs

DEVELOPED CONDITIONS

Land Treatments for the proposed development are:

Basin	Area (ac)	Land Treatments			
		A	B	C	D
100	0.120	0	0.015	0.015	0.090
200	0.236		0.021	0.020	0.195
300	0.146	0	0.013	0.013	0.120
400	0.576	0	0.041	0.040	0.495

6-hour peak runoff calculation for each Basin

Basin 100

$$(.015 \times 2.28) + (.015 \times 3.14) + (.09 \times 4.70) = 0.50 \text{ cfs}$$

Basin 200

$$(.021 \times 2.28) + (.020 \times 3.14) + (.195 \times 4.70) = 1.03 \text{ cfs}$$

Basin 300

$$(.013 \times 2.28) + (.013 \times 3.14) + (.120 \times 4.70) = 0.63 \text{ cfs}$$

Basin 400

$$(.041 \times 2.28) + (.040 \times 3.14) + (.495 \times 4.70) = 2.55 \text{ cfs}$$

Total Peak Runoff under developed conditions is 4.71 cfs