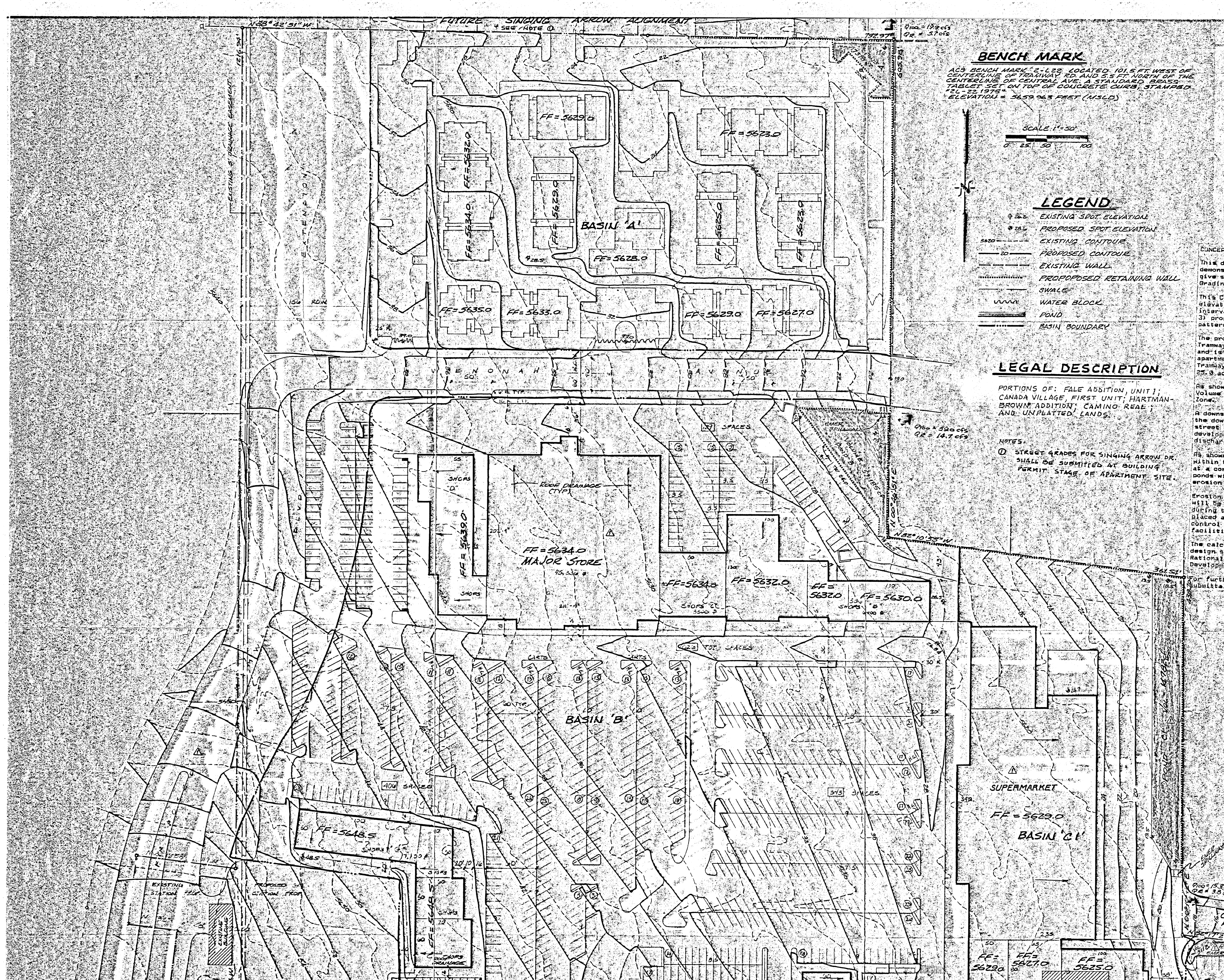


BENCH MARK

ACS BENCH MARK "2-L22" LOCATED 101.5 FT. WEST OF CENTERLINE OF TRAMWAY RD. AND 5.5 FT. NORTH OF THE CENTERLINE OF CENTRAL AVE. A STANDARD BRASS TABLET SET ON TOP OF CONCRETE CURB, STAMPED "2L-22 1975" ELEVATION = 5659.963 FEET (MSLD)

SCALE: 1" = 50'

0 25 50 100

LEGEND

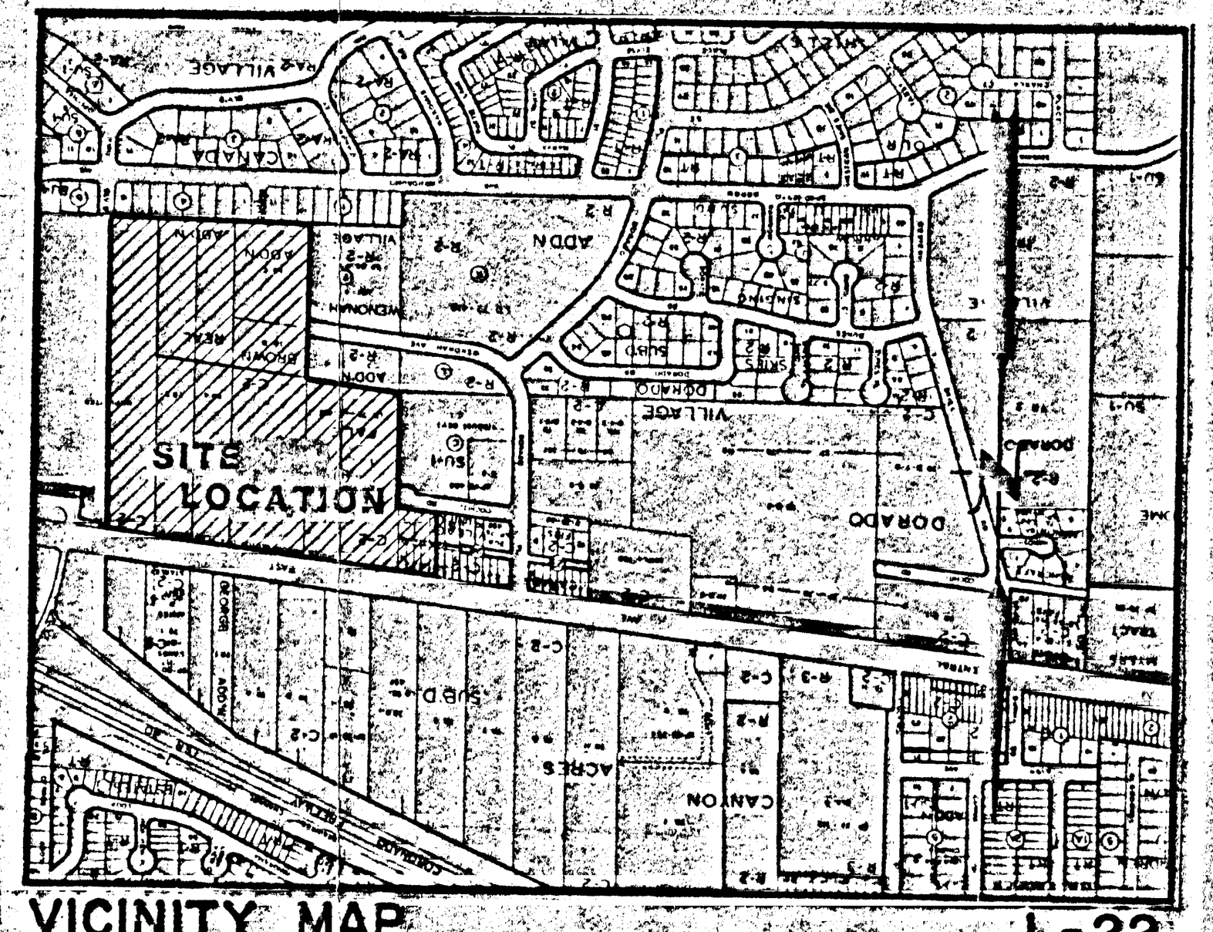
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING WALL
- PROPOPOSED RETAINING WALL
- SWALE
- WATER BLOCK
- POND
- BASIN BOUNDARY

LEGAL DESCRIPTION

PORTIONS OF: FALE ADDITION, UNIT 1; CANADA VILLAGE, FIRST UNIT; HARTMAN-BROWN ADDITION; CAMINO REAL; AND UNPLATTED LANDS.

NOTES.

① STREET GRADES FOR SINGING ARROW DR. SHALL BE SUBMITTED AT BUILDING PERMIT STAGE OF APARTMENT SITE.



VICINITY MAP

SCALE 1" = 800'

L-22

CONCEPTUAL DRAINAGE PLAN

This drainage plan is conceptual in nature and attempts only to demonstrate the proposed drainage scheme. No attempt is made to give specific detail to proposed drainage structures. The final Grading and Drainage Plan will provide necessary detail.

This Conceptual Drainage Plan shows: 1) existing and proposed elevations indicated by contours and spot elevations at 2'-0" intervals; 2) continuity between proposed and existing elevations; 3) proposed buildings, parking areas, landscaped areas, drainage patterns, and ponding areas.

The proposed improvements are located on Central Ave. S.E. at Tramway Blvd. N.E. The site is approximately 29.5 acres in size and is to be developed as a shopping center with an adjoining apartment complex. Public right-of-way will be dedicated for Tramway Blvd. and Wenonah Ave. leaving a net area of approximately 25.0 acres.

As shown by Plate L-22 of the Albuquerque Master Drainage Study, Volume II, this site does not lie within a designated Flood Hazard Zone. No off-site flows enter the site.

A downstream analysis was performed to determine the capacity of the downstream drainage system. It was determined that residential street capacity limited discharge to approximately 1.0 cfs per developed acre within the drainage basin. This projects to a discharge of 25.0 cfs for this development.

As shown by the plan, all storm water will be routed overland within the site to several detention ponds. These ponds will drain at a controlled rate to their respective discharge points. All ponds will be provided with emergency overflow spillways and erosion protection.

Erosion will not result due to this development as all exposed soil will be lanscaped or paved. Temporary erosion control measures during the construction phase will consist of a ditch-dike system placed along the south and west property lines. Temporary erosion control will remain in place until the permanent drainage facilities are completed.

The calculations shown below analyze the 100yr-6hr and 10yr-6hr design storms for the existing and developed conditions. The Rational Method of estimating runoff is utilized as outlined in the Development Process Manual, Volume II, Chapter 22.

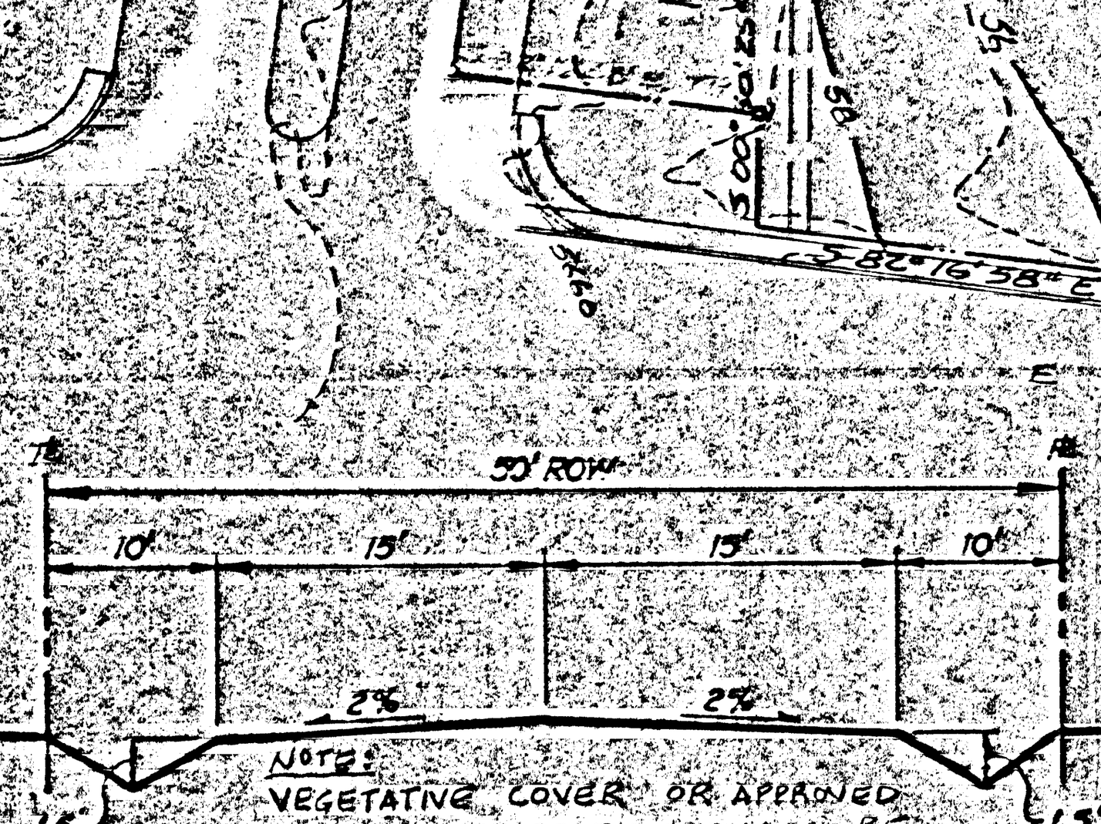
For further information regarding downstream analysis, see separate submittal to City Hydrology.

CALCULATIONS

1. DESIGN CRITERIA
   - P100=2.50 IN. P10=1.64 IN.
   - Tc=0.0078L+0.77/S+0.385
   - i=P6.84Tc+(-0.51)
   - Q=CiA
   - VOLUME=PCA
   - SOIL: TIJERAS COMPLEX - SOIL GROUP 'B'

2. EXISTING CONDITION
   - A=29.5 ACRES
   - C=0.34
   - Tc=10 MIN.
   - i100=5.28 IN/HR i10=3.47 IN/HR
   - Q100=53.0 CFS Q10=34.8 CFS
   - V100=91020 CF V10=59800 CF

3. DEVELOPED CONDITION
   - A. BASIN 'A'
     - AREA=5.7 ACRES
     - C=0.66
     - Tc=10 MIN.
     - i100=5.28 IN/HR i10=3.47 IN/HR
     - Q100=19.9 CFS Q10=13.1 CFS
     - V100=34140 CF V10=22430 CF
     - ALLOWABLE DISCHARGE=1.0 CFS/AC
     - Qr=5.7 CFS
     - BY SOLVING HYDROGRAPH: POND VOLUME=17370 CF
   - B. BASIN 'B'
     - AREA=14.7 ACRES
     - C=0.76
     - Tc=10 MIN.
     - i100=5.28 IN/HR i10=3.47 IN/HR
     - Q100=59.0 CFS Q10=38.8 CFS
     - V100=101390 CF V10=66615 CF
     - ALLOWABLE DISCHARGE=1.0 CFS/AC
     - Qr=14.7 CFS
     - BY SOLVING HYDROGRAPH: POND VOLUME=57185 CF
   - C. BASIN 'C1'
     - AREA=3.8 ACRES
     - C=0.76
     - Tc=10 MIN
     - i100=5.28 IN/HR i10=3.47 IN/HR
     - Q100=15.3 CFS Q10=10.0 CFS
     - V100=26210 CF V10=17220 CF
     - ALLOWABLE DISCHARGE=1.0 CFS/ACRE
     - Qr=3.8 CFS
     - BY SOLVING HYDROGRAPH: POND VOLUME=14782 CF
   - D. BASIN 'C2'
     - AREA=0.8 ACRES
     - C=0.76
     - Tc=10 MIN.
     - i100=5.28 IN/HR i10=3.47 IN/HR
     - Q100=3.2 CFS Q10=2.1 CFS
     - V100=5520 CF V10=3625 CF
     - ALLOWABLE DISCHARGE=1.0 CFS/ACRE
     - Qr=0.8 CFS
     - BY SOLVING HYDROGRAPH: POND VOLUME=3112 CF



NOTE: VEGETATIVE COVER OR APPROVED EROSION PROTECTION SHALL BE PROVIDED WITHIN ROADSIDE DITCHES.

COCHITI RD. SECTION

NO SCALE

ESPEY, HUSTON & ASSOC., INC.
Engineering & Environmental Consultants
4801 INDIAN SCHOOL ROAD NE SUITE 204
ALBUQUERQUE, NEW MEXICO 87110
PHONE (505) 255-1625

JAMES L. LEYMON JR. NEW MEXICO 8105 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY DAL	DATE 8-84	SHEET NO.	
DRAWN BY TXW	FB		
CHECKED BY DAL	JOB NO. 5452-01		
APPROVED BY		OF	SHEETS

NO.	REVISIONS	BY	DATE
△	REVISED BUILDING LAYOUT PER REVISED SITE DEVELOPMENT PLAN. REVISED PONDS C1 & C2 DESIGNS. REVISED TRAMWAY BLVD ALIGNMENT	DAL	1-15-85

conceptual approval
date 4-4-85
for site Development plan

RECEIVED
APR 04 1985
HYDROLOGY SECTION

job title FOUR HILLS VILLAGE SHOPPING CENTER AND PLANNED RESIDENTIAL DEVELOPMENT		
PROJECT COORDINATOR GEORGE RAINHART	job no. 1484	date 8/29/84
sheet title GRADING AND DRAINAGE		by

de la torre · rainhart, p.a. aia
architects
6121 indian school road ne · suite 141
albuquerque nm 87110 · 505 881 0550

sheet 3
C1
of 4