



LOCATION MAP
SCALE: 1"=300'

H-22

BENCH MARK

ACS BENCH MARK 11-G22 LOCATED 250 FEET WEST OF THE INTERSECTION OF CANDELARIA RD AND CHELWOOD PARK BLVD NEAR THE MEDICAL CENTER. STATIONED AT 11+00.00. TARGET STAMPED 11-G22 1979. SET FLUSH WITH THE GROUND.
ELEVATION = 5694.36 FEET (MSLD)

GRADING AND DRAINAGE PLAN

This Grading and Drainage Plan shows 1) existing and proposed elevations indicated by spot elevations and contours at 1'-0" intervals; 2) proposed buildings, parking areas, and landscaped areas; and 3) proposed drainage features.

The proposed improvements are located on Candelaria Road N.E. just west of Nakomis Dr. N.E. The site is bounded on the north by Candelaria Rd. N.E., on the west by undeveloped land, and on the east and south by the Embudo Arroyo. The site is more particularly described as Tract 29C1, Brentwood Hills. At present the site is undeveloped.

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

The site topography slopes uniformly from the northeast corner to the southwest corner of the site. Historically, approximately 1.1 cfs drains overland as sheet flow into the Embudo Arroyo, which is concrete lined. This drainage pattern will not be altered as a result of development. However, runoffs will be provided as a more efficient means of draining storm water from the site to the arroyo.

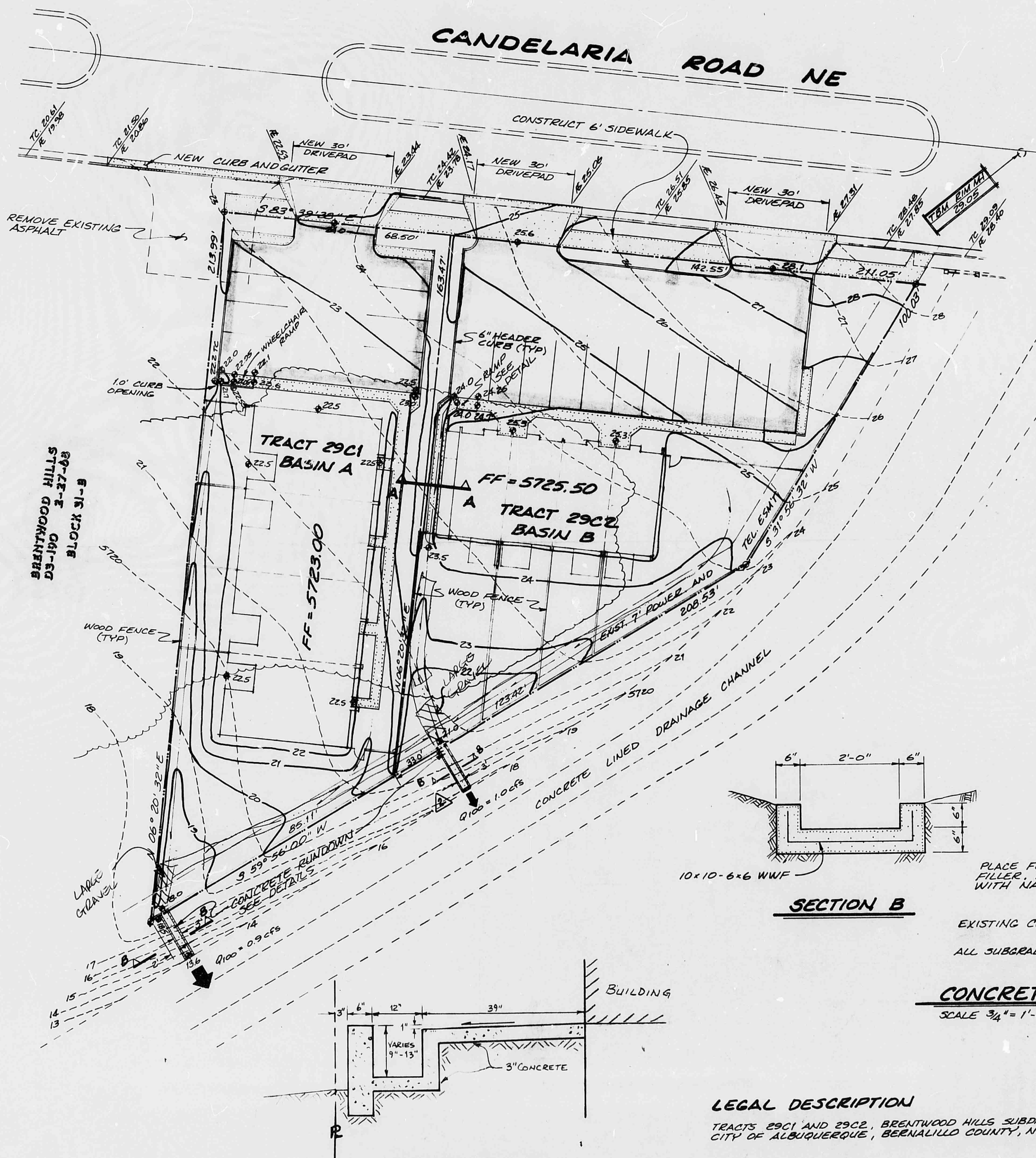
As shown by the plan, all storm water will be routed overland within each tract to a discharge point into the Embudo Arroyo. Therefore, no drainage easements will be required for the conveyance of storm water. At each discharge point a concrete runoff will be provided to convey approximately 1.0 cfs into the Embudo Arroyo.

Erosion will not result due to this development as all exposed soil will be landscaped or paved. Temporary erosion control measures during the construction phase will consist of a ditch-dike system placed along the west and south boundaries of the site.

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

CALCULATIONS

- DESIGN CRITERIA**
 $P_{100}=2.52$ IN. $P_{10}=1.66$ IN.
 $T_c=0.0078L+0.77/5+0.385$
 $L=66.84T_c(-0.51)$
 $Q=CIA$
 VOLUME=PCRA
 SOIL: EMBUDO TIJERAS COMPLEX - SOIL GROUP 'B'
- EXISTING CONDITION**
 $A=0.63$ ACRES
 $C=0.34$
 $T_c=10$ MIN.
 $1100=5.33$ IN/HR $110=3.50$ IN/HR
 $Q_{100}=1.1$ CFS $Q_{10}=0.7$ CFS
 $V_{100}=1960$ CF $V_{10}=1290$ CF
- DEVELOPED CONDITION**
 - BASIN 'A' (TRACT 29C1)**
 $AREA=0.30$ ACRES
 $C=0.59$
 $T_c=10$ MIN.
 $1100=5.33$ IN/HR $110=3.50$ IN/HR
 $Q_{100}=0.9$ CFS $Q_{10}=0.6$ CFS
 $V_{100}=1620$ CF $V_{10}=1065$ CF
 - BASIN 'B' (TRACT 29C2)**
 $AREA=0.33$ ACRES
 $C=0.59$
 $T_c=10$ MIN.
 $1100=5.33$ IN/HR $110=3.50$ IN/HR
 $Q_{100}=1.0$ CFS $Q_{10}=0.7$ CFS
 $V_{100}=1780$ CF $V_{10}=1170$ CF
 - RUNDOWN CAPACITY**
 - CHECK ENTRANCE**
 USING WEIR EQUATION: $Q=3.33L(H^{1.5})$
 WHERE: $Q=1.0$ CFS
 $H=0.5$ FT
 THEN: $L=0.9$ FT USE 2 FT
 - CHECK RUNDOWN CAPACITY**
 USING MANNINGS EQUATION: $Q=(1.49/n)A(R^{2/3})(S^{1/2})$
 WHERE: $n=0.13$
 $A=1.0$ SF
 $R=0.33$ FT
 $S=0.25$
 THEN: $Q=27$ CFS > Q_{100}



SECTION A-A
SCALE 3/4"=1'-0"

SECTION B

CONCRETE RUNDOWN DETAILS
SCALE 3/4"=1'-0"

LEGAL DESCRIPTION

TRACTS 29C1 AND 29C2, BRENTWOOD HILLS SUBDIVISION, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

LEGEND

- 80.1 EXISTING SPOT ELEVATION
- 80.5 PROPOSED SPOT ELEVATION
- 5280 EXISTING CONTOUR
- 80 PROPOSED CONTOUR
- SIVALE
- CONCRETE
- ASPHALT
- EXISTING DIET PILES

APPROVED FOR DRAINAGE

4/24/85
 DATE
 Signature
 TITLE
 ADVISE DRAINAGE INSPECTOR
 WHEN GRADING EXECUTED
 Revised

APPROVED
 APR 10 1985
 HYDROLOGY SECTION

REVISIONS		NO.		BY	
TRACTS 29C1 AND 29C2 GRADING AND DRAINAGE PLAN					
<div style="display: flex; justify-content: space-between;"> <div> <p>DESIGNED BY <u>DL</u> DATE <u>8-84</u></p> <p>DRAWN BY <u>TW</u> FB</p> <p>CHECKED BY <u>DL</u> JOB NO. <u>2412-08</u></p> <p>APPROVED BY <u>DL</u></p> </div> <div> <p>ESPEY, HUSTON & ASSOC., INC.</p> <p>Engineering & Environmental Consultants</p> <p>4801 INDIAN SCHOOL ROAD N.E. SUITE 100</p> <p>ALBUQUERQUE, NEW MEXICO 87110</p> <p>PHONE (505) 830-1883</p> </div> </div>					

H22/D43