HYDROLOGY

D9/D2
1 PLAN

D9/D2

1 PLAN

VICINITY MAP D-9

SCALE: 1" = 800'

PROJECT BENCHMARK

STATION MARK IS A STANDARD CITY OF ALBUQUERQUE BRASS TABLET STAMPED "1-D9", SET IN TOP OF A CONCRETE POST PROJECTING 0.5 FEET ABOVE GROUND. STATION IS LOCATED ABOUT 7 MILES N.W. OF DOWNTOWN ALBUQUERQUE & 4 MILES WEST OF STATE RD. 448, AT THE N.W. CORNER OF LA BOCA NEGRA PARK.
ELEVATION = 5467 FEET (MSLD)

TEMPORARY BENCHMARK

TOP OF CAP ELEVATION @ N.E. CORNER OF LOT 1, BLOCK 1
ELEVATION = 5556.41 FEET (MSLD)

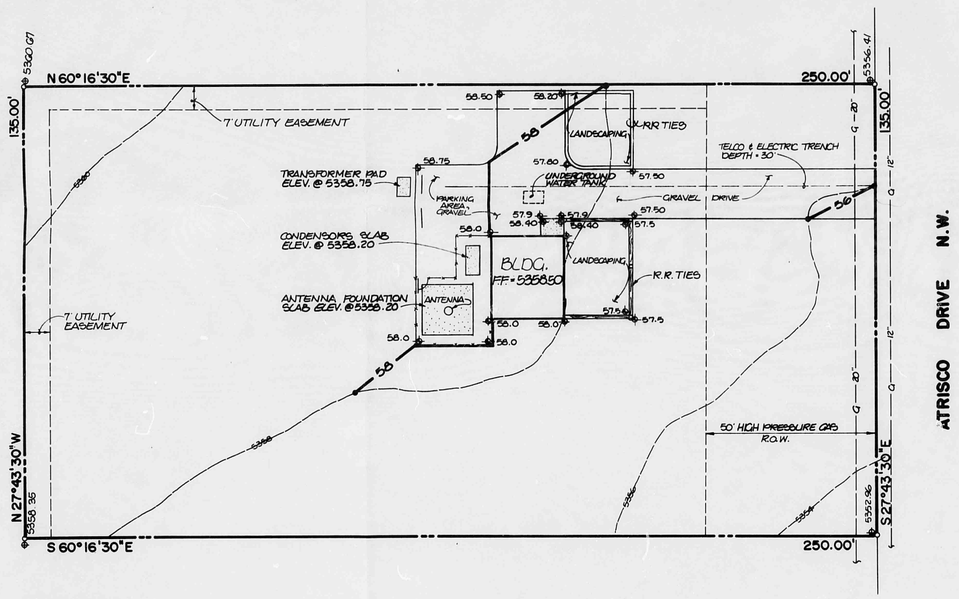
LEGAL DESCRIPTION

LOT 1, BLOCK 1, UNIT 25, VOLCANO CLIFFS SUBDIVISION

LEGEND

- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- 5G — PROPOSED CONTOUR
- 5550 — EXISTING CONTOUR
- SWALE
- PROPERTY LINE
- CONCRETE

SCALE: 1" = 20'



CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

DRAINAGE PLAN

The following items concerning the New Vector Communications - Site B Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the west side of Atrisco Drive N.W. in Block 1, Unit 25, Volcano Cliffs Subdivision. At present, the site is undeveloped. The proposed improvements will only affect a portion of the overall site, Lot 1.

As indicated by a Predesign Conference held with Mr. Fred J. Aguirre on November 8, 1984, this site does not lie within a designated Flood Hazard Zone. Because of the small scale of the proposed development, no interim ponding will be required. In addition, the analysis of offsite flows is not required; no major flows are expected to impact this site. This, too, was determined during said Predesign Conference.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) the limit and character of existing and proposed improvements, and 3) continuity between existing and proposed grades. The proposed improvements, as shown hereon, are compatible with those shown on the approved site development plan. Due to the limited nature of the proposed improvements, they will have negligible impact on downstream conditions.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will increase the peak discharge from the site by 0.1 cfs, a negligible increase.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 10:
AmB - Alameda Sandy Loam
Hydrologic Soil Group C

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84) T_c^{-0.51} = 4.65$ in/hr
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, sf

Volume: $V = CP_6A (1/12)$
where C varies
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

$A_{total} = 33,750$ sf $= 0.77$ Ac
$A_{imp} = 0$ sf; % impervious = 0%
$C = 0.50$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.50)(4.65)(0.77) = 1.8$ cfs
V_{100} $CP_6a = (0.50)(2.2/12)(33,750) = 3,090$ cf

Developed Condition

$A_{total} = 33,750$ sf $= 0.77$ Ac

A_{imp}/A_{total} (% imp) + A_{gravel}/A_{total} (% imp) +

A_{perv}/A_{total} (% imp) = 825/33,750 (1.0) + 3,400/33,750 (.55) +

29/750/33,750 (0) = % impervious = 08%

$Q_{100} = (0.52)(4.65)(0.77) = 1.99$ cfs

$V_{100} = (0.52)(2.2/12)(33,750) = 3,220$ cf

Comparison

$\Delta Q_{100} = (0.52)(4.65)(0.77) = 1.9$ cfs
$\Delta V_{100} = (0.52)(2.2/12)(33,750) = 3220$ cf

JEFFREY G. MONTGOMERY NEW MEXICO 6547 REGISTERED PROFESSIONAL ENGINEER 12-05-84

RECEIVED DEC 06 1984 DESIGN HYDROLOGY SECTION

Montgomery Associates, Inc.
811 DALLAS N.E. • ALBUQUERQUE • NEW MEXICO • 87110
ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.
DRAWN BY: S.G.H.
APPROVED: J.G.M.

JOB NO. 41601
DATE 11-84

GRADING AND DRAINAGE PLAN
NEW VECTOR COMMUNICATIONS — SITE B

FILE NO.
SHEET 1 OF 1

HYDROLOGY

D9/D2
1 PLAN

D9/D2

1 PLAN

VICINITY MAP D-9

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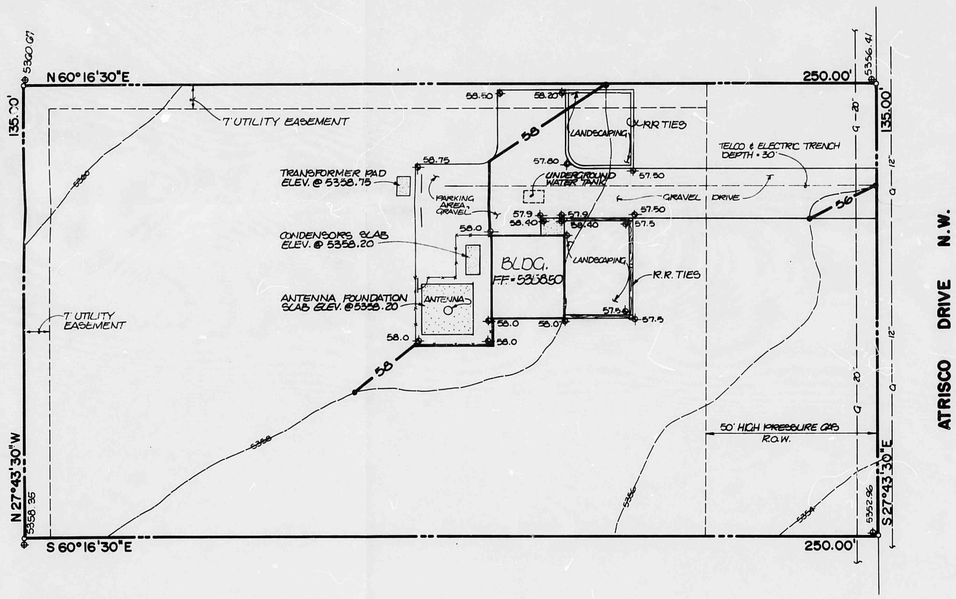

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JEFFREY E. MONTOYA — NEW MEXICO — 8547 — REGISTERED PROFESSIONAL ENGINEER — 12-09-84

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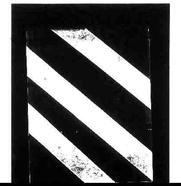
HYDROLOGY D9/D2 1 PLAN