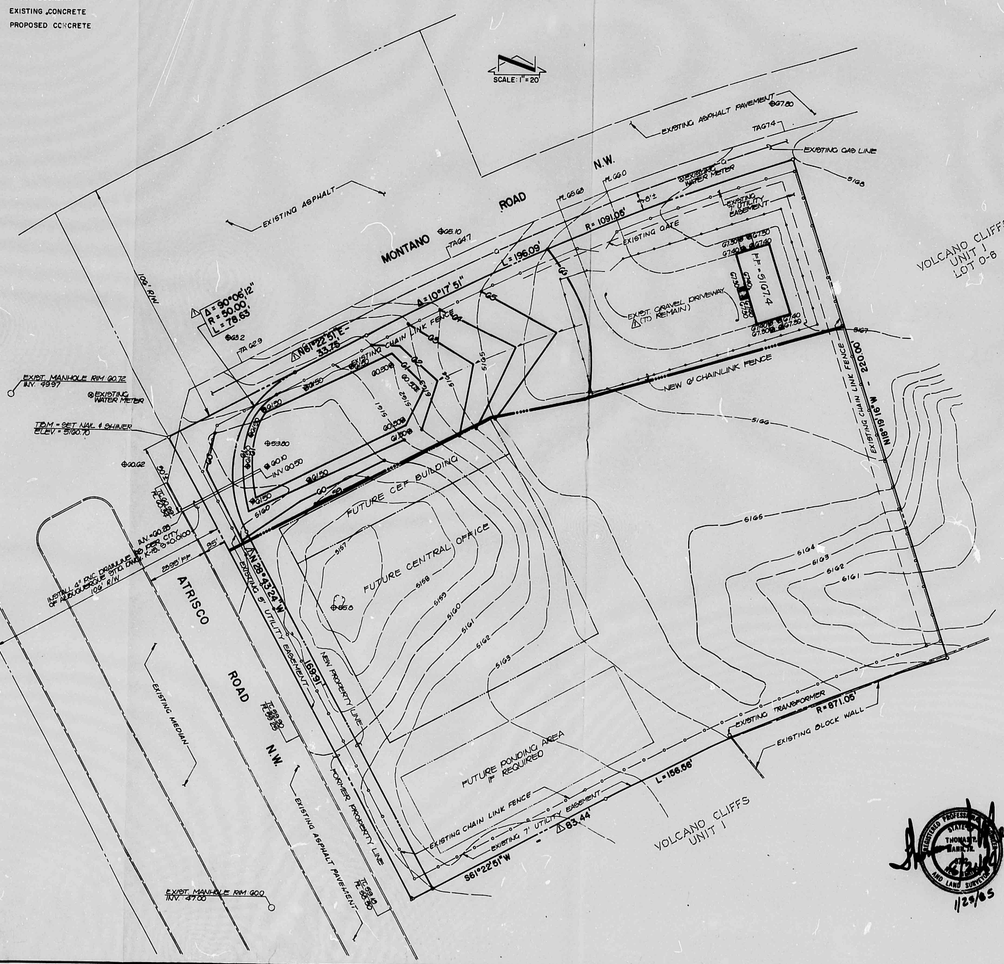
LEGEND

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SWALE
- BASIN BOUNDARY
- EXISTING CONCRETE
- PROPOSED CONCRETE



CONSTRUCTION NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT THE LOCATING SERVICE 765-1234, FOR LOCATIONS OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL CONFLICTS. IF A CONFLICT EXIST, THE CONTRACTOR SHALL REPORT 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 STANDARD 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 BETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL DEPOSITED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

TEMPORARY BENCHMARK

SET NAIL & SHINER AT NORTHWEST CORNER OF PROPERTY LINE.
ELEVATION = 5160.70 FEET (M.S.L.D)

PROJECT BENCHMARK

A.C.S. STATION 14-E10 A 40-PENNY NAIL IN AN ELECTRIC POWERLINE POLE LOCATED 180 FEET OF THE JUNCTION OF ATRISCO ROAD, NW AND MONTANO ROAD, NW ON THE WEST SIDE OF ATRISCO ROAD, NW.
ELEVATION = 5160.66 FEET (M.S.L.D)

DRAINAGE PLAN

The following items concerning Volcano Cliffs Mountain Bell Utility Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

The proposed improvements, as shown on the Vicinity Map, are located at the southeast quadrant of the Montano Road N.W. and Atrisco Road N.W. intersection. At present, the surrounding area is partially developed.

As shown by Panel 14 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, Bernalillo County, the site does not lie within a designated Flood Hazard Zone; however, downstream flooding is a concern. Because of this, runoff generated by the site will be routed through a positive discharge pond. At present, runoff generated by this site flows from east to west, toward a depression located on the west portion of the site. The northerly portion of the site drains onto Montano Road N.W. In addition, some offsite sheet flow may enter the site along the east boundary. This runoff, which has been quantified in the calculations, will be accepted and conveyed through the aforementioned pond and discharged to Atrisco Road N.W.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) continuity between existing and proposed grades, and 3) the limit and character of the existing and proposed improvements. As shown by this plan, the proposed improvements consist of grading a portion of the project site for proper drainage along with adjacent paving. Flows generated onsite will be routed from east to west to a positive discharge pond located at the northwest yard of the site. The pond will discharge onto Atrisco Drive N.W. from that point, the runoff will flow in a southerly direction along the east edge of Atrisco Road N.W. to the intersection with Dellyne Avenue N.W. Based upon a field survey, it appears that the runoff will pond at this intersection. The proposed drainage pattern will improve a portion of the existing pattern because it will eliminate the discharge of some runoff onto the adjacent lot.

The Calculations which appear below analyze 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 result in a net increase in runoff of only 0.1 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 20:
BRD-Bluepoint-Rokan
Hydrologic Soil Group A

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, acres

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

Existing Condition (Partial Development)

$A_{total} = 18110$ sf = 0.42 Ac
$A_{imp} = 0$ sf; % impervious = 0%
$C^{EXP} = 0.16$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.16)(4.65)(0.42) = 0.3$ cfs
$V_{100} = CP_6A = (0.16)(2.2/12)(18110) = 530$ cf

Partial Developed Condition

$A_{total} = 18110$ sf = 0.42 Ac
$A_{imp} = 2400$ sf; % impervious = 13%
$C^{EXP} = 0.22$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.22)(4.65)(0.42) = 0.4$ cfs
$V_{100} = CP_6A = (0.22)(2.2/12)(18110) = 730$ cf
$V_{Pond} = 1/3[(A_{@0.10} + A_{@0.50})(60.50 - 60.10) + (A_{@0.50} + A_{@1.00})(61.00 - 60.50)]$
$\triangle 1445 = 1/3[(1,770 + 2,2600)(0.10) + (2660 + 2490)(0.50)] = 2085$
$V_{100} = 730 + 1445 = 2175$ cf (for partial development)
$Q_{100} = CA\frac{V_{100}}{12h} = 0.4$ cfs
where C = 0.75
A = 0.0873 sf (4" dia pipe)
g = 32.2 ft/sec²
h = 0.55 ft

Offsite Flows

$A_{total} = 2600$ sf = 0.06 Ac
$A_{imp} = 0$ sf; % impervious = 0%
$C^{EXP} = 0.16$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.16)(4.65)(0.06) = 0.04$ cfs
$V_{100} = (0.16)(2.2/12)(2600) = 77$ cf

Comparison

Partial Development

$\Delta Q_{100} = 0.4 - 0.3 = 0.1$ cfs (increase)
$\Delta V_{100} = 730 - 530 = 200$ cf (increase)

RECEIVED JAN 28 1985 HYDROLOGY SECTION

PRELIMINARY ISSUE
SITE IMPROVEMENT/ CITY ORDINANCE
ISSUE 1 4-4-2005 4:06PM
BA10557 LPU TMA

REVISION:
1 10/05 CHANGED TO PRELIMINARY EXISTING PAVEMENTS

DRAWN T.M.A.	LONG & WATERS ARCHITECTS ENGINEERS	JOB NO. 84-56	NO. OF SHEETS 1
CHECKED		CIVIL	
DATE SEPT 84			

ALBUQUERQUE, NEW MEXICO
VOLCANO CLIFFS

TEMPORARY MODULAR EQUIPMENT BUILDING

SITE IMPROVEMENTS / CITY ORDINANCE

DRAINAGE STUDY & GRADING PLAN

GEO. CODE 5A5042

Manager Real Estate/Engineering
Martin Bell
Real Estate Engineering
Albuquerque, New Mexico

5AG03-SLC-SK001

TMA JOB No 4101

1/29/85

E-10/D004

RF 21 DATE 2-24-92 BY ESP

CITY OF ALBUQUERQUE

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Karen Acero
CITY CLERK RECORDER

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My Commission Expires MAY 8 1992
Norberta Sanchez

THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.

CITY OF ALBUQUERQUE
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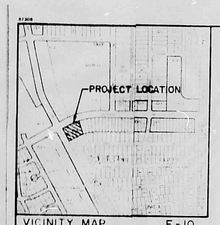
PLANS/PLATS ON FILE

FILE DESC: E-10/D004

PLANS/PLATS 1

F 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F



VICINITY MAP E-10

SCALE 1"=1000'

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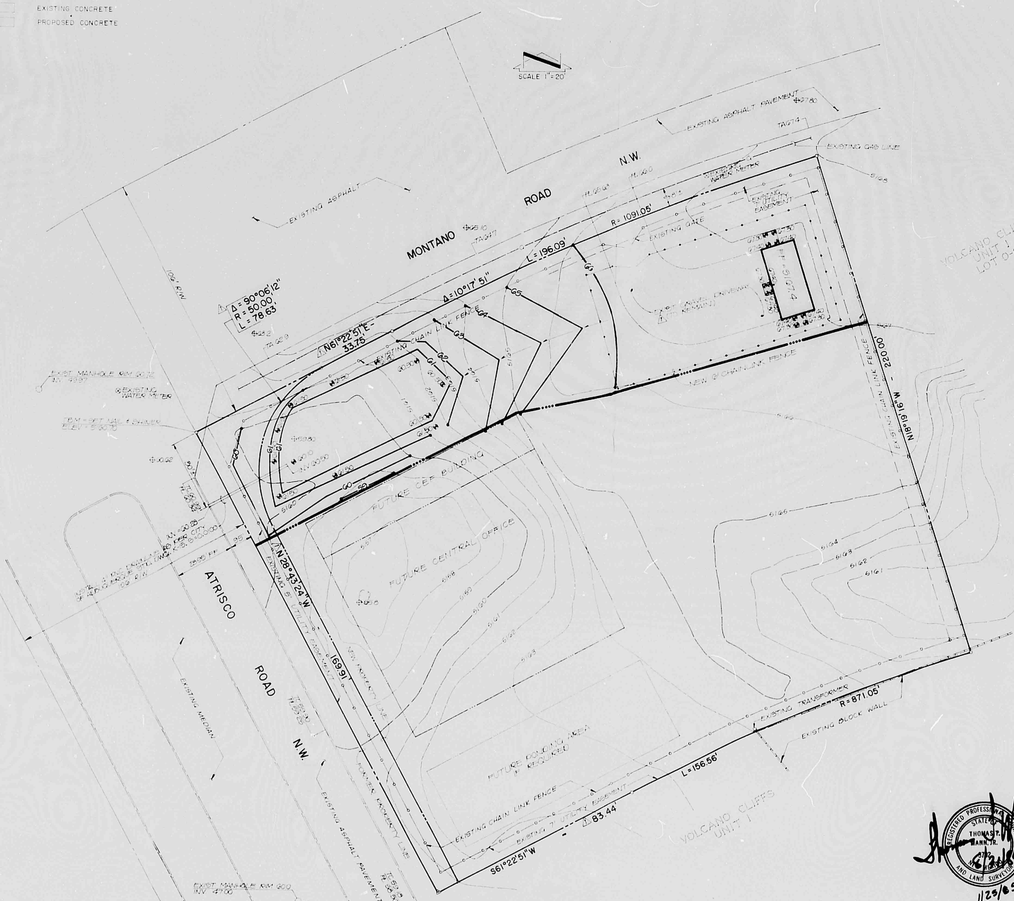

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$V_{1645} = 1/2(1/3)[(0 + 1660)(0.40) + (1660 + 2490)(0.50)]$
$V_{Pond} = 1370$ cf $= V_{100}$ (for partial development)
$Q_{release} = CA\sqrt{2gh} = 0.4$ cfs
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$A = 0.0873$ sf (4" dia pipe)
$g = 32.2$ ft/sec^2
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PRELIMINARY ISSUE
SITE IMPROVEMENTS/
CITY ORDINANCE
ISSUE
4-4-1986 4:06PM
BM5857 LPU THA

REVISION

DRAWN BY THA
DATE SEPT 86

LONG & WATERS
ARCHITECTS ENGINEERS

JOB NO. 84-56
CIVIL
SHT. NO. 1 OF 1 SHEETS

ALBUQUERQUE, NEW MEXICO
VOLCANO CLIFFS

TEMPORARY MODULAR EQUIPMENT BUILDING

SITE IMPROVEMENTS/ CITY ORDINANCE

DRAINAGE STUDY & GRADING PLAN

VLO CODE 545042

Manager Real Estate/ Engineering

Mailing Address:
Real Estate/Engineering
Albuquerque, New Mexico

5AG03-SLC-SKC01

E10/D004

HYDROLOGY SECTION
JAN 28 1985

PROFESSIONAL ENGINEER
THOMAS A. HANNA
STATE OF NEW MEXICO
NEW LAND SURVEY
1/29/85

THIS PLAN SHOT TWICE
ONCE ON LIGHT AND
ONCE ON DARK.

CITY OF ALBUQUERQUE
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NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires July 8, 1995
Norberta Sanchez

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CITY OF ALBUQUERQUE

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