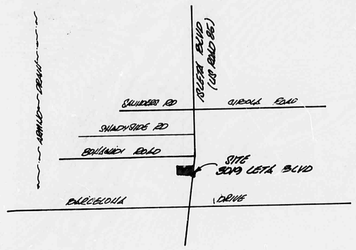
HYDROLOGY N12/D5 1 PLAN

N12/D5

1 Plan

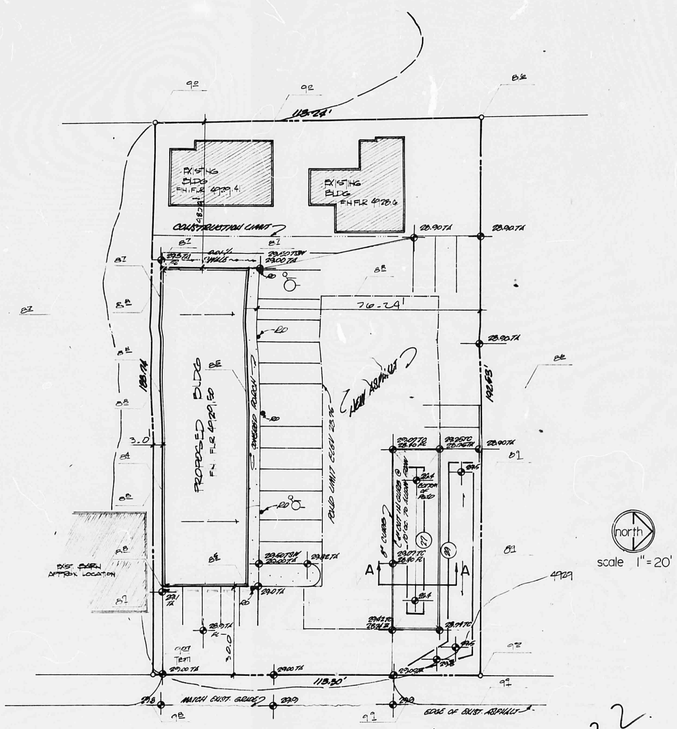
D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

GRADING AND DRAINAGE PLAN



VICINITY MAP

N12



LEGEND

EXIST CONTOUR	4929
DESIGNED CONTOUR	29
EXISTING SPOT ELEV.	25
DESIGNED SPOT ELEV.	
POND LIMIT	

ABBR.

TOP SIDEWALK	TSW
TOP OF CURB	TC
TOP OF ASPHALT	TA
FLOWLINE	FL
ROOF DRAIN	RD

TOTAL VOLUME OF POND CREATED
3000 CU.FT

TYP SECTION A-A

N.T.S.

BP-85-132

LEGAL DESCRIPTION
LOT 12, VIRA ADDITION

OWNER
MIKE SANCHEZ

BENCH MARK
P-12 Sta 500-3 Elevation 4930.501

CITY ADDRESS
3019 ISLETA BLVD.

COUNTY ZONE ATLAS
N-12

RECEIVED
FEB 05 1985
HYDROLOGY SECTION

Drainage Calculations

I References

A. City of Albuquerque Development Manual (DPM) Vol.2, Design Criteria Chapter 22,Drainage,Flood Control And Erosion Control.
B. Soil survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico.
C. Flood Insurance Rate Map, City of Albuquerque, Bernalillo County, New Mexico Panel 40 of 50

II. General Inforamation

A. soil Type (Ref B)
soil series Va, Vinton
Hydrologic group B
B. Runoff Coefficient "C" Factor (Ref.A,C-1)
Undeveloped------ 0.34 curve B, plate C-1
Developed --assume the folling values
Bldg 1.00
Concrete 1.00
Asphalt 0.90
Landscape0.34 (natural soil)
Weighted "C" Factor

Existing Conditions

Type of Surface	"C"	area	"C"x area
Bldg (roof area)	1.00	3501 sq.ft.	3501 sq.ft.
Natural soil	0.34	18087 sq. ft.	6150 sq.ft.
total		21588 sq.ft.	9651 sq.ft.

Developed Conditions

Bldg (roof area)	1.00	7241 sq.ft.	7241 sq.ft
Asphalt Paving	0.90	11865 sq.ft.	10679 sq.ft.
Landscape	0.34	2482 sq.ft.	844 sq.ft.
total		21588 sq.ft	18764 sq.ft.

Weighted "C" Factor =Σ "C" x area/ area
Existing 9651/21588 = 0.45
Proposed 18764/21588 = 0.87

C. 6-Hour, 100-year Rain, R_6=2.25 inches (Ref. A, Plate D-1)
D. Time of concentration, use 10 minutes
E. Rainfall Intensity (Ref. A, Plate D-2)

$I=R_6 x 6.84 x T_c$ exp. -0.51
=2.25x6.84x10 exp. -0.51
=4.76

F. Peak Discharged (Rational Method)
Existing Conditions
Q=0.45x4.76x21588/43560
=1.06 cfs
Proposed Conditions
Q=0.87x4.76x21588/43560
=2.05 cfs
G. Volume V=CxIxA (cu. ft.)
Existing Condition = 0.45x2.25/12x21588=1821
Proposed Condition = 0.87x2.25/12x21588=3521
note: 1700 cu. ft. increase

Displacement Volume
Bldg cor. elev. 8.7,8.7,8.8 and 8.5
average=(8.7+8.7+8.8+8.5)/4
=8.68 (4938.68)
Flood Base Elevation 4929.00 (Ref. C)
Volume = 29.00-28.68 x Bldg area (3740 sq.ft.
=1197 cu. ft.

III Ponding Calculations

Total Displacement	1197 sq.ft.
+ Total Increase Due To Development	1200 sq.ft.
Ponding Required	2397 sq.ft.

IV Flood Proofing

Finished Floor Elev	4929.50
100 Year Flood Base Elev.	4929.00

FRANK D. LOVE
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER
2-4-85

CITY OF ALBUQUERQUE
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