HYDROLOGY

K19/D1

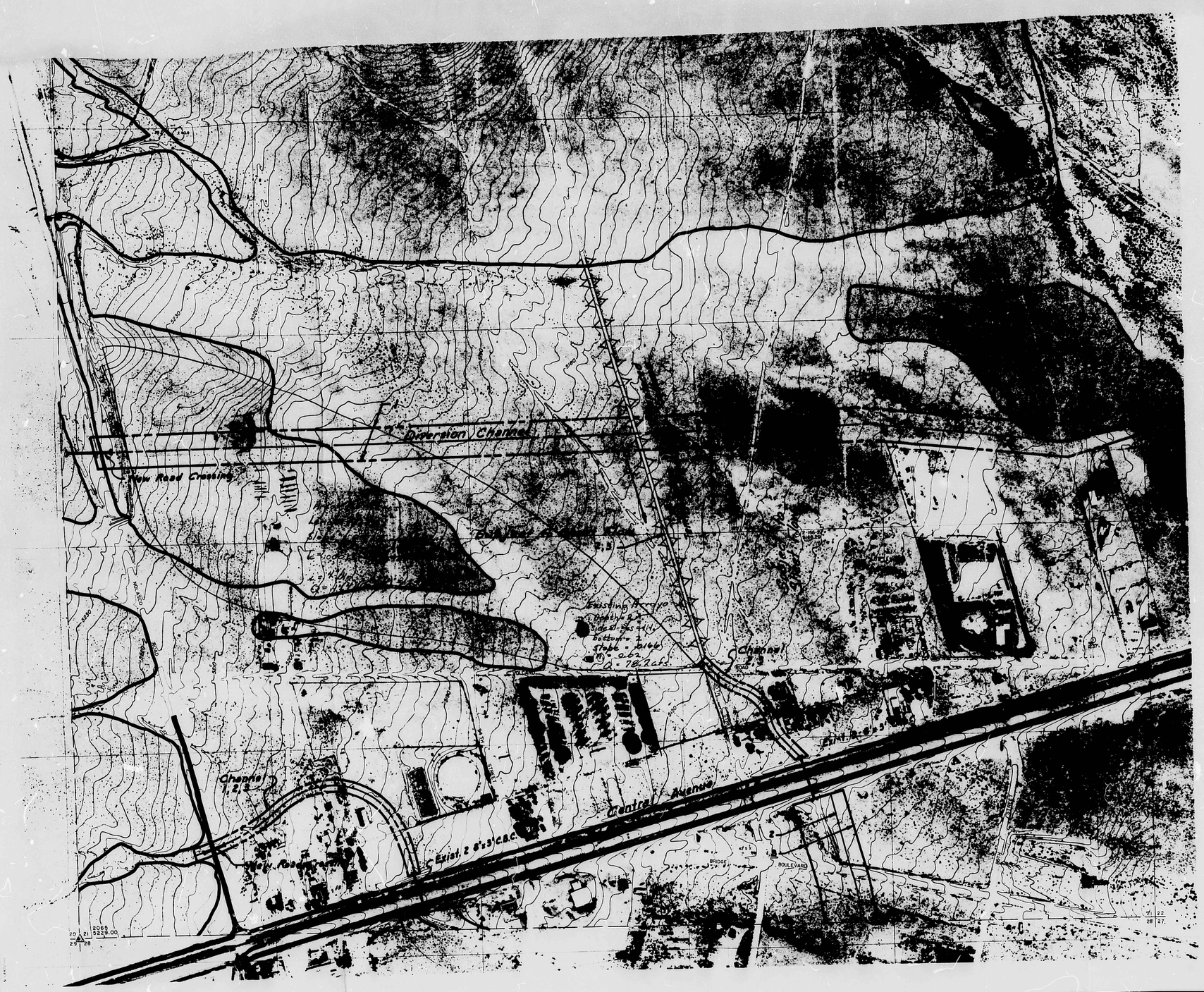
2 PLANS

K9/D1

2 Plans

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

CITY OF ALBUQUERQUE



1973

Scale 1 in. = 200 ft.

VERTICAL DATUM-MEAN SEA LEVEL

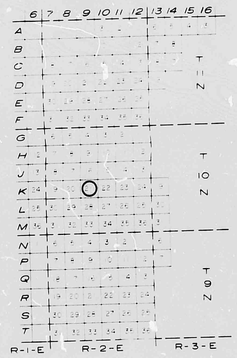
CONTOUR INTERVAL 1 ft., 2 ft., & 5 ft.

SECTION 21

TOWNSHIP 10 NORTH

RANGE 2 EAST

SHEET INDEX



Prepared By
WILLIAM MATOTAN & ASSOCIATES - ENGINEERS
ALBUQUERQUE, NEW MEXICO

LEGEND

- TOWNSHIP OR RANGE LINE
- SECTION LINE
- APPROX. TOWNSHIP OR RANGE LINE
- APPROX. SECTION LINE
- SECTION CORNER FOUND
- APPROX. SECTION CORNER
- PRIMARY HORIZONTAL & VERTICAL CONTROL
- VERTICAL CONTROL
- ANALYTICAL TARGET
- SPOT ELEVATION
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- CONTOURS THROUGH HEAVY VEGETATION
- 100 YEAR STORM FLOOD PLAIN LIMITS
- 25 YEAR STORM FLOOD PLAIN LIMITS
- RIGHT OF WAY FOR DIVERSION CHANNELS, DETENTION & DESILTING AREAS (Number Indicates Alternate Plan)
- CENTERLINE OF CHANNELIZATION
- PROPOSED FLOOD PLAIN ZONE (Number Indicates Alternate Plan)

NOTE: COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS TAKEN JUNE 1972 BY LIMBAUGH ENGINEERS INC. 1000 FOOT GRID BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM CENTRAL ZONE

K-9

LIMBAUGH ENGINEERS, INC.

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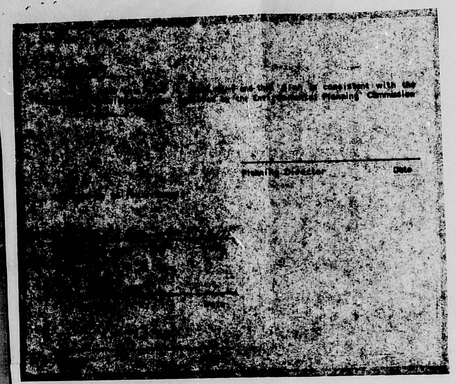
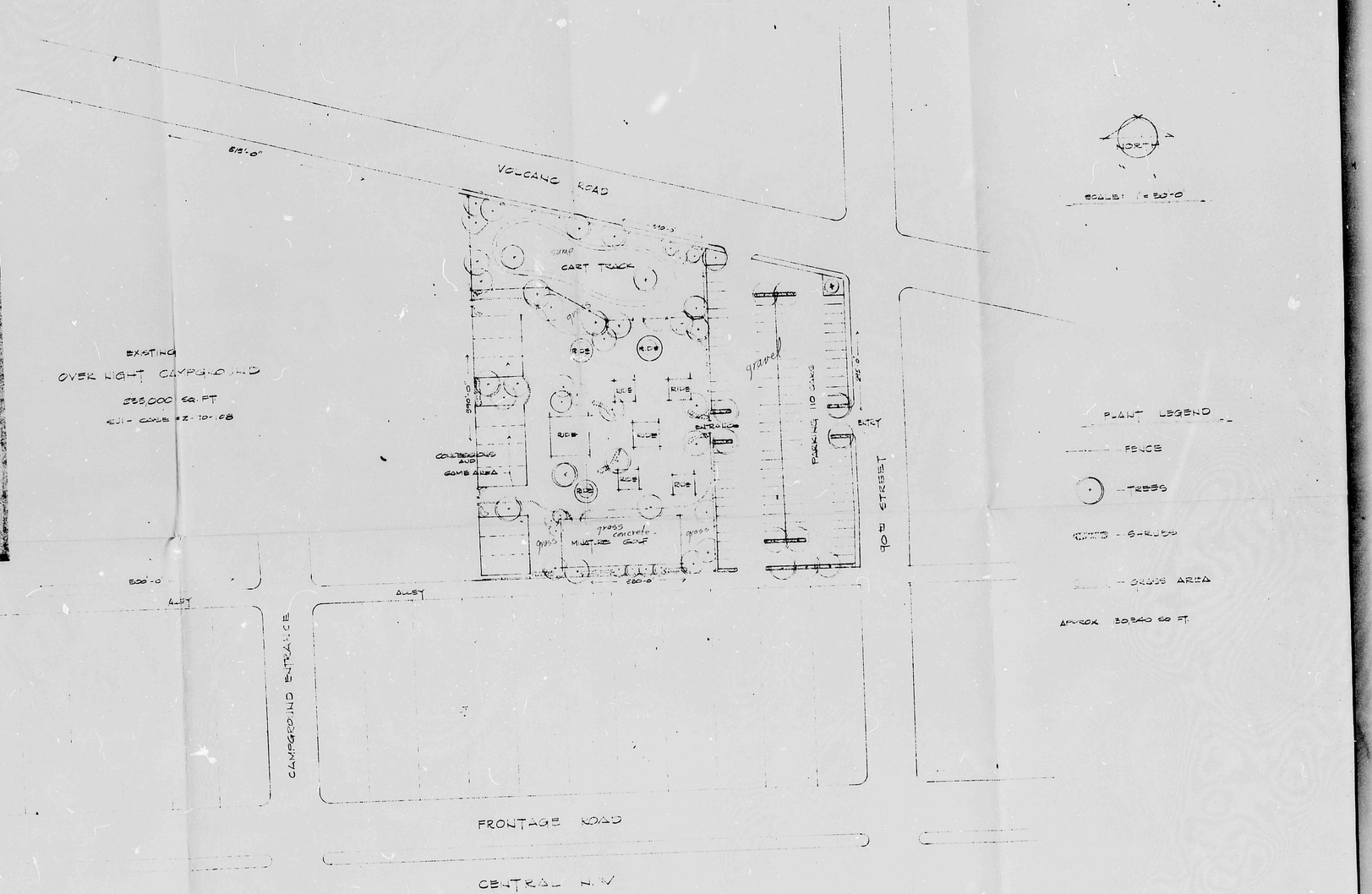
CITY OF ALBUQUERQUE





9201 Central NW Van Barber
831-4846

PROPOSED AMUSEMENT PARK
for DULCE SUENOS
9201 CENTRAL N.W.
ALBUQUERQUE, NEW MEXICO

LOS PATIOS INC.
BOX 235-A
CORRALES, NEW MEXICO
T.R. WEAVER - LANDSCAPE ARCHITECT

JUNE 2, 1975

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

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D E B A

CITY OF ALBUQUERQUE

C D

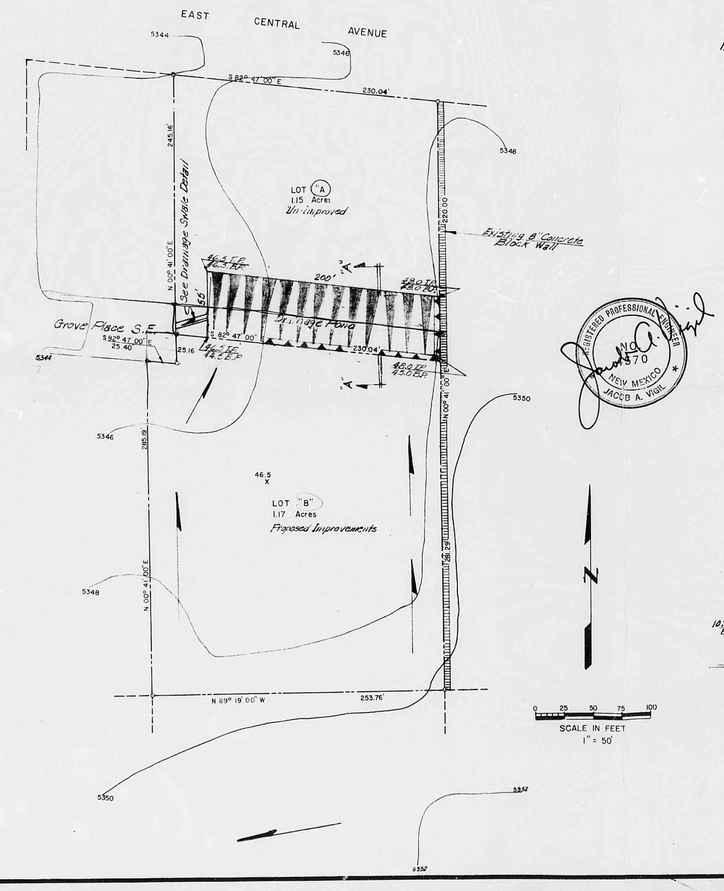
HYDROLOGY K19/D1 1 PLAN

K19/D1

1 Plan

CITY OF ALBUQUERQUE

AMENDED REPLAT OF BEVENS ADDITION



1. Run off before development
Onsite
$Q = CIA$
$= 0.4 \times 5.4 \times 2.86$
$= 6.2$ C.F.S.

Where
C = Of Undeveloped State
$I = \frac{193}{t+25} = \frac{193}{10+25} = 5.4$ t = 10 Min.
A = 2.86 Ac.

2. Run off after development
Onsite
Only lot "B" Will be improved
Lot "A" Will Not have Improvements

$Q = CIA$
$= 0.76 \times 5.4 \times 2.86$
$= 11.74$ C.F.S.

C = 1.00 impervious Surface
C = 0.40 pervious Surface
Composite "C"
$C = \frac{\text{Area A} \times C_p + \text{Area B} \times C_{imp.}}{\text{Area A + Area B}}$
$= \frac{1.15 \times 0.40 + 1.71 \times 1.0}{2.86}$
$C = 0.76$
$I = \frac{193}{t+25}$ t = 10 Min.
$I = 5.4$
A = 2.86 Ac.

Comparing 1 and 2
Run off before development = 6.2 C.F.S.
Run off after development = 11.7 C.F.S.
Increase in Runoff = 5.5 C.F.S.

RETENTION BASIN DESIGN

Set allowable Outflow = 3.0 C.F.S.

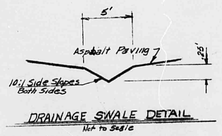
(a) Calculate Qo = $\frac{\text{Allowable Outflow}}{\text{Acres} \times \text{Runoff Coeff.}} = \frac{3.0}{2.86 \times 0.76} = 1.38$ C.F.S./Ac. Imperviousness

(b) Calculate the time in minutes for max. Volume of Storage:
$T = -25 + \sqrt{\frac{1080 \times 3}{Qo}} = -25 + 71.66 = 46.66$ Min.

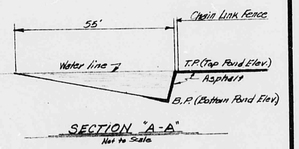
(c) Calculate the Max. Volume of Storage per Ac. Imperviousness
$V_s = \frac{11.5 \times Q_o T}{T + 25} - 40 Q_o T = 738 \times 61 - 2576.63 = 4809$ ft³/Ac. Imperviousness

(d) Calculate the total Volume of Storage Required for the entire Site.
$V_t = V_s \times$ No. of Acreage $\times$ Runoff Coeff.
$= 4809 \times 2.86 \times 0.76$
$= 10423$ ft³

Provide Finding as Shown.



DRAINAGE SWALE DETAIL
Not to Scale



SECTION "A-A"
Not to Scale

PREPARED FOR
WALKER-HINKLE COMPANY

DRAINAGE STUDY

NO.	DATE	REVISIONS DESCRIPTION	BY
1			
2			
3			
4			

DATE 6-6-77
SCALE 1" = 50'
DESIGNED Shah
DRAWN Buck
JOB NO.

ROUBAL & ASSOCIATES
PLANNING DESIGN MANAGEMENT CONSULTANTS
ALBUQUERQUE, NEW MEXICO 87110

REGISTERED PROFESSIONAL ENGINEER 370 NEW MEXICO JACOB A. VIGIL

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