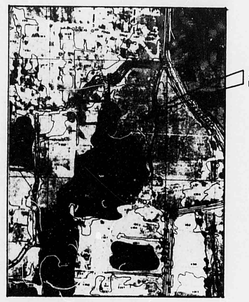
HYDROLOGY N11/D1 1 PLAN

N11/D1

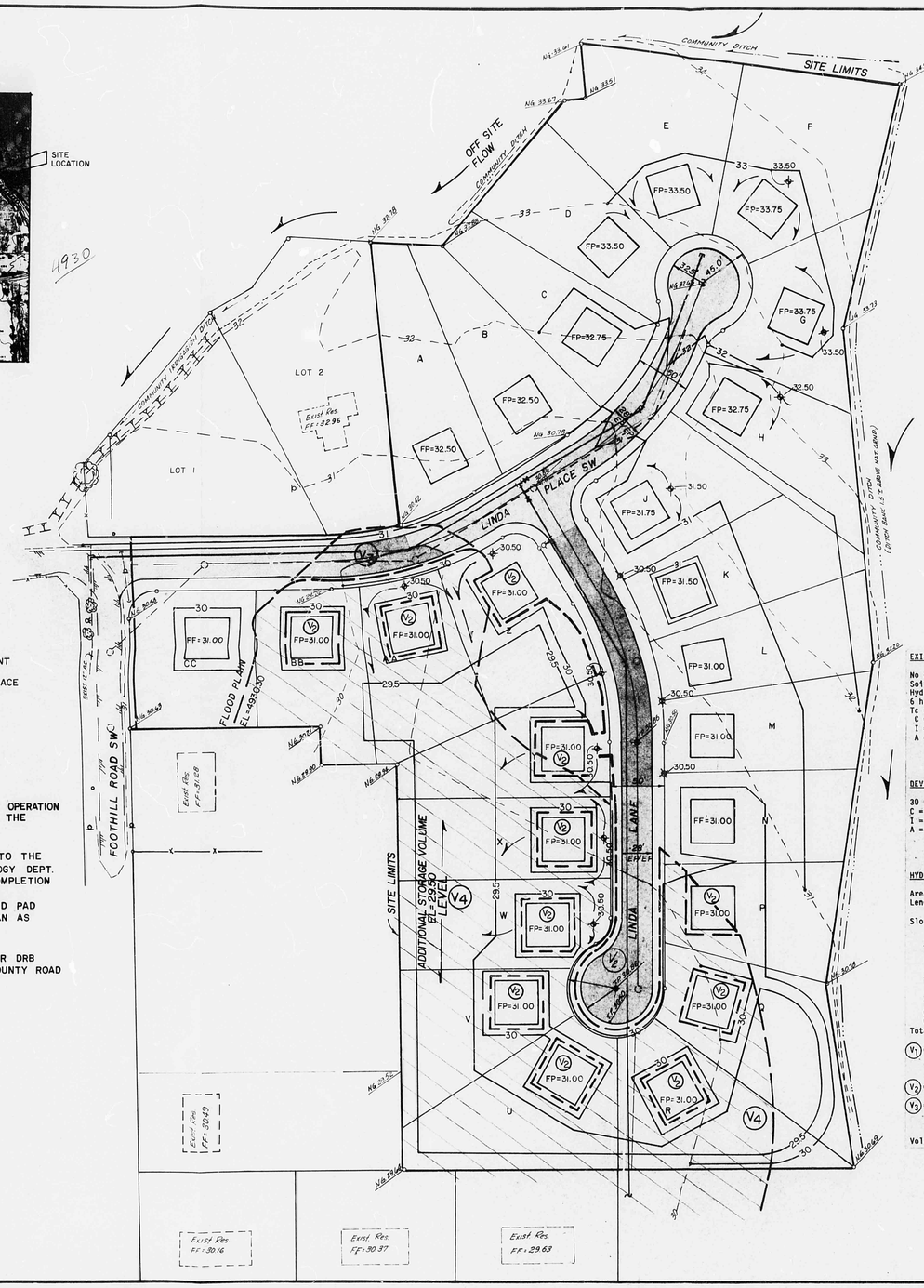
1 Plan

CITY OF ALBUQUERQUE



FLOODWAY MAP NO. 39

4930



PROPOSED

REPLAT OF THE AMENDED REPLAT OF LOT NO. 4

MILLIGAN ADDITION

BERNALILLO COUNTY, NEW MEXICO

filed October 8, 1980, C-17-97

TERRAIN MANAGEMENT PLAN

N

SCALE: 1"=50'

LOCATION PLAT ZONE ATLAS MAP NO. N-11

LEGEND

30	FINISHED CONTOUR
31	EXISTING CONTOUR
NG	ELEV. NATURAL GROUND SPOT ELEV.
	FINISHED SPOT ELEV.
	LIMITS OF FLOOD PLAIN (EXIST)
	FLOW LINE
	EXIST ASPH PUMT
F.P.= 31.00	FINISHED PAD ELEV.
F.F.	FINISHED FLOOR ELEV.

BENCH MARK

EAST BONNET BOLT OF FIRE HYDRANT LOCATED AT INTERSECTION OF FOOTHILL ROAD SW AND LINDA PLACE EL= 4932.86 MSL

NOTE!

1. CONTRACTOR SHALL PLAN HIS OPERATION TO MINIMIZE EROSION DURING THE CONSTRUCTION PHASE
2. THE ENGINEER WILL SUBMIT TO THE CITY OF ALBUQUERQUE, HYDROCOGY DEPT. A STATEMENT OF PROJECT COMPLETION WITH REFERENCE TO GENERAL COMPLIANCE WITH THE FINISHED PAD ELEVATIONS AND GRADING PLAN AS SHOWN HEREON.
3. ROADWAY WIDTHS (28') ARE PER DRB REQUIREMENT & BERNALILLO COUNTY ROAD DEPTARTMENT REQUEST.

EXISTING CONDITIONS

No offsite flows affect this site
Soils VC (Vinton Clay Loam) Plate 40 SCS Bernalillo County
Hydrological Soils Group "B"
6 hr Rainfall Volume from Plate 22.2, D-1 = 2.25"
Tc = 13.39 min
C = 0.32 from Plate 22.2, C-1
I = 3.46 from Plate 22.2, D-2
A = 9.1329 acres
C = CIA
Q = (0.32)(3.46)(9.1329)
Q = 10.11 cfs

DEVELOPED CONDITIONS

30 percent impervious (1/3 acre residential lots)
C = 0.48 from Plate 22.2.C-1
I = 3.46 from Plate 22.2.D-2
A = 9.1329
Q = CIA
Q = (0.48)(3.46)(9.1329)
Q = 15.17 cfs

HYDROGRAPH FOR DRAINAGE BASIN (Developed and undeveloped)

Area of Basin = 9.1329 acres (Contributing area within site)
Length of Course = 1,100

$$\text{Slope} = \frac{39.40 - 29.64}{1100} = 0.0048 \text{ percent}$$

$$Tc = 0.0078 \frac{L^{(0.77)}}{S^{(0.385)}}$$

$$Tc = 0.0078 \frac{1100^{(0.77)}}{0.0048^{(0.385)}}$$

Tc = 13.39 min
Qp = 15.17 cfs (developed)
Qp = 10.11 cfs (undeveloped)
Total Duration = 49.50 min

V_1 = Volume required for storage of additional runoff (from hydrograph)

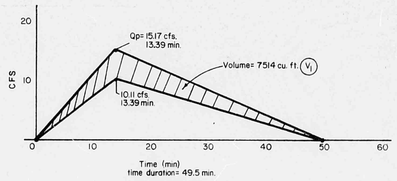
$$\frac{(13.39 \times 60)5.06}{2} + \frac{(36.11 \times 60)5.06}{2} = 7,514 \text{ cu ft}$$

V_2 = Housepad Displacement Volume within flood plain = 11,752 cu ft

V_3 = Roadway Displacement Volume within flood plain = 5,706 cu ft

Total Volume Required = 24,972 cu ft

Volume obtained within site grading = 26,494.28 cu ft (V_4)



HYDROGRAPH

1 - Pond 1.8'
2 - Comments to come
3 - Comments

E-24-RT

RECEIVED AUG 05 1985 HYDROLOGY SECTION

SANTIAGO ROMERO, JR. NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

SHT. NO. 3 of 4

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CITY OF ALBUQUERQUE
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CITY OF ALBUQUERQUE

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