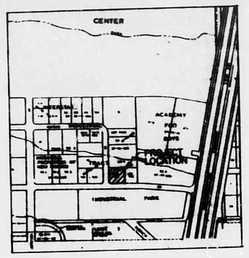
HYDROLOGY

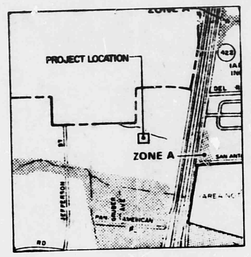
D17/D10
1 PLAN

D17/D10

1 Plan



VICINITY MAP 0-17



FLOOD HAZARD MAP #5

LEGAL
LOT 12-B INTERSTATE
INDUSTRIAL TRACT UNIT 5

SOILS
EMBUDO-EmB

BENCHMARK
CITY OF ALBUQUERQUE
BRASS CAP 1.0M ELEVATION= 5166.92

DRAINAGE PLAN

The following items concerning the Barnett Brothers Drainage Plan are contained hereon: (1) vicinity map, (2) flood hazard map, (3) grading plan and (4) calculations.

The proposed building is located at the northeast corner of the intersection of Ellison Street N.E. and Hawkins Street N.E. The building will be used as office space with associated adjacent parking for employees and customers.

The land to the east of the project site is developed and graded so that all flows are directed to Ellison Street. The land to the south and west of the project site is city streets and is parallel with or lower than the project site. The land to the north is developed and graded so that all flows go to Hawkins Street. Therefore, no offsite flows enter the project site. The project (1) does not lie in a flood plan, (2) does not lie adjacent to a natural or artificial water course and (3) has no drainage easements on the property.

The grading plan shows (1) existing contours at 1'0" intervals, (2) proposed grades indicated by spot elevations and contours, (3) swales, (4) continuity between proposed and existing elevations, (5) that all runoff will be conducted into a pond before leaving the site, (6) that retaining walls will not be required and (7) that erosion will not result from upland runoff or construction.

Calculations

Area of Parcel = 28,767 s.f. = 0.66 ac.
Impervious Area = 8,823 s.f. = 0.20 ac.

Composite Cn = $\begin{bmatrix} .20 \\ .66 \end{bmatrix}$ 98 + $\begin{bmatrix} .46 \\ .66 \end{bmatrix}$ 79 = 85

From Plate 4 Farmington & ponding = 16%
Required Pond Volume = 28,767 (.16) 2.4 ÷ 12 = 921 c.f.

Pond Volume = $\frac{(3.2 + 2.0)}{2}$ 400 (1) = 1040 c.f.

Q_5 = 0.4 (5.4) 0.66 = 1.43 c.f.s.

Orifice Calculation

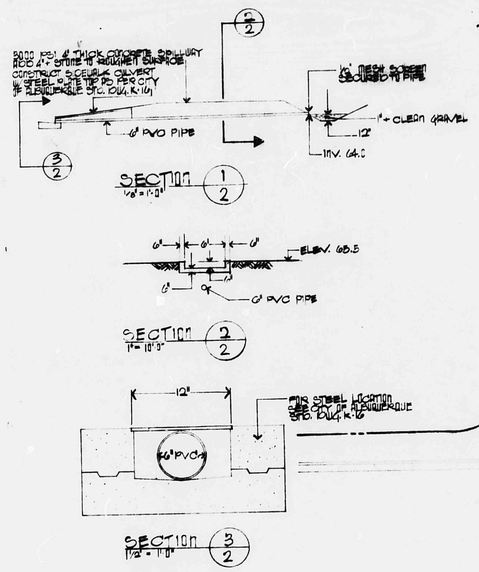
$19.636\ kd^2\sqrt{h} = 19.636\ (0.61)\ (6)^2\ \sqrt{1} \div (7.5 \times 60) = 0.96$ c.f.s.

use 1-6" PVC pipes

Q_{100} = 0.57 (5.4) 0.66 = 2.03 c.f.s.

Spillway

$Q = 3.33\ wh^{3/2} = 3.33\ (6)\ (.5)^{3/2} = 7.06$ c.f.s.



LEGEND

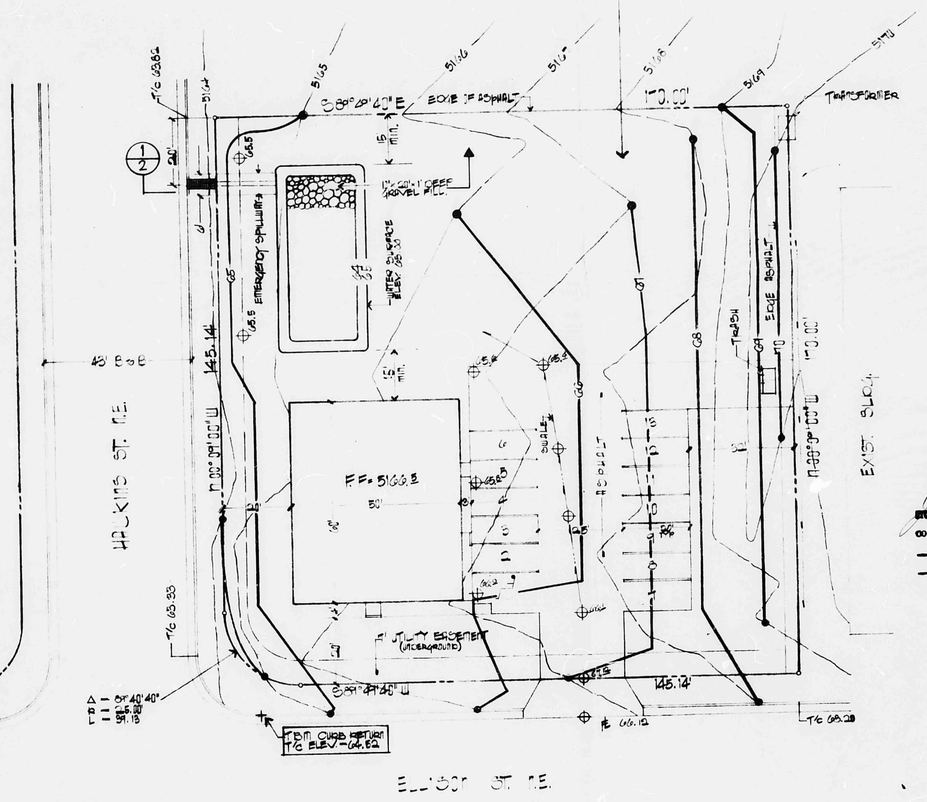
EXIST. CONTOURS
PROPOSED CONTOURS
EXIST. SPOT ELEVATION
PROPOSED SPOT ELEVATION

Scale: 1" = 20'

We propose that the erosion control requirements be satisfied by seeding the disturbed areas (except paved areas) with the following grass mixture:

Species	Variety or Origin	Pure Live Seed Lbs/Acre
Annual Rye Grass	New Mexico, Colorado, Arizona	8.0
Giant dropseed	New Mexico	2.0
Sand dropseed	New Mexico	1.0
Indian ricegrass	Paloma	4.0
Sideoats grama	Vaughn	6.0
	Total	21.0

The seeded area shall be fertilized and irrigated as necessary to insure the grasses become established. This work shall be performed within 15 days after completion of the site grading.



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TITLE
CONTINGENCIES Approved S.O. 69

REGISTERED PROFESSIONAL ENGINEER
STATE OF
THOMAS T. MARR JR.
NEW MEXICO
REGISTERED LAND SURVEYOR
10/23/81
11/11/81

JOB NO. 1108

MARR ENGINEERING
81 DALLAS N.E. - ALBUQUERQUE - NEW MEXICO 87108
ENGINEERS

DURA BILT PRODUCTS, INC.
GENERAL CONTRACTORS LICENSE NO. 3044
4808 JEFFERSON NE PH 883-9100 ALBUQUERQUE NM 87109

BARNETT BROS
5001 ELLISON NE

DATE: 4 NOV 81
JOB NO: 81-122

SHEET NO: 2
OF 6

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