HYDROLOGY

L21/D25
1 PLAN

L21/D25

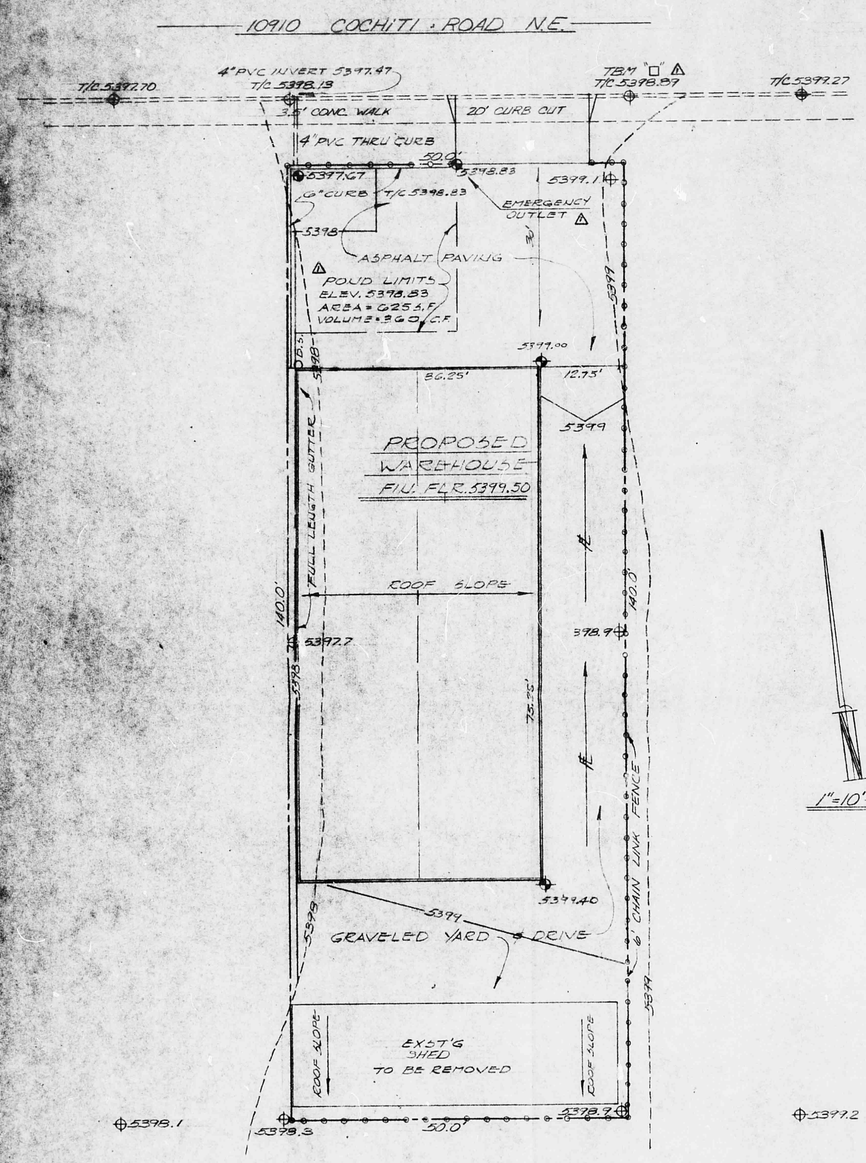
1 PLAN

DRAINAGE PLAN

LOT 15, BLOCK 11, EAST CENTRAL BUSINESS ADDITION
ALBUQUERQUE, NEW MEXICO

ZONE MAP L-21 BENCHMARK 5-L21(R) ELEV. 5466.53
FLOOD MAP 37 SOIL TYPE "B"
TOTAL AREA: 7000 SQ.FT. = 0.161 ACRES
TOTAL AREA ROOFED OR PAVED: 6000 S.F. = 86%
FLOOD HAZARD AREA 600' WEST
AT COCHITI & BRITT

FILE # L21/D25 APPROVED:



1"=10'-0"

HYDROLOGY:

OFF-SITE FLOW: MINIMAL SHEET FLOW FROM DEVELOPED AREAS TO THE EAST, 0.50 ACRES MAX.

ON-SITE FLOW: 100 YEAR - 6 HOUR STORM = 2.42", I = 2.3 × 2.42 = 5.57"

C = 0.82, Q = 0.82 × 5.57 × 0.161 = 0.74 CFS

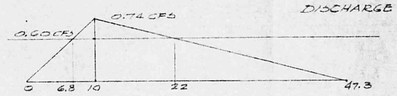
TOTAL MAX. RUNOFF, PER DPM 22.2 D-4, CN 92 = 1.75" = 0.15'

VOLUME = 0.15' × 7000 S.F. = 1050 CU.FT. FOR CONTROLLED DISCHARGE

ASSUME 4" PVC PIPE WITH HEAD = 98.83 - 97.47 = 1.36' = 4.12 h

PER ACP, FIG. 33, PG. 230, Q = 0.60 CFS - DURATION = 1050 × 2 / 0.74 = 47.3 MINUTES

DISCHARGE = 15.2 MIN. × 60 × 0.60 CFS = 547.2 C.F.
6.8 MIN. × 60 × 0.30 CFS = 122.4 C.F.
25.3 MIN. × 60 × 0.30 CFS = 455.4 C.F.
1125 C.F.



STORAGE REQ'D = 15.2 × 60 × 0.14 / 2 = 64 CU.FT.
AREA AVAILABLE = 25' × 25' = 625 SQ.FT.
REQ'D AVERAGE DEPTH = 64 / 625 = 0.10'
DEPTH AVAILABLE = 98.83 - 97.67 = 1.16 / 2 = 0.58'

POND VOLUME POTENTIAL = 625 × 0.58' = 362.5 CU.FT. → ADEQUATE
(NO PONDING WAS NOTED ON OTHER RECENT PROXIMATE CONSTRUCTION)

HYDRAULICS:

12' EAST SWALE: CARRIES 0.30 CFS FROM REAR, DEPTH = 3", SLOPE = 0.0050, n = 0.25
Q = 160 S.F. × 1.486 × 0.25 × 0.071 / 0.025 = 1.70 CFS - ADEQUATE

20' CURB CUT: EMERGENCY SPILLWAY CARRIES 0.74 CFS, DEPTH = 0.20', SLOPE = 0.0050, n = 0.17
Q = 4.0 S.F. × 1.486 × 0.342 × 0.071 / 0.017 = 8.50 CFS - ADEQUATE

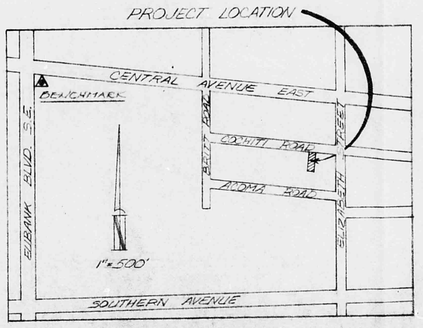
EROSION CONTROL NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE TO THE FOLLOWING:

1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE THE SITE DURING CONSTRUCTION.
2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING.
3. ANY AND ALL SEDIMENTATION ORIGINATING ON THE SITE WHICH IS DEPOSITED WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PROMPTLY AND COMPLETELY REMOVED BY THE CONTRACTOR.

LEGEND:

PROPERTY LINE
EXISTING CONTOURS 5372
PROPOSED CONTOURS 5370
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
FLOW DIRECTION
EXISTING CHAIN LINK FENCE
EXISTING CURB



VICINITY MAP

RECEIVED
SEP 04 1985
HYDROLOGY SECTION

DUANE LEE LOGAN N.M. 2300 REGISTERED PROFESSIONAL ENGINEER

8-30-85 7-25-85

DUANE LOGAN
CONSULTING CIVIL ENGINEER
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ALBUQUERQUE, NEW MEXICO 87102

DRAINAGE PLAN	File #
For: RON BARRON	Date 7/1/85
At: 10910 COCHITI ROAD S.E.	Drawn
ALBUQUERQUE, NM	Sheet 1 of 1