HYDROLOGY M16/D17 1 PLAN

M16/D17

1 Plan

INFORMATION SHEET

PROJECT TITLE Office Building For Don Dean

TYPE OF SUBMITTAL Grading Plan and Drainage Report

Q17

ZONE ATLAS PAGE NO. M-16 CITY ADDRESS

LEGAL DESCRIPTION Lot 12-B, Airport Industrial Park

ENGINEERING FIRM Engineering Associates, Inc. CONTACT August F. Mosimann,P.E.

ADDRESS 1840 Lomas N. E. PHONE 242-7522

OWNER Arnell Brokerage CONTACT

ADDRESS 2820 E. Broadbent PK NE PHONE 345-8825

ARCHITECT Tom Lucero CONTACT Tom Lucero

ADDRESS 1401 Kit Carson Ave SW PHONE 247-1917

SURVEYOR Albuquerque Surveying Co. Inc. CONTACT Fred Sanchez

ADDRESS 3119 Menaul Blvd. NE PHONE 884-2036

CONTRACTOR Don Dean Const. CONTACT Don Dean

ADDRESS 10300 Constitution Ave NE PHONE 296-9428

DATE SUBMITTED Nov. 30,1983

BY August F. Mosimann,P. E.

Foundation Only
Released
12/12/83

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NOV 30 1983
ENGINEERING

DRAINAGE STUDY

FOR

OFFICE BUILDING FOR DEAN CONSTRUCTION

PROJECT DESCRIPTION

New construction will include a 3221 Sq. Ft. building with 8779 Sq. Ft. of paving and a 4119 Sq. Ft. of unpaved area which will contain a temporary holding facility for storm waters. A pump will be provided to remove the storm water to Baylor St. which fronts the site on the south. The total site area is 16119 Sq. Ft.(0.3701 Acres).

LEGAL DESCRIPTION

Lot 12-A, AIRPORT INDUSTRIAL PARK

EXISTING SITE STUDY

The site is undeveloped. Runoff is toward the North across an adjacent lot and then into Alamo St.

The impervious portion is 0%
The soil classification is "A", Cu
(Soil Survey Sheet 31)
The "C" factor is .18
(Plate 22.2 C-1)
The runoff length is 160 ft.
The slope is 7.0%
The Concentration time is .0078x(160^.77)/(.070^.385)=1.08 min
(10 min minimum)
The average velocity is 160/(10x60)=0.26 ft/sec
The 100 year-6 hour precipitation amount is 2.3 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.3x0.657=1.51 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.3=4.95 in/hr.
The 10 year intensity is 2.15x1.51=3.25 in/hr.
The 100 year flow rate is Q=CxIxA=0.18x4.95x0.3701=0.33 cfs
The 10 year flow rate is Q=CxIxA=0.18x3.25x0.3701=0.22 cfs
The 100 year volume is V=CxPxA=0.18x2.3x16119/12=556 cu. ft.
The 10 year volume is V=CxPxA=0.18x1.51x16119/12=365 cu. ft.

OFFSITE FLOWS

There are no offsite flows affecting the site. They are intercepted by the curb and gutter in Baylor St. to the south.

RECEIVED

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ENGINEERING

DEVELOPED SITE STUDY

As described under project description above, the site will have approximately 12000 Sq. Ft. of impervious areas and 4119 of unpaved areas which will include a pond.

The impervious portion is 75%
The soil classification is "A", Cu
(Soil Survey Sheet 31)
The "C" factor is .60
(Plate 22.2 C-1)
The runoff length is 160 ft.
The slope is 7.0%
The Concentration time is .0078x(160^.77)/(.070^.385)=1.08 min
(10 min minimum)
The average velocity is 160/(10x60)=0.26 ft/sec
The 100 year-6 hour precipitation amount is 2.3 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.3x0.657=1.51 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.3=4.95 in/hr.
The 10 year intensity is 2.15x1.51=3.25 in/hr.
The 100 year flow rate is Q=CxIxA=0.60x4.95x0.3701=1.10 cfs
The 10 year flow rate is Q=CxIxA=0.60x3.25x0.3701=0.72 cfs
The 100 year volume is V=CxPxA=0.60x2.3x16119/12=1853 cu. ft.
The 10 year volume is V=CxPxA=0.60x1.51x16119/12=1217 cu. ft.

FLOOD CONTROL

A 60 ft.x30 ft.x1.5 ft. basin will be provided at the downstream end of the property. The volume provided will be 2700 Cu. Ft. which is greater than the 100 year volume of 1853 Cu. Ft. A sump pit with a pump will drain the pond into Baylor Avenue within 24 hours.

ROBERT R. COBLIAN
STATE OF CALIFORNIA
CO. 0903
REGISTERED PROFESSIONAL ENGINEER

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

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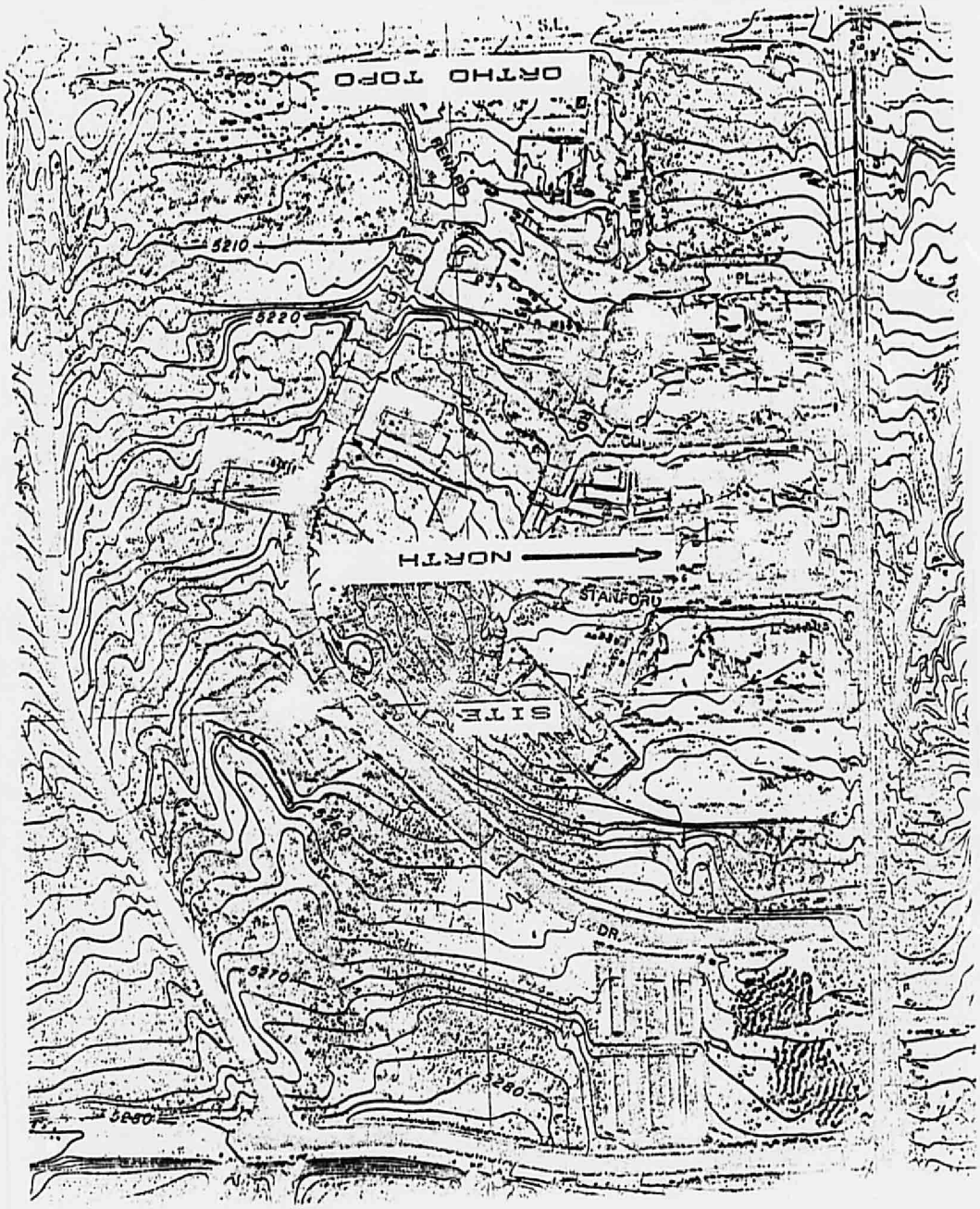

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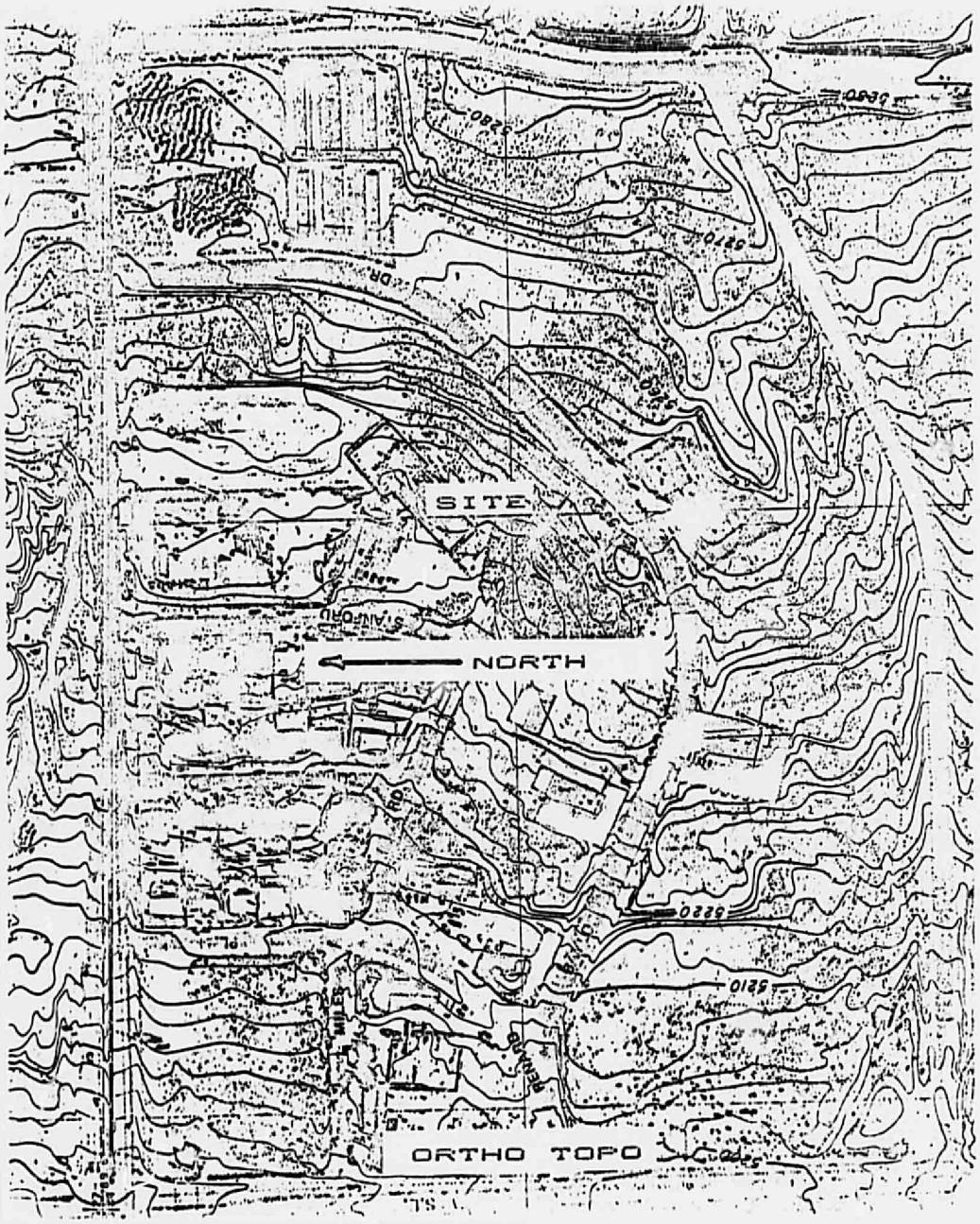
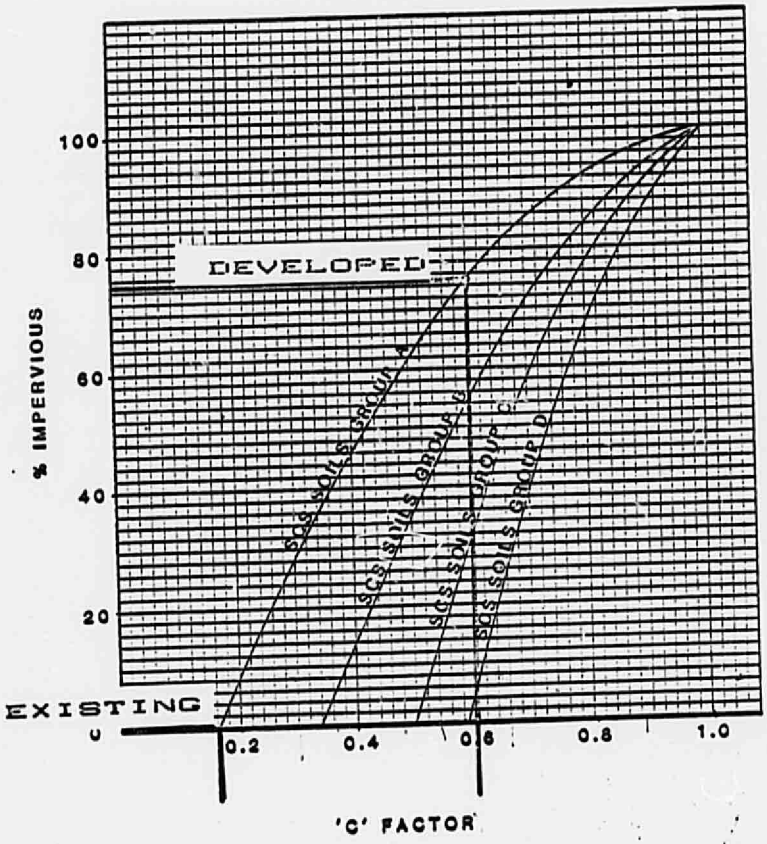


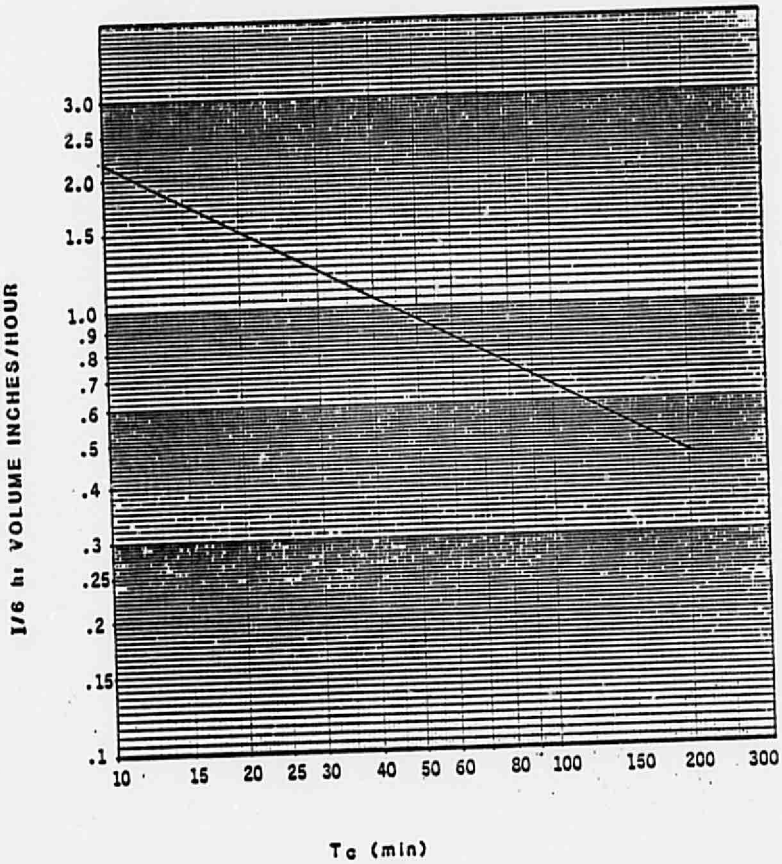
DRAINAGE CRITERIA

DETERMINATION OF RATIONAL FORMULA 'C' FACTOR



DIMENSIONLESS RAINFALL INTENSITIES

$I = (6\text{-hr. rain})\, 6.84\, t_c^{-0.51}$



note: To get actual intensities, multiply rainfall volume from plate D-1 by value from curve. Use reduction factors on Plate D-1 for other than 100-yr.

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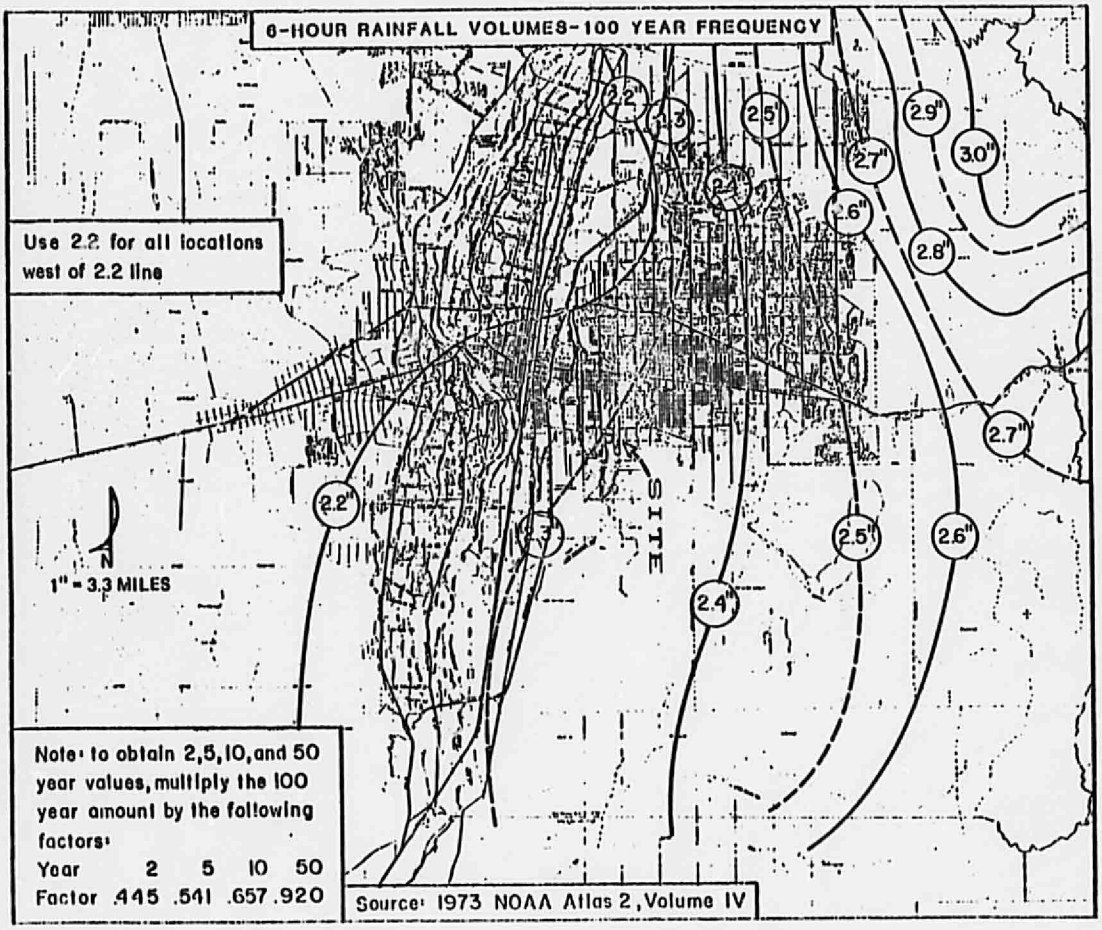
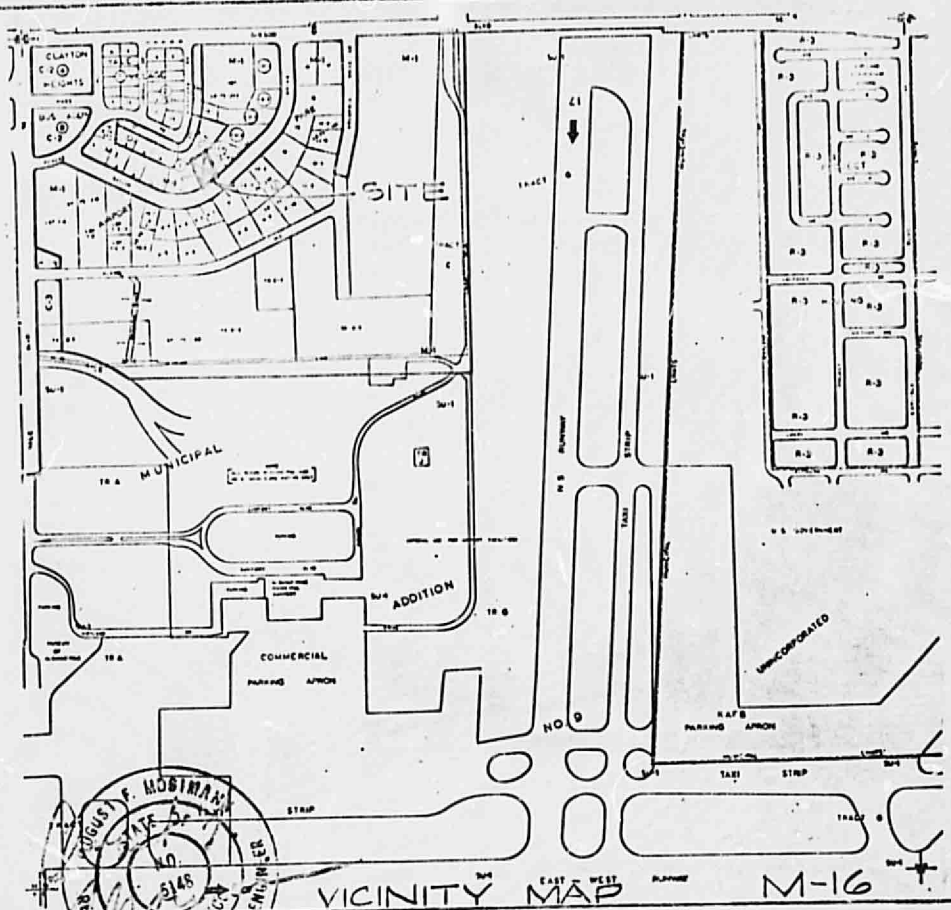


File

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



VICINITY MAP M-16

AUGUST F. MOSTMAN STATE OF NEW MEXICO NO. 5148 REGISTERED PROFESSIONAL ENGINEER

NOTICE TO CONTRACTOR M16-D17

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 31 "

3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.

4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.

5. Backfill compaction shall be according to RESIDENTIAL street use.

P-10158 Ouivaramillo Con C-154

APPROVALS	NAME	DATE
A.C.E./DESIGN	[illegible]	11/8/83
INSPECTOR	[illegible]	3/19/84
A.C.E./FIELD	[illegible]	3-20-84 3-20-84

TITLE: OFFICE BUILDING FOR DON DEAN 2501 BAYLOR DR.

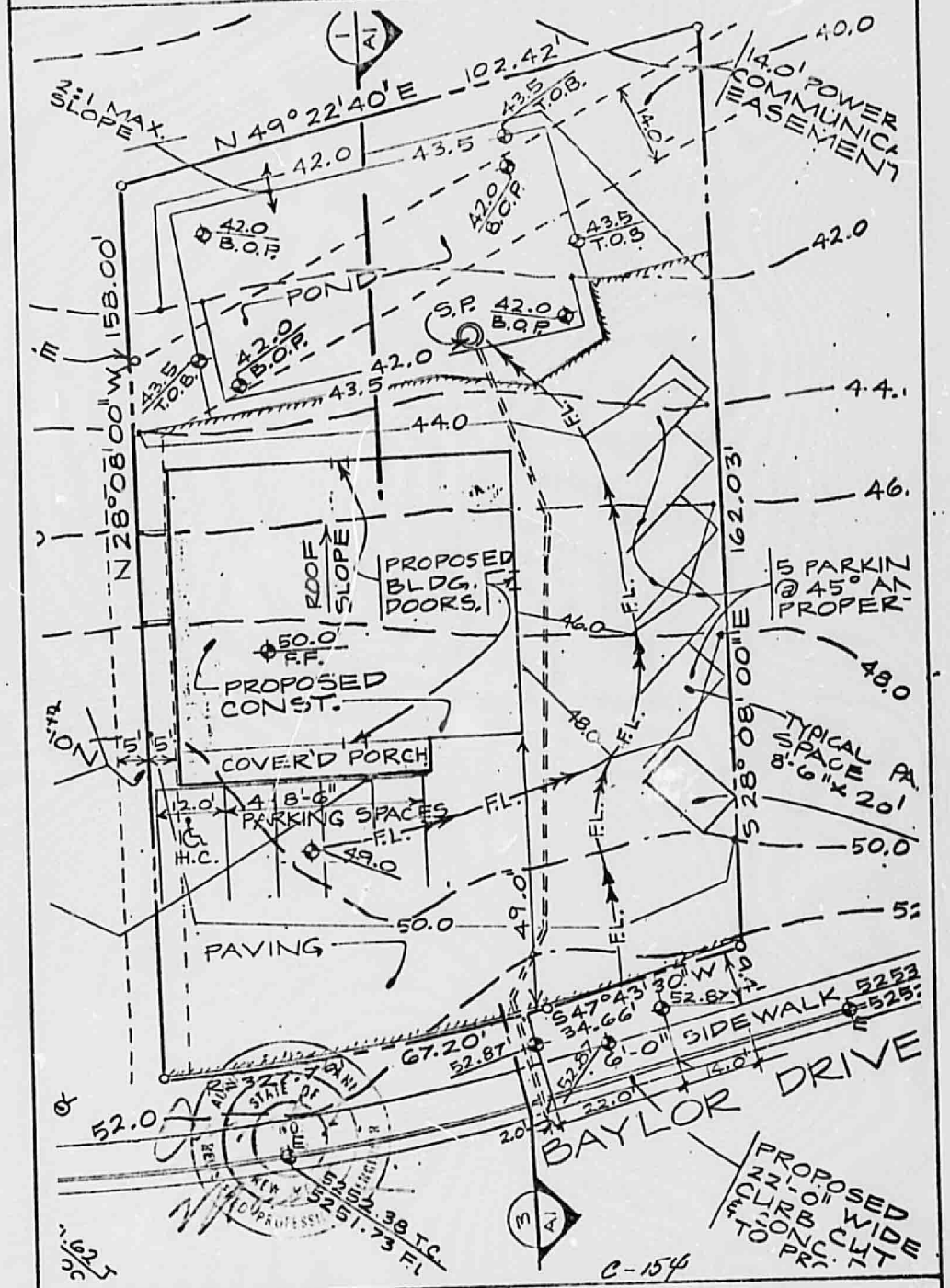
PERMIT NO.

SHEET 1 OF 3

MAP NO. M-16

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



APPROVALS	NAME	DATE
A.C.E./DESIGN	[illegible]	11 Dec 83
INSPECTOR	[illegible]	3/9/84
A.C.E./FIELD	[illegible]	3-20-84

TITLE: OFFICE BUILDING FOR DON DEAN 2501 BAYLOR DR.

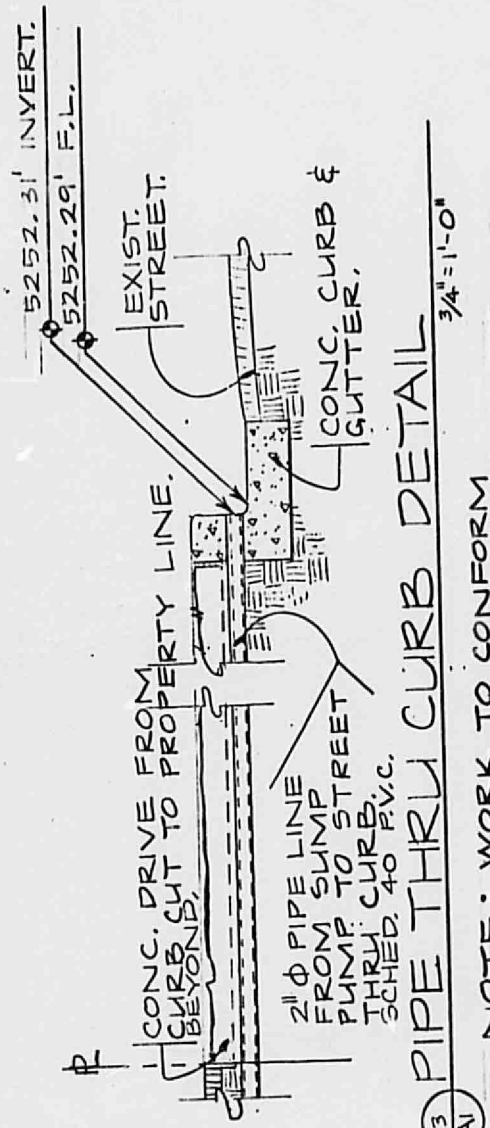
PERMIT NO.

SHEET 2 OF 3

MAP NO. M-16

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



3/4" = 1'-0"

3 / A1 PIPE THRU CURB DETAIL

NOTE: WORK TO CONFORM TO CITY STD. DETAIL DRAWING K-15.

AUGUST F. MOSIMANN STATE OF NEW MEXICO 6142 PROFESSIONAL ENGINEER

C-154

APPROVALS	NAME	DATE	TITLE: OFFICE BUILDING FOR DON DEAN 2501 BAYLOR DR.	
A.C.E./DESIGN	G Kelch	11 Dec 83		
INSPECTOR	Perry G	3/19/84	PERMIT NO.	MAP NO. N-16
A.C.E./FIELD	B.J. Hellcher	3-20-84	SHEET 3 OF 3	
	W.J. McCamman	3-20-84		