HYDROLOGY

K19/D41

ONE PLAN

1 PLAN FOR

TEXAS ST. APTS.

K19-D41

GRADING AND DRAINAGE PLAN

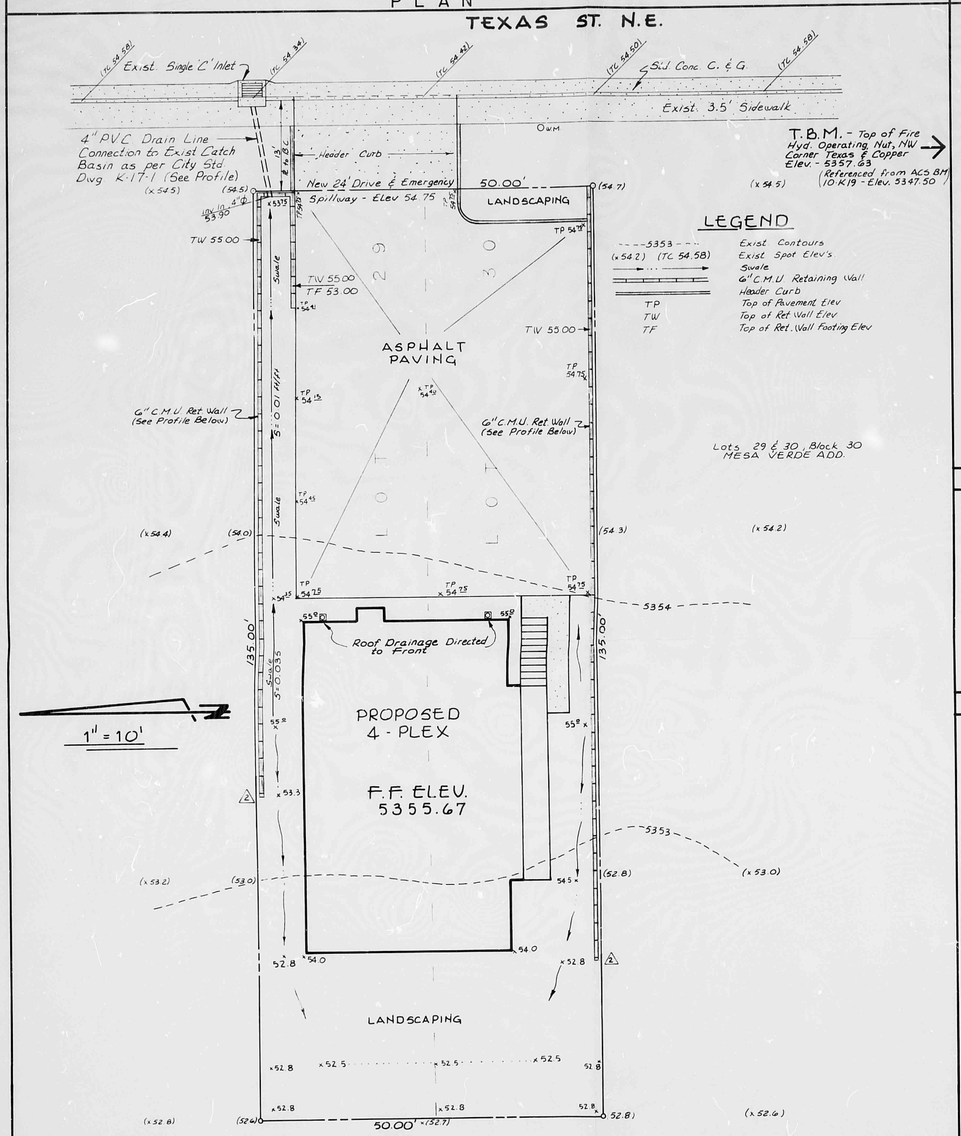
TEXAS STREET APARTMENTS

REVISED FEBRUARY 1984

DECEMBER 1983

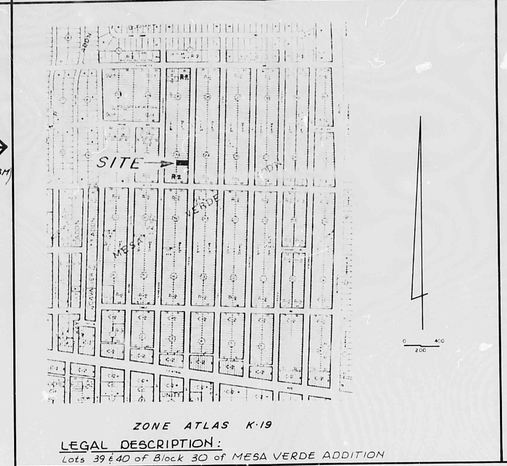
RECEIVED FEB 13 1984 HYDROLOGY SECTION

PLAN



VICINITY MAP

From ABQ ZONE ATLAS K-19

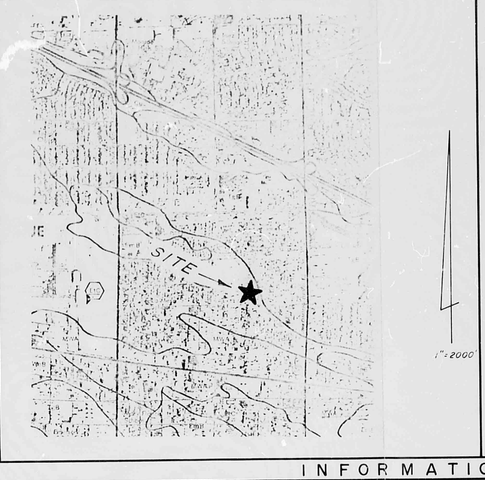


ZONE ATLAS K-19

LEGAL DESCRIPTION:
Lots 39 & 40 of Block 30 of MESA VERDE ADDITION

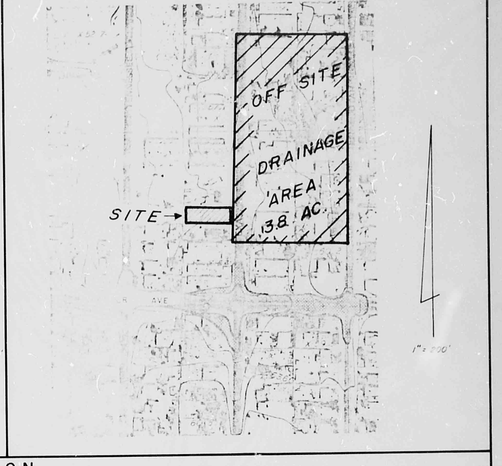
SOILS MAP

From Soil Survey, Bernalillo County - USDA, SCS



FLOOD HAZARD MAP

From ABQ MASTER DRAINAGE STUDY



SOILS INFORMATION

Soil series and map symbols	Depth for	Slope	Depth from surface	Dominant surface texture	Classification: Unified	Classification: AASHTO	Coarse fragments	Percentage passing sieve: No. 4	No. 10	No. 40	No. 200	Liquid limit	Plasticity index	Permeability	Available water capacity	Reaction	Salinity	Shrink-swell potential	Risk of corrosion: Uncoated steel	Concrete
*Embudo - EmB, EnC. *For Tijeras part of EnC see Tijeras series.	>5	5	0-20	Gravelly fine sandy loam and gravelly sandy loam	SM	A-2, A-4		85-95	70-85	60-75	25-50	NP	NP	6.0-8.2	0.02-0.09	7.9-8.4	0-1	Low	Low	Low
			20-60	Gravelly loamy coarse sand	SM	A-1		80-95	50-70	30-45	10-25	NP	NP	>6.0	0.01-0.06	7.9-8.4	0-1	Low	Low	Low
Tijeras - TgE	>5	>5	0-19	Gravelly fine sandy loam and sandy clay loam	SM, CL-ML, or CL	A-4		80-100	60-90	50-80	35-65	30-50		0.60-2.0	0.10-0.16	7.9-8.4	0-1	Low to moderate	High	Low
			19-60	Gravelly sandy loam and very gravelly sandy loam	SM	A-1 or A-2	0-20	70-90	45-70	25-60	15-35	NP	NP	2.0-20.0	0.03-0.09	7.9-8.4	0-1	Low	High	Low

DESCRIPTION:

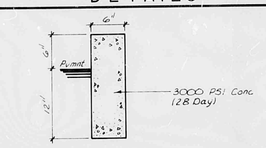
EnC Embudo-Tijeras complex, 0 to 9 percent slopes. This mapping unit is about 50 percent an Embudo gravelly fine sandy loam, 0 to 5 percent slopes, and about 35 percent a Tijeras gravelly fine sandy loam that has 1 to 9 percent slopes.

The Embudo soil is in drainageways and depressions and the Tijeras soil is on low ridges in narrow and blocky areas. The Tijeras soil has the profile described as representative of the Tijeras series. On both soils, runoff is medium and the hazard of water erosion is moderate.

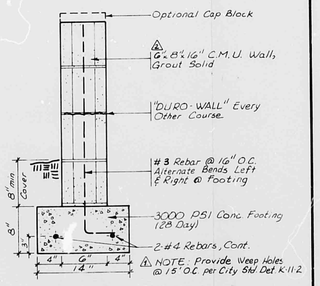
Included in this unit in mapping are areas of Tijeras, Madurez and Wolf soils, which make up about 15 percent of the unit.

This mapping unit is used for community development, wildlife habitat, and range. The Embudo part of this unit is subject to flooding. Control of runoff is required for proper construction. Dwelling capability subclass VIIe; nonarable; community development.

DETAILS



HEADER CURB



RETAINING WALL

HYDROLOGY

General

The 67,0 square foot site (1.16 AC) is currently undeveloped and slopes from east to west at approximately 1%. There is an 18" RCP storm drain in Texas Street (System 201) which flows 240' at a slope of .009 ft/ft to a 36" RCP storm drain in Copper Avenue. The area is almost entirely developed and the proposed development of a four-plex on this site constitutes an **INFILL**.

OFF-SITE - The Albuquerque Master Drainage Plan (AMDP) indicates that flood flows do not leave Texas Street adjacent to the site in the event of 100-year and smaller floods. The AMDP identifies flood hazard area along and in Copper Avenue both east and west of Texas Street. The AMDP also calls for the construction of three storm drainage improvements (292-01B, 203-01A, 203-02A) which are high priority and will largely eliminate the flooding along Copper Avenue. The development of this site in the fashion proposed herein, will not be impacted by off-site flows and will not adversely impact any facilities or properties.

There are two single Type C inlets in Texas Street on either side of the street and directly east of this parcel. The contributing area to these inlets is 3.8 acres or less. The line and inlets have a capacity of 9 cfs and will nearly carry the entire 10.3 cfs, 100-year storm runoff (C = .5, i = 5.4, A = 3.8 acres). The street will easily carry any remaining flows below curb depth.

ON-SITE - The proposed grading plan directs roof and parking lot runoff to the northeast corner of the parcel through a landscaped swale. A 4" diameter PVC pipe is proposed to convey runoff directly into the back of the existing single Type C inlet in Texas Street. In the event the pipe should become clogged, the landscape area and parking lot can safely store more than half the 100-year runoff volume, with the remainder directed through the driveway and into the street.

CALCULATIONS:

100-year rainfall = 2.4 in, i = 5.4 in/hr
Hydrologic Group B soils
C = .9 (asph.) CN = 95 (1.9 in runoff)

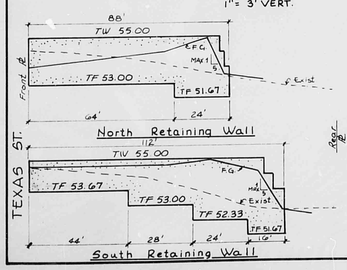
Q = C i A = (.9)(5.4)(.16) = .78 cfs
4" diameter pipe will carry .36 cfs at spillway crest
Runoff volume = (1.9 in) - 12 x 50ft ft2 = 794 ft3
Storage volume at spillway crest = 547 ft3

NOTE: Some runoff may flow through the driveway [illegible] a nuisance [illegible], damage or hazard [illegible].

APPROVED FOR DRAINAGE
3/1/84
Billy Gooding
SIGNATURE
ADVISE DRAINAGE INSPECTOR WHEN GRADING BEGINS
K19/D41

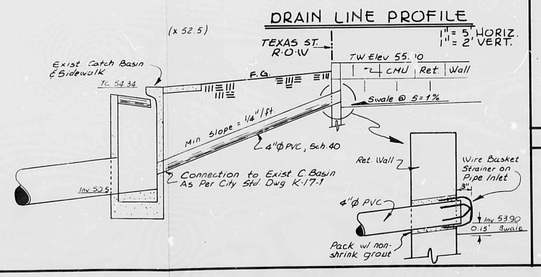
RETAINING WALL PROFILES

1" = 30' HORIZ.
1" = 3' VERT.



DRAIN LINE PROFILE

1" = 5' HORIZ.
1" = 2' VERT.



EROSION CONTROL

The site will be fully developed immediately. Erosion problems generated by phased development will not, therefore, be a problem.

CONSTRUCTION PHASE: The contractor shall exercise reasonable care during construction to prevent the movement of sediment from the site into the street. Loose soil stockpiled in the street during utility connection activities shall be protected from being carried downstream by flowing water in the street.

DATE: 2-7-83

LEVERTON - EASTERLING, INC.
CONSULTING ENGINEERS • LAND SURVEYING • LAND PLANNING
5629 PARADISE BLVD. NW • ABQ. NM 87114 • (505) 897-8021

1. Revision Jan 3, 1984 Added Weep Hole Note to Retaining Wall
2. Revision Feb 3, 84 Revised Retaining Wall & Adjacent Grades

SHEET 1 OF 1