HYDROLOGY

F18/D33

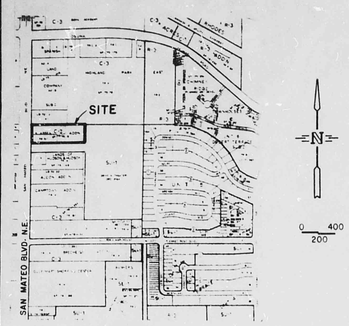
TWO PLANS

2 PLANS FOR

SAN MATEO MINI WARE-
HOUSE

F-18-D 33

VICINITY MAP *From City of Albuquerque Zone Atlas F-18*

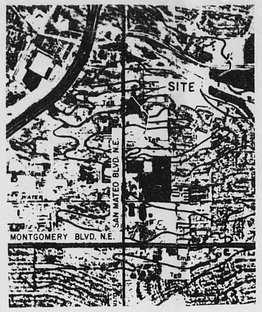


LEGAL DESCRIPTION:

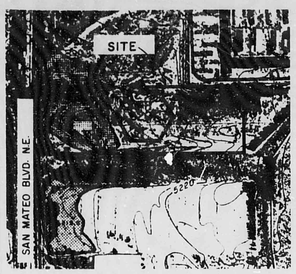
Tracts B & B-1 of the Klossen Addition, Albuquerque, N.M.; Filed March 27, 1978 in Volume B14, Folio 122

Zone Atlas *F-18*

SOILS MAP *From Soil Survey, Bernalillo County - USDA, SCS*



FLOOD HAZARD MAP *From ABQ. Master Drainage Study*



NOTE:
The Flood Plain Shown Has Been Eliminated By Upstream Drainage Improvements Recently Constructed on the Adjacent (East and South) Property.

SOILS INFORMATION

Soil series and map symbols	Degree and kind of limitations for—						Suitability as source of—				Soil features affecting—		Hydrologic soil group
	Septic tank absorption fields	Sewage lagoons	Shallow excavations	Dwellings without basements	Sanitary landfill (trench type)[1]	Local road and streets	Road fill	Sand	Gravel	Topsoil	Pond reservoir areas	Dikes, levees, and other embankments	
*Embudo: EmB, EtC. For Tijeras part of EtC, see Tijeras series.	Slight[2]	Severe: seepage.	Moderate:[2] small stones.	Slight[2]	Severe: seepage.	Slight	Good	Poor: excess fines.	Poor: excess fines.	Poor: small stones.	Seepage	Piping, compressible	B
Tijeras: TgB	Slight	Severe: seepage.	Severe: small stones; cutbanks cave.	Moderate: shrink swell.	Severe: seepage.	Moderate: shrink swell; low strength.	Fair: shrink swell; low strength.	Poor: excess fines.	Poor: excess fines.	Poor: small stones.	Seepage	Low strength; piping.	B

[1] Some local areas are subject to flooding.
[2] Soil is subject to consolidation under load.

DESCRIPTION:

EtC—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 undulations. 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 Tesajo, Millett, and Wink soils, which make up about 15 percent of the unit.

This mapping unit is used for community development, watershed, wildlife habitat, and range. The Embudo part of this unit is subject to flooding. Control of moisture is required for proper compaction. Dryland capability subclass VIIe; native plant community 4.

TgB—Tijeras gravelly fine sandy loam, 1 to 5 percent slopes. This nearly level to gently sloping soil is on old alluvial fans on the East Mesa. It has a profile similar to that described as representative of the series, but has a yellowish brown surface layer about 6 inches thick and has less gravel and more lime between depths of 10 and 30 inches.

Included with this soil in mapping are areas of Embudo, Madurez, and Latene soils, which make up 20 percent of the unit.

Runoff is moderate, and the hazard of water erosion is moderate.

This soil is used for community development, range, watershed, and wildlife habitat. Dryland capability subclass VIIe; native plant community 4.

DRAINAGE INFORMATION

EXISTING CONDITIONS

Offsite - The existing San Mateo Storm Drain System has the capacity to accept the runoff from this development. It was originally designed to collect runoff from the two existing 24" CMP storm drain lines within the tract. The combined capacity of the two lines exceeds 30 cfs. The upland offsite contributing area is currently completely developed. Offsite areas have been required to do onsite ponding and to direct runoff away from this site through the use of storm drains and retaining walls.

Onsite - This site is partially developed. The area that is developed is almost entirely impervious. The balance is covered by sparce native vegetation. All runoff flows to one of the two existing storm drain catch basins and thence into the San Mateo Storm Drain System.

DEVELOPED CONDITIONS

Onsite - The site is planned for full and immediate development as shown on the plan. All runoff will be directed to the existing catch basin located along the south boundary which has ample capacity for the 100-year developed runoff. Should the grate become clogged, approximately 2.5 times the 100-year runoff volume could be stored before spilling out the north driveway into San Mateo Blvd.

HYDROLOGY:

	AP ø	DA AC	H FT	S FT/FT	L FT	T_C MIN	SOIL TYPE	% IMP	CN	C	P_2 IN	P_{10} IN	P_{100} IN	i_2 IN/HR	i_{10} IN/HR	i_{100} IN/HR	V_2 FT^3	V_{10} FT^3	V_{100} FT^3	Q_2 CFS	Q_{10} CFS	Q_{100} CFS
Existing Conditions	1	2.64	12	.020	610	4.91	B	39	70	.52	1.0	1.5	2.3	2.18	3.27	5.01	ø	958	3642	3.0	4.5	6.9
Developed Conditions	1	2.64	6.5	.011	590	6.02	B	90	92	.86	1.0	1.5	2.3	2.18	3.27	5.01	3833	7667	14,374	4.9	7.4	11.4

NOTES:

- Existing conditions direct all drainage to existing catch basin on south property line or on west property line.
- Developed conditions direct all drainage to existing catch basin on south property line.
- Minium Tc of 10 minutes used in calculations.

CATCH BASIN:

- Elevation h above 24" pipe:
  $Q = CA\sqrt{2gh}$ C = .6, Q = 6.43 cfs, A = 3.14 sq ft
  h = .18 ft = 2.2 inches
- Effective x-sectional area of grate
  34 sq in grate, 1/2" bars, 1 1/4" oc
  A = 600 sq in = 4.17 sq ft,
  V = Q/A = 6.43 cfs/4.17 fps = 1.5 fps
- Capacity of 24" CMP
  S = .02 n = .024 Q max = 17 cfs

MOUNTAIN SHADOWS RETAIL CENTER

AMENDED

GRADING AND DRAINAGE PLAN

GENERAL NOTES:

Two (2) working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.

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 or surveyor so that the conflict can be resolved with minimum amount of delay.

All utilities and utility service lines shall be installed prior to paving.

Backfill compaction shall be according to specified street use.

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.

RECEIVED
APR 17 1986
HYDROLOGY SECTION

NO.	REVISIONS	BY	DATE

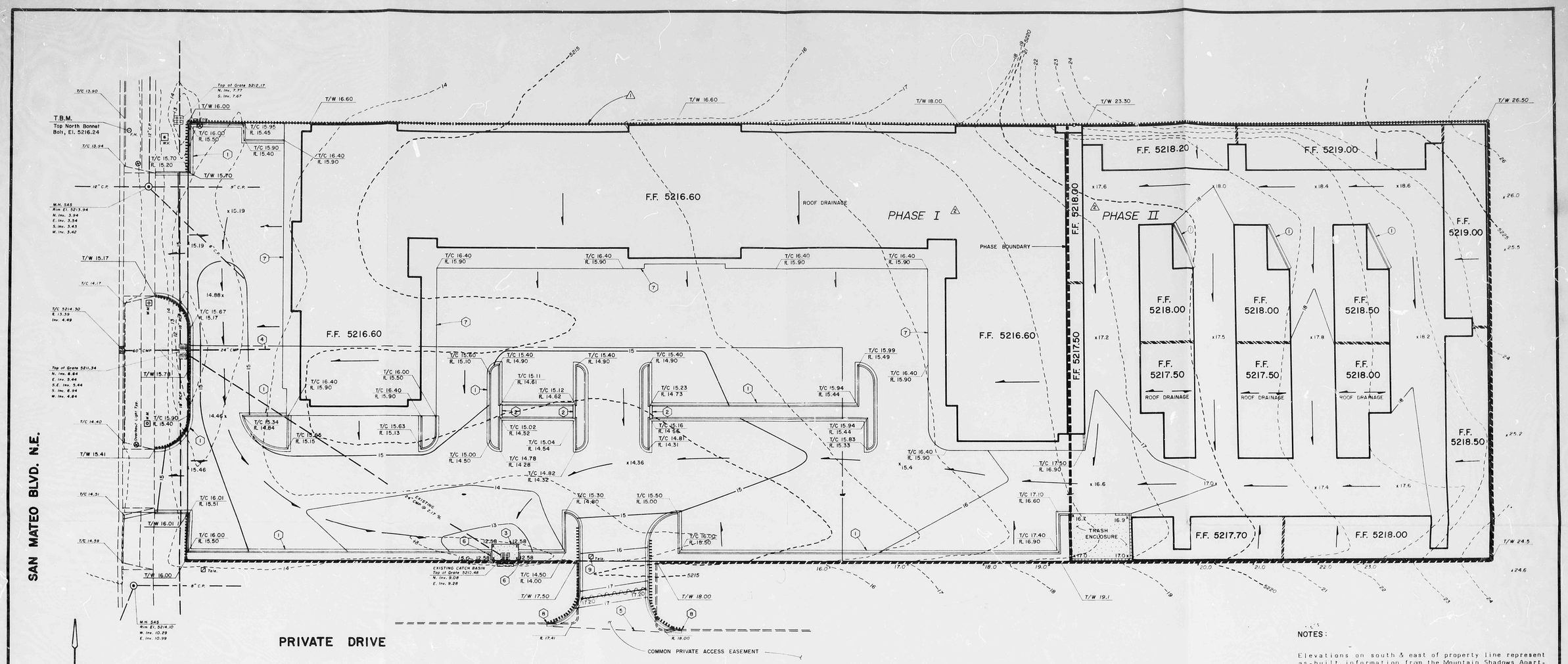
MOUNTAIN SHADOWS RETAIL CENTER
AMENDED
GRADING & DRAINAGE PLAN

5-22-85

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
5643 Paradise Blvd. N.W.
Albuquerque, New Mexico 87114

Designed:	Drawn:	Checked:	Sheet 1 of 2
Job No: 400703	Date: MAY 22, 1985		

F18/D33

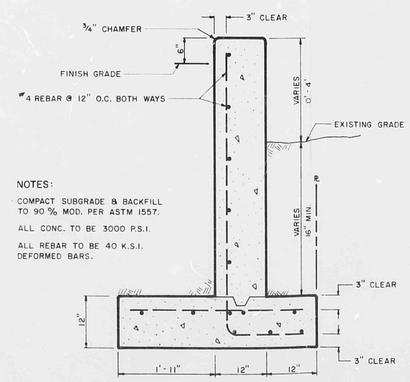


LEGEND :

EXISTING INFORMATION	T/C 14.40
EXISTING CONTOURS	---14----
EXISTING RETAINING WALL	
PROPOSED INFORMATION	T/C 14.40
PROPOSED CONTOUR	—— 16 ——
PROPOSED SPOT ELEVATION	x 15.5
PROPOSED RETAINING WALL	
DIRECTION OF FLOW	
FINISH FLOOR ELEV. DIVIDE	

KEYED NOTES :

1. Median curb and gutter, see Detail 1. Provide 1" bituminous filler between curbing and retaining wall in those cases where curbing runs alongside retaining wall.
2. Concrete rundown, see Detail 2.
3. Construct 8' x 12' x 6" thick concrete pad with 6" x 6" No. 6 gauge wire mesh around existing catch basin.
4. Cap and block abandoned 24" CMP and remove remainder of line.
5. Match existing asphalt.
6. Tie curb back to existing retaining wall.
7. Monolithic curb and sidewalk, see Detail 3.
8. Tie to existing curb.
9. Relocate existing telephone pole.



NOTES:

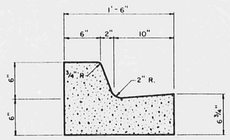
COMPACT SUBGRADE & BACKFILL TO 90 % MOD. PER ASTM 1557.

ALL CONC. TO BE 3000 P.S.I.

ALL REBAR TO BE 40 K.S.I. DEFORMED BARS.

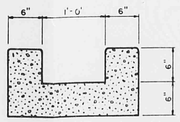
RETAINING WALL DETAIL

SCALE : 3/4" = 1'-0"



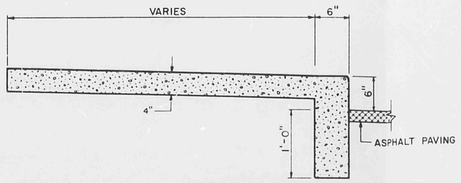
DETAIL 1

N.T.S.



DETAIL 2

SCALE : 1" = 1'-0"



DETAIL 3

N.T.S.

NOTES :

Elevations on south & east of property line represent as-built information from the Mountain Shadows Apartment Complex.

Retaining wall to be incorporated into building walls wherever possible.

Vertical Datum Is Based On The City Of Albuquerque Bench Mark "N.M. 367-1" El. 5210.60. △1

RECEIVED APR 17 1986 HYDROLOGY SECTION

NO.	REVISIONS	BY	DATE
△2	ADD PHASE BOUNDARY DELINEATIONS	M.S.	4-18-86
△1	ADD VERTICAL DATUM, & TAPE TO NORTH RETAINING	M.S.	7-1-85

MOUNTAIN SHADOWS RETAIL CENTER

AMENDED

GRADING & DRAINAGE PLAN

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
5643 Paradise Blvd. N.W.
Albuquerque , New Mexico 87114

Designed:	Drawn: M.S.	Checked:	Sheet 2 of 2
Job No: 400703	Date: MAY 22, 1985		

5-22-85

F18/D33