CITY OF
Albuquerque

October 30,1998

Marvin R. Kortum
Kortum Engineering
1605 Speakman Dr. SE
Albuquerque, New Mexico 87123

RE: ENGINEER CERTIFICATION FOR FINANCIAL GUARANTEE RELEASE FOR
CANYON BREEZE II (F21-D70) CERTIFICATION STATEMENT DATED 10/14/98
W.O. # 5639.82 DRB # 97-16

Dear Mr. Kortum:

Based on the information provide on your October 15,1998 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
Terri Martin
file -

Sincerely
Bernie J. Montoya
Bernie J. Montoya CE
Associate Engineer

5639.82 W.O.
DRB 97-16

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Canyon Breeze II ZONE ATLAS/DRNG. FILE #: F-21/D70

LEGAL DESCRIPTION: Canyon Breeze II Subdivision

CITY ADDRESS: 4600 block of Morris Street, NE

ENGINEERING FIRM: Marvin R Kortum CONTACT: Marvin R Kortum

ADDRESS: 1605 Speakman Dr. SE Albuquerque, NM 87123 PHONE: (505) 299-0774

OWNER: Keith Macduffee, Ellis Realty CONTACT: 298-8400; M;250-9100

ADDRESS: 3809 Eubank Blvd. NE Albuquerque, NM 87111 PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

____ NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

X ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

X CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

____ OTHER _____ (SPECIFY)

RECEIVED
OCT 15 1998
HYDROLOGY SECTION

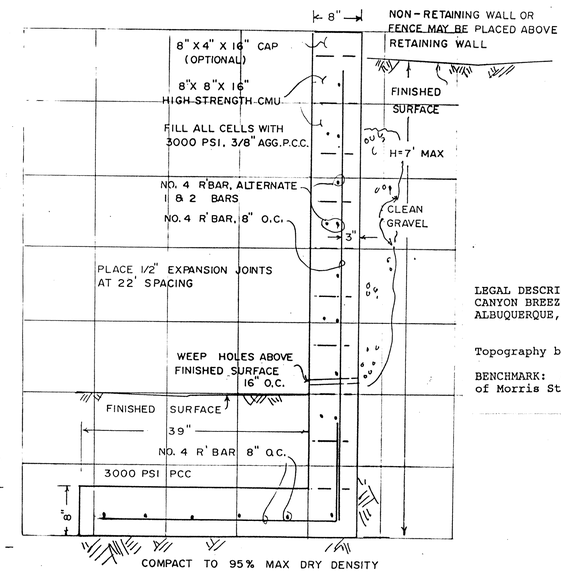
DATE SUBMITTED: OCTOBER 14, 1998

BY: Marvin R Kortum

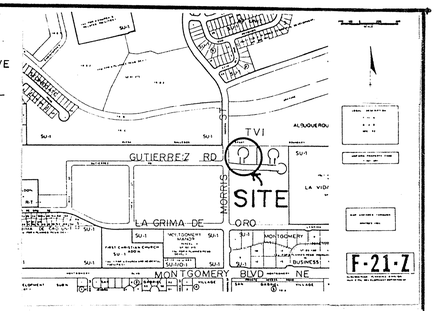
I certify that I have inspected the Canyon Breeze II Townhouse site and that the building finished floor elevations for house floors in place and rough grading for lots without buildings are in substantial compliance with the grading and drainage plan (F-21/D-70) as approved by letter dated July 14, 1997, from the City of Albuquerque Public Works Department, Hydrology Section. Elevations and as-built conditions are as noted.

Marvin R. Kortum NMPE 6519 October 14, 1998

MARVIN R. KORTUM NEW MEXICO 6519 REGISTERED PROFESSIONAL ENGINEER October 14, 1998



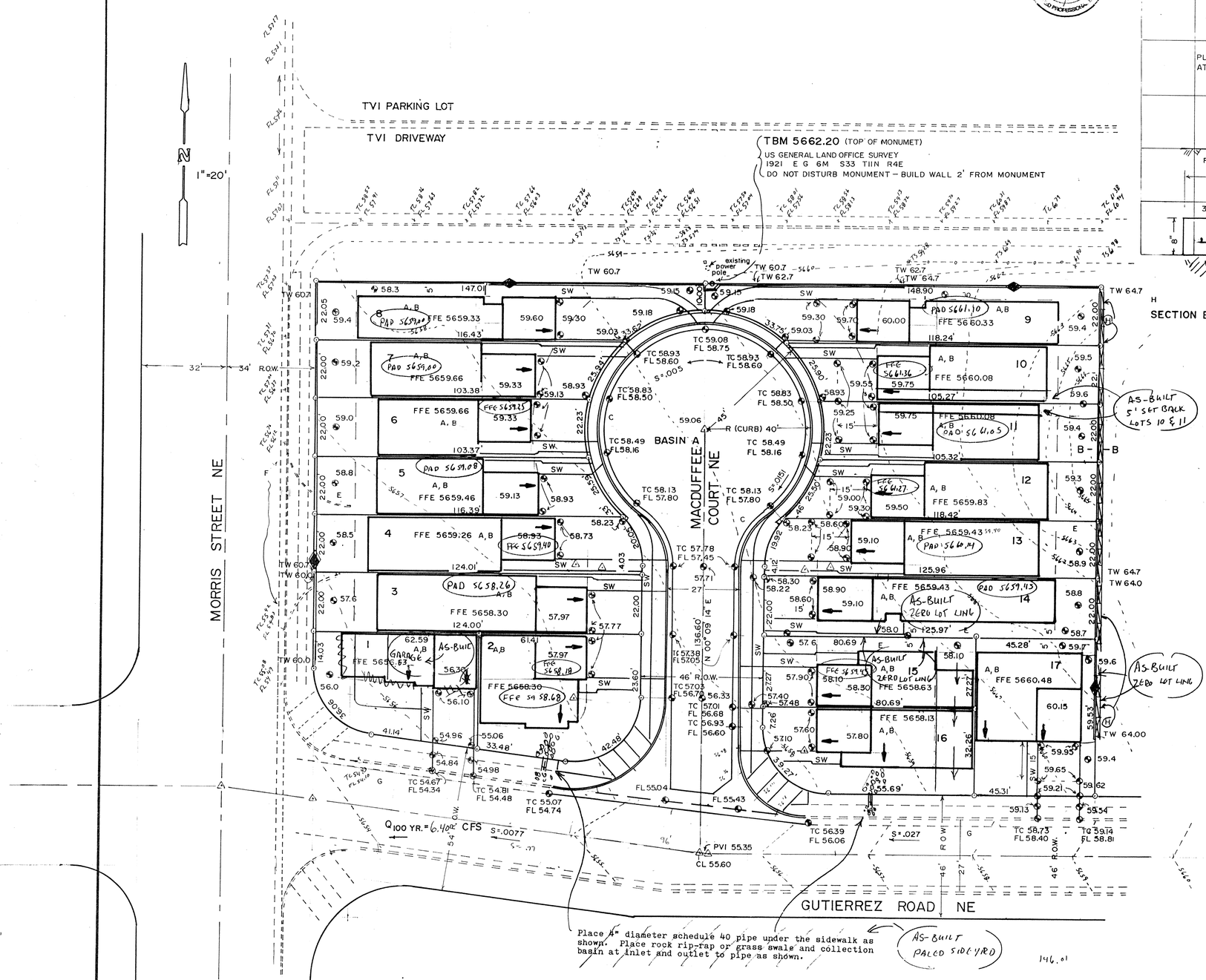
SECTION B-B RETAINING WALL DETAIL 1"=1'



LEGAL DESCRIPTION
CANYON BREEZE II SUBDIVISION, IN SECTION 33, T11N, R4E, NMPM, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

Topography by Marvin R Kortum, March, 1997.

BENCHMARK: ACS 10-G21, located in the SW corner of the intersection of Morris Street and Montgomery Boulevard, NE. Elevation 5636.111



NOTES

A. House and garage sizes shown on the drawing are general and are based on the maximum allowable ground print for the first story of the building. Roof or other overhangs are not shown. A minimum of 750 SF of usable open space is required for each lot, and building outlines shown allow for the 750 SF of open space. Building setbacks shown are based on required setbacks as shown on the plat. Areas not shown as impervious areas (house, garage, driveway, sidewalks) are considered landscaped.

B. Finished Floor elevations (FFE) shown on the drawing are the top surface of the slab, considering slab on grade construction. The finished earthwork elevation should be based on the thickness of the slab to be used (earth pad elevation is FFE less the slab thickness). Alternative construction methods may dictate different earth grading.

C. Mountable Curb, Roll Type, Drawing 2415.

E. All back and side yard setbacks are considered drainage easements. Notations will be made on the plat prior to approval.

F. Existing driveway with valley gutter to be removed and replaced with standard curb and gutter.

G. Curb, gutter and street pavement are being placed by City of Albuquerque Project 563981.

H. Retaining wall required along the east boundary line of the subdivision. Walls on the north and west can be garden type walls if the difference in earth surface elevations on either side of the wall is less than 18 inches.

LEGEND	Existing	Proposed
Spot Elevation	x 42'	43.27
Top of Curb	TC	TC
Flow Line Invert	FL	FL
Finished Floor Elevation	FFE	FFE
Contour Line	52'+/-	44
Property Line		
Lot Number	3	3
Structure		
Curb and Gutter		
Drainage basin boundary		
Roof drain		
Retaining wall		

ADD 4" DRAIN PIPE	MRK	July 2 1997
REMOVED DRAIN TO NORTH	M R K	APRIL 30, 1997
PRELIMINARY	M R K	MARCH 31, 1997
APPROVALS, REVISIONS	BY	DATE

MARVIN R. KORTUM NEW MEXICO 6519 REGISTERED PROFESSIONAL ENGINEER

April 30 1997 July 2 1997

MARVIN R. KORTUM, P.E.
Civil Engineering
NM PE 6519

1605 Speakman Drive, S.E.
Albuquerque, New Mexico 87123
(505) 299-0774

GRADING AND DRAINAGE PLAN
CANYON BREEZE II SUBDIVISION

RECEIVED OCT 15 1998 HYDROLOGY SECTION

PROJECT NO.	MAP NO	SHEET	OF
F-21/D70	F-21	1	2

PURPOSE:

The purpose of this grading and drainage plan is to obtain approval for a construction of a new subdivision of 17 lots for townhouses.

DISCUSSION:

A. The new subdivision, CANYON BREEZE II, is adjacent to a recently approved townhouse subdivision, CANYON BREEZE I, on the east and south sides of the site. On the north is a paved street and parking lot of the Morris Street campus of TVI. On the west is the paved right-of-way of Morris Street, NE.

B. The area is presently vacant and unimproved. History of past development on the site is unknown, but it appears that surface has been regraded, perhaps to a depth of a few feet, as evidenced by a US GENERAL LAND OFFICE SURVEY MONUMENT along the north property line. The monument base is now about two feet above the present surface. Presumably, when the monument was placed in 1921, the base was at the surface at that time. The 1976 city aerial photographs indicate that that the surface is different from adjacent undisturbed areas.

DRAINAGE CONSIDERATIONS:

A. The site is not located within the limits of the 100-year flood, see Flood Insurance Rate Map, panel 144 of 825, effective date, September 20, 1996. Drainage from the site flows to the Arroyo del Oso (Bear Canyon) channel by way of a subsurface storm drain system and the street surface. The Arroyo del Oso channel is a designated 100 year flood channel.

B. The site itself is presently within a small drainage basin, with runoff leaving the basin by sheet flow to the south and east, entering the right-of-way of Morris Street and Gutierrez Road (presently under construction as part of the CANYON BREEZE I subdivision). The small basin of about 1.25 acres is defined by the east curb and sidewalk of Morris Street along the west; a cut slope along the north side, on the south of the TVI drive and parking lot; a wall to be constructed as part of the CANYON BREEZE II subdivision along the east side, and the north curb and sidewalk of Gutierrez Road on the south.

C. The proposed development of the subdivision will entail very little change to the surface. There will be two to three feet of cut over the northeast portion of the site, with fill fill to a depth of one to two feet over the southwest portion of the site. Runoff will be mostly directed to the new street and turn-around to be constructed, except for those lots facing Gutierrez Road, where runoff will go directly to Gutierrez Road. All roof and driveway runoff will be directed to the streets. Provision for drainage of the back of the lots which do not have surface access to the front of the lots will be by easements across adjacent lots toward the streets.

D. The site is within a Special Assessment District Basin, SAD 204. published June 1984, revised August 1984, for the City of Albuquerque, New Mexico. Based on the study, the permitted peak free flow off of the site of the subdivision is 4.27 CFS per acre, for a total permitted peak free flow of 5.34 CFS for the 100 year design storm. Estimated runoff from the proposed subdivision is 6.40 CFS (Table B-1) for the 100 year design storm, which is 1.06 CFS above the permitted free flow. (A request was made to TVI that a portion of the runoff from the site for the northern 4 lots and the adjacent street surface, an area of about 6600 SF (0.1515 acres), be directed through a channel to the TVI drive and parking lot, then across the parking lot in a paved valley gutter, to enter the Arroyo del Oso channel through an existing weir and energy disipator. The request for the diversion across the TVI parking lot has been denied by TVI.)

E. Estimates of the areas contributing to the runoff basin are shown in the attached Table A-1 for the complete subdivision. Actual building ground prints are not know, so the estimate is based on the maximum allowable building size based on building setbacks shown on the plat, and the conditions that each lot must have 750 SF of usable open area, and that no more than 8 buildings can be connected by common walls, and 10 feet wide space must be provided between building groups. For estimate purposed, the impervious sidewalks are considered part of the required usable open area, but the rest of the usable open area is considered landscaped area. There will be some overlap of landscaped areas (land treatment B) with the impervious roof and paved areas (land treatment D) due to overhang of trees and shrubs, but no credit is given for reduced runoff in the estimate.

F. The estimated runoff for the basin is given in the attached Table B-1.

G. A formal request for a variance to permit the free discharge of the difference (1.06 CFS) between the actual 100 year design storm runoff (6.40 CFS) and the permitted SAD 100 year design storm runoff (5.34 CFS) is forwarded with this Grading and Drainage Plan.

SOILS:

Soils on the subdivision are identified by reference C as Tijeras gravelly fine sandy loam, 1 to 5 percent slopes (TgB). The soils are suited for residential buildings and associated infrastructure. The soils have moderate shrink swell and low strength for streets, so imported material may be required for streets and driveways. Soils may be susceptible to consolidation, particularly when wetted, so care must be taken to direct runoff and landscape watering away from building foundations.

CONCLUSIONS:

A. The proposed construction is not within a designated 100 year floodplain.

B. Construction as proposed will not increase the hazard from flooding to downstream facilities.

C. The proposed grading and construction will protect the property from any off-site or on-site runoff.

REFERENCES:

A. Standard Specifications for Public Works Construction, City of Albuquerque.

B. Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque...Bernalillo County...AMAFCA, January 1993.

C. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, USDA-SCS.

D. Flood Insurance Rate Map, City of Albuquerque, Bernalillo County, Federal Emergency Management Agency, Panel 144 of 825, effective date: September 20, 1996.

APRIL 30, 1997
RUNOFF FOR ALL OF CANYON BREEZE II SUBDIVISION

TABLE B-1
Runoff Estimate: For On-site Basin of 1.249 acres (17 LOTS).
Runoff Factors Zone 4

Land use	Peak	Total	CURRENT USE Area	Percent	Peak Runoff	Total Runoff	PROPOSED USE Area	Percent	Peak Runoff	Total Runoff
	CFS/acre	inches	SF		CFS	CF	SF		CFS	CF
A	2.26	0.66	54389.00	1.000	2.82	2991.4	0.00	0.000	0.00	0.0
B	3.05	0.85	0.00	0.000	0.00	0.0	12373.41	0.227	0.87	876.4
C	3.94	1.13	0.00	0.000	0.00	0.0	0.00	0.000	0.00	0.0
D	5.74	2.57	0.00	0.000	0.00	0.0	42015.59	0.773	5.54	8998.3
TOTALS			54389.00	1.000	2.82	2991.4	54389.00	1.000	6.40	9874.8
			1.249 acre				1.249 acre			

NOTES:
a. Runoff factors from Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, City of Albuquerque, Bernalillo County and AMAFCA, January, 1993
b. Land use descriptions: A. Uncompacted soil
B. Lawn, shrubs
C. Compacted soil
D. Impervious areas
c. Peak runoff = Area (acres) x factor (CFS/acre) = CFS
d. Total runoff = Area (SF) x factor (inches) / 12 (inches /foot) = CF
e. Peak and total runoff is based on 6 hour, 100 year frequency storm
f. The current use is for the site in its natural state, or partially developed if off-site. The proposed use is for full development of the basin, under present zoning

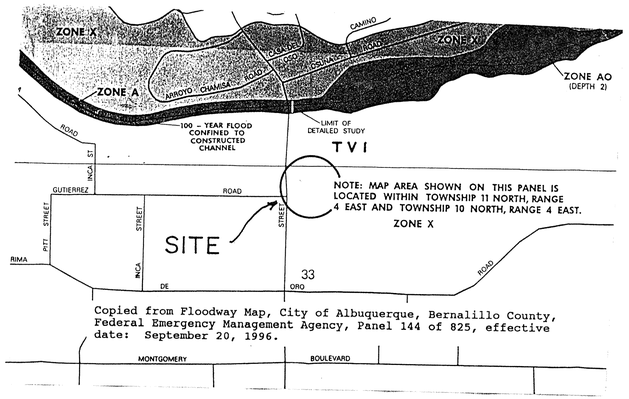
APRIL 30, 1997
TABLE A-1
CANYON BREEZE II
LOT SIZE AND LAND USE

LOT #	LOT AREA	HOUSE SIZE (RECTANGLE EQUIVALENT) WIDE	LENGTH	AREA	GARAGE SIZE WIDE	LENGTH	AREA	DRIVEWAY SIZE WIDE	LENGTH	AREA	SIDEWALK, STREET TO HOUSE WIDE	LENGTH	AREA	LOT OPEN AREA LOT-HOUSE -GARAGE-DRIVEWAY	IMPERVIOUS AREA LAND TR D	LANDSCAPED AREA LAND TR B
	SF	LF	LF	SF	LF	LF	SF	LF	LF	SF	LF	LF	SF	SF	SF	SF
1	2804	18.14	35.00	634.90	17.00	20.00	340.00	16.00	20.00	320.00	4.00	20.00	80.00	1509.10	1374.90	1429.10
2	2772	27.40	38.00	1041.20	17.00	20.00	340.00	16.00	20.00	320.00	4.00	23.00	92.00	1070.80	1793.20	978.80
3	2728	22.00	59.90	1317.80	17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	750.20	2137.80	590.20
4	2686	22.00	50.72	1115.84	17.00	20.00	340.00	16.00	30.00	480.00	4.00	53.00	212.00	750.16	2147.84	538.16
5	2386	22.00	40.72	895.84	17.00	20.00	340.00	16.00	25.00	400.00	4.00	40.00	160.00	750.16	1795.84	590.16
6	2254	22.00	38.36	843.92	17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	750.08	1663.92	590.08
7	2386	22.00	42.18	927.96	17.00	20.00	340.00	16.00	23.00	368.00	4.00	50.00	200.00	750.04	1835.96	550.04
8	2985	17.05	55.00	937.75	17.00	20.00	340.00	16.00	33.00	528.00	4.00	70.00	280.00	1179.25	2085.75	899.25
9	3027	17.00	57.00	969.00	17.00	20.00	340.00	16.00	33.00	528.00	4.00	75.00	300.00	1190.00	2137.00	890.00
10	2427	22.00	44.04	968.88	17.00	20.00	340.00	16.00	23.00	368.00	4.00	50.00	200.00	750.12	1876.88	550.12
11	2296	22.00	40.27	885.94	17.00	20.00	340.00	16.00	20.00	320.00	4.00	42.00	168.00	750.06	1713.94	582.06
12	2429	22.00	46.31	1018.82	17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	750.18	1838.82	590.18
13	2729	22.00	50.50	1111.00	17.00	20.00	340.00	16.00	33.00	528.00	4.00	53.00	212.00	750.00	2191.00	538.00
14	2771	17.00	70.97	1206.49	17.00	20.00	340.00	16.00	20.00	320.00	4.00	53.00	212.00	904.51	2078.49	692.51
15	2201	22.27	35.50	790.59	17.00	20.00	340.00	16.00	20.00	320.00	4.00	35.00	140.00	750.41	1590.59	610.41
16	2469	22.26	44.23	984.56	17.00	20.00	340.00	16.00	20.00	320.00	4.00	26.00	104.00	824.44	1748.56	720.44
17	2697	39.53	31.70	1253.10	17.00	20.00	340.00	16.00	20.00	320.00	4.00	20.00	80.00	783.90	1993.10	703.90
TOTAL	44047			16903.59			5780.00			6400.00			2920.00	14963.41	32003.59	12043.41

RIGHT-OF-WAY
TOTAL IMPERVIOUS (LAND TREATMENT D) SF 10012
TOTAL PERVIOUS (LAND TREATMENT B) SF 330

LAND USE SUMMARY	SF	ACRES	PERCENT
TOTAL AREA	54389.00	1.25	
LAND TREATMENT B	12373.41	0.28	22.75%
LAND TREATMENT D	42015.59	0.96	77.25%
TOTAL	54389.00	1.25	100.00%

House and garage sizes shown on the tables are general and are based on the maximum allowable ground print for the first story of the building. Actual dimensions of constructed building may vary, but overall area may not exceed the areas shown on the tables. Roof or other overhangs are not shown. A minimum of 750 SF of usable open space is required for each lot, and building outlines shown allow for the 750 SF of open space. Building sizes shown are based on required setbacks as shown on the plat, which may result in larger usable open space areas than required.



Copied from Floodway Map, City of Albuquerque, Bernalillo County, Federal Emergency Management Agency, Panel 144 of 825, effective date: September 20, 1996.

I certify that I have inspected the Canyon Breeze II Townhouse site and that the building finished floor elevations for house floors in place and rough grading for lots without buildings are in substantial compliance with the grading and drainage plan (F-21/D-70) as approved by letter dated July 14, 1997, from the City of Albuquerque Public Works Department, Hydrology Section. Elevations and as-built conditions are as noted.

Marvin R. Kortum October 14, 1998
NMPE 6519

NO CHANGE	MRK	July 2 1997
REMOVE DRAIN TO NORTH	M R K	APRIL 30, 1997
PRELIMINARY	M R K	MARCH 31, 1997

MARVIN R. KORTUM, P.E.
Civil Engineering
NM PE 6519

1605 Speakman Drive, S.E.
Albuquerque, New Mexico 87123
(505) 299-0774

GRADING AND DRAINAGE PLAN
CANYON BREEZE II SUBDIVISION

PROJECT NO.	MAP NO.	SHEET OF
F-21/D70	F-21	2 2