City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 13, 1980

Mr. Christopher L. Weiss
President Consultant Inc.
1100-C Alvarado, NE
Albuquerque, New Mexico 87110

Reference: Tijeras Club Townhouses

Dear Mr. Weiss:

My office has received a letter from Mr. I.L. Sanchez, regarding the referenced project, and following the suggestions by the local F.H.A. Office, the retention requirements will be waived.

I believe that Mr. Conegliano has advised you on possible design solution that could be implemented, which would prevent this development from experiencing foundation problems.

Very truly yours,

Richard Heller
City Engineer

RH/lc
xc: Bruno Conegliano
Drainage File

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ALBUQUERQUE SERVICE OFFICE
625 TRUMAN STREET, N.E.
ALBUQUERQUE, NEW MEXICO 87110

REGION VI

February 12, 1980

IN REPLY REFER TO:
6.6HTV

Sanchez Construction, Inc.
9998 Montgomery, N. E.
Albuquerque, N. M. 87111

J20-P4

Gentlemen:

Subject: Tijeras Club Townhouses, FHA File No. 530,
Albuquerque, New Mexico

Our review of the neighborhood grading and drainage plan for the subject subdivision reveals that it is not acceptable. The plan proposes "ponding areas" on a number of the lots as close as five (5) feet from the buildings. FHA's requirement is that no water be ponded within fifteen (15) feet of the structure. In addition, the soils report for the subject subdivision recommends that positive surface water drainage be maintained and that the soils at and below the foundation elevations be kept dry.

Due to the size of lot in this development and the placement of the buildings, it may be necessary to find an alternative to ponding in order to maintain the structural integrity of the proposed units.

Should you have any questions, please contact Michael R. Griego, Subdivision Appraiser, telephone number 766-3239.

Sincerely,

M. J. Buckley
for I. L. Sanchez-Davis
Service Office Supervisor

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

February 8, 1979

Mr. Subhas K. Shah, P.E.
2829 Jefferson St. N. E.
Albuquerque, New Mexico 87110

RE: TIJERAS CLUB TOWNHOUSES

Dear Mr. Shah:

On February 6, 1979, my office received preliminary revised Flood Hazard Boundary Maps from the Federal Insurance Administration. These revised maps do not show the property in question in the Flood Hazard Area. Therefore, the requirement that a retention wall be built, is removed. The drainage report is hereby approved.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/el

cc - Richard Heller, City Engineer
Drainage File
Rich Leonard, AMAFCA

Subhas K. Shah P.E.

CONSULTING ENGINEER
2829 JEFFERSON ST. N.E.
ALBUQUERQUE, NEW MEXICO 87110
PHONE (505) 268-8036

February 5, 1979

Mr. Bruno Conegliano
Asst. City Engineer-Hydrology
City of Albuquerque
Post Box 1293
Albuquerque, New Mexico 87103

Re: Tijeras Club Townhouses

Dear Bruno,

This letter is an ammendment to the drainage study and response to your letter dated February 2, 1979. Your comments are well considered and responded as follow:

(1) Retention Wall: As per your request, a 3' high retention wall will be constructed along the north property line and first 200' south of Indian School Road along the channel of the proposed subdivision.

(2) Offsite Runoff: The drainage study as submitted provides adequate facilities to handle offsite runoff emnating from the east which exceed the present condition. A concrete lined run-down between lots 14&15 will be provided with proper structure discharging into the Embudo Arroyo.

(3) Onsite Ponding: The developer believes that the backyard ponding be retained as shown on the grading plan, since the backyards will be individually fenced and the drainage along the back lots will not be feasible.

Attached is a revised grading plan as requested.

I sincerely wish to express my gratitudes and thanks to you for being very courteous and cooperative in review and approval of the drainage study.

If you have any comments, please, do not hesitate to contact me.

Thanks,

Very Truly Yours,

Subhas K. Shah, P.E.

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

February 2, 1979

J20-D4

Mr. Subhas K. Shah
2829 Jefferson Street N.E.
Albuquerque, New Mexico 87110

Re: Tijeras Club Townhouses

Dear Mr. Shah:

A review of the hydrologic data of the Embudo Arroyo System held on January 31, 1979 in the offices of the Albuquerque District of the U.S.C.E. with Mr. Boyd Lare of the Flood Plain Management Section, has lead to the conclusion that the flood hazard conditions indicated on the USCE studies have been reduced after the construction of the Embudo Dam. This reassessment will allow the City to permit the development of the parcel of interest. It is nevertheless recommended that a retention well, 3 ft. in height, be built along the north property line and the first 200 ft. south of Indian School Rd. along the channel. Regarding the offsite flow, it is requested that the runoff emanating from the east in excess of the storm sewer capacity be conveyed through the 20 ft. easement into the Embudo Arroyo. It is also recommended that the site grading plan be revised to remove the ponding areas. Direct discharge to the arroyo will be allowed through one single facility that will have collected all the runoff of the subdivision. It is requested that a letter of amendment to the drainage report be submitted incorporating the requirements above together with a revised site grading plan.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs

cc - Dick Heller
Drainage File
Rich Leonard

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 29, 1980

Christopher L. Weiss, P.E.
President
Consultants, Inc.
1100-C Alvarado NE
Albuquerque, New Mexico 87110

Reference: Drainage Study for Tijeras Club Townhouses

Dear Chris:

I have no objection to your request dated January 23, 2980.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/lc

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

January 26, 1979

J30-04

Subhas K. Shah
2829 Jefferson St., NE
Albuquerque, New Mexico 87110

RE: TIJERAS CLUB TOWNHOUSES

Dear Mr. Shah,

I have reviewed the drainage report for the referenceed development; regretfully I have to inform you that the City will not be able to approve the platting of this parcel since it is located in the Embudo Arroyo Flood Plain. Some ammelioration of the flooding conditions indicated by the United States Corps of Engineers, (Flood Plain Information Albuquerque Arroyos Part IV - Albuquerque New Mexico - 1974), has been provided by the construction of the channel lining and of the Embudo Dam. Nevertheless there are at least two major structures, the Piedra Lisa Dam and the Glenwood Hills Dam that have not yet been constructed. The design capcity of the lined channel is evaluated in 5300 cfs south of Indian School Road and this value is only 60% of the flood flow discharge of 8890 cfs estimated by the United States Corps of Engineers at Wyoming Boulevard.

My comments on the details of the drainage report will be forthcoming.

Very truly yours,

Bruno Conegliano
Assistant City Engineer/Hydrology

BC/lg

cc: Dick Heller/City Engineer
Rich Leonard/ Executive Director
Drainage File

consultants, inc.
ENGINEERING - PLANNING

January 23, 1980

RECEIVED
JAN 28 1980
CITY ENGINEER

Mr. Bruno Conegliano
Municipal Development
City of Albuquerque
400 Marquette N. W.
Albuquerque, New Mexico 87103

RE: Drainage Study for Tijeras Club Townhouses

Dear Bruno:

Consultants, Inc. has been hired by Bill Sanchez to revise the grading plan for the above referenced project to meet FHA MPS standards. One of the objections FHA had to the submitted plan was the potential presence of ponded runoff up to 1.5 ft. deep adjacent to some structures.

In light of the presence of the Embudo Arroyo adjacent to lots 14-27, we would like to request that these lots be allowed to drain directly into the channel by way of individual 3" pipes. The remainder of the lots would be ponded as provided for in the approved report, with the addition of underground gravel basins where required due to FHA grading requirements for open space and maximum pond depth of 0.5 ft.

We will submit copies of the revised FHA approved grading plan for your records.

Thank you.

Respectfully,

Christopher L. Weiss, P. E.
President

CLW/bl

Copies to: Mike Griegos, FHA
Bill Sanchez

1100-C ALVARADO NE ■ ALBUQUERQUE, NEW MEXICO 87110 ■ (505) 268-2666

consultants, inc.
ENGINEERING - PLANNING

January 23, 1980

RECEIVED
JAN 28 1980
CITY ENGINEER

Mr. Bruno Conegliano
Municipal Development
City of Albuquerque
400 Marquette N. W.
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Thank you.

Respectfully,

Christopher L. Weiss, P. E.
President

CLW/bl

Copies to: Mike Griegos, FHA
Bill Sanchez

1100-C ALVARADO NE ■ ALBUQUERQUE, NEW MEXICO 87110 ■ (505) 268-2666

DRAINAGE STUDY

TIJERAS CLUB TOWNHOUSES

ALBUQUERQUE, NEW MEXICO

January 1979

DRAINAGE STUDY

TIJERAS CLUB TOWNHOUSES

Albuquerque, New Mexico

Prepared for,

Pete Daskalos and Nick Kay

5321 Menaul Blvd., N. E.

Albuquerque, New Mexico

Prepared By

Subhas K. Shah

2829 Jefferson Street N. E.

Albuquerque, New Mexico 87110

TABLE OF CONTENTS

PURPOSE

The purpose of this report is to analyze the existing and proposed drainage conditions on the site of the proposed 27 unit townhouse subdivision; also, to present a drainage plan which will serve the needs of the development and meet city drainage requirements.

SITE LOCATION AND DESCRIPTION

The site lies on the southeast corner of the intersection of Indian School Road N.E. and the Embudo Arroyo and is bounded on the east by Altez Street N.E. and on the south by developed lots.

The tract originally lay in the 100-year flood plain as designated by the Federal Insurance Agency maps. The Embudo Arroyo has been realigned and concrete lined. The capacity of the arroyo has been greatly increased and the 100-year flood level in this area has been reduced.

The site, as shown on Figure 5, has an average uniform slope of 2% from east to west and the surface is sparsely vegetated with weeds and some native grasses.

DESIGN METHOD

Because of its reliability and simplicity, the Rational Formula ($Q = CIA$) has been used to analyze the storm runoff.

Where:

Q = Runoff rate in cubic feet/second.

A = Contributing area in acres.

I = Intensity in inches per hour for a duration equal to the time of (accumulated) duration measured in minutes and obtained from Chart I, Appendix, the "Master Plan of Drainage, City of Albuquerque, New Mexico" by

Herkenhoff and Associates. (Note: Where a Time of Concentration (T_c) is less than ten minutes from Figure II, the Intensity value equal to ten minutes was used as shown on the curve for a 100-year storm in Figure III).

C = The variable of the rational formula. The coefficient represents the integrated effects of infiltration, detention, storage, evaporation, retention, flow routing, and the interception which all effect the time distribution and peak rate of runoff. C has no units.

EXISTING GRAINAGE CONDITIONS

The site is surrounded by paved roadways and upstream surface drainage is diverted around the tract and into the arroyo; see Figure IV. Calculations which approximate anticipated water flows caused by upstream drainage are included in the appendix of this report. A 48-inch storm sewer crosses the tract from east to west and discharges into the arroyo.

On-site drainage presently "sheet flows" across the property and is discharged into the arroyo; these flows have been calculated to be 5.1 cubic feet per second.

DEVELOPED DRAINAGE CONDITIONS

The drainage plan as proposed (Plate 5) presents a method of developing the property retaining existing flow patterns and not increasing downstream flow rates.(see Figure V).

In order to retain increased flows due to new impervious areas, a ponding area has been planned for each lot. The plan requires that the front yard of lots abutting Altez Street drain to Altez. A water block will be utilized on McKnight Court to prevent off-site drainage from Altez Street. Lots abutting McKnight Court and drainage created by the new street will flow west along the street and be

discharged into the arroyo. Thus, flows from the sight discharged downstream in the developed state will be 3.6 cubic feet per second which is less than the 5.1 cubic feet per second discharged in the undeveloped state.

Runoff created by the impervious roof areas and backyards of all lots will be ponded in the back yards.

RECOMMENDATIONS

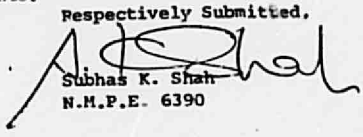
As with any plan the end result is only as good as the execution of the plan. We feel that an adequate plan has been outlined in this report. We further recommend that finished grade contours and elevations as shown in Figure V be closely adhered to during construction. The following items are of prime importance:

1. Ponds be built and maintained as shown in grading plan.
2. Lots 1 through 4 and 24 store the required volume by means of roof ponding in addition to the required backyard ponding.
3. A concrete rundown be constructed between lots 14 and 15 and proper provisions be made for discharge into Embudo Arroyo.
4. That finished floor pads be constructed to grades shown.

SUMMARY

A grading plan has been devised for the subject project that will effectively provide safe, adequate drainage for the proposed improvements. Incorporated into the plan is a design that meets all criteria required by the local governments.

Respectively Submitted,



Subhas K. Shah
N.M.P.E. 6390

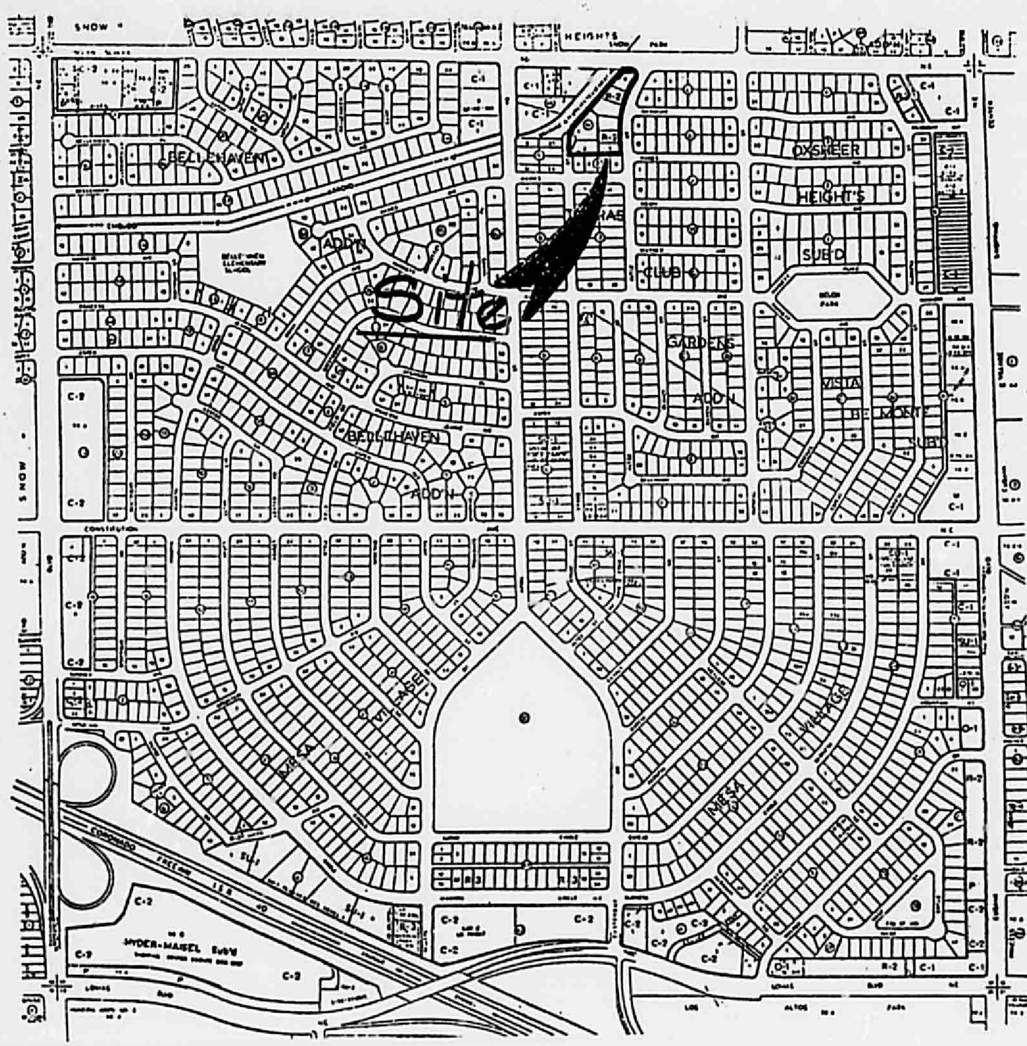
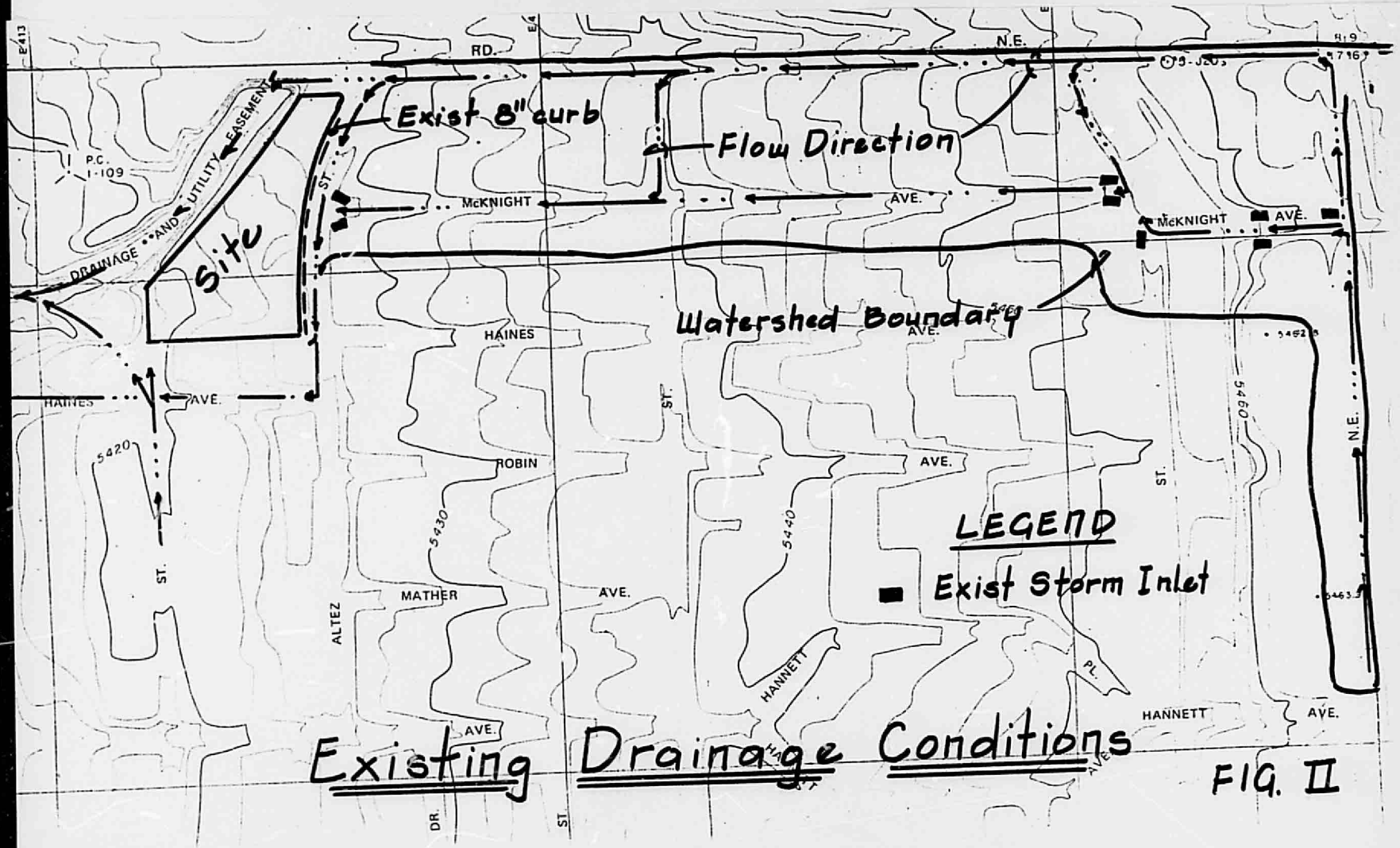

SNOW
HEIGHTS
BELLEHAVEN
ADD'N
OXSHEER
HEIGHTS
SUBD
CLUB
GARDENS
ADD'N
VISTA
BELMONTE
SUBD
Site
BELLEHAVEN
ADD'N
MESA
HYDER-MAISEL SubD
C-2
C-1

FIG. I

J·20·Z



Existing Drainage Conditions

FIG. II

Offsite Runoff
(See Plate 4)

Single family residences--62

Commercial Areas----------2

1. Area contributing to offsite flow = 25.83 acres

2. Impervious Area--

   a. Single family homes

      Assume average home = 2,000 sf.

      Walkways = 500 sf.

      Driveways = 450 sf.

      2,950 sf.

      62 X 2950 = 155,000 sf.

   b. Commercial Areas = 200,000 sf.

   c. Street & Sidewalks=193,800 sf.

   Total Impervious Area = a+b+c=548,800 sf.

   = 12.60 acres

3. Total Pervious Area = Total Area - Impervious Area = 25.83-12.60

   = 13.23 acres

4. Calculate Composite C Factor:

   Impervious surface use C = .95

   Pervious surface (lawn) use C = .25

   $$\text{Composite } C = 12.60 \times \frac{.95 + 13.23}{25.83} \times .25$$

   = .59

   Compute Runoff

5. $Q_{100} = C.I.A.$

   Where C = .59

   $$I = \frac{189}{t+25}$$

   $$t_c = .0078\ k^{0.77}$$

Where $K = \sqrt{\frac{L^3}{h}}$

$L = 2000$ ft.

$h = 30$ ft.

$t_c = 13.68$ min.

$I = 4.89$

$Q_{100} = C.I.A. = .59 \times 4.89 \times 25.83 = 74.71$ cfs.

6. Calculate runoff for 10 year storm.

$Q_{10} = C \ I_{10} \times A$

Where $C = .59$

$I_{10} = \frac{91}{t + 24}$

$t = 13.68$

$I_{10} = 2.35$

$Q_{10} = .59 \times 2.35 \times 25.83 = 35.81$ cfs.

7. (a) Compute carrying capacity of McKnight Avenue:

$Q = A.V. = A \times \frac{1.486}{N} R^{2/3} S^{1/2}$ Where

$A = 16$ sf.

$P = 33.33$

$R = .48$

$R^{2/3} = .613$

$S = .015$

$S^{1/2} = .1225$

$N = .015$

$= 16 \times \frac{1.486}{.015} \times .613 \times .1225 = 119$ cfs.

(b) Compute capacity of Altez Street

$Q = A \times V = Ax\frac{1.486}{N} R^{2/3} S^{1/2}$ Where:

$A = 16$ sf.

$P = 33.33$

$R = .48$

$R^{2/3} = .613$

$S = .007$

$S^{1/2} = .084$

$N = .015$

$$Q = 16 \times \frac{1.486}{.015} (.613)(.084) = 81.6 \text{ cfs.}$$

Summary

The area contributing to upstream run-off was determined to be 26 acres. Storm run-off from this area was calculated to be 75 cfs. Existing storm drain inlets have been designed to carry a 10-year storm or 35.8 cfs. Presently, run-off is carried down McKnight Street and Altez Streets (as shown on Figure 2). Capacities of these two streets was calculated to be 119 and 82 cfs. respectively. Since the carrying capacity of the streets is so much greater than the anticipated storm flows the maximum water elevation would not top the curb. However, as an additional factor of safety, all floor pads have been raised 1.5 feet above the top of curb elevation.

On-Site Drainage Calculations

1. Undeveloped runoff for total site:

   Q = C x I x A, Where:

   C = 0.40; I = 5.4; A = 2.36

   = .4 x 5.4 x 2.36 = 5.1 cfs.

2. Developed runoff for total site:

   Q = C x I x A, Where:

   C = .70; I = 5.4; A = 2.36

   = 0.70 x 5.4 x 2.36 = 8.9 cfs.

3. Runoff from 14 developed front yards facing McKnight Street:

   Q = C x I x A, Where:

   C = .62; I = 5.4; A = .32

   = .62 x 5.4 x .32 = 1.08 cfs.

4. Runoff from developed McKnight Street:

   Q = C x I x A, Where:

   C = .95; I = 5.4; A = .36

   = .95 x 5.4 x .36 = 1.85 cfs.

5. Runoff from 13 developed front yards fronting Altez Street:

   Q = C x I x A, Where:

   C = .60; I = 5.4; A = .20

   = .60 x 5.4 x .20 = .64 cfs.

6. Combined runoff from steps 3, 4 and 5 above:

   1.08 cfs. + 1.85 cfs. + .64 cfs. = 3.57 cfs.

7. Tables A and B which follow present a tabulation of runoff volumes and also the storage necessary to retain runoff from the dwellings and backyards on-site.

TABLE B

On-Site Storage Calculations

Lot No.	Unit Area (sf.)	Back-yard (sf.)	Total Area (sf.)	'C' Factor	Volume Runoff (cfs.)	Pond Storage (cf.)	Roof Storage (cf.)
1	1080	1093	2173	.67	303	200	103
2	1240	960	2200	.67	307	200	107
3	1240	960	2200	.67	307	200	107
4	1240	1110	2350	.67	328	200	128
5	934	1066	2000	.66	275	369	0
6	690	774	1464	.71	246	1014	0
7	718	1789	2507	.56	292	243	49
8	690	1812	2502	.55	289	747	0
9	718	2306	3024	.53	289	2795	0
10	800	1609	2409	.56	292	488	0
11	690	1838	2528	.55	292	391	0
12	1034	2508	3542	.56	417	1361	0
13	1080	1452	2532	.63	335	1215	0
14	690	1916	2606	.55	301	893	0
15	800	1465	2265	.59	281	547	0
16	800	1339	2139	.61	274	323	0
17	800	2402	3202	.54	363	653	0
18	1034	1661	2695	.62	351	623	0
19	1034	1572	2606	.62	889	963	0
20	690	789	1479	.66	205	623	0
21	1662	1411	3073	.70	452	856	0

TABLE B
continued

Lot No.	Unit Area (sf.)	Back-yard (sf.)	Total Area (sf.)	'C' Factor	Volume Runoff (cf .)	Pond Storage (cf.)	Roof Storage (cf.)
22	1662	1330	2992	.71	446	623	0
23	1662	947	2609	.75	411	391	20
24	1474	1062	2536	.72	383	275	108
25	1700	1324	3024	.71	451	507	0
26	1080	1307	2387	.65	326	753	0
27	1034	1451	2485	.63	329	501	0

TABLE A

On-Site Runoff-Rate Calculations

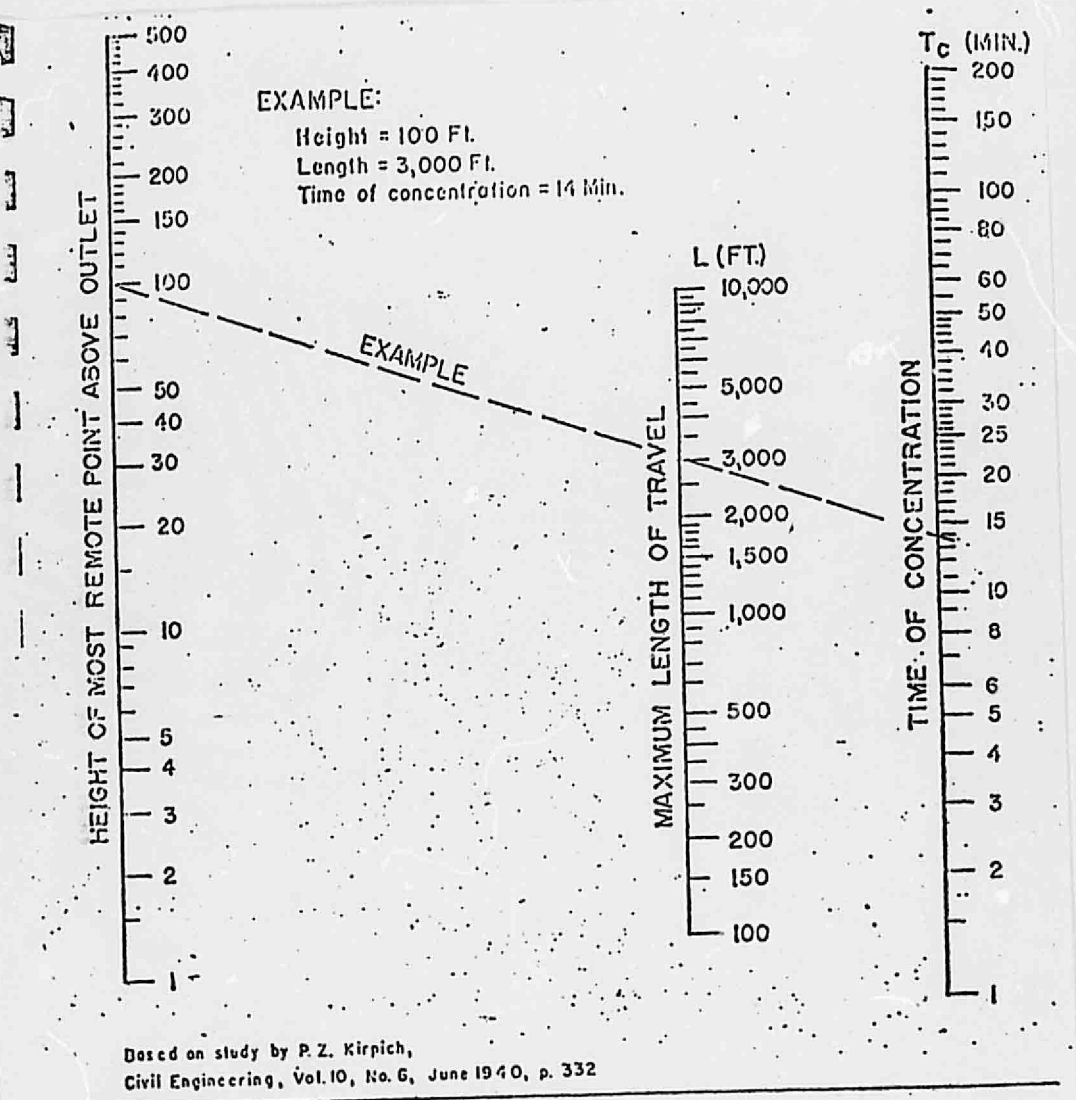
Lot No.	Unit Type	Total Area (sf.)	Front Yard (sf.)	'C' Factor	Run-off Rate (cfs.)
1	D	3000	827	.62	.06
2	F	3000	800	.62	.06
3	F	3000	300	.62	.06
4	F	3000	650	.62	.05
5	G	3000	1000	.62	.08
6	H	3014	1550	.62	.12
7	J	3007	500	.62	.04
8	H	3002	500	.62	.04
9	J	3724	700	.62	.05
10	K	3009	600	.62	.05
11	H	3018	490	.62	.04
12	G	4042	500	.62	.04
13	D	3032	500	.62	.04
14	H	3146	540	.62	.04
15	K	3225	960	.62	.07
16	K	3439	1300	.62	.10
17	K	3902	700	.62	.05
18	E	3325	630	.62	.05
19	E	3126	520	.62	.05
20	H	3129	1650	.62	.13
21	A	3553	480	.62	.05
22	A	3317	325	.62	.02
23	A	3089	480	.62	.04

TABLE A
continued

Lot No.	Unit Type	Total Area (sf.)	Front Yard (sf.)	'C' Factor	Run-off Rate (cfs.)
24	B	3041	505	.62	.04
25	C	3084	60	.62	.01
26	D	3027	640	.62	.05
27	E	3685	1200	.62	.10
				TOTAL	1.53

Summary

The site in the developed state will discharge 3.57 cfs. downstream, an amount less than that being discharged in the present undeveloped state. The remainder will be retained on the site by means of roof and backyard ponding not to exceed 2" and 18" in depth respectivelv.



Based on study by P. Z. Kirpich,
Civil Engineering, Vol. 10, No. 6, June 1940, p. 332

TIME OF CONCENTRATION OF SMALL DRAINAGE BASINS

Reprinted from "Design of Roadside Drainage Channels - Hydraulic Engineering Circular No. 6", April 1962, U. S. Dept.

FIGURE III

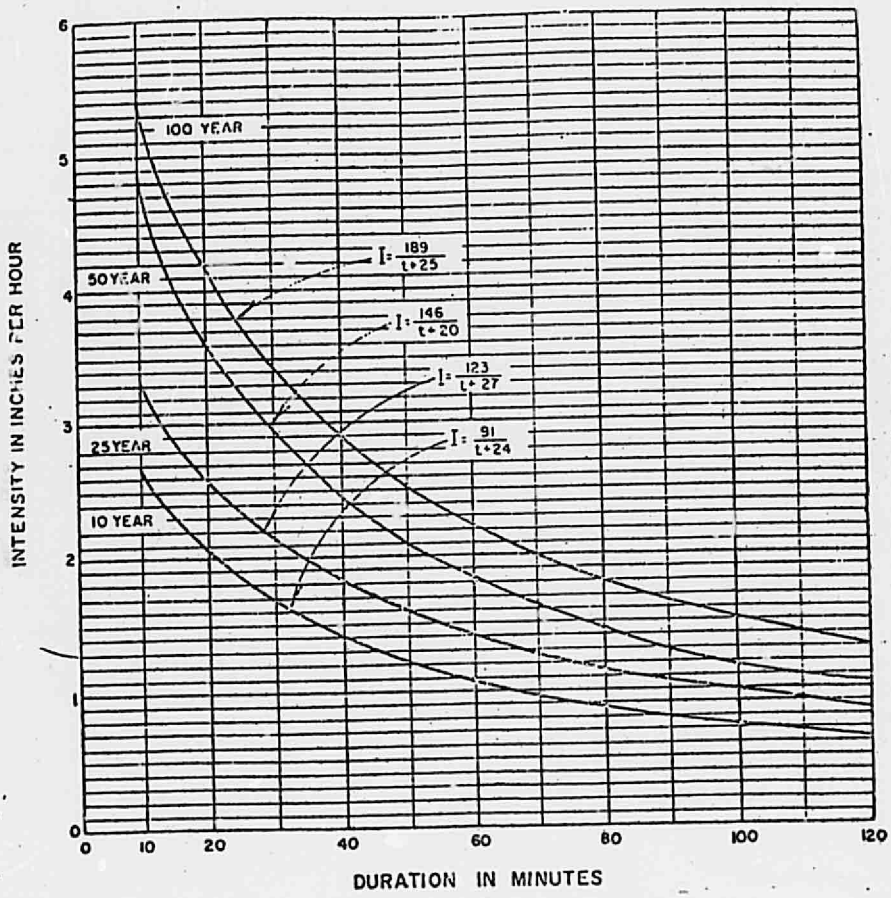
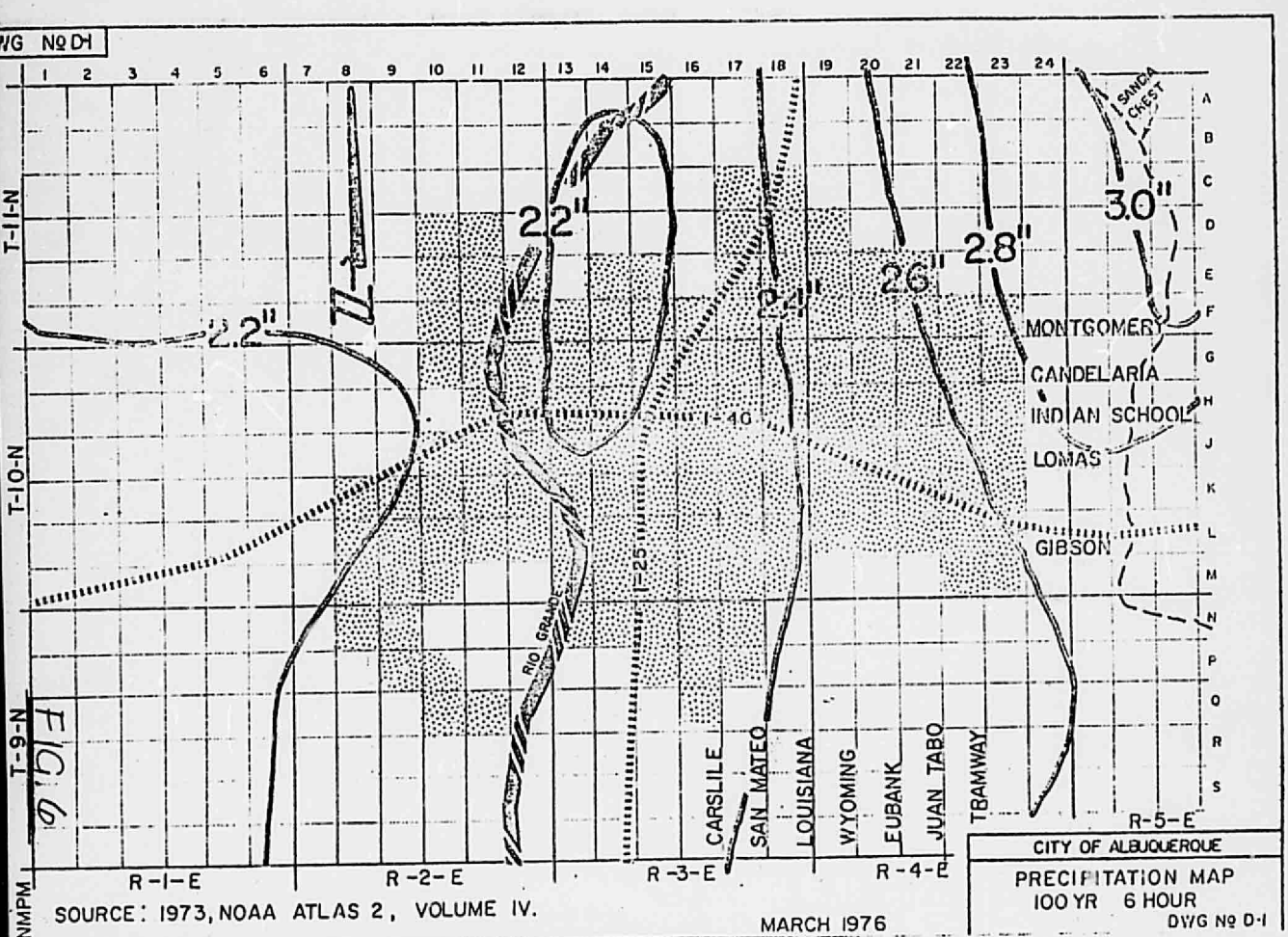
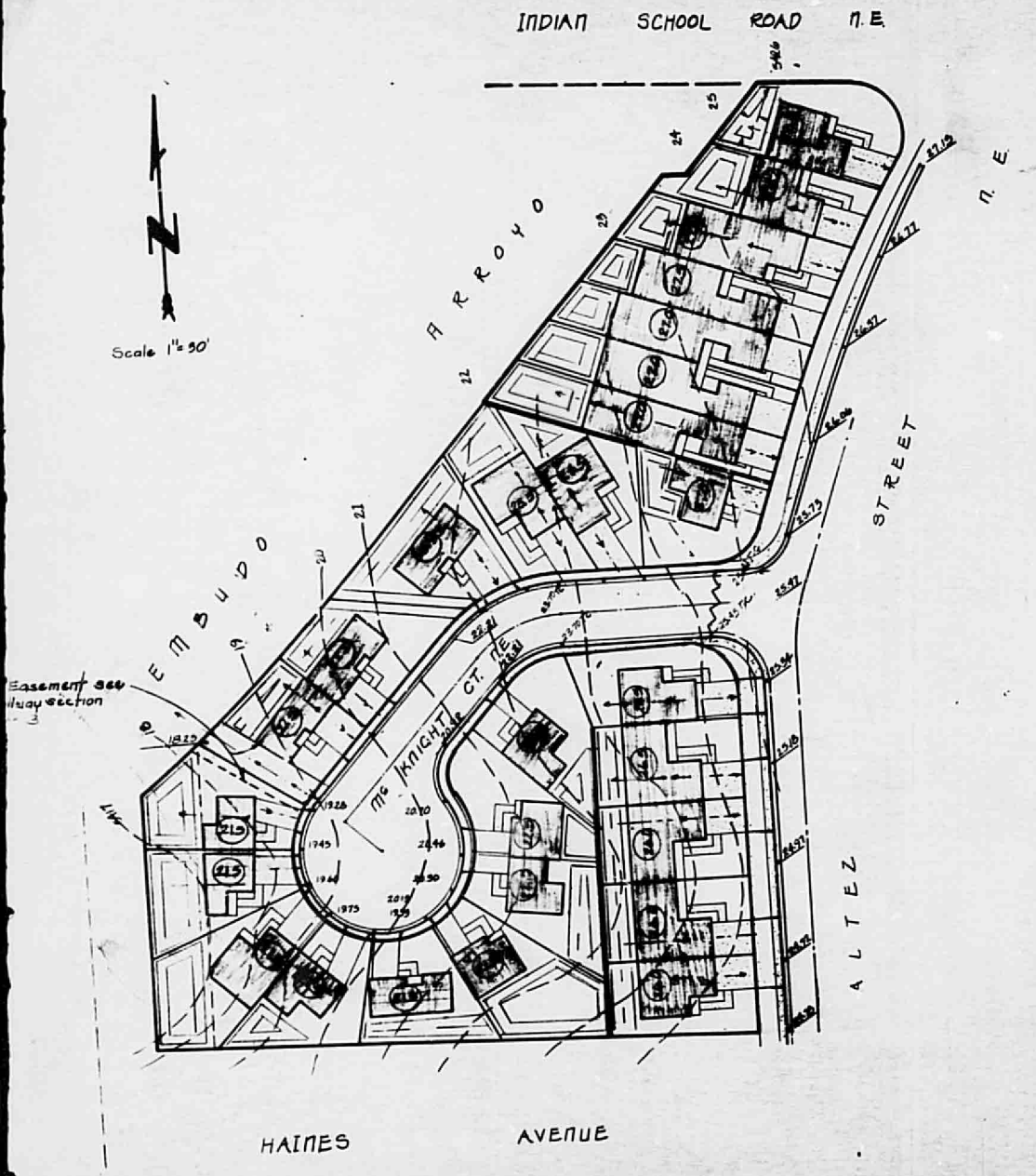


FIGURE IV

MASTER PLAN OF DRAINAGE CITY OF ALBUQUERQUE - NEW MEXICO AND ENVIRONS	
INTENSITY DURATION FREQUENCY CURVES (ALBUQUERQUE AREA - 1961)	
GORDON HERKENHOFF & ASSOC CONSULTING ENGINEERS ALBUQUERQUE, NEW MEXICO	CHART 1

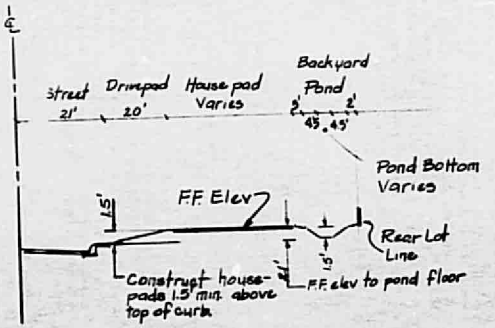

DWG Nº D-1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
A B C D E F G H J K L M N P Q R S
T-11-N
T-10-N
T-9-N
2.2"
2.2"
2.2"
2.4"
2.6"
2.8"
3.0"
SANDIA CREST
MONTGOMERY
CANDELARIA
INDIAN SCHOOL
LOMAS
GIBSON
I-40
I-25
RIO GRANDE
CARSLILE
SAN MATEO
LOUISIANA
WYOMING
EUBANK
JUAN TABO
TRAMWAY
R-1-E
R-2-E
R-3-E
R-4-E
R-5-E
NMPM
FIG. 6
SOURCE: 1973, NOAA ATLAS 2, VOLUME IV.
MARCH 1976
CITY OF ALBUQUERQUE
PRECIPITATION MAP
100 YR 6 HOUR
DWG Nº D-1

ELEVATION IN FEET (USC & GS 1929 M.S.L. DATUM)
5460
5450
5440
5430
5420
5410
5400
5390
5380
PARSIFAL STR
INDIAN SCHOOL
MOON STREET CROSSING
STREAMBED
I
II



LEGEND

- Proposed Drainage Patterns
- Finished Floor Elevations
- Spot Elevations
- Ponds
- Exist. Contours
- New Retaining Wall
- Water Block



TYPICAL LOT SECTION

No Scale

APPROVAL:

HYDROLOGIST — DATE 5/4/78

CITY ENGINEER — DATE 5/4/78

EO 036 02[illegible]

Site & Grading Plans for

TIJERAS. CLUB TOWNHOUSES

C-2

TIJERAS CLUB TOWNHOUSES

79 17114

ALBUQUERQUE, NEW MEXICO

FEBRUARY, 1979

State of New Mexico } SS
County of Bernalillo
This instrument was filed for record on
MAR 23 1979
At ___ o'clock ___ m. Recorded in Vol. ___ of records of said County Folio ___
Clerk & Recorder
___ Deputy Clerk

State of New Mexico } SS
County of Bernalillo
This instrument was filed for record on
___ 1979
At ___ o'clock ___ m. Recorded in Vol. D9 of records of said County Folio 79
___ Deputy Clerk

The foregoing Replat of a certain tract of land being identified as Lots numbered One (1) thru Eight (8) inclusive, in Block lettered "B" of the TIJERAS CLUB GARDENS ADDITION to the City of Albuquerque, New Mexico as the same are shown and designated on the Replat of said Addition filed in the office of the County Clerk of Bernalillo County, New Mexico on October 26, 1953, together with the Vacated East one-half (½) of Erbbe Street N.E. immediately west of and adjacent to Lots 1 & 2, Block "B" of said Replat, and being more particularly described by metes and bounds survey as follows:

Beginning at the Southeast corner of the tract herein described, said Southeast corner being common to the Southeast corner of Lot numbered Three (3) of said Replat and also being a point on the Westerly right-of-way line of Altez Street N.E.; thence,

N 01° 05' 56" W, 190.83 feet distance along said right-of-way to a point of curve; thence,

Northeasterly, 48.31 feet distance along the arc of a curve bearing to the right and having a radius of 139.97 feet and a central angle of 19° 46' 58" and a chord which bears N 08° 47' 2?" E, 48.08 feet, continuing along said right-of-way to a point of tangency; thence,

N 18° 40' 42" E, 85.41 feet distance, continuing along said right-of-way to a point of curve; thence,

Northeasterly, 137.70 feet distance along the arc of a curve bearing to the right and having a radius of 630.00 feet and a central angle of 12° 31' 24" and a chord which bears N 24° 56' 24" E, 137.43 feet, continuing along said right-of-way to a point of reverse curve; thence,

Northwesterly, 51.80 feet distance along the arc of a curve bearing to the left and having a radius of 25.00 feet and a central angle of 118° 42' 58" and a chord which bears N 28° 09' 23" W, 43.02 feet to a point on the Southerly right-of-way line of Indian School Road N.E.; thence,

N 87° 30' 52" W, 48.43 feet distance along said right-of-way line to the Northwest corner of the tract herein described, said Northwest corner also being a point on the Easterly right-of-way line of the Embudo Arroyo; thence,

S 40° 53' 00" W, 60.00 feet distance along said right-of-way line to an angle point; thence,

N 87° 30' 52" W, 12.76 feet distance along said right-of-way line to an angle point; thence,

S 40° 53' 00" W, [illegible] feet distance along said right-of-way line to a point of curve; thence,

[illegible] 120.[illegible] feet distance along the arc of a curve bearing to the [illegible] having a radius of 992.79 feet and a central angle of [illegible] and a chord which bears S 46° 41' 50" W, [illegible] line to a point, [illegible] Street N.E.; thence,

S 01° 0?' 2?" [illegible] feet distance along said center line to the [illegible] herein described; thence,

S 8?° ??' 17" E, [illegible] feet distance to the place of beginning and containing 2.3522 acres, more or less.

FREE CONSENT AND DEDICATION:
Surveyed, platted as shown hereon and now comprising of Lots numbered One (1) thru Twenty-seven (27) inclusive, of TIJERAS CLUB TOWNHOUSES, an Addition, Albuquerque, New Mexico is with the free consent of and in accordance with the desires of the undersigned owners and proprietors thereof, and said owners and proprietors do hereby dedicate the public rights-of-way shown hereon, together with all easements shown on the plat, power, communication and gas line easements are reserved where shown by dashed lines and being as dimensioned herein, including the right of ingress and egress and the right to trim interfering trees.

Owner(s) PETE CASHALOS

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

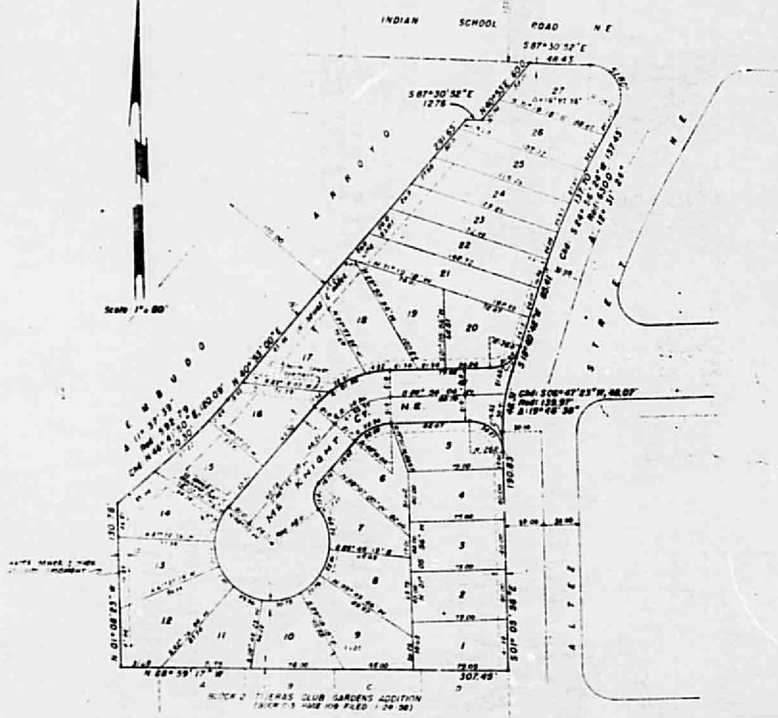
On this ___ day of ___, 1979, the foregoing instrument was acknowledged before me by ___

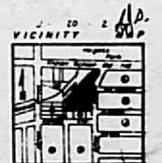
My commission expires ___

Notary Public

I, Frank G. Benavidez, hereby certify that I am a Registered Land Surveyor under the laws of the State of New Mexico, that this plat was prepared by me or under my direct supervision and meets the minimum requirements for monumentation and surveys of the Albuquerque Subdivision Ordinance and is true and correct to the best of my knowledge and belief.

Frank G. Benavidez No. 4?5 ___ Date





SHEETS 3&4 ONLY

APPROVED	DATE 3-8-79	APPROVED	DATE 3-8-79
CITY PLANNING 277-22-1		WATER RESOURCES	
APPROVED	DATE Feb 20, 1979	APPROVED	DATE 2-2?-79
CITY SURVEYOR		AMAFCA	
APPROVED	DATE 12-29-78	APPROVED	DATE 12-29-78
CITY PARKS AND RECREATION		GAS COMPANY OF NEW MEXICO	
APPROVED	DATE 12/26/78	APPROVED	DATE 2-27-79
TRAFFIC ENGINEER		MOUNTAIN STATES TEL AND TEL CO	
APPROVED	DATE 4-9-79	APPROVED	DATE 3-6-79
		PROPERTY MANAGEMENT	
		APPROVED	DATE Mar 8, 1979

20 096 0138

FRANK G. BENAVIDEZ, SURVEYOR
2109 CANDELARIA RD. NE