HYDROLOGY E22/D7 1 of 2 FIFTEEN PLANS

E 22/D 7

15 PLANS

E22-D7

BOHANNAN-HUSTON

Amended Master Conveyance Study for the Academy/Tramway/Eubank Sector Development Study

INC.

E22-D7

BOHANNAN-HUSTON

Amended Master Conveyance Study for the Academy/Tramway/Eubank Sector Development Study

INC.

E22-D7

Amended Master Conveyance Study for the Academy/Tramway/Eubank Sector Development Study

PREPARED FOR

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INFORMATION SHEET

PROJECT TITLE Amendment to Academy/ Tramway/Eubank Sector Development Plan TYPE OF SUBMITTAL Master Conveyance Study

ZONE ATLAS PAGE NO. E-21,22 CITY ADDRESS _____

LEGAL DESCRIPTION _____

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CONTRACTOR _____ CONTACT _____

ADDRESS _____ PHONE _____

PRE-DESIGN MEETING:

____ YES
x NO
____ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

____ SKETCH PLAT APPROVAL
____ PRELIMINARY PLAT APPROVAL
____ SITE DEVELOPMENT PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY APPROVAL
____ ROUGH GRADING PERMIT APPROVAL
____ GRADING/PAVING PERMIT APPROVAL
X OTHER Sector Plan Approval (Specify)

RECEIVED DEC 20 1984 HYDROLOGY SECTION

DATE SUBMITTED: 12/20/84

BY: _____

TABLE OF CONTENTS

Background, Purpose and Scope 1

Bear Canyon Arroyo 4

Bear Tributary Arroyo 5

Pino Arroyo 8

- Pino Arroyo East of Tramway Dam 8
- Pino Arroyo West of Tramway Dam 11

Summary and Conclusions 15

Appendix

- Summary of References
- Summary of Provisions for Drainage Management
- Summary of Hydrological Analysis [Ref. 6]
- Hydraulic Analysis of Tramway Dam [Ref. 6]
- Proposed Channel Sections for Pino Arroyo
- Hydraulics of Proposed Channels
- Hydrology for Bear Tributary Storm Sewer [Ref. 6]

Plates

1. Sector Development Plan Drainage Overview
2. Master Conveyance Study Original Basins
3. Drainage Management Within Area of Amendment
4. Academy/Tramway/Eubank Sector Plan Amendment

Background, Purpose and Scope

In 1978, "under the leadership of Affiliated Mortgage and development Company (now AmeriWest), several Albuquerque Developers organized their individual land holdings into one large contiguous land area for development plan review by the City of Albuquerque under the Sector Development Plan provisions of the Comprehensive Zoning Ordinance" [Ref. 1].

One requirement for approval of the "Academy/Tramway/Eubank Sector Development Plan" by the City of Albuquerque's Environmental Planning Commission (EPC) was "that a drainage plan be prepared with more engineering detail as to flow characteristics and proposed improvements that will handle the flows through the Sector Development Planned area of northeast Albuquerque." [Ref. 1] In satisfying this requirement, Community Sciences Corporation prepared and submitted the Master Conveyance Study for the Academy/Tramway/Eubank Sector Development Plan. The purpose of that study was "to evaluate the various drainage facilities which would be necessary to convey storm flows to the major arroyo systems . . . not to address drainage patterns and facilities which are considered internal to individual platting areas" [Ref. 1].

The original master conveyance study addressed storm water conveyance systems within the Bear Canyon and Bear Tributary Arroyo watersheds. Reference was made to a concurrent study conducted by Herkenhoff and Associates for the Pino Basin. This study however, did not provide a detailed hydrological analysis of the Pino Basin west of Tramway Dam.

Since 1978, several parcels of land within the boundaries of the Sector Development Plan have been subdivided and constructed upon. Additionally, several projects are currently under construction, including the Special Assessment District No. 205, which will provide construction of the major infrastructure improvements required for further development within the sector plan area. Among these improvements are Eubank Boulevard, Lowell Avenue and Academy Road as major transportation corridors, and several major storm water conveyance facilities, which will be discussed later (See Plate 1).

In October of 1984, AmeriWest Corporation made application to the EPC to reorganize their remaining undeveloped lands within the sector development plan area. These lands fall between Academy Road and San Antonio Road, and from Tramway Boulevard west, approximately to the Tanoan Country Club. This reorganization involved altering the previously approved land uses on some tracts and shifting residential densities from downstream parcels that have been developed at densities lower than approved in the original Sector Development Plan. This reorganized plan was submitted as an amendment to the original Academy/Tramway/Eubank Sector Development Plan (See Plate 4) and will be heard at the December 20, 1984 EPC meeting.

As a requirement to approval of the Sector Plan Amendment, the Albuquerque City Engineer's Hydrology Department has required that this Amendment to the Master Conveyance Study be prepared. The scope of this report is as follows:

- To summarize the conceptual plan for drainage management within the area of the sector plan amendment (See Plate 3).

- Reference existing approved submittals that provide information identifying components of that plan for drainage management.
- Contain exerpts from the original master conveyance study that are superceded by this submittal (See Plate 2).
- Identify existing and proposed floodplain and easements required for drainage management (See Plate 3).

Bear Canyon Arroyo

The development with related drainage improvements that has occurred within the Sector Plan area falling within the Bear Canyon Watershed has largely conformed to that identified in the Master Conveyance Study. Basins A, B, and C as identified on Plate 2 of the Master Conveyance Study (see Plate 2 enclosed) have been protected from upland flows by an earthen channel that was constructed immediately west of and parallel to Tramway Boulevard. This channel diverts upland runoff into the Bear Canyon Arroyo proper immediately west of Tramway Boulevard (see Plate 1 enclosed).

The developments that have been established within this watershed include Overlook, La Vista Grande (Aico-Wood), Prospector's Ridge (formerly Burning Bush), and Peppertree Subdivisions. The concrete channel proposed by the Master Conveyance Study between Overlook and La Vista Grande is in place, as are the storm sewer in Spain Road and the north-south street in Prospector's Ridge, now named Vista Bonita.

Bear Tributary Arroyo

A major departure from the Master Conveyance Study occurred when the open concrete channel, proposed to convey storm water within the Bear Tributary Arroyo from Lowell Avenue west to Eubank Boulevard was abandoned in favor of a closed conduit. This facility will be constructed under SAD-205.

Additional improvements to the Bear Tributary watershed have made the construction of a closed conduit more practical. Approved in the Spring of 1983, this plan utilized existing capacity in the Pino (Tramway) dam to control runoff from the upper Bear Tributary Arroyo. The alternative concept is presented as follows (See Plate 1):

A. Construct a diversion berm located approximately one mile east of Tramway Boulevard on the Bear Tributary Arroyo. The berm would divert all flows from the upper Bear Tributary Basin into the Pino Tributary. The combined runoff would flow westward under Tramway Boulevard and into the existing Pino Dam.

B. Upgrade the crossing structure at the Pino Tributary and Tramway Boulevard to handle the developed flows within the Pino Tributary plus the additional flows from the upper Bear Tributary Basin.

C. Construct a diversion structure consisting of a sedimentation pond, inlet structure, 96" underground conduit, and outlet energy dissipator to divert the runoff generated in the Bear Tributary Basin between Tramway Road and the diversion berm described in A above. When these diversions are in place there

would be no contributing storm runoff from the Bear Tributary Arroyo east of Tramway Boulevard to the lower Bear Tributary Arroyo west of Tramway Boulevard.

D. Storm runoff generated in the basin bounded by Lowell Avenue and Tramway Boulevard below Academy Road would be collected by streets, drainage ways, and/or storm drains, and would be conveyed westward to Lowell Avenue (See Plate 3). These infrastructure improvements are not to be a part of SAD-205, but will be the responsibility of the developer for this tract. At the present time, the existing natural arroyo will be used to convey existing flows westward to Lowell Avenue.

E. Construct an underground conduit from Eubank Boulevard to Lowell Avenue to convey flows generated above Eubank Boulevard and below Tramway Boulevard westward, outletting into the existing open channel west of Eubank Boulevard. Construction of an inlet structure and sedimentation pond at Lowell Avenue will be required to catch the flows generated east of Lowell Avenue. Flows from the remainder of the basin will be collected and channeled into the conduit at various points along the pipeline.

F. Construct an energy dissipator immediately west of Eubank Boulevard to transition the flow from the pipe into the existing open channel downstream. [Ref. 6]

Drainage basins north of Academy Road within the Bear Tributary watershed would be required to discharge into Academy Road. The runoff

collected in Academy Road would then flow westward past Lowell to a point just east of the proposed extension of Carruthers Street. The special design inlets in Academy proposed by the Master Conveyance Study are to be constructed under SAD-205. The conduit designed to deliver that flow to the Bear Tributary storm sewer was extended to the Bear Tributary storm sewer by means of a change order to SAD-205 [Ref. 15].

Construction of these improvements within the Bear Tributary Arroyo will facilitate a flood boundary revision eliminating surface flood boundaries from Lowell Avenue to Eubank, and a request for reduction of the drainage right of way easement to a 40 foot width. The 40 foot width has been approved by the Development Review Board and will be platted by adjacent developments after completeion of the Bear Tributary Storm Sewer.

The ponding areas shown on the Master Conveyance Study north of Academy for Basins D and E have been functionally removed by the proposals presented in the drainage report for Country Club Estates [Ref. 13]. Instead of ponding runoff within the subdivision, runoff from Basin D has been diverted into the Pino Arroyo by means of a temporary diversion ditch and dike. A proposed storm sewer to be constructed in Tract K Tanoan Properties will provide permanent conveyance of these diverted flows to the Pino Arroyo.

Pino Arroyo

Of all the existing storm water conveyance systems within the Sector Plan area, the proposed amendment has the most significant impact on the Pino Arroyo.

Pino Arroyo East of Tramway Dam

The diversions to the Pino Arroyo from the Bear Tributary Arroyo east of the existing Tramway Dam have required extensive recalculation of the hydraulics of the dam. These issues have been addressed in the "Drainage Report for the Bear Tributary Arroyo, East of Tramway, for SAD-205" [Ref. 3]. The diversions have increased the water surface elevation in the Tramway Dam reservoir during the 100 year storm from 5970.4 to 5976.3. This in turn has required dedication of an extensive parcel of land that consists of relatively flat topography east of the existing eastern slope of the reservoir (area indicated on Plate 3).

Development of the parcels east of the reservoir as high density residential and the construction of recreational facilities within the reservoir proper would require regrading the reservoir floor and wall. The existing capacity of the reservoir must not be reduced.

Containment of storm flows generated east of Tramway Boulevard would be required between Tramway Boulevard and the reservoir. A concrete lined channel with a well constructed energy dissipator in the reservoir would provide the only feasible structure capable of containing the magnitude of the flows expected in the Pino Arroyo proper.

Currently, Tramway Boulevard has a single 48" culvert for passing storm flows in the Pino Arroyo. Construction of an adequate drainage structure for Tramway Boulevard would be required prior to any development of lands between Tramway Boulevard and the dam within the Pino Arroyo watershed. Tramway Boulevard provides inadequate headwater to allow construction of any type of structure besides a long, low bridge or a series of short, wide box culverts within the Pino Arroyo. Flows would then be contained within the proposed concrete lined channel that would deliver those flows into the Tramway Dam. In the Appendix is a sketch of the proposed channel for the Pino Arroyo that would be capable of conveying the flows expected. Currently, the developed discharge at Tramway Boulevard from lands east of Tramway Boulevard in the Pino Arroyo has been estimated on the order of 4500 cfs [Ref. No. 6]. A copy of the summary of Hydrological Analysis provided in the "Drainage Report for The Bear Tributary Arroyo East of Tramway for SAD-205" is in the Appendix. The extension of Tennyson Street from San Antonio Boulevard south to Academy Road, as proposed in the Sector Plan Amendment (Plate 4), would facilitate extending the Tramway Boulevard crossing structures that are to be built at the Pino Arroyo and the Pino Tributary Arroyo.

Among the concepts that have been discussed for drainage management within the lands owned by the Albuquerque Boy's Academy east of Tramway is a possible consolidation of the Pino Tributary Arroyo with the Pino Arroyo. Flows in the Pino Tributary Arroyo between Tramway Boulevard and the reservoir would be drastically reduced. If this occurs, localized runoff could be handled by a minor storm sewer that would

convey flows to the reservoir. A preferable solution would be to provide a landscaped easement or utilize internal streets to convey local flows to the reservoir with a trickle channel for irrigation runoff. If this proposed consolidation does not occur, containment of the 1200 cfs expected in the Pino Tributary Arroyo at Tramway west to the reservoir would be required. The Appendix contains a sketch and hydraulic rating curves for such a channel. The sketches for the proposed channels are provided to give a general idea of the magnitude of the hydraulic capacity required for the flows expected. They are not intended to provide design detail.

Adjacent to Academy Road, immediately west of Tramway Boulevard, the Sector Plan Amendment has proposed a commercial development and a residential development with a density of 15 DU/AC. These developments fall within Basin #3 of the drainage analysis prepared for the design of the Bear Tributary Storm Sewer under SAD-205. Basin #3, as shown in the Appendix, was given a curve number of 85 and designed to discharge directly to Academy under the provisions of the drainage analysis prepared for SAD-205. This curve number was chosen conservatively for the previously planned developments within Basin #3 and should be adequate for estimation of the actual runoff generated by the Developments proposed in the Sector Plan Amendment.

It is understood that prior to development of the parcels of land that fall within the confines of the Pino Arroyo Watershed east of the Tramway Dam, a complete hydraulic analysis of the reservoir must be submitted. This analysis must show the impact of containing flows within the Pino Arroyo including a flood boundary revision, energy dissipation required for those contained flows, and proof of the provision of

adequate reservoir capacity after the installation of recreational facilities within the reservoir. Preliminary investigation has shown that the discharge from the Tramway Dam should not be altered by more than 10 percent during the 100 year storm as a result of reconstruction of the reservoir basin east of the dam. This assumption is justified due to the fact that after the diversion of over 1,200 cfs from the Bear Tributary Arroyo into the Tramway Dam reservoir increased the 100 year dishcarge by about 10 percent. An additional factor that must be dealt with is the safety and/or liability for damages resulting from the joint use of flood control facilities for recreational purposes. This hydraulic analysis will require the approval of AMAFCA and the State Engineer.

Pino Arroyo West of Tramway Dam

The Pino Arroyo west of the Tramway Dam flows through the Tanoan Golf Course and presently undeveloped lands, to Eubank Boulevard. West of Eubank Boulevard, all parcels along this path are currently constructed upon or are currently being planned. Those developments include the Wimbledon West Subdivision, Village Greens West, Fairway Estates, The Masters, Torrey Pines, and The Champions. All of these developments except for Wimbledon West are designed either with free or controlled discharge of storm water into the Pino Arroyo onto the Tanoan Golf Course. Wimbledon West falls within the drainage area of the North Pino Arroyo. The most recent submittals are The Masters and The Champions. Included in the drainage analysis for The Masters subdivision

was a request for revision of the FEMA Floodway Boundary due to site grading providing containment of the 100 year flood to the Tanoan Golf Course. Ths development is immediately west of Eubank Boulevard. Computations for the preliminary design of a drainage crossing structure on the arroyo have been performed. This area deserves special attention due to the imminent nature of developments adjacent to Eubank and the inevitability of construction of Eubank North through the Tanoan properties across the Pino Arroyo.

Eubank Boulevard is designated as a principal arterial in the long range major street plan. The Academy/Tramway/Eubank Sector Development Plan calls for 156 foot of right-of-way across the Tanoan Properties between Academy Road and San Antonio Boulevard. AMAFCA has a 150 foot wide drainage easement through the Tanoan Golf Course crossing Eubank.

Due to the ultimate six lane divided section for Eubank Boulevard and the private nature of the Tanoan Golf Course, an at grade crossing for golfers is unaccetable. Therefore, a structure that would accommodate drainage as well as allow golfers to cross under the roadway should be considered at the Pino Arroyo.

Preliminary investigation indicates that drainage in the Pino Arroyo flows west toward Eubank in two well defined channels: one through the golf course fairway, the other skirting the fairway on the north, through tract P. These two channels are combined at Eubank and continue west. Under current conditions, construction of the Eubank Boulevard embankment and drainage structure would require either channelization of flows to efficiently combine the two existing flow paths east of Eubank, or construction of training dikes to combine the flow, or both.

Construction of a training dike on the south side of the Arroyo to protect the proposed townhouse development in the Highlands Subdivision (Tract I) will be essential. Due to the desire to reclaim much of the currently flooded property in Tract P on the north side of the Arroyo, site grading will be designed to divert and contain storm water on the Golf Course. This would also serve to aid in training runoff into the Eubank Structure. A hydraulic analysis must be performed to provide justification for a flood boundary map revision, as well as identify any procedures required to minimize floodwater damage to the golf course. A report prepared by Simons & Li Engineers in 1979 provided hydraulic and erosion control criteria for shallow flooding on earthen and sod channels that was applied to then current conditions on the golf course. A similar study should be undertaken.

A 48" storm drain, being constructed under SAD-205 will outfall into or adjacent to the Eubank structure. Investigation of the peak flow characteristics of the storm drain shows that the majority of the runoff carried in the storm sewer will pass through the channel before the peak flow in the Pino Arroyo arrives at Eubank. Therefore, the 48" storm sewer should outlet into the Eubank structure in order to eliminate the need for additional energy dissipation at the storm sewer outlet. See Plate 3 for a sketch of the approximate location of the proposed Eubank Structure.

Tract O of the Tanoan Properties presents a similar hydraulic problem as Tract P east of Eubank Boulevard. A portion of Tract O proposed as a high density development is currently inundated by the 100 year flood. Reclamation of land within this development will require

extensive site grading to divert and contain storm water to the golf course. The topography of the parcels on the south side of the Arroyo must also be investigated to insure that diversion of runoff from Tracts O and P do not increase the flood level on those tracts. A hydraulic analysis must be submitted to FEMA for a floodway map revision. Bank stabilization and erosion protection must be provided where required.

Summary and Conclusions

In November, 1984, AmeriWest submitted a request to the EPC for an amendment to the Academy/Tramway/Eubank Sector Development Plan. The proposed amendment shifted residential densities within the property owned by AmeriWest between Academy Road and San Antonio Boulevard West of Tramway Boulevard.

As a requirement for approval, the City of Albuquerque has requested a revision of the Master Conveyance Study prepared in 1979 for the original Sector Development Plan. The revision should summarize the concepts for drainage management for the remaining undeveloped parcels within the amended area, and identify the infrastructure that has been constructed within existing developments, particularly that which deviates from the provisions of the original Master Conveyance Study. Table 1 (in the Appendix) attempts to summarize text material by providing a detailed breakdown of the drainage provisions proposed or constructed within the Sector Plan area developments, as well as identifing the additional requirements that must be met prior to construction within undeveloped parcels.

Of the three major watersheds within the Sector Plan area, the Pino Arroyo is most affected by the proposed Amendment to the Sector Development Plan. The proposed Amendment does not alter the operation of the Bear Canyon Arroyo, and the developments that have been constructed within that watershed have conformed with the provisions of the original Master Conveyance Study.

The proposed developments within the Pino Arroyo Basin east of the Tramway Dam will require complete hydraulic analysis of the dam and reservoir to be approved by AMAFCA and the State Engineer, coordination of drainage provisions with the lands east of Tramway Boulevard, and with the future highway improvements on Tramway Boulevard.

A current and complete hydrological analysis of the Pino Arroyo west of Tramway Dam could not be found. Since it is likely that development within the remaining Tanoan Properties will proceed from west to east, a report providing current and complete hydrological analysis of the Pino Arroyo west of Tramway dam will be forthcoming.

Individual drainage plans for each development within the Tanoan Properties must provide justification for any flood boundary revisions and will be consistent with the provisions of this report and the forthcoming reports, unless otherwise approved by the City Engineer and AMAFCA.

APPENDIX

TABLE OF REFERENCES

1. Academy/Tramway/Eubank Master Conveyance Study	Community Sciences Corporation 1978
2. Northeast Heights Drainage Management Plan	Leonard Rice 1975
3. Design Hydrology - Arroyo Del Pino Dams	Herkenhoff & Associates 1977
4. Flood Hazard Study - Tanoan-Pino Basin	Community Sciences Corporation 1979
5. Hydraulic and Erosion Analysis of Arroyo Del Pino	Simons & Li Engineers 1979
6. Drainage Report for Bear Arroyo Tributary East of Tramway	Tom Mann & Associate 1984

DRAINAGE SUBMITTALS

7. Academy Place Subdivision (Burning Bush)	Bohannan-Huston 1979
8. Overlook Subdivision (Aico Wood)	Bohannan-Huston 1979
9. Peppertree Subdivision	Community Sciences Corporation 1980
10. Fairway Estates Subdivision	Community Sciences Corporation 1979
11. Village Greens Subdivision	Community Sciences Corporation 1979
12. The Masters at Tanoan	Greiner Engineering 1984(R)
13. Country Club Estates	Community Sciences Corporation 1984
14. Wimbledon West Subdivision	DMJM/AHA
15. Academy Ridge East Subdivision	Bohannan-Huston Current
16. The Champions at Tanoan	Greiner Engineering Current

Tract Description	Existing (E) Construction (C) Or Planned (P)	Drainage Provisions Under Academy/Tramway/Eubank Master Conveyance Study	Provisions In Place Or Planned	Requirements Prior To Development
PINO WATERSHED				
Village Greens	E		48" SD extended from Academy Road to Pino Arroyo with inlets and energy dissipation.	
Fairway Estates	E		Swales and rundowns provide free discharge into Pino Arroyo.	
The Masters	C		Free discharge into Pino. Diversion Berm east end. Flood Map Revision.	
The Champions	P		Free discharge into Academy Road, Pino Arroyo, Tanoan Drive.	
Eubank Boulevard	P	(SAD-205) 48" SD delivers flows from Academy into Pino.	Crossing structure, training dikes and energy dissipator required.	Hydraulic analysis upstream to revise flood boundary. AMAFCA easement revision.
Tract I, The Highlands	P		Free discharge into Academy, Eubank, Pino Arroyo.	
Tract P, (Proposed Business Park) and/or Residential 12 Du/Ac)	P		Site grading to divert 100 year flow and contain flooding to Golf Course. Bank Stabilization. Free discharge into Pino Arroyo.	Flood boundary revision based on Pino Hydrology
Tract O (Residential 20 Du/Ac)	P		Site grading to divert 100 year flow and contain flooding to Golf Course. Bank Stabilization.	Flood boundary revision based on Pino Hydrology
Tract N (Residential 24 Du/Ac and Recreational	P	(SAD-205) Constructed diversions which increase water surface elevation within Tramway Dam Reservoir.	Reclaimation of land by regrading reservoir, containing flows within Pino, Pino Tributary Arroyos.	Hydraulic analysis of reservoir, flood boundary revision revise AMAFCA easements.
Tramway Boulevard		(SAD-205) Improved crossing structure constructed on Pino Tributary Arroyo. Bear Tributary diversions constructed.	Single 48" culvert on Pino Arroyo in place. Crossing Structure Required.	Coordination with drainage plan for lands east of Tramway.
BEAR TRIBUTARY WATERSHED				
The Meadows	C	Discharge portion into Academy, Bear Tributary Channel.	(SAD-205) Construct storm sewer to convey flows west across Eubank.	Completion of the Bear Tributary storm sewer, Diversions to Pino Arroyo.
Academy Ridge East	P	No flows to Academy Road, storm sewer lateral to Academy Road from Bear Tributary storm sewer.	(SAD-205) Construct storm sewer to convey flows west across Eubank.	Completion of the Bear Tributary storm sewer, Diversions to Pino Arroyo.
Peppertree	P	Flows conveyed internally to Lowell.	(SAD-205) Inlet structure to be constructed at Lowell for Bear Tributary storm sewer.	Completion of the Bear Tributary storm sewer, Diversions to Pino Arroyo.
Country Club Estates	C	Offsite flows ponded, onsite flows discharge into Academy Road conveyed to Bear Tributary storm sewer.	(SAD-205) Inlet structure in Academy Road proposed storm sewer to divert previously ponded flow into Pino Arroyo.	
Tract L and M (Residential 15 Du/Ac and Commercial	P	Discharge to Adacemy Road.	Discharge to Academy Road	

SUMMARY OF HYDROLOGICAL ANALYSIS

A summary of the hydrological analysis is presented in the tabular form below:

HASE	BASIN	ANALYSIS POINT	AREA (ac)	FLOW (CFS) AND T-PEAK (HRS)							
				SCS		HYMO		HEC I		MITCAT ①	
				Q-100	Tp	Q-100	Tp	Q-100	Tp	Q-100	Tp
STING OWS	Bear Tributary	Tramway	801	726	0.48	648	0.48	1174	0.67	1132	
	Pino Tributary	Tramway	274			166	1.03	310	0.70		
	Pino (including Pino Tributary)	Tramway	3185							4649	1.7
VELOPED FLOWS ASSUMING NO VERSION(S)	Bear Tributary	Tramway	801			1220 ①	0.60			1206	
	Pino Tributary	Tramway	274			352	0.43	425	0.57		
	Pino (including Pino Tributary)	Tramway Dam	3235							4848	
	Tramway Dam outflow									182	
LOWS AFTER ONSTRUCTION F DIVERSIONS BEFORE FUTURE LAND DEVELOPMENT	Upper Bear Tributary	Upper Diversion	480			520	0.67	810	0.50		
	Pino Tributary and Upper Bear Tributary	Tramway	754			632	0.77	1050	0.60		
FULLY DEVELOPED FLOWS	Upper Bear Tributary	Upper Diversion	480			520	0.67	810	0.50		
	Pino Tributary and Upper Bear Tributary	Tramway	754			763	0.67	1200	0.57		
	Lower Bear Tributary	Tramway	321			750	0.37	690	0.53		
	Pino (including Pino Tributary and Diverted Bear Tributary)	Tramway Dam	4036							5257	1.3 ②
	Tramway Dam at Flow	Tramway Dam								206	②

NOTES:

① MITCAT is the model used for the "Northeast Heights Drainage Management Plan", Leonard Rice Consulting Engineers, Inc. and formally adoped by A.M.A.F.C.A.

② Developed flows for the Tramway Dam were based on hydrographs generated in the "Northeast Heights Drainage Management Plan" plus hydrographs generated in the HEC I runs.

③ See Appendix: Bear Tributary flow analysis at Tramway Boulevard and Eubank Boulevard, Bohannon Houston 1983.

4. The rainfall used for this analysis was the one hour, 100-year rainfall equal to 2.3 inches (K. Whitman). The rainfall distribution was based on the 10% probability, first quartile storm, typical of intense southwestern thunderstorms, from F.A. Huff, "Tim Distribution of Rainfall in Heavy Storms," Water Resources Research, 3, No., 4, 1967.

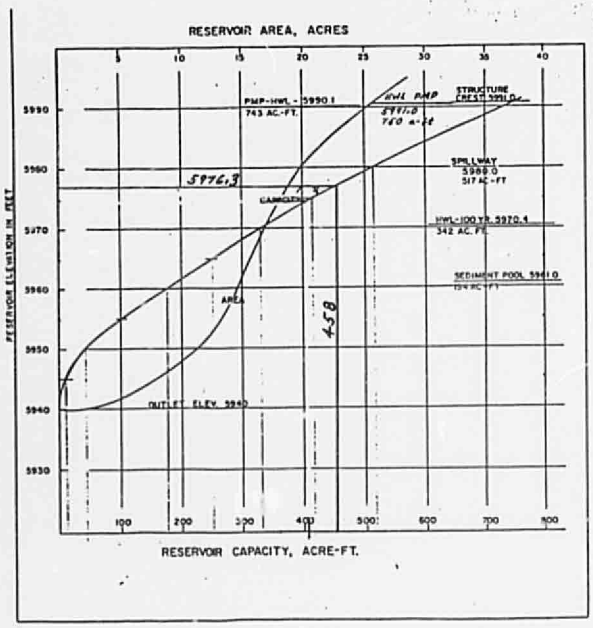


Figure 14 - Volume- elevation relation for Tramway Dam (Ref. 2).

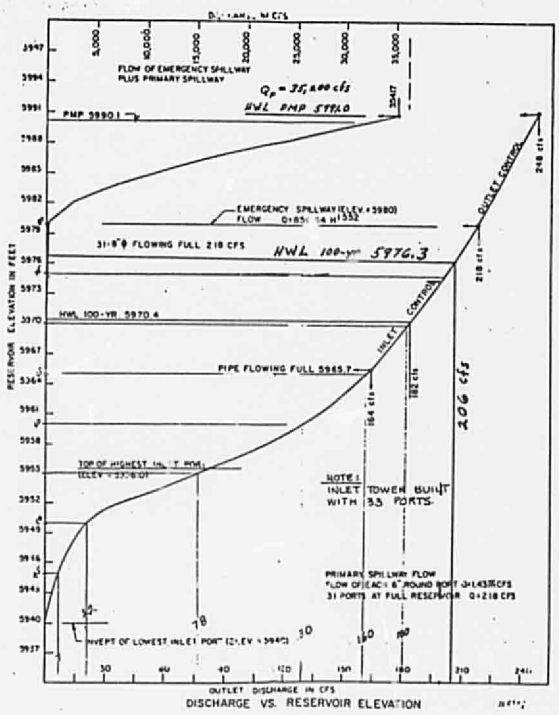


Figure 13 - Outlet discharge - elevation relation for Tramway Dam (Ref. 2).

TABLE VII

NEW PINO DAM AT TRAMWAY - REVISED INFLOW

SPILLWAY-OUTLET:
EXISTING LOW LEVEL OUTLET AND SPILLWAY
THE INITIAL SPILLWAY-OUTLET RELEASE IS 0 CFS

INFLOW HYDROGRAPH:

100-YR INFLOW FLOOD HYDROGRAPH - WITH DIVERSIONS INTO THE RESERVOIR

STAGE-STORAGE-DISCHARGE TABLE:

STAGE	SURCHARGE STORAGE ACRE-FEET	SPILLWAY-OUTLET RELEASE CFS
5940.00	0.00	0.00
5942.50	4.00	3.00
5945.00	12.00	7.00
5947.50	24.00	13.00
5950.00	43.00	21.00
5952.50	70.00	45.00
5955.00	100.00	78.00
5957.50	140.00	107.00
5960.00	176.00	130.00
5962.50	216.00	145.00
5965.00	250.00	160.00
5967.50	290.00	173.00
5970.00	330.00	180.00
5972.50	376.00	192.00
5975.00	420.00	200.00
5977.50	470.00	211.00
5980.00	517.00	218.00

Table VII (continued)

INFLOW-OUTFLOW HYDROGRAPHS:

TIME HOURS	INFLOW CFS	OUTFLOW CFS
0.00	0.0	0.0
0.25	619.0	4.2
0.50	1626.0	17.9
0.75	1993.0	58.8
1.00	3700.0	108.9
1.25	5257.0	159.9
1.50	4403.0	188.2
1.75	2872.0	200.8
2.00	1409.0	206.1
2.25	304.0	205.7
2.50	44.0	203.1
2.75	6.0	201.7
3.00	1.0	200.7
3.25	0.0	199.8
3.50	0.0	199.1
3.75	0.0	198.3
4.00	0.0	197.6
4.25	0.0	196.8
4.50	0.0	196.1
4.75	0.0	195.4
5.00	0.0	194.6
5.25	0.0	193.9
5.50	0.0	193.2
5.75	0.0	192.5
6.00	0.0	191.6
6.25	0.0	190.6
6.50	0.0	189.6
6.75	0.0	188.6
7.00	0.0	187.5
7.25	0.0	186.5
7.50	0.0	185.5
7.75	0.0	184.5
8.00	0.0	183.6
8.25	0.0	182.6
8.50	0.0	181.6
8.75	0.0	180.6
9.00	0.0	179.8
9.25	0.0	179.1
9.50	0.0	178.5
9.75	0.0	177.8
10.00	0.0	177.2
10.25	0.0	176.6
10.50	0.0	175.9
10.75	0.0	175.3
11.00	0.0	174.7
11.25	0.0	174.0
11.50	0.0	173.4
11.75	0.0	172.6
12.00	0.0	171.4
12.25	0.0	170.3
12.50	0.0	169.1
12.75	0.0	168.0

13.00	0.0	166.9
13.25	0.0	165.8
13.50	0.0	164.7
13.75	0.0	163.6
14.00	0.0	162.5
14.25	0.0	161.4
14.50	0.0	160.3
14.75	0.0	159.0
15.00	0.0	157.6
15.25	0.0	156.1
15.50	0.0	154.7
15.75	0.0	153.3
16.00	0.0	151.9
16.25	0.0	150.6
16.50	0.0	149.2
16.75	0.0	147.9
17.00	0.0	146.5
17.25	0.0	145.2
17.50	0.0	144.1
17.75	0.0	142.9
18.00	0.0	141.8
18.25	0.0	140.8
18.50	0.0	139.7
18.75	0.0	138.6
19.00	0.0	137.5
19.25	0.0	136.5
19.50	0.0	135.4
19.75	0.0	134.4
20.00	0.0	133.4
20.25	0.0	132.3
20.50	0.0	131.3
20.75	0.0	130.3
21.00	0.0	128.8
21.25	0.0	127.1
21.50	0.0	125.5
21.75	0.0	123.8
22.00	0.0	122.2
22.25	0.0	120.6
22.50	0.0	119.1
22.75	0.0	117.5
23.00	0.0	116.0
23.25	0.0	114.5
23.50	0.0	113.0
23.75	0.0	111.5
24.00	0.0	110.1
24.25	0.0	108.6
24.50	0.0	107.2
24.75	0.0	105.7
25.00	0.0	104.1
25.25	0.0	102.6
25.50	0.0	101.0
25.75	0.0	99.6
26.00	0.0	98.1
26.25	0.0	96.6
26.50	0.0	95.2
26.75	0.0	93.8
27.00	0.0	92.4
27.25	0.0	91.1
27.50	0.0	89.7
27.75	0.0	88.4

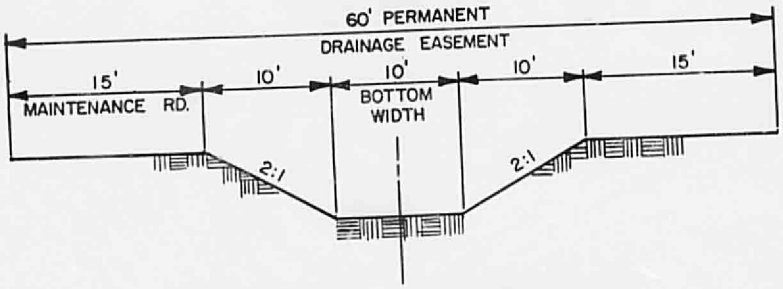
28.00	0.0	87.1
28.25	0.0	85.8
28.50	0.0	84.5
28.75	0.0	83.3
29.00	0.0	82.1
29.25	0.0	80.8
29.50	0.0	79.7
29.75	0.0	78.5
30.00	0.0	77.0
30.25	0.0	75.3
30.50	0.0	73.6
30.75	0.0	72.0
31.00	0.0	70.4
31.25	0.0	68.8
31.50	0.0	67.3
31.75	0.0	65.8
32.00	0.0	64.3
32.25	0.0	62.9
32.50	0.0	61.5
32.75	0.0	60.1
33.00	0.0	58.8
33.25	0.0	57.5
33.50	0.0	56.2
33.75	0.0	54.9
34.00	0.0	53.7
34.25	0.0	52.5
34.50	0.0	51.4
34.75	0.0	50.2
35.00	0.0	49.1
35.25	0.0	48.0
35.50	0.0	47.0
35.75	0.0	45.9
36.00	0.0	44.9
36.25	0.0	44.1
36.50	0.0	43.3
36.75	0.0	42.5
37.00	0.0	41.8
37.25	0.0	41.0
37.50	0.0	40.3
37.75	0.0	39.5
38.00	0.0	38.8
38.25	0.0	38.1
38.50	0.0	37.4
38.75	0.0	36.8
39.00	0.0	36.1
39.25	0.0	35.5
39.50	0.0	34.8
39.75	0.0	34.2
40.00	0.0	33.6
40.25	0.0	33.0
40.50	0.0	32.4
40.75	0.0	31.8
41.00	0.0	31.2
41.25	0.0	30.6
41.50	0.0	30.1
41.75	0.0	29.6
42.00	0.0	29.0
42.25	0.0	28.5
42.50	0.0	28.0
42.75	0.0	27.5

43.00	0.0	27.0
43.25	0.0	26.5
43.50	0.0	26.0
43.75	0.0	25.6
44.00	0.0	25.1
44.25	0.0	24.6
44.50	0.0	24.2
44.75	0.0	23.8
45.00	0.0	23.3
45.25	0.0	22.9
45.50	0.0	22.5
45.75	0.0	22.1
46.00	0.0	21.7
46.25	0.0	21.3
46.50	0.0	21.0
46.75	0.0	20.8
47.00	0.0	20.6
47.25	0.0	20.4
47.50	0.0	20.2
47.75	0.0	20.1
48.00	0.0	19.9
48.25	0.0	19.7
48.50	0.0	19.6
48.75	0.0	19.4
49.00	0.0	19.2
49.25	0.0	19.1
49.50	0.0	18.9
49.75	0.0	18.7
50.00	0.0	18.6
50.25	0.0	18.4
50.50	0.0	18.2
50.75	0.0	18.1
51.00	0.0	17.9
51.25	0.0	17.8
51.50	0.0	17.6
51.75	0.0	17.5
52.00	0.0	17.3
52.25	0.0	17.2
52.50	0.0	17.0
52.75	0.0	16.9
53.00	0.0	16.7
53.25	0.0	16.6
53.50	0.0	16.4
53.75	0.0	16.3
54.00	0.0	16.2
54.25	0.0	16.0
54.50	0.0	15.9
54.75	0.0	15.7
55.00	0.0	15.6
55.25	0.0	15.5
55.50	0.0	15.3
55.75	0.0	15.2
56.00	0.0	15.1
56.25	0.0	15.0
56.50	0.0	14.8
56.75	0.0	14.7
57.00	0.0	14.6
57.25	0.0	14.4
57.50	0.0	14.3
57.75	0.0	14.2

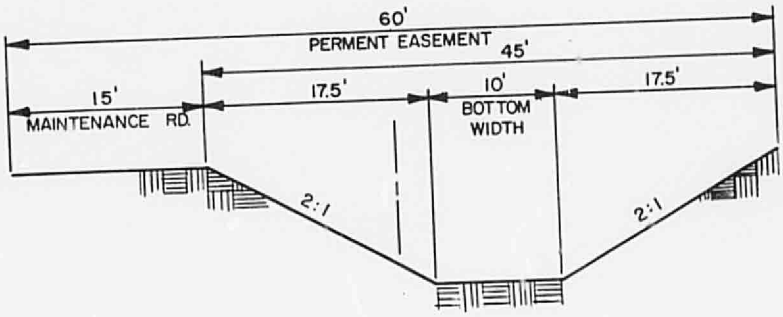
58.00	0.0	14.1
58.25	0.0	14.0
58.50	0.0	13.8
58.75	0.0	13.7
59.00	0.0	13.6
59.25	0.0	13.5
59.50	0.0	13.4
59.75	0.0	13.2
60.00	0.0	13.1
60.25	0.0	13.0
60.50	0.0	12.9
60.75	0.0	12.8
61.00	0.0	12.6
61.25	0.0	12.5
61.50	0.0	12.4
61.75	0.0	12.2
62.00	0.0	12.1
62.25	0.0	12.0
62.50	0.0	11.9
62.75	0.0	11.7
63.00	0.0	11.6
63.25	0.0	11.5
63.50	0.0	11.4
63.75	0.0	11.3
64.00	0.0	11.2
64.25	0.0	11.0
64.50	0.0	10.9
64.75	0.0	10.8
65.00	0.0	10.7
65.25	0.0	10.6
65.50	0.0	10.5
65.75	0.0	10.4
66.00	0.0	10.3
66.25	0.0	10.2
66.50	0.0	10.1
66.75	0.0	10.0
67.00	0.0	9.9
67.25	0.0	9.8
67.50	0.0	9.7
67.75	0.0	9.6
68.00	0.0	9.5
68.25	0.0	9.4
68.50	0.0	9.3
68.75	0.0	9.2
69.00	0.0	9.1
69.25	0.0	9.0
69.50	0.0	8.9
69.75	0.0	8.8
70.00	0.0	8.7
70.25	0.0	8.6
70.50	0.0	8.5
70.75	0.0	8.5
71.00	0.0	8.4
71.25	0.0	8.3
71.50	0.0	8.2
71.75	0.0	8.1
72.00	0.0	8.0
72.25	0.0	8.0
72.50	0.0	7.9
72.75	0.0	7.8

73.00	0.0	7.7
73.25	0.0	7.6
73.50	0.0	7.6
73.75	0.0	7.5
74.00	0.0	7.4
74.25	0.0	7.3
74.50	0.0	7.2
74.75	0.0	7.2
75.00	0.0	7.1
75.25	0.0	7.0
75.50	0.0	7.0
75.75	0.0	6.9
76.00	0.0	6.8
76.25	0.0	6.7
76.50	0.0	6.7
76.75	0.0	6.6
77.00	0.0	6.5
77.25	0.0	6.5
77.50	0.0	6.4
77.75	0.0	6.3
78.00	0.0	6.3
78.25	0.0	6.2
78.50	0.0	6.1
78.75	0.0	6.1
79.00	0.0	6.0
79.25	0.0	6.0
79.50	0.0	5.9
79.75	0.0	5.8
80.00	0.0	5.8
80.25	0.0	5.7
80.50	0.0	5.7
80.75	0.0	5.6
81.00	0.0	5.5
81.25	0.0	5.5
81.50	0.0	5.4
81.75	0.0	5.4
82.00	0.0	5.3
82.25	0.0	5.3
82.50	0.0	5.2
82.75	0.0	5.2
83.00	0.0	5.1
83.25	0.0	5.1
83.50	0.0	5.0
83.75	0.0	5.0
84.00	0.0	4.9
84.25	0.0	4.9
84.50	0.0	4.8
84.75	0.0	4.8
85.00	0.0	4.7
85.25	0.0	4.7
85.50	0.0	4.6
85.75	0.0	4.6
86.00	0.0	4.5
86.25	0.0	4.5
86.50	0.0	4.4
86.75	0.0	4.4
87.00	0.0	4.3
87.25	0.0	4.3
87.50	0.0	4.2
87.75	0.0	4.2

88.00	0.0	4.2
88.25	0.0	4.1
88.50	0.0	4.1
88.75	0.0	4.0
89.00	0.0	4.0
89.25	0.0	4.0
89.50	0.0	3.9
89.75	0.0	3.9
90.00	0.0	3.8
90.25	0.0	3.8
90.50	0.0	3.8
90.75	0.0	3.7
91.00	0.0	3.7
91.25	0.0	3.6
91.50	0.0	3.6
91.75	0.0	3.6
92.00	0.0	3.5
92.25	0.0	3.5
92.50	0.0	3.5
92.75	0.0	3.4
93.00	0.0	3.4
93.25	0.0	3.4
93.50	0.0	3.3
93.75	0.0	3.3



PINO TRIBUTARY PROPOSED CHANNEL



PINO ARROYO PROPOSED CHANNEL

PINO ARROYO PROPOSED CHANNEL- TRAMWAY WEST

MANNINGS N=.0130 SLOPE =.0200

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	9.50	3	29.00	0.00			
2	19.00	0.00	4	48.00	9.50			

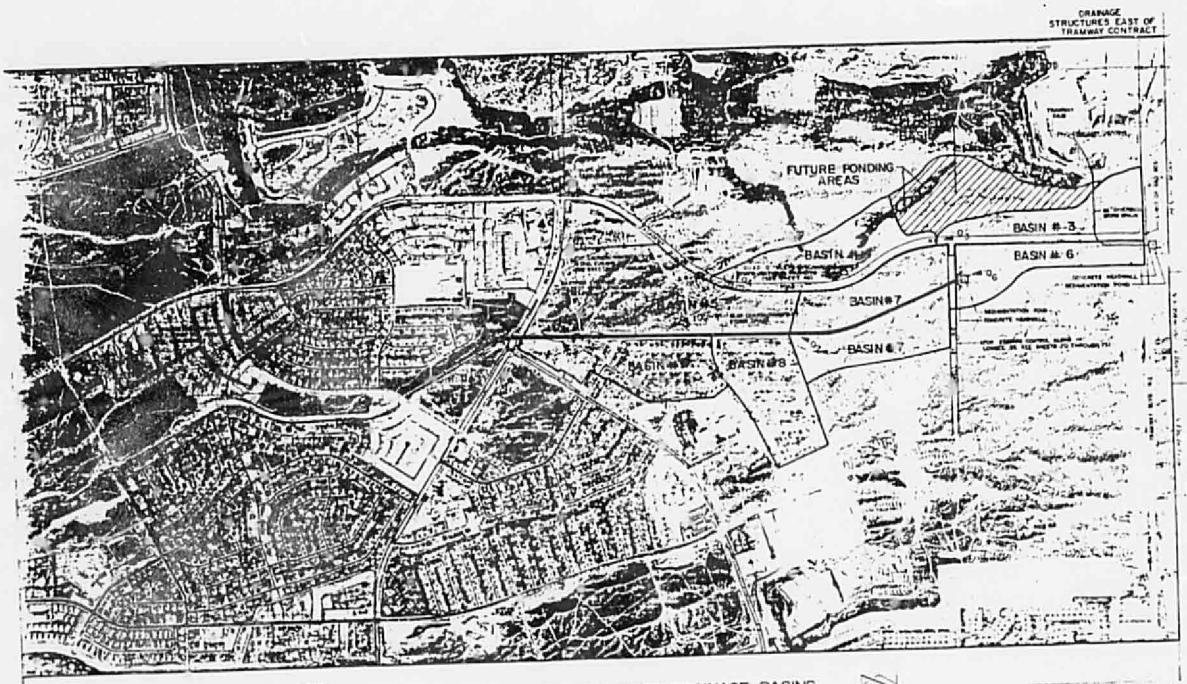
WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS
0.25	0.25	2.63	18.21	11.12	6.18	11.00
0.50	0.50	5.50	52.17	12.24	9.49	12.00
0.75	0.75	8.63	104.18	13.35	12.08	13.00
1.00	1.00	12.00	171.21	14.47	14.27	14.00
1.25	1.25	15.63	252.46	15.59	16.14	15.00
1.50	1.50	19.50	349.43	16.71	17.92	16.00
1.75	1.75	23.63	450.79	17.83	19.50	17.00
2.00	2.00	28.00	587.31	18.94	20.98	18.00
2.25	2.25	32.63	729.32	20.06	22.35	19.00
2.50	2.50	37.50	867.20	21.18	23.66	20.00
2.75	2.75	42.63	1041.33	22.30	24.90	21.00
3.00	3.00	48.00	1252.12	23.42	26.09	22.00
3.25	3.25	53.63	1460.00	24.53	27.23	23.00
3.50	3.50	59.50	1685.39	25.65	28.33	24.00
3.75	3.75	65.63	1928.72	26.77	29.39	25.00
4.00	4.00	72.00	2190.42	27.89	30.42	26.00
4.25	4.25	78.63	2470.93	29.01	31.43	27.00
4.50	4.50	85.50	2770.68	30.12	32.41	28.00
4.75	4.75	92.63	3090.10	31.24	33.36	29.00
5.00	5.00	100.00	3429.61	32.36	34.30	30.00
5.25	5.25	107.63	3789.66	33.48	35.21	31.00
5.50	5.50	115.50	4170.65	34.60	36.11	32.00
5.75	5.75	123.63	4573.01	35.71	36.99	33.00
6.00	6.00	132.00	4997.15	36.83	37.86	34.00
6.25	6.25	140.63	5443.53	37.95	38.71	35.00
6.50	6.50	149.50	5912.51	39.07	39.55	36.00
6.75	6.75	158.63	6404.52	40.19	40.38	37.00
7.00	7.00	168.00	6919.97	41.30	41.19	38.00
7.25	7.25	177.63	7459.27	42.42	41.99	39.00
7.50	7.50	187.50	8022.82	43.54	42.79	40.00
7.75	7.75	197.63	8611.01	44.66	43.57	41.00
8.00	8.00	208.00	9224.24	45.78	44.35	42.00
8.25	8.25	218.63	9862.91	46.90	45.11	43.00
8.50	8.50	229.50	10527.41	48.01	45.87	44.00
8.75	8.75	240.63	11218.12	49.13	46.62	45.00
9.00	9.00	252.00	11935.44	50.25	47.36	46.00
9.25	9.25	263.63	12679.75	51.37	48.10	47.00
9.50	9.50	275.50	13451.42	52.49	48.83	48.00

PIKO TRIBUTARY PROPOSED CHANNEL- FREEWAY WEST

MANNINGS N=.0130 SLOPE =.0400

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	5.00	3	20.00	0.00			
2	10.00	0.00	4	30.00	5.00			

WSEL FT.	DEPTH INC	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS CONSTRUCTIONS
0.50	0.50	5.50	73.78	12.24	13.41	12.00
1.00	1.00	12.00	247.13	14.47	20.18	14.00
1.50	1.50	19.50	494.17	16.71	25.34	16.00
2.00	2.00	28.00	830.58	18.94	29.66	18.00
2.50	2.50	37.50	1254.59	21.18	33.46	20.00
3.00	3.00	48.00	1770.76	23.42	36.89	22.00
3.50	3.50	59.50	2383.49	25.65	40.06	24.00
4.00	4.00	72.00	3097.72	27.89	43.02	26.00
4.50	4.50	85.50	3918.33	30.12	45.83	28.00
5.00	5.00	100.00	4850.21	32.36	48.50	30.00



FUTURE DEVELOPED DRAINAGE BASINS
FOR SIZING OF
BEAR CANYON TRIBUTARY
BETWEEN
EUBANK BLVD & LOWELL ST

FUTURE DEVELOPED DRAINAGE BASINS

1721

48 87

Tom Mann Associates, Inc.
Engineers
811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

10078
May 26, 1983

BEAR TRIBUTARY FLOW ANALYSIS

100 year, 1 hour discharges in CFS:

Crossing	No Diversion	Diversion 1-Mile East Of Tramway	Diversion At Tramway
Tramway	1220	700	0
Lowell	1250	800	170
Eubank	1410	1280	830

BEAR TRIBUTARY FLOW ANALYSIS
AT TRAMWAY BOULEVARD AND EUBANK BOULEVARD

INTRODUCTION

The purpose of this study was to determine 100-year flow rates along the Bear Arroyo Tributary at Tramway and Eubank, assuming different runoff conditions upstream of Tramway.

The first part of this analysis was to develop a rainfall-runoff model that matched the accepted flow rates developed by Leonard Rice. The second part of the analysis was to then evaluate the downstream effects of a diversion east of Tramway that reduced flow in the Bear Tributary to 700 cfs or less at Tramway.

PROCEDURES

The rainfall-runoff model HYMO was used for this analysis. The model uses the SCS curve number approach to develop runoff and also has routing capabilities. Drainage areas downstream of Tramway were defined by T. Mann Engineers. Upstream of Tramway the drainage areas were defined by Bohannan–Huston, Inc. within a study entitled "Drainage Evaluation of Albuquerque Academy Land East of Tramway," February, 1982. Curve numbers were based on standard SCS criteria assuming fully developed conditions with no on-site reduction of flow. Times of concentration for the sub-basins were based on average velocities for street flows taken from the Kent Whitman report.

The rainfall used for this analysis was the one hour, 100-year rainfall equal to 2.3 inches (K. Whitman). The rainfall distribution was based on the 10% probability, first quartile storm, typical of intense southwestern thunderstorms, from F.A. Huff, "Time Distribution of Rainfall in Heavy Storms," Water Resources Research, 3, No. 4, 1967.

A1-3

The one hour storm was used because flooding problems in this area usually result from very intense, short duration thunderstorms. Six hour storms would add to the volume of runoff but would not add to the peak flow rate.

STUDY RESULTS

A schematic of the sub-basin characteristics and flow rates is shown on Figure 1. The hydrographs for the flows, at Tramway and Eubank, with and without the diversion are shown on Figure 2. A review of the attached computer runs indicates that without the diversion, the peak flow rate at Eubank is mostly dependent on the large flow from east of Tramway because the peak flows from intervening drainage basins west of Tramway occur earlier. With the diversion in place, the intervening sub-basins contribute more directly to the peak flow rate at Eubank.

The Leonard Rice peak flow rates for Bear Tributary at Tramway and Eubank are 1,206 cfs and 1,400 cfs respectively. Discharges generated by the rainfall-runoff model for those same locations, without an upstream diversion, yielded 1,220 cfs and 1,410 cfs. With the diversion in place (approximately one mile east of Tramway) flows at Tramway and Eubank were estimated to be 700 cfs and 1,280 cfs respectively.

There is only a small difference in peak flow at Eubank with and without the diversion. Again, this analysis was based on many assumptions and on fully developed conditions without on-site detention.

Additional information developed in this study are the expected flows at Lowell. The peak flow rate along Academy at Lowell is 80 cfs. The peak channel flow at Lowell is 760 cfs with the diversion and 1,240 cfs without the diversion. Total routed flow at Lowell (Academy flow and channel flow) is 800 cfs and 1,250 cfs with and without the upstream diversion.

One last computer run was made to determine the peak flow rate at Eubank assuming total diversion at Tramway. Assuming no flow at Tramway, total flow at Lowell (Academy and channel flow) would be 170 cfs and peak flow at Eubank would be 830 cfs.

A1-4

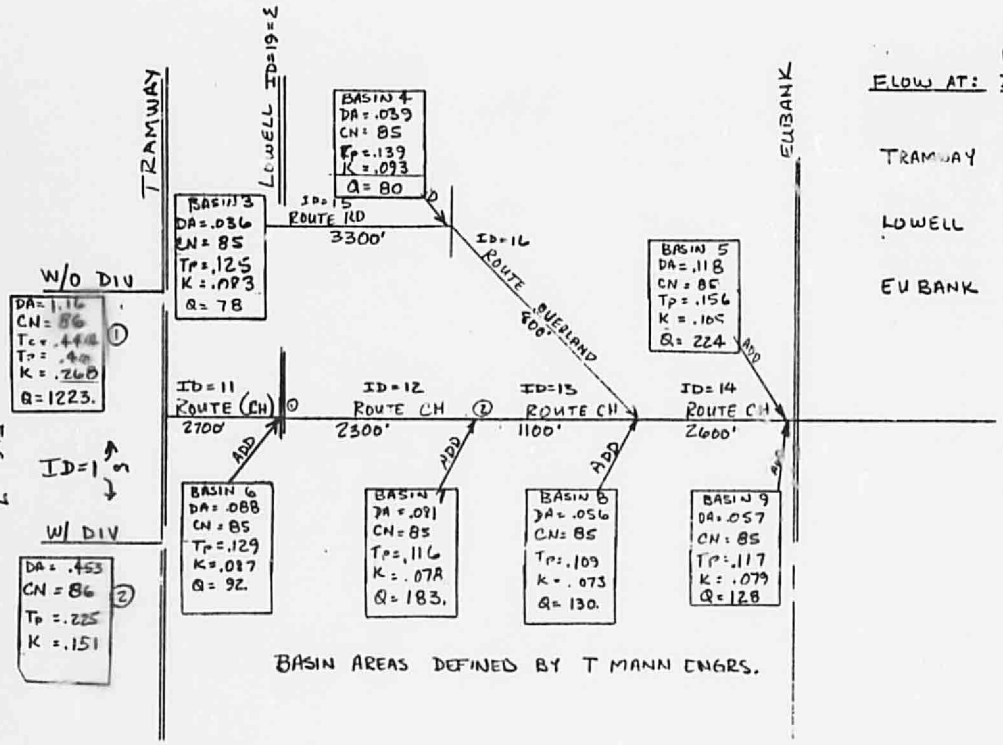


FIG. 1

BASIN AREAS DEFINED BY T MANN ENGRS.

FLOW AT:	WITHOUT DIVERSION (CFS)	WITH DIVERSION 1MI EAST OF TRAMWAY (CFS)	WITH DIVERSION AT TRAMWAY (CFS)
TRAMWAY	1220	700.	-0-
LOWELL	1250.	800.	170.
EU BANK	1410.	1280.	830

OVERLAND SECTION

n=.018 SLP=.03

STA.	ELEV
0	2
2	0
62	0
64	2

ROAD SECTION

n=.015 SLP=.03

0	.67
.1	0.0
30	.47
60	0.0
60.1	-.67

CHANNEL SECTION

n=.013 SLP=.03

0	5
10	0
20	0
30	5

MIN	
0	.0
2	.33
4	.79
6	1.21
8	1.53

RAINFALL .0333HR, 2 MIN 1 HR = 2.3"

10	1.78	20	2.16	12 QUARTILE
12	1.94	22	2.19	10% PROBABILITY
14	2.02	24	2.22	
16	2.09	26	2.25	
18	2.13	28	2.28	
		30	2.30	

A1-5

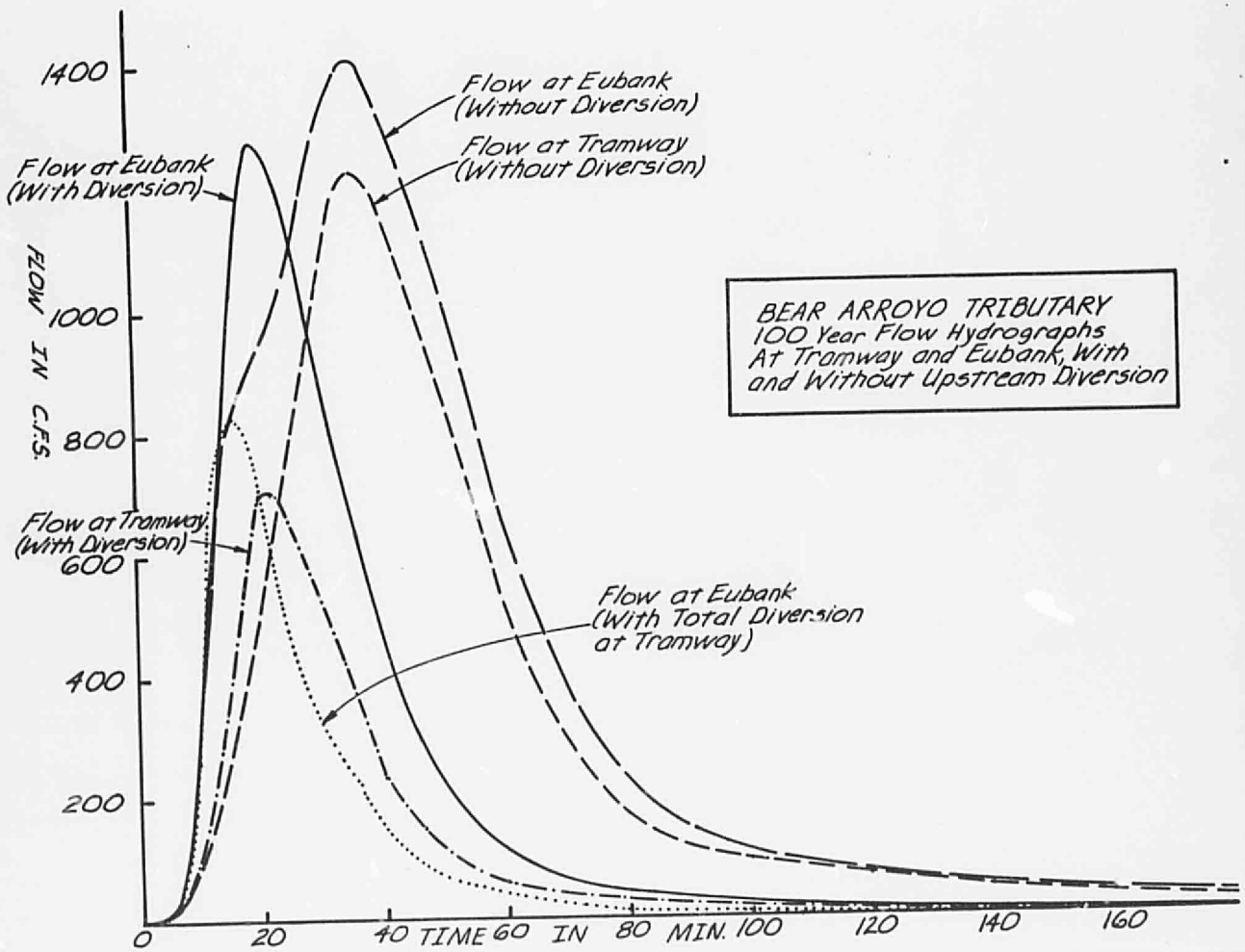

BEAR ARROYO TRIBUTARY
100 Year Flow Hydrographs
At Tramway and Eubank, With
and Without Upstream Diversion
Flow at Eubank
(Without Diversion)
Flow at Tramway
(Without Diversion)
Flow at Eubank
(With Diversion)
Flow at Tramway
(With Diversion)
Flow at Eubank
(With Total Diversion
at Tramway)
FLOW IN C.F.S.
1400
1000
800
600
400
200
0
20
40
60
80
100
120
140
160
TIME IN MIN.

FIG 2

A1-6

822/D7

AMERIWEST CORPORATION

P.O. Box 25625
Albuquerque, NM 87125
505-883-3450

RECEIVED
APR 10 1985
HYDROLOGY SECTION

MEMO - LETTER

TO: Fred Aguirre, City of Albuquerque, Hydrology

DATE: April 8, 1985

FROM: Lynn Johnson, AmeriWest Corporation

SUBJECT: Drainage Agreement

As per our meeting on Friday, April 5, 1985, please find attached a copy of the Drainage Agreement between the City and AmeriWest.

If you have any questions, please call me at 883-3263.

00847-0884

0015
FSA 7/ 4/28/85

File this with sector plan.
7/

AGREEMENT

THIS AGREEMENT dated this 16th day of July, 1980, is entered into between the CITY OF ALBUQUERQUE, a minicipal corporation (the "City"), the TANOAN COMMUNITY ASSOCIATION, a New Mexico non-profit corporation (the "Community Association") and AFFILIATED MORTGAGE & DEVELOPMENT COMPANY, a New Mexico corporation ("AMDeC").

WHEREAS, Tanoan, a planned community development within the City of Albuquerque, has been Master Planned and the Environmental Planning Commission has adopted the Tanoan Master Plan as part of the Comprehensive Plan of the City by approval of the Academy-Tramway-Eubank Sector Development Plan,

WHEREAS, the Environmental Planning Commission has given subdivision approval to Village Greens, Fairway Estates and the Masters subdivisions (the "Approved Subdivisions") within the Sector Development and AMDeC intends to develop additional subdivisions within the Sector Development,

WHEREAS, the Sector Development Plan provides that the Tanoan Community shall have community streets owned and maintained by the Community Association, with easements for water and sewer lines, and the Approved Subdivisions have such community streets,

WHEREAS, the parties are desirous of defining and clarifying the responsibilities, obligations and liabilities of the parties with respect to the community streets and the municipal utilities within the Approved Subdivisions and any future subdivisions within the Tanoan Communities which are approved by the Environmental Planning Commission for community streets, and

WHEREAS, AMDeC is the developer of the Tanoan Communities and will own the community streets until such time as they are conveyed to the Community Association.

NOW, THEREFORE, it is agreed:

1. This Agreement shall govern the community-owned streets in the Approved Subdivisions and in any future subdivisions within the Tanoan Communities which are approved by the Environmental Planning Commission for community streets (herein the "Subdivisions").

2. The City is the owner of all water meters and distribution and service lines, sanitary sewer lines (except for lateral sewer lines and connections), storm sewer lines, and other appurtenances of those systems located within existing easements dedicated to public use within the Subdivisions (the City Systems).

3. The Community Association or AMDeC is the owner of the community streets, sidewalks, curb and gutter, landscaping and the irrigation water system which are located within the community street right-of-way (the Association Systems).

4. The City shall exercise complete dominion and control over the City Systems, to the exclusion of the Community Association and shall be solely responsible for the operation, repair and maintenance of the City Systems.

5. The Community Association or AMDeC shall exercise complete dominion and control over the Association Systems, to the exclusion of the City, and shall be solely responsible for the operation, repair and maintenance of the Association Systems.

6. Where the City, in fulfilling its performance obligations under the Agreement, damages the Association Systems, without negligence on the part of the City, the City shall bear no obligation to the Community Association for repair and restoration of those Association Systems, and will be held harmless for damages to the Community Association due to waterline breaks or sewer backups. HOWEVER, the City shall have the obligation to:

A. barricade potentially dangerous conditions as a result of the repair work, and

B. immediately notify the Community Association of such damage to their system.

7. Where the Community Association or AMDeC damages the City Systems either with or without negligence, they shall be liable to the City for repair of that system, to the extent that the City's negligence does not contribute to the damage to the City System. The Community Association or AMDeC shall:

A. grant complete access to its facilities at all times,

B. pay the City the cost of repair of the City Systems,

C. prohibit the placement of obstructions in the public easements that could increase the cost and difficulty to the City for operation, maintenance, and repair of the City Systems over those of standard public right-of-way costs, and

D. pay for any barricades at work sites after City has completed repair on City Systems.

8. In the event the Community Association is dissolved, or is unwilling or unable to comply with the terms of this Agreement and AMDeC does not assume the obligations under this Agreement, master meters shall be installed and the operation and maintenance requirements of the Tanoan Community water and sewer systems shall become the responsibility of the property owners within the Subdivisions unless the utility easements are dedicated and accepted as public rights-of-way.

9. This Agreement shall be binding upon AMDeC for only those obligations or claims relating to an Association System of which

AMDeC is the owner and has not conveyed to the Community Association.

CITY OF ALBUQUERQUE

By _____
Acting CAO

ATTEST

_____
CITY ATTORNEY

_____
SECRETARY

TANOAN COMMUNITY ASSOCIATION, INC.

By _____
President

AFFILIATED MORTGAGE & DEVELOPMENT COMPANY

By _____
Exec. V.P.

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 18, 1985

Kerry Davis
Bohannan-Huston, Inc.
4125 Carlisle Boulevard, NE
Albuquerque, New Mexico 87107

RE: AMENDED MASTER CONVEYANCE STUDY FOR THE ACADEMY/TRAMWAY/EUBANK SECTOR DEVELOPMENT STUDY (E-22/D7) SUBMITTED DECEMBER 20, 1985

Dear Mr. Davis:

For the record, the referenced drainage submittal is approved for Sector Plan sign-off.

I would like to take this time to thank you for the background information you provided me with. Your time and the background information was beneficial in the reviewing of this report.

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

Fred J. Aguirre, P.E.
Design Hydrologist

FJA/bsj

cc: Cleve Matthews
AmeriWest

BOHANNAN-HUSTON INC.
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
UNIVERSITY PLAZA, 330 GARFIELD SUITE 104 SANTA FE, N.M. 87509 505 988-7671
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491

April 5, 1985

MEMBERS OF THE DRB

Re: Revision Plat for the Tanoan Properties, DRB-84-744

Gentlemen:

With this letter, AmeriWest Corporation requests consideration for a bulk land subdivision in connection with the above referenced submittal, which is to be heard by the DRB on Tuesday, April 9, 1985. Two important factors influenced this request. One factor was that an assessment plat would not accomplish the dedication of public right-of-way on Eubank Boulevard, which was a condition of approval of the proposed amendment to the Academy/Tramway/ Eubank Sector Development Plan. Another factor was that the proposed assessment plat would not create legal metes and bounds for the parcels identified for development by the Sector Plan Amendment. Therefore, the parcels could not be legally conveyed without further platting.

Attached is a copy of the "Notice of Subdivision Plat Conditions" required by the DPM for bulk land subdivisions. In addition, a corresponding note has been placed on the plat specifying that a variance from certain subdivision requirements has been granted.

The conditions of the subdivision ordinance for bulk land subdivision have been addressed as follows:

1. The notice of waiver of the provisions of Section 6, as mentioned previously, is submitted herewith, and placed on the plat.

2. "Further Public Agency Review" must occur for all developments within the boundaries of this plat. A note has been placed on the plat requiring further plat review by the DRB for all subsequent development of parcels within the Tanoan Properties.

3. The use of the land for building purposes is not expected by the DRB prior to further subdivision or site development plan approval.

PRINCIPA
JERRY R. BOHANNAN, P.E. & L.S.
LARRY W. HUSTON
MICHIAL M. EMERY, P.E.

4. No landlocked parcels have been created by the revision plat. Corridors for access have been identified on the plat, and development or conveyance of those affected parcels is contingent upon provision of approved access.

5. Attached is a list of infrastructure improvements required by further development within the Tanoan Properties, and for which a deferral of financial guarantees is requested.

If you have any questions concerning this request or the referenced submittal, please feel free to call Kerry Davis at 881-2000.

Truly yours,

Michial M. Emery, P.E.
President

pc: Mr. Randy Traynor
Ms. Janet Saiers
Mr. Bob Fosnaugh
~~Mr. Fred Aguirre~~
Mr. Jon Ertsgaard
Mr. Cleve Matthews
Mr. Herb Denish
Ms. Lynn Johnson

KD/mls
Job No. 4 239 8

The following is a list of infrastructure improvements required by further development within the Tanoan Properties that is requested for deferral of financial guarantees under the provisions of the subdivision ordinance for bulk land transfers:

STREET IMPROVEMENTS - MAJOR CORRIDORS

Street Name	Description	Development Served
Eubank Boulevard (Major Arterial)	156' R/W, 8 lane Divided	The Champions at Tanoan The Highlands at Tanoan Tract P-1, Tanoan Properties

Note: The Masters at Tanoan provided financial guarantees for that portion of Eubank Boulevard dedicated by the subdivision plat for the Masters. Financial guarantees for remaining portions of Eubank Boulevard will be included with subdivision improvements agreements for those developments from which Eubank right-of-way was dedicated.

Lowell Street (Collector)	68' r/w flared to 86' @ Academy. 4 lane undivided flared to 4 lane divided w/left turn lane	Tracts K-1-A,K-3,K-4,L-2, L-3,L-4,N-6,O-2 and O-3

Note: Approximately 1000' of Lowell St. north of Academy Road will be constructed concurrent with or prior to subdivision improvements within Tract K-1-A to be operated as a private street as per the Dedication Agreement filed 1/8/85. Tract K-1-A will be the first parcel within the Tanoan properties to be developed following approval of the Sector Plan Amendment (DRB-84-744).

Tennyson Street (Collector)	68' r/w flared to 86' @ Academy Rd. 4 lane undivided flared to 4 lane divided w/left turn lane	Tracts L-3,M-1,M-2,N-1,N-2, N-3,N-4,N-5,N-7

Note: Although street improvements for Lowell, Tennyson and Eubank are the responsibility of the developer(s), drainage crossing structures for the Pino Arroyo (and Pino Tributary Arroyo) are identified as City responsi- bility by the drainage ordinance.

STREET IMPROVEMENTS - MINOR CORRIDORS

Development Served	Outlet Corridor	Description
Tracts K-1-A, K-3, K-4, O-1, O-2	Lowell Street	Private major local street to cross golf course between Tracts K-3/K-4 and O-1/O-2
Tracts N-4, N-7, N-5	San Antonio, Tennyson St.	Public street to provide access to park site and recreational lands in a looped configuration from San Antonio to Tennyson
Tract N-6	Lowell Street	Private access to Tramway Dam

Note: As stated on the plat, corridors are provided for these facilities and provison of public rights-of-way or private access easements must be dedicated to provide access to all the tracts listed above prior to conveyance of or construction upon those tracts.

DRAINAGE IMPROVEMENTS

Description	Tract	Tract Served
Storm Sewer Diversion to Pino Arroyo	K-1-A	M-2,L-3,L-2

Note: A portion of this storm sewer, along with an open channel and an energy dissipation structure near the Tanoan Country Club have been constructed as off-site facilities to Country Club Estates Subdivision. The remainder of the underground storm sewer will be constructed with subdivision improvements within Tract K-1-A. All other tracts are allowed discharge directly into either the Pino Arroyo (Tanoan Golf Course) or Academy Road (constructed under SAD-205).

SEWER IMPROVEMENTS - BEAR TRIBUTARY BASIN

Street	Description	Developments Served
Lowell	8" main-outfall to Academy Rd. Main. (SAD-205)	L-3,M-2, possibly L-4,N-1,N-2,N-3
Tennyson	8" main-outfall to Academy Rd. Main (SAD-205)	M-1, possibly N-1, N-2,N-3

Note: A 15" sewer main in Academy Road along with 8" stubs at Lowell and Tennyson, and a portion of the sewer main that will provide service for Tracts N-1, N-2 and N-3 has been constructed as a part of or concurrent with SAD-205. Tract L-2, and a portion of Tract K-1-A will outfall to Academy Road through Country Club Estates.

SEWER IMPROVEMENTS - PINO BASIN

Description	Developments Served
8" outfall to Tanoan Sewer Interceptor	Tract K-1-A
8" outfall to Tanoan Sewer Interceptor	Tracts O-1, O-2
8" outfall to Tanoan Sewer Interceptor	Tracts K-3, K-4
8" outfall to Tanoan Sewer Interceptor in Lowell Street	Tract O-3
8" outfall to Tanoan Sewer Interceptor in Lowell Street	Tract L-4, L-5

Note: Sewer outfall for Tract O-3 could cross Lowell and discharge to the Tanoan Interceptor through Tracts O-1 and O-2.

MASTER PLAN WATER IMPROVEMENTS

Description	Development Served
20" upper 7E	O-1, O-2
10" lower 8E	K-1-A, K-3, O-2
12" upper 8E, Lowell Street	L-2,L-3,L-4,L-5, O-2, O-3
12" 9E, Tennyson Street	L-3,M-1,M-2,N-1, N-2,N-3

Note: Master planned water facilities are to be extended as required in conjunction with the developments they serve.

NOTICE OF SUBDIVISION PLAT CONDITIONS
REVISION PLAT OF THE TANOAN PROPERTIES

The Revision Plat of the Tanoan Properties, including Tracts 155-A, 4-A-1, 4-B-1, 4-C, 5-A-1, 5-B, K-1-A, K-2-A, K-2-B, K-2-C, K-2-D, K-2-E, K-3, K-3-A,K-4, K-4-A, L-1, L-2, L-2-A, L-3, L-4, L-5, L-6, L-7, M-1, M-2, N-1, N-2, N-3, N-4, N-5, N-6, N-7, O-1, O-2, O-3, P-1, The Champions at Tanoan, and The Highlands at Tanoan, has been granted a variance or waiver from certain subdivision requirements pursuant to Section 7 of the City of Albuquerque Subdivision Ordinance.

Future Subdivision of lands within this plat, zoning site development plan approvals, and development permits may be conditioned upon dedication of rights-of-way and easements, and/or upon infrastructure improvements by the owner for water, sanitary sewer, streets, drainage, grading and parks in accordance with current resolutions, ordinances and policies in effect at the time for any specific proposal.

The City and AMAFCA (with reference to drainage) may require and/or permit easements to be added, modified, or removed when future plats and/or site development plans are approved.

By its approval of this subdivision the City makes no representation or warranties as to availability of utilities, or final approval of all requirements including (but not limited to) the following items: Water and santiary sewer availability; future street dedications and/or improvements; park and open space requirements; drainage requirements and/or improvements; and, excavation, filling or grading requirements. Any person intending development of lands within this subdivision is cautioned to investigate the status of these items.

At such time as all such conditions have been satisfactorily met, the City Engineer (with the concurrance of AMAFCA with respect to drainage) shall approve a recordable document, removing such conditions from all or from a portion of the area within the subject subdivision.

ACKNOWLEDGED:

_____
Allan Whitesel, Vice President
AmeriWest Corporation

STATE OF NEW MEXICO)
SS
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this ___ day of _____, 1985 by _____.

My Commission Expires:

_____
Notary Public

_____
Chairman
Development Review Board

STATE OF NEW MEXICO)
SS
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this ___ day of _____, 1985 by _____.

My Commission Expires:

_____
Notary Public

→ Don

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

INTER-OFFICE MEMORANDUM

From ~~TO:~~ DEVELOPMENT REVIEW BOARD MEMBERS
BARRY LEVINE, Transportation
LEORA JAEGER, Transit
STEELE NOWAK, Council of Governments
DAN SABO, AMAFCA
MAX CISNEROS, Refuse Removal Division
PAT EVERTSEN, Police Building
TED SCHOLER, Fire Department
FRED MALONE, Environmental Health
BOB ROMERO, Zoning Enforcement Officer
MARY LOU HAYWOOD, Neighborhood Coordination
LEONARD GREENSPAN, Albuquerque Public Schools
VAL VALDEZ, Real Estate Officer
CAROL HODGES, Air Pollution Control Division
C. PRESTON CLEMENTS, Gas Company of New Mexico
RUBIN PHILLIPS, Public Service Company of New Mexico
WAYNE HEMSING, Mountain States Telephone Company

MAR 29 1985
AMAFCA

RECEIVED
APR 03 1985
HYDROLOGY SECTION

To ~~FROM:~~ RANDY TRAYNOR, Chairman, Development Review Board

SUBJECT: DEVELOPMENT REVIEW BOARD HEARING ON VACATIONS AND MAJOR SUBDIVISIONS

Your comments on the following case(s) are requested. Board hearing is on Tuesday, April 9, 1985. Comments must be received by APRIL 2, 1985. Attached are copies of the request.

V-85-23 Bohannan Huston, Inc., agents for AmeriWest Corporation, requests Vacation and subsequent realignment of portions of the 150 foot and 60 foot drainage easements located adjacent to Tract I, Tanoan Properties, and Open Space Tracts 4-A & B, 5-A, and Tract N, Tanoan Properties, generally located on both sides of the Eubank extension, north of Academy Road, N.E., and adjacent to Tramway Boulevard, north of Academy Road, N.E. (E-21, 22, 23)

Applicant has contacted AMAFCA concerning both requests. AMAFCA has no objection, however we have not seen either plat and therefore request that plats be sent to AMAFCA for signing.

MUNICIPAL DEVELOPMENT DEPARTMENT

Jack E. Leaman, City Planner | PLANNING DIVISION | Telephone (505) 766-7422

AN EQUAL OPPORTUNITY EMPLOYER

c.c. Fred Aguirre

APPL[illegible]N FOR SUBDIVISION AND/OR VA[illegible]N

INSTRUCTIONS

Print or Type in Black Ink Only. Use additional sheets if necessary. The completed application is to be submitted to the Planning Division by the applicant or agent. Each application must be accompanied by the filing fee (checks are preferred and made payable to the City of Albuquerque). All attachments must be submitted with the application and, after folding, shall not exceed 8 1/2 x 14 inches. Additional information may be obtained from the Planning Division (505) 766-7422.

APPLICATION FOR:

SUBDIVISION

____ Sketch Plat

x Preliminary Plat

x Final Plat

VACATION

____ Public Right-of-Way

____ Private Way

____ Easement

1. **APPLICANT INFORMATION**
   a. Applicant AmeriWest Corporation Telephone 883-3450
   Mailing Address Post Office Box 25625
   Albuquerque, NM Zip Code 87125
   Applicant's Proprietary Interest in Property: Owner
   b. Agent(if any): Bohannan Huston, Inc. Telephone: 881-2000
   Mailing Address: 4125 Carlisle N.E., Albuquerque, NM 87107
   c. Signature of Agent: [illegible] Date 3/13/85

2. **LOCATION OF REQUEST**
   a. Street Address(if any):
   b. Legal Description of Property:
   (1) Lot(s)/Tract(s): EI,K-1,K-2,L,M,N,O & P & Open Space 4-A, 4-B and 5-A
   (2) Block:
   (3) Subdivision-Addition Name/MRGCD Map: Tanoan Properties
   c, Location of Property by Streets: North of Academy Road between Tramway and Eubank (approximately)
   d. Uniform Property Code:

3. **PROJECT DETAILS**
   a. Present Zoning: See Academy/Tramway/Eubank Sector Development Plan Proposed: Ref: Amendment to Sector Plan (attached)
   b. No. of Lots Existing: 12 Proposed:
   c. No. of Dwelling Units Existing: Proposed: same as above
   d. Total Land Area Covered by Request: Net Acres 15.5 Sq. Feet

4. **(VACATION ONLY) REASON FOR REQUEST** Use Separate Sheet: Why should the vacation by granted?

5. **ATTACHMENTS AS REQUIRED IN SUBDIVISION ORDINANCE** See appropriate checklist(s)

****

PLANNING DIVISION INTERNAL USE ONLY

Cross-references: SP-78-1 No. Signs Issued:

Application and Fee Received by: [illegible] Date: 3-13-85

Fee Paid: Dollars $ Method of Payment: CREDIT:

TREASURER VALIDATION

MAP NO. E-21,22,23

HEARING DATE March 26, 1985

CASE NO. DRB-85-744

SEND LETTER OF APPROVAL

BOHANNAN-HUSTON INC.
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
UNIVERSITY PLAZA, 330 GARFIELD SUITE 104 SANTA FE, N.M. 87509 505 986-7671
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491

March 13, 1985

Mr. Randy Traynor
DRB Chairman
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Amendment to the Academy/Tramway/Eubank Sector Development Plan and the Revised Plat of the Tanoan Properties
DRB 84-744

Dear Randy:

Submitted herewith are five (5) copies of the revised summary plat of the Tanoan Properties, and five (5) copies of the amendment to the Academy/ Tramway/Eubank Sector Development Plan that was approved by the EPC on December 20, 1984. Also attached is a copy of the application for final plat review by the DRB. We request that these items be placed on the DRB agenda at the earliest possible convenience.

The EPC conditions for approval of the Sector Plan Amendment have been addressed as follows:

1. Both commercial/office sites have been identified as office park and restaurant with full service liquor. "Neighborhood Commerical" has been eliminated as a possible land use for these sites.

2. A residential tract with a proposed maximum density of 15 DU/Ac has been identified along Academy Road as consisting of approximately 21 acres.

3. The request for additional access to Tramway from the Tanoan Properties was withdrawn from the TCC by AmeriWest.

4. The issue of Lowell Street dedication has been resolved to the satisfaction of both AmeriWest and the City. Additional right-of-way to flare the 68' dedicated right-of-way to the 86' right of way existing south of Academy Road will be accomplished prior to the DRB hearing.

5. The revised plat of the Tanoan Properties dedicates all remaining right-of-way on Eubank Boulevard.

6. It is understood that a glare screen must be constructed between Tennyson Street and Tramway Road when Tennyson Street is extended north from Academy road.

PRINCIPALS
JERRY R. BOHANNAN, P.E. & L.S.
LARRY W. HUSTON
GEORGE M. LOVELY, P.E.

7. An amended master conveyance study was submitted for City review on December 20, 1984. To date, we have received no comments from AMAFCA or City Hydrology. We have been in contact with both entities and hope to have addressed any adverse comments prior to DRB review.

8. It is understood that AMAFCA approval of the master conveyance study and approval of any subsequent submittals that affect their easements must be obtained prior to final approval.

9. Open space 4-C has been identified on the revised plat. This tract, along with Open Space 1, Open Space 2 and Open Space 3 will serve as the current Open Space Dedication for the Tanoan Developments. Legal Descriptions are currently being drawn up for those documents. This will be accomplished prior to DRB review.

10. The Sector Plan Amendment has been revised to show future access to the proposed park in a looped alignment from Tennyson to San Antonio. Tract N-4 has been identified on the plat to serve as the proposed park. Tract N-4 is only 2.7 acres, approximately, which does not satisfy all of the park dedication requirements of the Tanoan Properties. Due to the recent tendency of Tanoan Developments to fall considerably below approved densities, it seems logical to create a tract smaller than the required park and work out the specific park dedication agreement at a later date. This seems particularly applicable since AmeriWest currently has a park dedication credit of 0.9 acre based on present development.

11. Therefore, we request DRB review of the revised plat of the Tanoan Properties and the amendment to the Academy/Tramway/Eubank Sector Development Plan. We also request your assistance in coordinating the final approval of the sector plan amendment by the Chairman of the EPC.

If you have any questions or comments, please do not hesitate to call Kerry Davis or me at 881-2000.

Sincerely yours,

Michial M. Emery

Michial M. Emery, P.E.
President

Enclosures

cc: Mr. Cleve Matthews
Mr. Allan Whitsel
Ms. Lynn Johnson
Mr. Herb Denish

KD/mls
Job No. 4 239 8

B. H. SWINBURNE, CHAIRMAN
WILLIAM V. HEREFORD, VICE-CHAIRMAN
FRANCES MCCOY, SECRETARY-TREASURER
R. WARD HUNNICUTT, DIRECTOR
REX FUNK, DIRECTOR

RICHARD E. LEONARD
EXECUTIVE ENGINEER

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2215

March 25, 1985

Ms. Janet Saiers, Coordinator
City of Albuquerque Parks and Recreation
P.O. Box 1293
Albuquerque, NM 87103

RE: Proposed Park - Academy/Eubank/Tramway Sector
Development Plan

Dear Janet:

Upon request from Cleve Matthews, I am writing this letter to convey my understanding that AmeriWest Corporation has proposed a 2.7 acre park site near Tramway and San Antonio, to be located in part of the easement granted to AMAFCA. More specifically, part of the park lands are contained in the emergency spillway for Pino/Tramway Dam. A copy of the easement is attached.

I support the concept of using the land for both a park and a spillway. However, in keeping with the easement, we need to approve plans for grading, landscaping, and the placement of structures which might obstruct flood flows. I am reasonably confident that plans can be worked out which will satisfy both of us.

Sincerely,

Rich Leonard

Richard E. Leonard
Executive Engineer

ic
Encl.
cc: Cleve Matthews
Lynn Johnson
K. Davis, B-H

P.S. A good way to document this would be for AMAFCA to issue the City an encroachment license. REL

Academy / Tramway / Eubank Sector Development Plan
DRB-84-744

1. Parks and Recreation wishes to retain the park site designation north of Academy that was part of the original Sector Plan. They would not, at this time, be interested in trading the general park site designation for a designation in the Pino Dam floodplain.

2. Currently the City owns three park ponding areas (none of which were accepted as the result of the subdivision process). They are 1) Taylor Ranch Mariposa Pond; 2) John B. Robert Dam; 3) Odelia Pond. The Odelia Pond is under construction for two softball fields to be ready May 1985.

3. After the 1985 storm season, Parks and Recreation would have a better idea of the maintenance concerns in these ponding-storm retention areas. At that time, they would know if they could even consider accepting part of the dam area.

4. Parks and Recreation would consider increasing the size of the Prospector's Ridge (3.7 acres) park on San Victorio Street south of Academy and retaining a smaller park site north of Academy. This could be a tot-lot or mini-park depending on the demographics of the Tanoan area.

5. Parks and Recreation would also prefer that any new park designation be moved west of the dam to the area which contai the single family units.

6. Development of this area will require water and sanitary sewer availability be addressed to the specific tracts.

7. For informational purposes, the Water Resource Department does not presently have facilities on the line capable of servicing most of zon 9E portion of this area.

8. A water serviceability statement should be requested.

9. The higher densities next to the golf course could run apartment traffic through or adjacent to single family areas - which has caused neighborhood dissension in some areas.

10. Alignment of street through the golf has been changed - this must be justified - is not per Long Range Major Street Plan. Status of street - temporary private versus public must be clarified and discusses.

11. A comparison of the number of DUs, commercial and office acreages for the presently approved Sector Plan versus the proposed plan should be provided.

12. A new north-south street west of Tramway is desirable.

13. No access will be permitted to Tramway; this should be specified on the plan.

14. An amended drainage study that includes the floodplain easement and proposed amendments to the floodplain is required. Also included or referenced should be any new subdivisions/developments and drainage easements.

15. The question of dedication of Eubank Boulevard should be addressed with this submittal.

Scotch® 7664 "Post-it" Routing-Request Pad

ROUTING - REQUEST

Please
- [ ] READ
- [ ] HANDLE
- [ ] APPROVE

and
- [ ] FORWARD
- [ ] RETURN
- [ ] KEEP OR DISCARD
- [ ] REVIEW WITH ME

To NEED TO REVIEW IMPORTANT

Date _____ From _____

BOHANNAN-HUSTON INC.
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
UNIVERSITY PLAZA, 330 GARFIELD SUITE 104 SANTA FE, N. M. 87509 505 988-7671
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491

December 20, 1984

Mr. Fred Aguirre
City Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Amendment to the Academy/Tramway/Eubank Sector Development Plan Master Conveyance Study.

Dear Fred:

Submitted herewith is the report for the Amendment to the Master Conveyance Study for the Academy/Tramway/Eubank Sector Development Plan for the proposed developments north of Academy Road. This report is in compliance with your comments from the DRB review of the Sector Plan Amendment. It provides an outline of the concepts for Drainage Management within the undeveloped lands within the Amended Sector Plan area. We hope that you will find it concise and complete as to the scope required for Sector Plan Drainage submittals.

Additional detailed hydraulic studies of the Pino Basin will be provided prior to development of any lands within this watershed.

If you have any questions or comments, please call Kerry Davis at 881-2000.

Sincerely yours,

Michial M. Emery

Michial M. Emery, P.E.
President

what is DRB No. ?
84-744

Enclosure

cc: Mr. Cleve Matthews

KD/mls
Job No. 4 239 5

RECEIVED
DEC 20 1984
HYDROLOGY SECTION

PRINCIPALS
JERRY R. BOHANNAN, P.E. & L.S.
LARRY W. HUSTON
MICHIAL M. EMERY, P.E.

HYDROLOGY E22/D7 2 of 2 FIFTEEN PLANS

78 19401

GRANT OF EASEMENT
FOR
SPILLWAY

AFFILIATED MORTGAGE & DEVELOPMENT COMPANY, a New Mexico corporation, Grantor, for good and valuable consideration, the receipt of which is hereby acknowledged, does grant, bargain, sell and convey unto the ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, a political subdivision of the State of New Mexico, Grantee, and its successors and assigns, the permanent right and easement to construct, operate, repair, reconstruct, protect and maintain an earth spillway for the conveyance of flood waters, along with related erosion prevention devices, on, over and across that real estate which is located in the County of Bernalillo and State of New Mexico and is more particularly described in Exhibit A, attached hereto and incorporated herein by reference.

TO HAVE AND TO HOLD the aforesaid rights and easements for the uses and purposes aforesaid unto the Grantee, its successors and assigns, forever.

THERE IS RESERVED to the Grantor, its successors and assigns, the right to use said lands for recreation, open space and other purposes which will not interfere with the rights and easements hereby granted, provided that such use shall be exercised in such a manner as will not damage, or interfere with the construction, operation and maintenance of Grantee's flood control facilities.

THERE IS FURTHER RESERVED to the Grantor, its successors and assigns, the right to shape, reshape and landscape the spillway, provided, however, that plans and specifications therefor are first prepared by a professional engineer and submitted to Grantee for its review and approval; such approval shall not be withheld if the operation and use of the spillway as designed will not be

E-22

endangered or impaired by such work.

In the event the use of the above described real estate or adjacent dam by Grantee for flood control purposes is abandoned for a period of five (5) years, the rights and easement herein granted shall revert to the Grantor, its successors and assigns.

WITNESS its hand and seal this 17 day of March, 1978.

AFFILIATED MORTGAGE & DEVELOPMENT COMPANY

By Charles A. Haeglin

Title [illegible]

ACKNOWLEDGMENT FOR CORPORATION

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was duly acknowledged before me this 17 day of March, 1978, by Charles A. Haeglin, Exec. V.P. of AFFILIATED MORTGAGE & DEVELOPMENT COMPANY, a New Mexico corporation, on behalf of said corporation.

Judith T. Burch
NOTARY PUBLIC

My commission expires:

May 6, 1980

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

MAR 17 3 31 PM 1978

Mic 595 PG 221-223
BK

EMMA C. GONZALES
CO. CLERK & RECORDER

[illegible] DEPUTY

A Certificate of Survey for the

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

PARCEL Easement #4 (Revised)

Tramway Floodwater Retaining Structure

A certain parcel of land situate in the Northwest quarter of Section 27, Township 11 North, Range 4 East, New Mexico Prinicpal Meridian, Bernalillo County, New Mexico, which is more particularly described by metes and bounds as follows:

Beginning at a point from which U.S.G.S-B.C. Tumble, Township 11 North, Range 4 East, New Mexico Principal Meridian (brass cap in place) bears N. 44° 47' 38" E., a distance of 642.98 feet; which point is also centerline station P. T. 15 + 86 of emergency spillway of Tramway Floodwater Retaining Structure; thence,

S. 54° 04' 16" W., a distance of 150.00 feet to an angle point; thence,

Northwesterly, a distance of 142.53 feet along the arc of a circular curve to the left (said arc having a radius of 149.02 feet substending a chord which bears N. 63° 28' 01" W., a distance of 137.16 feet) to a point; thence,

S. 89° 16' 16" W., a distance of 30.00 feet to a point; thence,

N. 00° 43' 44" W., a distance of 300.00 feet to an angle point; thence,

N. 89° 16' 16" E., a distance of 30.00 feet to a point; thence,

Southeasterly, a distance of 429.46 feet along the arc of a circular curve to the right (said arc having a radius of 449.02 feet subtending a chord which bears S. 63° 22' 29" E., a distance of 413.28 feet) to a point; thence,

S. 54° 04' 16" W., a distance of 150.00 feet to the point of beginning of the parcel herein described and containing 2.18 acres, more or less.

NOTE: All bearings of the preceding description are on the New Mexico State Plane grid, Central Zone, ∠ =- 0° 08' 40"

SPILLWAY

EXHIBIT "A"

85 175.

FILED WITH CITY CLERK'S OFFICE
1/8/85 dw
5 copies

DEDICATION DEED
(EUBANK BOULEVARD)

AND

GRANTS OF EASEMENT

DAVID PRICE and DALLAS PRICE ("PRICE" which term includes their successors and assigns) for good and sufficient consideration grant to the CITY OF ALBUQUERQUE, a municipal corporation ("CITY") whose address is P. O. Box 1293, Albuquerque, New Mexico 87103, that certain real property situate in Bernalillo County, New Mexico, more particularly described in Exhibit "A" attached hereto and incorporated herein by reference (the "PROPERTY").

THIS CONVEYANCE is subject to an easement (the "EASEMENT") reserved to PRICE, and appurtenant to that certain real property, presently used as the Tanoan Golf Course, situate in Bernalillo County, New Mexico, more particularly described in Exhibit "B" attached hereto and incorporated herein by reference (the "DOMINANT PROPERTY"). The EASEMENT shall be for the purpose of the passage of pedestrians, golf carts, and golf maintenance apparatus and vehicles under the roadway to be constructed upon the PROPERTY through the CROSSING STRUCTURE, as hereinafter defined. The EASEMENT shall be reserved in perpetuity, and shall be appurtenant to, run with, and benefit the DOMINANT PROPERTY.

THIS CONVEYANCE is for municipal and public roadway purposes including, but not limited to, the construction and maintenance of a street, sidewalks, and utilities together with a structure (the "CROSSING STRUCTURE") for the passage of vehicular

1/8/85
Fred Aguirre:
Copies for your files.
Thanks,
Denise

and pedestrian traffic over the Pino Tributary Arroyo which the PROPERTY traverses. The CROSSING STRUCTURE shall be designed and constructed by the CITY, at its sole cost and expense, in a manner to accommodate both the flows of the Pino Tributary Arroyo and to permit the convenient passage under the CROSSING STRUCTURE of pedestrians, golf carts, golf course maintenance vehicles and apparatus pursuant to the EASEMENT. Additionally, PRICE agrees to convey reasonable construction, maintenance, and slope easements to the CITY, as are reasonably necessary for construction and maintenance of the street and the CROSSING STRUCTURE. The CITY shall not be obligated to expend any additional monies to provide safety or aesthetic amenities to accommodate the use of the EASEMENT. PRICE assumes the obligation to provide for the safe passage of pedestrians and equipment under the CROSSING STRUCTURE.

At least thirty (30) days prior to awarding a contract for the design of the CROSSING STRUCTURE the CITY agrees to provide written notice to PRICE and the AMERIWEST CORPORATION, a New Mexico corporation ("AMERIWEST") of the proposed letting of the contract, which notice shall be for the purpose of providing PRICE and AMERIWEST the right to be heard by the CITY on the subject of the design of the CROSSING STRUCTURE.

THIS CONVEYANCE IS FURTHER SUBJECT to an easement which is hereby granted to AMERIWEST to construct a wrought iron and white slump block wall (the "WALL") along the sides of the CROSSING STRUCTURE, approximately six feet (6') in height in order to preserve the security of the AMERIWEST PROPERTY.

AMERIWEST shall have the responsibility to construct and to maintain, at its sole cost, the WALL and shall indemnify PRICE and the CITY and hold them harmless from any claims or damages occasioned as a result of the WALL being constructed upon the CROSSING STRUCTURE or upon the PROPERTY. The design of the WALL must be approved in writing by the CITY prior to its construction.

PRICE agrees that he shall indemnify the CITY and hold the CITY harmless from claims or damages resulting from the use of the EASEMENT, except when such claim or damage results from the negligence of the CITY. The CITY agrees that it shall indemnify and hold PRICE harmless from claims or damages resulting from the use of the EASEMENT which result from the CITY's negligence.

THIS CONVEYANCE IS FURTHER SUBJECT TO: reservations, restrictions, and easements of record, including a drainage easement in favor of AMAFCA which is in existence and which shall survive this conveyance and an easement which has been granted to Ameriwest for passage of pedestrians across the PROPERTY, and ad valorem taxes for 1984 and thereafter.

All provisions of this instrument, including the benefits and burdens, run with the land and are binding upon and inure to the heirs, assigns, successors and personal representatives of the parties hereto.

Notices required to be given by this conveyance are to be given at the following addresses unless written notice of change of address has been lodged with the other parties:

Ameriwest Corporation
6400 Uptown Boulevard, N.E.
Suite 300-East
Albuquerque, New Mexico 87110

David and Dallas Price
c/o American Golf and Tennis Corp.
641 Sepulvada Boulevard
Los Angeles, California 90049

THIS CONVEYANCE IS WITH SPECIAL WARRANTY COVENANTS.

Executed the 31st day of December, 1984.

x _____
DAVID PRICE

_____
DALLAS PRICE

ACCEPTED:

CITY OF ALBUQUERQUE,
a municipal corporation

By _____
Its _____

APPROVED:

_____
ASSISTANT CITY ATTORNEY

_____
TRAFFIC ENGINEER

Approved As To Form
_____
City Attorney
Date: 12/21/84

ATTEST:
_____
City Clerk

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

The foregoing instrument was duly acknowledged before me this 18th day of December, 1984, by DAVID PRICE.

_____
Notary Public

My Commission Expires:
OCT. 20, 1987

OFFICIAL SEAL
BONNIE J. MATTERN
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
MY COMMISSION EXPIRES OCT. 20, 1987

JM11 Price/City Ded Deed

A certain tract of land situate within projected Section 28, T11N, R4E, N.M.P.M., within the Elena Gallegos Grant, City of Albuquerque, Bernalillo County, New Mexico, being a portion of Open Space - 4 and Open Space - 5, TANOAN PROPERTIES as the same is shown and designated on the plat filed in the office of the County Clerk of Bernalillo County, New Mexico on June 25, 1982 and being more particularly described by plat bearings and ground distances as follows:

BEGINNING at the southwest corner of the tract herein described, said corner being a point on the southerly boundary of said Open Space - 4 and also being a point on the northerly boundary of Tract E of said TANOAN PROPERTIES, whence the southeast corner of said Tract E bears S06°20'50"E, 667.21 feet and from said point of beginning running thence along the westerly boundary of the tract herein described,
N00°10'12"E, 207.28 feet to the northwest corner of the tract herein described, a point on the northerly boundary of said Open Space - 4; thence continuing along the northerly boundary of said Open Space - 4 and Open Space - 5,
N34°37'45"E, 275.70 feet to the northeast corner of the tract herein described, a point on the northerly boundary of said Open Space - 5; thence leaving said boundary of Open Space - 5 and continuing along the easterly boundary of the tract herein described,
S00°10'12"W, 293.87 feet to the southeast corner of the tract herein described, a point on the southerly boundary of said Open Space - 5; thence continuing along the southerly boundary of said Open Space - 5 and Open Space - 4,
S48°06'50"W, 210.10 feet to the point and place of beginning.

Tract contains 0.8974 acre, more or less.

Bohannan-Huston Inc.
4125 Carlisle Blvd. N.E.
Albuquerque, NM 87107

October 31, 1984
Job No. 42390

A. Dwain Weaver
A. Dwain Weaver
N.M.P.L.S. NO. 6544

A. DWAIN WEAVER
NEW MEXICO
6544
REGISTERED LAND SURVEYOR

EXHIBIT "A"

STATE OF CALIFORNIA)
) ss.
COUNTY OF Los Angeles)

The foregoing instrument was duly acknowledged before me this 1st day of December, 1984, by DALLAS PRICE.

Bonnie J Mattern
Notary Public

My Commission Expires:

Oct. 20, 1987

OFFICIAL SEAL
BONNIE J. MATTERN
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
MY COMMISSION EXPIRES OCT 20,1987

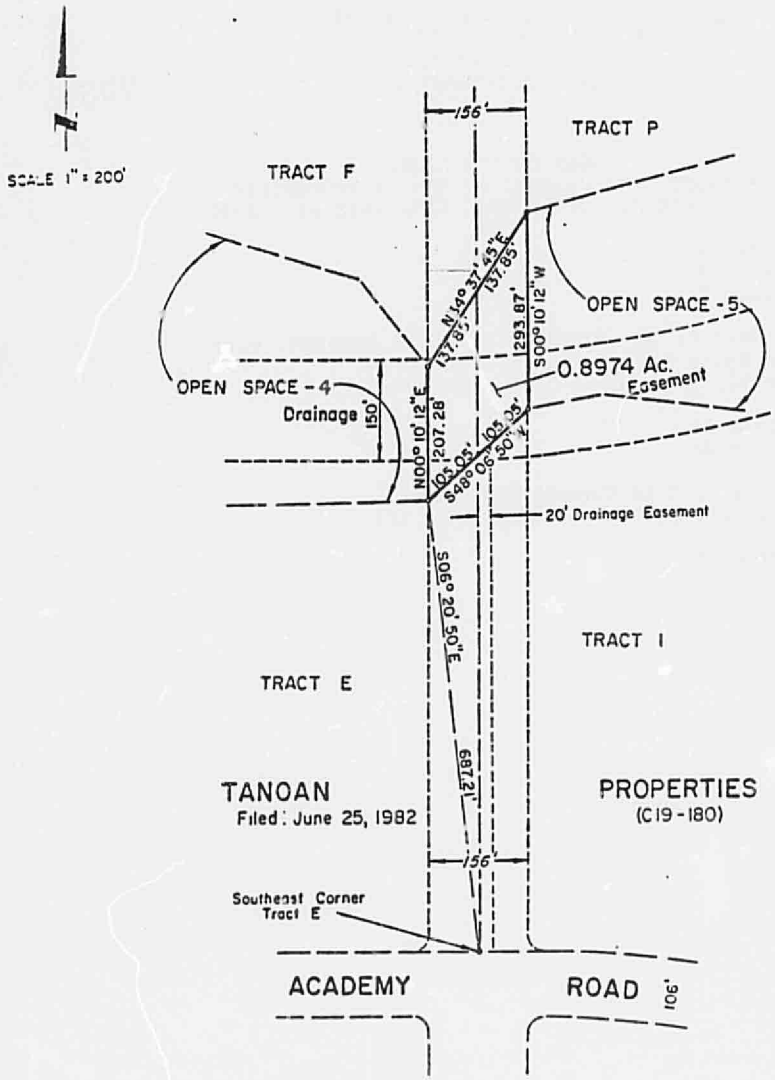
STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 31st day of December, 1984, by Frank A. Kleinhenz, Chief Administrative Officer of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Notary Public

My Commission Expires:

12/18/88



JOB NO 42390

BOHANNAN HUSTON INC

OCTOBER 31, 1984

II.

COUNTRY CLUB LANDS
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED APRIL 19, 1984, BOOK C23, PAGE 165
CLUBHOUSE TRACT A-1
CLUBHOUSE TRACT B-1

236

III.

GOLF COURSE LANDS
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED JUNE 25, 1982, BOOK C19, PAGE 180 (1-5)

Open Space 1
Open Space 2
Open Space 3

The Amended Plat of The Masters at Tanoan together with
Amended Open Space - 4 of Tanoan Properties
filed May 10, 1984, book C23, page 197 (1-3)

Open Space 4A
Open Space 4B

Amended Summary Plat of Tanoan Properties
filed April 19, 1984, book C23, page 165

Open Space 5A

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD
1985 JAN 28 PM 3:03
DOLORES C. WALLER
CO. CLERK & RECORDER
DEPUTY

EXHIBIT "B"
BK 29 PG 236

85 1756

237

FILED WITH CITY CLERK'S OFFICE

1/8/85 dw

DEDICATION DEED
(LOWELL STREET)

AND

GRANTS OF EASEMENT

DAVID PRICE and DALLAS PRICE, ("PRICE" which term includes their successors and assigns) for good and sufficient consideration grant to the CITY OF ALBUQUERQUE ("CITY") whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, that certain real property situate in Bernalillo County, New Mexico, more particularly described in Exhibit "A" attached hereto and incorporated herein by reference, ("PROPERTY").

PRICE hereby reserves a temporary easement (the "TEMPORARY EASEMENT") for full and exclusive possession and control of the PROPERTY subject to any public utility purposes needed by the CITY. This TEMPORARY EASEMENT shall continue in force until such time as the CITY makes a formal determination (the "DETERMINATION") that it is necessary for the public health and safety to construct and open a public street over the PROPERTY. The DETERMINATION shall be made after a public hearing at which the public has had any opportunity to be heard. Notice of the public hearing shall be given in the manner then prescribed by the CITY'S subdivision ordinance for a public hearing, additionally the CITY shall give notice to PRICE and AMERIWEST. The DETERMINATION shall not be deemed made until a final decision has been entered by the CITY'S governing body, if appealed to that body by

a party of interest in accordance with the CITY'S then existing procedures. The TEMPORARY EASEMENT shall terminate upon the DETERMINATION being final.

THIS CONVEYANCE is further subject to an easement (the "EASEMENT") reserved to PRICE, and appurtenant to that certain real property, presently used as the Tanoan Golf Course, situate in Bernalillo County, New Mexico more particularly described in Exhibit "B" attached hereto and incorporated herein by reference (the "DOMINANT PROPERTY"), for the purpose of the passage of pedestrians, golf carts, and golf maintenance apparatus and vehicles across the PROPERTY. After the DETERMINATION being final, the exact location of the EASEMENT shall be determined by agreement between PRICE and the CITY. The EASEMENT shall be reserved in perpetuity, and shall be appurtenant to, run with, and benefit the DOMINANT PROPERTY.

THIS CONVEYANCE IS FURTHER SUBJECT to an easement granted to AMERIWEST to construct and maintain, at its sole cost, a wrought iron and white slump block wall (the "WALL") along the sides of the PROPERTY, SIX FEET (6') in height in order to preserve the security of the AMERIWEST PROPERTY. AMERIWEST shall have the responsibility to maintain the WALL and shall indemnify PRICE and the CITY and hold them harmless from any claims or damages occasioned as a result of the WALL being constructed upon the PROPERTY. The design of the WALL must be approved in writing by the CITY prior to its construction.

THIS CONVEYANCE IS FURTHER SUBJECT TO: reservations, restrictions, and easements of record, including a drainage

easement in favor of AMAFCA which is in existence and which shall survive this conveyance and an easement which has been granted to AMERIWEST for passage of pedestrians across the PROPERTY, and ad valorem taxes for 1984 and thereafter.

All provisions of this instrument, including the benefits and burdens, run with the land and are binding upon and inure to the heirs, assigns, successors and personal representatives of the parties hereto.

PRICE agrees that he shall indemnify the CITY and hold the CITY harmless from claims or damages resulting from the use of the EASEMENT, except when such claim or damage results from the negligence of the CITY. The CITY agrees that it shall indemnify and hold PRICE harmless from claims or damages resulting from the use of the EASEMENT which result from the CITY's negligence.

Notices required to be given by this conveyance are to be given at the following addresses unless written notice of change of address has been lodged with the other parties:

Ameriwest Corporation
6400 Uptown Boulevard, N.E.
Suite 300-East
Albuquerque, New Mexico 87110

David and Dallas Price
c/o American Golf and Tennis Corp.
641 Sepulvada Boulevard
Los Angeles, California 90049

WITH SPECIAL WARRANTY COVENANTS.

Executed the 31st day of December, 1984.

ACCEPTED:

DAVID PRICE

CITY OF ALBUQUERQUE,
a municipal corporation

DALLAS PRICE

By Frank A. Kleinkerg
Its

Approved As To Form
City Attorney
Date: 12/21/84

APPROVED:

ASSISTANT CITY ATTORNEY

TRAFFIC ENGINEER

ATTEST:

City Clerk

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

The foregoing instrument was duly acknowledged before me this 18th day of December, 1984, by DAVID PRICE.

Notary Public

My Commission Expires:

Oct. 20, 1987

OFFICIAL SEAL
BONNIE J MATTERN
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
MY COMMISSION EXPIRES OCT 20,1987

STATE OF CALIFORNIA)
) ss.
COUNTY OF Los Angeles)

The foregoing instrument was duly acknowledged before me this 18th day of December, 1984, by DALLAS PRICE.

Notary Public

My Commission Expires:

Oct 20, 1987

OFFICIAL SEAL
BONNIE J MATTERN
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
MY COMMISSION EXPIRES OCT 20,1987

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me on this 31st day of December 1984, by Frank A. Kleinhenz, Chief Administrative Officer of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Notary Public

My Commission Expires:

10/18/88

EXHIBIT "A"

DESCRIPTION

A certain tract of land situate within projected Section 27, T11N, R4E, N.M.P.M., within the Elena Gallegos Grant, City of Albuquerque, Bernalillo County, New Mexico, being a portion of Open Space - 5, TANOAN PROPERTIES as the same is shown and designated on the plat filed in the office of the County Clerk of Bernalillo County, New Mexico on June 25, 1982 and being more particularly described by plat bearings and ground distances as follows:

BEGINNING at the northeast corner of the tract herein described, said corner being a point on the northerly boundary of said Open Space - 5 whence the projected Section Corner common to Sections 22, 23, 26, and 27 as shown on said plat of TANOAN PROPERTIES bears N77°46'20"E, 2535.67 feet and from said point of beginning running thence along the easterly boundary of the tract herein described,
S25°46'13"E, 90.60 feet to a point of curvature; thence,
432.94 feet along the arc of a curve to the right having a radius of 484.00 feet and a chord bearing S00°08'41E, 418.65 feet to a point of reverse curvature; thence,
107.58 feet along the arc of a curve to the left having a radius of 416.00 feet and a chord bearing S18°04'20"W, 107.28 feet to the southeast corner of the tract herein described, said corner being a point on the southerly boundary of said Open Space - 5; thence continuing along said southerly boundary,
N44°48'47"W, 74.06 feet to a point; thence,
S54°08'23"W, 8.20 feet to a point on curve being the southwest corner of the tract herein described; thence leaving said southerly boundary of Open Space - 5 and continuing along the westerly boundary of the tract herein described,
89.11 feet along the arc of a curve to right having a radius of 484.00 feet and a chord bearing N20°12'23"E, 88.98 feet to a point of reverse curvature; thence,
372.11 feet along the arc of a curve to the left having a radius of 416.00 feet and a chord bearing N00°08'41"W, 359.83 feet to a point of tangency; thence,
N25°46'13"W, 120.57 feet to the northwest corner of the tract herein described, said corner being an angle point on the northerly boundary of said Open Space - 5; thence continuing along said northerly boundary,
N88°00'56"E, 74.31 feet to the point and place of beginning.

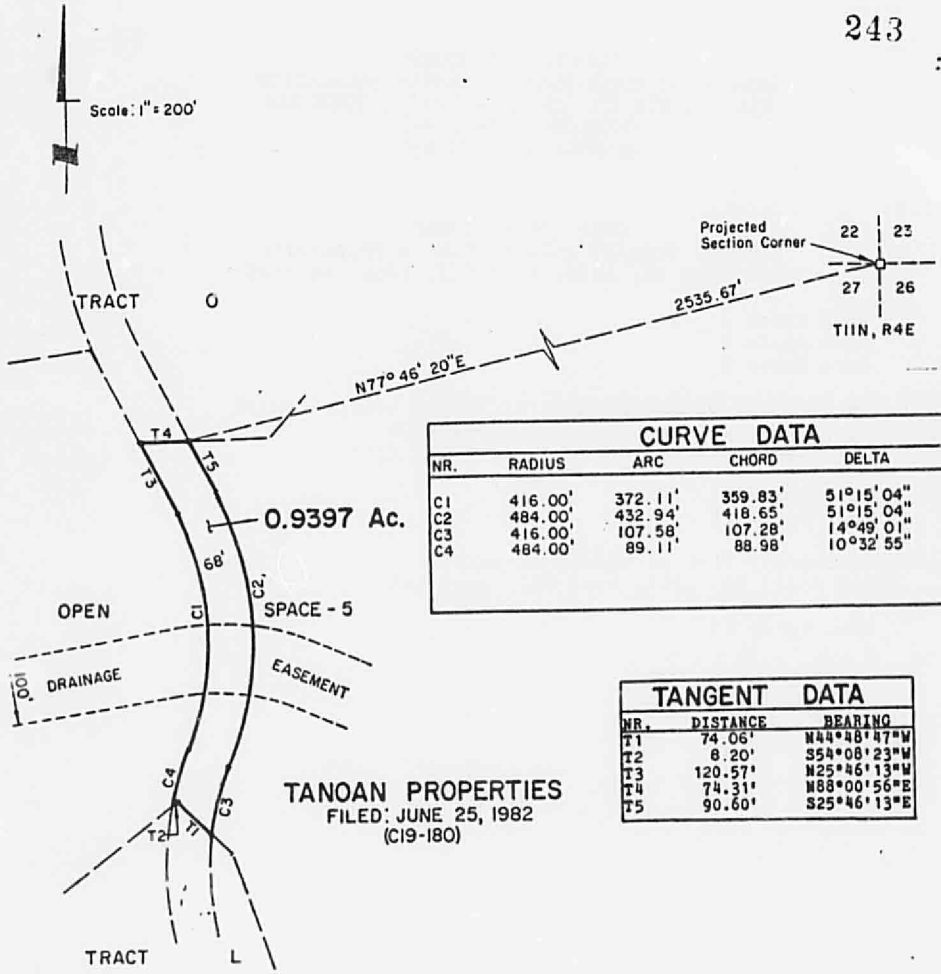
Tract contains 0.9397 acre, more or less.

Bohannan-Huston Inc.
4125 Carlisle Blvd. N.E.
Albuquerque, NM 87107

December 13, 1984
Job No. 42390

A. Dwain Weaver
A. Dwain Weaver
N.M.P.L.S.

A. DWAIN WEAVER
NEW MEXICO
6544
No. 6544
REGISTERED LAND SURVEYOR



CURVE DATA					
NR.	RADIUS	ARC	CHORD	DELTA	TANGENT
C1	416.00'	372.11'	359.83'	51°15'04"	199.54'
C2	484.00'	432.94'	418.65'	51°15'04"	232.16'
C3	416.00'	107.58'	107.28'	14°49'01"	54.09'
C4	484.00'	89.11'	88.98'	10°32'55"	44.68'

TANGENT DATA		
NR.	DISTANCE	BEARING
T1	74.06'	N44°48'47"W
T2	8.20'	S54°08'23"W
T3	120.57'	N25°46'13"W
T4	74.31'	N88°00'56"E
T5	90.60'	S25°46'13"E

TANOAN PROPERTIES
FILED: JUNE 25, 1982
(C19-180)

JOB NO. 42390

DECEMBER 13, 1984

BOHANNAN HUSTON INC.

DOMINANT PROPERTY

II.

COUNTRY CLUB LANDS
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED APRIL 19, 1984, BOOK C23, PAGE 165
CLUBHOUSE TRACT A-1
CLUBHOUSE TRACT B-1

III.

GOLF COURSE LANDS
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED JUNE 25, 1982, BOOK C19, PAGE 180 (1-5)

Open Space 1
Open Space 2
Open Space 3

The Amended Plat of The Masters at Tanoan together with Amended Open Space - 4 of Tanoan Properties filed May 10, 1984, book C23, page 197 (1-3)

Open Space 4A
Open Space 4B

Amended Summary Plat of Tanoan Properties filed April 19, 1984, book C23, page 165

Open Space 5A

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1985 JAN -8 PM 3:04

Ms 6904 PG 237-244
DOLORES C. WALLER
CO. CLERK & RECORDER
DEPUTY

EXHIBIT "B"

85 17

245

FILED WITH CITY CLERK'S OFFICE
1/8/85 dw

DEDICATION DEED
(LOWELL STREET)

AND

GRANTS OF EASEMENT

AMERIWEST CORPORATION, A New Mexico Corporation ("AMERIWEST" which term includes its successors and assigns) for good and sufficient consideration grants to the CITY OF ALBUQUERQUE ("CITY") whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, that certain real property situate in Bernalillo County, New Mexico, more particularly described in Exhibit "A" attached hereto and incorporated herein by reference, ("PROPERTY").

AMERIWEST hereby reserves a temporary easement (the "TEMPORARY EASEMENT") for full and exclusive possession and control of the PROPERTY subject to any public utility purposes needed by the CITY. This TEMPORARY EASEMENT shall continue in force until such time as the CITY makes a formal determination (the "DETERMINATION") that it is necessary for the public health and safety to construct and open a public street over the PROPERTY. The DETERMINATION shall be made after a public hearing at which the public has had any opportunity to be heard. Notice of the public hearing shall be given in the manner then prescribed by the CITY'S subdivision ordinance for a public hearing, additionally the CITY shall give notice to PRICE and AMERIWEST. The DETERMINATION shall not be deemed made until a final decision has

been entered by the CITY'S governing body, if appealed to that body by a party of interest in accordance with the CITY'S then existing procedures. The TEMPORARY EASEMENT shall terminate upon the DETERMINATION being final. Any expenses associated with relocation or removal of guard stations or other appurtenances associated with a private street shall be borne by AMERIWEST.

THIS CONVEYANCE IS FURTHER SUBJECT TO: reservations, restrictions, and easements of record, including a drainage easement in favor of AMAFCA which is in existence and shall survive this conveyance and an easement which has been granted to AMERIWEST for passage of pedestrians across the PROPERTY and ad valorem taxes for 1984 and thereafter.

AMERIWEST agrees that it shall indemnify the CITY and hold the CITY harmless from claims or damages resulting from the use of the TEMPORARY EASEMENT, except when such claim or damage results from the negligence of the CITY. The CITY agrees that it shall indemnify and hold AMERIWEST harmless from claims or damages resulting from the use of the TEMPORARY EASEMENT which result from the CITY's negligence.

All provisions of this instrument, including the benefits and burdens, run with the land and are binding upon and inure to the heirs, assigns, successors and personal representatives of the parties hereto.

Notices required to be given by this conveyance are to be given at the following addresses unless written notice of change of address has been lodged with the other parties:

Ameriwest Corporation
6400 Uptown Boulevard, N.E.
Suite 300-East
Albuquerque, New Mexico 87110

David and Dallas Price
c/o American Golf and Tennis Corp.
641 Sepulvada Boulevard
Los Angeles, California 90049

WITH SPECIAL WARRANTY COVENANTS.

Executed the 31st day of December 1984.

ACCEPTED:

CITY OF ALBUQUERQUE,
a municipal corporation

By [signature]
Its

APPROVED:

[signature]
ASSISTANT CITY ATTORNEY

[signature]
TRAFFIC ENGINEER

ATTEST:

[signature]
City Clerk

AMERIWEST CORPORATION, a New Mexico corporation

By [signature]
Its Vice President

Approved As To Form

[signature]
City Attorney

Date: 12/21/84

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was duly acknowledged before me this 21st day of December, 1984, by Allan L. Whitesel, Vice President of AMERIWEST CORPORATION, a New Mexico corporation on behalf of said corporation.

Stephanie R. Tilner
Notary Public

My Commission Expires:

FU 12-6-86

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 31st day of December, 1984, by Frank A. Kleinhenz, Chief Administrative Officer of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Notary Public

My Commission Expires:

12/18/88

DESCRIPTION

A certain tract of land situate within projected Section 27, T11N, R4E, N.M.P.M., within the Elena Gallegos Grant, City of Albuquerque, Bernalillo County, New Mexico, being a portion of Tracts "O" and "L" and a portion of Open Space-5 as the same is shown and designated on the plat of TANOAN PROPERTIES filed in the office of the County Clerk of Bernalillo County, New Mexico on June 25, 1982 and being more particularly described by plat bearings and ground distances as follows:

249

BEGINNING at the northeast corner of the tract herein described, said corner being a point on the northerly boundary of said Tract "O" and also being a point on the southerly right-of-way of San Antonio Drive whence the projected Section Corner common to projected Sections 22, 23, 26, and 27 as shown on said plat of TANOAN PROPERTIES bears S89°36'20"E, 2606.00 feet and from said point of beginning running thence along the easterly boundary of the tract herein described,
S00°23'40"W, 154.68 feet to a point of curvature; thence,
258.47 feet along the arc of a curve to the left having a radius of 566.00 feet and a chord bearing S12°41'17"E, 256.23 feet to a point of tangency; thence,
S25°46'13"E, 257.54 feet to a point of curvature; thence,
432.94 feet along the arc of a curve to the right having a radius of 484.00 feet and a chord bearing S00°08'41"E, 418.65 feet to a point of reverse curvature; thence,
318.49 feet along the arc of a curve to the left having a radius of 416.00 feet and a chord bearing S03°32'53"W, 310.77 feet to a point of tangency; thence,
S18°23'04"E, 252.09 feet to a point of curvature; thence,
641.79 feet along the arc of a curve to the right having a radius of 634.00 feet and a chord bearing S10°36'56"W, 614.74 feet to a point of reverse curvature; thence,
408.38 feet along the arc of a curve to the left having a radius of 566.00 feet and a chord bearing S18°56'43"W, 399.58 feet to the southeast corner of the tract herein described, said corner being a point on the southerly boundary of said Tract "L" and also being a point on the northerly right-of-way of Academy Road, whence the southeast corner of said Tract L bears S89°36'55"E, 1927.11 feet; thence continuing along said southerly boundary and said northerly right-of-way,
N89°36'55"W, 68.04 feet to the southwest corner of the tract herein described; thence leaving the southerly boundary of said Tract "L" and the northerly right-of-way of Academy Road and continuing along the westerly boundary of the tract herein described,
454.94 feet along the arc of a curve to the right having a radius of 634.00 feet and a chord bearing N19°03'31"E, 445.25 feet to a point of reverse curvature; thence,
572.96 feet along the arc of a curve to the left having a radius of 566.00 feet and a chord bearing N10°36'56"E, 548.80 feet to a point of tangeny; thence,
N18°23'04"W, 252.09 feet to a point of curvature; thence,
370.55 feet along the arc of a curve to the right having a radius of 484.00 feet and a chord bearing N03°32'53"E, 361.56 feet to a point of reverse curvature; thence,
372.11 feet along the arc of a curve to the left having a radius of 416.00 feet and a chord bearing N00°08'41"W, 359.83 feet to a point of tangency; thence,
N25°46'13"W, 257.54 feet to a point of curvature; thence,
289.52 feet along the arc of a curve to the right having a radius of 634.00 feet and a chord bearing N12°41'17"W, 287.01 feet to a point of tangency; thence,
N00°23'40"E, 154.68 feet to the northwest corner of the tract herein described, a point on the northerly boundary of said Tract "O" and also being a point on the southerly right-of-way of San Antonio Drive; thence continuing along said northerly boundary and said southerly right-of-way,
S89°36'20"E, 68.00 feet to the point and place of beginning.

Tract contains 4.2529 acres, more or less.

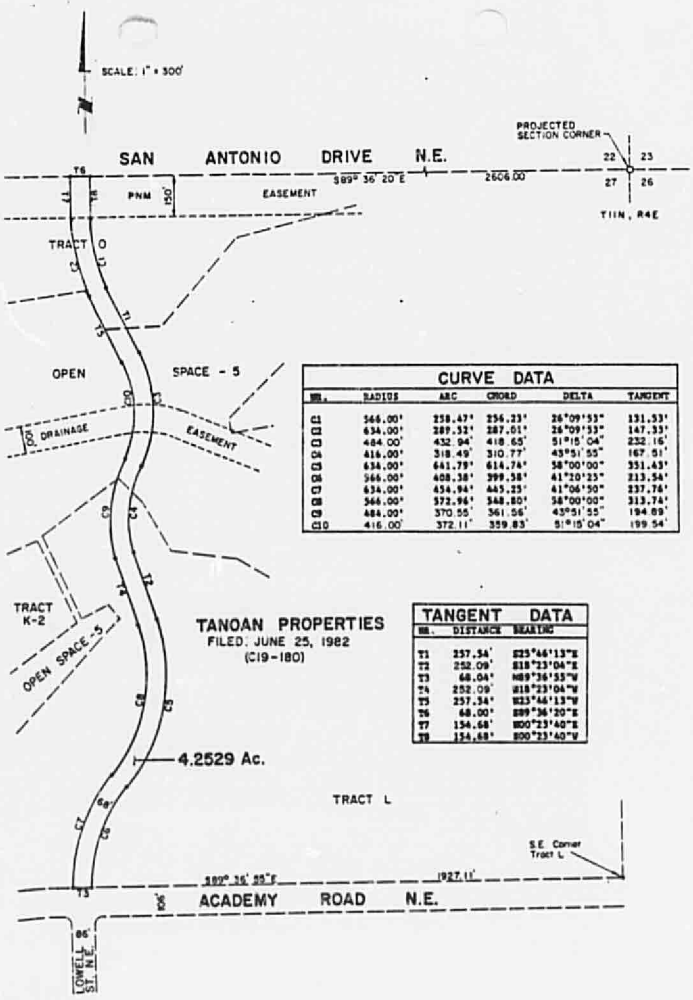
Bohannan-Huston Inc.
4125 Carlisle Blvd., N.E.
Albuquerque, NM 87107

December 13, 1984
Job No. 42390

A. DWAIN WEAVER NEW MEXICO 6544 REGISTERED LAND SURVEYOR

A. Dwain Weaver
A. Dwain Weaver
N.M.P.L.S. No. 6544

EXHIBIT "A"



CURVE DATA

NO.	RADIUS	ARC	CHORD	DELTA	TANGENT
C1	566.00'	258.47'	256.23'	26°09'53"	131.53'
C2	634.00'	289.32'	287.01'	26°09'53"	147.33'
C3	484.00'	432.94'	418.65'	51°15'04"	232.16'
C4	416.00'	318.49'	310.77'	43°51'55"	167.51'
C5	634.00'	641.79'	614.74'	58°00'00"	351.43'
C6	566.00'	408.38'	399.58'	41°30'25"	213.54'
C7	634.00'	454.94'	445.25'	41°06'50"	237.76'
C8	566.00'	572.96'	548.80'	58°00'00"	313.74'
C9	484.00'	370.55'	361.56'	43°51'55"	194.69'
C10	416.00'	372.11'	359.83'	51°15'04"	199.54'

TANGENT DATA

NO.	DISTANCE	BEARING
T1	257.54'	S25°46'13"E
T2	252.09'	S18°23'04"E
T3	68.04'	N89°36'55"W
T4	252.09'	N18°23'04"W
T5	257.54'	N25°46'13"W
T6	68.00'	S89°36'20"E
T7	154.68'	S00°23'40"E
T8	154.68'	S00°23'40"W

JOB NO. 42390

DECEMBER 13, 1984

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1985 JAN -8 PM 3:04

Mc 190 A PG 245-250
DOLORES C. VALLER
CO. CLERK & RECORDER
DEPUTY

2199