

March 10, 1980

Middle Rio Grande Conservancy District  
P.O. Box 581  
Albuquerque, NM 87103

Attention: Mr. Shaw

Subject: Casita Vista Unit II Townhouses

Dear Mr. Shaw:

Pursuant to our telephone conversation on March 7, 1980, I have contacted the owner of the property and re-reviewed the plans to address your concerns regarding grease and debris intrusions into the M.R.G.C.D. facilities resulting from the drainage scheme.

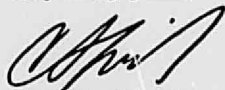
This letter will serve to assure the M.R.G.C.D. that only the rear and side yards of the proposed project drain into the ponds (which ultimately connect, hydraulically, to the M.R.G.C.D. facility) and there cannot be any grease or oil deposition resulting from irresponsible automotive use within the City Right-of-Way. As for the potential of an individual using the rear of the property for grease and oil dumping, I think that is highly improbable.

Firstly, the site is graded such that it would be physically difficult for any individual to drain their crankcase in the rear of the units, and secondly, the Covenants and the Site Development Plan call for a landscaping treatment in the rear yards (which may either be grass, southwestern landscaping or other vegetative cover). This landscaping should preclude any deleterious effect on your facility and obviate the need for a grease trap or other such construction.

The inlet of the six inch pipe which drains the ponds will have suitable protection over or above the orifice. We envision this protection to be hardware cloth or some other type of mesh but we will leave an opening to the contractor to suggest a more aesthetic alternative.

If you have any questions on the above please give me a call.

Very truly yours,

  
Cliff A. Spirock  
President

CC: Kent M. Whitman  
Grover Jones  
Richard Heller✓

CAS/lms

RECEIVED  
MAR 11 1980  
CITY ENGINEER

RSN <u>EMA</u>	ADM _____
HRO <u>HRO</u>	SUR _____
CDS _____	COUN _____
DES _____	SEC _____
INSR _____	FILE <u>FILE</u>
HYDRO _____	RETURN _____

SURVEYING  
ENGINEERING  
LAND PLANNING



## City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 26, 1979

Community Sciences Corporation  
P.O. Box 1328  
Corrales, New Mexico 87048

RE: PLAT REVIEW - CASITA VISTA II

Gentlemen:

The above plat has been reviewed and only one deficiency is apparent. An easement or easements for drainage purposes should be dedicated between Casita Vista Place and the Arenal Canal should Casita Vista Place not drain to 52nd Street N.W. as previously discussed.

Should you have any further questions, please feel free to contact me.

Very truly yours,

Richard S. Heller  
City Engineer

RSH/tsl

cc: Bruno Conegliano, Asst. CE/Hydrology

MUNICIPAL DEVELOPMENT DEPARTMENT

ENGINEERING DIVISION

Richard S. Heller, P.E., City Engineer

Telephone (505) 766-7441

Community Sciences Corporation  
P. O. Box 1328  
CORRALES, NEW MEXICO 87048

(505) 897-0000

TO City Engineer

City of Albuquerque

P.O. Box 1293

Albuquerque, NM 87103

## LETTER OF TRANSMITTAL

DATE	12-24-79	JOB NO.	47-2-0002
ATTENTION	Mr. Richard Heller		
RE:	Casita Vista II		

### GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via \_\_\_\_\_ the following items:

☐ Shop drawings

☒ Prints

☐ Plans

☐ Samples

☐ Specifications

☐ Copy of letter

☐ Change order

☐ \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
1			Plat Print

THESE ARE TRANSMITTED as checked below:

☐ For approval

☐ Approved as submitted

☐ Resubmit \_\_\_\_\_ copies for approval

☐ For your use

☐ Approved as noted

☐ Submit \_\_\_\_\_ copies for distribution

☐ As requested

☐ Returned for corrections

☐ Return \_\_\_\_\_ corrected prints

☒ For review and comment

☐ \_\_\_\_\_

☐ FOR BIDS DUE \_\_\_\_\_

19 \_\_\_\_\_

☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Please review and contact us if there needs to be any additions or deletions.

COPY TO Mission Construction

SIGNED: Georgia Spivack / Lds

Community Sciences Corporation  
P. O. Box 1328  
CORRALES, NEW MEXICO 87048

(505) 897-0000

TO AMAFCA (City Engineer)

P.O. Box 1293

Albuquerque, NM 87103

RECEIVED  
DEC 26 1979  
CITY ENGINEER

# LETTER OF TRANSMITTAL

DATE	12-24-79	JOB NO.	47-2-0002
ATTENTION	Mr. Bruno Conegliano		
RE:	Casita Vista II		

GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via \_\_\_\_\_ the following items:

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☐ Samples

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☐ \_\_\_\_\_

☐ FOR BIDS DUE \_\_\_\_\_

19 \_\_\_\_\_

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REMARKS Please review and contact us if there needs to be any additions or deletions.

COPY TO Mission Construction

SIGNED: Georgia Spickard / lds

## CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE

December 12, 1979

REF. NO. \_\_\_\_\_

TO: Bruno Conegliano, City Hydrologist

FROM: Don Peterson, Zoning Hearing Examiner *dp*

SUBJECT: Casita Vista II

When you wrote your memo of December 10, 1979, you were not aware of ZA-79-150 which gave the developers a choice of two development patterns. Naturally, any development will have to abide by City Engineering drainage requirements. No action by the EPC is required.

I am sorry this application did not go to Engineering for comment. I have gotten into the custom of not sending many cases to Engineering since Engineering has rarely made a comment of substance on "special exception" zoning comment requests. I would welcome more input in the future. I will send more comment requests.

DP/lmg

cc: Richard Heller, City Engineer

Community Sciences Corporation  
P. O. Box 1328  
CORRALES, NEW MEXICO 87048

(505) 897-0000

TO

*Bruno Conegliano*

# LETTER OF TRANSMITTAL

DATE	<i>12/3/79</i>	JOB NO.
ATTENTION		
RE:		

GENTLEMEN:

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via \_\_\_\_\_ the following items:  
☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications  
☐ Copy of letter ☐ Change order ☒ *Reports*

COPIES	DATE	NO.	DESCRIPTION
<i>2</i>			<i>Drainage Management Plan for Costa</i>
			<i>With Unit 2</i>

THESE ARE TRANSMITTED as checked below:

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> For approval     | <input type="checkbox"/> Approved as submitted            | <input type="checkbox"/> Resubmit _____ copies for approval   |
| <input type="checkbox"/> For your use                | <input type="checkbox"/> Approved as noted                | <input type="checkbox"/> Submit _____ copies for distribution |
| <input type="checkbox"/> As requested                | <input type="checkbox"/> Returned for corrections         | <input type="checkbox"/> Return _____ corrected prints        |
| <input type="checkbox"/> For review and comment      | <input type="checkbox"/> _____                            |   |
| <input type="checkbox"/> FOR BIDS DUE _____ 19 _____ | <input type="checkbox"/> PRINTS RETURNED AFTER LOAN TO US |   |

REMARKS \_\_\_\_\_  
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\_\_\_\_\_

COPY TO \_\_\_\_\_

SIGNED: *Kent M. Whitman*

CASITA VISTA

UNIT TWO

DRAINAGE MANAGEMENT  
PLAN

PREPARED FOR: MUNDO SOL CORPORATION  
ALBUQUERQUE, NEW MEXICO

PREPARED BY: COMMUNITY SCIENCES CORPORATION  
CORRALES, NEW MEXICO

NOVEMBER 1979



*Kent M. Whitman*

KENT M. WHITMAN, P.E.

SURVEYING  
ENGINEERING  
LAND PLANNING

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**RECEIVED**  
**DEC 05 1979**  
**CITY ENGINEER**



CASITA VISTA - UNIT TWO  
DRAINAGE MANAGEMENT PLAN

A) PURPOSE AND SCOPE

Mundo Sol Corporation is currently planning to develop a 1.16 acre tract within the Town of Atrisco Grant, Bernalillo County New Mexico.

The purpose of this report is to present a drainage management plan for the proposed development (Casita Vista, Unit Two) which is acceptable to the City of Albuquerque and to the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA).

B) SITE LOCATION AND TOPOGRAPHY

The proposed development, Casita Vista - Unit Two, is located in northwest Albuquerque. The 1.16 acre tract is situated between 52nd street N.W. and the Arenal Canal, approximately 150' northerly from Central Avenue. See Plate 1, Location Map, Page Three.

The site slopes northeasterly toward the Arenal Canal at an approximate gradient of 3% percent. Soils overlying the site consist of sands with small amounts of silt; generally loose to medium dense in the upper 4 to 6 feet.

C) DESIGN CRITERIA

1) ENGINEERING PARAMETERS

For calculation of required storage volumes a composite C of 0.69 has been computed for developed areas, and a C of 0.40 was used for undeveloped areas.

All volume calculations have been based on 100 year-6 hour rainfall of 2.2" (0.18") per AMAFCA requirements.

Rate of runoff calculations have been based on the frequency - intensity - duration relationship for a 100 year storm as presented by Gordon Herkenhoff and Associates in their 1963 Master Plan of Drainage for the City of Albuquerque. This relationship is expressed by the following equation:  $I = 189 / (Tc+25)$ .

2) FLOOD CONTROL REGULATIONS

The drainage plan presented in this report has been designed to comply with the 1972 AMAFCA Resolution in regard to rate and volume of runoff leaving the site. That Resolution has been interpreted to say that the rate and volume of runoff allowed to leave the site after development shall be no greater than the rate and volume running off prior to development.

D) COMPUTATIONAL PROCEDURES

Appendix A contains samples of the various types of hydraulic calculations performed.

E) OFF-SITE DRAINAGE

Plate 2, OFF-SITE DRAINAGE MAP shows the existing topography for the proposed development tract. The natural drainage flow is from West to East. Flow from the West is intercepted by 52nd street N.W. before reaching the tract. Flows South of the tract are West-to-East but have the potential to flow toward the southerly boundary of the tract. To prevent drainage from flowing onto the development site from the South, a 6" high P.C.C. curb will be constructed along the South Boundary.

F) ON-SITE DRAINAGE

As shown on the Drainage Management Plan, Plate 3, on-site drainage is conveyed to on-site lot ponds except for the front yard areas of lots 1 - 3 and 5 - 10. For lots 4 and 10 the side yard, or yard area adjacent to 52nd street N.W., is utilized as a ponding area and does not drain to 52nd street N.W.

The tract was analyzed for ponding requirement only because the rate of runoff to 52nd street was determined to be insignificant. (See Appendix A - Calculations, No. 4).



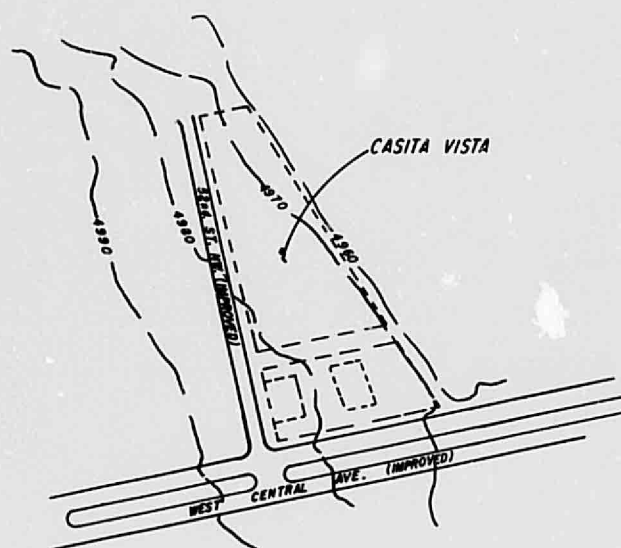


PLATE 2  
OFFSITE DRAINAGE MAP



## City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 10, 1979

Mr. Kent Whitman  
Community Science Corp.  
P.O. Box 1328  
Corrales, New Mexico 87048

Reference: Casita Vista Development

Dear Mr. Whitman:

I have reviewed the drainage report for the referenced development, and I cannot concur with the proposal submitted.

A field investigation has revealed that the soil in place is mostly loose alluvial sand with much greater permeability than that exhibited by the soils of the east alluvial fans where a C value of 0.4 is usually adopted. I believe that the existing conditions do not warrant the use of a runoff coefficient C greater than 0.15-0.2.

I also object to the proposal of raising the land by importing fill material and conveying the developed runoff to 52nd Street. The minimal nature of the storm drainage facilities in the valley makes it imperative that no additional discharge be conveyed to already overload facilities, or preempt some of their capacity. My Assistant, Fred Aguirre, has reviewed the computation submitted and found them inadequate (see attachment). I concur with his disagreement, particularly with the use of a runoff coefficient of 0.65 for southwestern landscaping which is normally underlaid by polyethylene film; a value of 0.9 should instead be used.

I further find the drainage report inadequate in terms of the attention paid to the vertical bank, 10 to 15 ft. high, adjacent to the Arenal Canal: Will the ponding areas on top of the slope cause bank failures? A soil engineer report will be required to verify the stability of the slope with the design proposal submitted. Given the circumstances of the site, 100% retention is required. As you may be aware, the development plan shown on the drainage report is at variance with the plan submitted to the Planning Department, and a new action by the E.P.C., will be required. I am forwarding a copy of the plan to Mr. Don Peterson, for his review and follow up.

### MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

Mr. Kent Whitman  
Page 2  
12-10-79

If you have any questions, please don't hesitate to contact my office.

Very truly yours,



Bruno Conegliano  
Assistant City Engineer/Hydrology

BC/lc

xc: Richard Leonard, AMAFCA  
Richard Heller, City Engineer  
Fred Aguirre, Civil Engineer  
Drainage File -

APPENDIX A  
CALCULATIONS

Page Five

1) COMPOSITE C

Total Area = 1.16 Acres

No of Lots = 10

Average Area of Lot =  $1.16/10 = 0.116$  Acres

= 5053 S.F.

ITEM	AREA	C
Driveway	220 S.F.	0.95
Patio	150	0.95
Building	1000	0.95
Paving(street)	370 S.F.	0.95
Lawn	800 S.F.	0.25
Southwest Landscape	2,513	0.65
<u><math>1,740 \times 0.95 + 800 \times 0.25 + 2,513 \times 0.65</math></u>		<u>5053</u>

COMPOSITE C =

= 0.69

2) POND VOLUME (AVERAGE PER LOT)

$R(100 \text{ yr.} - 6 \text{ hr.}) = 2.2" = 0.18'$

C natural = 0.40

C dev = 0.69

VOLUME =  $(0.69 - 0.40) (0.18) (5053)$   
= 264 C.F.

3) POND - VOLUME

Length: Top = 30'

Bottom = 25.5'

Width: Top = 15

Bottom = 10.5

Depth: = 0.75'

VOLUME =  $\frac{(30 \times 15) + (25.5 \times 10.5)}{2} (0.75) = 269 \text{ C.F.}$

CALCULATION

4) RATE OF RUNOFF

The front 20' of lots 1-3, and 5-10 are proposed to be graded to drain to 52nd street N.W.

The contributing area is approximately:

$$20 \times 325 / 43,560 = 0.15 \text{ Acres}$$

$$Q = C I A$$

$$C = 0.45$$

$$I = 5.4 \text{ in/hr for } T_c < 10 \text{ min.}$$

$$A = 0.15 \text{ Acre}$$

$$Q = 0.4 \text{ cfs.}$$

CONCLUSION: Runoff to street is virtually insignificant.

5) OFF-SITE AREA RATE OF RUNOFF ( SOUTH BOUNDARY )

$$Q_{\text{required}} = 0.8 \text{ acre} \times 5.4 \text{ in/hr} \times 0.90$$

$$= 3.9 \text{ cfs.}$$

Side Slopes @ 0 left & 50 : 1 right

Bottom Width : 0

Depth : 0.5'

Width : 0

N : .025

S : .03 (min.)

$$Q = 25 \text{ cfs. O.K. } > 3.9 \text{ cfs.}$$