

FILE COPY



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 10, 1990

Michael J. Yost, P.E.  
Community Science Corporation, Inc.  
Post Office Box 1328  
Corrales, New Mexico 87048

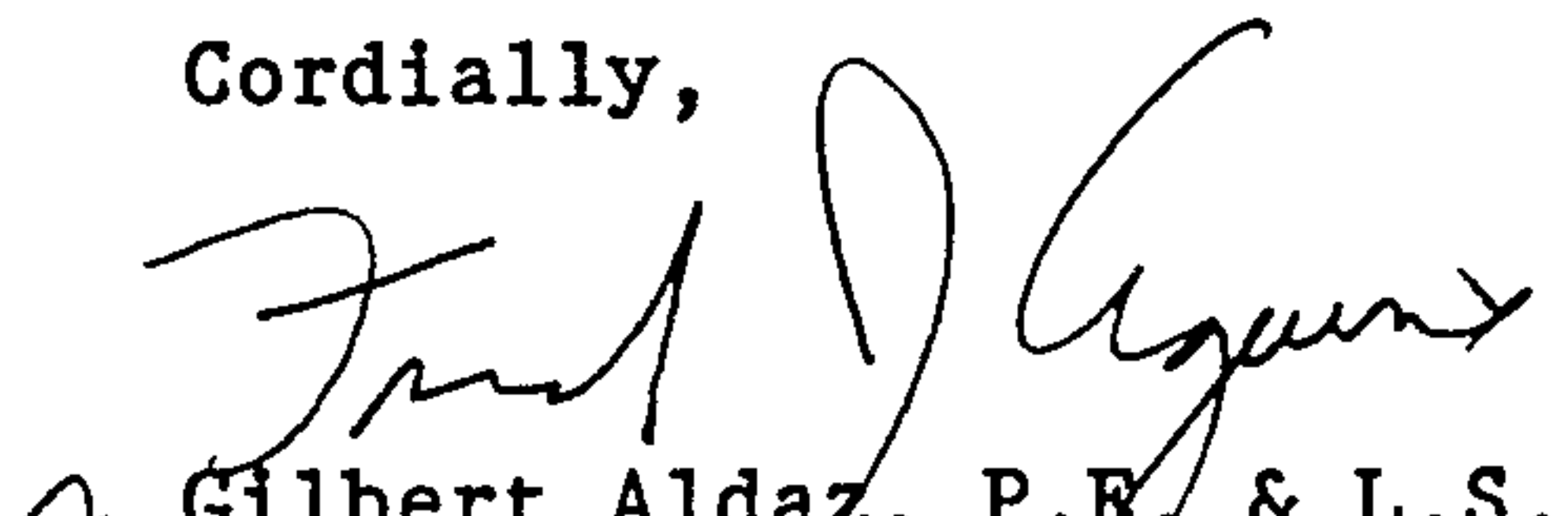
RE: DRAINAGE PLAN FOR HOMESTEAD HILLS SHOPPING CENTER, BUILDINGS D AND F, (D-11/D9) ENGINEER'S STAMP DATED SEPTEMBER 26, 1990

Dear Mr. Yost:

Based on the information received September 26, 1990, the Engineer's Certification is acceptable for Certificate of Occupancy Release for Buildings D and F only. Please be advised that future Certifications for the other buildings (with the exception of Building E), will require that all paving must be in place prior to release of occupancy.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

  
Gilbert Aldaz, P.E. & L.S.  
Civil Engineer/Hydrology

xc: Blake Chancellor

GA  
(WP+1470)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

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# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 10, 1990

Stephen Crawford, P.E.  
Community Sciences Corporation  
Post Office Box 1328  
Corrales, New Mexico 87048

RE: DRAINAGE PLAN FOR HOMESTEAD HILLS SHOPPING CENTER PHASE I  
(D-11/D9) ENGINEER'S STAMP DATED May 11, 1990

Dear Mr. Crawford:

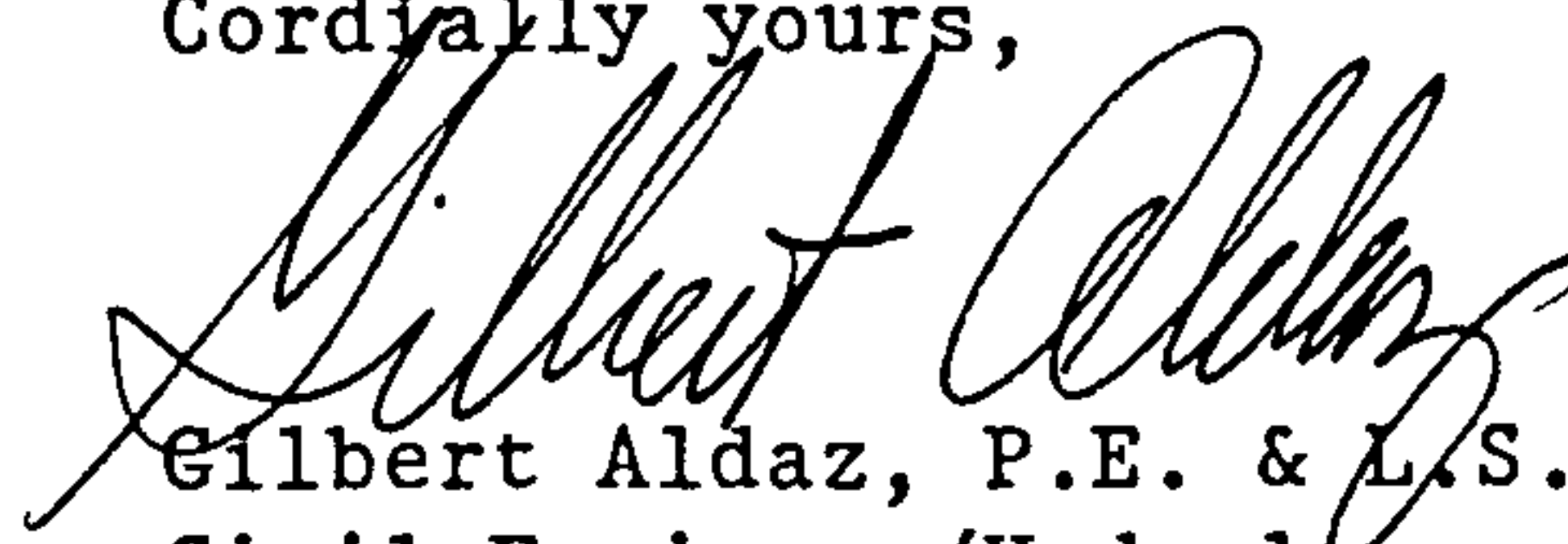
The purpose of this letter is to rescind my approval of Phase I per my letter dated April 18, 1990 and to grant you approval for building permit on the entire site. This is per your request from your letter received May 4, 1990.

Please be advised that the site must be completed in its entirety, prior to requesting individual Certificates of Occupancy for one building at a time. An Engineer's Certification will be required per the D.P.M. Engineer's Certification Checklist.

Please attach a copy of this letter to the construction sets prior to sign-off by Hydrology.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially yours,

  
Gilbert Aldaz, P.E. & L.S.  
Civil Engineer/Hydrology

xc: Blake Chancellor

GA  
(WP+1470)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

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Telephone (505) 768-2500

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# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 18, 1990

Stephen Crawford, P.E.  
Community Sciences Corporation  
Post Office Box 1328  
Corrales, New Mexico 87048

RE: DRAINAGE PLAN FOR HOMESTEAD HILLS SHOPPING CENTER PHASE I  
(D-11/D9) ENGINEER'S STAMP DATED APRIL 3, 1990

Dear Mr. Crawford:

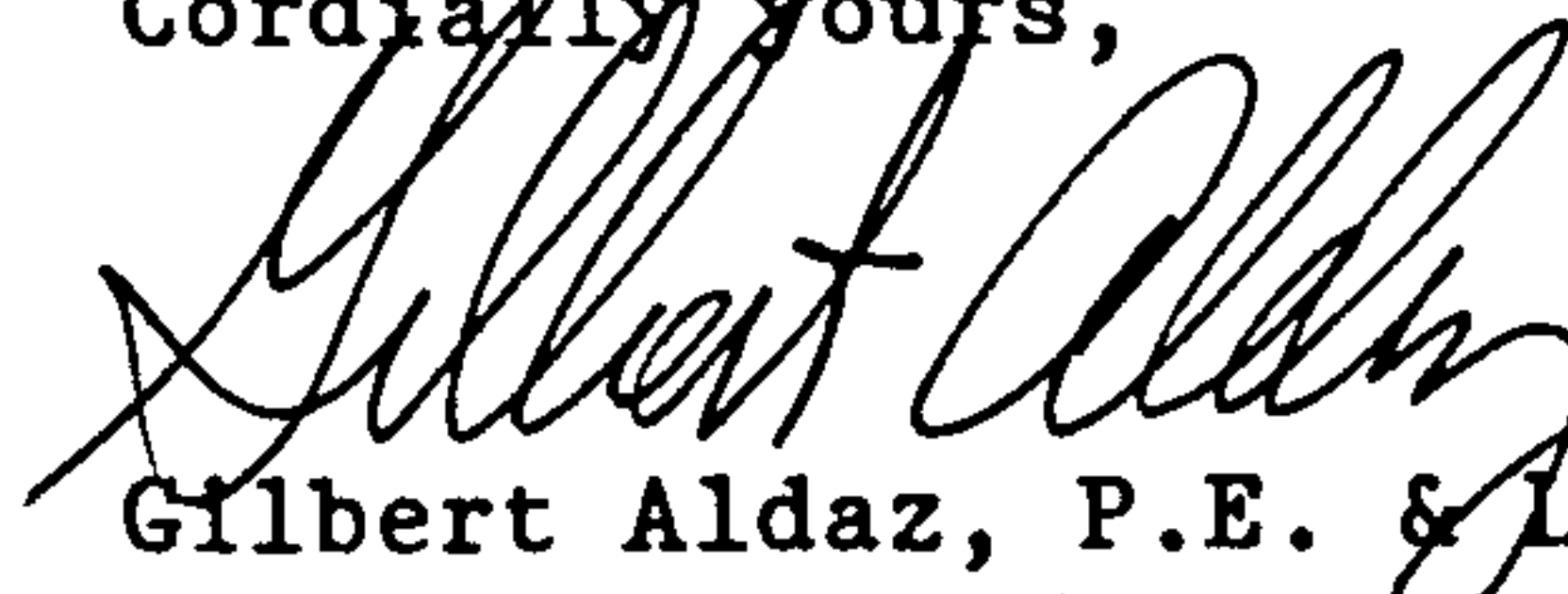
Based on the information provided on your submittal of April 3, 1990, the referenced plan is approved for Building Permit for Phase I.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

Please be advised that prior to Certificate of Occupancy release, an Engineer's Certification will be required per the D.P.M. Engineer's Certification Checklist.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially yours,

  
Gilbert Aldaz, P.E. & L.S.  
Civil Engineer/Hydrology

cc: Blake Chancelor

GA:bsj  
(WP+1470)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

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KEN SCHULTZ  
MAYOR

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 25, 1989

Cliff Spirock  
Community Sciences Corporation  
Post Office Box 1328  
Corrales, New Mexico 87048

RE: CONCEPTUAL GRADING AND DRAINAGE PLAN OF HOMESTEAD HILLS  
SHOPPING CENTER RECEIVED SEPTEMBER 7, 1989 FOR SITE  
DEVELOPMENT PLAN APPROVAL (D-11/D9)

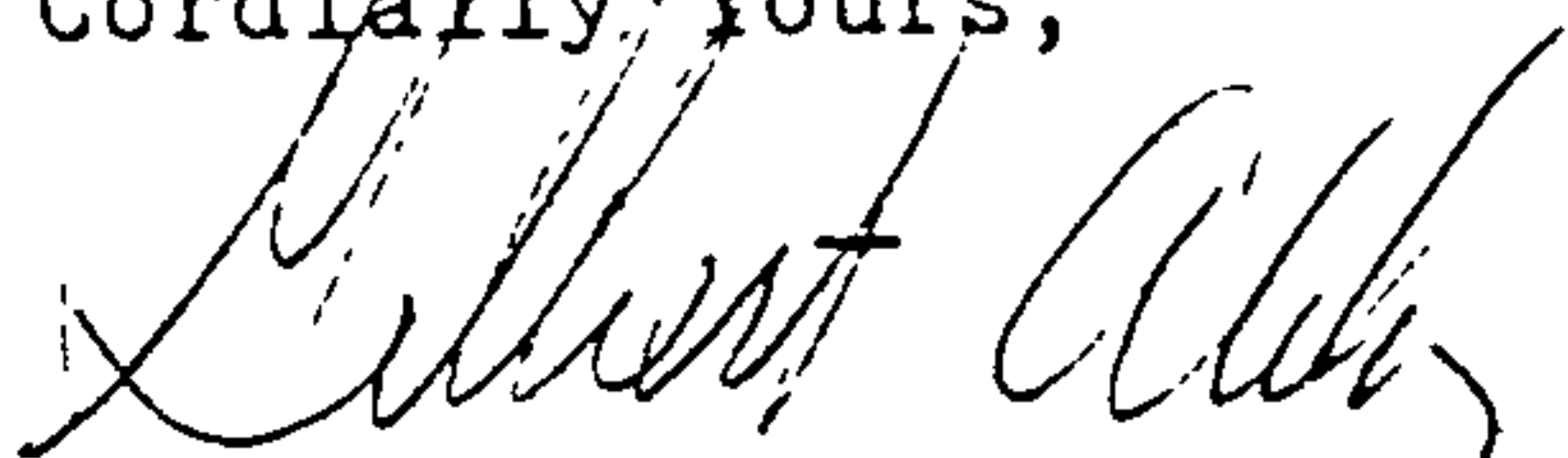
Dear Mr. Spirock:

Based on the information provided on your submittal, free discharge into Taylor Ranch Drive is not justified. Additional hydraulic analysis and all offsite flows entering the catch basins at the Mariposa Dam will need to be analyzed, to assure the dip section meets street drainage criteria.

Please refer to the drainage report prepared by GENE/MURRAY-McCORMICK, January 26, 1977. This report shows the flows from your parcel to drain west on Homestead Circle to the dip section, and through the channel between Pioneer East and Tract 26A. Please justify the capacity for Homestead Circle, the sidewalk culvert and the channel into the Mariposa.

If you have any questions concerning the disapproval of this drainage plan, please feel free to call me at 768-2650.

Cordially Yours,

  
Gilbert Aldaz, P.E. & L.S.  
Civil Engineer/ Hydrology

GA/bsj  
(WP+1312)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

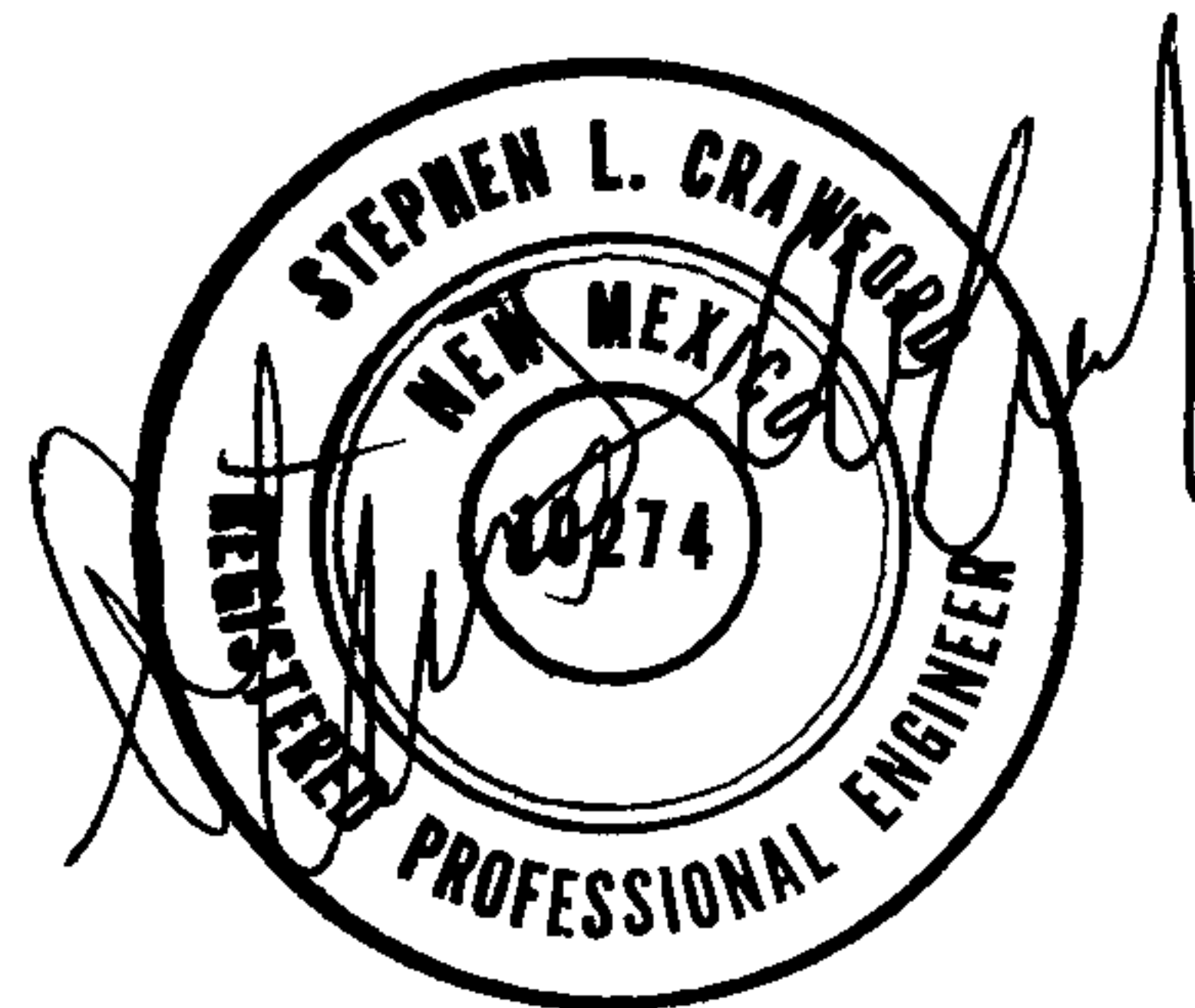
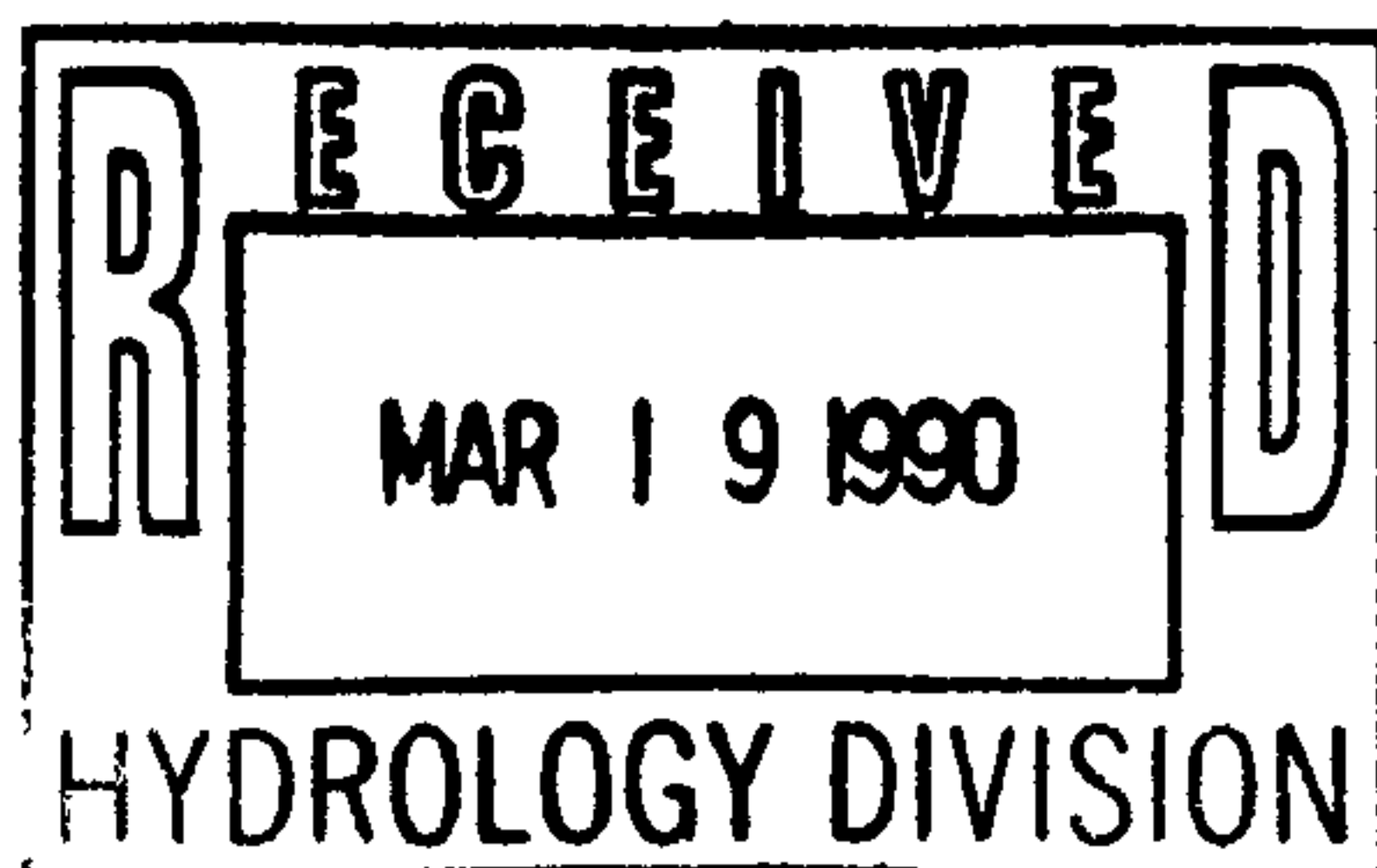
Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



DRAINAGE PLAN  
FOR  
HOMESTEAD HILLS SHOPPING CENTER  
~~PHASE I~~  
**ENTIRE SITE**  
MARCH 1990

By: Community Sciences Corporation  
Corrales, New Mexico  
Mr. Stephen L. Crawford, PE #10274



A. PHASING PLAN:

Phase I includes the onsite drainage and construction shown on the 2-28-90 Phase I Paving and Grading Plan (enclosed). Phase I also includes all offsite drainage work required by the approved Conceptual Grading and Drainage Plan (enclosed) and called out on the DRB required infrastructure listing for the site plan final signoff. The offsite drainage details are shown on sheet 5 of 5, DRC Project #4031.90 (enclosed).

Phase II will include the balance of the site's paving and grading construction as shown on the 3-12-90 Paving and Grading Plan for the entire site (enclosed). Various utility company requirements make it unfeasible to have any other logical phase breaks. Any structure in the Phase II area will require construction of all remaining site work.

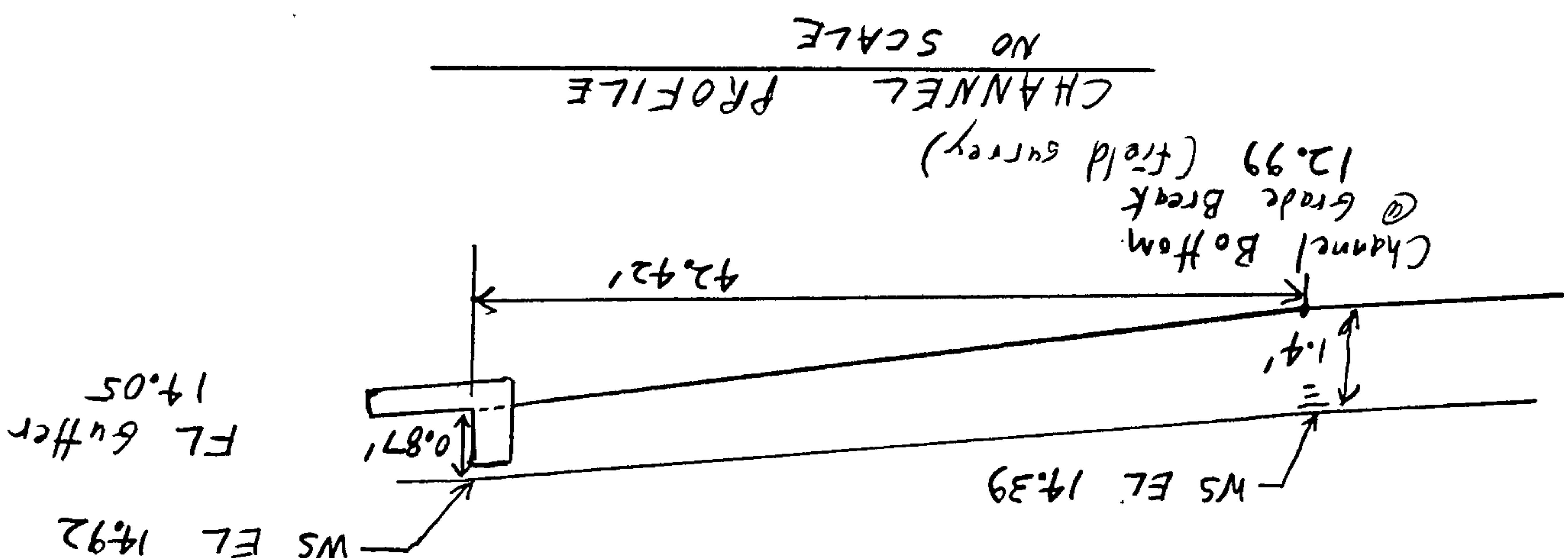
B DRAINAGE ANALYSIS:

This drainage plan is merely a refinement of the approved Conceptual Grading and Drainage Plan for the site. The appendix contains additional hydraulic calculations which justify the designs as submitted. The calculations for the Phase I retention pond are shown directly on the Phase I Paving and Grading Plan. The pond is actually a shallow onsite borrow pit and will have a maximum flood depth of less than 3 inches in the 100-year storm. A small part of the Phase I paving will drain to the pond and is not significant. The plans call for native seeding of disturbed areas which are not developed to control wind erosion.

Drainage Computation - Offsite  
Channel Reconstruction @  
Homesstead Circle / Conestoga Dr

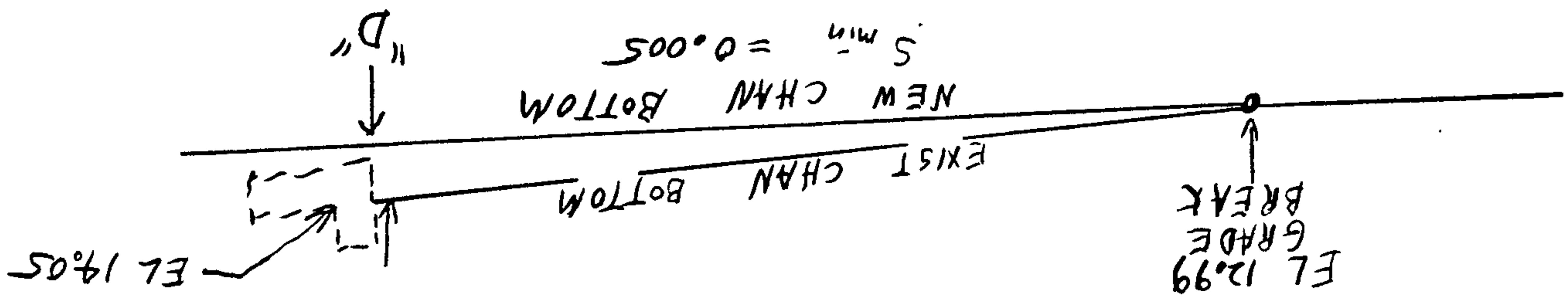
A) Reference Conceptual Drainage Plan.

B) Revised Hydraulic Slope for Underflow  
Calculations



$$S = (14.92 - 14.39) / 42.42 = 0.0125$$

C) New Channel Floor Elevation / Depth

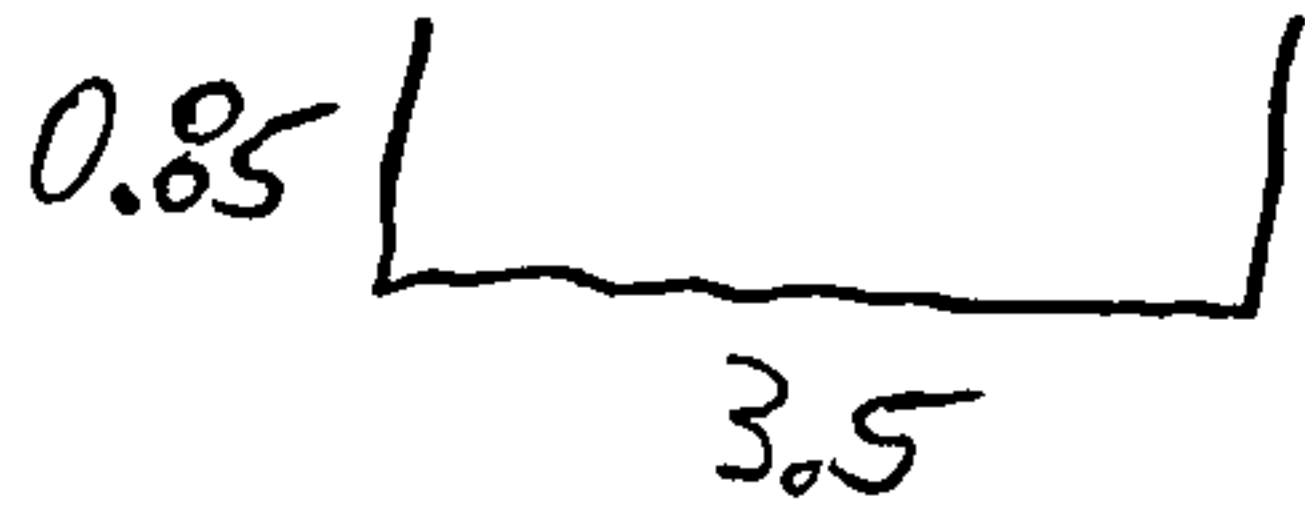


$$"D" = 14.05 - (12.99 + 0.005 \times 42.42LF) = 0.85'$$

"Underflow" Channels must be  
0.85' deep

D) Underflow Channel Capacity:

3.5' wide trench

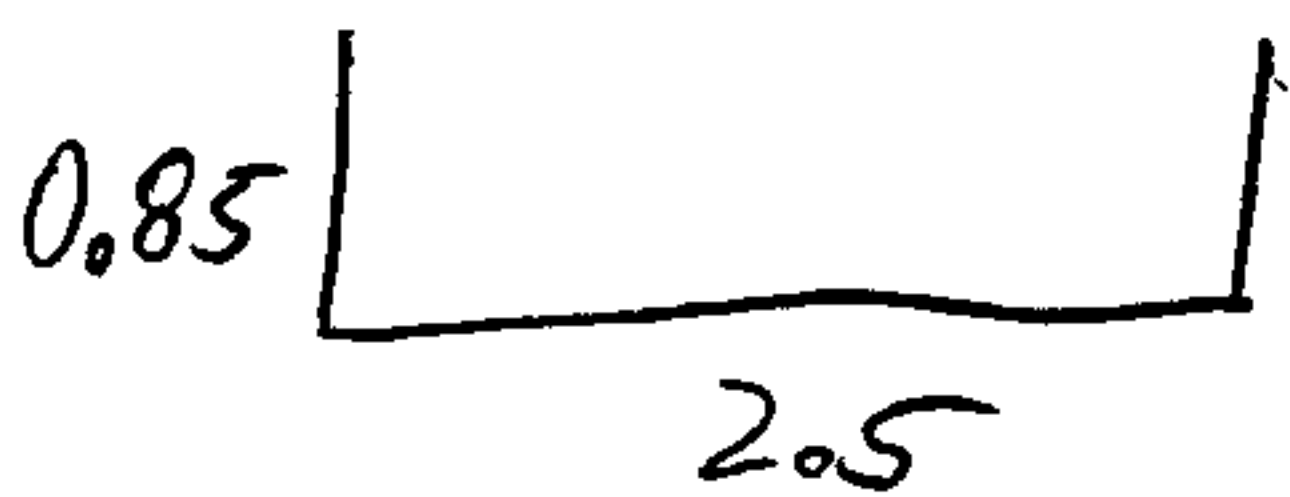


$$A = 2.98$$

$$R = 0.57$$

$$\text{Mannings } Q = 26.2$$

2.5' wide trench



$$A = 2.13$$

$$R = 0.51$$

$$\text{Mannings } Q = 17.4$$

E) Exist SW Culvert Capacity

Field Survey Measurements indicate  
a total clear opening of 20.0'

Broad Crest Weir with little or  
no downstream slope assumed

$$Q = 2.65(20)(0.87)^{3/2} = 43 \text{ cfs}$$

F) Total Capacity of Channels/Weir

$$43 + 2 \times 17.4 + 26.2 = 104 \text{ cfs}$$

$$\text{required} = 99.4$$

✓ OK



# G) Grating Orifice Capacity

Per DRC - use COA  
standard grates, 6 EA

Clear Area per = 4.1  $\text{ft}^2$

Assume 3.0% clogged  
(kind of like sump condition)

Net Area per = 2.9  $\text{ft}^2$   
 $\times 6 = 17.4 \text{ sq ft}$

Orifice Control with  $H = 0.87$  minus  
1.5" gutter depression = 0.75'

$$Q = CA \sqrt{2gH} \quad C = 0.6$$

$$Q = 72 \text{ cfs}$$

Wier + Grating Capacity = 115 cfs

required = 99.4

✓ OK

(Signature)

Revised  
3-17-90

Drainage Chock of  
SW Culvert / Channel  
Entrance :

per conceptual Grade & Drain  
 $Q_{10} = 276 \text{ CFS}$

a) Channel Entrance is 14' wide with 10" Curbs

b) Channel Slope is 2%

Downstream Sloping  
Weir Formula

$$Q = 3.1 H^{3/2}$$

$$Q = 3.1 \times 4 \times (0.83)^{3/2} = 31.8 \text{ cfs}$$

SW  
culverts  
276 cfs

OK

AK

2-5-70

①

Drainage Check of Water Block at North driveway on Taylor Ranch Road.

A) Approx 0.9 acre of sites runoff passes this area

$$Q_{100} = 0.95 \times 4.65 \times 0.9 = 4.0 \text{ cfs}$$

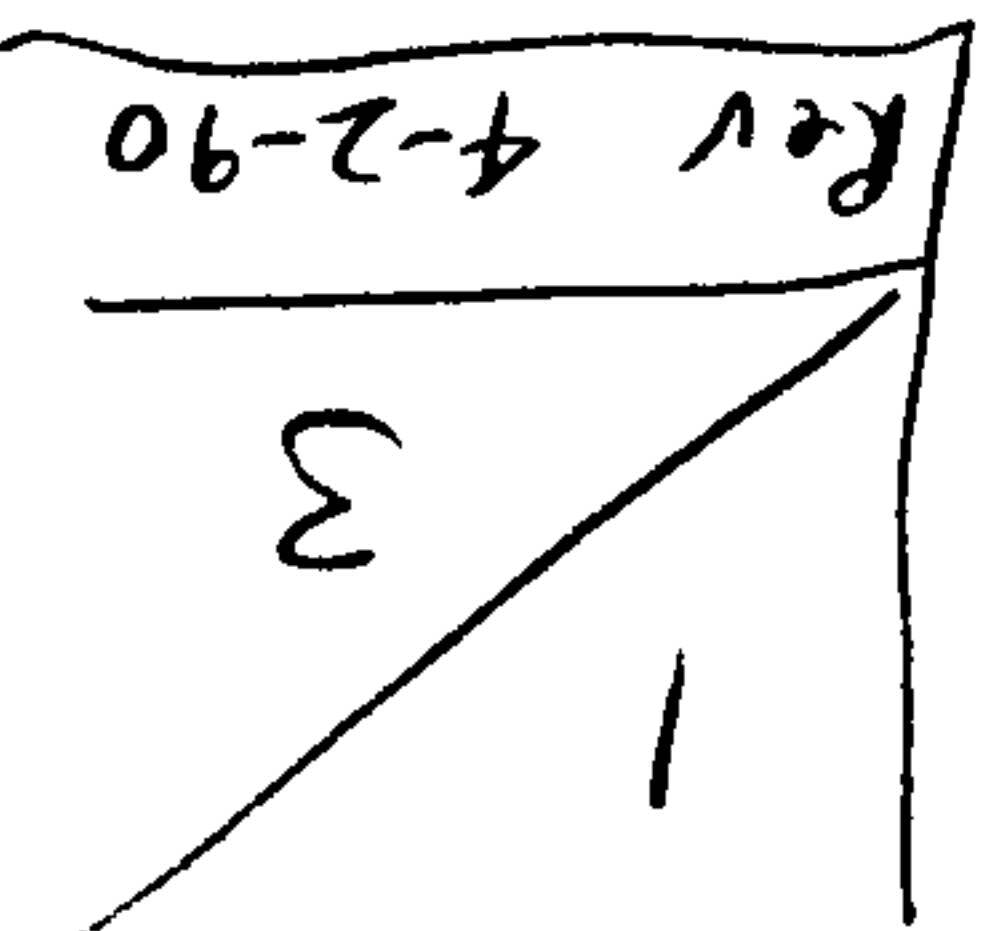
B) Curb opening in planter @ NE corner of Bldg controls flow. - Wier, 0.5' curb = depth

$$4.0 \text{ cfs} = 3.00 L (0.5)^{3/2} \quad L = 3.8'$$

Use 4.0' opening

C) Free board on water block need about a tenth foot

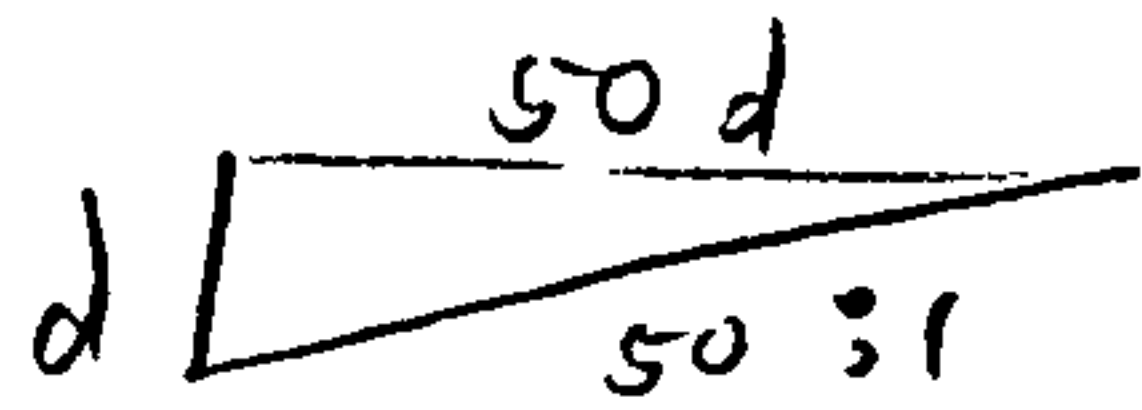
- set HP @ 0.6 feet above FL.



② Drainage Check of  
Water Block at South  
driveway on Taylor Ranch Road

A) Approx 1.2 acres of site's runoff  
passes this area

$$Q_{100} = 0.95 \times 4.65 \times 1.2 = 5.3 \text{ cfs}$$



$$s = 0.005$$

$$A = 50 d^2$$

$$P = 51.010 d$$

$$R = 0.98 d$$

$$5.3 = \frac{1.486}{0.017} (50 d^2) (0.98 d)^{2/3} \sqrt{0.005}$$

$$0.01738 = d^{8/3}$$

$$d = 0.22'$$

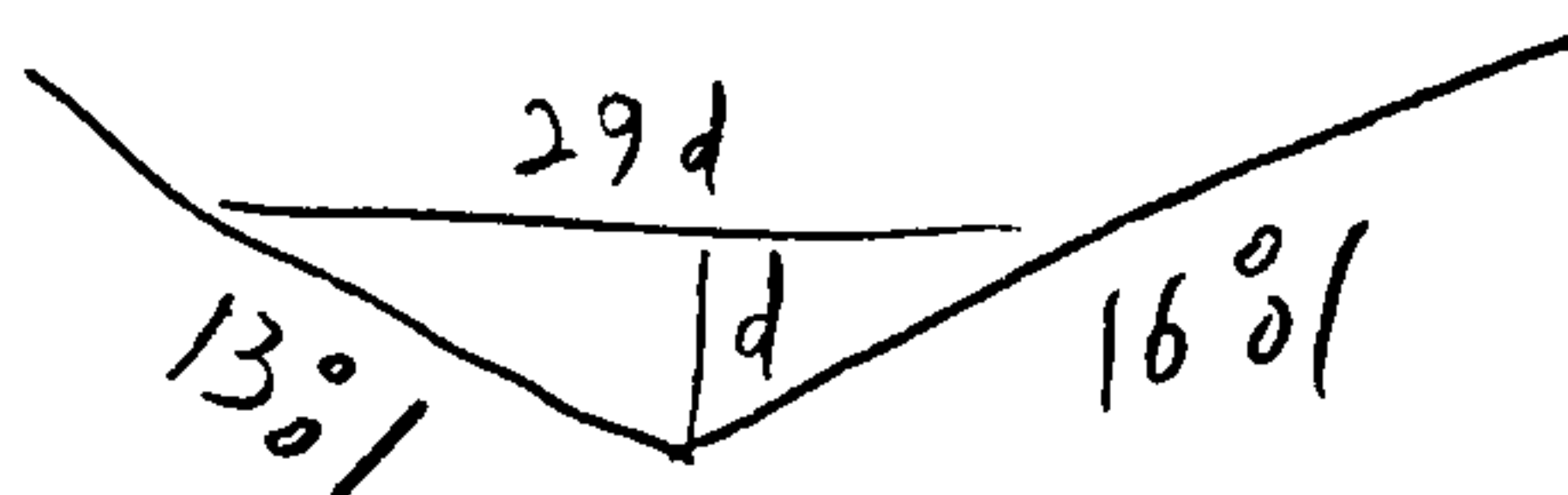
width of flow = 11'

✓ OK 13' wide area

To allow for freeboard set  
water block @ 0.3' high

③ Drainage Check of  
Water Block at  
driveway on Homestead Circle

A) Approx  $\frac{2}{3}$  of sites runoff  
passes this area  
 $Q_{100} = 28 \text{ cfs}$



$$A = 29d^2 \quad P = 29.07d$$

$$R = 0.998d$$

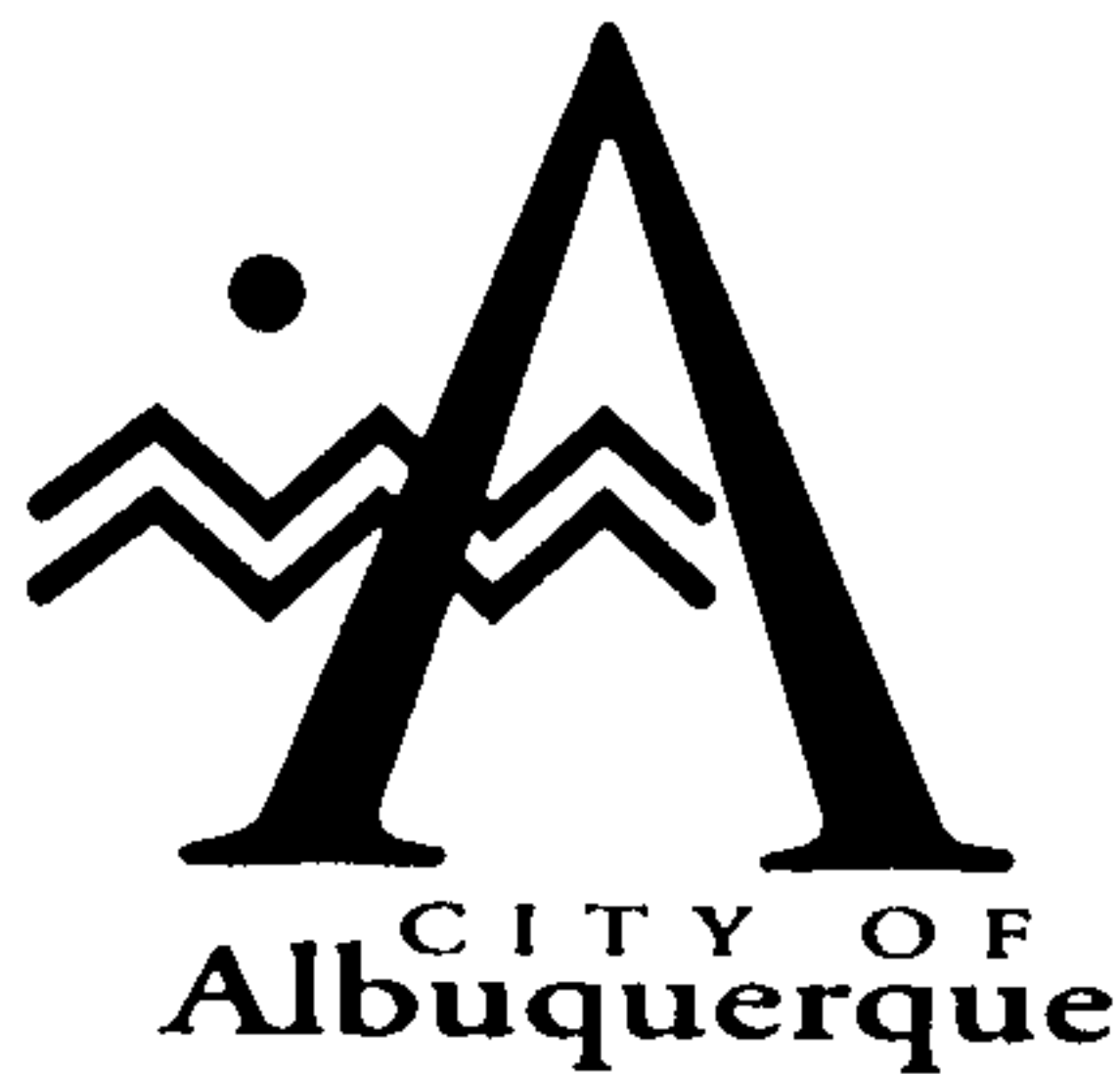
$$28 = \frac{1.486}{0.017} (29d^2) (0.998d)^{2/3} \sqrt{0.005}$$

$$d^{8/3} = 0.1564 \quad d = 0.50$$

width of flow = 14.5' OK

To allow for free board  
set water block @ 0.6' high





March 18, 1997

Martin J. Chávez, Mayor

Bob Ryals  
Ryals Engineering  
5301 Central NE  
Albuquerque, NM 87108

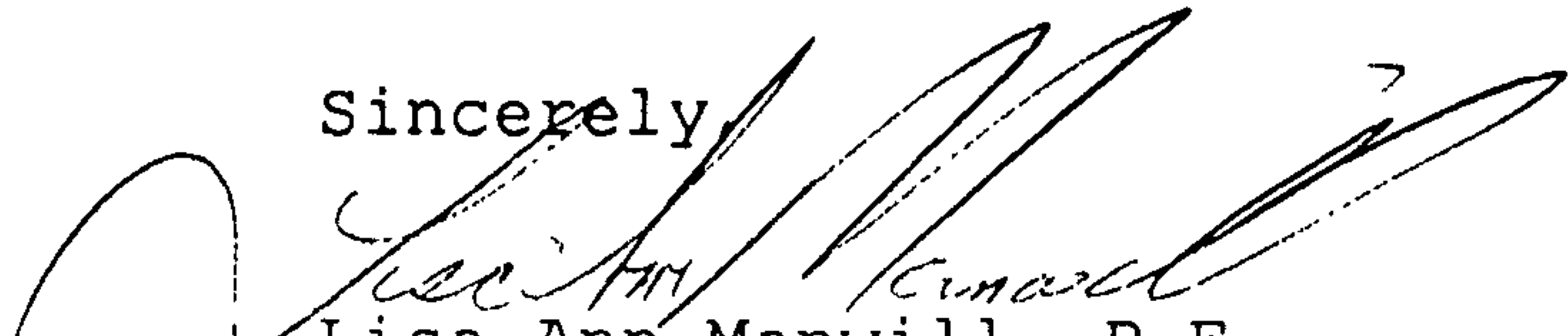
**RE: DAYCARE CENTER 5111 HOMESTEAD CIRCLE NW (D11-D9). ENGINEER'S  
CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S  
CERTIFICATION DATED 3-13-97.**

Dear Mr. Ryals:

Based on the information provided on your March 13, 1997 submittal, the above referenced project is approved for Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,



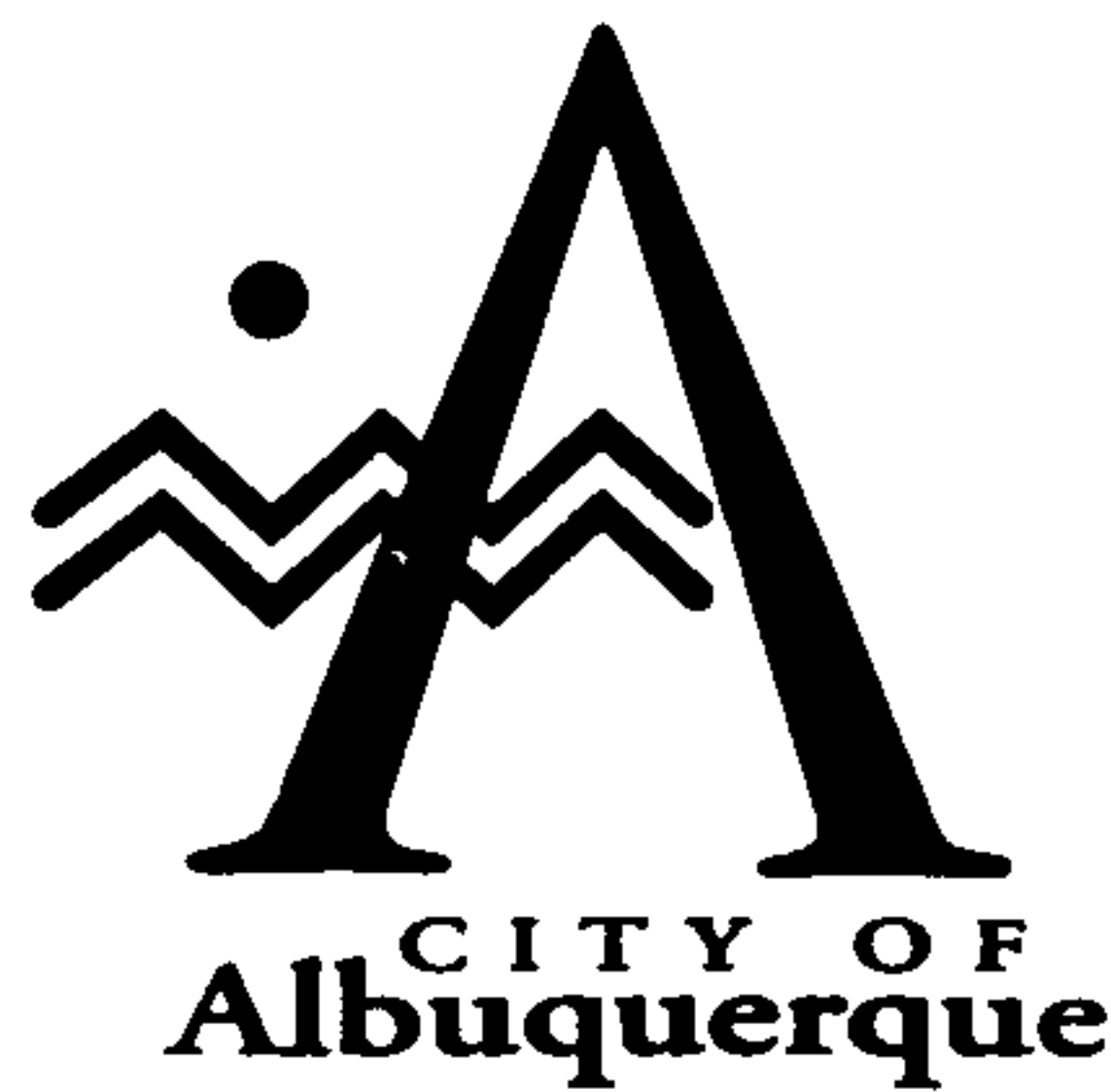
Lisa Ann Manwill, P.E.  
Engineering Assoc./Hyd.

c: Andrew Garcia  
(File)

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103





November 12, 1996

Martin J. Chávez, Mayor

Robert Ryals  
Ryals Engineering  
5301 Central NE #913  
Albuquerque, NM 87108

**RE: DRAINAGE PLAN FOR A DAY CARE CENTER @ HOMESTEAD HILLS  
SHOPPING CENTER BUILD PAD "G" (D11-D9) ENGINEER'S STAMP  
DATED 10/22/96.**

Dear Mr. Ryals:

Based on the information provided on your October 28, 1996 submittal, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE  
Engineering Associate

BJM/dl

c: Andrew Garcia  
File

Good for You, Albuquerque!





# *City of Albuquerque*

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 5, 1993

Michael Yost  
Community Science Corp.  
P.O. Box 1328  
Corrales, NM 87048

RE: ENGINEER CERTIFICATION FOR HOMESTEAD HILLS SHOPPING CENTER BUILDING  
C, (D11-D9) CERTIFICATION STATEMENT DATED 4/5/93.

Dear Mr. Yost:

Based on the information provided on your March 31, 1993 submittal, Engineer  
Certification for the above referenced building is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

*Bernie J. Montoya*  
Bernie J. Montoya, CE  
Engineering Assistant

BJM/d1/WPHYD/7662

xc: Alan Martinez  
File

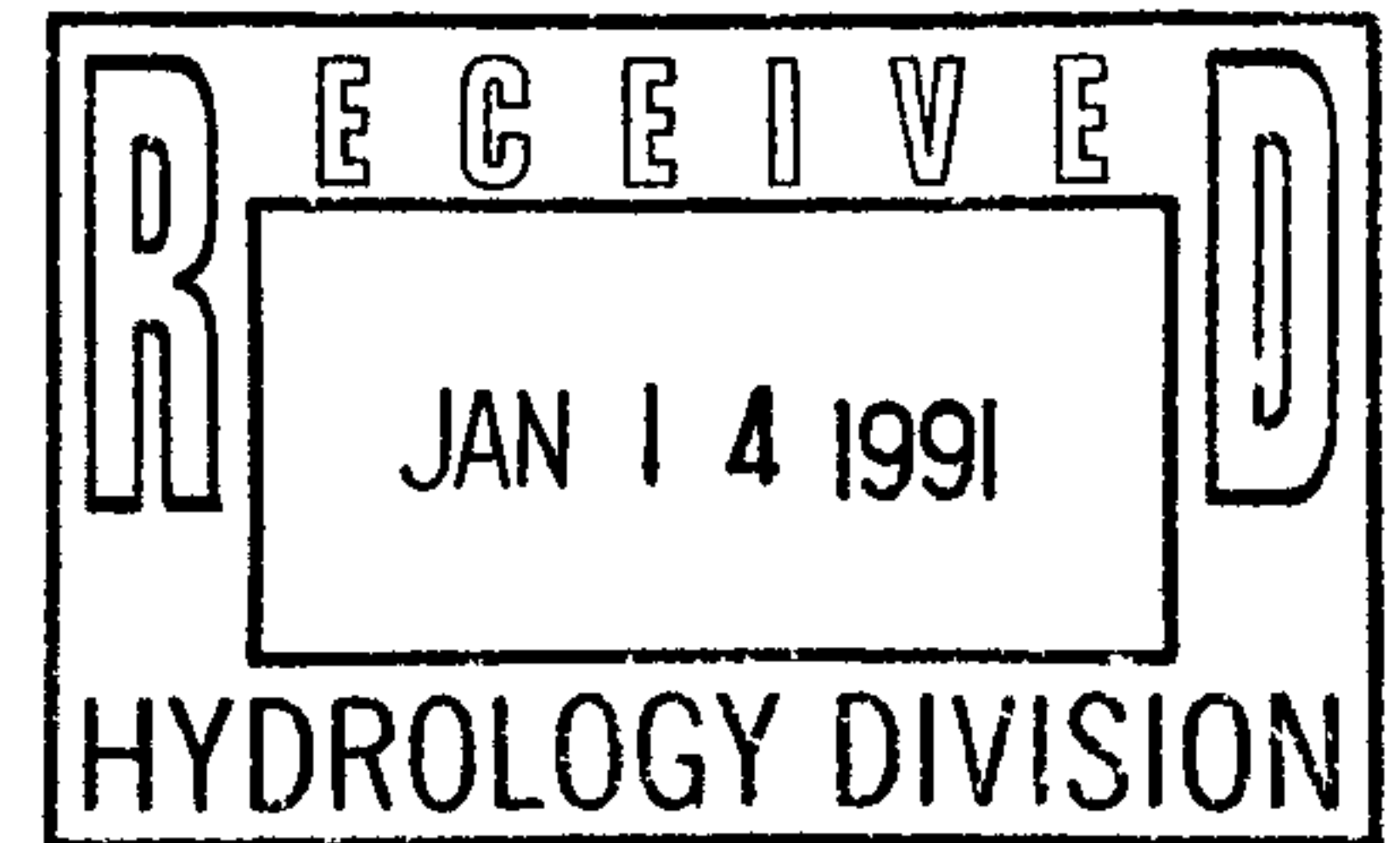
PUBLIC WORKS DEPARTMENT

D11/D9



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103



January 14, 1991

## PROJECT ACCEPTANCE LETTER

Mr. Jerry Kraybill  
C.C.M., Inc.  
8019 Edith Blvd. N.E.  
Albuquerque, NM 87113

RE: Homestead Hills Shopping Center, PROJECT NO.4031.80

Dear Mr. Kraybill:

The above referenced project has been completed according to the plans and specifications. The project consisted of installation of a 6" water line, nine (9) 4' fire hydrants and seven (7) 3" water services. Also made two (2) sanitary sewer tie-ins, one (1) on Taylor Ranch Rd. and one (1) on Homestead Hills. Removed curb and gutter in Taylor Ranch Rd. and built bus bay. Also built bus bay in Homestead Hills Rd. Constructed sidewalk culvert in Homestead Hills to drain project to corner of Homestead Hills and Conestoga Rd. with grates at dip section at entrance to drain channel. Made median revision on Taylor Ranch Rd. for access into project and reworked sprinkler system in median.

The City of Albuquerque accepts the referenced project as a whole and the contractual correction period began September 27, 1990. The correction period on this project is for one (1) year.

Sincerely,

Brian L. Speicher, P.E.  
Chief Construction Engineer  
Design/Construction Division  
Engineering Group  
Public Works Department

BLS:kt