



March 4, 1998

Gilbert Aldaz, P.E.  
Aldaz Engineering  
1605 Blair Drive NE  
Albuquerque, NM 87112

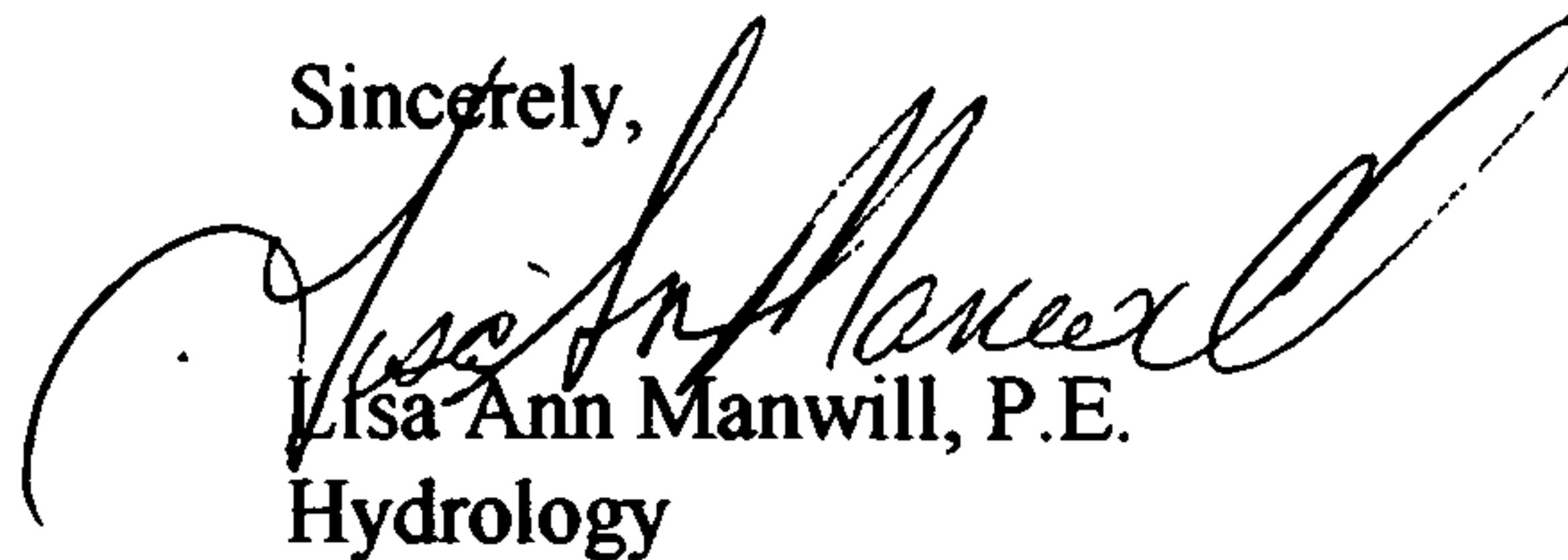
**RE: MARBERRY FOUR PLEX (L16-D34). ENGINEER'S  
CERTIFICATION FOR CERTIFICATE OF OCCUPANCY  
APPROVAL. ENGINEER'S CERTIFICATION DATED FEBRUARY  
23, 1998.**

Dear Mr. Aldaz:

Based on the information provided on your February 23, 1998 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.  
Hydrology

c: Andrew Garcia

File

Good for You, Albuquerque!



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Marberry Four Plex ZONE ATLAS/DRNG. FILE #: L-16/D34

DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lot 7, Block 5A, Loma Linda Addt.

CITY ADDRESS: Girard Blvd, North of Veil

ENGINEERING FIRM: Aldaz Engr. CONTACT: Gilbert Aldaz

ADDRESS: 1605 Blair Dr NE PHONE: 237-1456

OWNER: Phil Marberry CONTACT: Phil Marberry

ADDRESS: 2125 Camino De Chavez PHONE: 869-7903

ARCHITECT: Bosque Farms, NM 87068 CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

SURVEYOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

## TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☒ ENGINEER'S CERTIFICATION
- ☐ OTHER \_\_\_\_\_

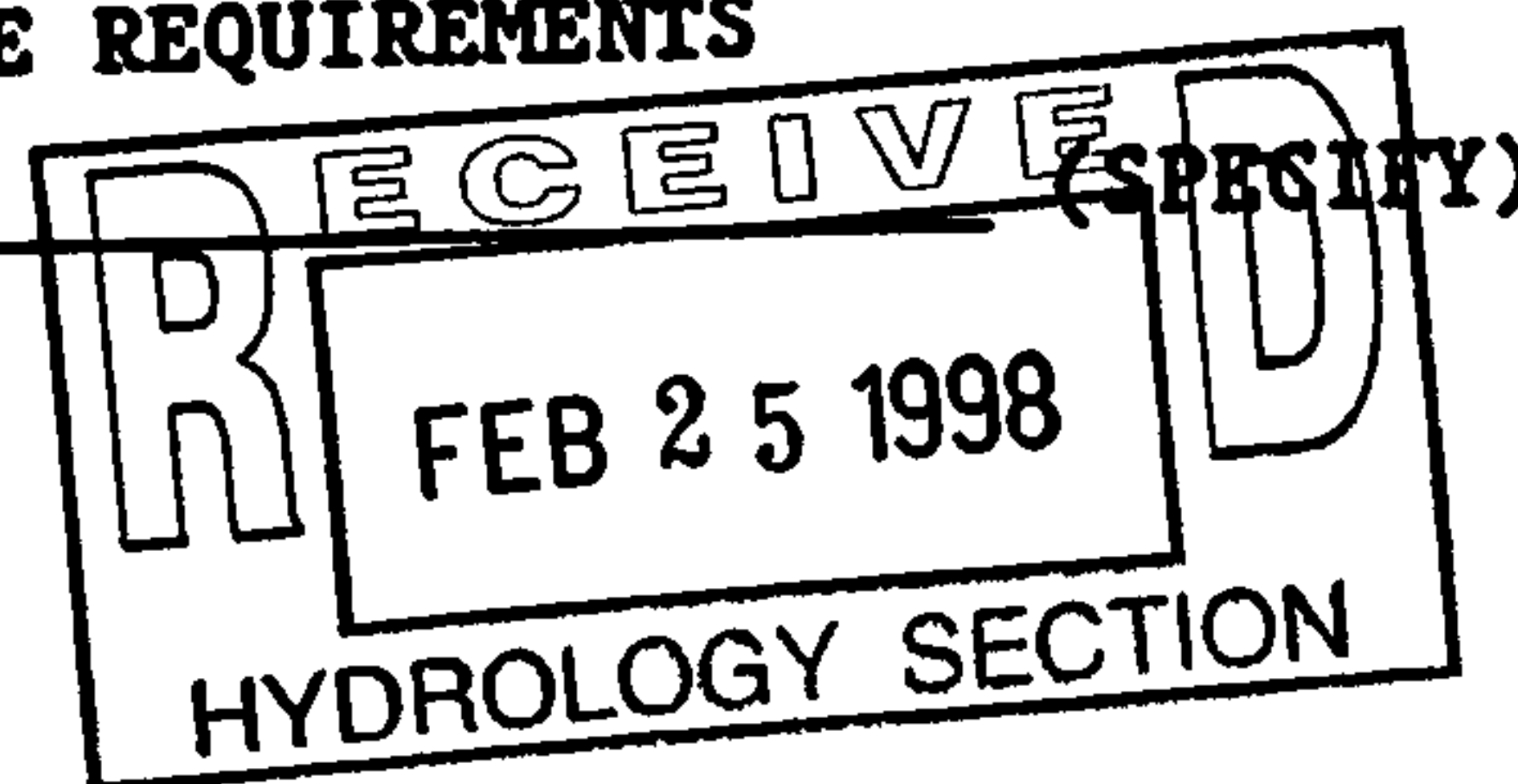
## PRE-DESIGN MEETING:

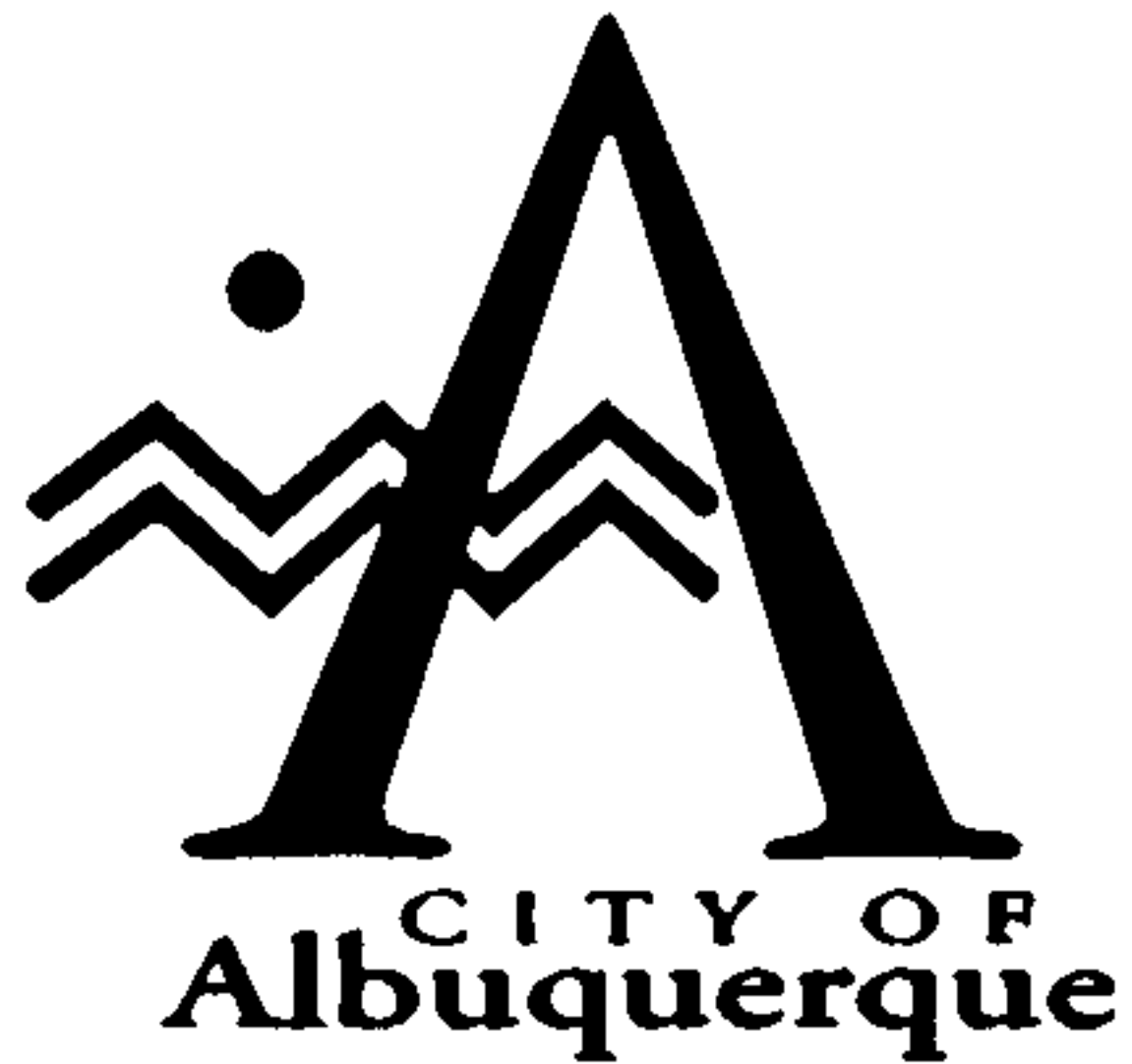
- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ S.A.D. DRAINAGE REPORT
- ☐ DRAINAGE REQUIREMENTS
- ☐ OTHER \_\_\_\_\_

DATE SUBMITTED: 02/25/98  
BY: Gilbert Aldaz





July 9, 1997

Martin J. Chávez, Mayor

Gilbert Aldaz, P.E.  
Aldaz Engineering  
1605 Blair Dr. NE  
Albuquerque, NM 87112

**RE: MARBERRY FOUR PLEX (L16-D34). DRAINAGE PLAN FOR BUILDING PERMIT  
APPROVAL. ENGINEER'S STAMP DATED JUNE 20, 1997.**


Dear Mr. Aldaz:

Based on the information provided on your July 7, 1997 submittal, the above referenced project is approved for Building Permit.

An Engineer's Certification will be required prior to 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



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: MARBERRY FOUR PLEX ZONE ATLAS/DRNG. FILE #: L-16/D34

DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lot 7, Block 5A, Loma Linda Addt

CITY ADDRESS: Girard Blvd, North of Vail SE

ENGINEERING FIRM: Aldaz Engineering CONTACT: Gilbert Aldaz

ADDRESS: 1605 Blair Dr NE PHONE: 237-1456

OWNER: Phil Marberry CONTACT: Phil Marberry

ADDRESS: 2175 Camino De Chavez PHONE: 869-7903

ARCHITECT: \_\_\_\_\_ CONTACT: \_\_\_\_\_

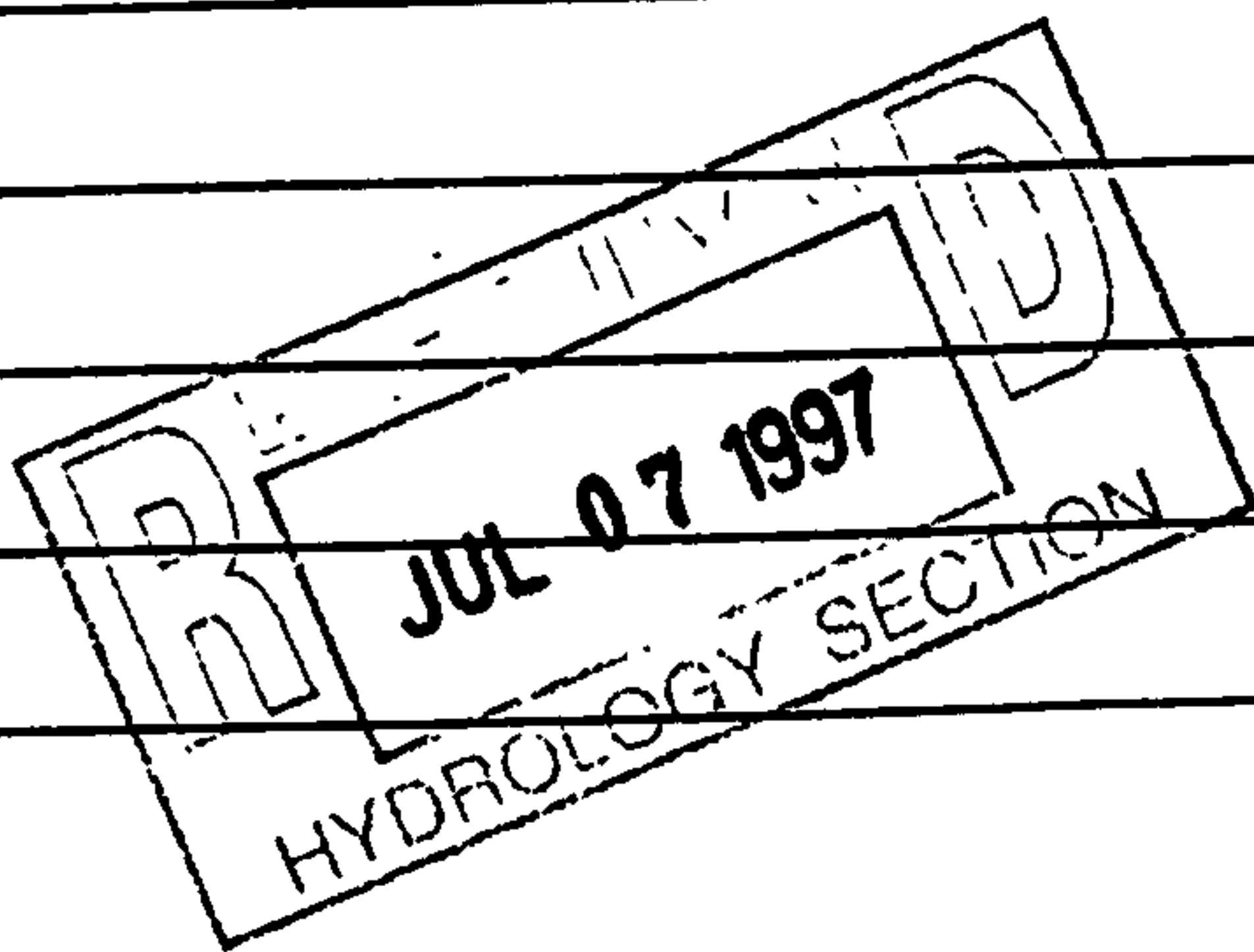
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

SURVEYOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_



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- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION
- ☐ OTHER \_\_\_\_\_

## PRE-DESIGN MEETING:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

## CHECK TYPE OF APPROVAL SOUGHT:

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- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ S.A.D. DRAINAGE REPORT
- ☐ DRAINAGE REQUIREMENTS
- ☐ OTHER \_\_\_\_\_ (SPECIFY)

DATE SUBMITTED: 07/07/97

BY: Gilbert Aldaz

Attachments:

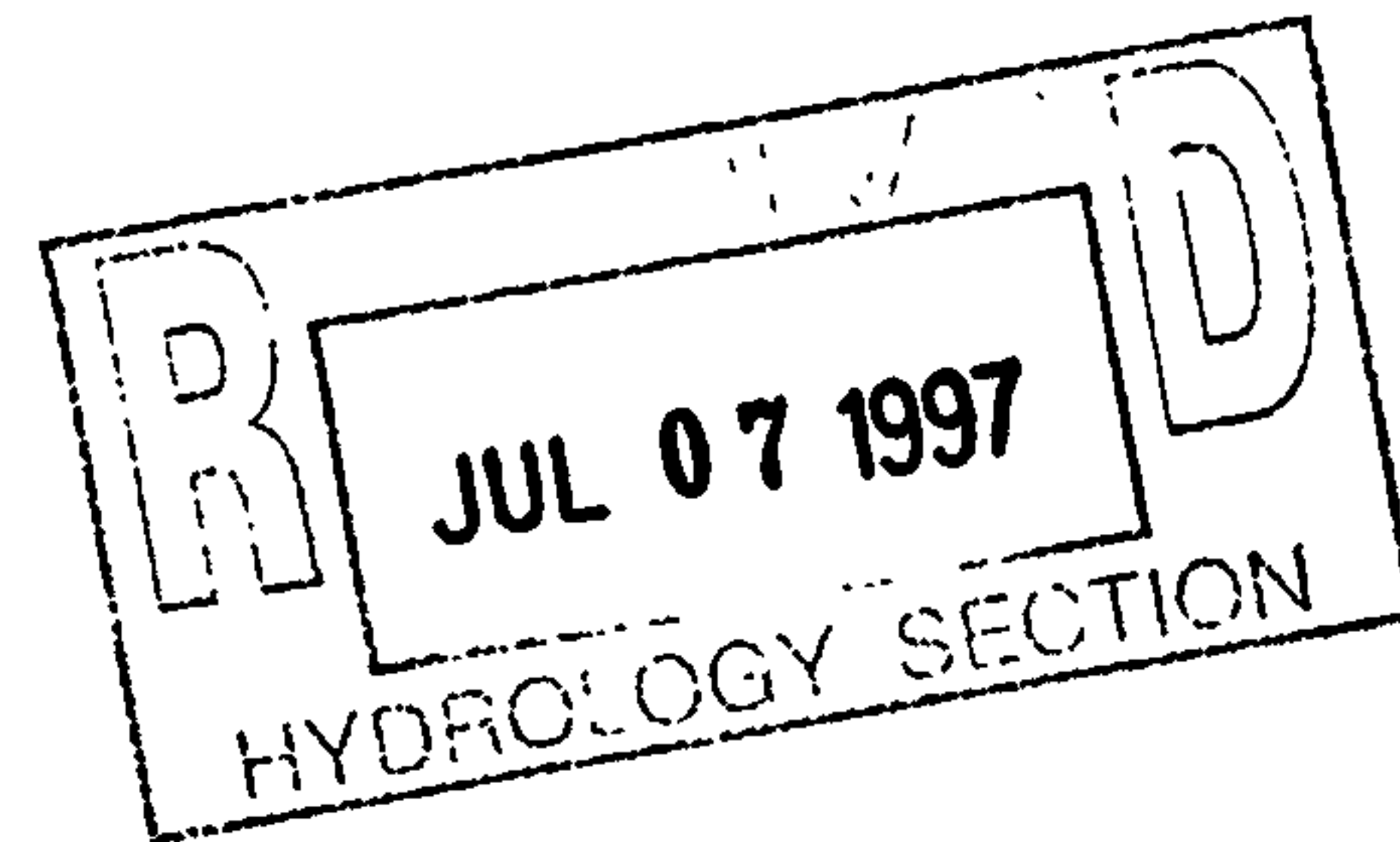
- As-Builts Channel & Pond
- Plat of Easements





July 7, 1997

Lisa Ann Manwill, P.E.  
Engineering Assoc. / Hyd.  
P.O. Box 1293  
Albuquerque, NM 87103



RE: YOUR COMMENTS DATED JUNE 30, 1997 FOR MARBERRY FOUR  
PLEX (L16-D34)

Dear Ms. Manwill:

According to the Albuquerque Master Drainage Study (Volume 2), dated January 1981, an analysis point at the floodplain location and Girard was identified as AP-3903. This analysis point indicated a flow rate of 148cfs was to be expected at this location. The Study goes on to state that 97cfs is overland and the remaining flow of 51cfs is carried by an existing 27" storm drain that lies within the floodplain. A concrete channel was constructed in the center of this floodplain by the apartment complex south of this proposed site, this channel has a 25 foot wide throat at the entrance on Girard and gradually narrows to 7.5 feet width.

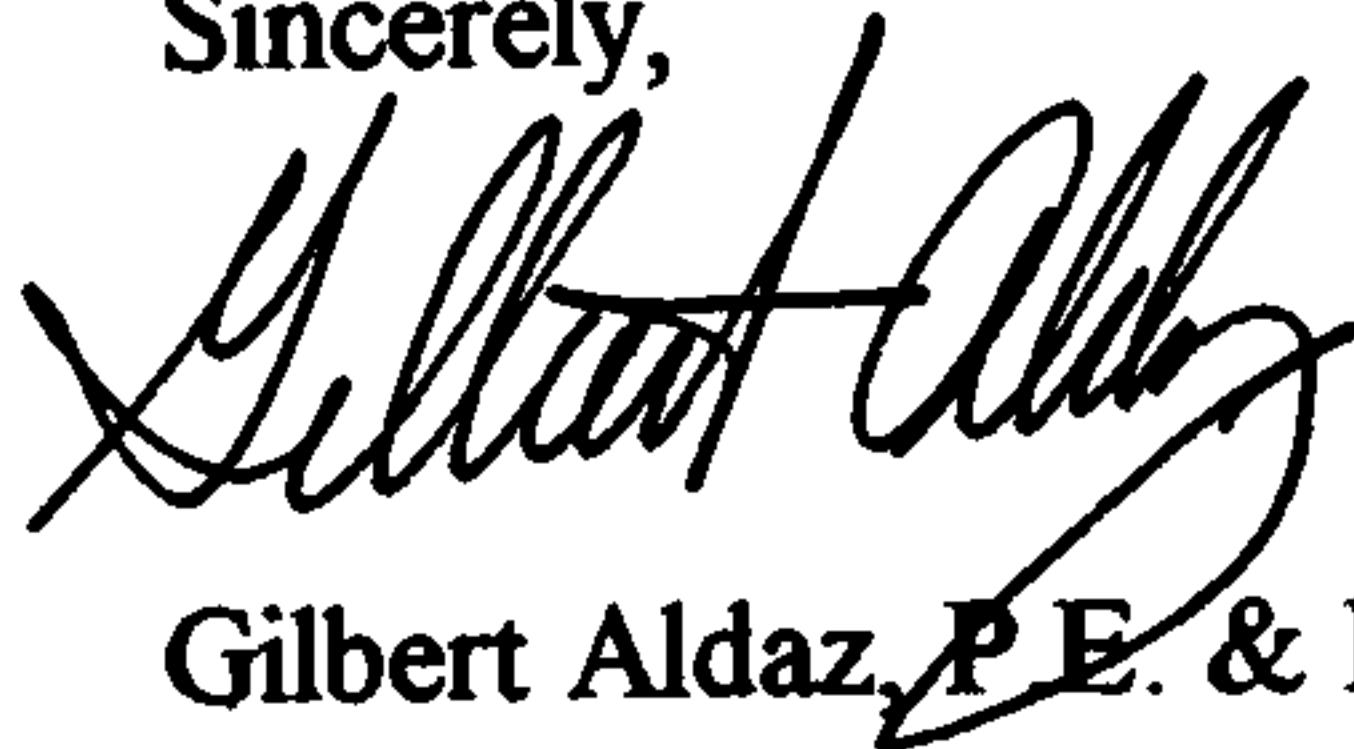
Attached is a cross section at the throat and a weir calculation assuming a rectangular opening, the capacity at this location indicates a flow rate of 274cfs. Also shown is a cross section at the main channel where it is at the narrowest, using a open channel flow program that utilizes a manning's equation indicates a normal depth of 1.06 feet with 1.83 feet of freeboard. In 1991 the City constructed a Intercepting and Detention Facility immediately east of Girard Boulevard which intercepts offsite flows, this may have further reduced the flow rate expected at this location.

I will respond to your comments as follows:

1. The base flood elevation assuming none of the above mention drainage improvements were in place would be 5265.5. This is based on taking a cross section at the east side of the four plex, extending this section to the bottom of the channel which has a invert elevation of 5264.5 and adding 1 foot since this is an AO(Depth 1). The finish floor elevation proposed is 5269.83, 4.33 feet above the base flood elevation.
2. Moving the building off the shaded floodplain area would not work since the lot is only 60 foot wide, an exception is requested based on the above calculations provided.
3. See previous calculations.

If you should have any questions, please do not hesitate to contact me at 237-1456.

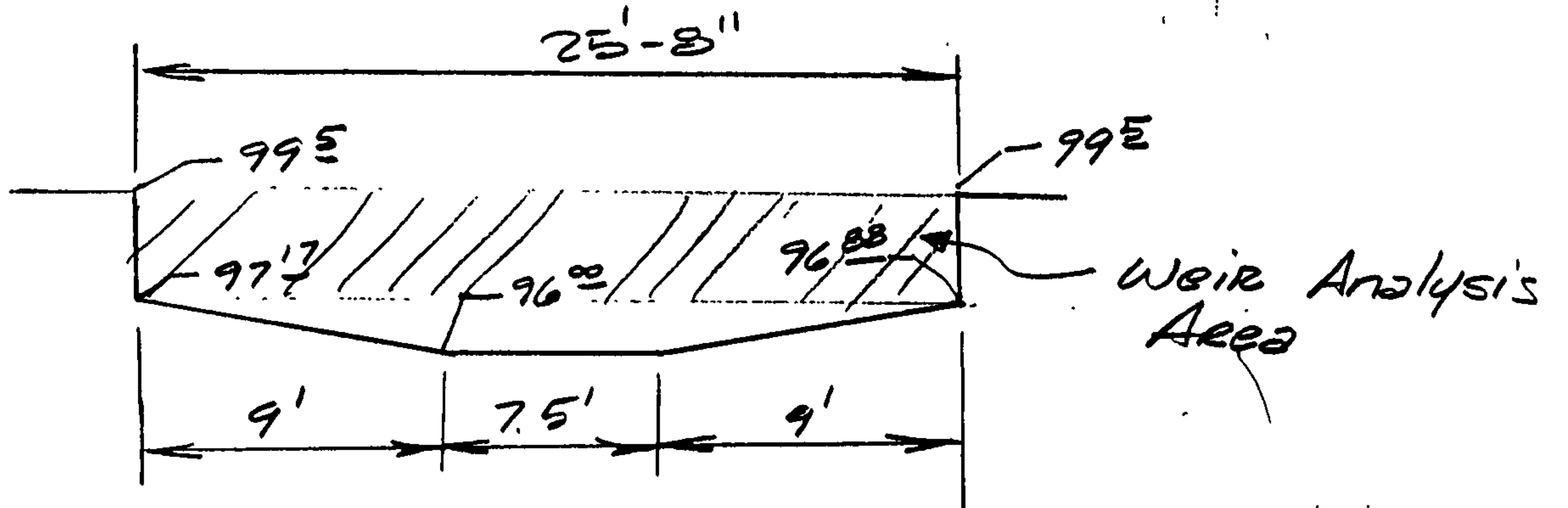
Sincerely,

A handwritten signature in black ink, appearing to read 'Gilbert Aldaz', written in a cursive style.

Gilbert Aldaz, P.E. & P.S.

# Channel Capacity Analysis

Cross Section at Throat on Girard Blvd.



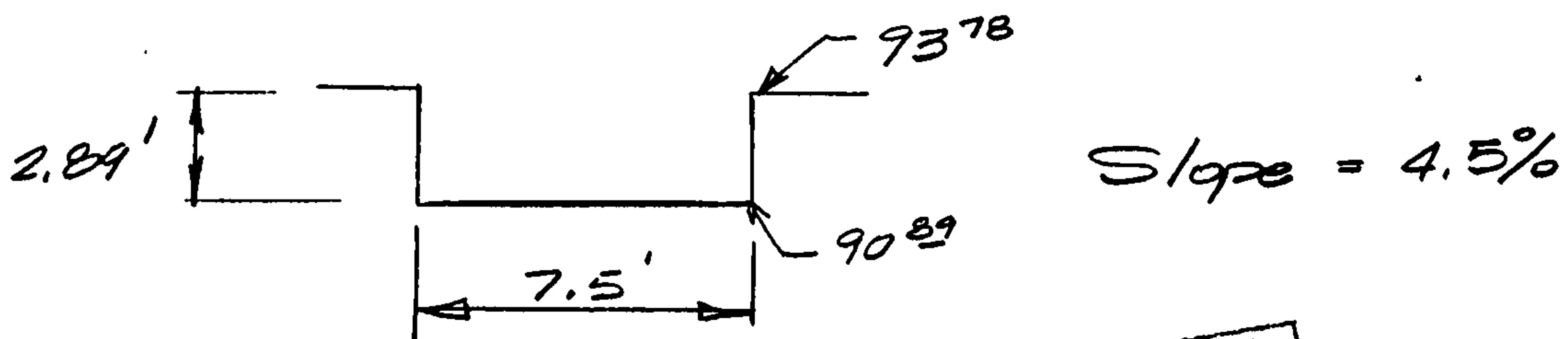
Weir:  $Q = CLH^{3/2}$  Assume  $V = 0$

$H = (99.5 - 97.17') = 2.33'$

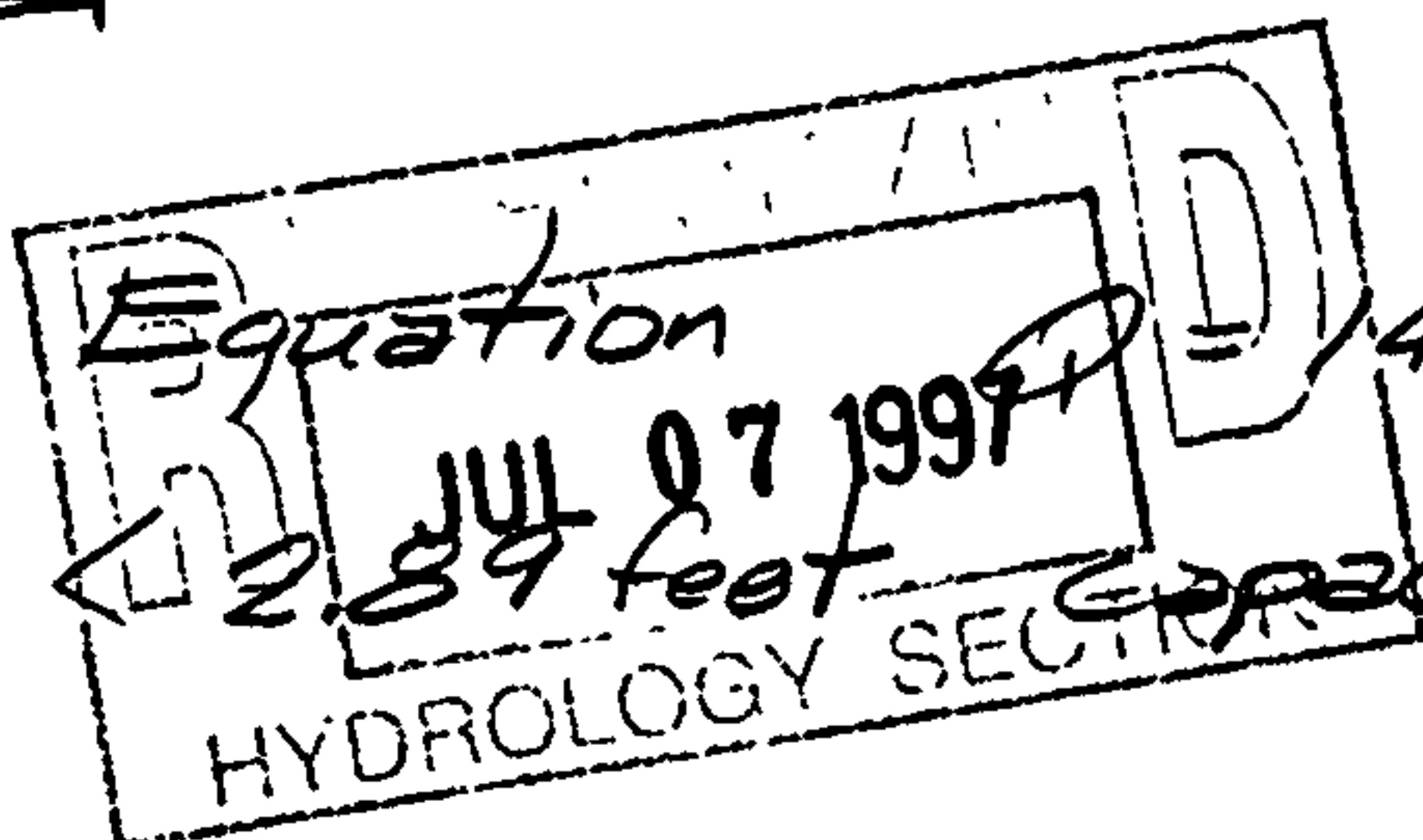
$L = 25.67$   $C = 3.0$  use Rectangular Section

$Q_{CAP} = 3.0 (25.67) (2.33)^{3/2} = 274 \text{ cfs capacity}$  } 97 cfs overland  
or  $Q_{peak} = 148 \text{ cfs}$

Cross Section at Main Channel



Using Mannings Equation  
 $d = 1.06 \text{ feet} < 2.89 \text{ feet}$  Capacity OK



TRAPEZOIDAL CHANNEL ANALYSIS  
NORMAL DEPTH COMPUTATION

July 1, 1997  
open channel flow from Girard Blvd  
for Manning's Equation

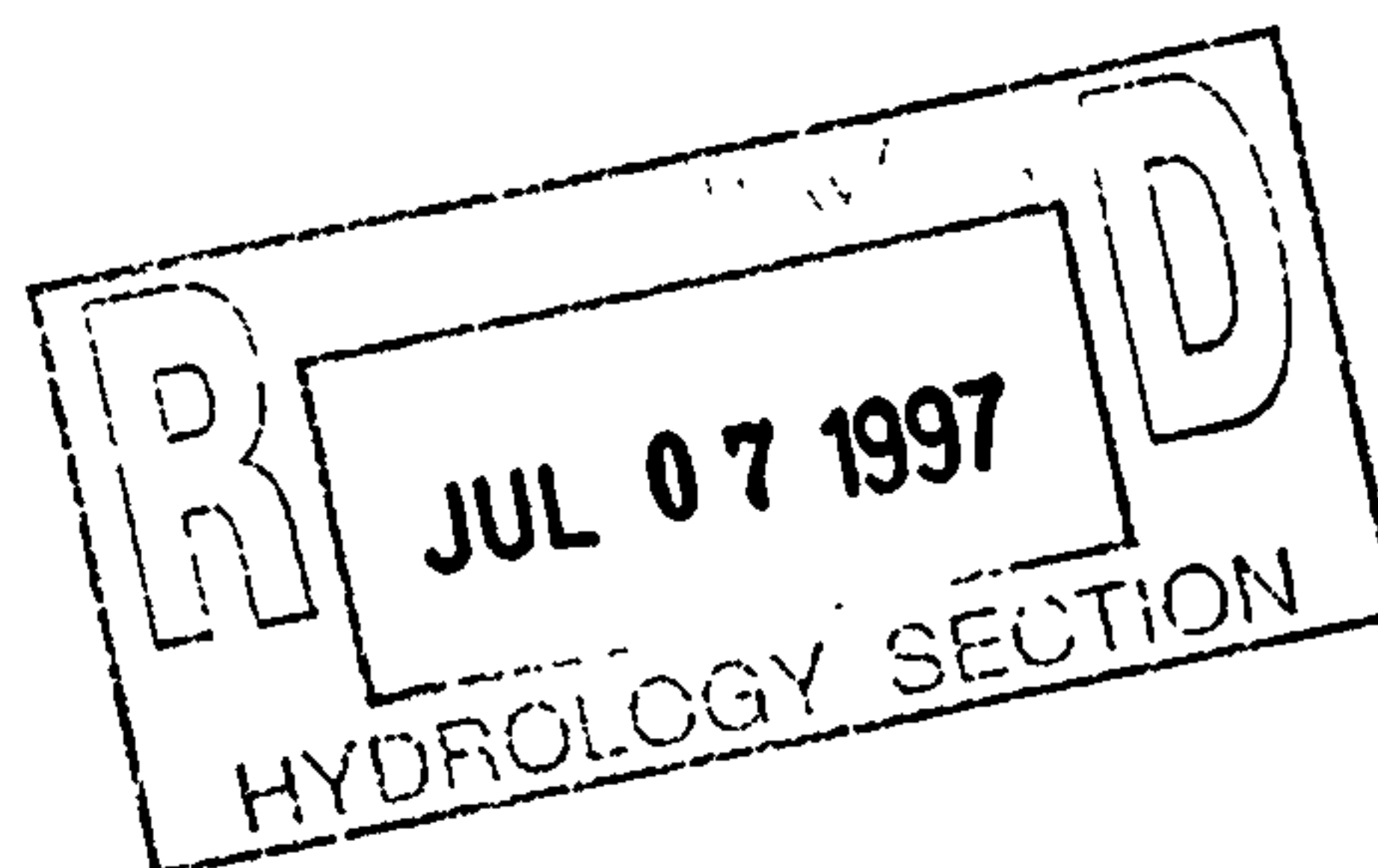
PROGRAM INPUT DATA:

DESCRIPTION	VALUE
Flow Rate (cubic feet per second).....	148.0
Channel Bottom Slope (feet per foot).....	0.0450
Manning`s Roughness Coefficient (n-value).....	0.0150
Channel Side Slope - Left Side (horizontal/vertical)....	0.01
Channel Side Slope - Right Side (horizontal/vertical)...	0.01
Channel Bottom Width (feet).....	7.5

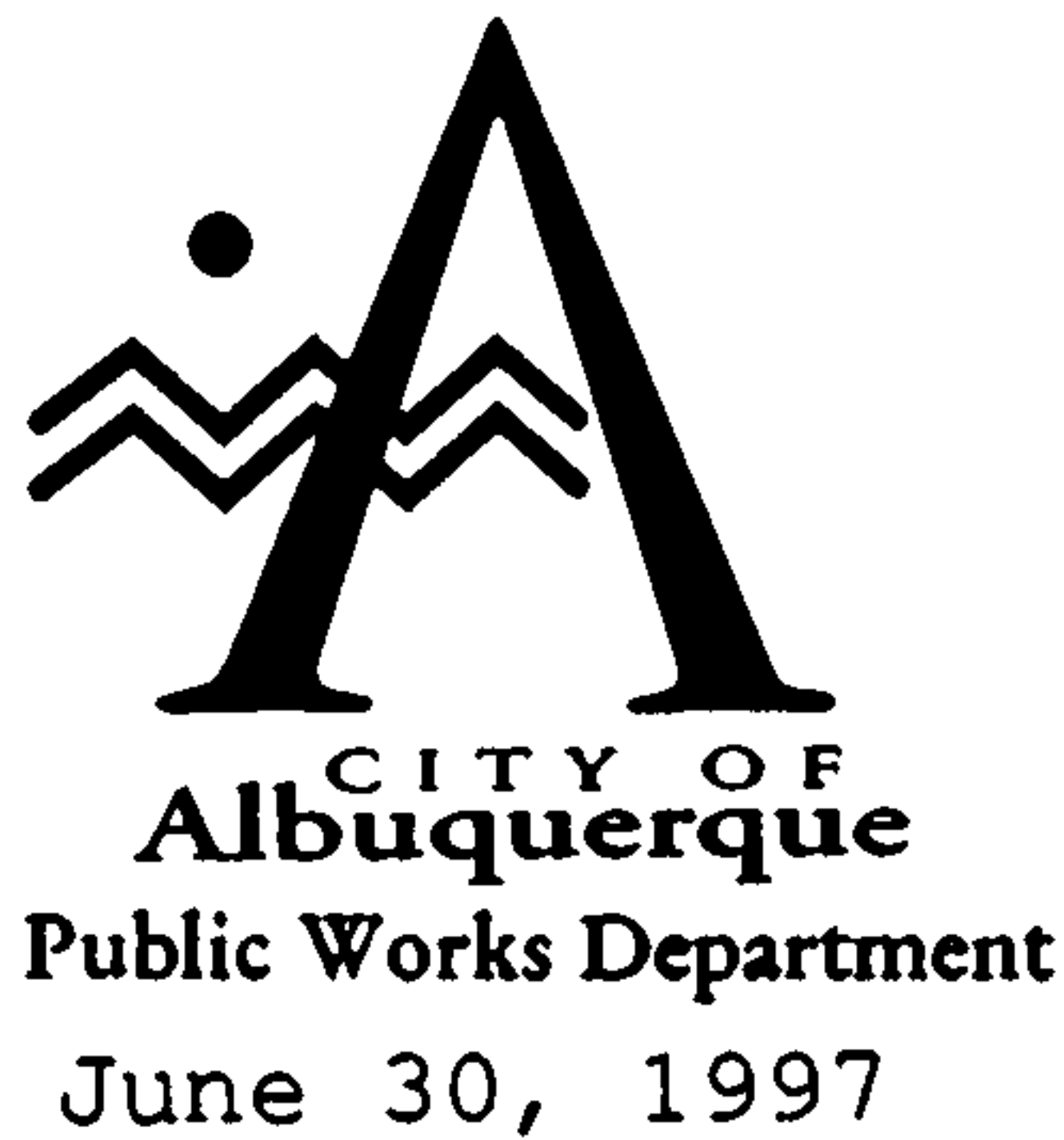
PROGRAM RESULTS:

DESCRIPTION	VALUE
Normal Depth (feet).....	1.06
Flow Velocity (feet per second).....	18.54
Froude Number (Flow is Super-Critical).....	3.171
Velocity Head (feet).....	5.34
Energy Head (feet).....	6.40
Cross-Sectional Area of Flow (square feet).....	7.98
Top Width of Flow (feet).....	7.52

TRAPEZOIDAL CHANNEL ANALYSIS COMPUTER PROGRAM, Version 1.3 (c) 1986  
Dodson & Associates, Inc., 7015 W. Tidwell, #107, Houston, TX 77092  
(713) 895-8322. A manual with equations & flow chart is available.







Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Gilbert Aldaz  
Aldaz Engineering  
1605 Blair Dr. NE  
Albuquerque, NM 87112

**RE: MARBERRY FOUR PLEX (L16-D34). DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED JUNE 20, 1997.**

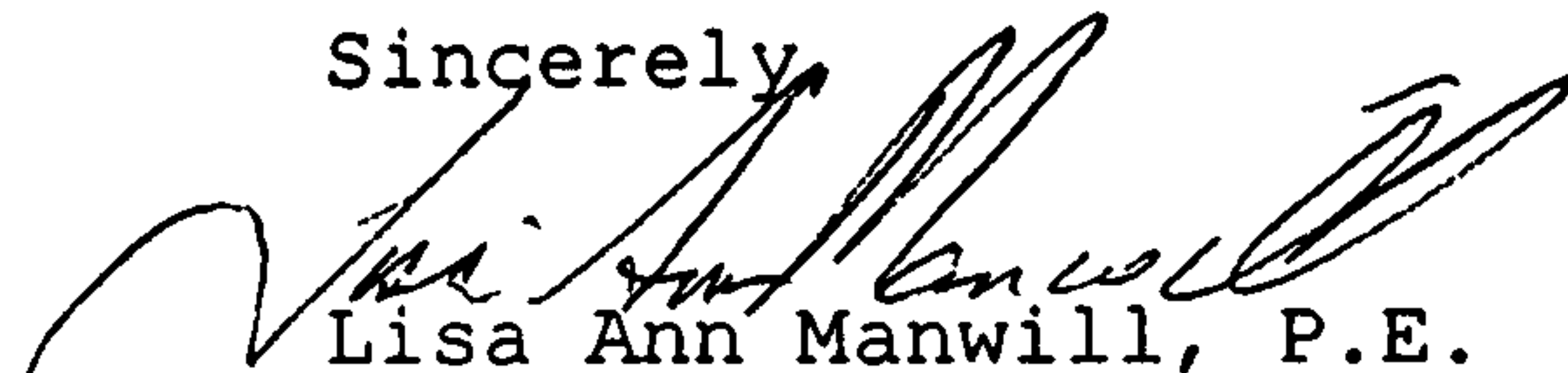
Dear Mr. Aldaz:

Based on the information provided on your June 23, 1997 submittal, I offer the following comments:

1. The finish floor elevation must be a minimum of 1-foot above the base flood elevation. What is the base flood elevation.
2. The building pad is not to encroach the shaded floodplain area.
3. Please discuss the offsite flows from the east that create this floodplain.

If I can be of further assistance, please feel free to contact me at 924-3984 or Susan Calongne at 924-3982.

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



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SURVEYOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_

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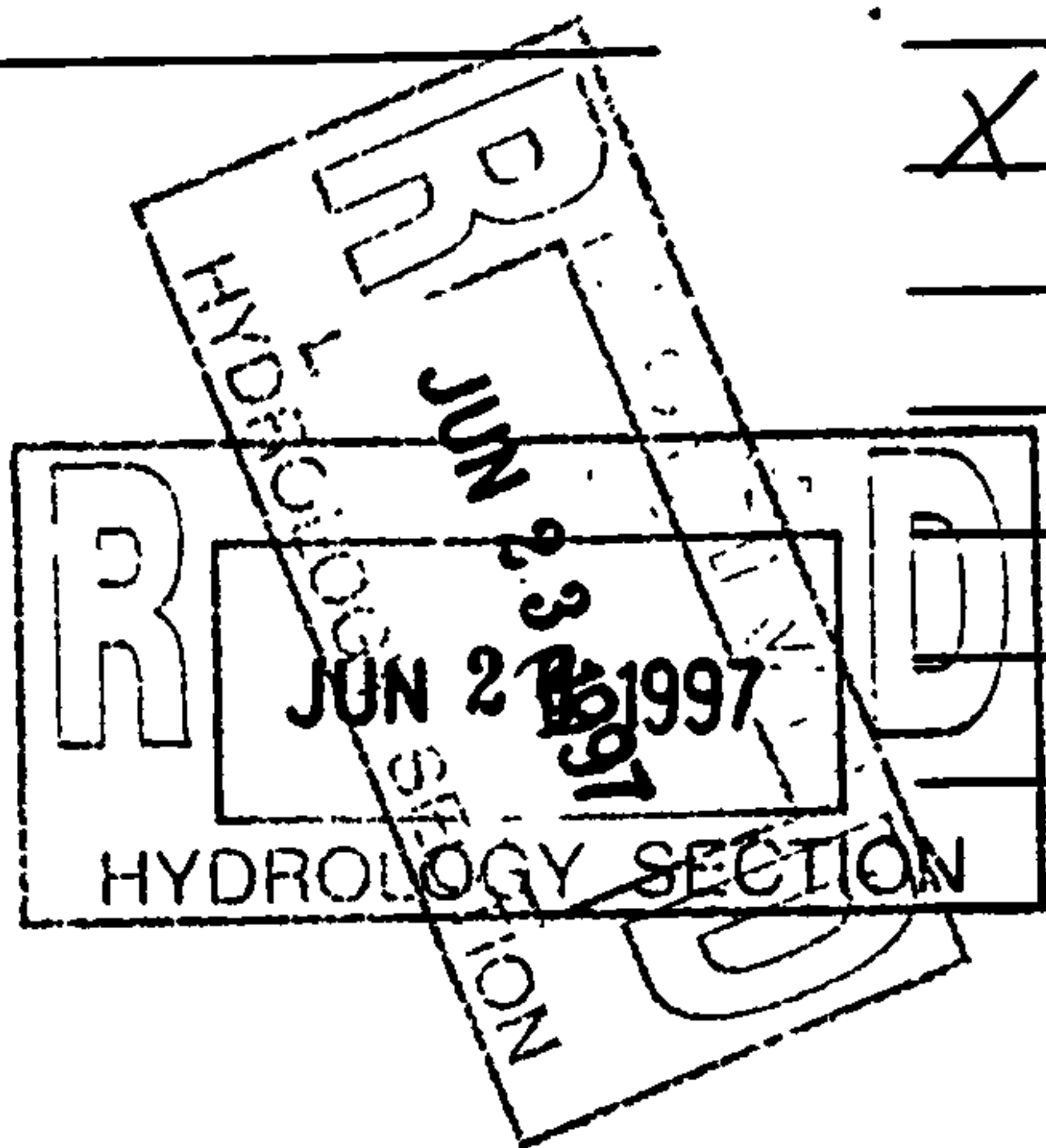
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- ☐ DRAINAGE REQUIREMENTS
- ☐ OTHER \_\_\_\_\_ (SPECIFY)

## PRE-DESIGN MEETING:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: 06/23/97

BY: [Signature]

Attachments:

- As-Built's Channel & Pond
- Plot of Easements