

78 62134

GRANT OF EASEMENT
FOR DRAINAGE

810

THIS INDENTURE made and executed this 16th day of August 1978, by and between WESTERN DEVELOPMENT COMPANY, Albuquerque, New Mexico, hereinafter called the Grantor and THE CITY OF ALBUQUERQUE, NEW MEXICO, a municipal corporation, hereinafter called Grantee.

WITNESSETH, that for good and valuable consideration the receipt of which is hereby acknowledged the Grantors have this day bargained and sold by these presents do sell, convey and deliver unto the City of Albuquerque a temporary drainage easement including the right to enter upon the real estate hereinafter described at any time that it may see fit and construct, maintain and repair, a drainage facility, across, through, and under the lands hereinafter described and the further right to remove trees, bushes, undergrowth and obstructions interfering with the location, construction and maintenance of said drainage facility until such time alternate methods of drainage are adopted in this area.

A tract of land situate in Section 27, T. 10 N, R. 4 E., N.M.P.M., City of Albuquerque, Bernalillo County, New Mexico, and being more particularly described as follows:

Beginning at the southwest corner of the tract herein set forth said point being the northwest corner of HIDDEN VALLEY, PHASE II, an Addition to the City of Albuquerque, New Mexico, as the same is shown and designated on said Addition, filed in the office of the County Clerk of Bernalillo County, New Mexico, on the 10th day of August 1976 (D7-54); thence leaving the north right-of-way of Hidden Valley Drive, N 02°34'45" W, 322.35 feet; thence N 35°48'59" W, 70.12 feet; thence N 01°32'07" W, 196.60 feet; thence N 51°58'02" W, 144.82 feet; thence N 77°56'27" E, 109.55 feet; thence S 35°27'50" E, 60.42 feet; S 12°03'33" E, 550.00 feet; thence S 30°46'07" E, 95.00 feet to a point on the north right-of-way of Hidden Valley Drive, said point being a point on curve; thence along said right-of-way 26.89 feet along the arc of a curve to the left having a radius of 175.00 feet whose chord bears S 85°19'21" W, 26.86 feet; through a central angle of 08°48'12" to a point of tangency; thence along said right-of-way S 80°55'15" W, 105.37 feet to the southwest and beginning corner of the tract herein set forth and containing 1.141 acres, more or less. (See attached Exhibit "A")

TO HAVE AND TO HOLD the said easement for the uses and purposes aforesaid, unto Grantee its successors and assigns for so long as said easement shall not be abandoned for use as a right-of-way for aforesaid drainage facility.

As part of the consideration for this grant, the Grantors do hereby release any and all claims for damages for whatsoever cause incidental to the exercise of the rights herein granted provided, however, that the Grantee agrees to save Grantors harmless from any and all liability that may arise as a result of the construction and use of the easement for the purposes set forth.

IN WITNESS WHEREOF, the parties have set their hands and seals this 17th day of August, 1978.


Bo K. Johnson, Vice President

The foregoing instrument was acknowledged before me this
17th day of August, 1978, by Lois A. Johnson, Vice President

Robert G. Hill
Notary Public

My Commission Expires: Dec. 30, 1978 STATE OF NEW MEXICO
COUNTY OF SHERMAN
FILED FOR REC'D

AUG 22 2 30 PM 1978
MEX 632 810-812
CO. CLERK
Deputy

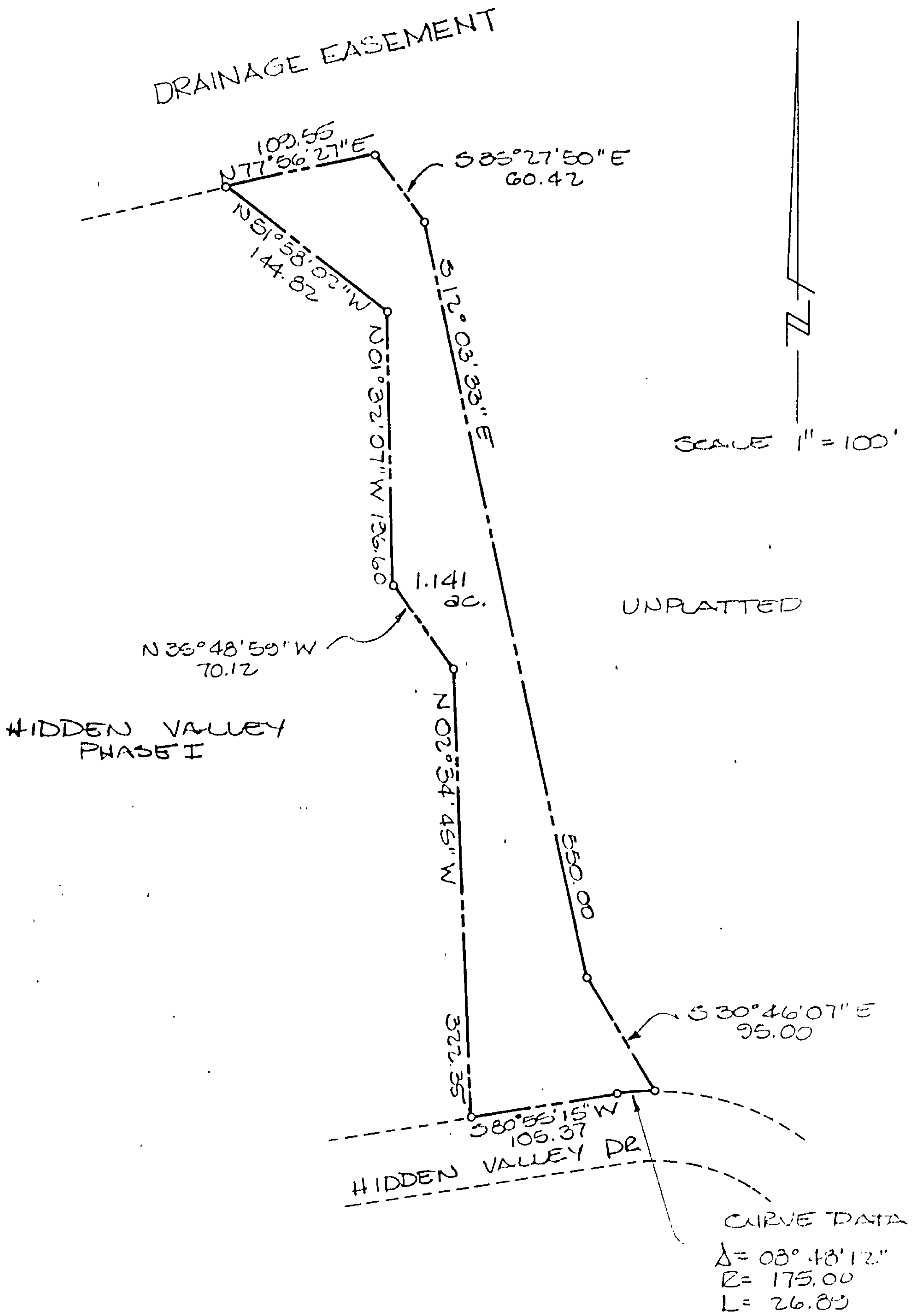


EXHIBIT "A"



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

July 7, 1986

Joe Jones
Denney-Tibbels-McLean & Associates, Inc.
2400 Comanche Road, NE
Albuquerque, New Mexico 87107

RE: DRAINAGE PLAN SUBMITTAL OF HIDDEN VALLEY IV-A OFFSITE FLOW
PROTECTION, RECEIVED JUNE 10, 1986 FOR DRAINAGE
IMPROVEMENTS APPROVAL (L-22/D13)

Dear Joe:

I have reviewed the above referenced submittal, drawings dated June 9, 1986, and concur with the diversion channel design. I do have the following comments in regards to the Grant of Easement and Drainage Covenant:

1. Exhibit "A" of the Grant of Easement does not accurately describe the proposed easement. The bearings shown go in the wrong direction. Also, the plat filing date of May 26, 1986 is incorrect, should it be 1986?
2. The Drainage Covenant should not include the City as a party unless the waters being diverted are public waters. If the water being diverted is just runoff from private property, then the covenant should be between the owner and party being protected. This covenant describing maintenance responsibilities and specifications could be incorporated into the Grant of Easement document.

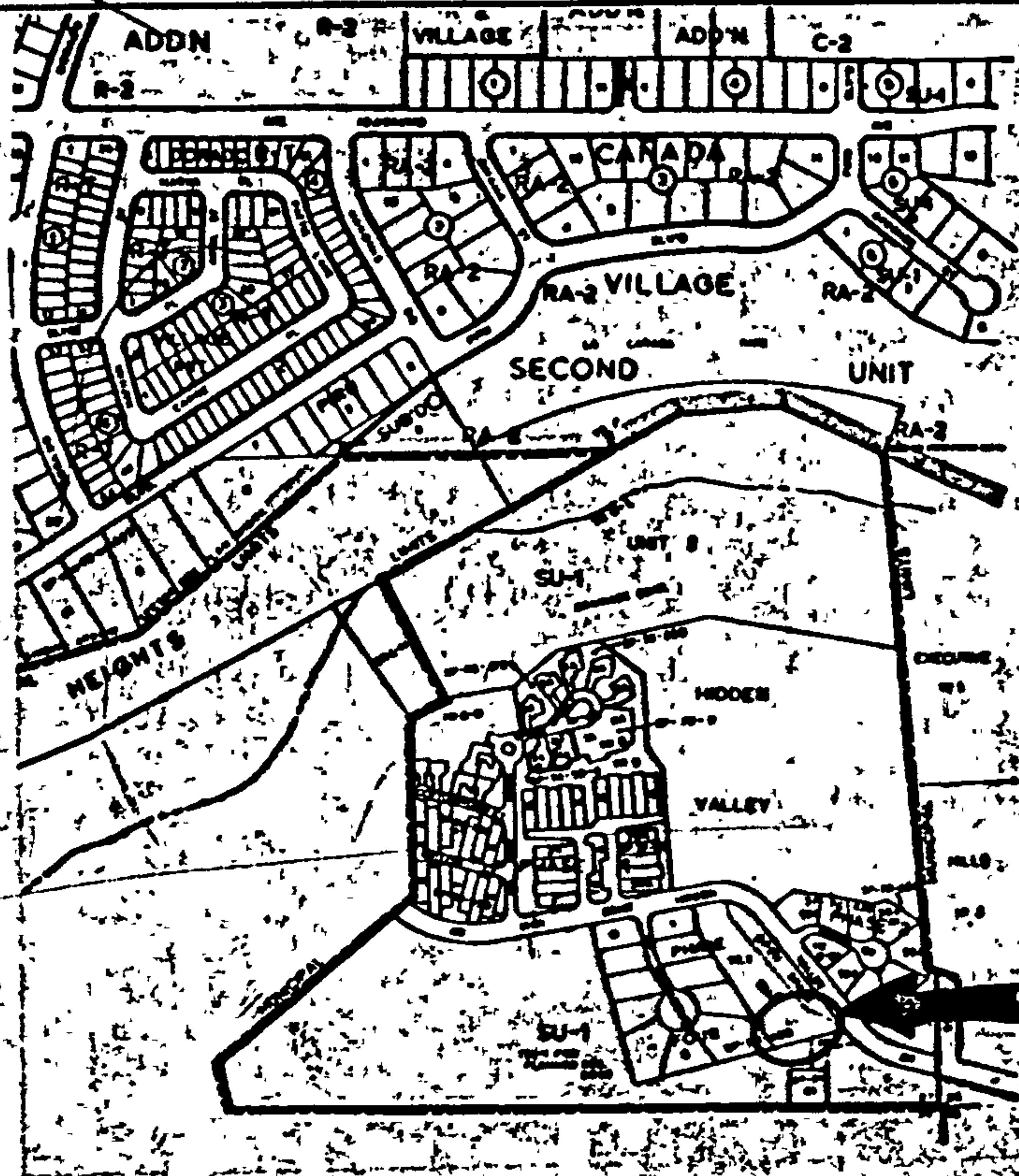
If you have any questions, call me at 766-7644.

Cordially,

Roger A. Green, P.E.

Roger A. Green, P.E.
C.E./Hydrology Section

RAG/bsj

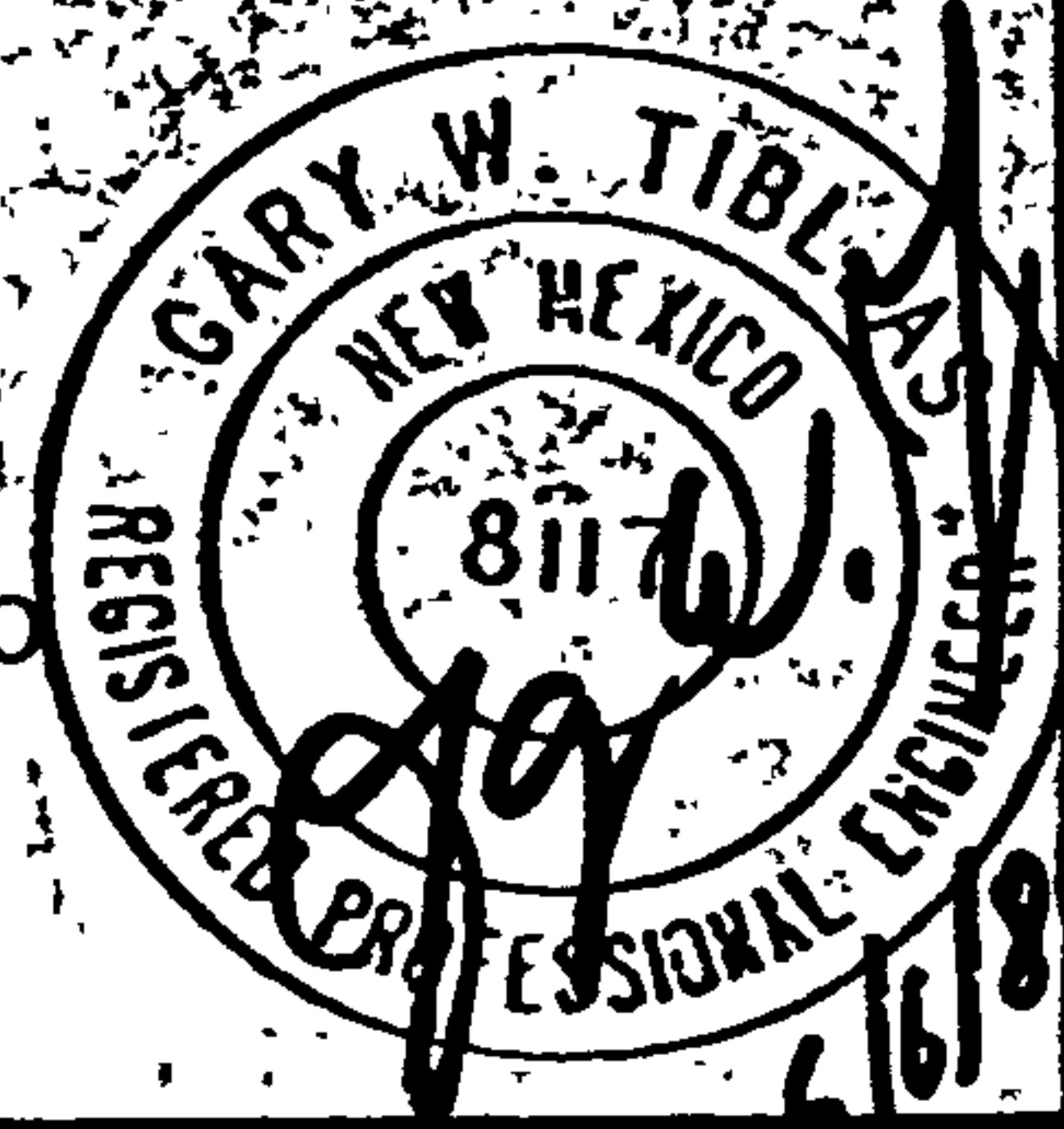
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY *Complete*SITE PLANBENCH MARK

Station is a standard ACS brass disc set in a concrete monument on the ground, and stamped "5-M22, 1975 ACS"

Temporary Benchmark is an exist. Sanitary Sewer Manhole at the intersection of Hidden Valley & Green Valley Drives. Rim EL. = 5523.41.

LEGAL DESCRIPTION

"HIDDEN VALLEY SOUTH" Filed March 26, 86 Vol. C-29, Folio 200

NOTICE TO CONTRACTOR

L-22-D-13

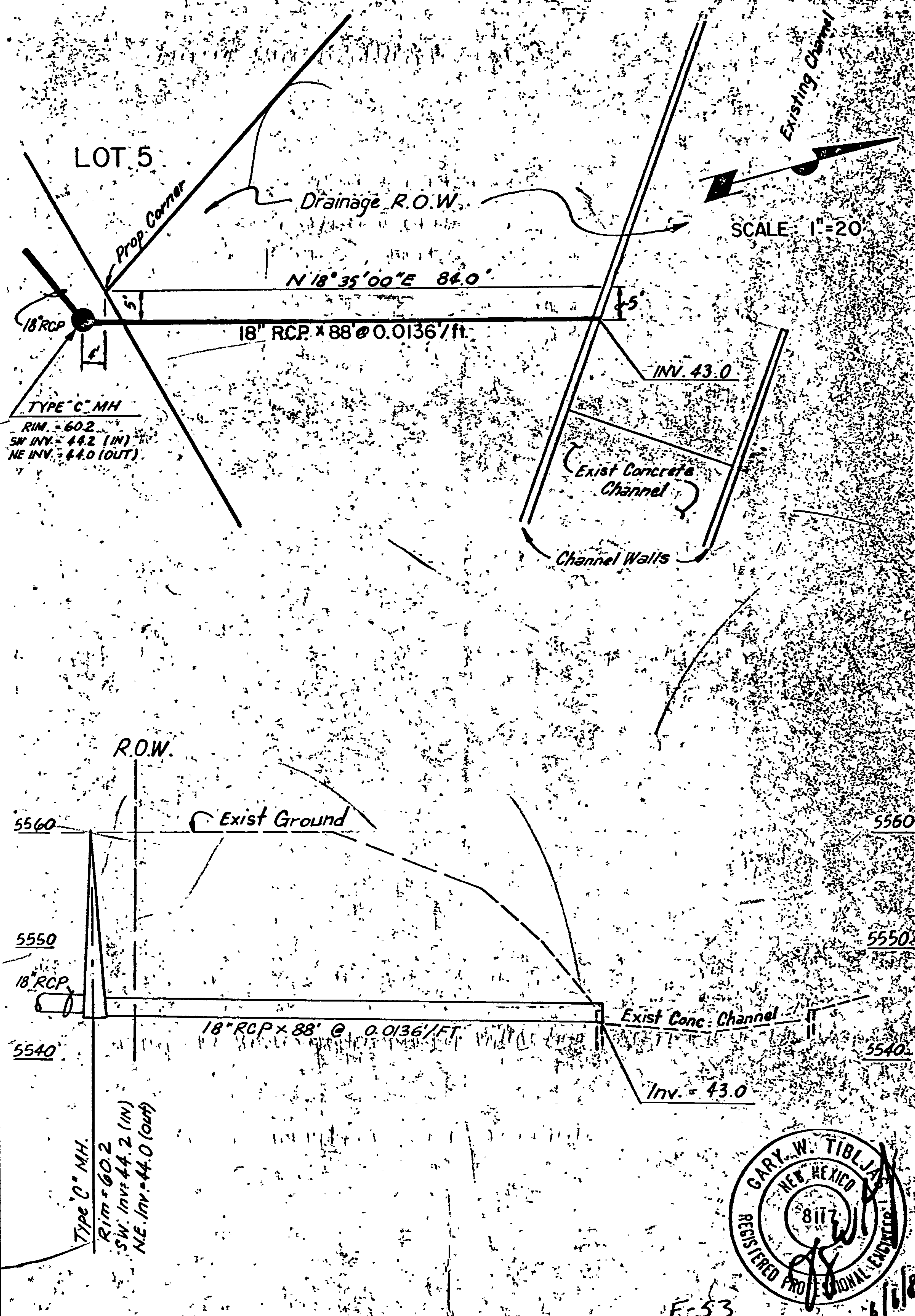
1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "City of Albuquerque Specifications from Public Works Contract 84-1"
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to arterial street use.
6. Maintenance of these facilities shall be the responsibility of the property served.

F-53

APPROVALS	NAME	DATE	TITLE: DRAINAGE IMPROVEMENTS
A.C.E. /DESIGN	Philip Fischer	6/20/86	HIDDEN VALLEY IV-A
INSPECTOR			PERMIT NO.
A.C.E. /FIELD			SHEET 1 OF 3
			MAP NO. L-22

CITY OF ALBUQUERQUE

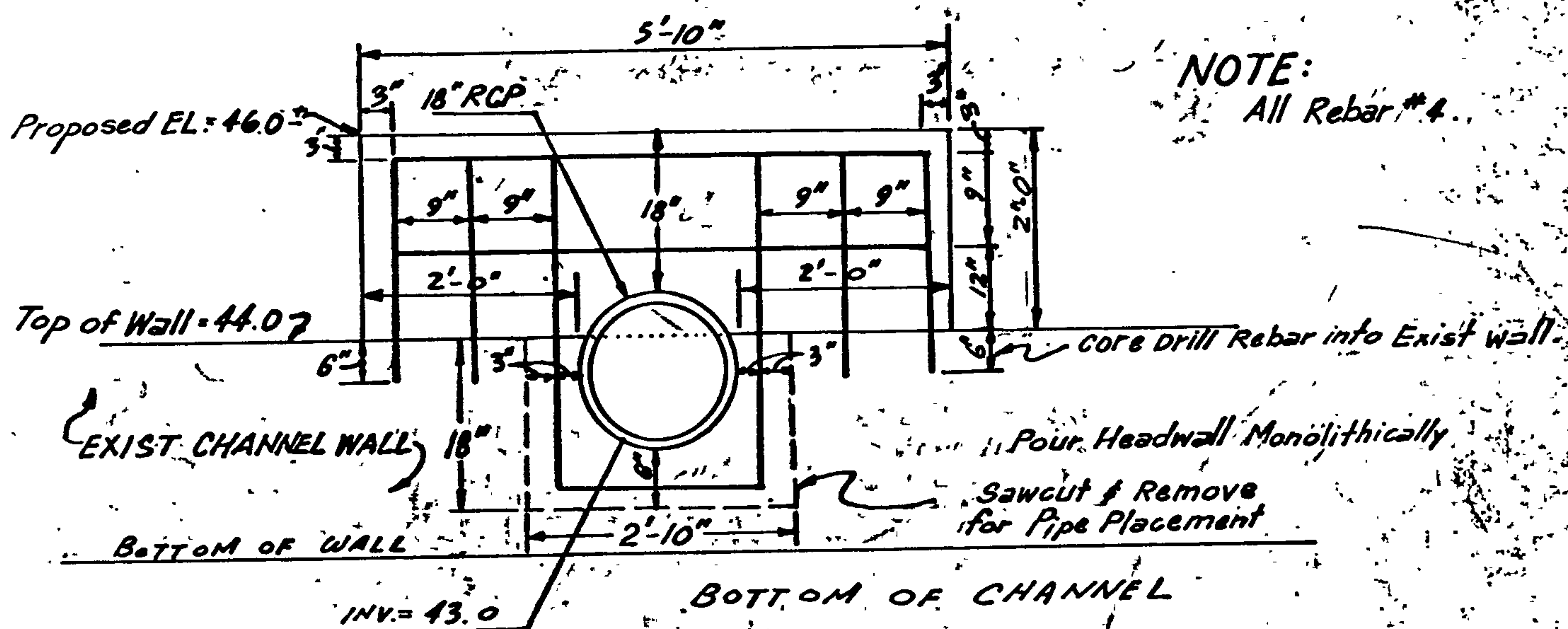
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



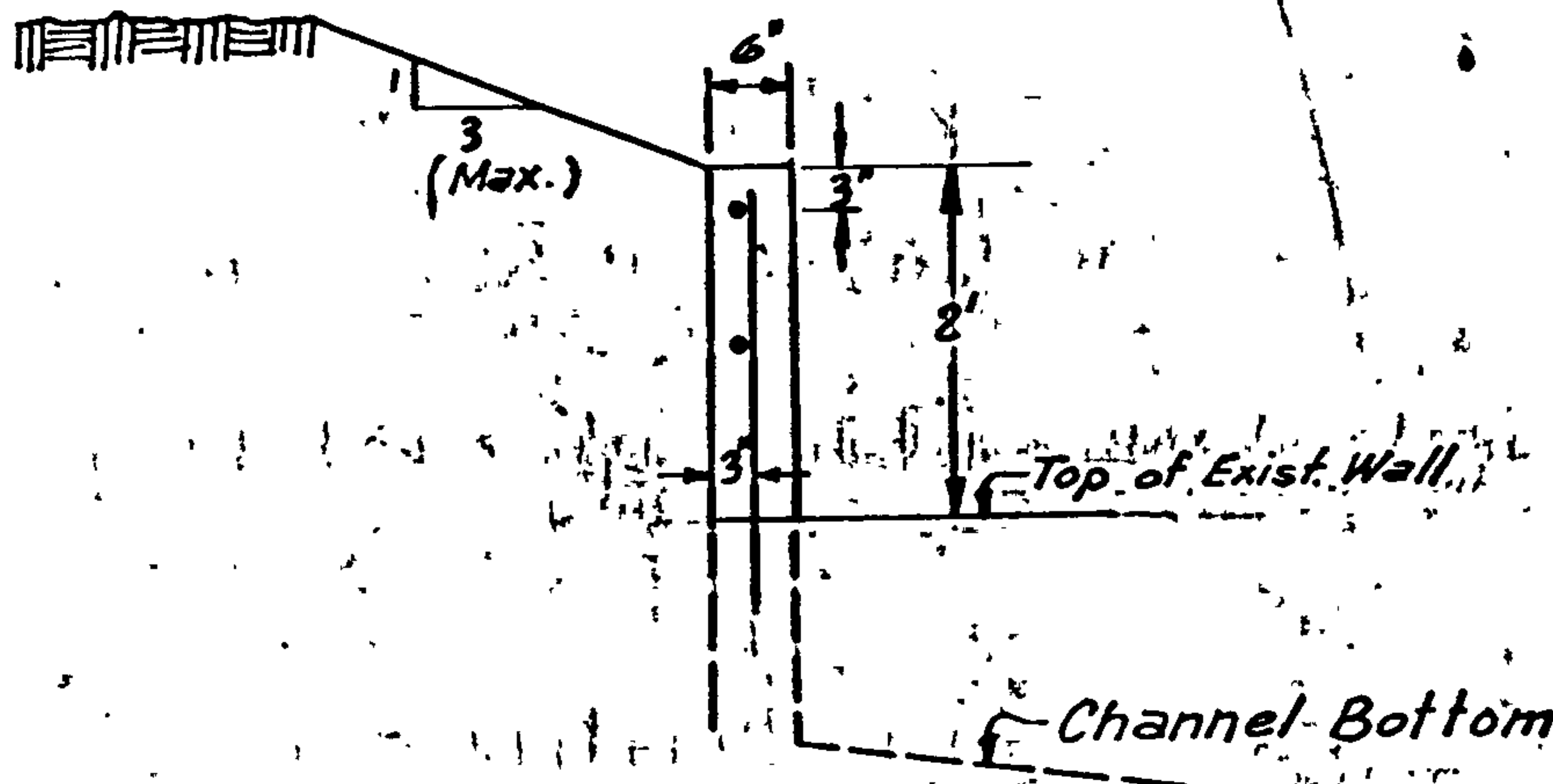
APPROVALS	NAME	DATE	TITLE: DRAINAGE IMPROVEMENTS
A.C.E. / DESIGN	Philip Firden	6/20/86	HIDDEN VALLEY IV-A
INSPECTOR			PERMIT NO.
A.C.E. / FIELD			SHEET 2 OF 3
			MAP NO. L-22

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



HEADWALL DETAIL AT OUTLET
1" = 2'



HEADWALL SECTION
1" = 2'



F-53

APPROVALS	NAME	DATE	TITLE:
A.C.E./DESIGN	Philip Fisher	6/20/86	DRAINAGE IMPROVEMENTS
INSPECTOR			HIDDEN VALLEY IV-A
A.C.E./FIELD			PERMIT NO.
			SHEET 3 OF 3
			MAP NO. L-22

DRAINAGE INFORMATION SHEET

P-13

PROJECT TITLE: HIDDEN VALLEY PHASE IV-A ZONE ATLAS/DRNG. FILE #: L-22

LEGAL DESCRIPTION: Hidden Valley South

CITY ADDRESS: _____

ENGINEERING FIRM: DENNEY-TIBLJAS-McLEAN & ASSOC, INC. CONTACT: Joe Jones

ADDRESS: 2400 Comanche NE, Albuquerque, NM 87107 PHONE: 884-0696

OWNER: Gerhard Muller CONTACT: Gerhard Muller

ADDRESS: 601 Hidden Valley SE, Albuq., NM 87123 PHONE: 292-5851

ARCHITECT: N/A CONTACT: N/A

ADDRESS: _____ PHONE: _____

SURVEYOR: DENNEY-TIBLJAS-McLEAN & ASSOC, INC. CONTACT: Steve Youtsey

ADDRESS: 2400 Comanche NE, Albuquerque, NM 87107 PHONE: 884-0696

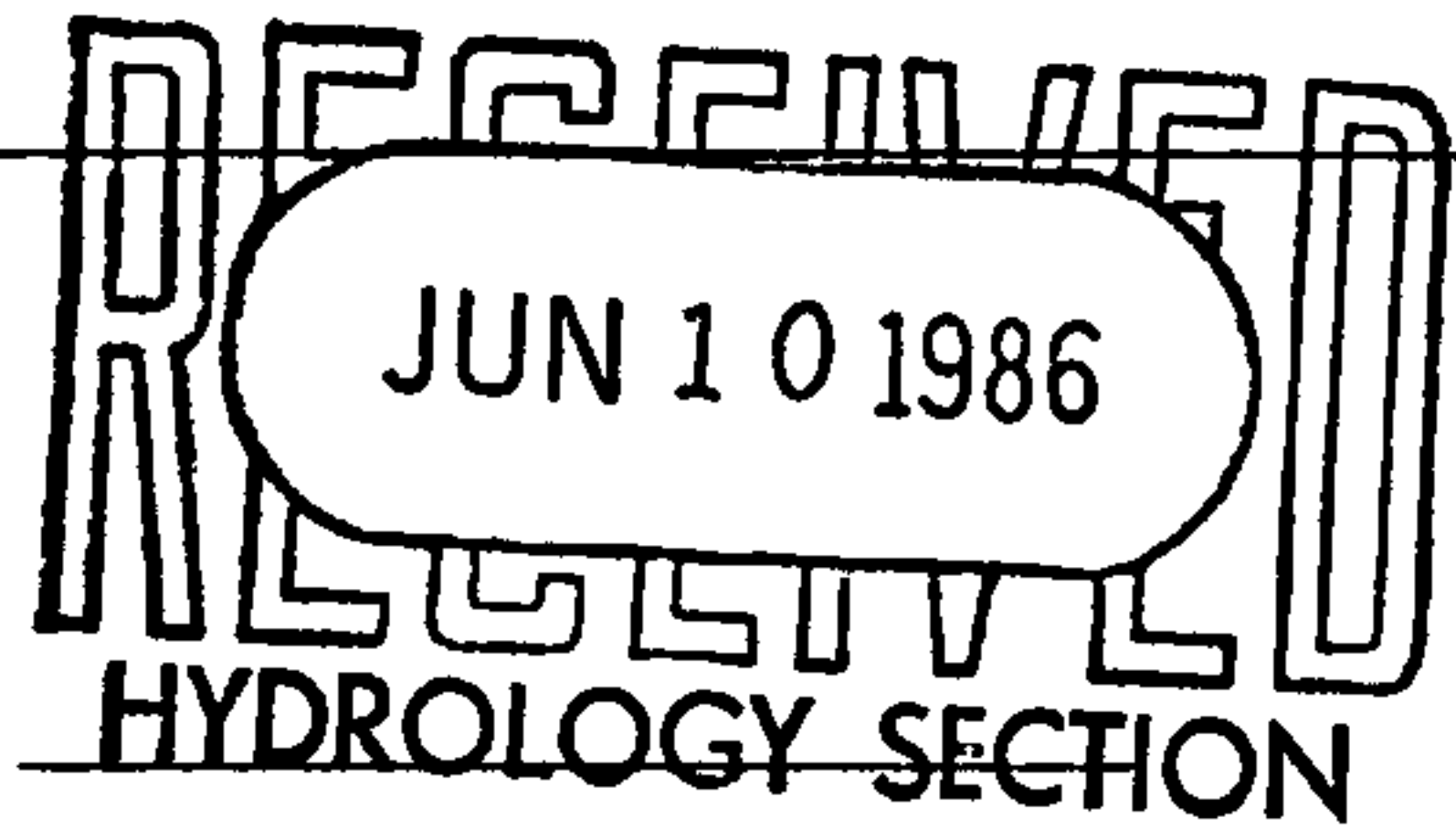
CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB No. _____
 EPC No. _____
 PROJ. No. _____



TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SECTOR PLAN APPROVAL
☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ SITE DEVELOPMENT PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☐ ROUGH GRADING PERMIT APPROVAL
☐ GRADING/PAVING PERMIT APPROVAL

DATE SUBMITTED: 6/10/86

BY: Joe Jones

JOE JONES
 REV. 10/85

☒ OTHER Drainage Improve- (SPECIFY) ments Approval

dtm & associates, inc

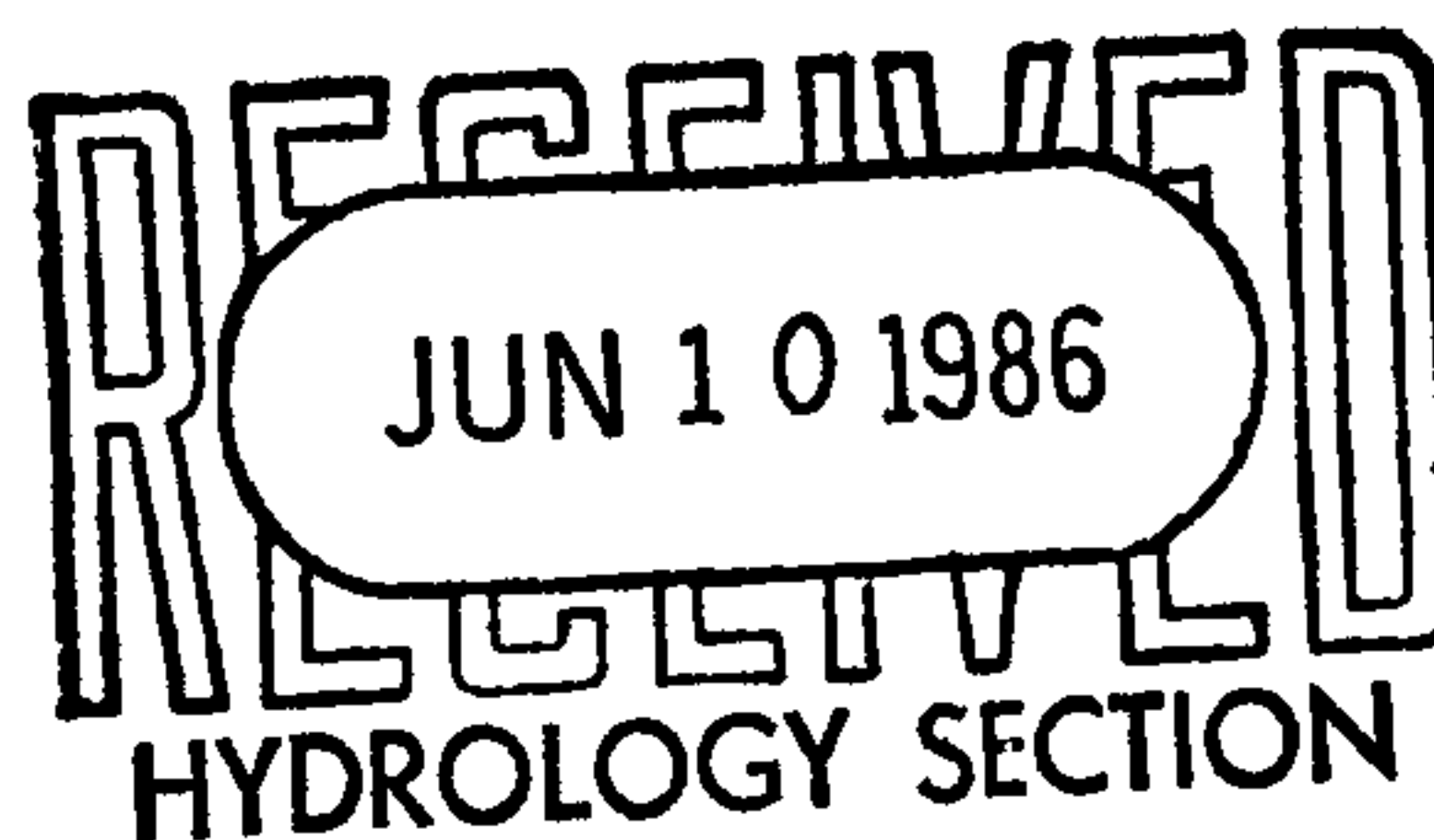
Denney-Tibljias-McLean & Associates, Inc.

Consulting Engineers ■ Planners ■ Surveyors

June 9, 1986

HAND DELIVERED

Mr. Carlos Montoya
City of Albuquerque
Hydrology Department
123 Central Avenue NW
Albuquerque, NM 87103



22-013

Re: Hidden Valley IV-A
DTM Job No. 815.11

Dear Carlos:

Enclosed for your approval is one copy of the proposed drainage improvements for subject project.

The purpose of the project is to correct existing drainage problems affecting Hidden Valley IV-A. Presently, approximately 10.4 acres of runoff sheet flow onto Hidden Valley IV-A. We are proposing to intercept this runoff via a grouted cobble swale. This swale will divert runoff into a catch basin which will then direct the runoff into a concrete lined drainage right-of-way via an 18" RCP.

A Special Order 19 has already been submitted for construction within public right-of-way.

Also, enclosed are copies of the Drainage Covenant and Easement. If you find these acceptable, I will have the originals signed, executed, and recorded. I will then submit the executed copies for your file.

If you have any questions, please feel free to call.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joe Jones".

Joe Jones

JJ/k1b
Enclosures
cc: Mr. Gerhard Muller

2400 COMANCHE ROAD, NE ■ ALBUQUERQUE, NM 87107
TELEPHONE (505) 884-0696



DENNEY - GROSS & ASSOCIATES, INC.
ENGINEERS SURVEYORS PLANNERS
2400 COMANCHE ROAD N.E.
ALBUQUERQUE, NEW MEXICO 87107
(505) 884-0695

LOCATION HIDDEN VALLEY IV - A

PROJ. NO. 815.11

DATE 3/9/86

DESIGNER J JONES

PAGE 1

DRAINAGE CALCULATIONS

OFFSITE AREA 10.4 AC

SOIL TYPE "A"

RAINFALL R = 2.5 INCHES

SCS METHOD

CN = 54

$T_c = 10 \text{ MIN}$

$Q_{PEAK} = 7.1 \text{ cfs}$ (SEE 22.2 F-1)

$$T_c = .0078 \frac{(1300)^{.77}}{(0.085)^{.385}} = 5 \text{ MINUTES}$$

USE 10 MIN.

NOTE: SOIL TYPE "A"
SERIES T₂ - TESAJD
FROM "SOIL SURVEY
OF BERNALILLO COUNTY..."

CHANNEL CAPACITY

MANNING'S

$$Q = \frac{1.486}{n} S^{1/2} A R^{2/3}$$

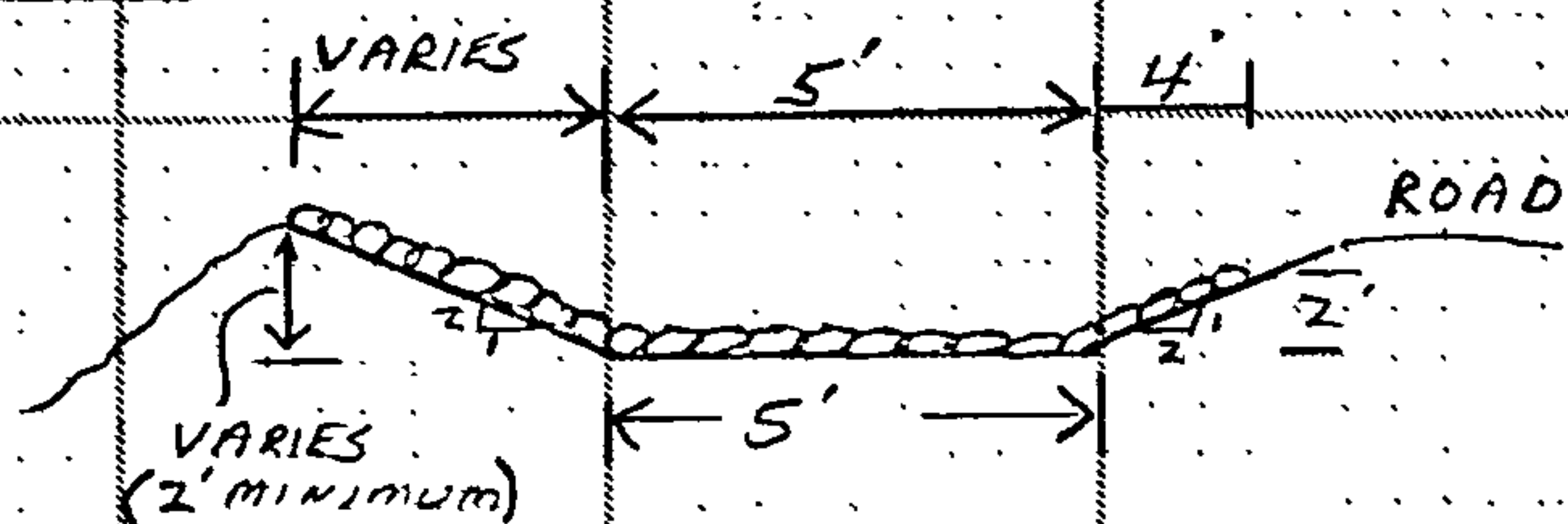
$S = 0.005$ (MINIMUM)

$$A = \frac{1}{2} (5 + 13) 2 = 18 \text{ (MINIMUM)}$$

$R = 1.4$

$n = 0.025$

$$Q = \frac{1.486}{0.025} (0.005)^{1/2} (18)^{2/3} = 24.7 \text{ cfs} > 7.1 \text{ cfs}$$



TYPICAL SECTION

GROUTED COBBLE CHANNEL

$$D \geq 1 \Rightarrow Q = 24 \text{ cfs}$$

CHANNEL HAS CAPACITY

PIPE CAPACITY (18" R.C.P.)

CHECK FOR OPEN FLOW

$$Q = \frac{1.486}{n} S^{1/2} A R^{2/3}$$

$S = 0.0101$ MINIMUM

$$A = \pi (0.75)^2 = 1.77 \text{ SF}$$

$R = 0.375$

$$Q = \frac{1.486}{0.03} (0.0101)^{1/2} (1.77) (0.375)^{2/3}$$

$$Q = 10.5 \text{ cfs} > 7.1 \text{ cfs}$$

PIPE DOES NOT FLOW FULL

Check Riser & Inlet Control :

$$\text{Riser } Q = 3.1 (L) h^{3/2} = (3.1)(8)(1)^{3/2} = 24.8 \text{ cfs} \therefore \text{OK}$$

$$\text{INLET } H_w/D = 3/1.5 = 2.0 \Rightarrow Q = 13 \text{ cfs}$$

HYDROGRAPH COMPUTATION WORKSHEET

DATE 3/9/86
 COMPUTED BY J Jones
 CHECK BY J Jones

PROJECT HIDDEN VALLEY IV ALOCATION HIDDEN VALLEYANALYSIS POINT # N/A(DR. AREA) A = 10.4 ACRES T_c 10 MINPOINT RAINFALL 2.5 IN. FROM PLATE 22.2 D-1CN = 54 FROM PLATES 22.2 C-2, 22.2 C-3RUNOFF VOLUME R = 0.15 IN. FROM PLATE 22.2 C-4COMPUTED T_p = 10 MIN. $T_p = T_c$
 (Rounded to even minute) $q_p = \frac{45.4A}{T_p} = \frac{472}{10}$ CFS./INCH OF RUNOFF $(R \times q_p) = Q_{peak} = \frac{7.1}{10}$ CFS $t(COLUMN) = (t/T_p) \quad t = T_p(t/T_p)$ $y = \frac{Q}{Q_{peak}} \quad Q = y(Q_{peak})$

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1		.03	
3	.2		.10	
4	.3		.190	
5	.4		.310	
6	.5		.470	
7	.6		.660	
8	.7		.820	
9	.8		.930	
10	.9		.990	
11	1.0		1.00	
12	1.1		.990	
13	1.2		.930	
14	1.3		.860	
15	1.4		.780	
16	1.5		.680	
17	1.6		.560	
18	1.7		.460	
19	1.8		.390	
20	1.9		.330	
21	2.0		.280	
22	2.2		.207	
23	2.4		.147	
24	2.6		.107	
25	2.8		.077	
26	3.0		.055	
27	3.2		.040	
28	3.4		.029	
29	3.6		.021	
30	3.8		.015	
31	4.0		.011	
32	4.5		.005	
33	5.0		.000	



RICHARD E. LEONARD
EXECUTIVE ENGINEER

**Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority**

2600 PROSPECT AVE. N.E.
P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125
TELEPHONE 344-3516

B. H. SWINBURNE, CHAIRMAN
WILLIAM V. HEREFORD, VICE-CHAIRMAN
FRANCES MCCOY, SECRETARY-TREASURER
VERNON DOAK, DIRECTOR
KLESTON LAWS, DIRECTOR



April 18, 1980

Mr. Stephen W. Hacker
Executive Vice President
Western Holding Co.
1224 Pennsylvania, NE
Albuquerque, NM 87110

Dear Mr. Hacker:

Today I conferred with Mr. Squires of your organization about the flood hazard at Hidden Valley. After reviewing the project's history and current situation, we agreed to the following: Western Development will survey the dike and arroyo after which you will propose improvements. Protection against at least the 100-year flood will be in place by early June, 1980.

My office will make available to you and your engineers all material provided by the Corps of Engineers and others.

I genuinely appreciate the positive attitude of Mr. Squires and your firm. We look forward to working with you to correct the bad situation at Hidden Valley.

Sincerely,

Richard E. Leonard

Richard E. Leonard
Executive Engineer

lc

cc: R. Heller ✓
B. Conegliano
Rick Squires

RECEIVED

APR 21 1980

CITY ENGINEER

RSH <i>ESA</i>	ADM _____
HRO <i>2/80</i>	SUR _____
CDS <i>all</i>	COUN _____
DES _____	SEC _____
INSP _____	FILE _____
HYDRO _____	RETURN _____



WESTERN DEVELOPMENT COMPANY

Letter Received
File

RECEIVED
JAN 04 1979
CITY ENGINEERS

January 2, 1979

Bruno Conegliano
City Hydrology Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque NM 87103

RE: Hidden Valley Phase 4A

Dear Mr. Conegliano:

Sheet 5 of 6, Hidden Valley 4A plans, indicate wire enclosed riprap for the protection of the berm, where Hidden Valley Arroyo meets the Tijeras Arroyo.

Western Development requests your approval to revise this protection to 4" thick concrete with 6" X 6"/10 gauge welded wire mesh with 12" embedment below the arroyo bottom.

If this is an acceptable alternative, please sign and return a copy to our office.

Very truly yours,

Andre Houle

Andre Houle
Engineering Manager

cf

Bruno Conegliano
City Engineer - Hydrology

Date

HIDDEN VALLEY REVISED CHANNEL DESIGN

11/23/78
A. CHANNEL SLOPE DESIGN

DESIGN $Q = 50$

100

150

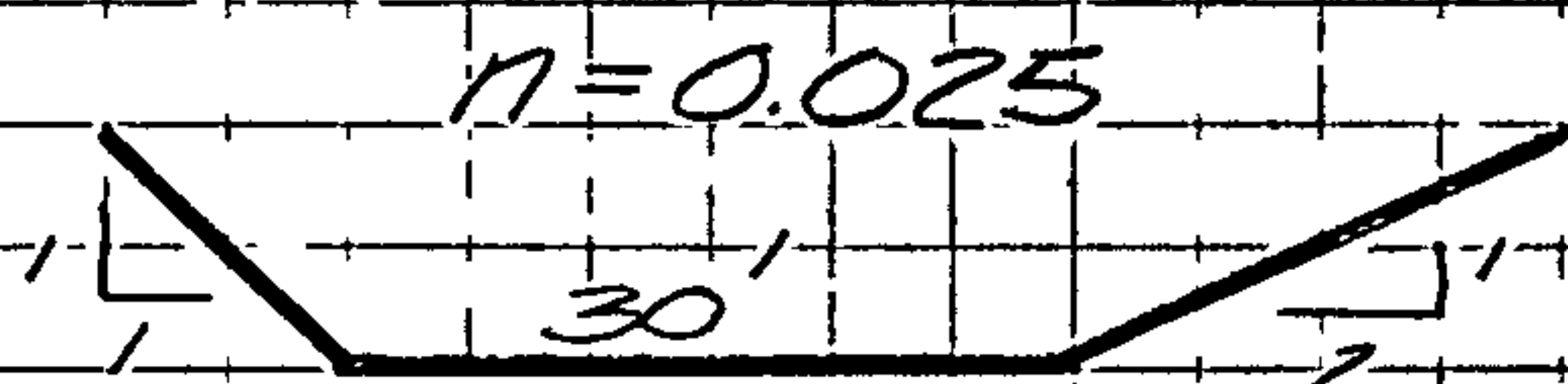
200

250

300

374 (100 YEAR STORM Q)

TYPICAL CHANNEL X-SECTION



$$A = 30d + 1.5d^2$$

$$WP = 30 + 3.65d$$

$$R_h = \frac{A}{WP}$$

$$Q = \frac{1.49}{n} A R_h^{2/3} S^{1/2}$$

SELECT S w/ $4.1 > \text{Velocity} > 2.5$ (fps)

IN UNLINED SECTION
FOR NO EROSION OR
SEDIMENT PROBLEMS

Q S d V_{fps}

TRY $S = 0.002$

50	"	0.75	2.13
100	"	1.14	2.77
150	"	1.45	3.21
200	"	1.73	3.57
250	"	1.97	3.86
300	"	2.19	4.12
374	"	2.50	4.45

$S = 0.002$ IS AN ACCEPTABLE SLOPE FOR CHANNEL

B) CONCRETE (GUNITE) RUNDOWN DESIGN

1. SELECT SLOPE @ 1:1 @ FACE
2. USE TYPE III STILLING BASIN (BUREAU OF RECLAMATION)
3. DETERMINE JUMP LENGTHS & HEIGHT USING
 - a) OPEN CHANNEL HYDRAULICS BY CHOW
 - b) HYDRAULIC DESIGN OF STILLING BASINS AND ENERGY DISSIPATOR - U.S. DEPT. INTERIOR BUREAU OF RECLAMATION

$$Q = 374 \text{ c.f.s.}; S = 0.002$$

$$d_1 = 2.50 \text{ FT.}$$

$$A_1 = 84.38 \text{ FT.}^2$$

$$T = 30 + 3(2.50) = 37.5$$

$$D = \frac{A}{T} = 2.25$$

$$\text{FROUDE No} = \frac{V}{\sqrt{gD}} = \frac{4.45}{\sqrt{(32.2)(2.25)}} = 0.526$$

$$\frac{d_2}{d_1} = \frac{1}{2}(\sqrt{1 + 8F_r^2} - 1) \Rightarrow \underline{\underline{d_2 = 0.209}}$$

$$Q = 374 \text{ c.f.s.}; S = 1.000$$

$$d_1 = 0.39 \text{ FT.}$$

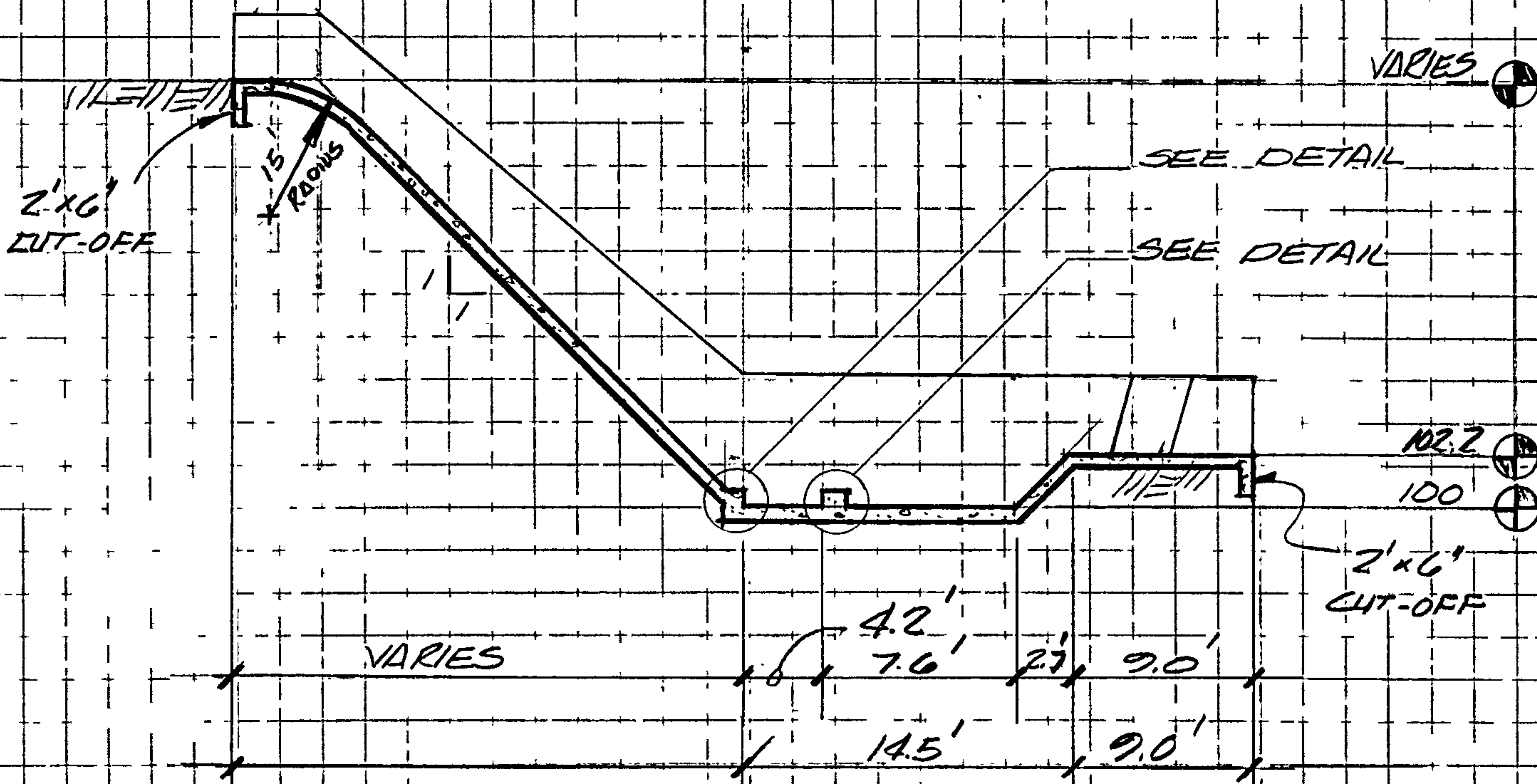
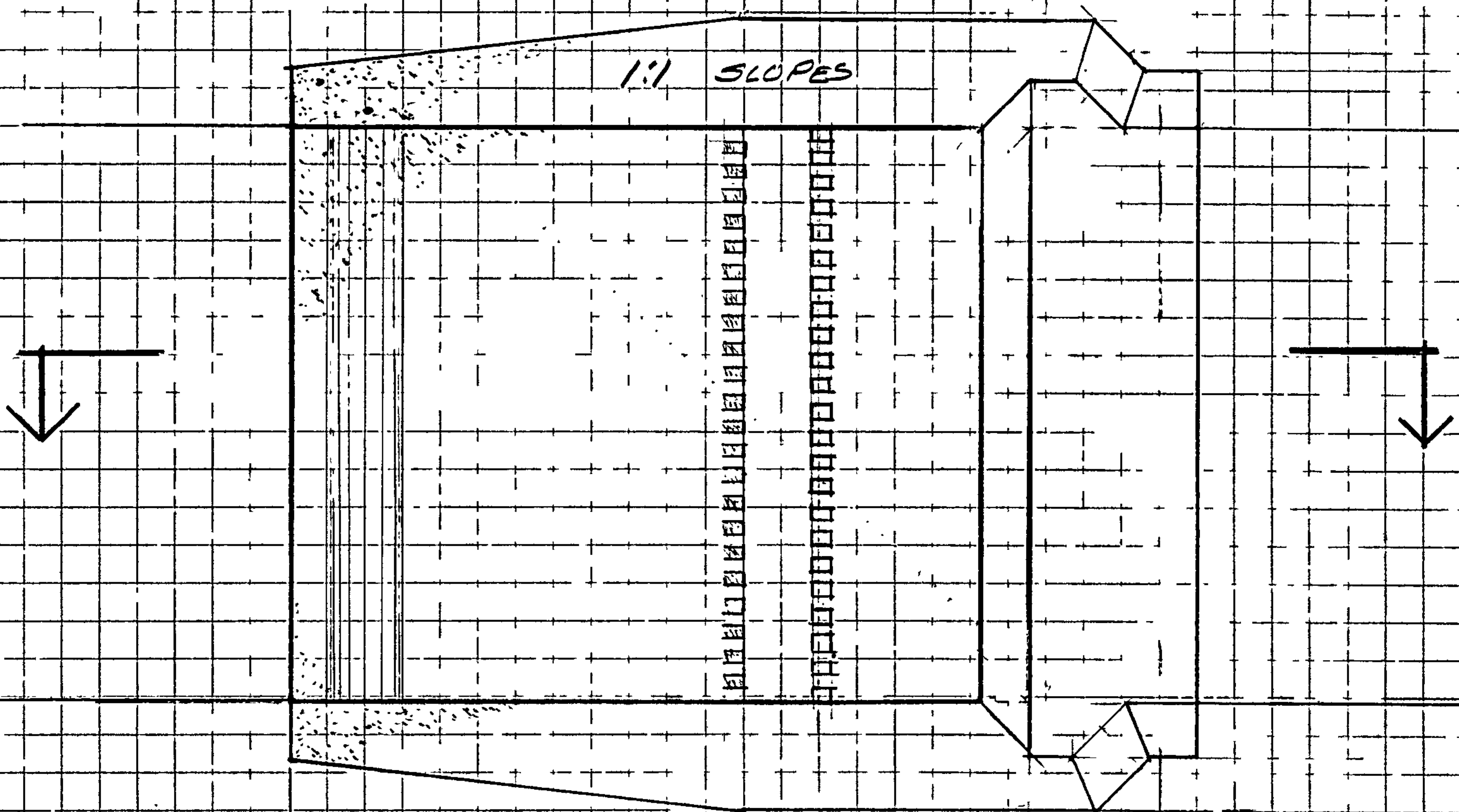
$$A = 11.93 \text{ FT.}^2$$

$$T = 31.17; V = 31.25$$

$$D = 0.38 \therefore F_r = \frac{31.25}{\sqrt{(32.2)(.38)}} = 8.93$$

$$\frac{d_2}{d_1} = \frac{1}{2}[\sqrt{1 + 8(8.93^2)} - 1] \Rightarrow \underline{\underline{d_2 = 12.14(.39) = 4.73 \text{ FT.}}}$$

PLAN OF RUNDOWN



DIMENSIONS OF RUNDOWN:

$$Q = \frac{1.49}{n} A R_h^{2/3} S^{1/2}$$

$n = 0.019$ FROM "OPEN CHANNEL HYDRAULICS" - CHOW

$$Q = 374$$

$$d_1 = 0.33; A = 10.13; V = 37.02; T = 30.99$$

$$D = 0.33$$

$$\text{Froude No} = \frac{V}{\sqrt{gD}} = \frac{37.02}{\sqrt{(32.2)(0.33)}} = 11.41$$

$$d_2 = d_1 \left[\frac{1}{2} (\sqrt{1 + 8F_1^2} - 1) \right] = 5.2'$$

FROM "HYDRAULIC DESIGN OF STILLING BASINS AND ENERGY DISSIPATORS"
— BUREAU OF RECLAMATION

FIG. 12

$$\frac{L_3}{D_2} = 2.75 \therefore L_3 \text{ MIN} = 2.75(5.2) = 14.3 \approx 14.5'$$

FIG. 18

$$\frac{h_3}{D_1} = 2.5 \therefore h_3 = 2.5(0.33) = 0.83' = 10''$$

$$\frac{h_4}{D_1} = 1.7 \therefore h_4 = 1.7(0.33) = 0.56' = 7'' \text{ BUT } 5.2 - 2.5 = 2.7' \therefore \text{SILL @ } 2.7'$$

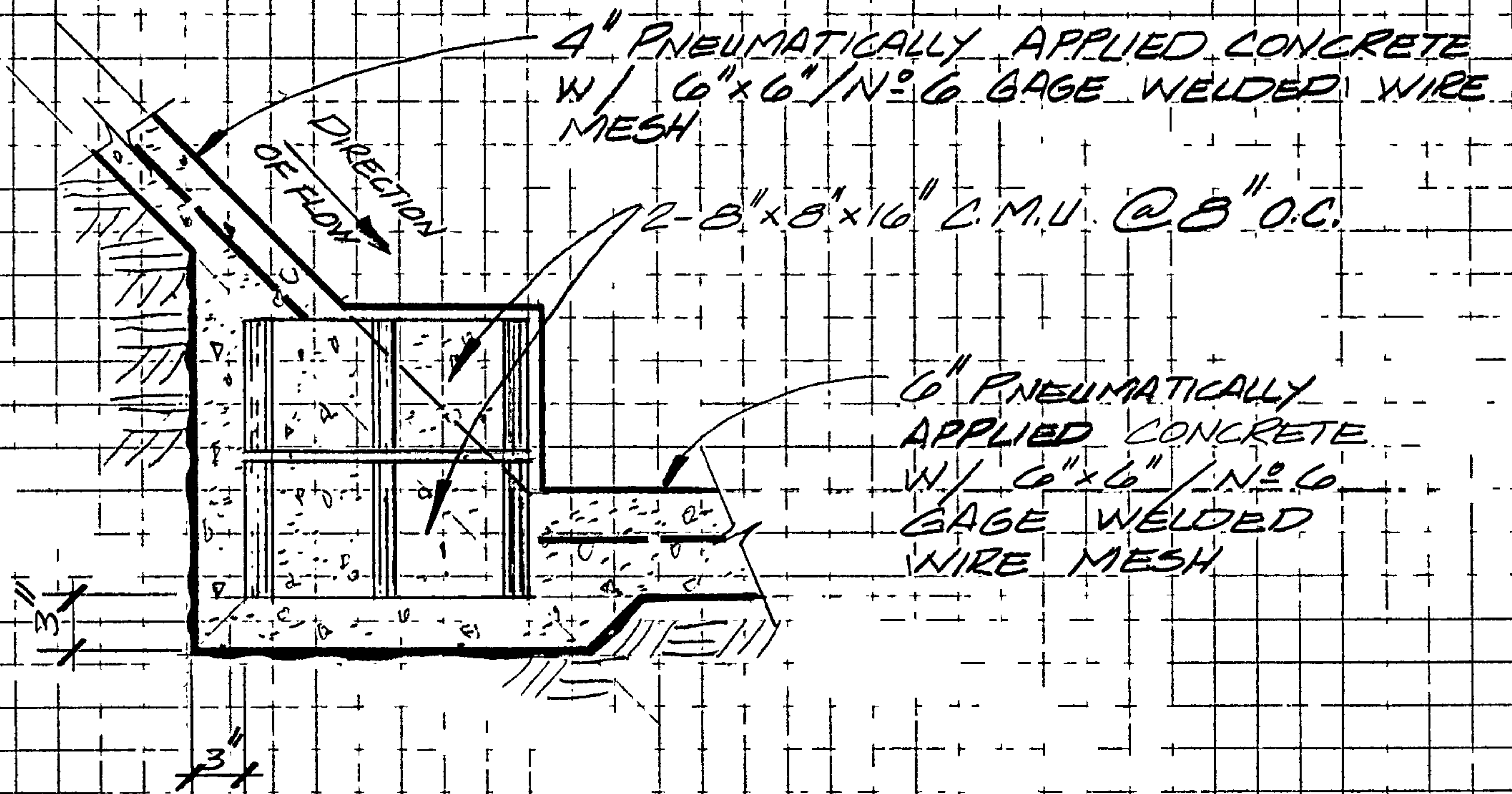
FIG. 17

MAKE CHUTE BLOCKS MIN. OF 8" AS PER BUREAU OF RECLAMATION

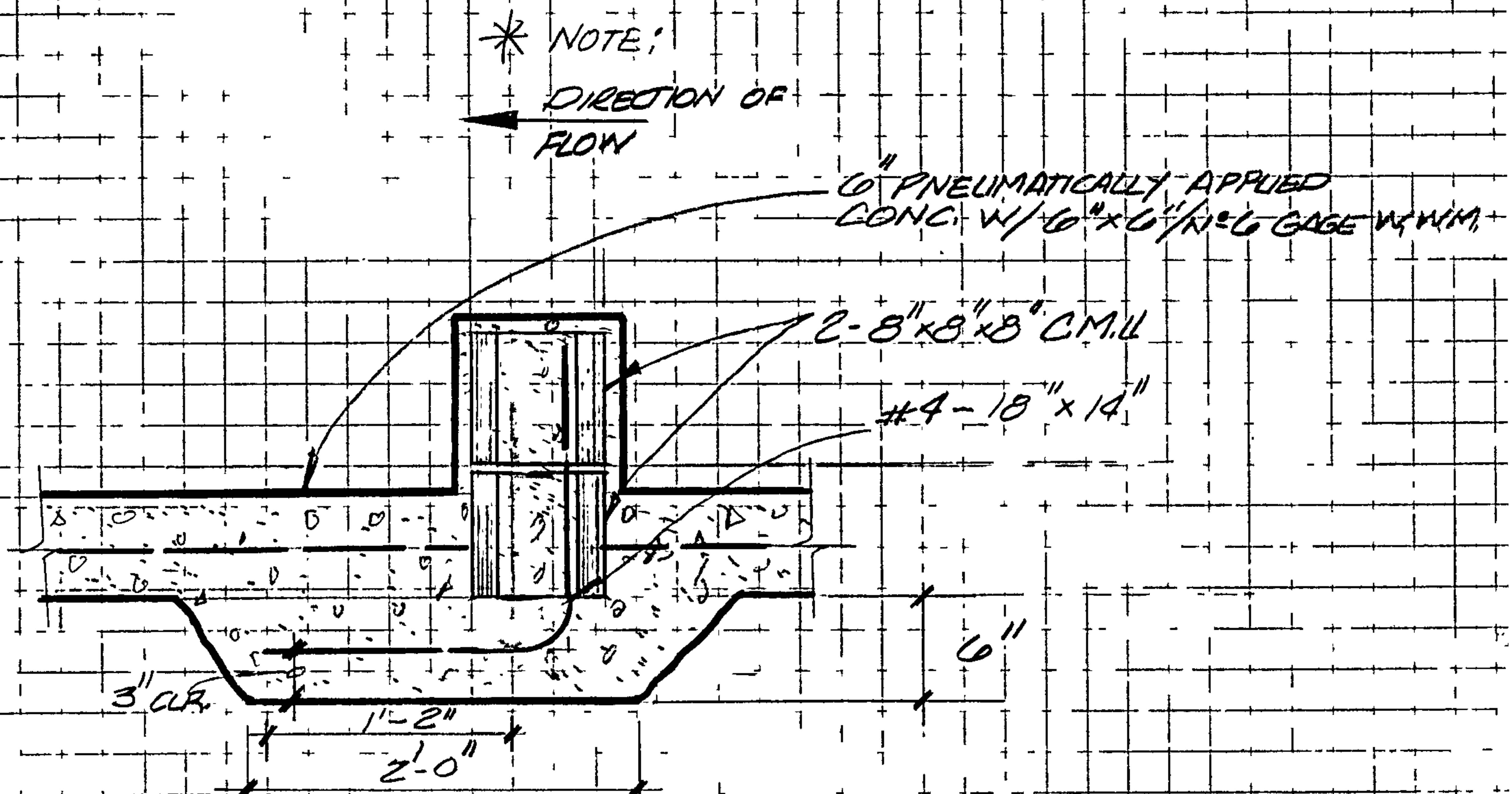
$$\text{BAFFLE PIERS} = h_3 = 10''$$

$$0.8D_2 = \text{DISTANCE BETWEEN BLOCKS \& PIERS} = 4.16'$$

CHUTE BLOCKS DETAIL



BAFFLE PIER DETAIL





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 22, 1978

Mr. Andre Houle
Western Development Co.
619 Truman N.E.
Albuquerque, N.M. 87110

Re: Hidden Valley IV Channel

Dear Mr. Houle:

The design of the proposed drop structures does not appear to be adequate on several counts:

1. There is an abrupt discontinuity in the flowline at the entrance of the chutes. Negative pressure and cavitation of the concrete will result with the proposed configuration.

2. The proposed stilling basin is a hybrid not corresponding to acceptable configurations such as "Type II" or "Type III" U. S. Bureau of Reclamation stilling basins. A Type II basin which seems closest to the design submitted requires a stilling basin length of 20.0 ft. vs. the 9.5 ft. shown. As shown in the enclosed computations a Type III stilling basin (which in my opinion is the option of choice in this case) requires a minimum length of 12.6 ft.

3. The minimum tail water elevation required for Type III stilling basin is computed in 4.0 ft. while a Type II stilling basin requires a tail water depth of 4.6 ft. The proposed depth of flow in the downstream channel is given in 2.5 ft. This depth of flow is insufficient to confine the hydraulic jump within the stilling basin.

4. The flow down the chute needs to be laterally confined to insure the effectiveness of the baffle blocks. The cinder blocks embedded in the floor of the stilling basin would be receiving the impact of the flow travelling down the chute at 31.25 ft/sec. As such they receive the momentum of the water which must be transmitted to the reinforcing in the floor of the basin. The proposed solution is not acceptable.

Mr. Houle

-2-

November 22, 1978

5. A plannimetric representation of the stilling basin must be furnished to show that the chute blocks and the baffle blocks are offset as required in the design standards.

6. The drawing must show clearly that dissipation devices will be constructed at each drop structure.

If you have further questions, please do not hesitate to contact me.

Very truly yours,



Bruno Conegliano
Assistant City Engineer - Hydrology

BC/fs

cc - Dwayne Sheppard
✓ Drainage File

Enclosure

Analysis of drop structures proposed by Western Development
for the Hidden Valley Channel

$$Q = 374 \text{ cfs}$$

$$S = 1:1$$

$$D = 0.39 \text{ ft}$$

$$V = 31.25$$

Referenced figures & pages are from: "Hydraulic design of
stilling Basins & Energy dissipators" U.S.B.R.
Engr. Mon. g. #25 - Jan 1978

$$F_1 = \frac{31.25}{3.54} = 8.82$$

Conjugate depth

$$D_2/D_1 = -1/2 + \sqrt{1/4 + 2F_1^2} = 11.96 \text{ (formula 3 p 7)}$$

$$D_2 = 0.39 \cdot 11.96 = 4.67 \text{ ft}$$

W.S. downstream required for effective dissipation of
velocity head within stilling basin

Recommended depth of flow in channel d.s. from
structure = 2.5 ft not adequate

Normal depth of jump (from Graph - Fig 6 @ P. 13)

$$L/D_1 = 75 \quad (w/F_1 = 8.82)$$

$$L = 0.39 \cdot 75 = 29.25$$

Recommended length of Dam (Fig 7 p. 13)

$$L/D_2 = 6.15 \quad (w/F_1 = 8.82)$$

$$L = 6.15 \times 4.67 = 28.72 \quad (\text{above } L = 29.25)$$

Recommended for canal structures and small spillways Run of TYPE III stilling basin

Minimum Tailwater depth

$$\text{Graph of } P. 25 \quad f.g. 11 \quad w/F_1 = 8.82$$

Basin Type III

$$TW/D_1 = 10.1$$

$$TW = .39 \times 10.1 = 4.0 \text{ ft}$$

Basin Type II

$$TW/D_1 = 11.75$$

$$TW = .39 \times 11.75 = 4.58 \text{ ft}$$

Minimum Basin length

$$L/D_2 = 2.7$$

Recommended

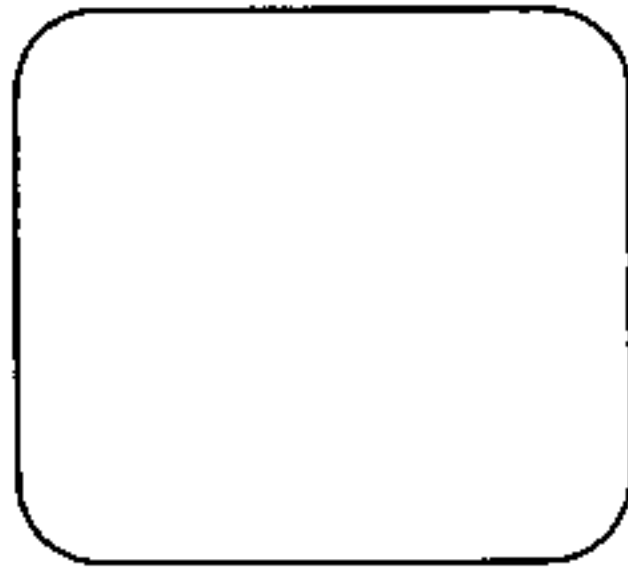
$$L = 2.7 \times 4.67 = 12.61 \text{ ft}$$

Type II

$$L/D_2 = 4.3$$

$$L = 4.3 \times 4.67 = 20.08 \text{ ft}$$

vs 9.5 used


MEURER, SERAFINI AND MEURER, INC.

CONSULTING ENGINEERS • SURVEYORS • PLANNERS

2601 WYOMING BLVD., N.E., SUITE F • ALBUQUERQUE, NEW MEXICO 87110 • (505) 292-1936

September 1, 1978

City Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico
87103

Attention: Mr. Bruno Conegliano

Dear sir:

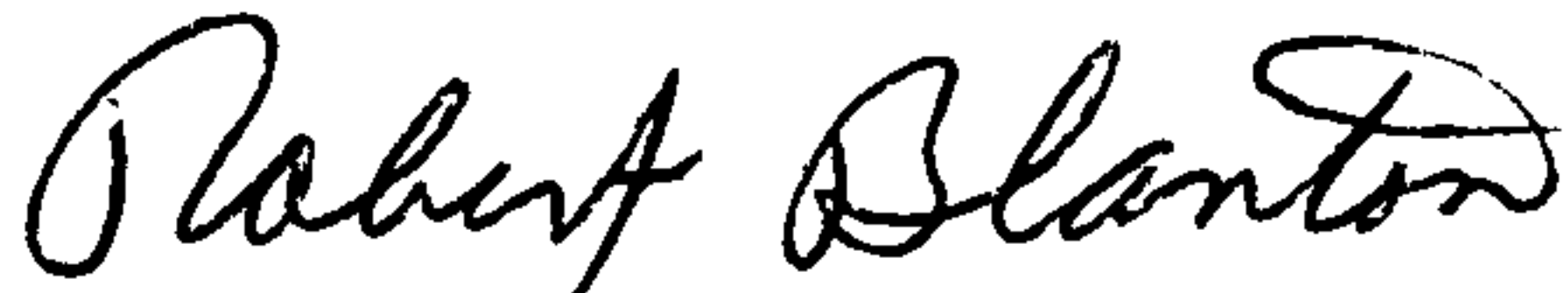
The problems with the improvement plans for Hidden Valley Phase IV-A which were discussed at the meeting on August 30, 1978 have all been addressed except for the water profile on the channel between Hidden Valley Drive and the Tijeras Arroyo. As of this date the channel has been surveyed and the calculations for the water profile will be forthcoming.

In order to expedite the construction of the subdivision we respectfully request approval of the plans subject to our providing the water profile.

Thank you.

Sincerely yours,

Meurer, Serafini and Meurer
by:



Robert Blanton, P. E.

RB:mcv

DEPARTMENT OF FIRE & ICE & MANAGEMENT
PROPERTY MANAGEMENT DIVISION
CITY OF ALBUQUERQUE
NEW MEXICO

Date: August 23, 1978

To: bruno Conegliano, City Hydrology Engineer

From: O. Val Valdez, City Real Estate Officer O.V.V.

Subject: Hidden Valley, Phase II

☐ Review and Comment

☐ For Your Information

☐ Note and See Me

☐ Necessary Action

☐ Note and Return

☐ Per Conversation

☐ As Requested

☐ Read and File

Attached herewith is a recorded copy
of Drainage Easement pertaining to
above captioned addition for your
records.

OVV/lc

RECEIVED
AUG 25 1978
CITY ENGINEERS

78 62134

GRANT OF EASEMENT
FOR DRAINAGE

810

THIS INDENTURE made and executed this 16th day of August 1978, by and between WESTERN DEVELOPMENT COMPANY, Albuquerque, New Mexico, hereinafter called the Grantor and THE CITY OF ALBUQUERQUE, NEW MEXICO, a municipal corporation, hereinafter called Grantee.

WITNESSETH, that for good and valuable consideration the receipt of which is hereby acknowledged the Grantors have this day bargained and sold by these presents do sell, convey and deliver unto the City of Albuquerque a temporary drainage easement including the right to enter upon the real estate hereinafter described at any time that it may see fit and construct, maintain and repair, a drainage facility, across, through, and under the lands hereinafter described and the further right to remove trees, bushes, undergrowth and obstructions interfering with the location, construction and maintenance of said drainage facility until such time alternate methods of drainage are adopted in this area.

A tract of land situate in Section 27, T. 10 N, R. 4 E., N.M.P.M., City of Albuquerque, Bernalillo County, New Mexico, and being more particularly described as follows:

Beginning at the southwest corner of the tract herein set forth said point being the northwest corner of HIDDEN VALLEY, PHASE II, an Addition to the City of Albuquerque, New Mexico, as the same is shown and designated on said Addition, filed in the office of the County Clerk of Bernalillo County, New Mexico, on the 10th day of August 1976 (D7-54); thence leaving the north right-of-way of Hidden Valley Drive, N 02°34'45" W, 322.35 feet; thence N 35°48'59" W, 70.12 feet; thence N 01°32'07" W, 196.60 feet; thence N 51°58'02" W, 144.82 feet; thence N 77°56'27" E, 109.55 feet; thence S 35°27'50" E, 60.42 feet; S 12°03'33" E, 550.00 feet; thence S 30°46'07" E, 95.00 feet to a point on the north right-of-way of Hidden Valley Drive, said point being a point on curve; thence along said right-of-way 26.89 feet along the arc of a curve to the left having a radius of 175.00 feet whose chord bears S 85°19'21" W, 26.86 feet; through a central angle of 08°48'12" to a point of tangency; thence along said right-of-way S 80°55'15" W, 105.37 feet to the southwest and beginning corner of the tract herein set forth and containing 1.141 acres, more or less. (See attached Exhibit "A")

TO HAVE AND TO HOLD the said easement for the uses and purposes aforesaid, unto Grantee its successors and assigns for so long as said easement shall not be abandoned for use as a right-of-way for aforesaid drainage facility.

AUG 22 2 30 PM 1978
New 632 810-812
EMMA J. FILES
CO. CLERK & REORDER
Dunick DEPUTY

DRAINAGE EASEMENT

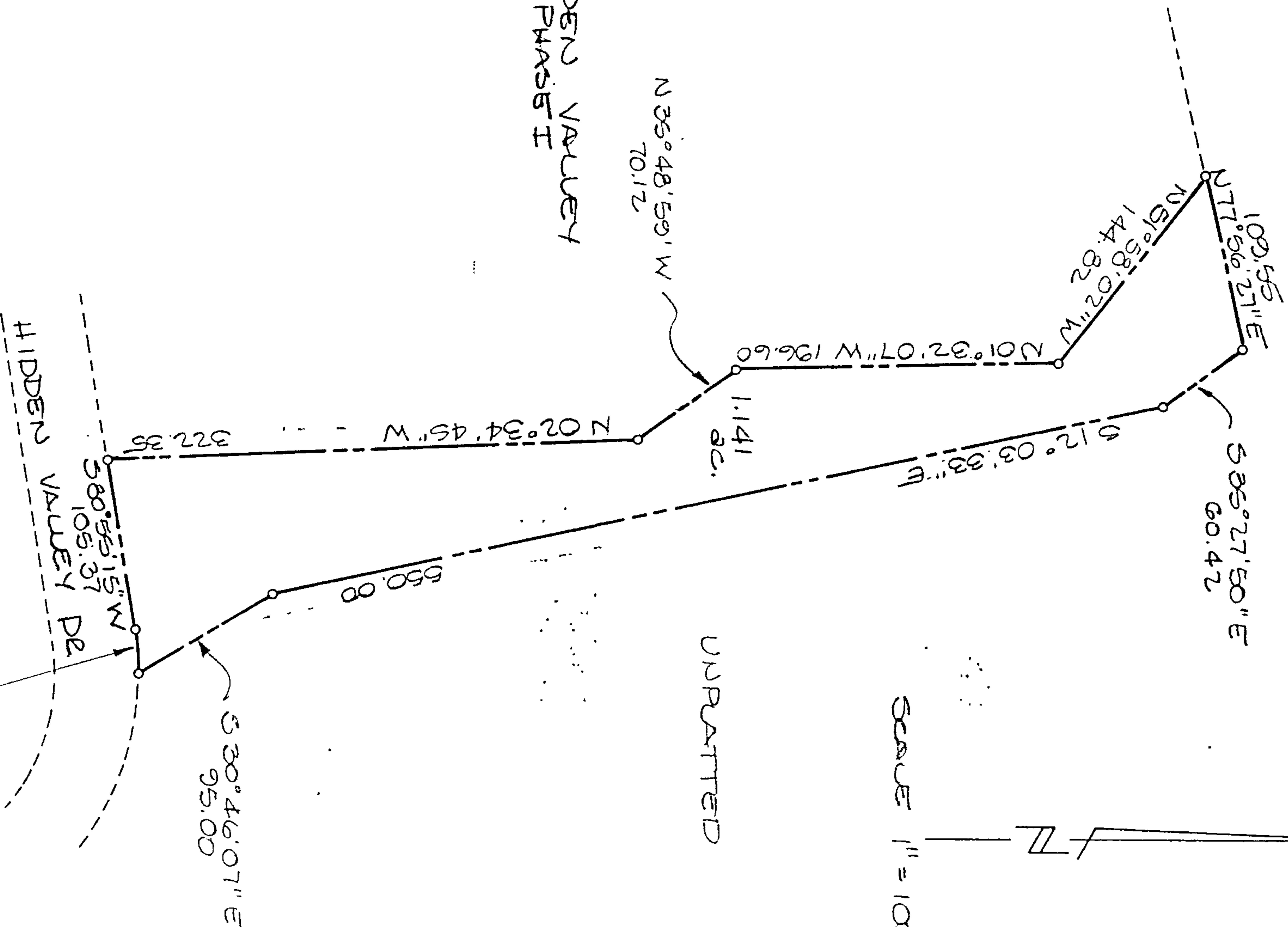
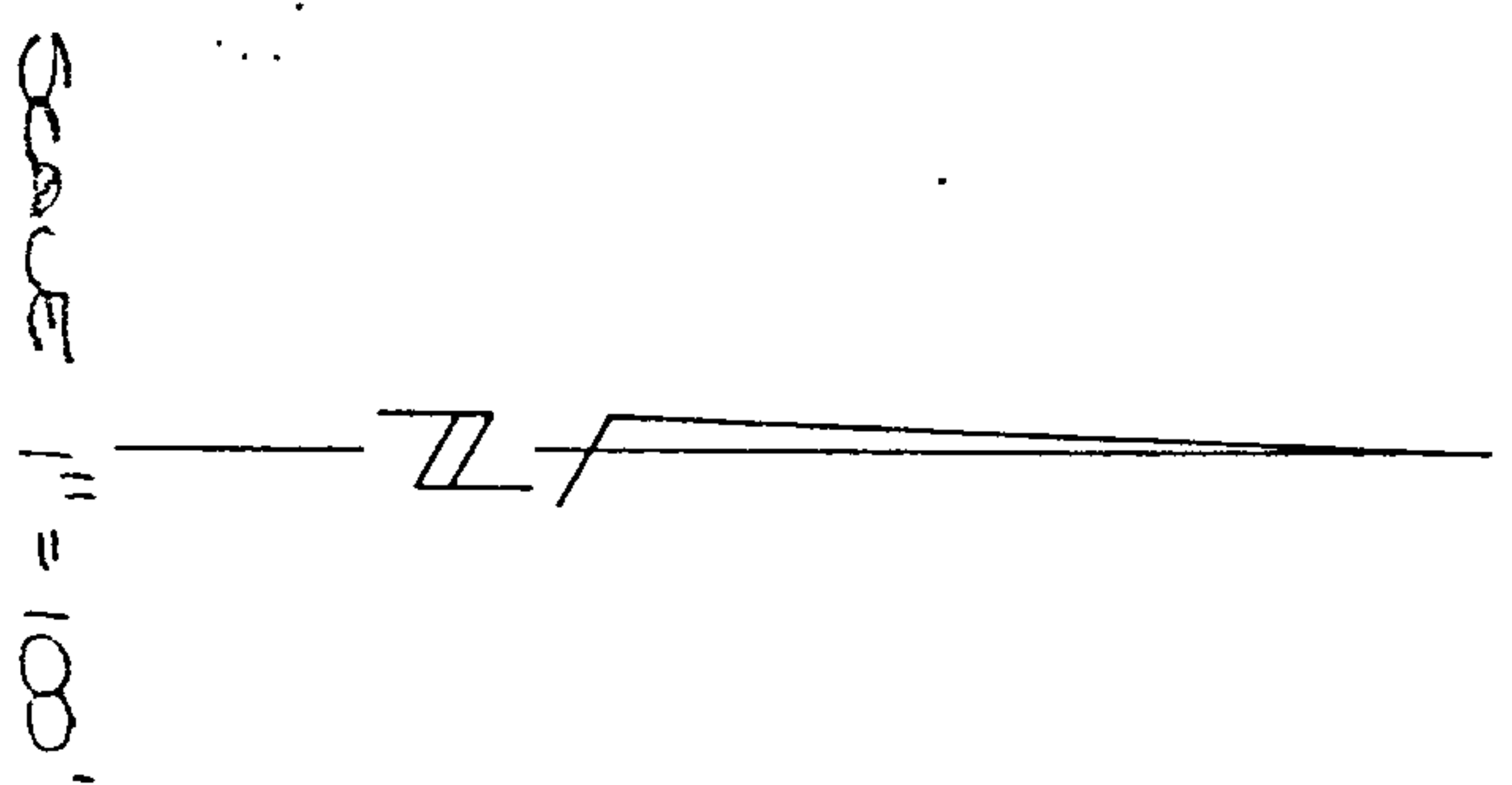


EXHIBIT "A"

LEGAL DESCRIPTION

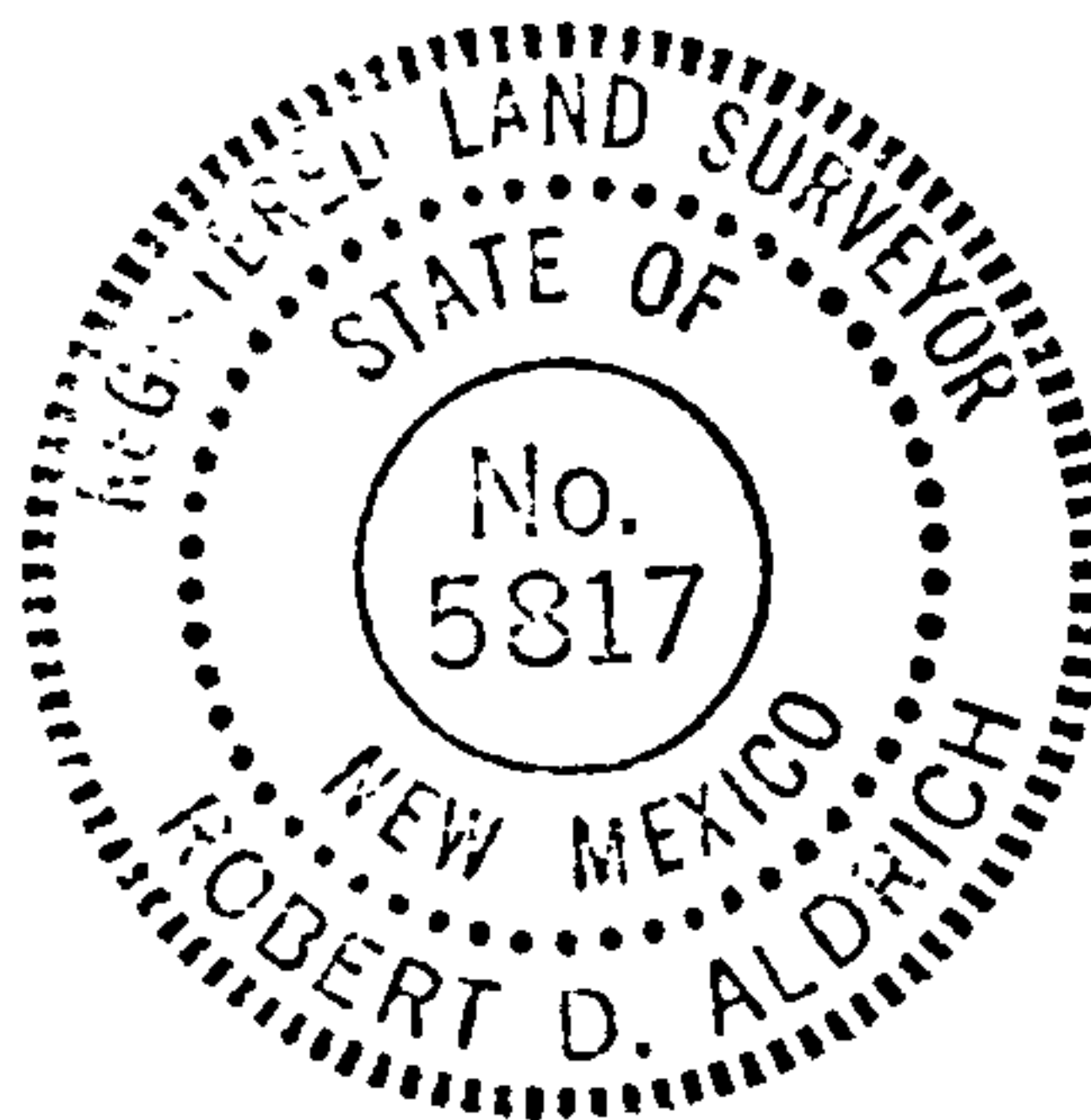
FOR TEMPORARY 5' WIDE DRAINAGE EASEMENT
HIDDEN VALLEY
PHASE IV-A

A parcel of land situate within the City of Albuquerque, Bernalillo County, New Mexico, being a portion of HIDDEN VALLEY, an Addition to the City of Albuquerque, as the same is shown and designated on said plat filed in the office of the County Clerk of Bernalillo County on September 15, 1974, and being more particularly described as follows:

Beginning at a point on the south right-of-way of Hidden Valley Drive, said point being on the centerline of a 5' wide drainage easement, said easement being 2.50 feet either side of the described centerline from whence the S.E. corner of Section 27, T 10 N, R 4 E, N.M.P.M., bears S 61°00'02" E, 1031.46 feet; thence S 14°00'00" E, 450.30 feet; thence N 76°35'50" E, 380.00 feet to a point 2.5 feet south of the S.E. corner of Lot 5 of Phase IV-A Hidden Valley and containing 0.0953 acres, more or less.

MEURER, SERAFINI, AND MEURER, INC.


Robert D. Aldrich
N.M.L.S. No. 5817
July 28, 1978



JAMES D. SMITH
EXECUTIVE ENGINEER

U. H. SWINBURNE, CHAIRMAN
WILLIAM V. KIMMICK, VICE-CHAIRMAN
FRANK J. MULLIGAN, SECRETARY/TREASURER
VERNON DEAR, DIRECTOR
RICHARD E. LEONARD, DIRECTOR



Albuquerque
**Metropolitan
Arroyo
Flood
Control
Authority**

2600 PROSPECT AVE. N.E.
P. O. BOX 25851 • ALBUQUERQUE, N. M. 87125
TELEPHONE 344-3516

7-20-78

*Bruno -
Please furnish
copy of answer also to
Nip.*
L.

RECEIVED
JUL 20 1978
CITY ENGINEERS

July 18, 1978

Mr. Bruno Conegliano
Assistant City Engineer
City Hall, 4th Floor
City of Albuquerque

Dear Bruno:

I believe you are aware that a "Task Force" is examining '72-2 for possible revision.

One concern expressed by members of the Task Force is delay in processing drainage reports. So that I might advise them on the nature of the problem, will you please provide me approximate answers to the following questions:

- a. How long does it typically take you to process drainage reports?
- b. About how many reports do you process during an average month?
- c. What percent of reports are you able to approve without additional information?
- d. What kind(s) of reports cause you the most trouble?
- e. How can the task force and AMAFCA help you?

The Task Force would welcome any other comments you care to offer.

Be assured that members of the Task Force and I appreciate the difficult nature of your job. We genuinely want to help.

Sincerely,

Richard E. Leonard

Richard E. Leonard
Associate Executive Engineer

cc: Mr. B. H. Swinburne, Task Force Chairman
✓ Mr. V. M. Kimmick, City Engineer

REL:sls

June 12, 1978

Mr. V. M. Kimmick
City Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Hidden Valley, Phase IV

Dear Mr. Kimmick:

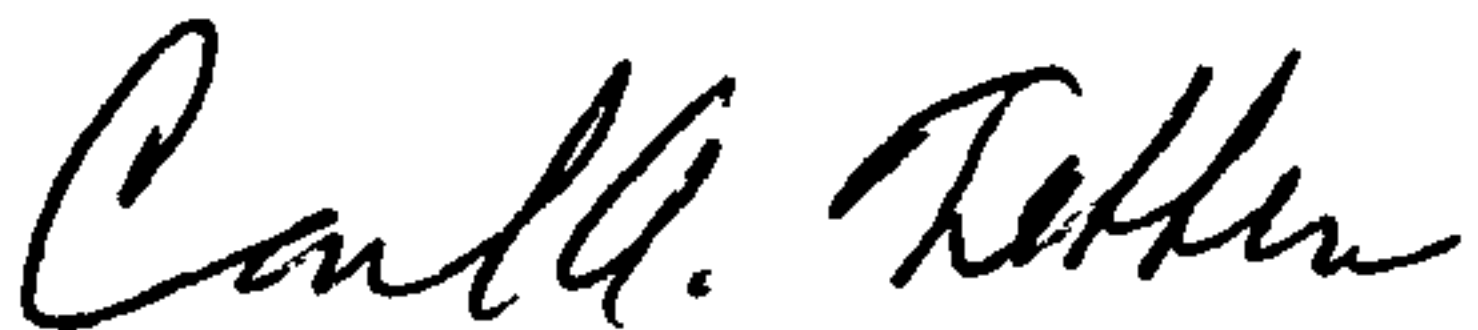
Transmitted herewith are two copies of the Drainage Study and eight sets of construction plans for the above referenced development.

Phase IV consists of 11 single family lots with private streets and water lines. Since this development is mostly private, these plans are being submitted more for your information.

Please review these plans at your earliest convenience.

Very truly yours,

MEURER, SERAFINI AND MEURER, INC.


Carl A. Tebbens, P.E.
Vice President

CAT:dw

Encls.

cc: Bo Johnson