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

July 8, 1994

Stephen L. Crawford
Community Sciences Corp.
P.O. Box 1328
Corrales, NM 87048

RE: REVISED ENGINEER CERTIFICATION FOR FAIRWAY MANOR UNIT 2 (G10-D3E) CERTIFICATION STATEMENT DATED 6/27/94.

Dear Mr. Crawford:

Based on the information provided on your June 27, 1994 resubmittal, the above referenced site acceptable for Financial Guarantee release and Engineer Certification.

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/WPHYD/436

c: Andrew Garcia
LyndaMichelle DeVanti
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 14, 1993

Doug Hughes, P.E.
Community Sciences Corp.
P.O. Box 1329
Corrales, NM 87048

RE: DRAINAGE REPORT FOR FAIRWAY MANOR (G10-D3E) ENGINEER'S STAMP DATED NOVEMBER 5, 1993 Project 4776.90.

Dear Mr. Hughes:

Based on the information provided on the referenced submittal received November 8, 1993, the report is acceptable for Work Order approval.

Please be advised that Work Order approval is required for the water block reconstruction at Vista Alegre Street. This reconstruction must also be certified as complete along with the subdivision prior to financial guarantee release.

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

Cordially,

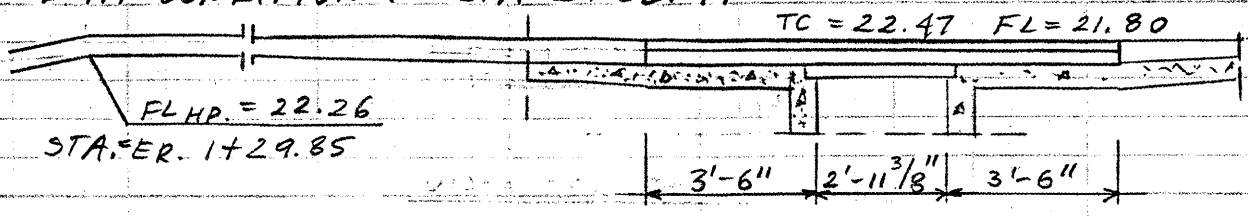
Gilbert Aldaz, PE & PS
City/County Floodplain Administrator

xc: Alan Martinez
LyndaMichelle DeVanti, DRC
File

wp+436

INLET CAPACITIES CALCULATIONS

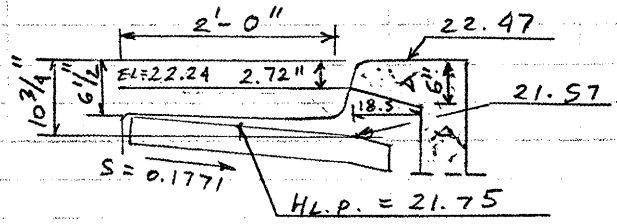
1) DOUBLE "A", SINGLE GRATE, DOUBLE THROAT INLET NO. 102.2 SUMP CONDITION. STA. 2+22.49 "VISTA DEL SUR"



$Q = CA\sqrt{2gH}$ $C = 0.66$ $g = 32.2$

EL. 22.26 CONTROLES. $\Rightarrow EL_{HP.} = 22.26.$

$EL_{L.P.}$ CALC.



$Q_{100} = 7.29$ CFS

$Q_{DESIGN} = 7.29 : 2 = 3.65$ CFS (ONE ON EACH SIDE OF ROAD)

$H = EL_{HP} - EL_{LP} = 22.26 - 21.75 = 0.51$ LF.

GRATE OPENING CALC.

$A_{TOTAL} = 4.56$ SF.

$A_{GRATE\ FRAME\ OBSTRUCTION} = 0.46$ SF

$A_{GRATE} = 4.56 - 0.46 = 4.10$ S.F.

OPTION NO. 1

USED 100% GRATE CAPACITY AND NO CURB OPENING.

$Q_1 = 0.66 \times 4.10 \times \sqrt{2 \times 32.2 \times 0.51} = 15.51$ CFS

OPTION NO. 2

USED 60% OF GRATE CAPACITY TO ACCOUNT FOR CLOGGING AND CURB OPENING CAPACITY.

GRATE CAPACITY

$Q_{GR.} = 15.51 \times 0.6 = 9.31$ CFS.

CURB OPENING CAPACITY CALC.

$L = 2'-11\frac{3}{8}" + (3'-6") \times 2 = 9.95$ LF

$h_1 = 22.47 - 21.57 = (2.72 : 12) = 0.67$

$A = 9.95 \times 0.67 = 6.67$ S.F.

$H = 22.26 - (21.5 + 0.34) = 0.42$

$Q_{CURB\ OP.} = 0.66 \times 6.67 \times \sqrt{2 \times 32.2 \times 0.42} = 22.89$ CFS.

$\Sigma\ Q_2 = 9.31 + 22.89 = 32.20$ CFS

TAKE OPTION NO. 1.

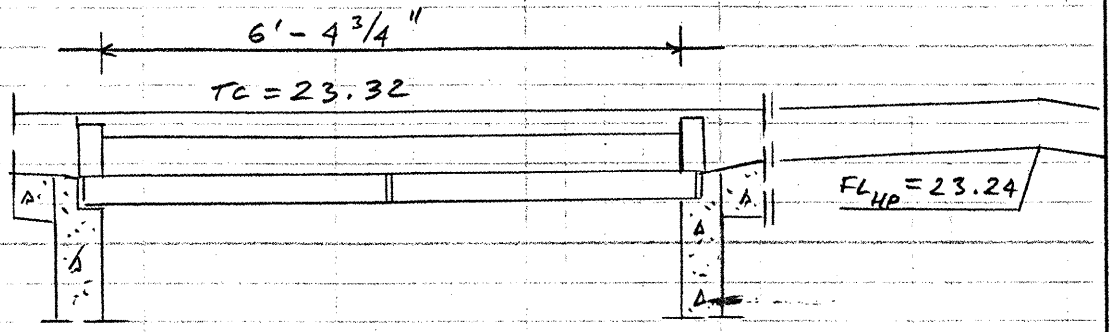
TOTAL DOUBLE "A" INLET CAPACITY = 15.51 CFS.

INFLOW FROM "VISTA DEL SUR" IS 7.29 : 2 =

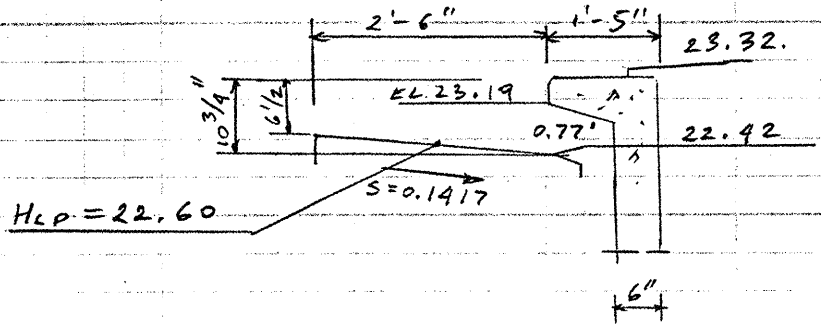
= 3.65 CFS PER EACH STORM DRAIN INLET

(FLOW) 3.65 CFS < 15.51 CFS. (CAPACITY.)

2.) INLET 101.2 STA 15+46.02 "SAN BENITO ST."
INLET TYPE DOUBLE "C" - SUMP CONDITION



EL = 23.24 CONTROLES ⇒ EL_{HP} = 23.24.



Q_{100} = 35.93 CFS

Q_{DESIGN} = 35.93 : 2 = 17.98 CFS
(ONE ON EACH SIDE OF ROAD)

H = 23.24 − 22.6 = 0.64

GRATE OPENING CALC.

A_{GRATE} = 4.10 × 2 = 8.20 SF

OPTION 1

USED 100% GRATE CAPACITY AND NO CURB OPENING.

$Q_1 = 0.66 \times 8.20 \sqrt{2 \times 32.2 \times 0.64} = 34.75$ CFS.

OPTION 2

USED 60% OF GRATE CAPACITY TO ACCOUNT FOR CLOGGING AND CURB OPENING CAPACITY.
GRATE CAP.

$Q_{GR} = 34.75 \times 0.6 = 20.85$ C.F.S.

TOTAL FROM "SAN BENITO ST." IS 35.93 : 2 = 17.98 CFS

TAKE 60% OF GRATE CAPACITY W/O OPENING.

(FLOW) 17.98 CFS < 20.85 CFS (CAPACITY)

Outlet Structure File: FAIR .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 11-09-1993 Time Executed: 14:49:28

Outflow Rating Table for Structure #01
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
22.16	0.0	E = Y min= 22.16
22.19	0.0	W(ft)= 2.381 Max. D(ft)= .03
22.22	0.1	W(ft)= 4.762 Max. D(ft)= .06
22.25	0.2	W(ft)= 7.142 Max. D(ft)= .09
22.28	0.4	W(ft)= 9.523 Max. D(ft)= .12
22.31	0.6	W(ft)= 11.904 Max. D(ft)= .15
22.34	1.0	W(ft)= 14.285 Max. D(ft)= .18
22.37	1.5	W(ft)= 16.665 Max. D(ft)= .21
22.40	2.1	W(ft)= 19.046 Max. D(ft)= .24
22.43	2.8	W(ft)= 21.427 Max. D(ft)= .27
22.46	3.6	W(ft)= 23.808 Max. D(ft)= .3
22.49	4.6	W(ft)= 26.189 Max. D(ft)= .33
22.52	5.7	W(ft)= 28.569 Max. D(ft)= .36
22.55	6.9	W(ft)= 30.95 Max. D(ft)= .39
22.58	8.3	W(ft)= 33.331 Max. D(ft)= .42
22.61	9.9	W(ft)= 35.712 Max. D(ft)= .45
22.64	11.6	W(ft)= 38.092 Max. D(ft)= .48
22.67	13.6	W(ft)= 40.473 Max. D(ft)= .51
22.70	15.6	W(ft)= 42.854 Max. D(ft)= .54
22.73	18.3	W(ft)= 42.864 Max. D(ft)= .57
22.76	21.1	W(ft)= 42.873 Max. D(ft)= .6
22.79	24.1	W(ft)= 42.883 Max. D(ft)= .63
22.82	27.1	W(ft)= 42.892 Max. D(ft)= .66
22.85	30.3	W(ft)= 42.902 Max. D(ft)= .69
22.88	33.6	W(ft)= 42.911 Max. D(ft)= .72
22.91	37.1	W(ft)= 42.921 Max. D(ft)= .75
22.94	40.6	W(ft)= 42.93 Max. D(ft)= .78
22.97	44.2	W(ft)= 42.94 Max. D(ft)= .81
23.00	48.0	W(ft)= 42.949 Max. D(ft)= .84
23.03	51.8	W(ft)= 42.959 Max. D(ft)= .87
23.06	55.7	W(ft)= 42.968 Max. D(ft)= .9
23.09	59.8	W(ft)= 42.978 Max. D(ft)= .93
23.12	63.9	W(ft)= 42.987 Max. D(ft)= .96
23.15	68.1	W(ft)= 42.997 Max. D(ft)= .99
23.16	0.0	E = or > E2=23.16

Wier Capacity at Cul de sac entrance
$Q_{100} = 43.25$ cfs

Outlet Structure File: FAIR .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 11-09-1993 Time Executed: 14:49:28

>>>>>> Structure No. 01 <<<<<<
(Input Data)

WEIR-XY
Weir - Defined by X, Y Coordinates
E1 (ft) =22.16 E2 (ft) =23.16

X dist.(ft)	Y elev.(ft)
0	23.16
.1	22.7
42.9	22.16
43	23.16

DRAINAGE COVENANT

This Drainage Covenant, between Fairway Manor Limited Partnership a New Mexico Limited Partnership ("Owner"), whose address is 6400 Uptown #200 W, Albuquerque, NM 87110, and the City of Albuquerque, New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico and is entered into as of the date Owner signs this Covenant.

1. Recital. Owner is the owner of certain real property described as: Tract X, El Rancho Atrisco North in Bernalillo County, New Mexico (the "Property").

Pursuant to City ordinances, regulations and other applicable laws, the Owner is required to construct and maintain certain Drainage Facilities on the Property, and the parties wish to enter into this Agreement to establish the obligations and responsibilities of the parties.

2. Description and Construction of Drainage Facilities. Owner shall construct the following "Drainage Facility" within the Property at Owner's sole expense in accordance with the standards, plans and specifications approved by the City pursuant to Drainage File No. G10/D3-E: Temporary Desiltation Pond, Deversion Berm & Inlet Control Structure as shown on Sheets 5 & 11 of City Proj. #4776.90

The Drainage Facility is more particularly described in the attached Exhibit A. The Owner will not permit the Drainage Facility to constitute a hazard to the health or safety of the general public.

3. Maintenance of Drainage Facility. The Owner will maintain the Drainage Facility at Owner's cost in accordance with the approved Drainage Report and plans.

4. City's Right of Entry. The City has the right to enter upon the Property at any time and perform whatever inspection, maintenance or repair of the Drainage Facility it deems appropriate, without liability to the Owner.

5. Demand for Construction or Repair. The City may send written notice ("Notice") to the Owner requiring the Owner to construct or repair the Drainage Facility within 60 days ("Deadline") of receipt of the Notice, as provided in Section 11, and the Owner will comply promptly with the requirements of the Notice. The Owner will perform all required work by the Deadline, at Owner's sole expense.

6. Failure to Perform by Owner and Emergency Work by City. If the Owner fails to comply with the terms of the Notice by the Deadline, or if the City determines that an emergency condition exists, the City may perform the work itself. The City may assess the Owner for the cost of the work and for any other expenses or damages which result from Owner's failure to perform. The Owner agrees promptly to pay the City the amount assessed. If the Owner fails to pay the City within thirty (30) days after the City gives the Owner written notice of the amount due, the City may impose a lien against Owner's Property for the total resulting amount.

(Approved by Legal Dept.
as to form only 06/90)

7. Liability of City for Repair after Notice or as a Result of Emergency. The City shall not be liable to the Owner for any damages resulting from the City's repair or maintenance following notice to the Owner as required in this agreement or in an emergency unless the damages are the result of the reckless conduct or gross negligence of the City.

8. Indemnification. Owner agrees to indemnify and save the City, its officials, agents and employees harmless from all claims, actions, suits and proceedings arising out of or resulting from the Owner's negligent maintenance, construction, repair or use of the Drainage Facility. To the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the indemnitee, or the agents or employees of the indemnitee; or (2) the giving of or the failure to give direction or instructions by the indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

9. Cancellation of Agreement and Release of Covenant. This Agreement may be released if the Drainage Facility is no longer required for the protection of the public health, safety and welfare by the City filing a "Notice of Release" with the Bernalillo County Clerk. The Notice of Release must be signed by the City's Chief Administrative Officer, or his designee, and the approval of the City Hydrologist must be endorsed thereon.

10. Assessment. Nothing in this agreement shall be construed to relieve the Owner, his heirs, assigns, and successors from an assessment against Owner's Property for improvements to the property under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.

11. Notice. For purposes of given formal written notice to the Owner, Owner's address is:

6400 Uptown Blvd, Suite 200 W
Albuquerque, NM 87110

Notice may be given to the Owner either in person or by mailing the notice by regular U.S. mail, postage paid. Notice will be considered to have been received by the Owner within three days after the notice is mailed if there is no actual evidence of receipt. The Owner may change Owner's address by given written notice of the change by Certified Mail, return receipt requested, to the City Public Works Department, P.O. Box 1293, Albuquerque, New Mexico, 87103.

12. Term. This Agreement shall continue until terminated by the City pursuant to Section 9 above.

(Approved by Legal Dept.
as to form only 06/90)

13. Binding on Owner's Property. The covenants and obligations of the Owner said forth herein shall be binding on Owner, its heirs, personal representatives, assigns and successors and on Owner's Property and shall constitute covenants running the Owner's Property until released by the City.

14. Entire Agreement. This Agreement contains the entire agreement of the parties and supercedes any and all other agreements or understanding, oral or written, whether previous to the execution hereof or contemporaneous herewith regarding this subject matter.

15. Changes to Agreement. Changes to this Agreement are not binding unless made in writing, signed by both parties.

16. Construction and Severability. If any part of this Agreement is held to be invalid or unenforceable, the remainder of the Agreement will remain valid and enforceable if the remainder is reasonably capable of completion.

17. Captions. The captions to the sections or paragraphs of this Agreement are not part of this Agreement and will not affect the meaning or construction of any of its provisions.

OWNER: Fairway Manor Limited Partnership
By Argus Development Company
Its General Partner
By: Ben F Spencer
Its: President, Argus Development
Dated: 11-11-93

STATE OF NEW MEXICO)
) ss
COUNTY OF SANDOVAL)

The foregoing instrument was acknowledged before me this 11TH day of NOVEMBER, 1993, [by name of person:] Ben F. Spencer, [title or capacity, for instance "president" or "owner":] *, of [Subdivider:] Fairway Manor Limited Partnership.

* President of Argus Development Co., Inc.
General Partner

Notary Public

My Commission Expires:
3-25-97

OFFICIAL SEAL
RICHARD D. QUINTANA
NOTARY PUBLIC - NEW MEXICO
NOTARY BOND FILED WITH SECRETARY OF STATE
My Commission Expires 3-25-97

CITY OF ALBUQUERQUE:

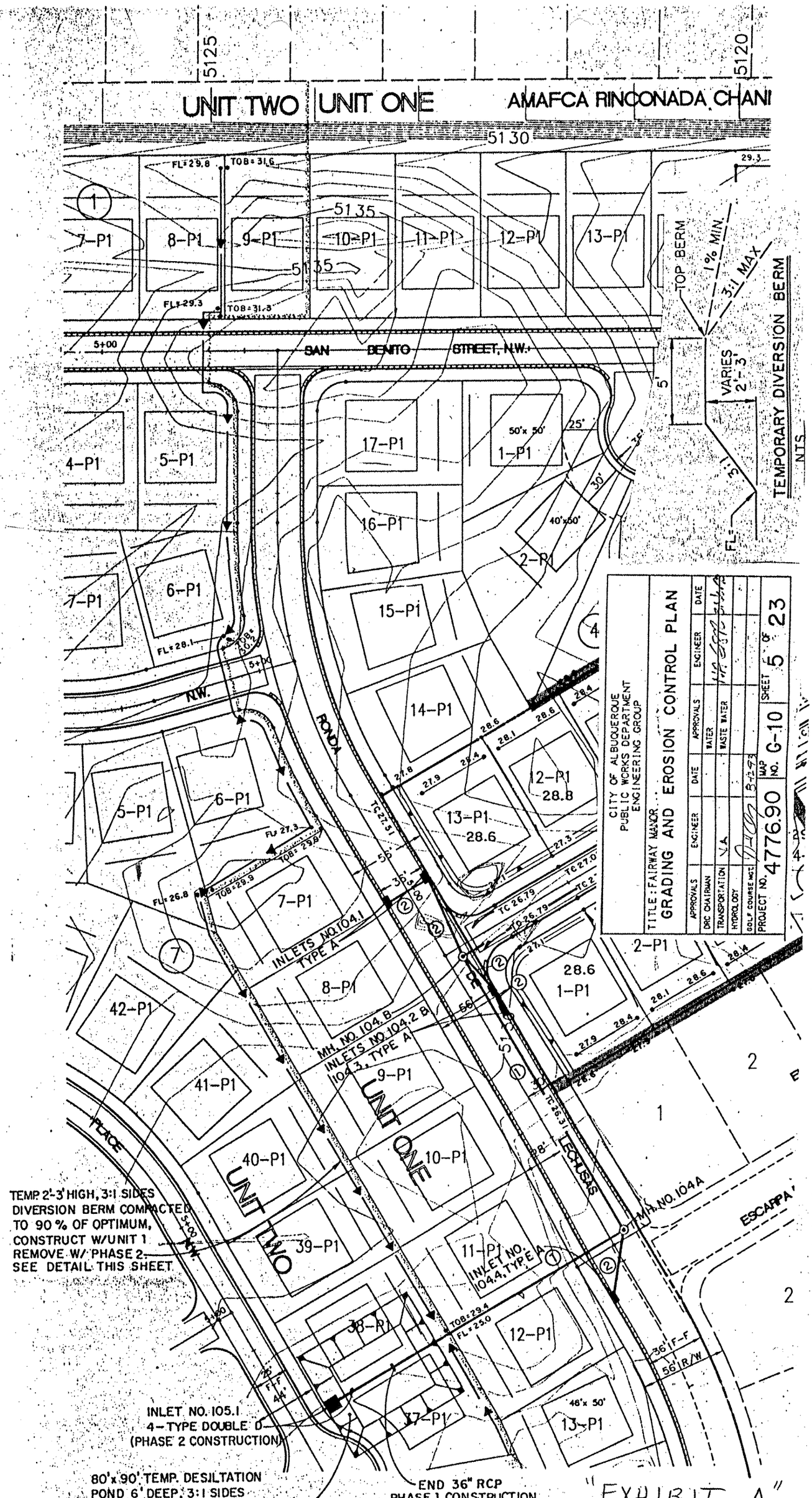
Approved:

By: _____
Title: _____
Dated: _____

(EXHIBIT A ATTACHED)

(Approved by Legal Dept.
as to form only 06/90)

(WP+124529)



"EXHIBIT A" 1 of 2

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1. Recital. Owner is the owner of certain real property described as: Tract D, El Rancho Atrisco de los Santos; filed 6-25-82; Vol C19, Folio 181 in Bernalillo County, New Mexico (the "Property").

Pursuant to City ordinances, regulations and other applicable laws, the Owner is required to construct and maintain certain Drainage Facilities on the Property, and the parties wish to enter into this Agreement to establish the obligations and responsibilities of the parties.

2. Description and Construction of Drainage Facilities. Owner shall construct the following "Drainage Facility" within the Property at Owner's sole expense in accordance with the standards, plans and specifications approved by the City pursuant to Drainage File No. G10/D3-E. Fairway Manor Subdivision, Unit 1, Sheets 22 and 23 attached hereto as Exhibit A Specifically the temporary pond and outfall control structure. (City Proj. #4776.90)

The Drainage Facility is more particularly described in the attached Exhibit A. The Owner will not permit the Drainage Facility to constitute a hazard to the health or safety of the general public.

3. Maintenance of Drainage Facility. The Owner will maintain the Drainage Facility at Owner's cost in accordance with the approved Drainage Report and plans.

4. City's Right of Entry. The City has the right to enter upon the Property at any time and perform whatever inspection, maintenance or repair of the Drainage Facility it deems appropriate, without liability to the Owner.

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as to form only 06/90)

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8. Indemnification. Owner agrees to indemnify and save the City, its officials, agents and employees harmless from all claims, actions, suits and proceedings arising out of or resulting from the Owner's negligent maintenance, construction, repair or use of the Drainage Facility. To the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the indemnitee, or the agents or employees of the indemnitee; or (2) the giving of or the failure to give direction or instructions by the indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

9. Cancellation of Agreement and Release of Covenant. This Agreement may be released if the Drainage Facility is no longer required for the protection of the public health, safety and welfare by the City filing a "Notice of Release" with the Bernalillo County Clerk. The Notice of Release must be signed by the City's Chief Administrative Officer, or his designee, and the approval of the City Hydrologist must be endorsed thereon.

10. Assessment. Nothing in this agreement shall be construed to relieve the Owner, his heirs, assigns, and successors from an assessment against Owner's Property for improvements to the property under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.

11. Notice. For purposes of given formal written notice to the Owner, Owner's address is:

6400 Uptown Blvd. Suite #200W
Albuquerque, NM 87110

Notice may be given to the Owner either in person or by mailing the notice by regular U.S. mail, postage paid. Notice will be considered to have been received by the Owner within three days after the notice is mailed if there is no actual evidence of receipt. The Owner may change Owner's address by given written notice of the change by Certified Mail, return receipt requested, to the City Public Works Department, P.O. Box 1293, Albuquerque, New Mexico, 87103.

12. Term. This Agreement shall continue until terminated by the City pursuant to Section 9 above.

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as to form only 06/90)

13. Binding on Owner's Property. The covenants and obligations of the Owner said forth herein shall be binding on Owner, its heirs, personal representatives, assigns and successors and on Owner's Property and shall constitute covenants running the Owner's Property until released by the City.

14. Entire Agreement. This Agreement contains the entire agreement of the parties and supercedes any and all other agreements or understanding, oral or written, whether previous to the execution hereof or contemporaneous herewith regarding this subject matter.

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16. Construction and Severability. If any part of this Agreement is held to be invalid or unenforceable, the remainder of the Agreement will remain valid and enforceable if the remainder is reasonably capable of completion.

17. Captions. The captions to the sections or paragraphs of this Agreement are not part of this Agreement and will not affect the meaning or construction of any of its provisions.

OWNER: Fairway Manor Limited Partnership
by Argus Development Company
its General Partner

By: Ben F Spencer
Its: President
Dated: 11/2/93

STATE OF New Mexico)
) ss
COUNTY OF Bernalillo)

The foregoing instrument was acknowledged before me this 2nd day of November, 1993, [by name of person:] Ben F. Spencer, [title or capacity, for instance "president" or "owner":] * of [Subdivider:] Fairway Manor Limited Partnership.

Ruth L. Jensen
Notary Public

My Commission Expires:
4-21-95

* President of Argus Development Co., Inc., General Partner

CITY OF ALBUQUERQUE:

Approved:

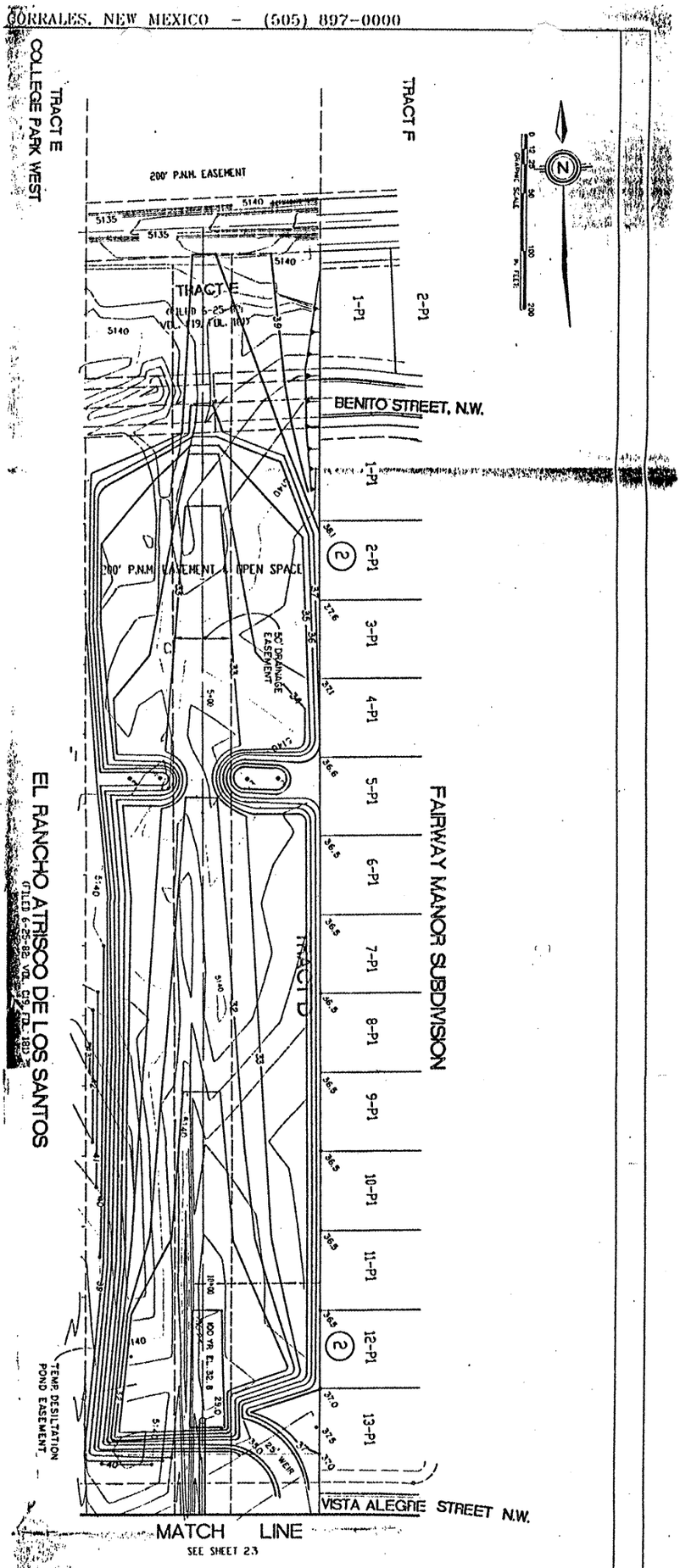
By: _____
Title: _____
Dated: _____

(EXHIBIT A ATTACHED)

(Approved by Legal Dept.
as to form only 06/90)

(WP+124529)

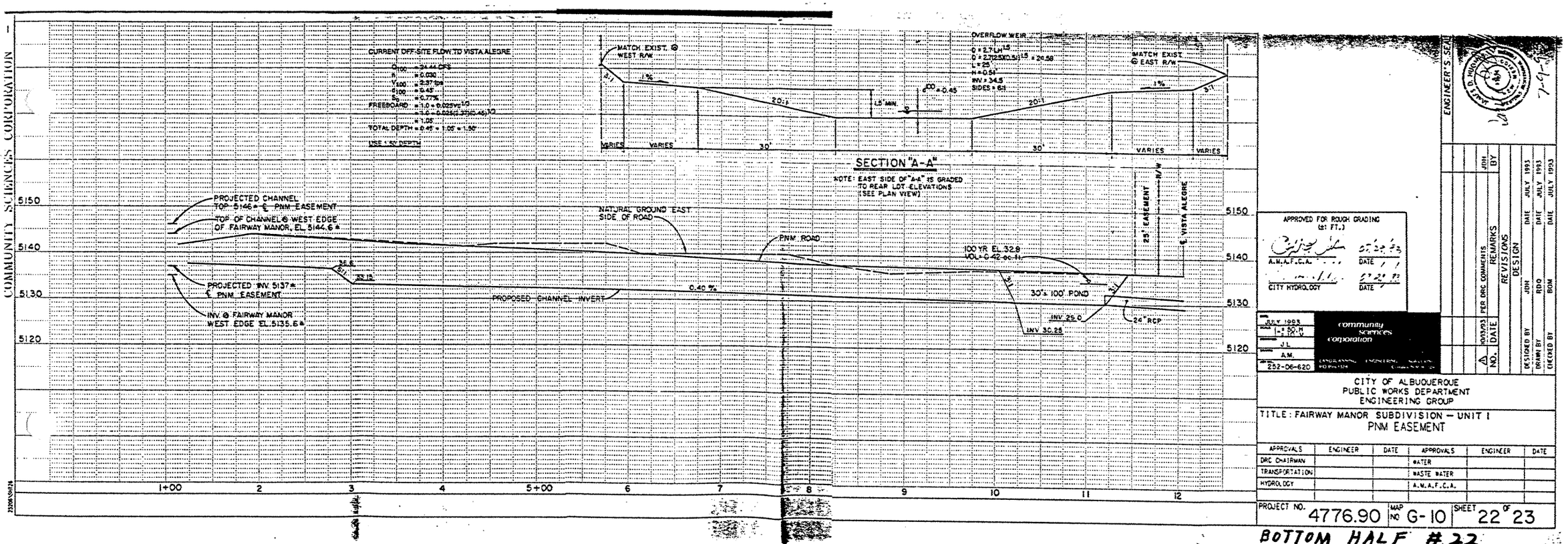
CORRALES, NEW MEXICO - (505) 897-0000



TOP HALF #22

SURVEY INFORMATION			BENCH MARKS	AS BUILT INFORMATION
FIELD NOTES			THAT STA. IS A STANDARD A.C.S. BRASS TABLET STAMPED "2-09"	CONTRACTOR
NO.	BY	DATE	SET IN A 2" IRON PIPE 1' ABOVE GROUND, STA. IS LOCATED ON	WORK STAKED BY ____ DATE ____
			TOP OF VOLCANIC OUTCROP. TO REACH THIS STA. BEGIN AT I-40	INSPECTOR'S ACCEPTANCE BY ____ DATE ____
			AND COORS RD., PROCEED NORTH ON COORS 0.4 MI. TO OURAY	FIELD VERIFICATION BY ____ DATE ____
			RD., WEST ON OURAY RD. 0.7 MI. TO END OF PAVEMENT,	DRAWINGS CORRECTED BY ____ DATE ____
			CONTINUE WEST ON DIRT ROAD TO TOP OF DAM, ALONG NORTH	MICRO-FILM INFORMATION
			BANK 0.8 MI. TO DIRT CROSSROAD, NORTH ON DIRT ROAD 0.5 MI.	RECORDED BY ____ DATE ____
			THE STA. IS ABOUT 600' WEST OF THIS POINT.	NO.

EXHIBIT A 1 of 4



COMMUNITY SCIENCES CORPORATION

APPROVED FOR ROUGH GRADING (±1 FT.)

A.M.A.F.C.A. — DATE 5/20/93

CITY HYDROLOGY — DATE 5/20/93

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	JDH
		DESIGNED BY	JDH
		DRAWN BY	RDO
		CHECKED BY	BDM

DATE JULY 1993
DATE JULY 1993
DATE JULY 1993

JULY 1993
SCALE 1" = 50' H
1" = 5' V
J.L.
A.M.
252-06-620

Community Sciences Corporation

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

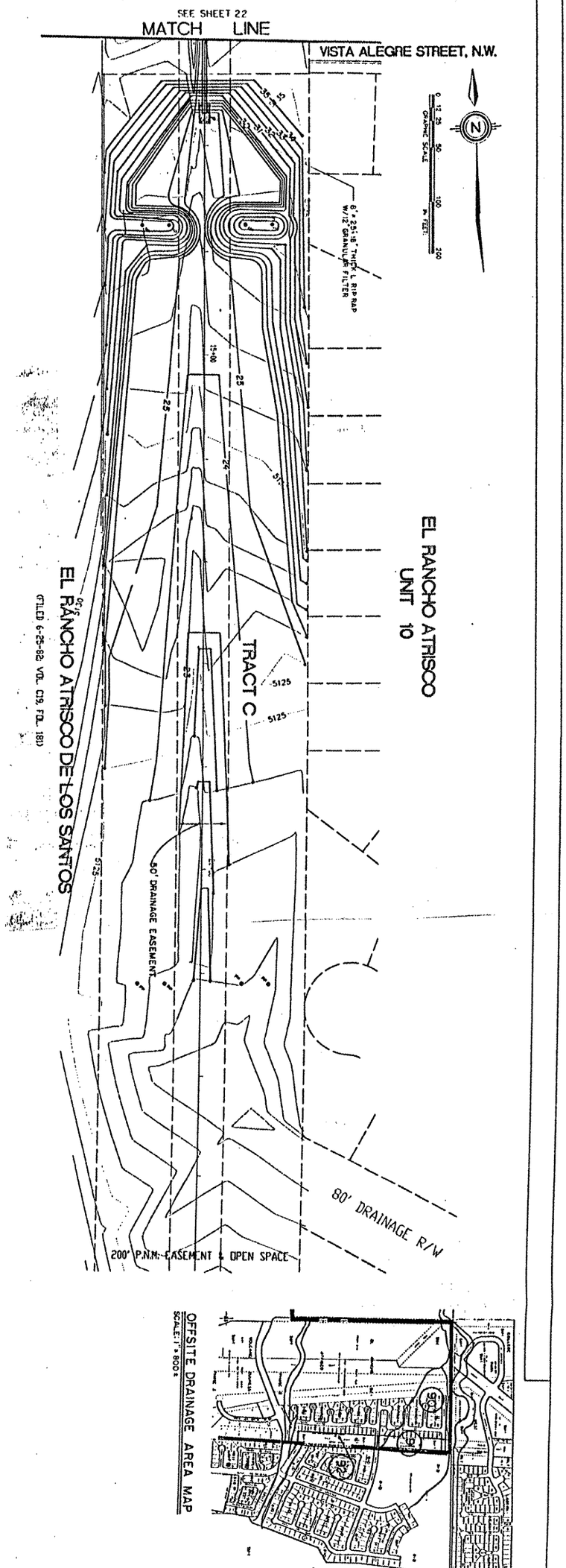
TITLE: FAIRWAY MANOR SUBDIVISION — UNIT 1
PNM EASEMENT

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY			A.M.A.F.C.A.		

PROJECT NO. 4776.90 | MAP NO G-10 | SHEET 22 OF 23

BOTTOM HALF #22

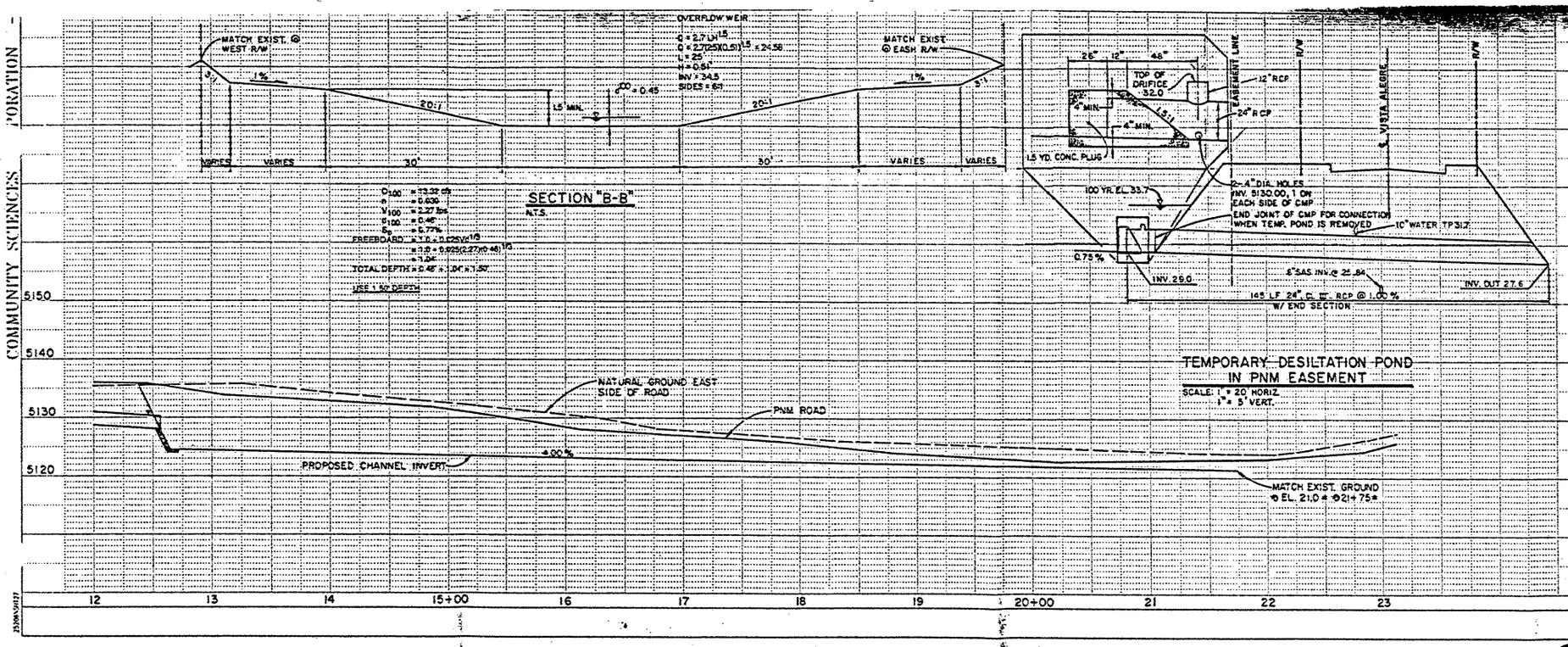
EXHIBIT A 2 of 4



SURVEY INFORMATION			BENCH MARKS	AS BUILT INFORMATION
FIELD NOTES				CONTRACTOR
NO.	BY	DATE	THAT STA. IS A STANDARD A.C.S. BRASS TABLET STAMPED "2-09" SET IN A 2" IRON PIPE 1' ABOVE GROUND. STA. IS LOCATED ON TOP OF VOLCANIC OUTCROP. TO REACH THIS STA. BEGIN AT I-40 AND COORS RD., PROCEED NORTH ON COORS 0.4 MI. TO OURAY RD., WEST ON OURAY RD. 0.7 MI. TO END OF PAVEMENT, CONTINUE WEST ON DIRT ROAD TO TOP OF DAM, ALONG NORTH BANK 0.6 MI. TO DIRT CROSSROAD, NORTH ON DIRT ROAD 0.5 MI. THE STA. IS ABOUT 600' WEST OF THIS POINT. ELEVATION = 5334.60 FEET	CITY INSPECTOR'S ACCEPTANCE BY DATE FIELD VERIFICATION BY DATE DRAWINGS COMPLETED BY DATE MICRO-FILM INFORMATION RECORDED BY DATE NO.

TOP HALF # 23

EXHIBIT A 3 of 4



COMMUNITY SCIENCES PORATION

APPROVED FOR ROUGH GRADING (61 FT.)

A.M.A.F.C.A. — DATE 7-19-93

CITY HYDROLOGY — DATE 7-19-93

NO.	DATE	REMARKS	BY
		REVISIONS	
1	10/13/93	PER DRC COMMENTS	JDH
		DESIGN	

JULY 1993
SCALE 1"=50'-0"
J.L.
A.M.
252-06-62C

community sciences corporation

ENGINEER'S SEAL

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: FAIRWAY MANOR SUBDIVISION — UNIT I

PNM EASEMENT

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
DRC CHAIRMAN			WATER	
TRANSPORTATION			WASTE WATER	
HYDROLOGY			A.M.A.F.C.A.	

PROJECT NO. 4776.90 | MAP NO. G-10 | SHEET 23 OF 23

BOTTOM HALF #23

EXHIBIT A 4 of 4

PERMANENT EASEMENT

Grant of Permanent Easement, between Fairway Manor Limited Partnership a New Mexico Limited Partnership ("Grantor"), whose address is 6400 Uptown #200W, Albuquerque, NM 87110 and the City of Albuquerque, a New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico, 87103.

Grantor grants to the City an exclusive, permanent easement ("Easement") in, over, upon and across the real property described on Exhibit "A" attached hereto ("Property") for the construction, installation, maintenance, repair, modification, replacement and operation of drainage channel together with the right to remove trees, bushes, undergrowth and any other obstacles upon the Property if the City determines they interfere with the appropriate use of this Easement.

Grantor covenants and warrants that Grantor is the owner in fee simple of the Property, that Grantor has a good lawful right to convey the Property or any part thereof and that Grantor will forever warrant and defend the title to the Property against all claims from all persons or entities.

The grant and other provisions of this Easement constitute covenants running with the land for the benefit of the City and its successors and assigns until terminated.

WITNESS my hand and seal this 2ND day of NOVEMBER, 1993.

GRANTOR:

_____

(Individual)

GRANTOR: FAIRWAY MANOR Limited PARTNERSHIP
BY: ARGUS Development Company
ITS: General PARTNER

By: Burt Spencer
Its: PRESIDENT
(~~Corporation~~ or Partnership)

INDIVIDUAL

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____.

_____
Notary Public

My Commission Expires:

_____

CORPORATION

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____, _____ of _____, a _____ corporation, on behalf of the corporation.

_____
Notary Public

My Commission Expires:

_____

PARTNERSHIP

STATE OF NEW MEXICO)
) ss
COUNTY OF SANDOVAL)

The foregoing instrument was acknowledged before me this 11TH day of NOVEMBER, 1993, by BEN F. SPENSER, partner(s), on behalf of FAIRWAY MANOR LIMITED PARTNERSHIP, *a partnership.

* PRESIDENT OF ARGUS DEV. CO., INC GENERAL PARTNER

_____
Notary Public

My Commission Expires:

_____

OFFICIAL SEAL
RICHARD D. QUINTANA
NOTARY PUBLIC - NEW MEXICO
NOTARY BOND FILED WITH SECRETARY OF STATE
My Commission Expires 3-25-97

(EXHIBIT "A" ATTACHED)

EXHIBIT "A"
1.40 ACRE PORTION
OF TRACT "C", EL RANCHO ATRISCO DE LOS SANTOS
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO

LEGAL DESCRIPTION:

AN EASEMENT FOR DRAINAGE WITHIN THE TOWN OF ATRISCO GRANT "PROJECTED" SECTION 3, TOWNSHIP 10 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO COMPRISING A PORTION OF TRACT "C" OF EL RANCHO ATRISCO DE LOS SANTOS AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JUNE 25, 1982 IN VOLUME C-19, FOLIO 181 SAID EASEMENT BEING A STRIP OF LAND FIFTY (50) FEET IN WIDTH, BEING 25 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTER LINE:

BEGINNING AT A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF VISTA ALEGRE STREET N.W. (60' R/W) SAID POINT BEING THE NORTHEAST CORNER OF SAID TRACT "C" OF EL RANCHO ATRISCO DE LOS SANTOS; THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N87°15'51"W, 100.00 FEET; TO THE TRUE PLACE OF BEGINNING OF THE EASEMENT HEREIN DESCRIBED; THENCE, LEAVING THE SOUTHERLY RIGHT-OF-WAY LINE OF VISTA ALEGRE STREET N.W. S02°44'09"W, 1231.45 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY-LINE OF OURAY ROAD N.W. (86' R/W) SAID POINT BEING THE TERMINUS OF THE EASEMENT HEREIN DESCRIBED.

SURVEYOR'S CERTIFICATION:

I, C.A. SPIROCK, HEREBY AFFIRM THAT I AM A DULY QUALIFIED REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO AND DO CERTIFY THAT THIS DESCRIPTION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND SHOWS ACCURATE DIMENSIONS AND LAND AREA. I FURTHER CERTIFY THAT THIS DESCRIPTION MEETS THE "MINIMUM STANDARD FOR LAND SURVEYS" SET FORTH BY THE STATE OF NEW MEXICO AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

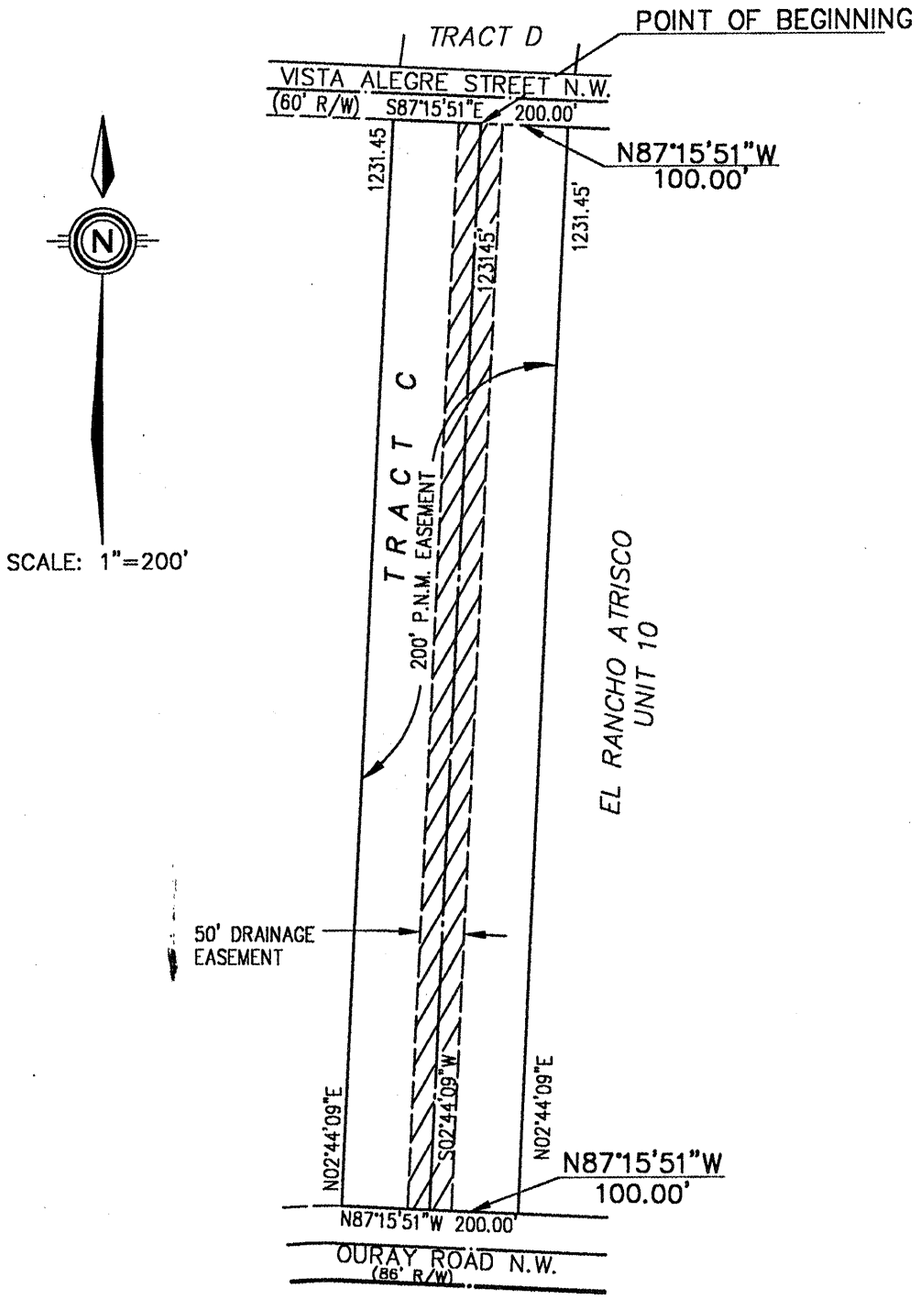
CLIFF A. SPIROCK, N.M.R.P.S. #4972

11/11/93
DATE

SEE ATTACHED EXHIBIT "A-1"

EXHIBIT "A-1",

1.40 ACRE PORTION
OF TRACT "C", EL RANCHO ATRISCO DE LOS SANTOS
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO



PERMANENT EASEMENT

Fairway Manor Limited Partnership

Grant of Permanent Easement, between a New Mexico Limited Partnership ("Grantor"), whose address is 6400 Uptown #200W, Albuquerque, NM 87110 and the City of Albuquerque, a New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico, 87103.

Grantor grants to the City an exclusive, permanent easement ("Easement") in, over, upon and across the real property described on Exhibit "A" attached hereto ("Property") for the construction, installation, maintenance, repair, modification, replacement and operation of drainage channel together with the right to remove trees, bushes, undergrowth and any other obstacles upon the Property if the City determines they interfere with the appropriate use of this Easement.

Grantor covenants and warrants that Grantor is the owner in fee simple of the Property, that Grantor has a good lawful right to convey the Property or any part thereof and that Grantor will forever warrant and defend the title to the Property against all claims from all persons or entities.

The grant and other provisions of this Easement constitute covenants running with the land for the benefit of the City and its successors and assigns until terminated.

WITNESS my hand and seal this 2nd day of November, 1993.

GRANTOR:

_____
(Individual)

GRANTOR: Fairway Manor Limited Partnership
BY: ARGUS Development Company
its General Partner:

By: Burt Spurrier
Its: PRESIDENT
(Corporation or Partnership)

INDIVIDUAL

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____.

_____
Notary Public

My Commission Expires:

_____

CORPORATION

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____, _____ of _____, a _____ corporation, on behalf of the corporation.

_____
Notary Public

My Commission Expires:

_____

PARTNERSHIP

STATE OF New Mexico)
) ss
COUNTY OF Bernalillo)

The foregoing instrument was acknowledged before me this 2nd day of November, 1993, by Ben F. Spencer, ~~partner(s)~~ *, on behalf of Fairway Manor Limited Partnership, a partnership.

Beth L Jansen
Notary Public

My Commission Expires:
4-21-95

(EXHIBIT "A" ATTACHED)

* President of Argus Development Co, Inc., General Partner

153C

EXHIBIT "A"
1.03 ACRE PORTION
OF TRACT "D", EL RANCHO ATRISCO DE LOS SANTOS
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO

LEGAL DESCRIPTION:

AN EASEMENT FOR DRAINAGE WITHIN THE TOWN OF ATRISCO GRANT "PROJECTED" SECTION 3, TOWNSHIP 10 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO COMPRISING A PORTION OF TRACT "D" OF EL RANCHO ATRISCO DE LOS SANTOS SUBDIVISION AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JUNE 25, 1982 IN VOLUME C-19, FOLIO 181 SAID EASEMENT BEING A STRIP OF LAND FIFTY (50) FEET IN WIDTH, BEING 25 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTER LINE:

BEGINNING AT A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAN BENITO STREET N.W. (50' R/W) SAID POINT BEING THE NORTHEAST CORNER OF SAID TRACT "D" OF EL RANCHO ATRISCO DE LOS SANTOS; THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N89°46'46"W, 100.04 FEET; TO THE TRUE PLACE OF BEGINNING OF THE EASEMENT HEREIN DESCRIBED; THENCE, LEAVING THE SOUTHERLY RIGHT-OF-WAY LINE OF SAN BENITO STREET S02°44'21"W, 896.85 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY-LINE OF VISTA ALEGRE STREET N.W. (60' R/W) SAID POINT BEING THE TERMINUS OF THE EASEMENT HEREIN DESCRIBED.

SURVEYOR'S CERTIFICATION:

I, C.A. SPIROCK, HEREBY AFFIRM THAT I AM A DULY QUALIFIED REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO AND DO CERTIFY THAT THIS DESCRIPTION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND SHOWS ACCURATE DIMENSIONS AND LAND AREA. I FURTHER CERTIFY THAT THIS DESCRIPTION MEETS THE "MINIMUM STANDARD FOR LAND SURVEYS" SET FORTH BY THE STATE OF NEW MEXICO AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

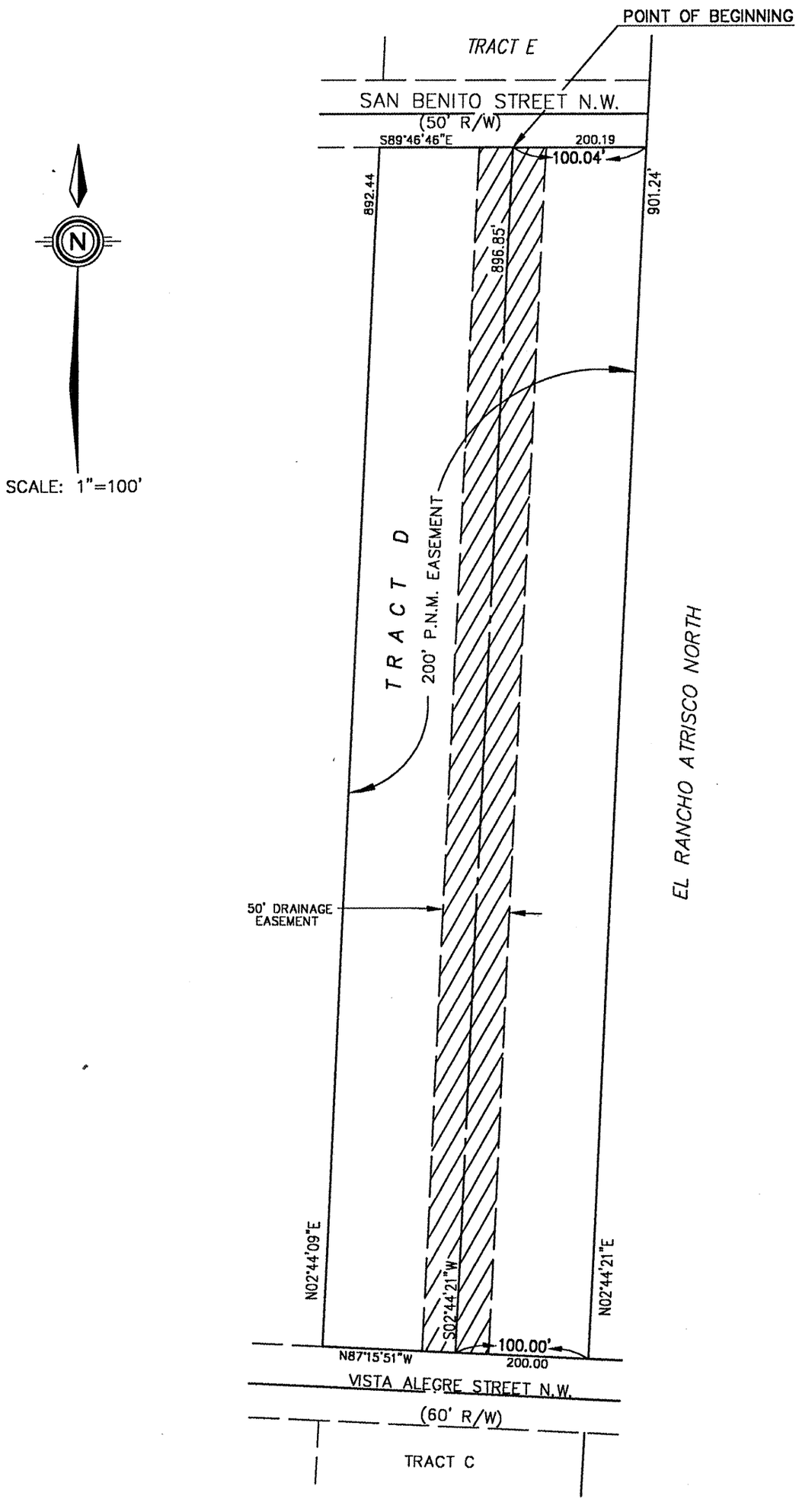
CLIFF A. SPIROCK, N.M.R.P.S. #4972

11/4/93
DATE

SEE ATTACHED EXHIBIT "A-1"

EXHIBIT "A-1",

1.03 ACRE PORTION
OF TRACT "D", EL RANCHO ATRISCO DE LOS SANTOS
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO



PERMANENT EASEMENT

Grant of Permanent Easement, between Fairway Manor Limited Partnership a New Mexico Limited Partnership ("Grantor"), whose address is 6400 Uptown #200W, Albuquerque, NM 87110 and the City of Albuquerque, a New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico, 87103.

Grantor grants to the City an exclusive, permanent easement ("Easement") in, over, upon and across the real property described on Exhibit "A" attached hereto ("Property") for the construction, installation, maintenance, repair, modification, replacement and operation of drainage channel together with the right to remove trees, bushes, undergrowth and any other obstacles upon the Property if the City determines they interfere with the appropriate use of this Easement.

Grantor covenants and warrants that Grantor is the owner in fee simple of the Property, that Grantor has a good lawful right to convey the Property or any part thereof and that Grantor will forever warrant and defend the title to the Property against all claims from all persons or entities.

The grant and other provisions of this Easement constitute covenants running with the land for the benefit of the City and its successors and assigns until terminated.

WITNESS my hand and seal this 2ND day of NOVEMBER, 1993.

GRANTOR:

_____
(Individual)

GRANTOR: FAIRWAY MANOR LIMITED PARTNERSHIP
BY: ARGUS Development Company
ITS: General Partner

By: Burt Spencer
Its: PRESIDENT
(Corporation or Partnership)

INDIVIDUAL

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____.

_____
Notary Public

My Commission Expires:

_____

CORPORATION

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 199__, by _____, _____ of _____, a _____ corporation, on behalf of the corporation.

_____
Notary Public

My Commission Expires:

_____

PARTNERSHIP

STATE OF New Mexico)
) ss
COUNTY OF Bernalillo)

The foregoing instrument was acknowledged before me this 2nd day of November, 1993, by Ben F Spencer, ~~*partner(s)~~, on behalf of Fairway Manor Limited Partnership, a partnership.

Ruth L Jones
Notary Public

My Commission Expires:
4-21-95

(EXHIBIT "A" ATTACHED)

*, President of Argus Development Co., Inc., General Partner ~~of Fairway~~

EXHIBIT "A"
0.11 ACRE PORTION
OF TRACT "E", EL RANCHO ATRISCO PHASE II
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO

LEGAL DESCRIPTION:

AN EASEMENT FOR DRAINAGE WITHIN THE TOWN OF ATRISCO GRANT "PROJECTED" SECTION 3, TOWNSHIP 10 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO COMPRISING A PORTION OF TRACT "E" OF EL RANCHO ATRISCO DE LOS SANTOS SUBDIVISION AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JUNE 25, 1982 IN VOLUME C-19, FOLIO 181 SAID EASEMENT BEING A STRIP OF LAND FIFTY (50) FEET IN WIDTH, BEING 25 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTER LINE:

BEGINNING AT A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF A.M.A.F.C.A. RINCONADA CHANNEL (50' R/W) AS THE SAME IS SHOWN AND DESIGNATED ON THE CORRECTED REPLAT OF COLLEGE PARK WEST FILED IN THE OFFICE OF COUNTY CLERK OF BERNALILLO COUNTY, ON MAY 28, 1984 IN VOLUME C-19, FOLIO 30 SAID POINT BEING THE NORTHEAST CORNER OF SAID TRACT "E" OF EL RANCHO ATRISCO DE LOS SANTOS; THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N89°46'46"W, 100.15 FEET; TO THE TRUE PLACE OF BEGINNING OF THE EASEMENT HEREIN DESCRIBED; THENCE, LEAVING THE SAID SOUTHERLY RIGHT-OF-WAY LINE RINCONADA CHANNEL S02°44'09"W, 100.10 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY-LINE OF SAN BENITO STREET N.W. (50' R/W) SAID POINT BEING THE TERMINUS OF THE EASEMENT LINE HEREIN DESCRIBED.

SURVEYOR'S CERTIFICATION:

I, C.A. SPIROCK, HEREBY AFFIRM THAT I AM A DULY QUALIFIED REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO AND DO CERTIFY THAT THIS DESCRIPTION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND SHOWS ACCURATE DIMENSIONS AND LAND AREA. I FURTHER CERTIFY THAT THIS DESCRIPTION MEETS THE "MINIMUM STANDARD FOR LAND SURVEYS" SET FORTH BY THE STATE OF NEW MEXICO AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

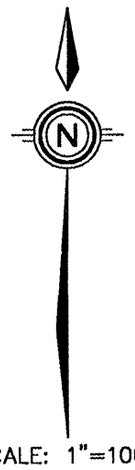
CLIFF A. SPIROCK, N.M.R.P.S. #4972

11/4/93
DATE

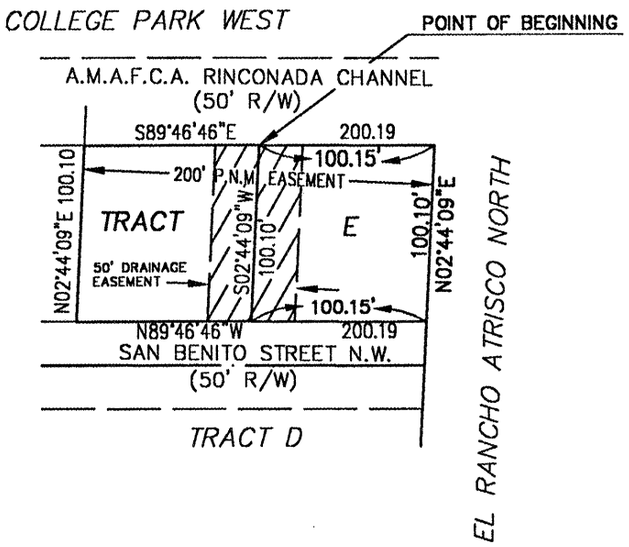
SEE ATTACHED EXHIBIT "A-1"

EXHIBIT "A-1",

0.11 ACRE PORTION
OF TRACT "E", EL RANCHO ATRISCO DE LOS SANTOS
SITUATE WITHIN THE TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10 N., R.2 E, N.M.P.M.
CITY OF ALBUQUERQUE,
BERNALILLO COUNTY, NEW MEXICO



SCALE: 1"=100'



I. PURPOSE AND SCOPE

Argus Development Company is currently planning for the development of Fairway Manor Subdivision. The proposed development consists of approximately 34.46 acres and is to be subdivided into 166 lots.

This report presents an overall Drainage Management and Grading Plan for approval by the City of Albuquerque in order that subsequent subdivision and development may commence.

II. SITE DESCRIPTION AND HISTORY

The site is located north of Vista Allegre Street and south of the AMAFCA Rinconada Channel as indicated on the Vicinity Map following the Tables in this report. This is the completion of El Rancho Atrisco Phase III.

The site slopes from west to east, is not in any flood plain, and is comprised of the Bluepoint Series BCC Type "A" according to the "Drainage Management Plan El Rancho Atrisco, Unit 7" prepared by Denney-Tibljas-McLean and Associates, Inc. This report was also used for off-site drainage to the south and the drainage channel capacity at the south end of Vista del Sur. The "Drainage Management Plan for El Rancho Atrisco Phase III" prepared by Denney-Tibljas-McLean was used for the side weir capacity in Ronda de Lechusas at the Ladera Channel.

III. DESIGN CRITERIA

A. Flood Control Regulations

The drainage plan presented in this report has been designed to comply with AMAFCA resolution 80-15, which requires that proposed land development projects be designed such that no flooding of private properties will occur during any storm up to and including the 100-year frequency event. Additionally, this drainage plan has been designed to comply with current "City of Albuquerque Drainage Ordinance" and Chapter 22 of the Development Process Manual (DPM), and subsequently adopted general policies of the City of Albuquerque.

1. 100-year storm:

    a. Stormwater flow depth not to exceed the top of curb in any street.

    b. Jump depth to be contained within right-of-way.

2. 10-year storm:

    a. Local street - velocity times depth less than 6.5

    b. Arterial streets:

        i. Flow not to exceed a depth of 0.50
        ii. Velocity times depth less than 6.5
        iii. One driving lane in each direction free of stormwater

B. Engineering Parameters

In accordance with AMAFCA criteria, all hydrological analysis is based on the 100-year frequency, 6-hour duration storm, as represented in Section 22.2, Hydrology, of the "Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January, 1993".

Ten-year, 6-hour values were also used for subcatchments, in accordance with City drainage policies regarding street flow.

The four rainfalls pertinent to the study are as follows:

	10-Year	100-Year
One-Hour	1.26"	1.88"
Six-Hour	1.47"	2.21"

IV. COMPUTATIONAL PROCEDURES

The analysis approach follows standard engineering practice. Key points of confluence were selected and the associated individual and aggregate contributing basins were subsequently defined.

Hydrological computations were accomplished by means of the March 1992 version of AHYMO Computer Program as developed by AMAFCA. The input parameters and resulting flows for the basins are summarized on Table 1. Summary and detailed AHYMO printouts are contained in Appendix A.

Times of concentration were estimated using the Upland Method and then converted to times to peak (Lg), in accordance with the above referenced Section 22.2 which also establishes the minimum time of concentration as 12 minutes.

Flow characteristics for conveyance swales, channels, and streets were analyzed based on the Manning equation for uniform flow. Streets are assumed to have a 2% cross slope from lip of gutter to crown and curb and gutter per City of Albuquerque Standard Details. Finished grade at the right-of-way is 0.33' above top of curb.

V. OFF-SITE DRAINAGE

No off-site drainage enters this site due to grading of the PNM Easement, however; on-site drainage will flow in Vista del Sur and Ronda de Lechusas south of the new development. The "Unit 7" Report previously mentioned indicates a flow of 25.6 cfs exiting our site from Vista del Sur and 13 cfs at Ronda de Lechusas. The Vista del Sur flow will be decreased to 9.23 cfs from areas 102.3 and 103 (see Conceptual Grading and Drainage Plan at the end of this report). The concrete rundown capacity at the end of Vista de Sur was checked by adding the 9.23 cfs to the "Unit 7" Report flow of 36.4 cfs. This combined flow of 45.63 cfs is within the rundowns capacity of 55.2 cfs.

The street flow capacity for Ronda de Lechusas was checked using HEC-2. The "Unit 7" report's flow of 49.8 cfs will produce a flow depth of 0.69'. The flow exiting our site will be increased from 13 cfs to 19 cfs. This net flow of 55.81 cfs at the Ladera Channel, with a flow depth of 0.72' and a sub-critical velocity of 3.14 fps, will be contained within the right-of-way. Additional height will be added to the existing water blocks along Ronda de

Lechusas (See Schematic preceding "TABLES") to protect property on adjacent streets. Using the coefficient (C=4.1 "Open Channel Flow" by: Henderson) from the "Phase III" Report previously mentioned, the weir will have a flow depth of 0.49' on each side.

A diversion swale and temporary desiltation pond is to be constructed through the PNM easement to protect the development from off-site drainage to the west. This area will drain to the Ladera Channel until future development west of the PNM easement diverts the flow to the AMAFCA Rinconada Channel. At this time, the temporary desiltation pond will be removed and the swale will serve only the easement.

VI. ON-SITE DRAINAGE

The on-site drainage will be contained with street flow. Flow from drainage areas 101, 102.1, 102.2, 104, and 105 will be collected in a storm drain and discharged into the AMAFCA Rinconada Channel via a 20' drainage right-of-way at the northeast corner of the subdivision. Watershed area 103 will flow to Sol Poniente Road and then combine with area 102.3 in Vista del Sure. Ronda de Lechusas will serve as the collector street for drainage area 104.1 Emergency overflow channels will protect the areas around the sumps. The two sumps in San Benito Street and Vista del Sur will have emergency overflow ability to the cul-de-sac at the intersections of those two streets.

VII. EROSION CONTROL

Control of excessive soil erosion into City streets and drainage improvements during construction will be accomplished by use of temporary lot line, water-trap berms. These will be windrowed into place following mass grading operations and left in place until each home is constructed and sold. The Conceptual Grading Plan at the end of this report illustrates the dimensions of these berms, and they will be located along those boundaries of each lot which are common to City rights-of-way or public easements.

where on plan?

TABLE 1
FUTURE DEVELOPMENT CONDITIONS

					LAND TREATMENT				INCREMENTAL		FUTURE TOTAL	
Basin I.D.	Area (Sq.Mi.)	Contr. Basin	Sum Area (Sq.Mi.)	T_c (Min.)	A	B	C	D	Q_{100} (cfs)	Q_{10} (cfs)	Q_{100} (cfs)	Q_{10} (cfs)
100	0.0168	100	0.0168	12	0	27.1	27.1	45.8	35.96	20.68	35.96	20.68
102.1	0.0012	102.1	0.0012	12	0	27.1	27.1	45.8	2.58	1.49	2.58	1.49
102.2	0.0034	102.2	0.0034	12	0	27.1	27.1	45.8	7.29	4.19	7.29	4.19
102.3	0.0012	102.3	0.0012	12	0	27.1	27.1	45.8	2.58	1.49	2.58	1.49
103	0.0031	103	0.0031	12	0	27.1	27.1	45.8	6.65	3.82	6.65	3.82
104	0.0133	104	0.0133	12	0	27.1	27.1	45.8	28.47	16.38	28.47	16.38
104.1	0.0057	104.1	0.0057	12	0	27.1	27.1	45.8	12.21	7.02	12.21	7.02
105	0.0120	104	0.0253	12	0	27.1	27.1	45.8	25.69	14.78	54.16	31.15
Ronda de Lechusas Flow at Weir											55.81	
Vista del Sur Flow at Rundown											45.63	

requires std C&G

TABLE 2

STREET FLOW CHARACTERISTICS

STREET	LOCATION	Q100	ST. WIDTH	% SLOPE	Dn	Vn	AREA	TOPWID	F	Dc	Vc
LOMA PEDREGOSA	1+00-5+65	2.06	25' MOUNT	0.50	0.21	1.23	1.68	18.93	0.73	0.19	1.61
	5+65-END	4.12	25' MOUNT	0.50	0.26	1.45	2.84	24.75	0.75	0.24	1.85
LA VIENTA	ALL OF ST	2.57	25' MOUNT	0.50	0.22	1.30	1.98	20.61	0.74	0.20	1.68
JAL PL.	1+00-5+69	11.56	25' MOUNT	0.50	0.36	2.15	5.39	26.25	0.84	0.34	2.43
	5+69-6+59	25.69	26' STAND	0.50	0.54	2.94	8.75	26.28	0.90	0.52	3.19
DANIELITO	ALL OF ST	13.70	25' MOUNT	0.53	0.38	2.34	5.86	26.25	0.87	0.36	2.59
SIERRA RICA	1+00-3+85	5.75	25' MOUNT	0.57	0.28	1.70	3.38	25.79	0.83	0.26	1.97
	3+85-END	6.10	25' MOUNT	0.50	0.29	1.67	3.65	25.89	0.78	0.27	2.01
ESCARPA	1+00-3+55	6.65	25' MOUNT	0.50	0.30	1.74	3.82	25.96	0.80	0.28	2.06
	3+55-END	3.96	25' MOUNT	0.53	0.26	1.47	2.70	24.12	0.77	0.23	1.83
VISTA DEL SUR	1+00-5+60	7.29	25' MOUNT	0.50	0.31	1.79	4.07	26.05	0.80	0.28	2.13
SAN BENITO	1+00-6+23	8.99	26' STAND	0.60	0.38	2.04	4.41	26.19	0.88	0.36	2.28
	6+23-11+58	17.98	26' STAND	0.60	0.46	2.68	6.71	26.24	0.93	0.45	2.83
	11+58-15+40	35.96	26' STAND	0.60	0.62	3.35	10.74	26.31	0.92	0.60	3.53
RONDA	1+00-5+00	18.45	36' STAND	0.50	0.49	2.26	8.17	36.25	0.84	0.46	2.58
	5+00-7+55	5.70	36' STAND	0.40	0.34	1.62	3.52	25.96	0.78	0.31	2.03
	7+55-13+19	19.01	40' STAND	0.40	0.51	2.05	9.28	40.26	0.75	0.47	2.53
	CHANNEL	55.81	40' STAND	0.40	0.72	3.14	17.76	40.34	0.83	0.67	3.58
	EXISTING	49.80	40' STAND	0.40	0.69	3.01	16.57	40.34	0.83	0.64	3.46

10 YEAR POST-DEVELOPMENT - SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992 RUN DATE (MON/DAY/YR) =07/07/1993
INPUT FILE = FAIR10PO.DAT USER NO.= J_HUGHES.S92

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
										PAGE = 1
*S	FAIRWAY MANOR - 10 YEAR POST DEVELOPMENT									
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 1.470
*S	FAIRWAY MANOR - 100 YEAR POST DEVELOPMENT									
COMPUTE NM HYD	101.00	-	1	.01680	20.68	.664	.74122	1.499	1.924	PER IMP= 45.80
COMPUTE NM HYD	102.10	-	2	.00120	1.49	.047	.74122	1.499	1.935	PER IMP= 45.80
COMPUTE NM HYD	102.20	-	3	.00340	4.19	.134	.74122	1.499	1.927	PER IMP= 45.80
COMPUTE NM HYD	104.00	-	4	.01330	16.38	.526	.74123	1.499	1.924	PER IMP= 45.80
COMPUTE NM HYD	105.00	-	5	.01200	14.78	.474	.74122	1.499	1.924	PER IMP= 45.80
*S	ON-SITE FLOW IN RONDA DE LACHUSAS									
ADD HYD	105.10	4& 5	6	.02530	31.15	1.000	.74120	1.499	1.924	
*S	AREAS 101, 102.1, 102.2, 104, & 105 DRAIN NORTH TO THE LA RINCONADA CHANNEL									
ADD HYD	101.11	1& 6	1	.04210	51.83	1.664	.74120	1.499	1.924	
ADD HYD	101.12	1& 3	1	.04550	56.03	1.799	.74120	1.499	1.924	
*S	TOTAL FLOW TO THE LA RINCONADA CHANNEL									
ADD HYD	101.12	1& 2	1	.04670	57.51	1.846	.74119	1.499	1.924	
COMPUTE NM HYD	103.00	-	3	.00310	3.82	.123	.74123	1.499	1.927	PER IMP= 45.80
COMPUTE NM HYD	102.30	-	4	.00120	1.49	.047	.74122	1.499	1.935	PER IMP= 45.80
*S	FLOW EXITING SITE AT VISTA DEL SUR									
ADD HYD	105.10	3& 4	2	.00430	5.31	.170	.74109	1.499	1.929	
COMPUTE NM HYD	104.10	-	3	.00570	7.02	.225	.74122	1.499	1.925	PER IMP= 45.80
*S	ONSITE FLOW EXITING AT RONDA DE LECHUSAS									
COMPUTE NM HYD	90.00	-	8	.02130	3.40	.096	.08473	1.532	.250	PER IMP= .00
COMPUTE NM HYD	91.00	-	9	.00790	1.28	.036	.08473	1.532	.253	PER IMP= .00
*S TOTAL INFLOW INTO POND										
ADD HYD	90.10	8& 9	10	.02920	4.68	.132	.08472	1.532	.251	
*S ROUTE HYDOGRAPH THRU POND										
ROUTE RESERVOIR	90.11	10	13	.02920	.97	.132	.08472	1.865	.052	AC-FT= .075
COMPUTE NM HYD	92.00	-	11	.00790	1.28	.036	.08473	1.532	.253	PER IMP= .00
ADD HYD	90.20	13&11	12	.03710	2.01	.168	.08471	1.565	.085	
FINISH										

100 YEAR POST-DEVELOPMENT - SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992 RUN DATE (MON/DAY/YR) =07/07/1993
INPUT FILE = FAIR99PO.DAT USER NO.= J_HUGHES.S92

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S	FAIRWAY MANOR - 100 YEAR POST DEVELOPMENT									
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.210
COMPUTE NM HYD	101.00	-	1	.01680	35.96	1.211	1.35139	1.499	3.344	PER IMP= 45.80
COMPUTE NM HYD	102.10	-	2	.00120	2.58	.086	1.35139	1.499	3.363	PER IMP= 45.80
COMPUTE NM HYD	102.20	-	3	.00340	7.29	.245	1.35139	1.499	3.350	PER IMP= 45.80
COMPUTE NM HYD	104.00	-	4	.01330	28.47	.959	1.35139	1.499	3.345	PER IMP= 45.80
COMPUTE NM HYD	105.00	-	5	.01200	25.69	.865	1.35139	1.499	3.345	PER IMP= 45.80
*S	ON-SITE FLOW IN RONDA DE LACHUSAS									
ADD HYD	105.10	4& 5	6	.02530	54.16	1.823	1.35137	1.499	3.345	
*S AREAS 101, 102.1, 102.2, 104, & 105 DRAIN NORTH TO THE LA RINCONADA CHANNEL										
ADD HYD	101.11	1& 6	1	.04210	90.12	3.034	1.35137	1.499	3.345	
ADD HYD	101.12	1& 3	1	.04550	97.41	3.279	1.35137	1.499	3.345	
*S	TOTAL FLOW TO THE LA RINCONADA CHANNEL									
ADD HYD	101.12	1& 2	1	.04670	99.99	3.366	1.35136	1.499	3.345	
COMPUTE NM HYD	103.00	-	3	.00310	6.65	.223	1.35139	1.499	3.351	PER IMP= 45.80
COMPUTE NM HYD	102.30	-	4	.00120	2.58	.086	1.35139	1.499	3.363	PER IMP= 45.80
*S	FLOW EXITING SITE AT VISTA DEL SUR									
ADD HYD	105.10	3& 4	2	.00430	9.23	.310	1.35127	1.499	3.354	
COMPUTE NM HYD	104.10	-	3	.00570	12.21	.411	1.35139	1.499	3.347	PER IMP= 45.80
*S	ONSITE FLOW EXITING AT RONDA DE LECHUSAS									
COMPUTE NM HYD	90.00	-	8	.02130	17.78	.506	.44534	1.532	1.304	PER IMP= .00
COMPUTE NM HYD	91.00	-	9	.00790	6.66	.188	.44534	1.532	1.317	PER IMP= .00
*S TOTAL INFLOW INTO POND										
ADD HYD	90.10	8& 9	10	.02920	24.44	.694	.44533	1.532	1.308	
*S ROUTE HYDOGRAPH THRU POND										
ROUTE RESERVOIR	90.11	10	13	.02920	5.77	.694	.44533	1.832	.309	AC-FT= .415
COMPUTE NM HYD	92.00	-	11	.00790	6.66	.188	.44534	1.532	1.317	PER IMP= .00
ADD HYD	90.20	13&11	12	.03710	9.99	.881	.44532	1.598	.421	
FINISH										

10 YEAR POST-DEVELOPMENT - DETAILED PRINTOUT

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   AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
        RUN DATE (MON/DAY/YR) = 07/07/1993
        START TIME (HR:MIN:SEC) = 10:56:20     USER NO.= J_HUGHES.S92
        INPUT FILE = FAIR10PO.DAT

*S                FAIRWAY MANOR - 10 YEAR POST DEVELOPMENT


START             TIME=0.0 HR PUNCH CODE=0

RAINFALL          TYPE=1 RAIN QUARTER=0.0
                  RAIN ONE=1.26 IN RAIN SIX=1.47 IN
                  RAIN DAY=1.77 IN DT=0.0333 HRS

              COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
              DT =    .033300 HOURS       END TIME =     5.994000 HOURS
                 .0000   .0010   .0020   .0030   .0040   .0051   .0062
                 .0073   .0085   .0096   .0108   .0121   .0133   .0147
                 .0160   .0174   .0188   .0203   .0218   .0234   .0250
                 .0267   .0284   .0303   .0322   .0342   .0362   .0384
                 .0407   .0431   .0457   .0491   .0529   .0568   .0650
                 .0839   .1129   .1546   .2117   .2868   .3826   .5019
                 .6476   .7875   .8450   .8933   .9362   .9752  1.0111
                1.0444  1.0755  1.1047  1.1322  1.1581  1.1825  1.2057
                1.2276  1.2485  1.2682  1.2869  1.3047  1.3095  1.3133
                1.3169  1.3203  1.3236  1.3267  1.3297  1.3326  1.3354
                1.3380  1.3406  1.3431  1.3456  1.3479  1.3502  1.3525
                1.3546  1.3567  1.3588  1.3608  1.3628  1.3647  1.3666
                1.3685  1.3703  1.3720  1.3738  1.3755  1.3771  1.3788
                1.3804  1.3820  1.3835  1.3851  1.3866  1.3881  1.3895
                1.3910  1.3924  1.3938  1.3952  1.3965  1.3979  1.3992
                1.4005  1.4018  1.4031  1.4043  1.4056  1.4068  1.4080
                1.4092  1.4104  1.4116  1.4127  1.4139  1.4150  1.4161
                1.4172  1.4183  1.4194  1.4205  1.4216  1.4226  1.4237
                1.4247  1.4257  1.4267  1.4277  1.4287  1.4297  1.4307
                1.4317  1.4326  1.4336  1.4345  1.4354  1.4364  1.4373
                1.4382  1.4391  1.4400  1.4409  1.4418  1.4427  1.4435
                1.4444  1.4453  1.4461  1.4470  1.4478  1.4486  1.4495
                1.4503  1.4511  1.4519  1.4527  1.4535  1.4543  1.4551
                1.4559  1.4567  1.4574  1.4582  1.4590  1.4597  1.4605
                1.4612  1.4620  1.4627  1.4634  1.4642  1.4649  1.4656
                1.4663  1.4671  1.4678  1.4685  1.4692  1.4699

*S                FAIRWAY MANOR - 100 YEAR POST DEVELOPMENT
*                 ******************************************
COMPUTE NM HYD    ID=1 HYD NO=101.0 DA=0.0168 SQ MI
                  PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                  TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   30.378    CFS   UNIT VOLUME =    .9990       B =   526.28      P60 = 1.2600
   AREA =      .007694 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .124821HR    TP =   .133300HR    K/TP RATIO =   .936388     SHAPE CONSTANT, N =  3.776847
   UNIT PEAK =   23.226    CFS   UNIT VOLUME =    .9997       B =   340.01      P60 = 1.2600
   AREA =      .009106 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300
```

```
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.00


   RUNOFF VOLUME =      .74122 INCHES     =        .6641 ACRE-FEET
   PEAK DISCHARGE RATE =      20.68 CFS  AT   1.499 HOURS   BASIN AREA =   .0168 SQ. MI.


COMPUTE NM HYD      ID=2 HYD NO=102.1 DA=0.0012 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   2.1698    CFS   UNIT VOLUME =    .9941       B =   526.28      P60 = 1.2600
   AREA =      .000550 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .124821HR    TP =   .133300HR    K/TP RATIO =   .936388     SHAPE CONSTANT, N =  3.776847
   UNIT PEAK =   1.6590    CFS   UNIT VOLUME =    .9918       B =   340.01      P60 = 1.2600
   AREA =      .000650 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=2 CODE=1

                                PARTIAL HYDROGRAPH   102.10


   RUNOFF VOLUME =      .74122 INCHES     =        .0474 ACRE-FEET
   PEAK DISCHARGE RATE =       1.49 CFS  AT   1.499 HOURS   BASIN AREA =   .0012 SQ. MI.


COMPUTE NM HYD      ID=3 HYD NO=102.2 DA=0.0034 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   6.1479    CFS   UNIT VOLUME =    .9975       B =   526.28      P60 = 1.2600
   AREA =      .001557 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .124821HR    TP =   .133300HR    K/TP RATIO =   .936388     SHAPE CONSTANT, N =  3.776847
   UNIT PEAK =   4.7004    CFS   UNIT VOLUME =    .9974       B =   340.01      P60 = 1.2600
   AREA =      .001843 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=3 CODE=1

                                PARTIAL HYDROGRAPH   102.20


   RUNOFF VOLUME =      .74122 INCHES     =        .1344 ACRE-FEET
   PEAK DISCHARGE RATE =       4.19 CFS  AT   1.499 HOURS   BASIN AREA =   .0034 SQ. MI.
```

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*                   ******************************************
COMPUTE NM HYD      ID=4 HYD NO=104.0 DA=0.0133 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N = 7.106420
   UNIT PEAK =  24.049    CFS   UNIT VOLUME =    .9989      B =  526.28      P60 = 1.2600
   AREA =     .006091 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .033300


   K =  .124821HR    TP =  .133300HR    K/TP RATIO =  .936388     SHAPE CONSTANT, N = 3.776847
   UNIT PEAK =  18.387    CFS   UNIT VOLUME =    .9995      B =  340.01      P60 = 1.2600
   AREA =     .007209 SQ MI    IA =    .42500 INCHES    INF =  1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .033300

PRINT HYD           ID=4 CODE=1

                                  PARTIAL HYDROGRAPH   104.00


   RUNOFF VOLUME =      .74123 INCHES     =        .5258 ACRE-FEET
   PEAK DISCHARGE RATE =     16.38 CFS  AT   1.499 HOURS   BASIN AREA =   .0133 SQ. MI.



COMPUTE NM HYD      ID=5 HYD NO=105.0 DA=0.012 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N = 7.106420
   UNIT PEAK =  21.698    CFS   UNIT VOLUME =    .9988      B =  526.28      P60 = 1.2600
   AREA =     .005496 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .033300


   K =  .124821HR    TP =  .133300HR    K/TP RATIO =  .936388     SHAPE CONSTANT, N = 3.776847
   UNIT PEAK =  16.590    CFS   UNIT VOLUME =    .9994      B =  340.01      P60 = 1.2600
   AREA =     .006504 SQ MI    IA =    .42500 INCHES    INF =  1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .033300

PRINT HYD           ID=5 CODE=1

                                  PARTIAL HYDROGRAPH   105.00


   RUNOFF VOLUME =      .74122 INCHES     =        .4744 ACRE-FEET
   PEAK DISCHARGE RATE =     14.78 CFS  AT   1.499 HOURS   BASIN AREA =   .0120 SQ. MI.



*S                  ON-SITE FLOW IN RONDA DE LACHUSAS
ADD HYD             ID=6 HYD NO=105.1 ID I=4 ID II=5
PRINT HYD           ID=6 CODE=1

                                  PARTIAL HYDROGRAPH   105.10


   RUNOFF VOLUME =      .74120 INCHES     =       1.0001 ACRE-FEET
```

PEAK DISCHARGE RATE = 31.15 CFS AT 1.499 HOURS BASIN AREA = .0253 SQ. MI.

```
*S   AREAS 101, 102.1, 102.2, 104, & 105 DRAIN NORTH TO THE LA RINCONADA CHANNEL
ADD HYD             ID=1 HYD NO=101.11 ID I=1 ID II=6
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.11


    RUNOFF VOLUME =      .74120 INCHES     =      1.6642 ACRE-FEET
    PEAK DISCHARGE RATE =      51.83 CFS  AT   1.499 HOURS   BASIN AREA =   .0421 SQ. MI.



ADD HYD             ID=1 HYD NO=101.12 ID I=1 ID II=3
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.12


    RUNOFF VOLUME =      .74120 INCHES     =      1.7986 ACRE-FEET
    PEAK DISCHARGE RATE =      56.03 CFS  AT   1.499 HOURS   BASIN AREA =   .0455 SQ. MI.



*S                  TOTAL FLOW TO THE LA RINCONADA CHANNEL
ADD HYD             ID=1 HYD NO=101.12 ID I=1 ID II=2
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.12


    RUNOFF VOLUME =      .74119 INCHES     =      1.8461 ACRE-FEET
    PEAK DISCHARGE RATE =      57.51 CFS  AT   1.499 HOURS   BASIN AREA =   .0467 SQ. MI.



*                   ****************************************
COMPUTE NM HYD      ID=3 HYD NO=103.0 DA=0.0031 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

    K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
    UNIT PEAK =   5.6054    CFS   UNIT VOLUME =    .9972       B =   526.28      P60 = 1.2600
    AREA =      .001420 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


    K =   .124821HR    TP =   .133300HR    K/TP RATIO =   .936388     SHAPE CONSTANT, N =  3.776847
    UNIT PEAK =   4.2857    CFS   UNIT VOLUME =    .9971       B =   340.01      P60 = 1.2600
    AREA =      .001680 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=3 CODE=1

                                PARTIAL HYDROGRAPH   103.00


    RUNOFF VOLUME =      .74123 INCHES     =       .1225 ACRE-FEET
    PEAK DISCHARGE RATE =       3.82 CFS  AT   1.499 HOURS   BASIN AREA =   .0031 SQ. MI.
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COMPUTE NM HYD       ID=4 HYD NO=102.3 DA=0.0012 SQ MI
                     PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                     TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =  2.1698    CFS   UNIT VOLUME =    .9941      B =  526.28      P60 = 1.2600
   AREA =      .000550 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =  .124821HR    TP =  .133300HR    K/TP RATIO =  .936388     SHAPE CONSTANT, N =  3.776847
   UNIT PEAK =  1.6590    CFS   UNIT VOLUME =    .9918      B =  340.01      P60 = 1.2600
   AREA =      .000650 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD            ID=4 CODE=1

                                PARTIAL HYDROGRAPH   102.30


   RUNOFF VOLUME =      .74122 INCHES     =        .0474 ACRE-FEET
   PEAK DISCHARGE RATE =      1.49 CFS  AT   1.499 HOURS   BASIN AREA =   .0012 SQ. MI.



*S                   FLOW EXITING SITE AT VISTA DEL SUR
ADD HYD              ID=2 HYD NO=105.1 ID I=3 ID II=4
PRINT HYD            ID=2 CODE=1

                                PARTIAL HYDROGRAPH   105.10


   RUNOFF VOLUME =      .74109 INCHES     =        .1700 ACRE-FEET
   PEAK DISCHARGE RATE =      5.31 CFS  AT   1.499 HOURS   BASIN AREA =   .0043 SQ. MI.



*                    ****************************************
COMPUTE NM HYD       ID=3 HYD NO=104.1 DA=0.0057 SQ MI
                     PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                     TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =  10.307    CFS   UNIT VOLUME =    .9982      B =  526.28      P60 = 1.2600
   AREA =      .002611 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =  .124821HR    TP =  .133300HR    K/TP RATIO =  .936388     SHAPE CONSTANT, N =  3.776847
   UNIT PEAK =  7.8801    CFS   UNIT VOLUME =    .9986      B =  340.01      P60 = 1.2600
   AREA =      .003089 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

*S                   ONSITE FLOW EXITING AT RONDA DE LECHUSAS
PRINT HYD            ID=3 CODE=1

                                PARTIAL HYDROGRAPH   104.10
```

```
    RUNOFF VOLUME =      .74122 INCHES     =        .2253 ACRE-FEET
    PEAK DISCHARGE RATE =       7.02 CFS  AT   1.499 HOURS   BASIN AREA =   .0057 SQ. MI.


*                   ****************************************
COMPUTE NM HYD      ID=8 HYD NO=90.0 DA=0.0213 SQ MI
                    PER A=100. PER B=0. PER C=0. PER D=0.
                    TP=-0.1349 HR MASS RAIN=-1

    K =   .181211HR    TP =   .134900HR    K/TP RATIO =  1.343299     SHAPE CONSTANT, N =  2.679055
    UNIT PEAK =   40.187    CFS   UNIT VOLUME =    .9987      B =   254.52      P60 = 1.2600
    AREA =      .021300 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=8 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.00


    RUNOFF VOLUME =      .08473 INCHES     =        .0963 ACRE-FEET
    PEAK DISCHARGE RATE =       3.40 CFS  AT   1.532 HOURS   BASIN AREA =   .0213 SQ. MI.


COMPUTE NM HYD      ID=9 HYD NO=91.0 DA=0.0079 SQ MI
                    PER A=100. PER B=0. PER C=0. PER D=0.
                    TP=-0.1333 HR MASS RAIN=-1

    K =   .179062HR    TP =   .133300HR    K/TP RATIO =  1.343299     SHAPE CONSTANT, N =  2.679055
    UNIT PEAK =   15.084    CFS   UNIT VOLUME =    .9981      B =   254.52      P60 = 1.2600
    AREA =      .007900 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=9 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    91.00


    RUNOFF VOLUME =      .08473 INCHES     =        .0357 ACRE-FEET
    PEAK DISCHARGE RATE =       1.28 CFS  AT   1.532 HOURS   BASIN AREA =   .0079 SQ. MI.


*S TOTAL INFLOW INTO POND
ADD HYD             ID=10 HYD NO=90.1 ID I=8 ID II=9
PRINT HYD           ID=10 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.10


    RUNOFF VOLUME =      .08472 INCHES     =        .1319 ACRE-FEET
    PEAK DISCHARGE RATE =       4.68 CFS  AT   1.532 HOURS   BASIN AREA =   .0292 SQ. MI.


PUNCH HYD           ID=10
*S ROUTE HYDOGRAPH THRU POND
ROUTE RESERVOIR     ID=13  HYD NO=90.11 INFLOW ID=10  CODE=5
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0.0	0.00	29.50
0.6	0.01	30.00
0.8	0.04	30.50
1.0	0.08	31.00
1.2	0.15	31.50
3.2	0.23	32.00
5.2	0.34	32.50
6.2	0.47	33.00
6.6	0.63	33.50
7.0	0.84	34.00
7.8	1.09	34.50

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	29.50	.000	.00
.17	.00	29.50	.000	.00
.33	.00	29.50	.000	.00
.50	.00	29.50	.000	.00
.67	.00	29.50	.000	.00
.83	.00	29.50	.000	.00
1.00	.00	29.50	.000	.00
1.17	.00	29.50	.000	.00
1.33	.00	29.50	.000	.00
1.50	4.36	30.12	.017	.65
1.67	2.88	30.77	.062	.91
1.83	1.15	30.93	.075	.97
2.00	.46	30.90	.072	.96
2.16	.33	30.80	.064	.92
2.33	.25	30.70	.056	.88
2.50	.18	30.59	.047	.83
2.66	.13	30.46	.038	.79
2.83	.10	30.32	.029	.73
3.00	.07	30.18	.021	.67
3.16	.05	30.04	.013	.62
3.33	.04	29.80	.006	.36
3.50	.03	29.65	.003	.18
3.66	.02	29.58	.002	.09
3.83	.02	29.54	.001	.05
4.00	.01	29.52	.000	.03
4.16	.01	29.52	.000	.02
4.33	.01	29.51	.000	.01
4.50	.00	29.51	.000	.01
4.66	.00	29.50	.000	.01
4.83	.00	29.50	.000	.00

PEAK DISCHARGE = .975 CFS - PEAK OCCURS AT HOUR 1.86
MAXIMUM WATER SURFACE ELEVATION = 30.937
MAXIMUM STORAGE = .0749 AC-FT INCREMENTAL TIME= .033300HRS

PRINT HYD ID=13 CODE=1

OUTFLOW HYDROGRAPH REACH 90.11

RUNOFF VOLUME = .08472 INCHES = .1319 ACRE-FEET
PEAK DISCHARGE RATE = .97 CFS AT 1.865 HOURS BASIN AREA = .0292 SQ. MI.

```
COMPUTE NM HYD       ID=11 HYD NO=92.0 DA=0.0079 SQ MI
                     PER A=100. PER B=0. PER C=0. PER D=0.
                     TP=-0.1333 HR MASS RAIN=-1

   K =   .179062HR    TP =   .133300HR    K/TP RATIO =  1.343299     SHAPE CONSTANT, N =  2.679055
   UNIT PEAK =   15.084    CFS   UNIT VOLUME =    .9981       B =   254.52      P60 = 1.2600
   AREA =      .007900 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD            ID=11 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    92.00


   RUNOFF VOLUME =      .08473 INCHES     =        .0357 ACRE-FEET
   PEAK DISCHARGE RATE =       1.28 CFS  AT   1.532 HOURS   BASIN AREA =   .0079 SQ. MI.



ADD HYD              ID=12 HYD NO=90.2 ID I=13 ID II=11
PRINT HYD            ID=12 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.20


   RUNOFF VOLUME =      .08471 INCHES     =        .1676 ACRE-FEET
   PEAK DISCHARGE RATE =       2.01 CFS  AT   1.565 HOURS   BASIN AREA =   .0371 SQ. MI.



FINISH

   NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 10:56:28
```

100 YEAR POST-DEVELOPMENT - DETAILED PRINTOUT

```
   AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
        RUN DATE (MON/DAY/YR) = 07/07/1993
        START TIME (HR:MIN:SEC) = 10:53:19     USER NO.= J_HUGHES.S92
        INPUT FILE = FAIR99PO.DAT

*S                FAIRWAY MANOR - 100 YEAR POST DEVELOPMENT


START             TIME=0.0 HR PUNCH CODE=0

RAINFALL          TYPE=1 RAIN QUARTER=0.0
                  RAIN ONE=1.88 IN RAIN SIX=2.21 IN
                  RAIN DAY=2.66 IN DT=0.0333 HRS

              COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
              DT =    .033300 HOURS      END TIME =    5.994000 HOURS
                 .0000  .0016  .0033  .0050  .0067  .0084  .0102
                 .0121  .0140  .0159  .0179  .0199  .0220  .0242
                 .0264  .0287  .0310  .0334  .0360  .0385  .0412
                 .0440  .0469  .0499  .0530  .0563  .0597  .0633
                 .0671  .0711  .0753  .0805  .0860  .0919  .1042
                 .1322  .1756  .2379  .3230  .4350  .5779  .7560
                 .9734 1.1822 1.2679 1.3399 1.4039 1.4621 1.5157
                1.5654 1.6119 1.6554 1.6964 1.7350 1.7716 1.8061
                1.8388 1.8699 1.8994 1.9273 1.9539 1.9612 1.9669
                1.9724 1.9777 1.9826 1.9874 1.9920 1.9964 2.0007
                2.0048 2.0088 2.0126 2.0164 2.0200 2.0235 2.0270
                2.0303 2.0336 2.0368 2.0399 2.0429 2.0459 2.0488
                2.0517 2.0545 2.0572 2.0599 2.0625 2.0651 2.0677
                2.0702 2.0726 2.0750 2.0774 2.0798 2.0821 2.0843
                2.0866 2.0888 2.0909 2.0931 2.0952 2.0973 2.0993
                2.1014 2.1034 2.1054 2.1073 2.1092 2.1112 2.1130
                2.1149 2.1167 2.1186 2.1204 2.1222 2.1239 2.1257
                2.1274 2.1291 2.1308 2.1325 2.1341 2.1358 2.1374
                2.1390 2.1406 2.1422 2.1438 2.1453 2.1469 2.1484
                2.1499 2.1514 2.1529 2.1544 2.1558 2.1573 2.1587
                2.1602 2.1616 2.1630 2.1644 2.1658 2.1671 2.1685
                2.1699 2.1712 2.1725 2.1739 2.1752 2.1765 2.1778
                2.1791 2.1803 2.1816 2.1829 2.1841 2.1854 2.1866
                2.1878 2.1891 2.1903 2.1915 2.1927 2.1939 2.1950
                2.1962 2.1974 2.1986 2.1997 2.2009 2.2020 2.2031
                2.2043 2.2054 2.2065 2.2076 2.2087 2.2098

*                 ******************************************
COMPUTE NM HYD    ID=1 HYD NO=101.0 DA=0.0168 SQ MI
                  PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                  TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N = 7.106420
   UNIT PEAK =  30.378    CFS   UNIT VOLUME =    .9990       B =  526.28      P60 = 1.8800
   AREA =      .007694 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =  .118398HR    TP =  .133300HR    K/TP RATIO =  .888205     SHAPE CONSTANT, N = 3.993616
   UNIT PEAK =  24.232    CFS   UNIT VOLUME =    .9999       B =  354.74      P60 = 1.8800
   AREA =      .009106 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300
```

```
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.00


   RUNOFF VOLUME =     1.35139 INCHES     =       1.2108 ACRE-FEET
   PEAK DISCHARGE RATE =      35.96 CFS  AT   1.499 HOURS   BASIN AREA =   .0168 SQ. MI.



COMPUTE NM HYD      ID=2 HYD NO=102.1 DA=0.0012 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   2.1698    CFS   UNIT VOLUME =    .9941       B =   526.28      P60 = 1.8800
   AREA =      .000550 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .118398HR    TP =   .133300HR    K/TP RATIO =   .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =   1.7309    CFS   UNIT VOLUME =    .9930       B =   354.74      P60 = 1.8800
   AREA =      .000650 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=2 CODE=1

                                PARTIAL HYDROGRAPH   102.10


   RUNOFF VOLUME =     1.35139 INCHES     =        .0865 ACRE-FEET
   PEAK DISCHARGE RATE =       2.58 CFS  AT   1.499 HOURS   BASIN AREA =   .0012 SQ. MI.



COMPUTE NM HYD      ID=3 HYD NO=102.2 DA=0.0034 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   6.1479    CFS   UNIT VOLUME =    .9975       B =   526.28      P60 = 1.8800
   AREA =      .001557 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .118398HR    TP =   .133300HR    K/TP RATIO =   .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =   4.9041    CFS   UNIT VOLUME =    .9978       B =   354.74      P60 = 1.8800
   AREA =      .001843 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=3 CODE=1

                                PARTIAL HYDROGRAPH   102.20


   RUNOFF VOLUME =     1.35139 INCHES     =        .2451 ACRE-FEET
   PEAK DISCHARGE RATE =       7.29 CFS  AT   1.499 HOURS   BASIN AREA =   .0034 SQ. MI.
```

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*                   ****************************************
COMPUTE NM HYD      ID=4 HYD NO=104.0 DA=0.0133 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   24.049    CFS   UNIT VOLUME =    .9989      B =   526.28      P60 = 1.8800
   AREA =      .006091 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .118398HR    TP =   .133300HR    K/TP RATIO =   .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =   19.184    CFS   UNIT VOLUME =    .9997      B =   354.74      P60 = 1.8800
   AREA =      .007209 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=4 CODE=1

                                  PARTIAL HYDROGRAPH   104.00


   RUNOFF VOLUME =     1.35139 INCHES     =        .9586 ACRE-FEET
   PEAK DISCHARGE RATE =      28.47 CFS  AT   1.499 HOURS   BASIN AREA =   .0133 SQ. MI.



COMPUTE NM HYD      ID=5 HYD NO=105.0 DA=0.012 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   21.698    CFS   UNIT VOLUME =    .9988      B =   526.28      P60 = 1.8800
   AREA =      .005496 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =   .118398HR    TP =   .133300HR    K/TP RATIO =   .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =   17.309    CFS   UNIT VOLUME =    .9997      B =   354.74      P60 = 1.8800
   AREA =      .006504 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=5 CODE=1

                                  PARTIAL HYDROGRAPH   105.00


   RUNOFF VOLUME =     1.35139 INCHES     =        .8649 ACRE-FEET
   PEAK DISCHARGE RATE =      25.69 CFS  AT   1.499 HOURS   BASIN AREA =   .0120 SQ. MI.



*S                  ON-SITE FLOW IN RONDA DE LACHUSAS
ADD HYD             ID=6 HYD NO=105.1 ID I=4 ID II=5
PRINT HYD           ID=6 CODE=1

                                  PARTIAL HYDROGRAPH   105.10


   RUNOFF VOLUME =     1.35137 INCHES     =       1.8234 ACRE-FEET
   PEAK DISCHARGE RATE =      54.16 CFS  AT   1.499 HOURS   BASIN AREA =   .0253 SQ. MI.
```

```
*S   AREAS 101, 102.1, 102.2, 104, & 105 DRAIN NORTH TO THE LA RINCONADA CHANNEL
ADD HYD             ID=1 HYD NO=101.11 ID I=1 ID II=6
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.11


    RUNOFF VOLUME =     1.35137 INCHES     =       3.0343 ACRE-FEET
    PEAK DISCHARGE RATE =      90.12 CFS  AT   1.499 HOURS   BASIN AREA =   .0421 SQ. MI.



ADD HYD             ID=1 HYD NO=101.12 ID I=1 ID II=3
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.12


    RUNOFF VOLUME =     1.35137 INCHES     =       3.2793 ACRE-FEET
    PEAK DISCHARGE RATE =      97.41 CFS  AT   1.499 HOURS   BASIN AREA =   .0455 SQ. MI.



*S                  TOTAL FLOW TO THE LA RINCONADA CHANNEL
ADD HYD             ID=1 HYD NO=101.12 ID I=1 ID II=2
PRINT HYD           ID=1 CODE=1

                                PARTIAL HYDROGRAPH   101.12


    RUNOFF VOLUME =     1.35136 INCHES     =       3.3658 ACRE-FEET
    PEAK DISCHARGE RATE =      99.99 CFS  AT   1.499 HOURS   BASIN AREA =   .0467 SQ. MI.



*                   ****************************************
COMPUTE NM HYD      ID=3 HYD NO=103.0 DA=0.0031 SQ MI
                    PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                    TP=-0.1333 HR MASS RAIN=-1

    K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
    UNIT PEAK =   5.6054    CFS   UNIT VOLUME =    .9972       B =   526.28      P60 = 1.8800
    AREA =      .001420 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


    K =   .118398HR    TP =   .133300HR    K/TP RATIO =   .888205     SHAPE CONSTANT, N =  3.993616
    UNIT PEAK =   4.4714    CFS   UNIT VOLUME =    .9975       B =   354.74      P60 = 1.8800
    AREA =      .001680 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=3 CODE=1

                                PARTIAL HYDROGRAPH   103.00


    RUNOFF VOLUME =     1.35139 INCHES     =        .2234 ACRE-FEET
    PEAK DISCHARGE RATE =       6.65 CFS  AT   1.499 HOURS   BASIN AREA =   .0031 SQ. MI.
```

```
COMPUTE NM HYD       ID=4 HYD NO=102.3 DA=0.0012 SQ MI
                     PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                     TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =  2.1698    CFS   UNIT VOLUME =    .9941      B =  526.28      P60 = 1.8800
   AREA =      .000550 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =  .118398HR    TP =  .133300HR    K/TP RATIO =  .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =  1.7309    CFS   UNIT VOLUME =    .9930      B =  354.74      P60 = 1.8800
   AREA =      .000650 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD            ID=4 CODE=1

                                PARTIAL HYDROGRAPH   102.30


   RUNOFF VOLUME =     1.35139 INCHES     =        .0865 ACRE-FEET
   PEAK DISCHARGE RATE =       2.58 CFS  AT   1.499 HOURS   BASIN AREA =   .0012 SQ. MI.



*S                   FLOW EXITING SITE AT VISTA DEL SUR
ADD HYD              ID=2 HYD NO=105.1 ID I=3 ID II=4
PRINT HYD            ID=2 CODE=1

                                PARTIAL HYDROGRAPH   105.10


   RUNOFF VOLUME =     1.35127 INCHES     =        .3099 ACRE-FEET
   PEAK DISCHARGE RATE =       9.23 CFS  AT   1.499 HOURS   BASIN AREA =   .0043 SQ. MI.



*                    ****************************************
COMPUTE NM HYD       ID=3 HYD NO=104.1 DA=0.0057 SQ MI
                     PER A=0.0 PER B=27.1 PER C=27.1 PER D=45.8
                     TP=-0.1333 HR MASS RAIN=-1

   K =  .072649HR    TP =  .133300HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =  10.307    CFS   UNIT VOLUME =    .9982      B =  526.28      P60 = 1.8800
   AREA =      .002611 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300


   K =  .118398HR    TP =  .133300HR    K/TP RATIO =  .888205     SHAPE CONSTANT, N =  3.993616
   UNIT PEAK =  8.2216    CFS   UNIT VOLUME =    .9988      B =  354.74      P60 = 1.8800
   AREA =      .003089 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

*S                   ONSITE FLOW EXITING AT RONDA DE LECHUSAS
PRINT HYD            ID=3 CODE=1

                                PARTIAL HYDROGRAPH   104.10
```

```
    RUNOFF VOLUME =     1.35139 INCHES     =        .4108 ACRE-FEET
    PEAK DISCHARGE RATE =      12.21 CFS  AT   1.499 HOURS   BASIN AREA =   .0057 SQ. MI.


*                   ****************************************
COMPUTE NM HYD      ID=8 HYD NO=90.0 DA=0.0213 SQ MI
                    PER A=100. PER B=0. PER C=0. PER D=0.
                    TP=-0.1349 HR MASS RAIN=-1

    K =   .165393HR    TP =   .134900HR    K/TP RATIO =  1.226044     SHAPE CONSTANT, N =  2.903816
    UNIT PEAK =   43.245    CFS   UNIT VOLUME =    .9993       B =   273.88      P60 = 1.8800
    AREA =      .021300 SQ MI    IA =    .65000 INCHES    INF =  1.67000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=8 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.00


    RUNOFF VOLUME =      .44534 INCHES     =        .5059 ACRE-FEET
    PEAK DISCHARGE RATE =      17.78 CFS  AT   1.532 HOURS   BASIN AREA =   .0213 SQ. MI.


COMPUTE NM HYD      ID=9 HYD NO=91.0 DA=0.0079 SQ MI
                    PER A=100. PER B=0. PER C=0. PER D=0.
                    TP=-0.1333 HR MASS RAIN=-1

    K =   .163432HR    TP =   .133300HR    K/TP RATIO =  1.226044     SHAPE CONSTANT, N =  2.903816
    UNIT PEAK =   16.232    CFS   UNIT VOLUME =    .9988       B =   273.88      P60 = 1.8800
    AREA =      .007900 SQ MI    IA =    .65000 INCHES    INF =  1.67000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=9 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    91.00


    RUNOFF VOLUME =      .44534 INCHES     =        .1876 ACRE-FEET
    PEAK DISCHARGE RATE =       6.66 CFS  AT   1.532 HOURS   BASIN AREA =   .0079 SQ. MI.


*S TOTAL INFLOW INTO POND
ADD HYD             ID=10 HYD NO=90.1 ID I=8 ID II=9
PRINT HYD           ID=10 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.10


    RUNOFF VOLUME =      .44533 INCHES     =        .6935 ACRE-FEET
    PEAK DISCHARGE RATE =      24.44 CFS  AT   1.532 HOURS   BASIN AREA =   .0292 SQ. MI.


PUNCH HYD           ID=10
*S ROUTE HYDOGRAPH THRU POND
ROUTE RESERVOIR     ID=13  HYD NO=90.11 INFLOW ID=10  CODE=5
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0.0	0.00	29.50
0.6	0.01	30.00
0.8	0.04	30.50
1.0	0.08	31.00
1.2	0.15	31.50
3.2	0.23	32.00
5.2	0.34	32.50
6.2	0.47	33.00
6.6	0.63	33.50
7.0	0.84	34.00
7.8	1.09	34.50

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	29.50	.000	.00
.17	.00	29.50	.000	.00
.33	.00	29.50	.000	.00
.50	.00	29.50	.000	.00
.67	.00	29.50	.000	.00
.83	.00	29.50	.000	.00
1.00	.00	29.50	.000	.00
1.17	.00	29.50	.000	.00
1.33	.00	29.50	.000	.00
1.50	23.74	31.40	.136	1.16
1.67	14.17	32.61	.369	5.42
1.83	5.21	32.79	.415	5.77
2.00	2.33	32.67	.383	5.53
2.16	1.64	32.48	.336	5.13
2.33	1.17	32.28	.291	4.30
2.50	.84	32.09	.250	3.57
2.66	.60	31.91	.216	2.84
2.83	.43	31.74	.188	2.16
3.00	.30	31.61	.167	1.64
3.16	.22	31.51	.151	1.23
3.33	.16	31.41	.138	1.16
3.50	.11	31.31	.124	1.12
3.66	.08	31.21	.110	1.08
3.83	.06	31.11	.096	1.05
4.00	.04	31.02	.083	1.01
4.16	.03	30.87	.070	.95
4.33	.02	30.72	.057	.89
4.50	.01	30.57	.046	.83
4.66	.01	30.41	.035	.77
4.83	.01	30.25	.025	.70
5.00	.00	30.10	.016	.64
5.16	.00	29.88	.008	.46
5.33	.00	29.67	.003	.20
5.49	.00	29.57	.001	.09
5.66	.00	29.53	.001	.04
5.83	.00	29.51	.000	.02
5.99	.00	29.51	.000	.01
6.16	.00	29.50	.000	.00

PEAK DISCHARGE = 5.773 CFS - PEAK OCCURS AT HOUR 1.83
MAXIMUM WATER SURFACE ELEVATION = 32.787
MAXIMUM STORAGE = .4145 AC-FT INCREMENTAL TIME= .033300HRS

```
PRINT HYD           ID=13 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.11


   RUNOFF VOLUME =      .44533 INCHES     =        .6935 ACRE-FEET
   PEAK DISCHARGE RATE =      5.77 CFS  AT   1.832 HOURS   BASIN AREA =   .0292 SQ. MI.



COMPUTE NM HYD      ID=11 HYD NO=92.0 DA=0.0079 SQ MI
                    PER A=100. PER B=0. PER C=0. PER D=0.
                    TP=-0.1333 HR MASS RAIN=-1

   K =   .163432HR    TP =   .133300HR    K/TP RATIO =  1.226044     SHAPE CONSTANT, N =  2.903816
   UNIT PEAK =   16.232    CFS   UNIT VOLUME =    .9988       B =   273.88      P60 = 1.8800
   AREA =      .007900 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033300

PRINT HYD           ID=11 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    92.00


   RUNOFF VOLUME =      .44534 INCHES     =        .1876 ACRE-FEET
   PEAK DISCHARGE RATE =      6.66 CFS  AT   1.532 HOURS   BASIN AREA =   .0079 SQ. MI.



ADD HYD             ID=12 HYD NO=90.2 ID I=13 ID II=11
PRINT HYD           ID=12 CODE=1

                                    OUTFLOW HYDROGRAPH REACH    90.20


   RUNOFF VOLUME =      .44532 INCHES     =        .8811 ACRE-FEET
   PEAK DISCHARGE RATE =      9.99 CFS  AT   1.598 HOURS   BASIN AREA =   .0371 SQ. MI.



FINISH

   NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 10:53:27
```

```
[ 1 ] INLET NUMBER 104.1
[ 2 ] COMBINATION GRATE & CURB INLET ON A CONTINUOUS GRADE
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE IS  9.23  (cfs)
[ 7 ] APPROACH GUTTER ' N 'VALUE  .017
[ 8 ] GUTTER LONGITUDINAL SLOPE  .005  (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE  .02  (ft/ft)
[10 ] WIDTH OF GUTTER IS  2  (ft)
[11 ] GUTTER CROSS SLOPE IS  .0625  (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS  2  (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS  2.75  (in.)
[14 ] WIDTH OF GRATE IS  2  (ft.)
[15 ] LENGTH OF GRATE IS  3.33  (ft.)

Enter number of item you want to change or
enter a 0 if all items are ok.?
```

PROJECT 25206
HEC12 Version: V2.30 User S/N: 77010133 Run Date: 06-18-1993

==========

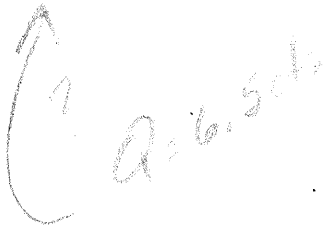
INLET NUMBER 104.1 LENGTH 7.5 STATION

TOTAL PEAK DISCHARGE = 9.23 (cfs)

GUTTER SLOPE = 0.0050 FT/FT PAVEMENT CROSS SLOPE = 0.0200 FT/FT

SPREAD	W	W/T	SW	SW/SX	Eo	a	S'W	SE
18.95	2.0	0.11	0.0625	3.1	0.29	3.8	0.157	0.066

XXXXXXXXXX COMBINATION GRATE CURB INLET ON A GRADE XXXXXXXXXX
SLOT INTERCEPTS 3.43 CFS GRATE INTERCEPTS 3.79 CFS
CFS INTERCEPTED= 7.22 CFS CARRYOVER= 2.01



```
[ 1 ] INLET NUMBER 104.2
[ 2 ] COMBINATION GRATE & CURB INLET ON A CONTINUOUS GRADE
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE IS  8.34  (cfs)
[ 7 ] APPROACH GUTTER ' N 'VALUE  .017
[ 8 ] GUTTER LONGITUDINAL SLOPE  .005  (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE  .02  (ft/ft)
[10 ] WIDTH OF GUTTER IS  2  (ft)
[11 ] GUTTER CROSS SLOPE IS  .0625  (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS  2  (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS  2.75  (in.)
[14 ] WIDTH OF GRATE IS  2  (ft.)
[15 ] LENGTH OF GRATE IS  3.33  (ft.)

Enter number of item you want to change or
enter a 0 if all items are ok.?
```

==========

INLET NUMBER 104.2 LENGTH 7.5 STATION

TOTAL PEAK DISCHARGE = 8.34 (cfs)

GUTTER SLOPE = 0.0050 FT/FT PAVEMENT CROSS SLOPE = 0.0200 FT/FT

SPREAD	W	W/T	SW	SW/SX	Eo	a	S'W	SE
18.21	2.0	0.11	0.0625	3.1	0.30	3.8	0.157	0.068

XXXXXXXXXX COMBINATION GRATE CURB INLET ON A GRADE XXXXXXXXXX

SLOT INTERCEPTS 3.27 CFS GRATE INTERCEPTS 3.45 CFS

CFS INTERCEPTED= 6.72 CFS CARRYOVER= 1.62

```
[ 1 ] INLET NUMBER 104.3
[ 2 ] COMBINATION GRATE & CURB INLET ON A CONTINUOUS GRADE
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE IS  1.62  (cfs)
[ 7 ] APPROACH GUTTER ' N 'VALUE  .017
[ 8 ] GUTTER LONGITUDINAL SLOPE  .005  (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE  .02  (ft/ft)
[10 ] WIDTH OF GUTTER IS  2  (ft)
[11 ] GUTTER CROSS SLOPE IS  .0625  (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS  2  (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS  2.75  (in.)
[14 ] WIDTH OF GRATE IS  2  (ft.)
[15 ] LENGTH OF GRATE IS  3.33  (ft.)

Enter number of item you want to change or
enter a 0 if all items are ok.?
```

==========

INLET NUMBER 104.3 LENGTH 7.5 STATION

TOTAL PEAK DISCHARGE = 1.62 (cfs)

GUTTER SLOPE = 0.0050 FT/FT PAVEMENT CROSS SLOPE = 0.0200 FT/FT

SPREAD	W	W/T	SW	SW/SX	Eo	a	S'W	SE
9.32	2.0	0.21	0.0625	3.1	0.57	3.8	0.157	0.109

XXXXXXXXXX COMBINATION GRATE CURB INLET ON A GRADE XXXXXXXXXX

SLOT INTERCEPTS 1.36 CFS GRATE INTERCEPTS 0.26 CFS

CFS INTERCEPTED= 1.62 CFS CARRYOVER= 0.00

```
[ 1 ] INLET NUMBER 104.4
[ 2 ] COMBINATION GRATE & CURB INLET ON A CONTINUOUS GRADE
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE IS  5.7  (cfs)
[ 7 ] APPROACH GUTTER ' N 'VALUE  .017
[ 8 ] GUTTER LONGITUDINAL SLOPE  .005  (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE  .02  (ft/ft)
[10 ] WIDTH OF GUTTER IS  2  (ft)
[11 ] GUTTER CROSS SLOPE IS  .0625  (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS  2  (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS  2.75  (in.)
[14 ] WIDTH OF GRATE IS  2  (ft.)
[15 ] LENGTH OF GRATE IS  3.33  (ft.)

Enter number of item you want to change or
enter a 0 if all items are ok.?
```

==========

INLET NUMBER 104.4 LENGTH 7.5 STATION

TOTAL PEAK DISCHARGE = 5.70 (cfs)

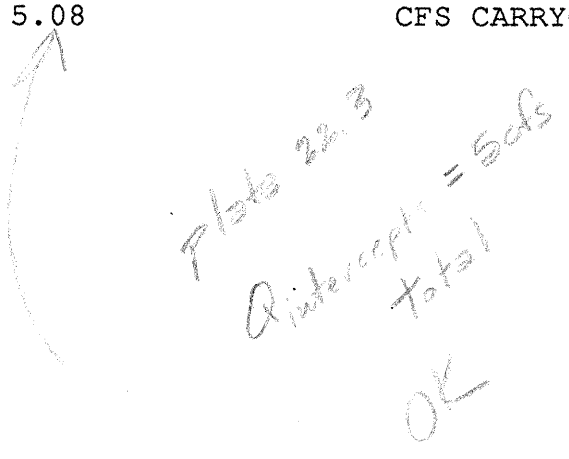
GUTTER SLOPE = 0.0050 FT/FT PAVEMENT CROSS SLOPE = 0.0200 FT/FT

SPREAD	W	W/T	SW	SW/SX	Eo	a	S'W	SE
15.68	2.0	0.13	0.0625	3.1	0.35	3.8	0.157	0.075

XXXXXXXXXX COMBINATION GRATE CURB INLET ON A GRADE XXXXXXXXXX

SLOT INTERCEPTS 2.71 CFS GRATE INTERCEPTS 2.36 CFS

CFS INTERCEPTED= 5.08 CFS CARRYOVER= 0.62



```
[ 1 ] INLET NUMBER 105.1
[ 2 ] GRATE INLET IN A SUMP
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE FOR FIRST SIDE IS  25.69  (cfs)
      PEAK DISCHARGE FOR OTHER SIDE IS  0  (cfs)
      TOTAL PEAK DISCHARGE IS  25.69  (cfs)
[ 7 ] APPROACH GUTTER ' N 'VALUE  .017
[ 8 ] GUTTER LONGITUDINAL SLOPE  .005  (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE  .001  (ft/ft)
[10 ] WIDTH OF GUTTER IS  6.7  (ft)
[11 ] GUTTER CROSS SLOPE IS  .001  (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS  6.7  (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS  2.75  (in.)

Enter number of item you want to change or
enter a 0 if all items are ok.?
```

==========

INLET NUMBER 105.1 LENGTH 10.8 STATION

TOTAL PEAK DISCHARGE = 25.69 (cfs)

GUTTER SLOPE = 0.0050 FT/FT PAVEMENT CROSS SLOPE = 0.0010 FT/FT

SPREAD AT A SLOPE OF .005 (ft./ft.) IS %186.08 (ft.)

XXXXXXXXXX GRATE INLET IN A SUMP XXXXXXXXXX
DEPTH OF WATER (ft) = 0.77 SPREAD (ft) = %772.99
Grate operates as A WEIR

PIPE CAPACITY CALCULATIONS

FAIRWAY MANOR STORM DRAIN HGL

STATION	STRUCTURE	DIAM (in)	Q	AREA	VEL	K	Sf (%)	LENGTH	ANGLE (degrees)	Hf	Hb	Hj	Hmh	Ht	TOTAL LOSSES	HGL (dn)	HGL (up)	PIPE INVERT	PIPE SOFFIT	HV	EGL (dn)	EGL (up)	------JUNCTION------ DIA 3	ANGLE
	CHANNEL																16.00	9.78	13.78	0.98		16.98		
		48	99.99	12.56	7.96	1435.70	0.49	32.54		0.16					0.16									
	MH#102.1C								40.36		0.13		0.05	0.00	0.18	16.16	16.34	10.13	14.13	0.98	17.14	17.32		
		48	99.99	12.56	7.96	1435.70	0.49	91.52		0.44					0.44									
	MH#102.1B								32.90		0.12	0.05	0.05	0.01	0.22	16.78	17.05	10.76	14.76	0.93	17.77	17.99	24.00	65.18
		48	97.41	12.56	7.76	1435.70	0.46	58.73		0.27					0.27									
1+00.00	MH#102.1A								52.41		0.14	0.10	0.05	0.01	0.31	17.32	17.77	11.04	15.04	0.80	18.26	18.57	24.00	45.00
		48	90.12	12.56	7.18	1435.70	0.39	132.60		0.52					0.52									
15+65.30	MH#101E								0.00		0.00	0.51	0.04	0.05	0.60	18.29	19.40	11.35	15.35	0.29	19.09	19.69	24.00	90.00
		48	54.16	12.56	4.31	1435.70	0.14	400.13		0.57					0.57									
11+65.17	MH#101D								90.00		0.06		0.01	0.04	0.11	19.97	19.88	12.75	16.25	0.49	20.26	20.37		
		42	54.16	9.62	5.63	1005.59	0.29	72.79		0.21					0.21									
6+60.80	MH#101C								21.01		0.05		0.02	0.00	0.07	20.09	20.16	13.05	16.55	0.49	20.58	20.66		
		42	54.16	9.62	5.63	1005.59	0.29	111.74		0.32					0.32									
5+51.79	MH#101B								24.10		0.05		0.02	0.00	0.08	20.49	20.56	13.42	16.92	0.49	20.98	21.05		
		42	54.16	9.62	5.63	1005.59	0.29	86.71		0.25					0.25									
4+67.41	MH#101A								14.48		0.04		0.02	0.00	0.06	20.81	20.88	13.74	17.24	0.49	21.31	21.37		
		42	54.16	9.62	5.63	1005.59	0.29	357.95		1.04					1.04									
5+59.06	MH#104B								90.00		0.10	0.72	0.02	0.02	0.87	21.92	22.98	15.07	18.07	0.29	22.41	23.28	24.00	98.00
		36	30.77	7.07	4.36	666.65	0.21	222.44		0.47					0.47									
7+81.50	MH#104A								90.00		0.06	0.11	0.01	0.01	0.20	23.46	23.74	15.80	18.80	0.21	23.75	23.95	24.00	135.00
		36	25.69	7.07	3.64	666.65	0.15	232.40		0.35					0.35									
6+45.37	INLET#105.1								0.00		0.00		0.01	0.02	0.03	24.09	24.32	17.10	20.10	0.00	24.29	24.32		

DRAINAGE AREA 102.1

	MH102.1B																	12.76	14.76			14.76		
		24	2.58	3.14	0.82	226.11	0.01	22.21		0.00					0.00									
	INLET#102.1								35.00		0.00		0.00	0.00	0.00	14.76	17.99	13.08	15.08	0.00	14.76	17.99		

DRAINAGE AREA 102.2

1+00.00	MH#102.1A																	13.04	15.04			15.04		
		24	7.29	3.14	2.32	226.11	0.10	138.38		0.14					0.14									
2+22.44	INLET#102.2L								90.00		0.02	0.06	0.00	0.01	0.09	15.18	18.78	14.36	16.36	0.02	15.18	18.80	24.00	90.00
		24	3.65	3.14	1.16	226.11	0.03	26.00		0.01					0.01									
2+22.44	INLET#102.2R								0.00		0.00		0.00	0.00	0.00	18.79	18.81	14.78	16.78	0.00	18.81	18.81		

DRAINAGE AREA 101

15+65.30	MH#101E																	15.78	17.78			17.78		
		24	17.98	3.14	5.73	226.11	0.63	26.69		0.17					0.17									
15+46.02	INLET#101.2L								90.00		0.10	0.31	0.03	0.03	0.46	17.95	20.12	16.00	18.00	0.20	17.95	20.32	24.00	90.00
		24	11.36	3.14	3.62	226.11	0.25	15.00		0.04					0.04									
15+31.02	INLET#101.1L								0.00		0.00		0.01	0.02	0.03	20.16	20.39	16.46	18.46	0.00	20.36	20.39		

DRAINAGE AREA 104

5+59.06	MH#104B																	16.07	18.07			18.07		
		24	14.44	3.14	4.60	226.11	0.41	59.61		0.24					0.24									
5+00.00	INLET 104.1L								90.00		0.07	0.25	0.02	0.02	0.35	18.31	23.79	17.14	19.14	0.08	18.31	23.87	24.00	90.00
		24	7.22	3.14	2.30	226.11	0.10	36.00		0.04					0.04									
5+00.00	INLET104.1R								0.00		0.00		0.00	0.01	0.01	23.83	23.92	18.08	20.08	0.00	23.91	23.92		

5+59.06	MH#104B																	16.07	18.07			18.07		
		24	8.34	3.14	2.66	226.11	0.14	31.53		0.04					0.04									
5+89.56	INLET 104.2								15.00		0.01	0.11	0.01	0.01	0.13	18.11	23.44	19.35	21.35	0.00	18.11	23.45	24.00	90.00
		24	1.62	3.14	0.52	226.11	0.01	15.00		0.00					0.00									
6+04.56	INLET104.3								0.00		0.00		0.00	0.00	0.00	23.45	23.45	19.81	21.81	0.00	23.45	23.45		

7+81.50	MH#104A																	16.80	18.80			18.80		
		24	5.08	3.14	1.62	226.11	0.05	41.13		0.02					0.02									
8+11.50	INLET#104.4								0.00		0.00		0.00	0.00	0.01	18.82	23.97	17.37	19.37	0.00	18.82	23.97		

TEMPORARY POND OUTLET STRUCTURE
ORIFICE

Outlet Structure File: FAIRWAY .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 07-07-1993 Time Executed: 11:05:39

Outflow Rating Table for Structure #01
ORIFICE Orifice - Based on Area and Datum Elevation

Elevation (ft)	Q (cfs)	Computation Messages
29.50	0.0	E < E1=30
30.00	0.0	H = 0.0
30.50	0.6	H = .5
31.00	0.8	H = 1.0
31.50	1.0	H = 1.5
32.00	1.2	H = 2.0
32.50	1.3	H = 2.5
32.80	1.4	H = 2.8
33.00	1.5	H = 3.0
33.50	1.6	H = 3.5
34.00	1.7	H = 4.0
34.50	1.8	H = 4.5
35.00	0.0	E = or > E2=35

C = .62 A = .17 sq.ft.
H (ft) = Table elev. - Datum elev. (30 ft)
Q (cfs) = C * A * sqr(2g * H)

12" CMP RISER

Outlet Structure File: FAIRWAY .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 07-07-1993 Time Executed: 11:05:39

Outflow Rating Table for Structure #03
STAND PIPE Stand Pipe with weir or orifice flow

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
29.50	0.0	E = or > E2=35.0
30.00	0.0	E = or > E2=35.0
30.50	0.0	E = or > E2=35.0
31.00	0.0	E = or > E2=35.0
31.50	0.0	E = or > E2=35.0
32.00	0.0	Transition: H = 0.0
32.50	1.9	Transition: H = .5
32.80	3.0	Transition: H = .8
33.00	3.8	Transition: H = 1.0
33.50	4.6	Orifice: H = 1.5
34.00	5.3	Orifice: H = 2.0
34.50	6.0	Orifice: H = 2.5
35.00	0.0	E = or > E2=35.0

Weir Cw = 2.7 Weir length = 3.141593 ft
Orifice Co = .6 Orifice area = .7853982 sq.ft.
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
Transition interpolated between elev. 32 and 33 ft
Weir equation = Orifice equation @ elev.= 32.44583 ft

community sciences corporation

June 21, 1993

Mr. Gilbert Aldaz, P.E
Public Works Section
Hydrology Department
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Fairway Manor - Variance Request

Dear Mr. Aldaz:

As we discussed Thursday afternoon, June 17th, the revised drainage plan for Fairway Manor redirects a large portion of the onsite stormwater back to the north into the Rinconada Channel. This subdivision will still discharge about 12 cfs (100 yr. flow) to the south down Ronda De Lechusas where the Unit 7 drainage plan showed only 6 cfs coming from this site in its undeveloped condition. Drainage from this proposed subdivision will be limited to runoff from those lots which front on the existing portions of Ronda De Lechusas and Vista Alegre, since those streets already have established grades on them.

From the Unit 7 Report, there is an existing flow at the downstream end of Ronda De Lechusas of 49.8 cfs which produces a sub-critical street flow depth of 0.69' (as-built geometry as previously documented is 40'F-F @ 0.40%). We are now proposing a total flow of 55.81 cfs at that same location which will produce a new street flow depth of 0.72'.

Please allow this depth as it is an insignificant increase and the only portions of Fairway Manor contributing flows are those lots which front on already constructed streets which drain to Ronda De Lechusas.

Very truly yours,

James D. Hughes

JDH/bjn

Enclosures: Revised Infrastructure List

CSC#252-06-610-JUN-045.LET

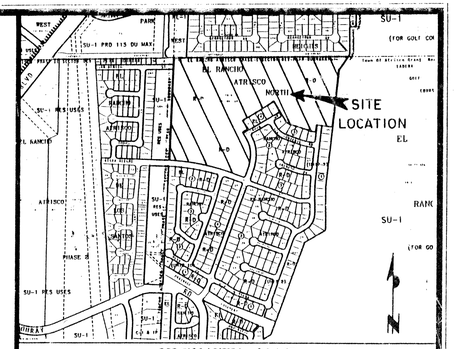
P.O. Box 1328
Corrales, New Mexico 87048
(505) 897-0000

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS

FAIRWAY MANOR SUBDIVISION - UNIT 1

CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

GRADING CERTIFICATION



VICINITY MAP

LEGEND

AS BUILT = ~~82.1~~ 820

FAIRWAY MANOR UNIT 1

GRADING AND DRAINAGE INSPECTION NOTES (INSPECTION 5-10-94)

AS BUILT SURVEY WAS CONDUCTED APRIL 5, 1994, BY COMMUNITY SCIENCES CORPORATION (CSC) AS INDICATED HEREIN. DRAINAGE INSPECTION WAS CONDUCTED ON MAY 10, 1994 BY CSC. THE FOLLOWING GENERAL OBSERVATIONS WERE MADE DURING THE DRAINAGE INSPECTION:

DRAINAGE INSPECTION (5-10-94)

1. GRADING OF THE 200' PNM EASEMENT ON THE WEST SIDE OF UNIT 2 AND SOUTH OF VISTA ALEGRE WAS COMPLETE IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN. THE 24" PIPE UNDER VISTA ALEGRE WAS NOT INSTALLED, AND THE LADERA WEST UNITS 3 & 4 DEVELOPMENT TO THE WEST HAS BEEN COMPLETELY GRADED TO DIVERT THAT OFF-SITE FLOW AWAY FROM THE PNM EASEMENT. AS A RESULT SOME VERY INFREQUENT PONDING MAY RESULT WITHIN THE 50' PERMANENT DRAINAGE EASEMENT. THE LACK OF THE PLANNED DISCHARGE PIPE IS OF NO SIGNIFICANT CONSEQUENCES SINCE THE ONLY AREA DRAINING TO THIS LOCATION IS THE PNM EASEMENT ITSELF. SINCE THE OFF-SITE AREA TO THE WEST HAS BEEN DIVERTED AWAY FROM THE PNM EASEMENT, THE NEED FOR THE TEMPORARY PONDING EASEMENT AND PRIVATE MAINTENANCE THEREOF NO LONGER EXISTS.

2. IN THE PROCESS OF CONSTRUCTING UNIT 1, UNIT 2 WAS ALSO GRADED IN ACCORDANCE WITH THE APPROVED PLAN.

3. GRADING OF THE AMAFCA R/W ON THE NORTH SIDE OF UNIT 1 APPEARED TO BE COMPLETED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN INCLUDING THE COMPLETION OF THE RETAINING WALLS ON THE NORTH SIDE OF LOTS 27 AND 28 BLOCK 1.

4. SUBJECT TO ROUTINE CONSTRUCTION OF BLOCK GARDEN WALLS ON TOP OF THE DEVELOPER PROVIDED RETAINING WALLS, ALL DEVELOPER REQUIRED PRIVATE RETAINING WALLS ARE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING PLANS. EXCEPT AS DESCRIBED IN NOTE 5 BELOW.

5. THE RETAINING WALLS BETWEEN LOTS 17 AND 18, BLOCK 6 AND LOTS 36 AND 37, BLOCK 1 WERE NOT INSTALLED BECAUSE THE AS-BUILT GRADING OF THE HOUSE PADS DID NOT REQUIRE THE RETAINING WALLS TO MEET GRADING AND DRAINAGE DESIGN CRITERIA. SEE THE CLOUDED AREA OF SHEET 3 OF 3 FOR FINAL SWALE AND YARD GRADING.

I, STEPHEN L. CRAWFORD, DO HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE GRADING AND DRAINAGE OF THIS SUBDIVISION IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN. SUBJECT TO THE CONSIDERATIONS IN THE NOTES ABOVE.

STEPHEN L. CRAWFORD — DATE 6-27-94

STEPHEN L. CRAWFORD NEW MEXICO 10274 REGISTERED PROFESSIONAL ENGINEER

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE

ENGINEER'S SEAL	DATE: APRIL 1994 SCALE: AS NOTED DESIGNED: JDH DRAWN: CQ JOB NO.: 252-06-640 community sciences corporation	APPROVED FOR CONSTRUCTION CITY ENGINEER DATE
	PROJECT NO. 4776.90	SHEET 1 OF 3

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

COMMUNITY SCIENCES CORPORATION – CORRALES, NEW MEXICO – (505) 897-0000

AMAFCA RINCONADA CHANNEL

UNIT TWO — UNIT ONE — 51.35

MATCH LINE

EL RANCHO ATRISCO UNIT 7 (PLAT 8-25-82)

ESCARPA DRIVE N.W.

INLET 104.4 TYPE A

INLETS 104.2 & 104.3 TYPE A

INLET 104.1 TYPE A

INLET 105 TYPE DOUBLE D

RONDA

SAN BENITO STREET N.W.

DANIELITO AVENUE N.W.

LOMA FEDERICOSA N.W.

VENTA LA N.W.

VALLEY GUTTER

10' PUBLIC DRAINAGE & SANITARY SEWER R/W

10' WIDE 2' DEEP CONC. CHANNEL PER C.O.A. STD. K-25 (TYPE B)

RONDA DE LECHUSAS N.W.

VISTA ALEGRE N.W.

VISTA MARAVILLOSA N.W.

EL RANCHO ATRISCO UNIT 10 (PLAT 10-25-82)

TRACT E (PLAT 8-25-82)

200' P.N.M. EASEMENT & OPEN SPACE
TRACT D
EL RANCHO ATRISCO DE LOS SANTOS (PLAT 8-25-82)

GRAPHIC SCALE 0 12 25 50 100 150 IN FEET

LEGEND

- TC=98.43 PROPOSED TOP OF CURB ELEVATION
- 98.0 PROPOSED SPOT ELEVATION
- 98.0 EXISTING SPOT ELEVATION (GRND & TC)
- EROSION CONTROL BERM
- PROPOSED CONCRETE VALLEY GUTTER
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- EXISTING CONTOUR W/ INDEX ELEVATION
- SWALE
- FLOW ARROW
- PROPOSED RETAINING WALL
- E EXISTING U.G. ELECTRICAL
- W EXISTING WATER LINE
- G EXISTING GAS LINE
- 30" SD EXISTING STORM DRAIN
- 30" SD PROPOSED STORM DRAIN
- WATER BLOCK
- PHASE LINE
- RETAINING WALL
- TEMPORARY DIVERSION BERM
- TOB=29.9 PROPOSED TOP OF BERM ELEVATION

EROSION CONTROL BERM, SEE DETAIL THIS SHEET
EXISTING CONTOUR W/ INDEX ELEVATION
CURB & GUTTER
CENTER LINE
INDICATES DRIVEWAY LOCATION REQUIRED BY SLOPE
RIGHT-OF-WAY LINE AS BUILT PAD ELEV.
PROPOSED PAD ELEV.
PAD LIMITS
LOT NO.
BLOCK NO.
DRAINAGE SWALE
SPOT ELEV. TYP.
BOUNDARY LINE

TYPICAL LOT DETAIL
SCALE: 1"=50'

TEMPORARY EROSION CONTROL BERM
COMPACT BERM TO 90% OF OPTIMUM USING PLACEMENT EQUIPMENT WHEELS AS REQ'D.
R AND R/W
FINISH ROUGH GRADING
CURB AND GUTTER
44' (FUTURE)

EROSION CONTROL BERM
TYPICAL SECTION THROUGH BERM
NOT TO SCALE

NOTES:
1. EROSION CONTROL BERMS ARE TO BE INSTALLED ON ALL LOTS ADJACENT TO THE PROPOSED STREETS OF THIS PROJECT.
2. GRADING OF UNIT 2 IS TO BE COMPLETED WITH UNIT 1

BACK YARD POND INV.
3'±
8' MAX.
5'±
3:1
EXIST GROUND
PROPERTY LINE

RETAINING / GARDEN WALL
BETWEEN BLK 6, FAIRWAY MANOR
& BLK 3 OF ELRANCHO ATRISCO
UNIT 7

GRADING OF ALL LOT PADS AND REAR AND SIDE YARD SWALES ON THIS PAGE IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLANS. ANY DEVIATION FROM TYPICAL GRADING IS ADDRESSED IN NOTES ON PAGE 1.

APPROVED FOR ROUGH GRADING (±1 FT.)

A.M.A.F.C.A. — DATE 5/29/93
CITY HYDROLOGY — DATE 6/22/93

DATE: MAY, 1993
SCALE: AS SHOWN
DRAWN: M.J.Y.
CHECKED: SPS / AM
JOB NO: 252-05-043

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	2/93

BENCH MARKS

THE STATION IS A STANDARD ACS BRASS TABLET STAMPED "2-10" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND, STA. IS LOCATED ON TOP OF A VOLCANIC OUTCROP. TO REACH THIS STA. BEGIN AT I-40 & COORS RD. WEST ON DUNAY RD. 0.7 MILE TO END OF PAVEMENT, CONTINUE WEST ON DIRT RD. TO TOP OF DAM. ALONG NORTH BANK 0.4 MILE TO DIRT CROSS ROAD NORTH ON DIRT ROAD 0.5 MILE. THE STATION IS ABOUT 800 FT. WEST OF THIS POINT.
ELEVATION = 5334.50 FT.

AS BUILT INFORMATION

CONTRACTOR — DATE
STAKED BY — DATE
INSPECTED BY — DATE
REVISIONS PER — DATE
CONNECTION BY — DATE

MICRO-FILM INFORMATION

RECORDED BY — DATE
REEL

ENGINEER'S SEAL
JAMES P. SMITH
NEW MEXICO
10274
REGISTERED PROFESSIONAL ENGINEER
6-27-94

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY	JDH
		DRAWN BY	RDG
		CHECKED BY	BOM

DATE 10/93
DATE 10/93
DATE 10/93

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: FAIRWAY MANOR
GRADING AND EROSION CONTROL PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A	5/27/93
TRANSPORTATION	Ed Adams	11-3-93	WASTE WATER		
HYDROLOGY			A.M.A.F.C.A.		

PROJECT NO. 4776.90 | MAP NO. G-10 | SHEET 2 OF 3

25206 SHT24.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

LADERA HEIGHTS SUBDIVISION
(REPLAT OF COLLEGE PARK ADDITION - UNIT 2)
(FILED 6-30-78, VOL. D8, FOL. 155)

UNIT TWO | UNIT ONE | AMAFCA RINCONADA CHANNEL (50' R/W) | EXIST. 10' AMAFCA R/W

SAN BENITO STREET, N.W.

ESCARPA DRIVE, N.W.

SOL PONIENTE RD. N.W.

VISTA DEL SUR, N.W.

EL RANCHO ATRISCO UNIT 7 (FILED 11-6-87, VOL. C35, FOL. 13)

EL RANCHO ATRISCO TRACT 1 (FILED 11-6-87, VOL. C35, FOL. 13) (FORMERLY LADERA GOLF COURSE) (FILED 6-16-78, VOL. D8, FOL. 64)

PIPE (STORM DRAIN)	SIZE
①	36"
②	24"
③	42"
④	48"
⑤	48"
⑥	24"

100 YR EMERGENCY OVERFLOW WEIRS
$Q = 2.7\ LH^{1.5}$

SAN BENITO WATER BLOCK	Q=35.96 cfs L = 26' H = 0.64' EL.= 23.69
CUL-DE-SAC WATER BLOCK	Q = 43.25 cfs L = 43.5' EL.= 22.97
CURB @ DRAINAGE R/W LOTS 27 & 28	Q = 45.83 cfs L = 20' H = 0.90' EL.= 22.87

APPROVED FOR ROUGH GRADING (±1 FT.)

A.M.A.F.C.A. — DATE 07/29/93

CITY HYDROLOGY — DATE 07/29/93

TEMP 2'-3' HIGH, 3:1 SIDES DIVERSION BERM COMPACTED TO 90 % OF OPTIMUM, CONSTRUCT W/UNIT 1 REMOVE W/ PHASE 2 SEE DETAIL THIS SHEET

INLET NO. 105.1
4-TYPE DOUBLE D
(PHASE 2 CONSTRUCTION)

80'x 90' TEMP. DESILTATION POND 6' DEEP, 3:1 SIDES CONSTRUCT W/ UNIT 1, REMOVE W/ PHASE 2 CONSTRUCTION BOT EL.= 16.5

END 36" RCP PHASE 1 CONSTRUCTION INSTALL INLET STRUCTURE SEE SHEET 11

LOT GRADING SPECIFICATIONS:

1. CROSS LOT DRAINAGE WILL NOT BE PERMITTED. IF LOCAL CONDITIONS SHOULD DICTATE A RELAXATION OF THIS RULE, THEN THE APPROPRIATE PUBLIC OR PRIVATE DRAINAGE EASEMENTS WILL BE DEDICATED ON THE PLAT.
2. CRITERIA FOR SETTING LOT ELEVATION CONTROL GRADES SHALL INCLUDE THE FOLLOWING:
   - A. ALL DRAINAGE SWALES AND YARD AREAS SHALL HAVE MINIMUM SLOPES OF 1% AND MAXIMUM SLOPES OF 4 HORIZONTAL TO 1 VERTICAL.
   - B. BUILDING PADS SHALL BE SET AT LEAST 0.2' ABOVE THE HIGHEST ELEVATION OF ADJACENT SWALES.
   - C. PAD ELEVATIONS WILL BE ASSUMED TO BE EQUAL TO FINISHED FLOOR OF GARAGE. MINIMUM DRIVEWAY SLOPES SHALL BE 1% AND DRIVEWAY SLOPES SHALL NOT EXCEED 8 %
   - D. USABLE YARD AREAS SHALL HAVE MINIMUM DIMENSIONS OF 30' x 15' SHALL HAVE MINIMUM SLOPES OF 1%.
3. WHERE YARD GRADES OF ADJACENT LOTS AT PROPERTY LINES CANNOT BE MATCHED USING THE ABOVE CRITERIA, RETAINING WALLS SHALL BE PROVIDED TO ACCOMMODATE GRADE DIFFERENTIALS.

GENERAL NOTES FOR GRADING

1) CONTRACTOR MUST OBTAIN TOP SOIL DISTURBANCE PERMIT PRIOR TO MASS GRADING OPERATION.
2) CONTRACTOR MUST OBTAIN RETAINING WALL PERMIT PRIOR TO RETAINING WALL CONSTRUCTION.
3) MASS GRADING SHALL BE IN ACCORDANCE WITH "CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS, PUBLIC WORKS CONSTRUCTION, 1985."

TEMPORARY DIVERSION BERM
NTS

GRADING OF ALL LOT PADS AND REAR AND SIDE YARD SWALES ON THIS PAGE IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLANS. ANY DEVIATION FROM TYPICAL GRADING IS ADDRESSED IN NOTES ON PAGE 1.

GRAPHIC SCALE 12 25 50 100 150 IN FEET

AS BUILT INFORMATION
CONTRACTOR
NAME — DATE
TITLE OF R.P.E. — DATE
ACCEPTANCE BY — DATE
FIELD LOCATION BY
DRAWING BY — DATE
CHECKED BY
MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS
THE STATION IS A STANDARD ACE BRASS TABLET STAMPED "7-08" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND, STA. IS LOCATED ON TOP OF A VOLCANIC OUTCROP. TO REACH THIS STA. BEGIN AT I-40 & COORS RD., WEST ON GUILDERSLEEVE 0.7 MILE TO END OF PAVEMENT, CONTINUE WEST ON DIRT RD. TO TOP OF MAL ALONG NORTH RIM 0.8 MILE TO DIRT CROSS ROAD NORTH ON DIRT ROAD 0.5 MILE. THE STATION IS ABOUT 800 FT. WEST OF THIS POINT.
ELEVATION = 5334.89 FT.

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	2/93

ENGINEER'S SEAL
JAMES D. DENNIS — NEW MEXICO — 10278 — REGISTERED PROFESSIONAL ENGINEER
6-27-94

NO.	DATE	REVISIONS	BY
1	10/13/93	PER DRC COMMENTS	JDH

DESIGNED BY JDH — DATE 10/93
DRAWN BY RDQ — DATE 10/93
CHECKED BY BDM — DATE 10/93

DATE: MAY, 1993
SCALE: AS SHOWN
DESIGN: M.J.Y.
DRAWN: S.P.S. / A.M.
ZONE ATLAS: 252-06-043

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: FAIRWAY MANOR
GRADING AND EROSION CONTROL PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION	N.A.		WASTE WATER	N.A. GRADING ONLY	
HYDROLOGY					
GOLF COURSE MGT.		8/12/93			

PROJECT NO. 4776.90 — MAP NO. G-10 — SHEET 3 OF 3

25206\SHT25.DWG