

November 2, 2005

Sam Santillanes
5505 La Colonia NW
Albuquerque, NM 87120

Re: Obstruction and Maintenance of drainage channel

Dear Mr. Santillanes,

The purpose of this letter is to respond to a complaint from two adjoining land owners about a structure allegedly erected by yourself on Tract R-2 (private property, owned by the Sagecrest Homeowners Association) upstream of the channel located in a private drainage easement on your property, (Lot B) in order to divert runoff intended to drain down the channel into 5605 Altima Pl. (Lot 2). I have enclosed excerpts from the original plat creating the subdivision in order to better explain the situation. This structure must be removed immediately in order to allow the runoff draining from Tract R-2 to continue through your lot as designed. I have also included copies of the plat language that mandate that the owner of Lot B is responsible for maintaining the channel. The lack of maintenance of this channel or failure to remove the structure could cause you to be liable for any damage either of those properties incurs due to misdirected runoff. Please contact me at 924-3986 to discuss this issue.

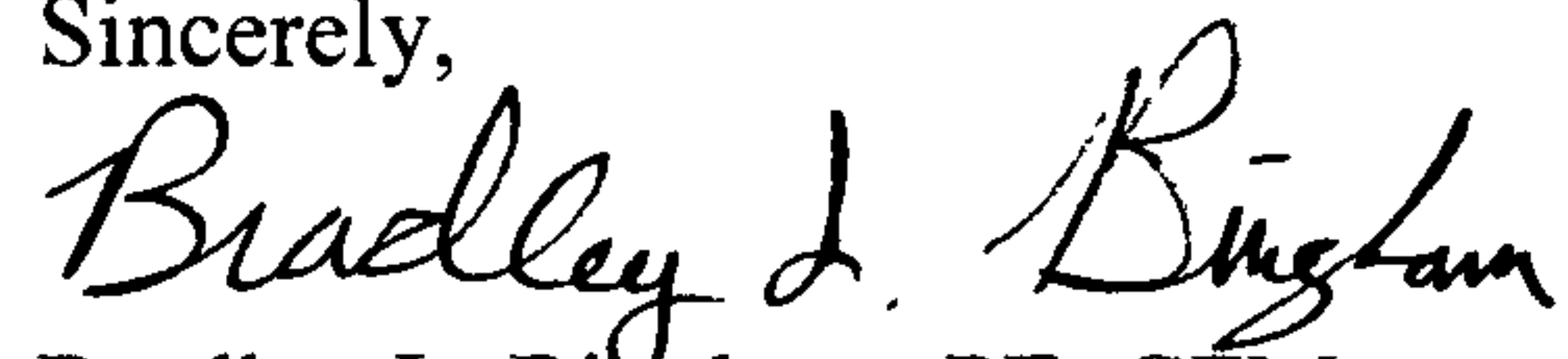
P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,



Bradley L. Bingham, PE, CFM
City Hydrologist
Principal Engineer, Planning Dept.
Development and Building Services

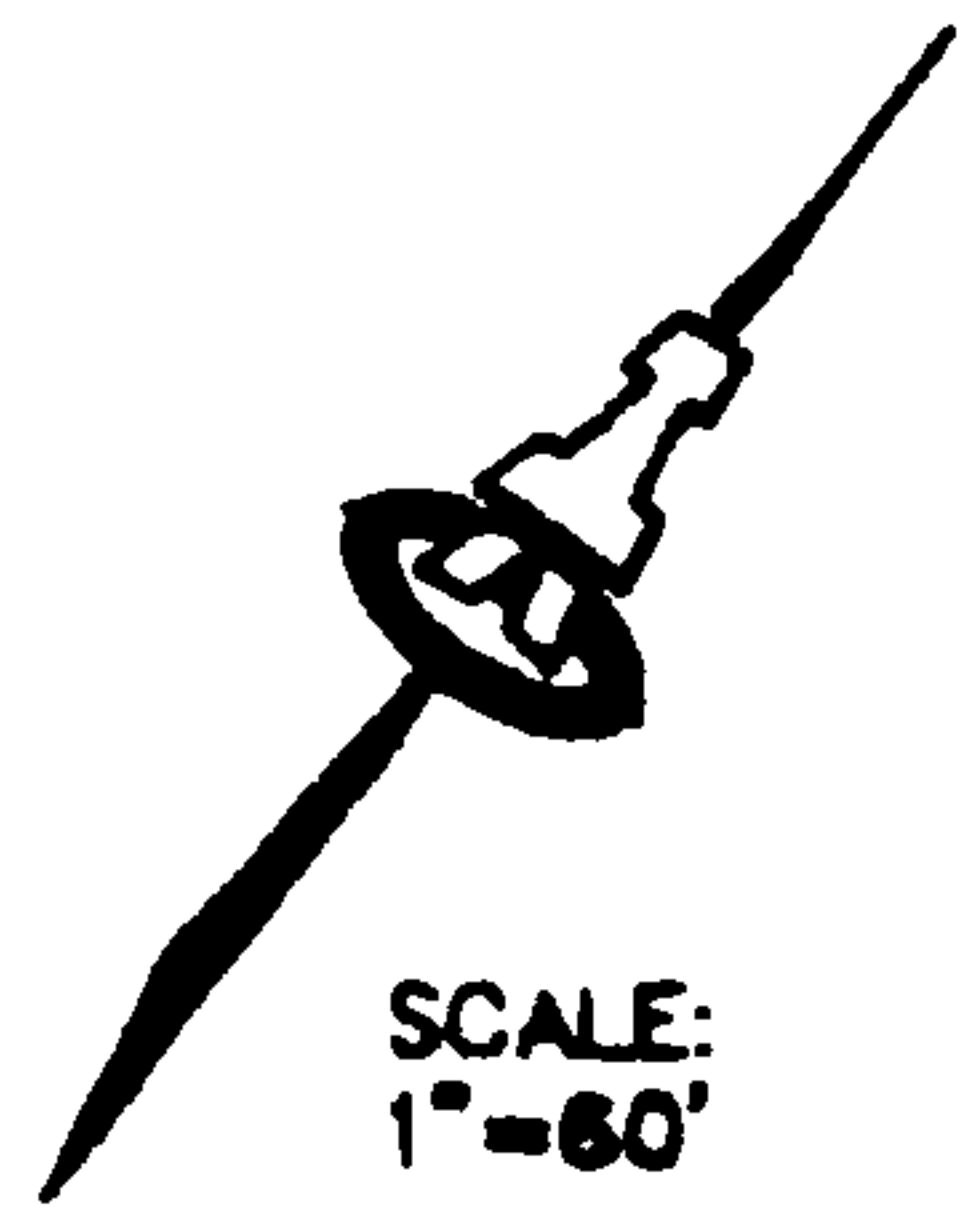
C: Adam Silva, 5605 Altima Pl. NW
William Silva, Sagecrest HOA, 5700 Cactus Flower Dr NW
file,

AREA (SF)

- 0104
- 0575
- 1882
- 0918
- 435
- 265
- 600
- 1144
- 1985
- 2932
- 7467
- 8328
- 6991
- 2405
- 4347
- 3712
- 7616
- 1237
- 2977
- 10094

PLAT CORRECTED
TO SHOW DETAIL
'A' BELOW

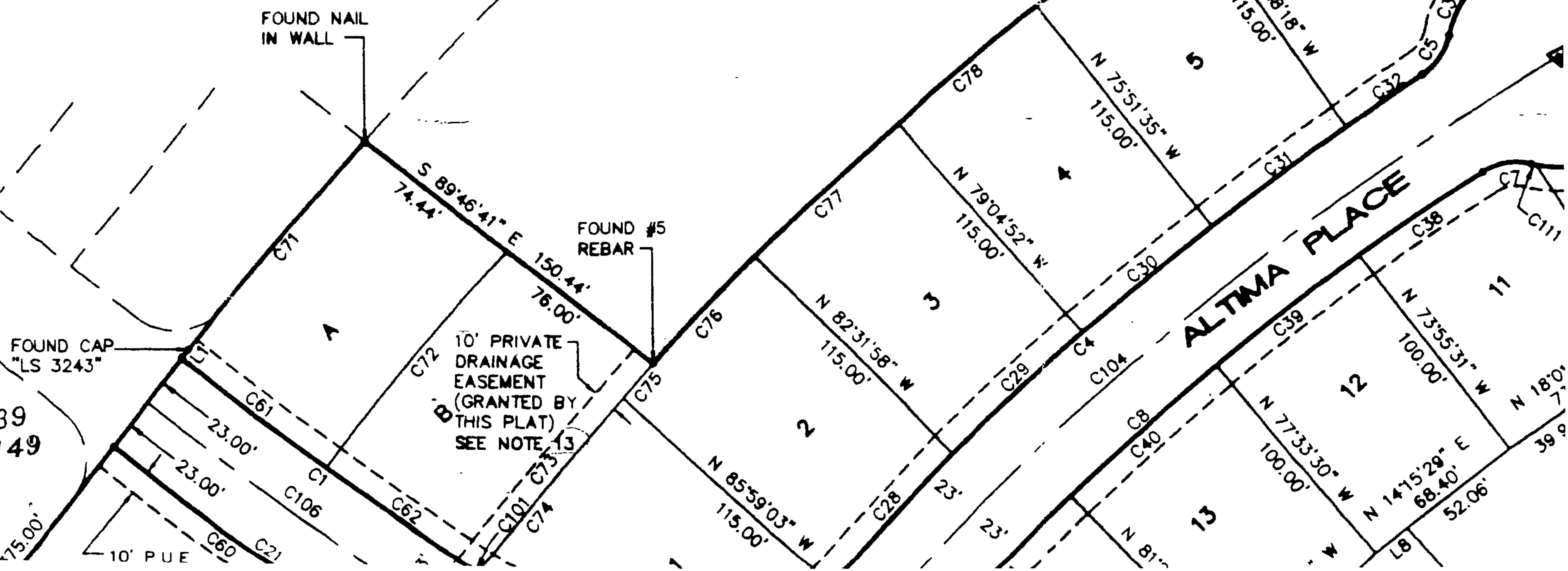
FOUND #5



SCALE:
1"=60'



TRACT R-2
FILED 8-8-84
VOL. C24 FOLIO 155



53'02'30"
48'23'59"
48'14'33"
41'23'16"
21'42'17"
11'05'37"
41'53'22"
65'14'36"
00'46'12"
02'04'24"
00'06'23"
04'01'11"
00'22'26"
01'12'48"
04'31'01"
02'52'49"
02'52'32"
08'02'18"
14'41'20"
07'55'24"
23'20'02"
61'55'52"
43'33'13"
47'39'10"
96'16'35"
04'21'33"
04'44'01"
04'47'28"
03'59'03"
00'48'24"

AND SERV
REASONABI

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EASEMENTS SH

LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	S 00'00'00" E	4.65'
L2	N 11'26'06" E	18.46'
L3	N 11'26'06" E	18.55'
L4	N 01'22'08" W	10.00'
L5	N 80'48'11" W	10.00'
L6	S 18'10'53" E	6.46'
L7	N 19'38'10" E	12.73'
L8	N 14'15'29" E	16.34'
L9	N 08'08'58" E	19.27'
L10	N 23'30'19" E	20.85'

SUBDIVISION DATA / NOTES--Continued from Sheet 1 of 3

12. CITY STANDARD UTILITY NOTE II:
"CITY OF ALBUQUERQUE WATER AND SANITARY SEWER SERVICE TO THE ESTATES AT TAYLOR RIDGE MUST BE VERIFIED AND COORDINATED WITH THE PUBLIC WORKS DEPARTMENT, CITY OF ALBUQUERQUE."
13. THE 10' PRIVATE DRAINAGE EASEMENT ALONG THE EAST LINE OF LOT B IS FOR THE BENEFIT OF TRACT R-2. THE MAINTENANCE OF THIS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNER OF LOT B.

Sagecrest Homeowners Association

October 13, 2005

Sam Santillanes
5505 La Colonia NW
Albuquerque, NM 87120

Adam Silva
5605 Ultima
238-8616

Dear Mr. Santillanes,

The Sagecrest Homeowners Association has been made aware of the fact that a concrete barrier has been erected by you on our property illegally behind your home. The city installed a concrete canal on the east side of your home for proper drainage from the open space land. This concrete barrier is not allowing proper drainage thereby causing erosion to some of the landowners on the bottom of the hill. Please remove the concrete barrier within one week of this notice.

Sincerely,

William Silva
President, Sagecrest Homeowners Association

Please call me if you have any questions: 899-8561

5700 Cactus Flower Dr NW 87120



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 27, 1996

**Scott McGee, PE
Isaacson & Arfman
128 Monroe St NE
Albuquerque, NM 87108**

**RE: ENGINEER'S CERTIFICATION FOR TAYLOR RIDGE TRACT A (E-12/D8)
RECEIVED FEBRUARY 13, 1996 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 2-9-96**

Dear Mr. McGee:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification for Financial Guaranty Release. Contact Terri Martin to obtain the Financial Guaranty Release for City Project Number 4918.93.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

**John P. Curtin, P.E.
Civil Engineer/Hydrology**

**c: Andrew Garcia
Terri Martin, CPN 4918.93
Ben Spencer, Argus Dev Co, 6400 Uptown NE Suite 200 W, 87110**



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 15, 2000

Scott M. McGee, P.E.
ISAACSON & ARFMAN
128 Monroe Street NE
Albuquerque, NM 87108

**Re: Engineers Certification – Taylor Ridge Tracts “C” & “E”
(E-12/D008) Submitted for Release of Financial Guaranty
Engineer’s Stamp dated 2/9/1995
Engineering Certification Stamp dated 12-14-2000**

Dear Mr. McGee:

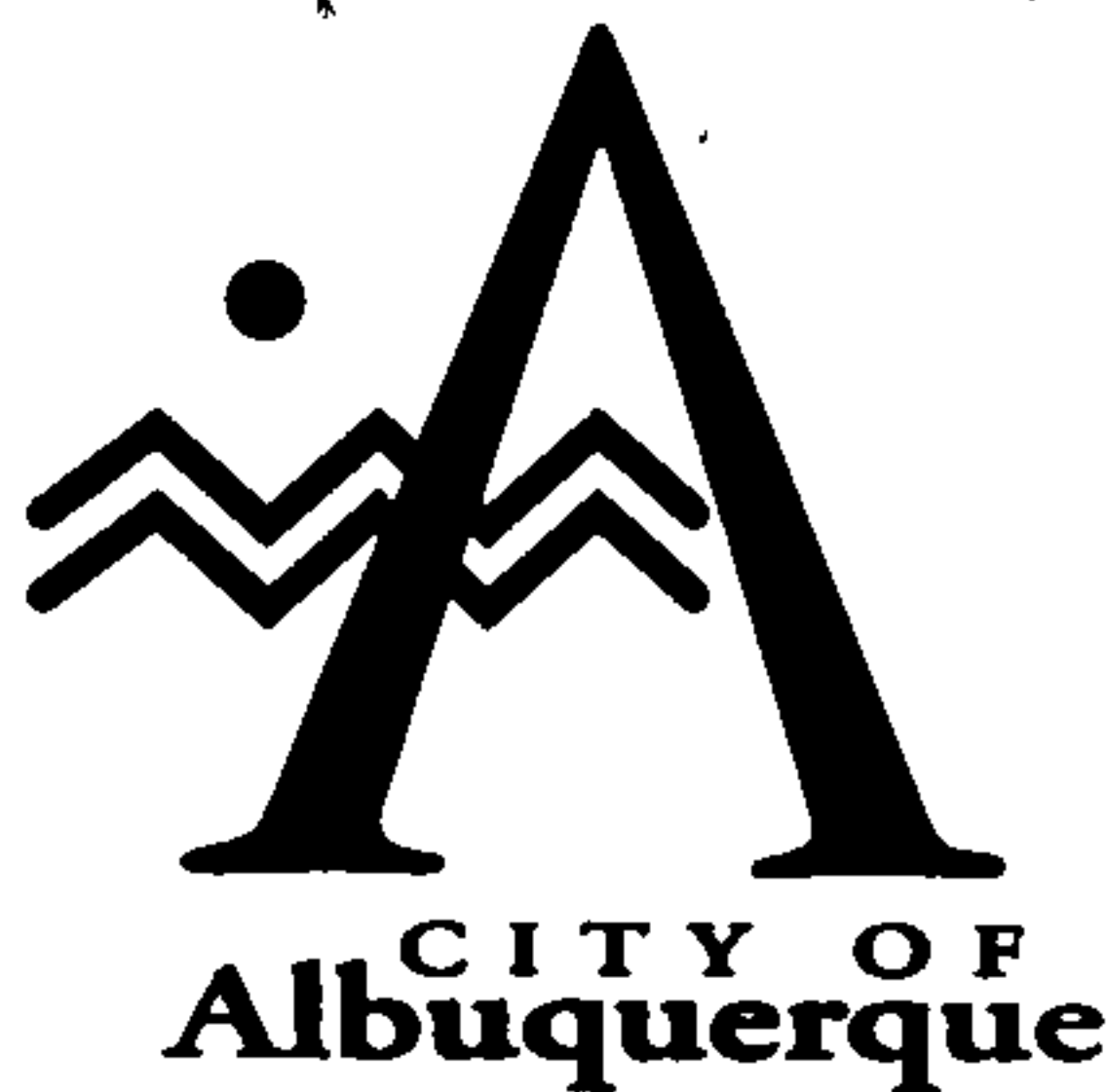
Based upon the information provided in your submittal dated 12-14-2000, all retaining walls in Tracts “C” & “E” have been built; the Engineering Certification for the above referenced subdivision is approved for Release of Financial Guaranty.

If I can be of further assistance, please contact me at 924-3986

Sincerely,

Bradley L. Bingham
Bradley L. Bingham, PE
Hydrology Review Engineer

C: Arlene Portillo, PWD – #4918.92
file



P.O. Box 1293 Albuquerque, NM 87103

December 20, 1996

Martin J. Chávez, Mayor

Scott McGee, PE
Isaacson & Arfman
128 Monroe St NE
Albuquerque, NM 87108

RE: MODIFIED S.O.#19 FOR 5327 APOLLO NW, TAYLOR RIDGE TRACTS C (E-12/D8)
RECEIVED DECEMBER 19, 1996 FOR STORM INLET MODIFICATION
ENGINEER'S STAMP DATED 12-19-96

Dear Mr. McGee:

Based on the information included in the submittal referenced above, City Hydrology approves the S.O.19 for 5327 Apollo Drive NW. Contact Storm Maintenance to inspect the modifications when they are completed.

It is City Hydrology's understanding that no additional Building Permit applications will be submitted at the Village at Taylor Ridge Subdivision until modification of the existing storm drain inlet has been inspected & approved by Storm Maintenance. Please be sure that City Hydrology receives a copy of the S.O.19 as soon as it is signed by Storm Maintenance.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

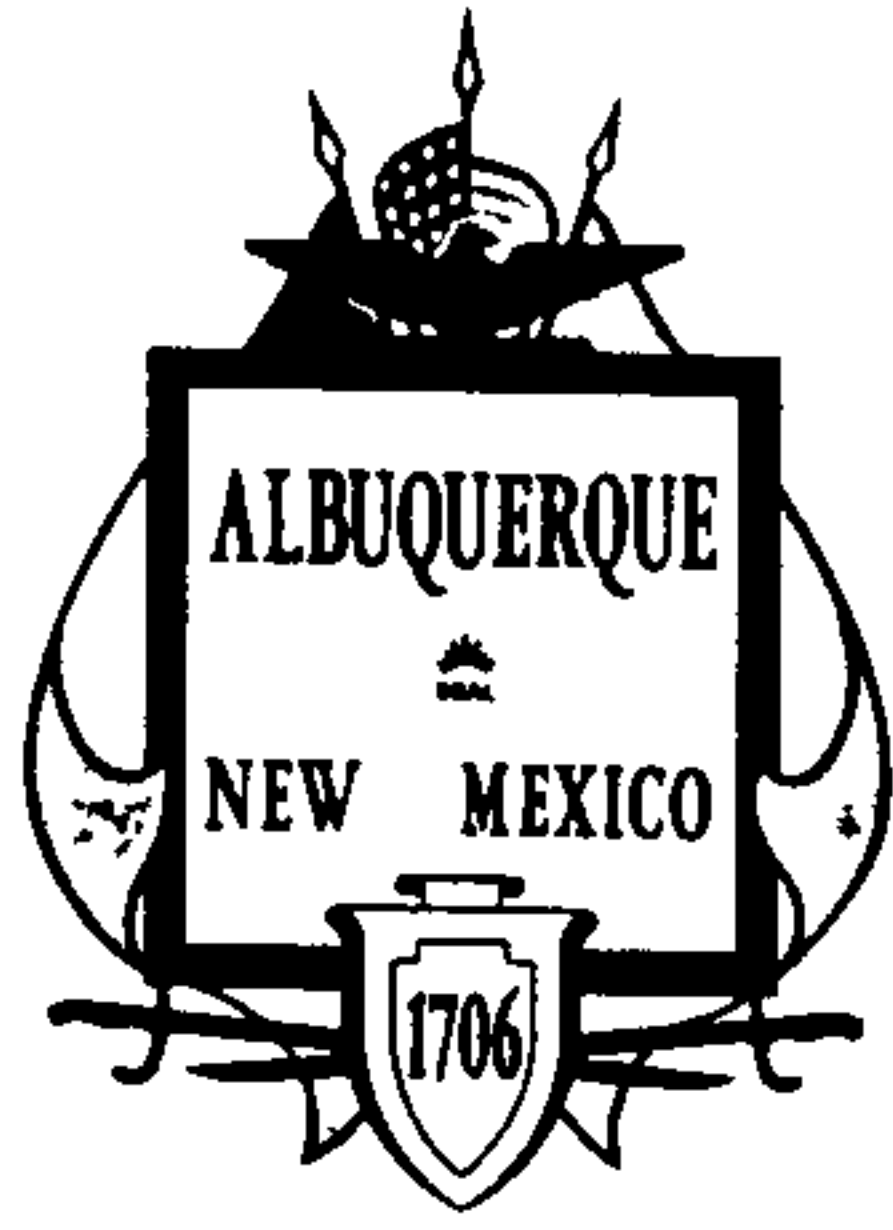
John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Andrew Garcia
Glenn Jurgensen, Storm Maintenance w/S.O.19 Copy
Tom Conway, Charter Bldg & Dev, 2103 Wyoming NE 87112

Arlene Portillo

Good for You, Albuquerque!





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 17, 1996

**Scott McGee, PE
Isaacson & Arfman
128. Monroe St NE
Albuquerque, NM 87108**

**RE: ENGINEER'S CERTIFICATION FOR TAYLOR RIDGE TRACTS C&E (E-12/D8)
RECEIVED MARCH 27, 1996 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 3-26-96**

Dear Mr. McGee:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification for Financial Guaranty Release. Contact Terri Martin to obtain the Financial Guaranty Release for City Project Number 4918.92.

City Hydrology recommends that buildings are constructed on the split pad lots promptly. The temporary 1h:1v slope will be highly susceptible to erosion during the rainy season.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

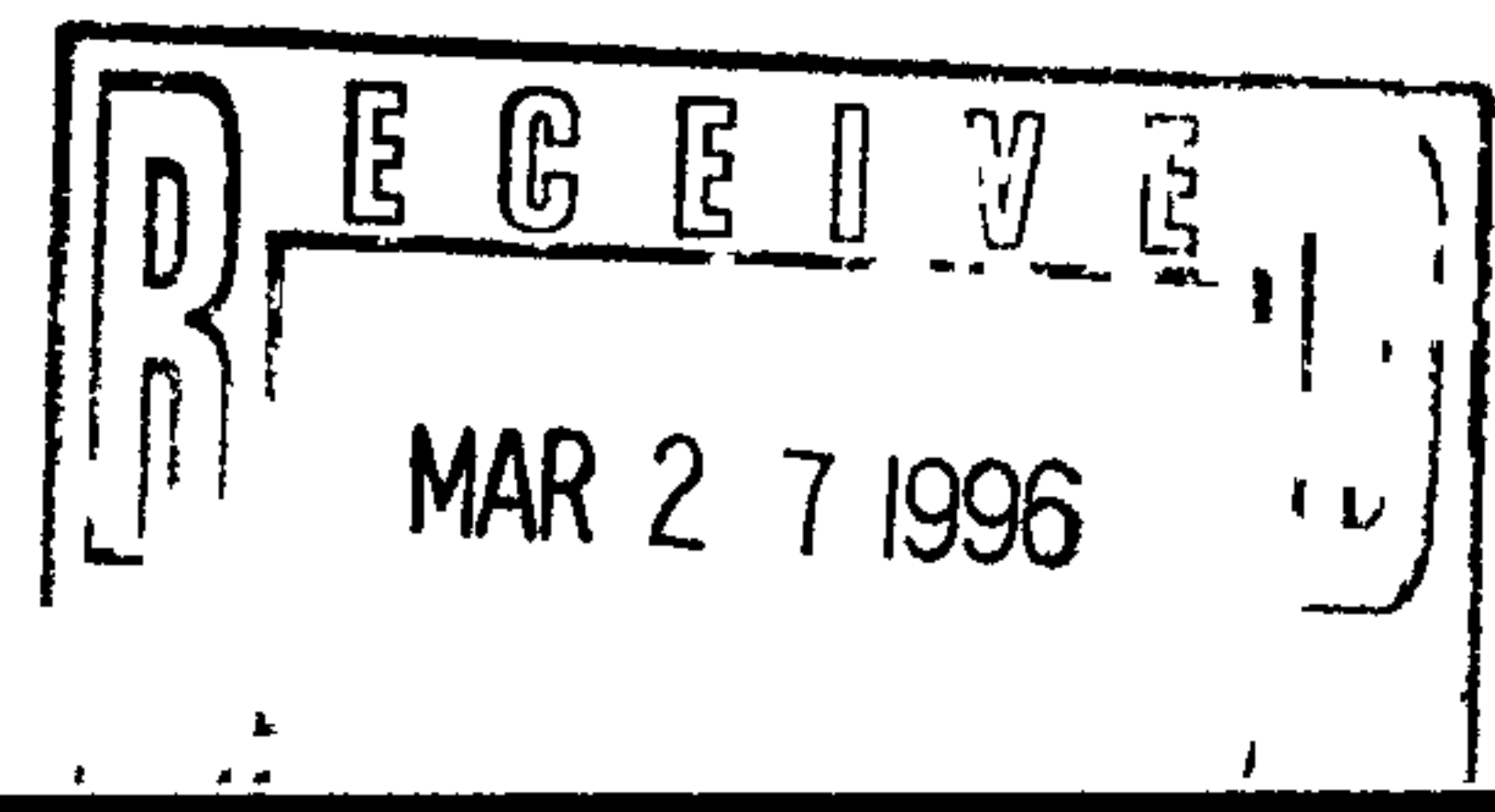


**John P. Curtin, P.E.
Civil Engineer/Hydrology**

**c: Andrew Garcia
Terri Martin, CPN 4918.92
Ben Spencer, Argus Dev Co, 6400 Uptown NE Suite 200 W, 87110**

DRAINAGE BASIN	AREA (AC)	LAND TREATMENT (%)				Q (cfs)
		A	B	C	D	
NORTH:						
A) Tres Vistas, Creighton Park, and abutting Montano Plaza, Taylor Ranch, and Oxnard Drives (5.5 D.U. = 4.6 D.U.'s/AC)	12.066	0	26	27	47	40.50
B) Park land (Tracts P-1, P-2, & P-3)	2.807	38	31	31	0	5.64
C) Tract A-1	3.702	0	50	50	0	9.10
D) Commercial (Tract D-1) (5.0 AC - 35' x 460')	4.630	0	10	0	90	19.15
E) Taylor Ridge Apts (north portion)		from Drainage Report →				<u>25.50</u>
NORTH BASIN : Q _{TOTAL} →						99.9 cfs

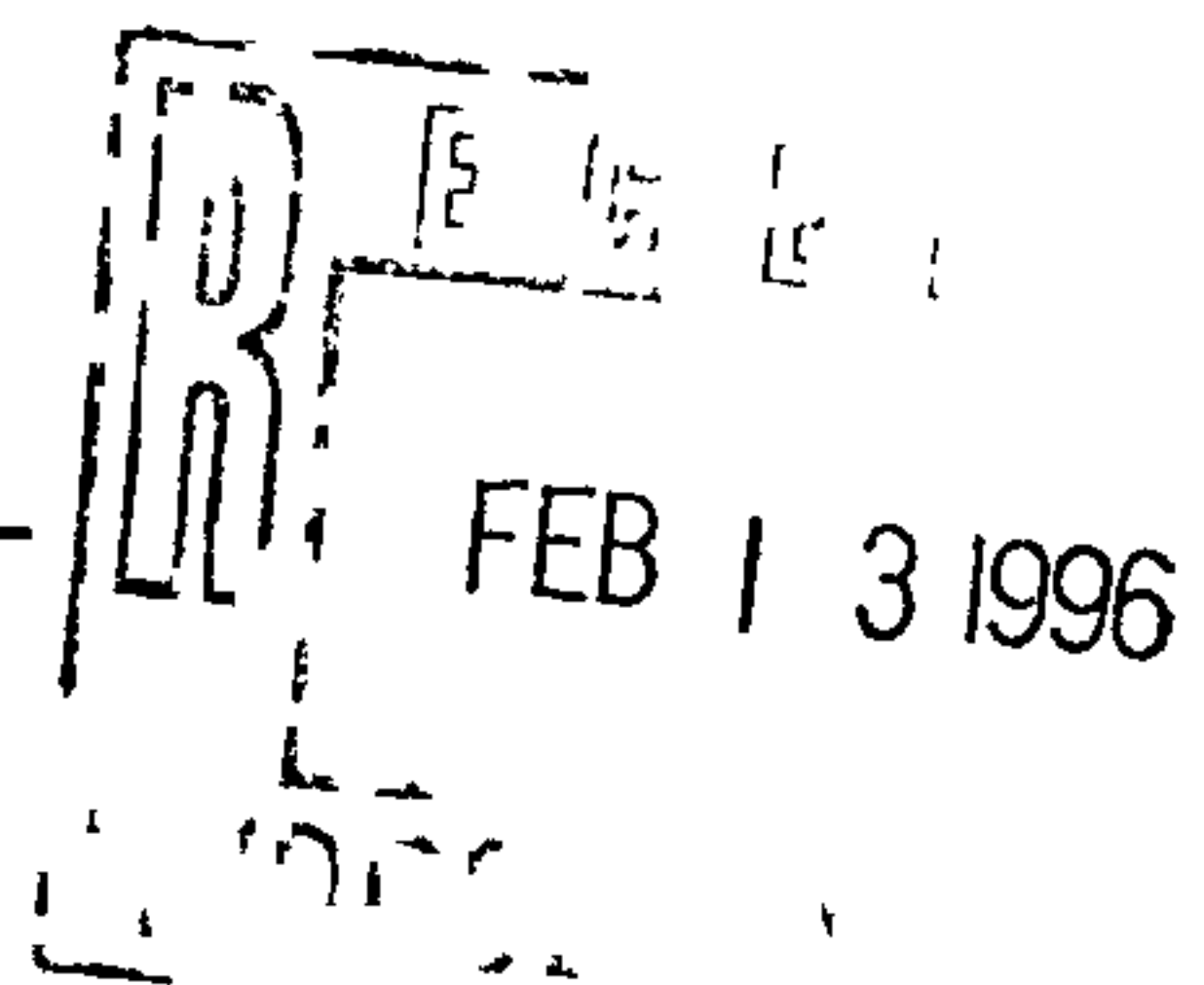
SOUTH:						
A) The Village, The Estates, portion of Montano Vista, and abutting Taylor Ranch and Montano Plaza Drives (97 DU's = 3.9 D.U.'s/AC)	24.917	0	24	35	41	81.81
B) Tr R-2 (Open Space)	2.010	0	50	50	0	4.92
C) Tr O-1 (Open Space)	0.950	0	50	50	0	2.33
D) Taylor Ridge Apts (south portion)		from Drainage Report →				<u>15.00</u>
SOUTH BASIN : Q _{TOTAL} →						104.1 cfs



CREIGHTON PARK @ TAYLOR RIDGE

SUBDIVISION	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>Q(CFS)</u>
A = 5,815.1 ACRES (4.5 D.U.'S / ACRE)	0	27	27	46	19.38
PARK LAND 2,807.1 ACRES	38	31	31	0	5.64*
TRACT A-1 <u>3,702.3 ACRES</u>	0	50	50	0	9.10*
$\Sigma A = 12,324.5$	TOTAL **				$Q_{100} = 34.1 \text{ CFS}$

AS-BUILT CONDITIONS



* LAND TREATMENT OF 50% B / 50% C HAS BEEN USED FOR REGRADED AREAS THAT HAVE BEEN REVEGETATED.

** RUNOFF RATE IS ACTUALLY LOWER THAN $Q = 34.1 \text{ CFS}$, BECAUSE TRACT A-1 DOES NOT FREELY DISCHARGE, BUT HAS A LOWER RELEASE RATE FROM THE DETENTION POND.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 24, 1995

**Scott McGee, PE
Isaacson & Arfman
128 Monroe St NE
Albuquerque, NM 87108**

**RE: AMENDED GRADING PLANS FOR TAYLOR RIDGE B, C & E (E-12/D8)
RECEIVED MARCH 7, 1995 FOR FINAL PLAT & WORK ORDER
ENGINEER'S STAMP DATED 2-9-95**

Dear Mr. McGee:

Based on the information included in the submittal referenced above, ~~City of Albuquerque Hydrology accepts these Grading Plans for Final Plat.~~ These Grading Plans have no official status until they are approved by DRB.

Engineer's Certification of grading & drainage per DPM checklist must be approved before the Financial Guaranty will be released.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

**John P. Curtin, P.E.
Civil Engineer/Hydrology**

**c: Andrew Garcia
Fred Aguirre, DRB 94-281
Ben Spencer, Argus Dev Co, 6400 Uptown NE Suite 200 W, 87110**



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 25, 1994

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, N.M. 87108

RE: DRAINAGE REPORT FOR TAYLOR RIDGE TRACTS A, B, C & E (E-12/D8)
RECEIVED OCTOBER 6, 1994 FOR GRADING PERMIT APPROVAL
ENGINEER'S STAMP DATED 9-27-94

Dear Mr. McGee:

Based on the information included in the submittal referenced above, City Hydrology accepts the Report and approves Tracts A, B, C & E for Grading Permit. City Hydrology acknowledges that the Grading & Drainage Plan for Tract A, dated 10-11-94, is the same as the Plan, dated 9-27-94, except for the addition of the 30' access easement and the elimination of one lot.

Tract D is not covered by the Report. Since the proposed grades have changed more than 18" from the grades approved under the Report for Taylor Ranch Tract R-1 (E-11/D26), DRB must approve the changes. Tract D must be seeded with Native Grass per City Spec 1012 to control erosion.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Andrew Garcia

WPHYD/8737/jpc

DRAINAGE REPORT

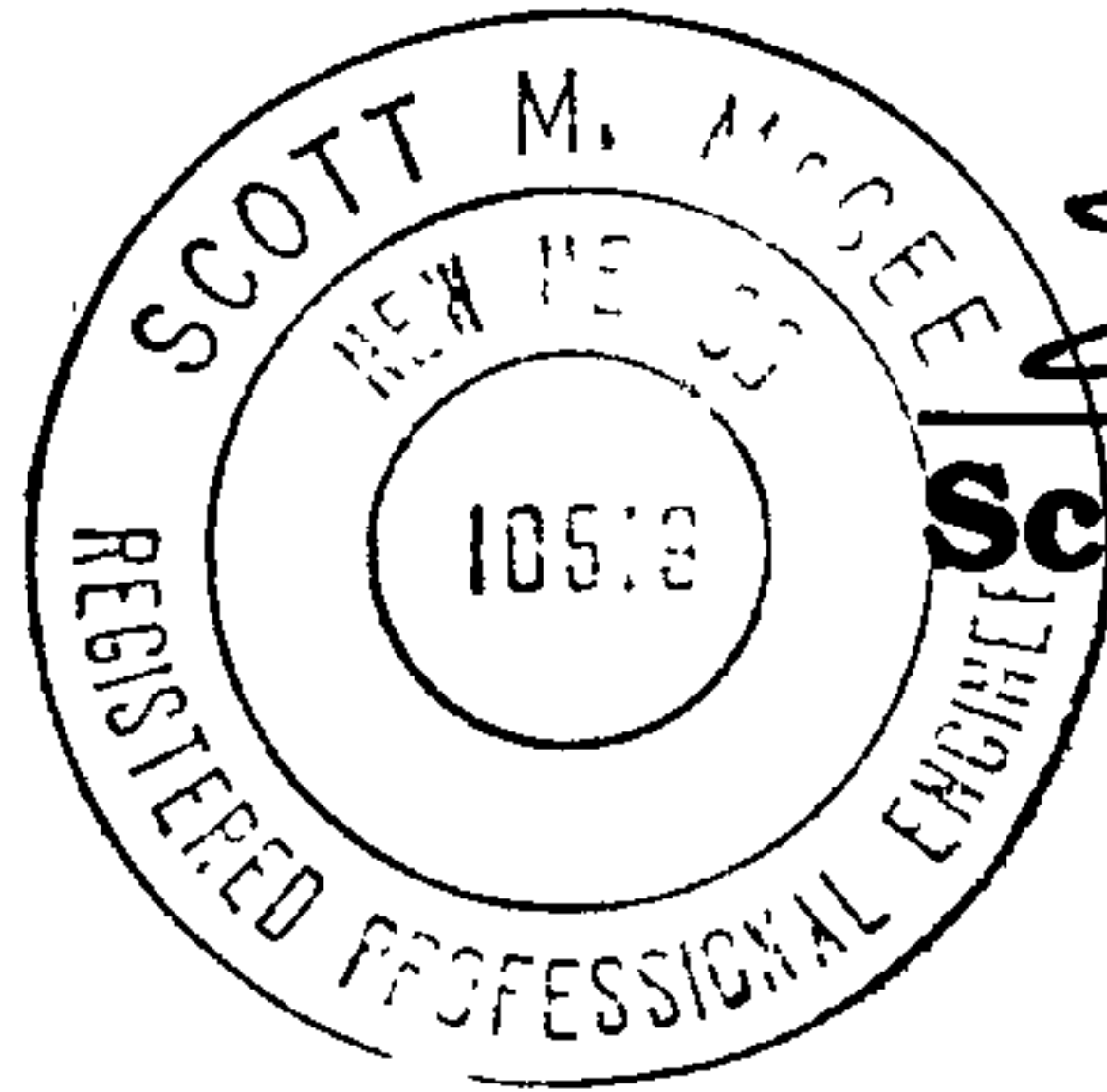
FOR

TAYLOR RIDGE TRACTS A, B, C & E

ALBUQUERQUE, NEW MEXICO
OCTOBER 1994

Prepared by:

ISAACSON & ARFMAN, P.A.
128 Monroe Street, NE
Albuquerque, NM 87108



Scott M McGee 10/4/94
Scott M. McGee, P.E. Date

CCT 6 1994

33Y D

I. INTRODUCTION

Taylor Ridge, Tracts A, B, C and E, is a residential subdivision proposed for a portion of the Taylor Ranch Tract R-1 site. Tract R-1 was split into nine tracts, (with a bulk land variance) which was approved and filed June 6, 1994. The site is located west of Coors Road between Montano Road NW and Dellyne Avenue NW.

The Bulk Land subdivision of Tract R-1 included the mass-grading of the site along with the construction of major "back-bone" utility, drainage, and roadway systems through the site. The drainage system was sized for future residential development and carries all flows east to a public stormwater detention/sedimentation facility adjacent to Coors Road NW.

This report addresses the proposed development of Taylor Ridge Tracts A, B, C and E (see Drainage Map in pocket). Tracts D, P-1, P-2, and P-3 are not proposed to be developed at this time. Tract F is the public stormwater detention/sedimentation facility.

II. EXISTING SITE CONDITIONS

- A. Flood Hazard--This site is not shown to be within an established flood hazard area as shown on the FIRM Panels 14 & 15.
- B. Soils--From the SCS Soil Survey of Bernalillo County, this site is 90 percent Bluepoint and Bluepoint-kokan association and 10 percent Madurez-Wink association. These soil associations are all loamy fine sands which are classified as Hydrologic Soil Group 'A' (90%) and 'B' (10%) soils.
- C. Topography--Located on the west side of Albuquerque, this land slopes generally from west to east at 3 to 10 percent. Drainage across each mass-graded tract will sheetflow east to temporary detention/sedimentation ponds.
- D. Offsite Flows--With the construction of Oxnard Drive NW and the extension to both Taylor Ranch Drive and Montano Plaza Drive, the four proposed tracts will accept very little offsite flow. The two exceptions are Tracts A and B. Tract A will continue to accept runoff from the adjacent City park lands while Tract B will accept runoff from the adjacent Taylor Ranch Tract R-2. The existing temporary

blanket drainage easement on Tract B will be vacated and replaced with a 10-foot private drainage easement over the easterly 10-feet of Lot 2 as shown. This will allow runoff to be conveyed from Tract R-2 to the public right-of-way of La Colonia Drive NW once this street is extended.

III. ONSITE DRAINAGE MANAGEMENT

Runoff from developed lots will typically be routed to the proposed interior roadways. When this is not possible, backyard ponding areas will provide storage volume for backyard runoff. Tracts B and C will involve extensions of public storm drains that were stubbed out as part of Project No. 4918.90, the "back-bone" storm drain system mentioned earlier.

All runoff will be routed to the public stormwater detention/sedimentation facility on Tract F. Runoff calculations are in the Appendix for individual tract development. Runoff amounts for individual tracts do not exceed those estimated in the Master Drainage Report for Taylor Ranch Tract R-1.

The Grading Plans included at the back of the Appendix will replace the mass-grading previously proposed. With the subdivision-lot grading proposed,

the earlier temporary detention/sedimentation ponds will not be required on each tract. Public streets will convey runoff to the public storm drain extensions shown.

BASIN	TRACTS	AREA (AC)	A	B	C	D		
	P-1, P-2, P-3	2.8071	0	100	0	0	5.7	cfs
10	A (4.9 d.u.'s/ac)	9.5174	0	30	21	49	31.9	cfs
		<u>12.3245</u>	<u>0</u>	<u>46</u>	<u>16</u>	<u>38</u>	<u>37.6</u>	cfs 37.7
20	Taylor Ranch & Montano Plaza R/W abutting Tract A	1.9835	0	0	21	79	8.0	cfs 4.06 cfs/Ac
	E	4.2457	0	20	20	60	15.29	cfs 3.60 cfs/Ac
	Oxnard Dr & Taylor Ranch Dr east of Montano Plaza	1.3085	0	0	21	79	5.31	cfs 4.06 cfs/Ac
30		<u>5.5542</u>	<u>0</u>	<u>16</u>	<u>20</u>	<u>64</u>	<u>20.6</u>	cfs
	Commercial-zoned area	5.0000	0	10	0	90	20.7	cfs 4.14 cfs/Ac
40	R-2 portion of D	<u>8.9260</u>	<u>0</u>	<u>25</u>	<u>5</u>	<u>70</u>	<u>33.1</u>	cfs 3.71 cfs/Ac
		<u>13.9260</u>	<u>0</u>	<u>20</u>	<u>3</u>	<u>77</u>	<u>53.5</u>	cfs
	R-2 (50% regraded)	2.0100	<u>50</u>	0	<u>50</u>	0	4.18	cfs 2.08 cfs/Ac
50	B (3.1 d.u.'s/ac)	12.1301	0	<u>30</u>	<u>35</u>	<u>35</u>	38.1	cfs 3.14 cfs/Ac
	Montano Plaza R/W (Tract 18-C-2)	1.9284	0	0	21	79	7.8	cfs 4.06 cfs/Ac
		<u>16.0685</u>	<u>6</u>	<u>23</u>	<u>35</u>	<u>36</u>	<u>50.1</u>	cfs
	Tract C (5.2 d.u.'s/ac)	9.2839	0	30	19	51	31.4	cfs 3.38 cfs
60	Tract D (southern portion)	2.1970	0	25	5	70	8.1	cfs 3.71 cfs/Ac
		<u>11.4809</u>	<u>0</u>	<u>29</u>	<u>16</u>	<u>55</u>	<u>39.5</u>	cfs

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE

Analysis Point # TRACT E

LOTS 1-29, TRES VISTAS CT,
& TRES VISTAS RD

DRAINAGE AREA:

Planimeter Rdg. _____ x .015

x Map Scale _____² ÷ 43,560

A = 4.2457 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Arroyo Flow:

Tc = 0.0078 $\frac{LO.77}{SO.385}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: <u>1</u>
A	<u>0</u>	<u>0</u>	
B	<u>15.20</u>	<u>0.637</u>	
C	<u>22.20</u>	<u>0.934</u>	
D	<u>63.60</u>	<u>2.675</u>	
	100%	<u>4.246</u>	

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	<u>0</u>	<u>-</u>	<u>0</u>
B	<u>0.637</u>	<u>2.03</u>	<u>1.3</u>
C	<u>0.934</u>	<u>2.87</u>	<u>2.7</u>
D	<u>2.675</u>	<u>4.37</u>	<u>11.7</u>
TOTAL			<u>15.7</u> 15.3 MDR

VOLUME OF RUNOFF:

Soil Group A B C D

CN (Previous) = _____ (P1 22.2 C-2)

Percent Impervious = _____ %

CN (Composite) = _____ (P1 22.2 C-3)

Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)

V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE TRACT A Analysis Point # 2A

DRAINAGE AREA:

Planimeter Rdg. _____ x .015
 x Map Scale _____² ÷ 43,560

Lots 1-27, Taylor Ridge Rd, &
 1.2 acres of Park (OFFSITE)

A = 7.01 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)
 Tc = _____ sec. = _____ min. Tc = _____ min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)
 Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Arroyo Flow:

Tc = 0.0078 $\frac{LO.77}{SO.385}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: <u>1</u>
A	-	_____	
B	<u>27</u>	<u>1.89</u>	
C	<u>26</u>	<u>1.83</u>	
D	<u>47</u>	<u>3.29</u>	
	100%	<u>7.01</u>	

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	_____	_____	_____
B	<u>1.89</u>	<u>2.03</u>	<u>3.8</u>
C	<u>1.83</u>	<u>2.87</u>	<u>5.2</u>
D	<u>3.29</u>	<u>4.37</u>	<u>14.4</u>
TOTAL			<u>23.4</u>

VOLUME OF RUNOFF:

Soil Group A B C D
 CN (Previous) = _____ (P1 22.2 C-2)
 Percent Impervious = _____ %
 CN (Composite) = _____ (P1 22.2 C-3)
 Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)
 V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE

Analysis Point # ZB

DRAINAGE AREA:

TRACT A-1 * 1.6 acres of
Park (OFFSITE)

Planimeter Rdg. _____ x .015

x Map Scale _____² ÷ 43,560

A = 5.32 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)
Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

Arroyo Flow:

Tc = 0.0078 $\frac{LO.77}{SO.385}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: _____
A	-	-	
B	<u>22</u>	<u>1.17</u>	
C	<u>78</u>	<u>4.15</u>	
D	-	-	
	100%	<u>5.32</u>	

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	-	-	-
B	<u>1.17</u>	<u>2.03</u>	<u>2.4</u>
C	<u>4.15</u>	<u>2.87</u>	<u>11.9</u>
D	-	-	-
TOTAL			<u>14.3</u>

VOLUME OF RUNOFF:

Soil Group A B C D

CN (Previous) = _____ (P1 22.2 C-2)

Percent Impervious = _____ %

CN (Composite) = _____ (P1 22.2 C-3)

Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)

V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

12

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE TRACT B Analysis Point # 3A

DRAINAGE AREA:

Planimeter Rdg. _____ x .015

Pegasus Pl cul-de-sac & backyards of lots 24-29

x Map Scale _____² ÷ 43,560

A = 4.78 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Arroyo Flow:

Tc = 0.0078 $\frac{LO.77}{SO.385}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: <u>1</u>
A	-		
B	<u>15</u>	<u>0.72</u>	
C	<u>58</u>	<u>2.77</u>	
D	<u>27</u>	<u>1.29</u>	
	100%	<u>4.78</u>	

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	-		
B	<u>0.72</u>	<u>2.03</u>	<u>1.5</u>
C	<u>2.77</u>	<u>2.87</u>	<u>7.9</u>
D	<u>1.29</u>	<u>4.37</u>	<u>5.6</u>
TOTAL			<u>15.0</u>

VOLUME OF RUNOFF:

Soil Group A B C D

CN (Previous) = _____ (P1 22.2 C-2)

Percent Impervious = _____ %

CN (Composite) = _____ (P1 22.2 C-3)

Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)

V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

12

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE TRACT B

Analysis Point # 3B

DRAINAGE AREA:

Planimeter Rdg. _____ x .015

x Map Scale _____² ÷ 43,560

LOTS A, B, 1-23, & FRONT YARDS OF
LOTS 24-29, & TR R-2 (2.01 ACRES
OFFSITE AREA)

A = 9.36 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)
Tc = _____ sec. = _____ min. Tc = _____ min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Arroyo Flow:

Tc = 0.0078 $\frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: <u>1</u>
A	<u>11</u>	<u>1.03</u>	
B	<u>12</u>	<u>1.12</u>	
C	<u>47</u>	<u>4.40</u>	
D	<u>30</u>	<u>2.81</u>	
	100%	<u>9.36</u>	

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	<u>1.03</u>	<u>1.29</u>	<u>1.3</u>
B	<u>1.12</u>	<u>2.03</u>	<u>2.3</u>
C	<u>4.40</u>	<u>2.87</u>	<u>12.6</u>
D	<u>2.81</u>	<u>4.37</u>	<u>12.3</u>
TOTAL			<u>28.5</u>

VOLUME OF RUNOFF:

Soil Group A B C D

CN (Previous) = _____ (P1 22.2 C-2)

Percent Impervious = _____ %

CN (Composite) = _____ (P1 22.2 C-3)

Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)

V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

12

RUNOFF CALCULATIONS

PROJECT: TAYLOR RIDGE

Analysis Point # TRACT C

PEGASUS DR, APOLLO CT,
APPOLLO DRIVE

DRAINAGE AREA:

Planimeter Rdg. _____ x .015

x Map Scale _____² ÷ 43,560

A = 9,9669 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

Overland Flow:

v = _____ ft/sec (P1 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

Street Flow:

v = _____ ft/sec (P1 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = (USE) 12 min.

Arroyo Flow:

Tc = 0.0078 $\frac{LO.77}{SO.385}$ = _____ min. Tc = _____ min.

LAND TREATMENT:

Land Use Type	Percentage	Acres	Precipitation Zone: <u>1</u>
A	—	—	
B	<u>15 30</u>	<u>1.50</u>	
C	<u>34 19</u>	<u>3.39</u>	
D	<u>51 51</u>	<u>5.08</u>	
	100%	<u>9.97</u>	<u>9.28 DMR</u>

PEAK DISCHARGE (Table 9):

Treatment	Area(acres)	Discharge (cfs/ac)	Q ₁₀₀ (cfs)
A	—	—	0
B	<u>1.50</u>	<u>2.03</u>	<u>3.0</u>
C	<u>3.39</u>	<u>2.87</u>	<u>9.7</u>
D	<u>5.08</u>	<u>4.37</u>	<u>22.2</u>
TOTAL			<u>34.9</u> 31.4 cfs

VOLUME OF RUNOFF:

Soil Group A B C D

CN (Previous) = _____ (P1 22.2 C-2)

Percent Impervious = _____ %

CN (Composite) = _____ (P1 22.2 C-3)

Direct Runoff, q₁₀₀ = _____ " (P1 22.2 C-4)

V₁₀₀ = q A = _____ x _____ ac x 43,560 = _____ cu. ft.

STREET HYDRAULICS SUMMARY

Location	Q (cfs)	Street Slope (%)	Flow Depth (ft) (4)	Area $\frac{1}{2}$ Street (SF)	Velocity (fps)	Avg. Depth (ft) (1)	Froude No. (2)	Sequent Depth (ft) (3)
<u>TRACT E</u>								
TRES VISTAS RD: @ lot 13/20	10.8	3.0	0.32	1.52	3.6	0.127	1.78	0.66
@ Oxnard Drive	(15.7-7.0)=8.7	8.0	0.26	0.89	4.9	0.099	2.74	0.89
<u>TRACT A</u>								
TAYLOR RIDGE RD: @ lot 5	19.0	2.5	0.38	2.20	4.3	.157	1.91	0.85
@ Montano Plaza Dr	23.4-10.4=13.0	2.4	0.35	1.90	3.4	.141	1.60	0.64

(1) $D = \text{Area} / \text{Top Width}$ (2) $F = V / (gD)^{1/2}$ (3) $D_2 = (0.5) D_1 [(1+8F^2)^{1/2} - 1]$ from DPM Plate 22.3 E-1
 (4) DPM Plate 22.3 D-1 (32' street) gives exact depth up to 0.36ft & close approximations to 0.40ft flow depth

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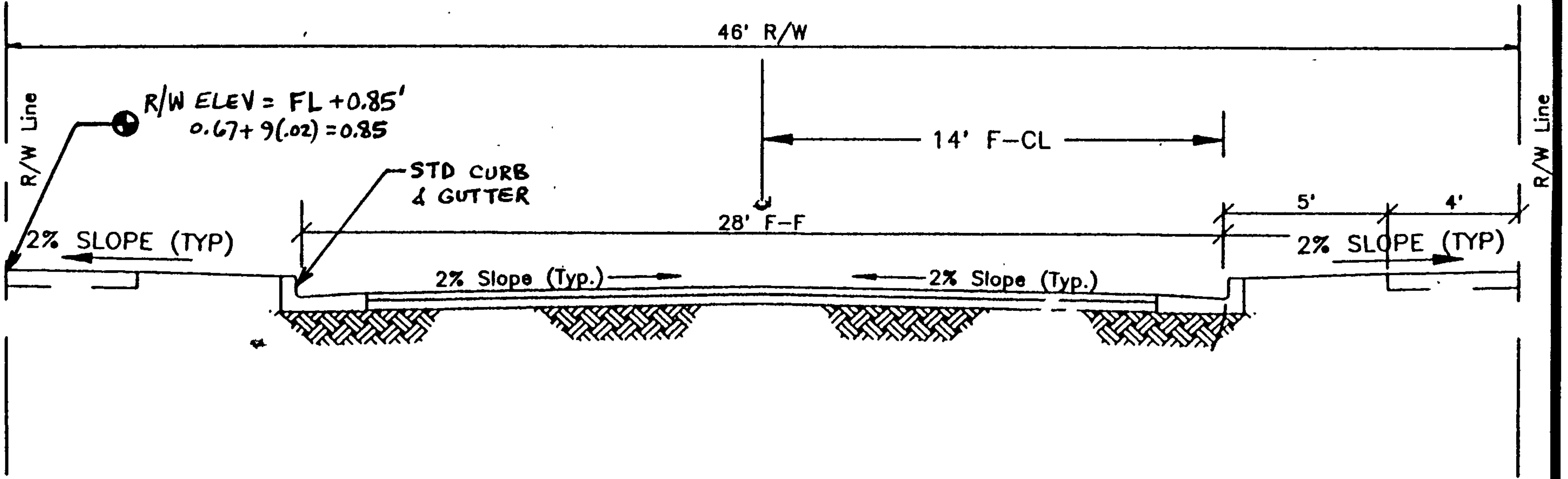
SUBJECT TAYLOR RIDGE JOB NO. _____
 BY SM DATE 8/30/94 SHEET NO. A7 OF _____

STREET HYDRAULICS SUMMARY

Location	Q (cfs)	Street Slope (%)	Flow Depth (ft) (4)	Area $\frac{1}{2}$ Street (sf)	Velocity (fps)	Avg. Depth (ft) (1)	Froude No. (2)	Segment Depth (ft) (3)
<u>TRACT B</u>								
LA COLONIA DR:								
@ lot 15	18.0	6.4	0.34	1.78	5.0	.140	2.35	0.87
@ Montano Plaza Dr	28.5-10=18.5	1.0	0.44	2.56	3.6	.183	1.48	0.73
<u>TRACT C</u>								
APOLLO DR:								
@ lot 17B/14A	18.6	2.3	0.38	2.20	4.2	.157	1.87	0.83
@ Pegasus Dr	27.4-11=16.4	2.3	0.3	2.04	4.0	.146	1.84	0.77
PEGASUS DR:								
@ Apollo Dr	7.5	4.0	0.28	1.08	3.5	.108	1.88	0.62

(1) $D = \text{Area} / \text{Top Width}$ (2) $F = V / (gD)^{1/2}$ (3) $D_2 = (0.5) D_1 [(1+8F^2)^{1/2} - 1]$ from DPM Plate 22.3 E-1
 (4) DPM Plate 22.3 D-1 (32' Street) gives exact depth to 0.36 ft & close approximations to 0.40 ft flow depth.

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(28' F-F STREET WIDTH)

SUBJECT TAYLOR RIDGE JOB NO. _____
BY SM DATE 8/30/94 SHEET NO. A9 OF _____

STORM DRAIN INLET CALCULATION TABLE

Location	Q _u , Upstream (cfs)	Street Grade (%)	Flow Depth (ft.)	Inlet Type	Inlet Capacity (cfs)	Q _d , Downstream (cfs)
LA COLONIA DR: lot 15/29	18.0	6.4	0.34	2 SNGL 'A'	6.0(2) = 12.0	6.0
LA COLONIA DR: lot 18	16.4	1.0	0.34	SNGL 'A' (DBL THROAT)	3.0	11.4
LA COLONIA DR: lot 23/24	13.5	1.0	0.40	2 SNGL 'A'	4.0(2) = 8.0	5.5
		TOTAL Q	INTERCEPTED		→ 23.0 cfs	(> 19.4* OK)
TAYLOR RIDGE RD: lot 5	19.0	2.5	0.38	2 SNGL 'A'	5.2(2) = 10.4	8.6

* 19.4 cfs REQ'D INTERCEPTION PER MASTER DRAINAGE PLAN FOR TRACT B

STORM DRAIN INLET CALCULATION TABLE

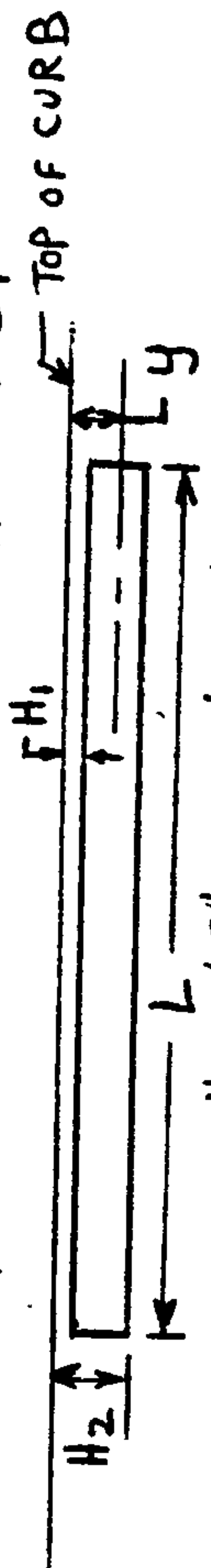
Location	Q, Upstream (cfs)	Street Grade (%)	Flow Depth (ft.)	Inlet Type	Inlet Capacity (cfs)	Q, Downstream (cfs)
TRES VISTAS RD: lot 13/20	10.8	3.0	0.32	2 SNGL 'A'	3.5(2) = 7.0	3.8
APOLLO DR: lot 17B/14A	18.6	2.3	0.38	2 SNGL 'A'	5.5(2) = 11.0	7.6
APOLLO DR: lot 20B/11A	12.9	2.3	0.34	2 SNGL 'A'	4.2(2) = 8.4	4.5
APOLLO DR: lot 21B/10A	5.0	2.3	0.25	2 SNGL 'A'	2.4(2) = 4.8	0.2
APOLLO DR: lot 8/9	3.2	(SUMP)	0.67	SNGL 'A' (DBL THROAT)	20.7 *	0.0
PEGASUS DR: lot 7	7.5	(SUMP)	0.67	SNGL 'A' (DBL THROAT)	20.7 *	0.0

* Q INTERCEPTED AT SUMP INLET BASED ON CLOGGED GRATE WITH OPEN THROAT ONLY ACCEPTING FLOW.

$$Q = C A \sqrt{2gh}$$

$$Q = (0.62)(5.21) \left((2)(32.2)(.635) \right)^{1/2}$$

$$Q = 20.7 \text{ CFS THROAT ONLY}$$



$$H_1 = 4.5' = .375'$$

$$H_2 = 10.75'' = .896'$$

$$A = L(H_2 - H_1) = 10.0(.521) = 5.21 \text{ SF}$$

$$y = H_1 + \left(\frac{H_2 - H_1}{2} \right) = .375 + .260$$

$$y = 0.635 \text{ FT}$$

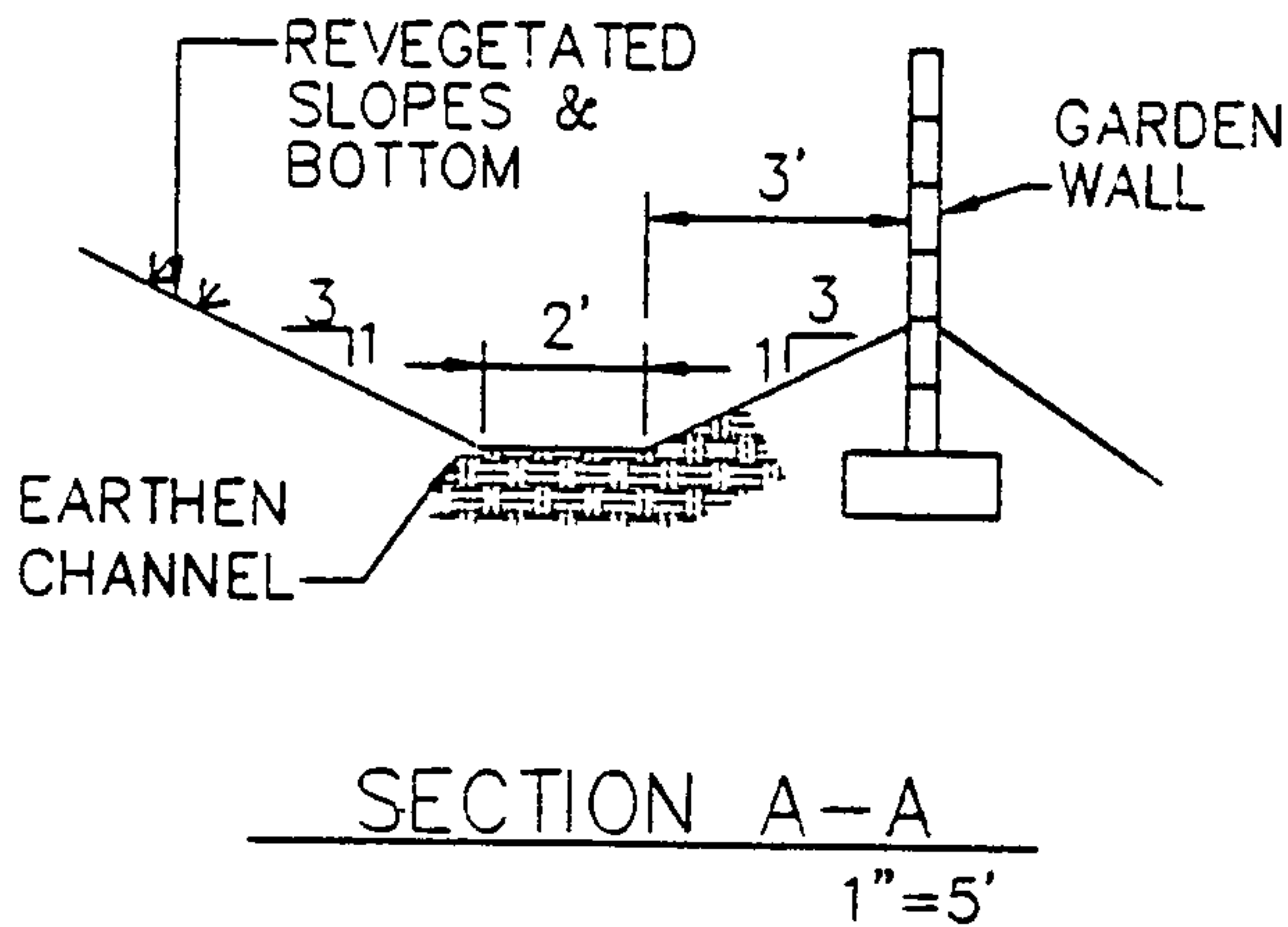
PIPE HYDRAULICS SUMMARY

Location	SD size (in)	Design Q (cfs)	Manning Capacity (cfs)	Slope (%)	Flow Depth (ft)	Velocity (fps)	Comments
Taylor Ridge Rd	18	10.4	18.2	3.0	0.86	10.0	
	24	10.4	32.0	2.0	0.65	12.0	
La Colonia Dr	24	15.0	32.0	2.0	0.93	10.0	
Apollo Dr (easement beyond)	24	24.2	32.0	2.0	1.56	9.9	
	36	69.8	94.0	2.0	2.25	13.1	
Tres Vistas Rd	18	7.0	18.2	3.0	0.70	8.5	
	24	7.0	32.0	2.0	0.60	7.4	

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SUBJECT TAYLOR RIDGE JOB NO. _____
 BY SM DATE 8/31/94 SHEET NO. 12 OF _____

TRACT R-2 SWALE



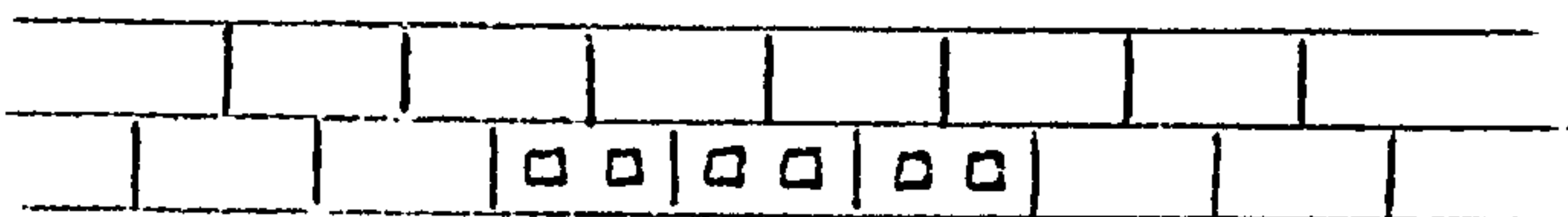
$S = 1\%$, for $y = 6''$

$Q = \frac{1.49}{.03} (1.75) (0.35)^{2/3} (.01)^{1/2}$

$Q = 4.3 \text{ CFS } (Q_{MAX} = 4.2 \text{ CFS})$

$V = \frac{Q}{A} = \frac{4.2 \text{ CFS}}{1.75 \text{ SF}} = 2.4 \text{ FPS}$

REAR WALL TURNED BLOCKS



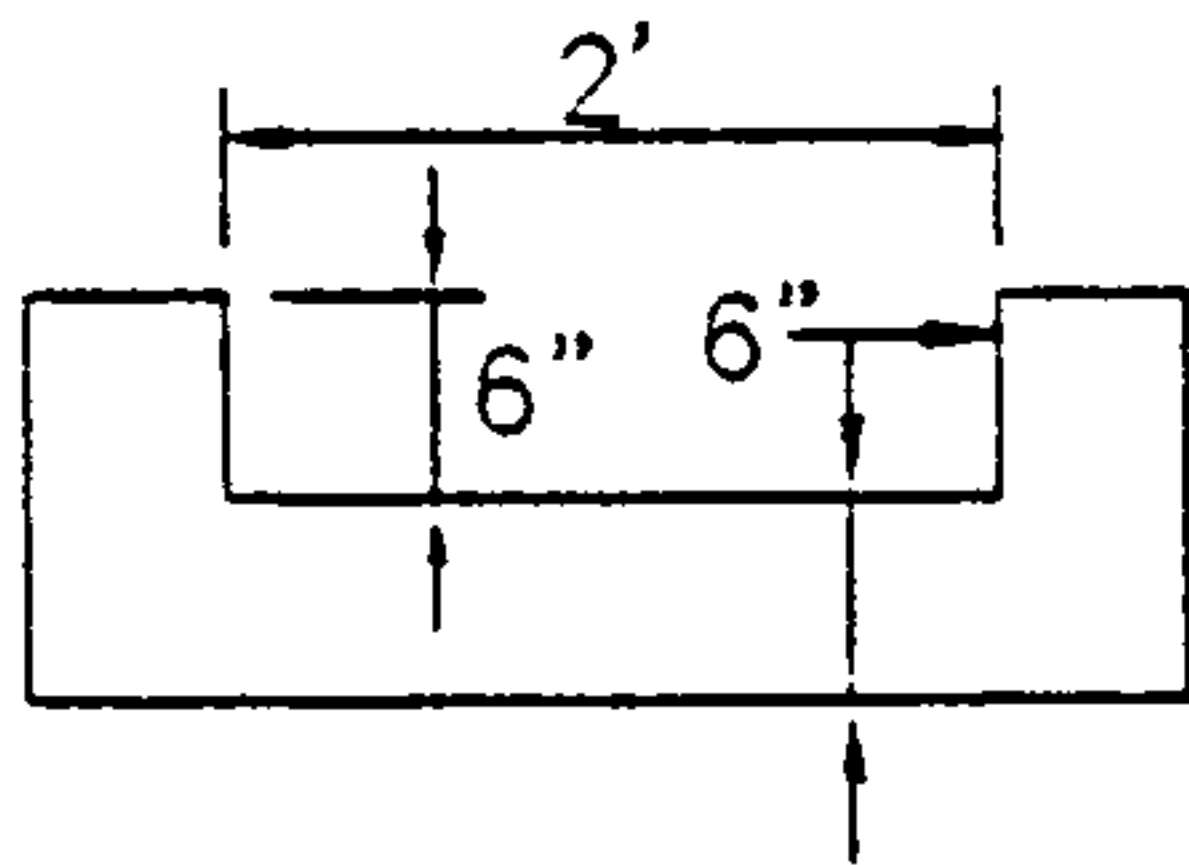
6 Openings @ 5 1/2" square

$A = 6 (0.21) = 1.26 \text{ SF}$

$Q = CA \sqrt{2gH}$

for $y = 6''$ $Q = (0.6)(1.26)[(64.4)(0.5)]^{1/2}$

$Q = 4.3 \text{ CFS}$ ←



SECTION B-B
1"=2'

NOTE:

PRIVATE DRAINAGE CHANNEL SHALL WIDEN TO 4' F-F OVER 4' LENGTH ADJACENT TO REAR LOT. REAR WALL SHALL HAVE 3 TURNED BLOCKS (AT GROUND LEVEL) AT DRAINAGE CHANNEL ENTRANCE.

LOT B
PRIVATE DRAINAGE CHANNEL

$S = 2\%$

CAPACITY: $Q = \frac{1.49}{.013} (1.0) (0.33)^{2/3} (.02)^{1/2} = 6.7 \text{ CFS}$

for $y = 0.34'$: $Q = \frac{1.49}{.013} (.68) (.257)^{2/3} (.02)^{1/2} = 4.4 \text{ CFS}$

$V = Q/A = 4.2/0.67 = 6.3 \text{ FPS}$