



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 30, 2001

Gregory J. Krenik
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque New Mexico 87199

RE: Pollution Retardant Mechanism Detail (B12-D9) Dated April 13, 2001

Dear Mr. Krenik:

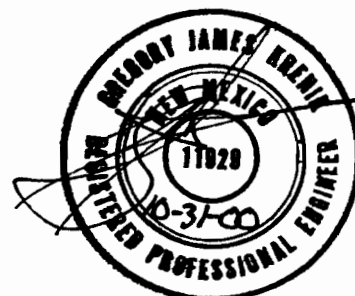
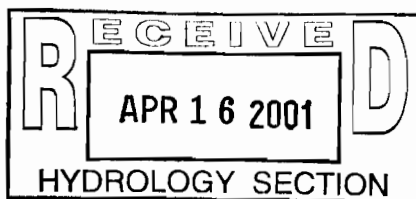
The City and Bernalillo County had already approved the above project. The City's approval letter is dated March 28, 2001. The above detail is also approved.

If you have any questions please call me a 924-3982.

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

DRAINAGE CALCULATIONS
FOR
AMIGO - GOLF COURSE ROAD
AND IRVING BLVD.



3-6-01
4-13-01



D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmgs@swcp.com

PROJECT AMIGO GOLF COURSE, IRVING
SUBJECT DRAINAGE CALCS
BY GSK DATE 2-27-01
CHECKED _____ DATE _____
SHEET 2 OF _____

Revised 4-13-01

- FIND RUNOFF FROM OFFSITE BASIN TO THE SOUTH.

WE WILL ONLY DETERMINE UNDEVELOPED
FLOW SINCE DEVELOPED FLOWS WILL NOT BE
ALLOWED TO ENTER OUR SITE.

OFFSITE BASIN = 1.5223 AC

100% TYPE A

FROM AHYMO OUTPUT SHEETS 9-11

$Q = 2.03 \text{ cfs}$

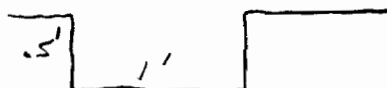
$V = 0.0570 \text{ AC-FT}$

- SIZE RESULTING POND

ELEV	AREA(SF)	VOLUME(AC-FT)
05	2465	0
06	4787	0.08324

ELEV. OF 0.0570 AC-FT
= 05.07

- SIZE WEIR OPENING



$$Q = 2.95 \text{ cfs} \approx 1.5$$

$$\text{FIND } Q \text{ THROUGH WEIR } Q = 2.95(1) 0.07^{1.5} = 0.055 \text{ cfs}$$

- CAPACITY OF CHANNEL

$$S = 6.25\% \quad n = 0.013$$

$$d = .5$$

$$wP = 2$$

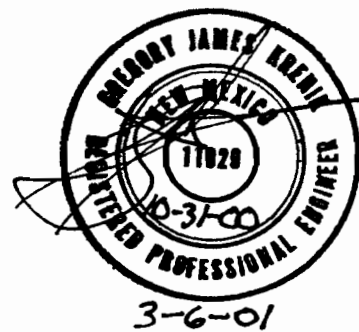
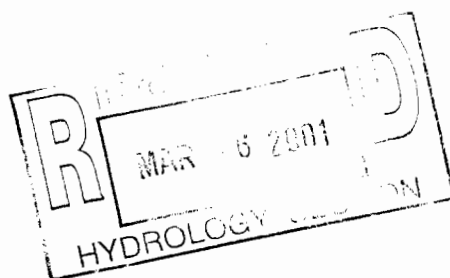
$$A = 0.5$$

$$V = 11.34 \text{ F/s}$$

$$Q = 5.67 \text{ cfs} > 0.055 \text{ cfs}$$

- INVERT OF POND OUTFALL WILL BE AT 05.57
TO ALLOW FOR SEDIMENT STORAGE.

DRAINAGE CALCULATIONS
FOR
AMIGO - GOLF COURSE ROAD
AND IRVING BLVD.





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PROJECT Amigo-GOLF COURSE & IRVING
SUBJECT DRAINAGE CALCS
BY GJK DATE 10-31-00
CHECKED _____ DATE _____
SHEET 1 OF _____
REVISED 2-27-01

- SITE IS LOCATED AT THE SE CORNER OF GOLF COURSE AND IRVING IN BERNALILLO COUNTY.
- SITE IS NOT IN A 100 YR FLOOD ZONE

$$\text{TOTAL SITE} = 2.366 \text{ AC} = 0.003697 \text{ SM}$$

$$\text{TYPE B} = 0.982 \text{ AC} = 41.50\% \quad \text{TYPE C} = 0.456 \text{ AC} = 19.28\% \\ \text{TYPE D} = 39.22\%$$

$$P_1 = 1.90 \text{ in}$$

$$P_6 = 2.20 \text{ in}$$

$$P_{24} = 2.68 \text{ in}$$

FROM AHYMO OUTPUT SHEETS 6-8

$$Q = 7.46 \text{ CFS}$$

$$V = 0.2448 \text{ AC-FT}$$

- SITE DRAINAGE & ROADWAY IMPROVEMENT ARE BEING INCORPORATED INTO THE GOLF COURSE & IRVING IMPROVEMENTS
- RUNOFF WILL OCCUR AT 3 LOCATIONS - BOTH DRIVEWAYS AND AN OUTFALL TO THE FUTURE STORMMAIN.
- EXISTING RUNOFF FROM THE SOUTH WILL BE ALLOWED TO ENTER THE PROPERTY AT THIS TIME. FUTURE DEVELOPMENT ON THOSE LOTS WILL REQUIRE CUTTING AND AT THAT TIME THOSE LOTS WILL NEED TO BE GRADED SO THEY DO NOT DISCHARGE ONTO THIS PROPERTY.
A SMALL POND WILL BE USED AS A DESILTING AREA FOR THIS RUNOFF BEFORE IT DISCHARGES TO IRVING.
- THE RUNOFF LEAVING THE DRIVEWAYS WILL ENTER CATCH BASINS ALONG GOLF COURSE AND IRVING.
- THIS PROJECT IS INCORPORATED WITH THE GOLF COURSE AND IRVING PROJECTS WHICH IS A CITY OF ALBUQUERQUE PROJECT. SMITH ENGINEERING IS DOING THE DESIGN FOR THE CITY
- "THE FINAL DRAINAGE REPORT FOR THE CORNER OF GOLF COURSE RD AND IRVING BLVD" PREPARED BY BOHANNAN-HUSTON 11/97 WILL BE REFERENCED - APPENDIX "A"



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PROJECT AMIGO GOLF COURSE IRVING
SUBJECT DRAINAGE CALCS
BY GSK DATE 2-27-01
CHECKED _____ DATE _____
SHEET 2 OF _____

- FIND RUNOFF FROM OFFSITE BASIN TO THE SOUTH.

WE WILL ONLY DETERMINE UNDEVELOPED
FLOW SINCE DEVELOPED FLOWS WILL NOT BE
ALLOWED TO ENTER OUR SITE.

OFFSITE BASIN = 1.5223 AC

100% TYPE A

FROM AHYMO OUTPUT SHEETS 9-11

$Q = 2.03$ cfs

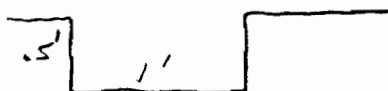
$V = 0.0570$ AC-FT

- SIZE DESILTING POND

ELEV	AREA(SF)	VOLUME(AC-FT)
05	2465	0
06	4787	0.8324

ELEV. OF 0.0570 AC-FT
= 05.07

- SIZE WEIR OPENING



$$Q = 2.95 L H^{1.5}$$

$$\text{FIND } Q \text{ THROUGH WEIR } Q = 2.95(1) 0.07^{1.5} = 0.055 \text{ cfs}$$

- CAPACITY OF CHANNEL

$$S = 6.25\% \quad n = 0.013$$

$$d = .5$$

$$wP = 2$$

$$A = 0.5$$

$$V = 11.34 \text{ F/S}$$

$$Q = 5.67 \text{ cfs} > 0.055 \text{ cfs}$$



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PROJECT AMIGO-GOLF-COURSE IRVING
SUBJECT DRAINAGE CALCS
BY GJK DATE 2-27-01
CHECKED _____ DATE _____
SHEET 3 OF _____

- RUNOFF FOR TOTAL BUILD OUT OF AMIGO SITE

$$\text{SITE} = 2.366 \text{ AC}$$

$$\text{TYPE B} = 0.6117 \text{ AC} = 25.86\%$$

$$\text{TYPE D} = 1.5169 \text{ AC} = 64.11\%$$

$$\text{TYPE C} = 0.2374 \text{ AC} = 10.03\%$$

FROM AH440 OUT PUT SHEETS 12-14

$$Q = 8.68 \text{ CFS}$$

$$U = 0.3025 \text{ AC-FT}$$

- TOTAL Q FROM OFFSITE BASIN AND BUILDOUT

$$Q = 2.03 \text{ CFS} + 8.68$$

$$= 10.71 \text{ CFS}$$

WITH THIS THE OFFSITE BASIN
IS UNDEVELOPED, DEVELOPED FLOW
WILL NOT ENTER THIS SITE.

- FIND Q FROM OFFSITE BASIN THAT DRAINS TO
IRVING BLVD, OFFSITE BASIN THAT DRAINS
TO AMIGO SITE AND THE AMIGO SITE.

WE WILL USE THE BH DATA FOR THE OFFSITE
BASINS - B=70% + D=70%



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PROJECT Amigo - Golf Course & IRVING
SUBJECT DRAINAGE CALCS
BY GSK DATE 2-27-01
CHECKED _____ DATE _____
SHEET 4 OF _____

TOTAL BASIN DEVELOPED

	AREA	A	B	C	D
AMIGO SITE	2.366	0	0.6117	0.2374	1.5169
OFFSITE BASIN	1.5223	0	0.7302 30%	0	1.7638 70%
IRVING OFFSITE	2.434	0	0.4567 30%	0	1.0656 70%
	<u>6.3223</u>	<u>0</u>	<u>1.7986 (28.45%)</u>	<u>0.2374 (3.75%)</u>	<u>4.2863 (67.80%)</u>

- COMPARE TO "THE FINAL DRAINAGE REPORT FOR THE CORNER OF GOLF COURSE RD AND IRVING BLVD" PREPARED BY BOHANNAN-HUSTON INC. NOV 1997.

OUR SITE IS COMPOSED OF BASINS 100 & 2000

BASIN	Q _{100(cfs)}	A	B	C	D	AREA(AC)
100	17.3	0	30	0	70	4.71
2000	14.2	0	30	0	70	3.88
	<u>31.5 cfs</u>		<u>30%</u>		<u>70%</u>	<u>8.59 cfs</u>

FROM AH440 OUTPUT SHEETS 15-20

$Q_{BH} = 31.96 \text{ cfs}$ THIS GREATER THAN 31.5 cfs FROM BH REPORT BUT USING THEIR INFO.

$Q_{AMIGO} = 23.39 \text{ cfs}$ THIS IS OUR TOTAL BASIN (SITE PLUS 2 OFFSITE BASINS)

- OUR BASINS ARE $\frac{6.3223}{8.59} = 73.60\%$ OF BH BASINS

Q OF OUR CALCULATED BASINS AREA PER THE BH DATA

$$Q = 31.96 \text{ cfs} \times 0.7360$$

$$Q_{BH} = 23.52 \text{ cfs} \approx 23.39 \text{ cfs} \quad \text{OK}$$

RUNOFF OF THE AMIGO SITE IS SLIGHTLY LESS THAN PROJECTED BH VALUE. SITE COMPLIES WITH MASTER PLAN.



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PROJECT Amigo-Golf Course & Irving

SUBJECT Drainage Calcs

BY GSK DATE 2-27-01

CHECKED _____ DATE _____

SHEET 5 OF _____

- DETERMINE FLOWS TO GOLF COURSE, IRVING AND THE ONSITE INLET FROM TOTAL BUILDOUT OF AMIGO SITE. $Q_T = 8.68$ cfs

BASIN	AREA (AC)	%	Q cfs
1 (GOLF COURSE)	0.5377	22.73	1.97
2 (INLET)	0.8125	34.34	2.98
3 (IRVING)	1.0158	42.93	3.73

- SIZE ON SITE INLET

USE 1-"DBL D" INLET

$$\frac{Q}{P} = 3.0 H^{3/2}$$

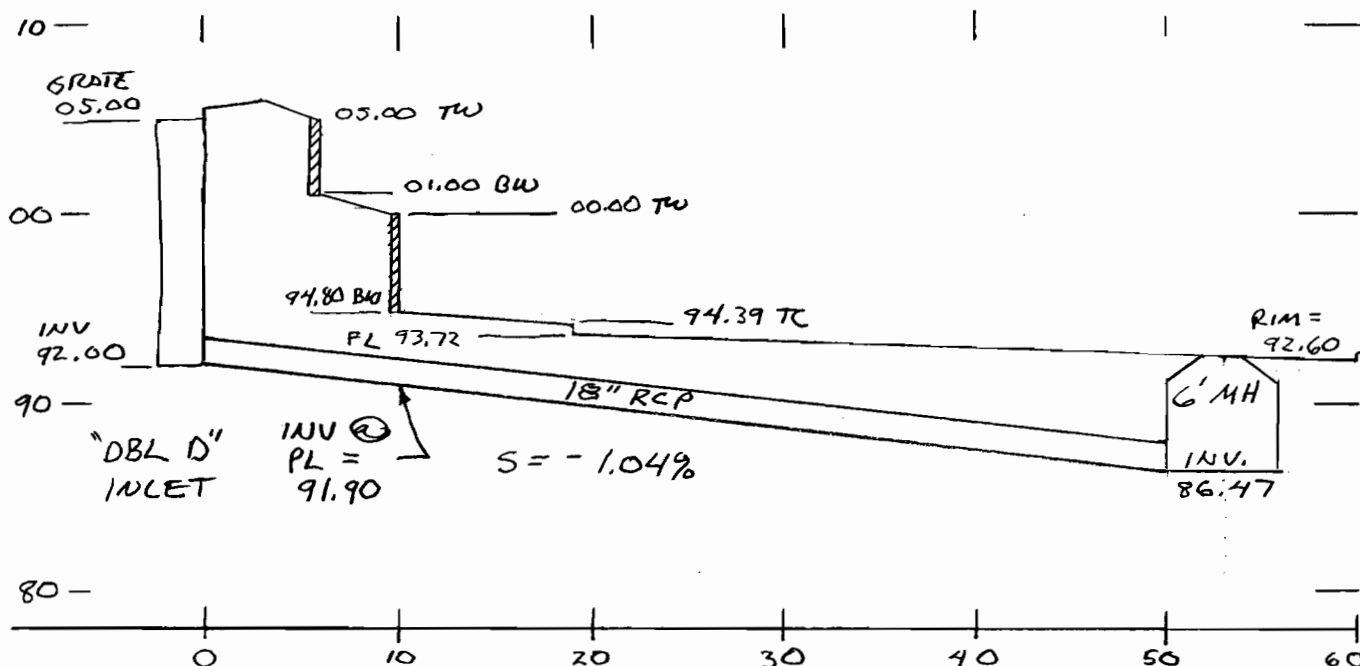
P=17

ASSUME 50% CLOGGED

$$\frac{2.98}{8.5} = 3.0 H^{3/2}$$

$$H = 0.24' < 0.5' \text{ OK}$$

- PROFILE STORM DRAIN





PROJECT OSLO DRUG SHEET NO. 1 OF
SUBJECT FLOW CALCS PROJECT NO. 1976A8
BY CSK DATE 10/6/97 CHECKED BY DATE 1/1

$$A_1 = 53,126 \text{ ft}^2 + 14,256 \text{ ft}^2 + 7405 \text{ ft}^2$$
$$= 74,787 \text{ ft}^2 = 1.72 \text{ acres}$$

ZONE 1

71% D 29% C

$$A_2 = 13,059 \text{ ft}^2$$
$$= 0.30 \text{ acres } 100\% C$$

$$A_3 = 10,278 \text{ ft}^2 + 5587 \text{ ft}^2$$
$$= 15,865 \text{ ft}^2 = 0.36 \text{ acres}$$

65% D 35% C

$$Q_p - A_1 = (2.87 \text{ cfs/acre} \times 4972 \text{ acres}) + (4.37 \text{ cfs/acre} \times 1.219 \text{ acres})$$

$$Q_{100} = \underline{\underline{6.8 \text{ cfs}}}$$

$$Q_{10} = \underline{\underline{4.3 \text{ cfs}}}$$

$$Q_p - A_2 = (2.87 \text{ cfs/acre} \times 0.30 \text{ acres})$$

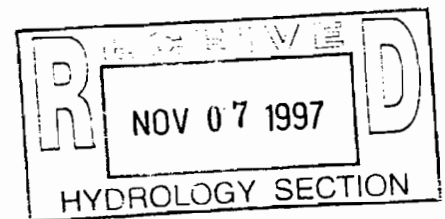
$$Q_{100} = \underline{\underline{0.9 \text{ cfs}}}$$

$$Q_{10} = \underline{\underline{0.4 \text{ cfs}}}$$

$$Q_p - A_3 = (2.87 \text{ cfs/acre} \times 1.128 \text{ acres}) + (4.37 \text{ cfs/acre} \times 0.236 \text{ acres})$$

$$Q_{100} = \underline{\underline{1.9 \text{ cfs}}}$$

$$Q_{10} = \underline{\underline{0.9 \text{ cfs}}}$$



Smith Engineering Company

6400 Uptown Boulevard, N.E. Suite 500E Albuquerque, New Mexico 87110 505/884-0700

Additional flow on Avocet Road:

$$(36')(645') = 23,220 \text{ ft}^2 = 0.5331 \text{ acre}$$

$$(4.73 \text{ cfs/acre})(0.5331 \text{ acre}) = 2.3 \text{ cfs } 100\text{-yr}$$

$$(2.89 \text{ cfs/acre})(0.5331 \text{ acre}) = 1.5 \text{ cfs } 10\text{-yr}$$

Additional flow on Kea Ave.:

$$(36')(487') = 17,532 \text{ ft}^2 = 0.4025 \text{ acre}$$

$$(4.73 \text{ cfs/acre})(0.4025 \text{ acre}) = 1.8 \text{ cfs } 100\text{-yr}$$

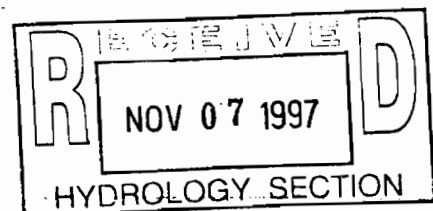
$$(2.89 \text{ cfs/acre})(0.4025 \text{ acre}) = 1.2 \text{ cfs } 10\text{-yr}$$

Remaining Area on Avocet Rd.:

$$(36')(201') = 7,236 \text{ ft}^2 = 0.1661 \text{ acre}$$

$$(4.73 \text{ cfs/acre})(0.1661 \text{ acre}) = 0.73 \text{ cfs } 100\text{-yr}$$

$$(2.89 \text{ cfs/acre})(0.1661 \text{ acre}) = 0.48 \text{ cfs } 10\text{-yr}$$



PROJECT NAME Osko Drug SHEET 1 OF 2
PROJECT NO. _____ BY DEB DATE 10/8/97
SUBJECT Street Flows CH'D _____ DATE _____

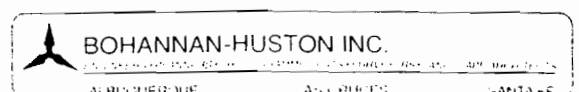
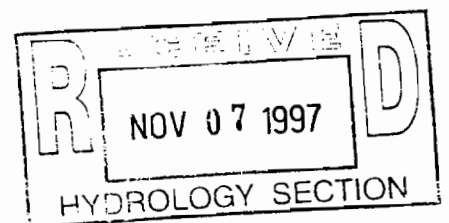
Pad Site 2:

Area = 1.19 acres

$$Q_{100} = (4.37 \text{ cfs/acre})(0.80 \text{ acre}) + (2.87 \text{ cfs/acre})(.39 \text{ acre}) = 4.6 \text{ cfs}$$

Q to Storm Drain = 2.9 cfs

Q to Golf Course = 1.7 cfs



PROJECT NAME Oscos Drug SHEET 2 OF 2
PROJECT NO. BY DEB DATE 10/30
SUBJECT Pad Site 2 CH'D DATE

GIVEN: DPM TABLE A-9, PAGE A-9 - HYDROLOGIC ZONE 1

LAND TREAT.	10-YEAR CFS/AC	100-YEAR CFS/AC
A	0.24	1.29
B	0.76	2.03
C	1.49	2.87
D	2.89	4.37

EXISTING CONDITIONS

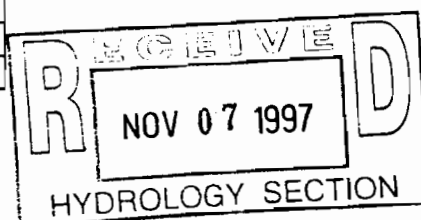
BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	8.79	50	40	10	0	5.0	15.3
200	2.93	10	10	20	45	5.0	8.4
300	0.84	0	0	65	35	1.7	2.9
400	0.46	0	0	90	10	0.7	1.4
500	0.74	0	10	85	5	1.1	2.1
600	1.5	0	0	95	5	2.3	4.4
700	0.47	0	0	10	90	1.3	2.0
800	0.66	0	0	10	90	1.8	2.8
900	1.2	0	0	10	90	3.3	5.1

DEVELOPED CONDITIONS

BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	4.71	0	30	0	70	10.6	17.3
200	2.93	0	40	0	60	6.0	10.1
300	0.84 4.2	0	5	0	100 95	2.3 1.1	3.8 1.85
400	0.46	0	5	0	95	1.3	2.0
500	0.74	0	5	0	95	2.1	3.1
600	1.5	0	5	0	95	4.2	6.4
700	0.47	0	5	0	95	1.3	2.0
800	0.66	0	5	0	95	1.8	2.8
900	1.2	0	5	0	95	3.3	5.1

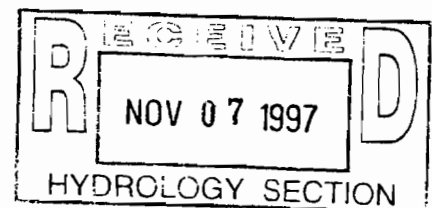
TOTAL FLOW AT IRVING BOULEVARD INTERSECTIONS

INTERSECTION LOCATION	EXISTING COND		DEVELOPED COND	
	10-YEAR (CFS)	100-YEAR (CFS)	10-YEAR (CFS)	100-YEAR (CFS)
GOLF COURSE RD	10.0	23.7	16.6	27.3
GREEN AVE	5.0	8.4	6.0	10.1
SNOWFLAKE DR	1.7	2.9	2.3	3.6
CADDIE ST	2.0	3.4	2.6	4.0
CARDINAL ST	5.0	8.3	6.5	9.9
CHANTILLY RD (N)	8.3	13.3	9.8	15.0
CHANTILLY RD (S)	2.3	4.4	4.2	6.4



FLOWS ON GOLF COURSE

Irving/Golf Course Intersection				2/20/97			
Zone 1							
Land Treatment		A	B	C	D		
	Storm 10-Yr	0.24	0.76	1.49	2.89		
Storm	100-Yr	1.29	2.03	2.87	4.37		
Existing conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	50	40	10	0	2.2	6.8
1 X 000	1.74	78	0	0	22	1.4	3.4
Developed conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	0	30	0	70	8.7	14.2
1 X 000	1.74	0	5	0	95	4.8	7.4



GIVEN: DPM TABLE A-9, PAGE A-9 - HYDROLOGIC ZONE 1

LAND TREAT.	10-YEAR CFS/AC	100-YEAR CFS/AC
A	0.24	1.29
B	0.76	2.03
C	1.49	2.87
D	2.89	4.37

EXISTING CONDITIONS

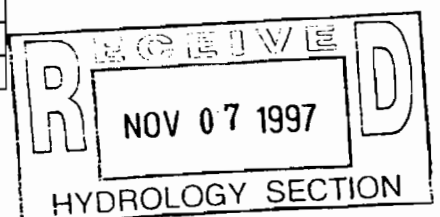
BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	8.79	50	40	10	0	5.0	15.3
200	2.93	10	10	20	45	5.0	8.4
300	0.84	0	0	65	35	1.7	2.9
400	0.46	0	0	90	10	0.7	1.4
500	0.74	0	10	85	5	1.1	2.1
600	1.5	0	0	95	5	2.3	4.4
700	0.47	0	0	10	90	1.3	2.0
800	0.66	0	0	10	90	1.8	2.8
900	1.2	0	0	10	90	3.3	5.1

DEVELOPED CONDITIONS

BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	4.71	0	30	0	70	10.6	17.3
200	2.93	0	40	0	60	6.0	10.1
300	0.84 4.2	0	5	0	100-95	2.3 (1.1)	3.6 (1.8) 35% ALL D
400	0.46	0	5	0	95	1.3	2.0
500	0.74	0	5	0	95	2.1	3.1
600	1.5	0	5	0	95	4.2	6.4
700	0.47	0	5	0	95	1.3	2.0
800	0.66	0	5	0	95	1.8	2.8
900	1.2	0	5	0	95	3.3	5.1

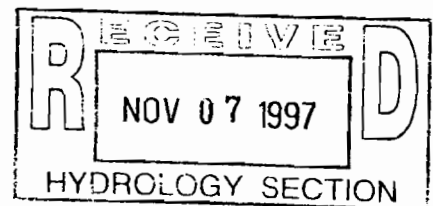
TOTAL FLOW AT IRVING BOULEVARD INTERSECTIONS

INTERSECTION LOCATION	EXISTING COND		DEVELOPED COND	
	10-YEAR (CFS)	100-YEAR (CFS)	10-YEAR (CFS)	100-YEAR (CFS)
GOLF COURSE RD	10.0	23.7	16.6	27.3
GREEN AVE	5.0	8.4	6.0	10.1
SNOWFLAKE DR	1.7	2.9	2.3	3.6
CADDIE ST	2.0	3.4	2.6	4.0
CARDINAL ST	5.0	8.3	6.5	9.9
CHANTILLY RD (N)	8.3	13.3	9.8	15.0
CHANTILLY RD (S)	2.3	4.4	4.2	6.4



Flows on Golf Course

Irving/Golf Course Intersection:		2/20/97					
Zone 1							
Land Treatment		A	B	C	D		
Storm	10-Yr	0.24	0.76	1.49	2.89		
Storm	100-Yr	1.29	2.03	2.87	4.37		
Existing conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	50	40	10	0	2.2	6.8
1 X 000	1.74	78	0	0	22	1.4	3.4
Developed conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	0	30	0	70	8.7	14.2
1 X 000	1.74	0	5	0	95	4.8	7.4



GIVEN: DPM TABLE A-9, PAGE A-9 - HYDROLOGIC ZONE 1

LAND TREAT.	10-YEAR CFS/AC	100-YEAR CFS/AC
A	0.24	1.29
B	0.76	2.03
C	1.49	2.87
D	2.89	4.37

EXISTING CONDITIONS

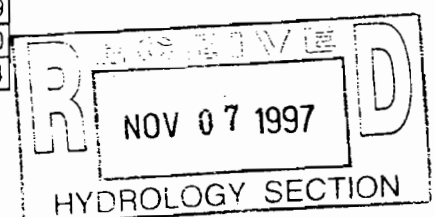
BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	8.79	50	40	10	0	5.0	15.3
200	2.93	10	10	20	45	5.0	8.4
300	0.84	0	0	65	35	1.7	2.9
400	0.46	0	0	90	10	0.7	1.4
500	0.74	0	10	85	5	1.1	2.1
600	1.5	0	0	95	5	2.3	4.4
700	0.47	0	0	10	90	1.3	2.0
800	0.66	0	0	10	90	1.8	2.8
900	1.2	0	0	10	90	3.3	5.1

DEVELOPED CONDITIONS

BASIN	AREA (ACRE)	LAND TREATMENTS				10-YEAR (CFS)	100-YEAR (CFS)
		A	B	C	D		
100	4.71	0	30	0	70	10.6	17.3
200	2.93	0	40	0	60	6.0	10.1
300	0.84	0	5	0	100-95	2.3 (1.1)	3.6 (1.85) ASSUME ALL 0
400	0.46	0	5	0	95	1.3	2.0
500	0.74	0	5	0	95	2.1	3.1
600	1.5	0	5	0	95	4.2	6.4
700	0.47	0	5	0	95	1.3	2.0
800	0.66	0	5	0	95	1.8	2.8
900	1.2	0	5	0	95	3.3	5.1

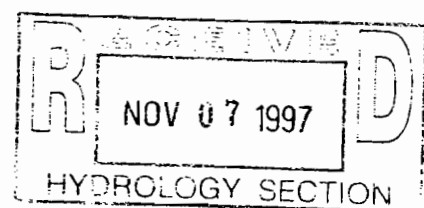
TOTAL FLOW AT IRVING BOULEVARD INTERSECTIONS

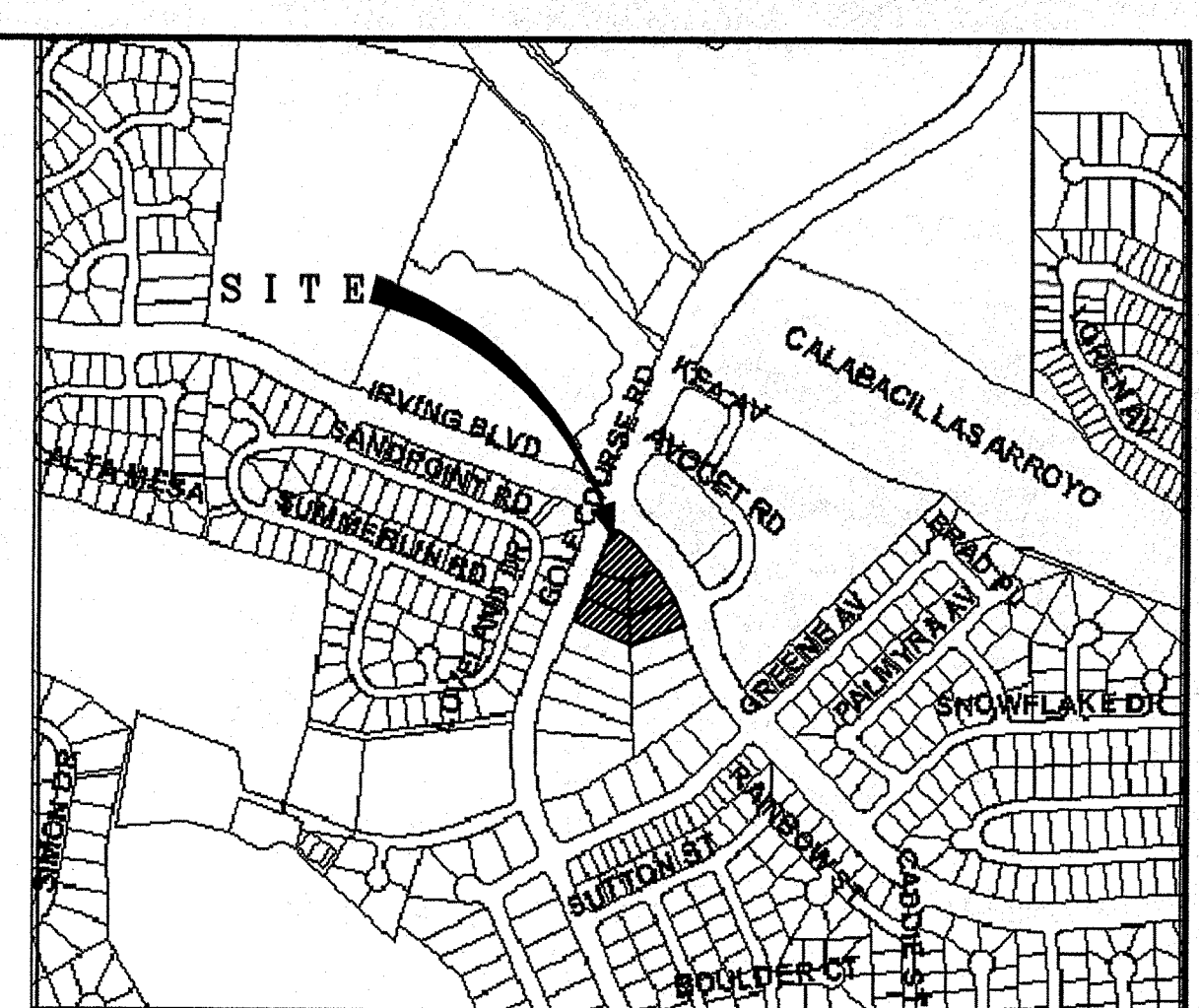
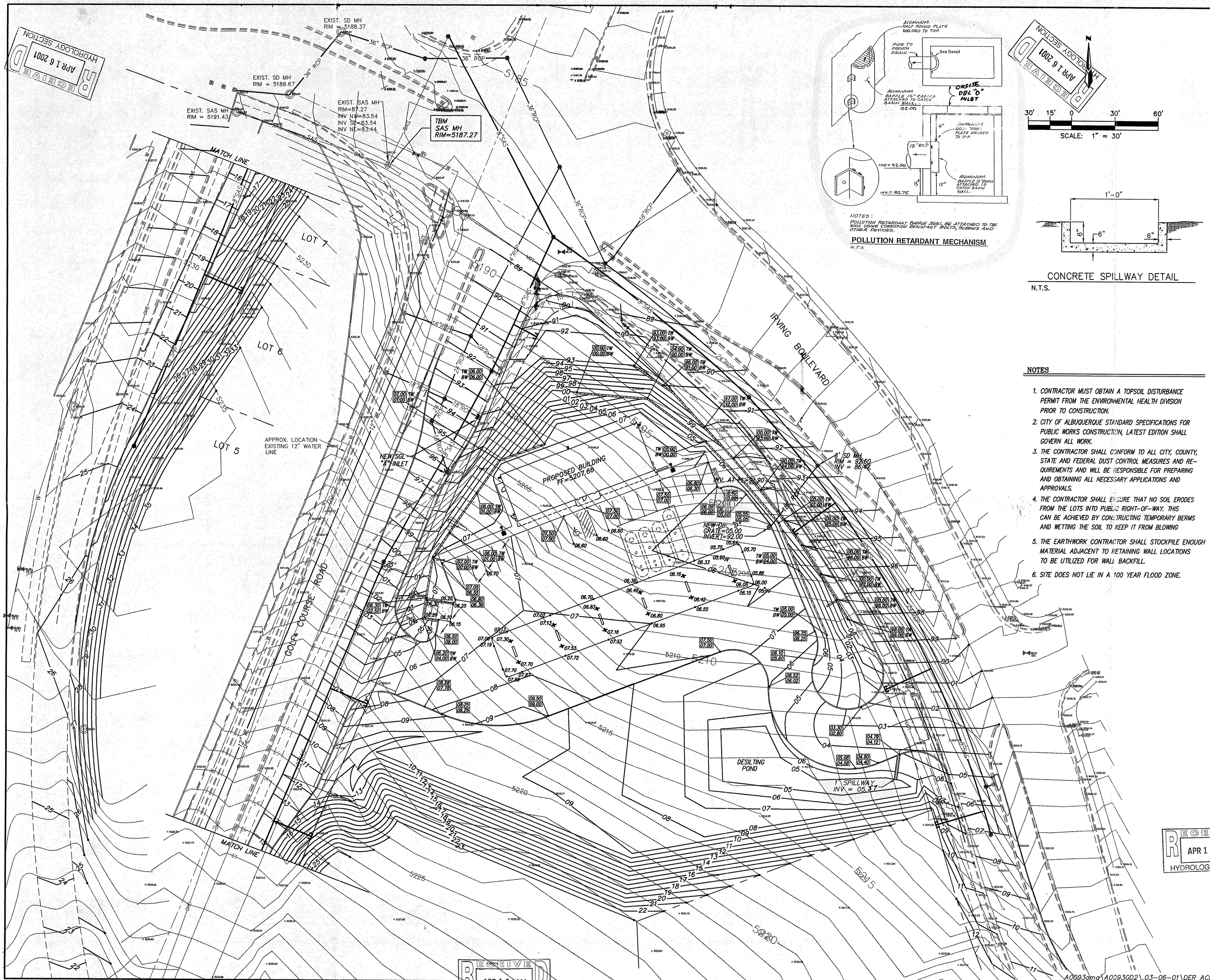
INTERSECTION LOCATION	EXISTING COND		DEVELOPED COND	
	10-YEAR (CFS)	100-YEAR (CFS)	10-YEAR (CFS)	100-YEAR (CFS)
GOLF COURSE RD	10.0	23.7	16.6	27.3
GREEN AVE	5.0	8.4	6.0	10.1
SNOWFLAKE DR	1.7	2.9	2.3	3.6
CADDIE ST	2.0	3.4	2.6	4.0
CARDINAL ST	5.0	8.3	6.5	9.9
CHANTILLY RD (N)	8.3	13.3	9.8	15.0
CHANTILLY RD (S)	2.3	4.4	4.2	6.4

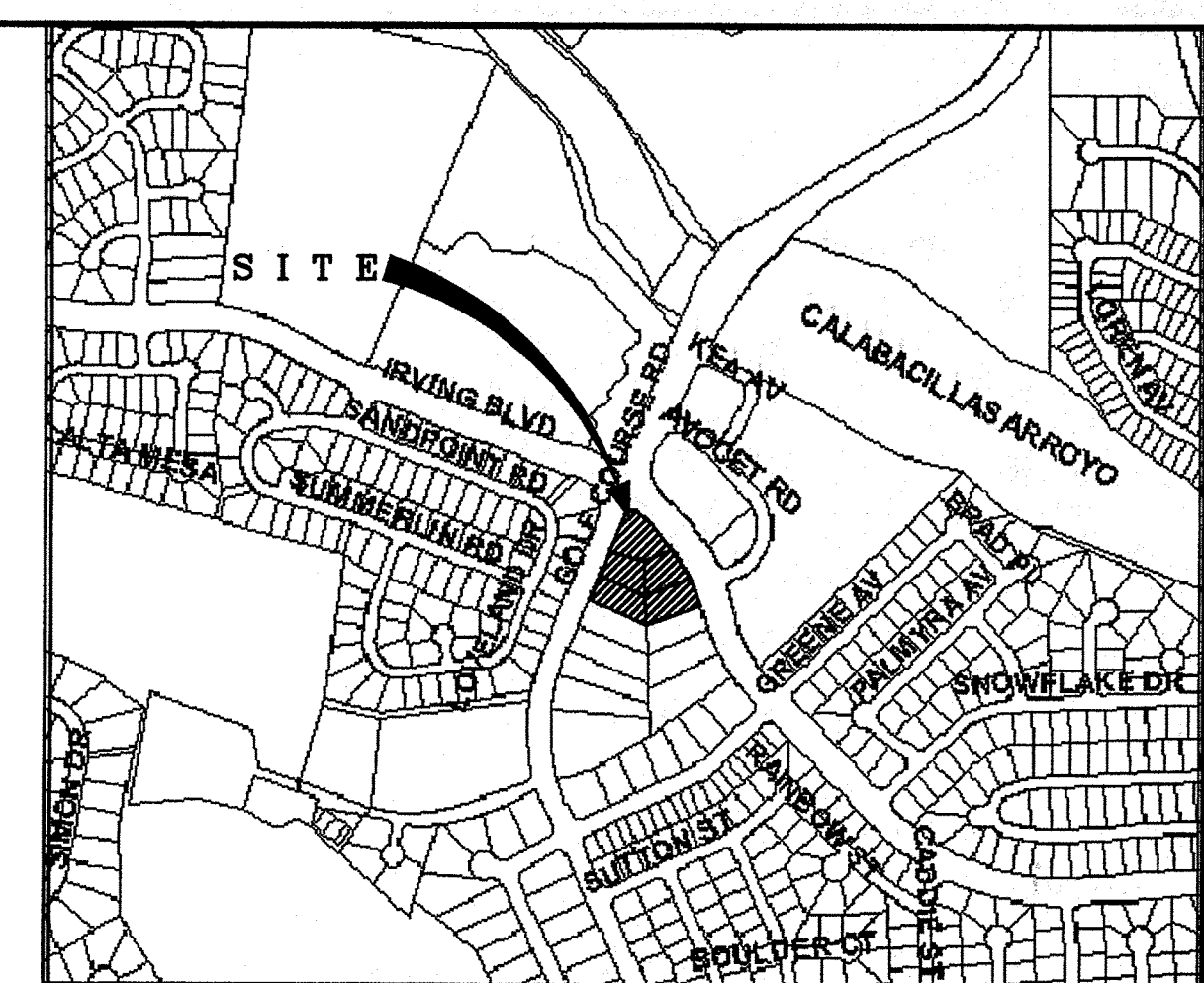
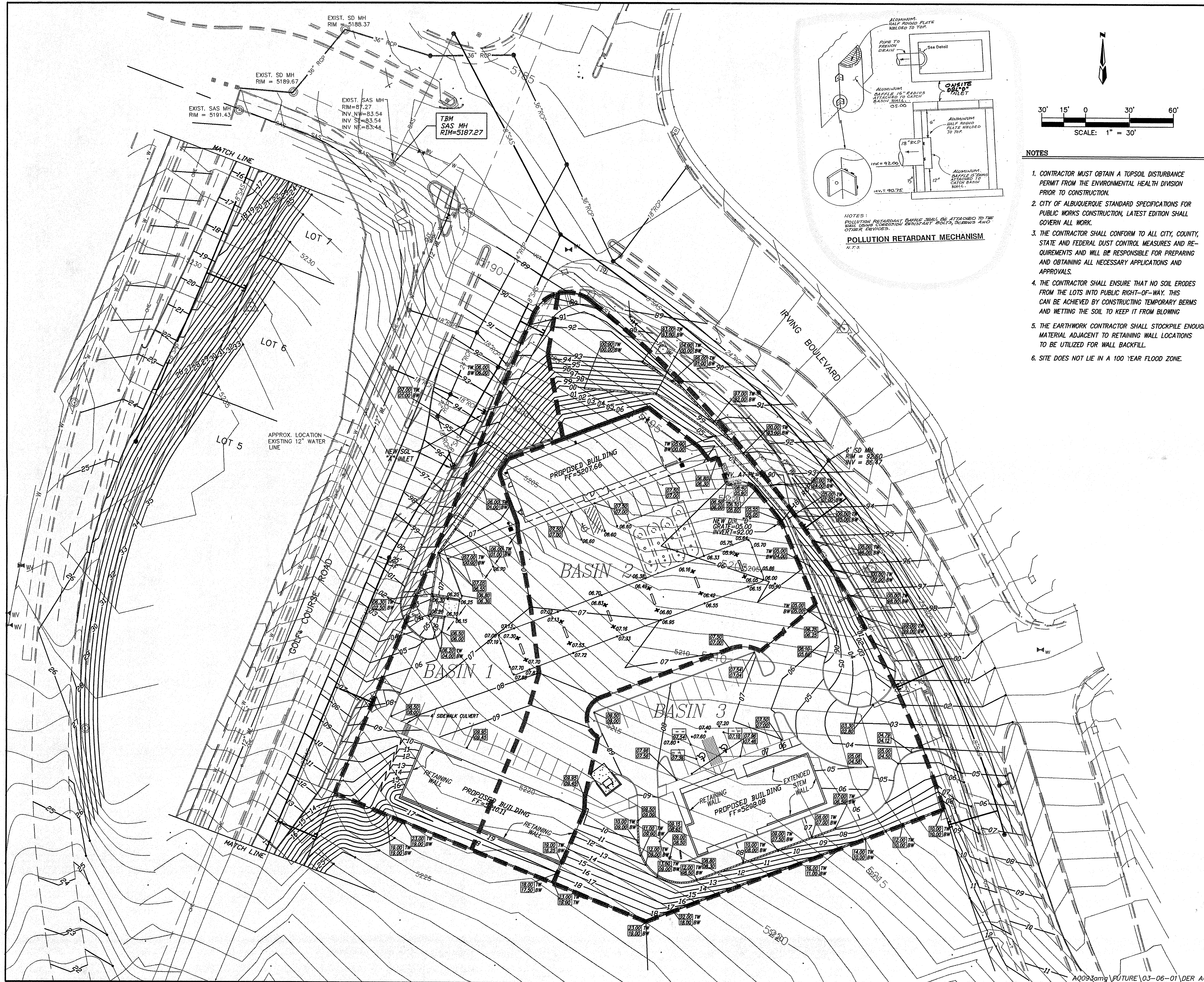


Flows on Golf Course

Irving/Golf Course Intersection		2/20/97					
Zone 1							
Land Treatment		A	B	C	D		
Storm	10-Yr	0.24	0.76	1.49	2.89		
Storm	100-Yr	1.29	2.03	2.87	4.37		
Existing conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	50	40	10	0	2.2	6.8
1 X 000	1.74	78	0	0	22	1.4	3.4
Developed conditions							
Basin	Area, Ac	A	B	C	D	10-Yr	100-Yr
2 X 000	3.88	0	30	0	70	8.7	14.2
1 X 000	1.74	0	5	0	95	4.8	7.4







VICINITY MAP ZONE MAP: B-12-Z

T B M (TEMPORARY BENCHMARK)

SANITARY SEWER MANHOLE IN INTERSECTION OF IRVING BOULEVARD AND GOLF COURSE ROAD RIM ELEV.=5187.27

ACS BENCHMARK

THE STATION "BLACK-2" IS LOCATED 8.5 MILES NORTHWEST OF DOWNTOWN ALBUQUERQUE.

TO REACH THE STATION FROM THE INTERSECTION OF COORS AND I-40 GO NORTH ON COORS 5.8 MILES TO PARADISE BLVD. TURN LEFT, GO WEST ON PARADISE BLVD. 1.1 MILES TO GOLF COURSE RD. TURN RIGHT, GO NORTH ON GOLF COURSE RD. 1.3 MILES TO MCMAHON BLVD., AND THE STATION ON THE LEFT.

THE STATION MARK IS A USGS BRASS TABLET STAMPED "BLACK-2 1977" SET FLUSH WITH THE GROUND.

X=372,920.43 Y=1,530,241.52 ELEVATION=5213.926

LEGAL DESCRIPTION

PARADISE HILLS INVESTMENT PROPERTIES UNIT 2 LOT 8 THRU 12 WITHIN THE TOWN OF ALAMEDA GRANT PROJECTED SECTION 12 TOWNSHIP 11 NORTH, RANGE 2 EAST, NMPM CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO.

LEGEND

	PROPOSED TOP OF CURB AND FLOWLINE SPOT ELEVATION
	PROPOSED TOP OF WALL AND BOTTOM OF WALL SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	PROPERTY LINE
	PROPOSED CONTOUR
	EXISTING CONTOUR
	PROPOSED CURB
	EXISTING CURB AND GUTTER
	PROPOSED RETAINING WALL
	PROPOSED ASPHALT SWALE
	FUTURE WATERLINE
	FUTURE SAS
	FUTURE STORMDRAIN
	DRAINAGE BASIN BOUNDARY

AMIGO - GOLF COURSE & IRVING FUTURE GRADING AND DRAINAGE PLAN

MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505)828-2200, FAX (505)797-9539

Designed: GJK	Drawn: WLW	Checked: DMG	Sheet 2 of 3
Date: 10/00	Job: A00093		