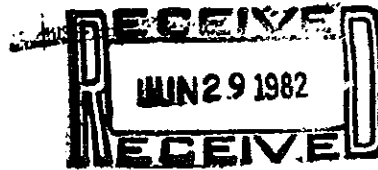




ADAM, HAMLYN, ANDERSON
consulting engineers inc.

4055 MONTGOMERY BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO 87109
505-851-1808



Mr. Richard Heller, City Engineer
P.O. Box 1293
Albuquerque, New Mexico 87103
June 25, 1982

Attn: Mr. F. Aguirre
Re: 405 Grand Ave. N.E.

Dear Sir:

On June 25, 1982, I personally inspected the subject project with respect to drainage. During the inspection, I also took spot elevation at points I considered to be critical. Included with this letter are three prints showing as built conditions with as built spot elevations at points I considered to be critical to the drainage.

I hereby certify that the drainage facilities as constructed will operate as designed in the drainage report prepared by me and approved by the City of Albuquerque.




Jean J. Bordenave, N.M.P.E. & L.S.#5110

PRINCIPALS:
CARL H. ADAM, P.E.
RICHARD L. HAMLYN, P.E.
JAMES D. ANDERSON, P.E.
DOYLE L. WISTE, P.E.
JEAN J. BORDENAVE, P.E.

ASSOCIATE:
PHILLIP K. MATTHEWS, P.E.

ADAM, HAMLYN, ANDERSON
CONSULTING ENGINEERS, INC.

DRAINAGE REPORT

405 GRAND AVE.

JOB NO. AC8157 SHT. NO. 1
DATE: 4/20/82
BY: OF 3

$$\text{MAX. } Q_{\text{ALLOW}} = 0.74 \text{ cfs}$$

$$\text{Max. } H = 75.0 - 73.5 - 0.21 = 1.29'$$

$$Q = 0.74 = 0.6 A \sqrt{2gH}$$

$$0.74 = 5.4687 A = \frac{\pi D^2}{4}$$

$$D = 0.415' = 4.98'' \text{ inches say } 5''$$

$$\text{Area} = .13635'$$

Runoff to pond: Volume = 2851 x Rainfall/12
= 2379 x Rainfall

TIME	ACCUM RAINFALL	RUNOFF TO POND	ORIFICE HEAD			INCREM OUTFLOW		ACCUM OUTFLOW	POND STORAGE
min	inches	ft ³	W.S. SLU.	AVE Elev.	Head ft	CFS	ft ³	ft ³	ft ³
0			74.0						
5	0.59	1404	74.75	74.38	0.62	0.513	154	154	1251
10	0.92	2188	74.87	74.81	1.05	0.673	202	394	1832
15	1.17	2783	74.93	74.90	1.14	0.700	210	604	2179
20	1.35	3211	74.97	74.95	1.19	0.716	214	818	2393
25	1.50	3569	74.99	74.98	1.22	0.725	217	1035	2534
30	1.62	3854	75.00	74.99	1.23	0.728	218	1253	2601
35	1.69	4021	74.99	74.99	1.23	0.728	218	1471	2550

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CONSULTING ENGINEERS, INC.

DRAINAGE REPORT 405 GRAND AVE

JOB NO. AC 815 77

SHT. NO.

DATE: 4/13/82

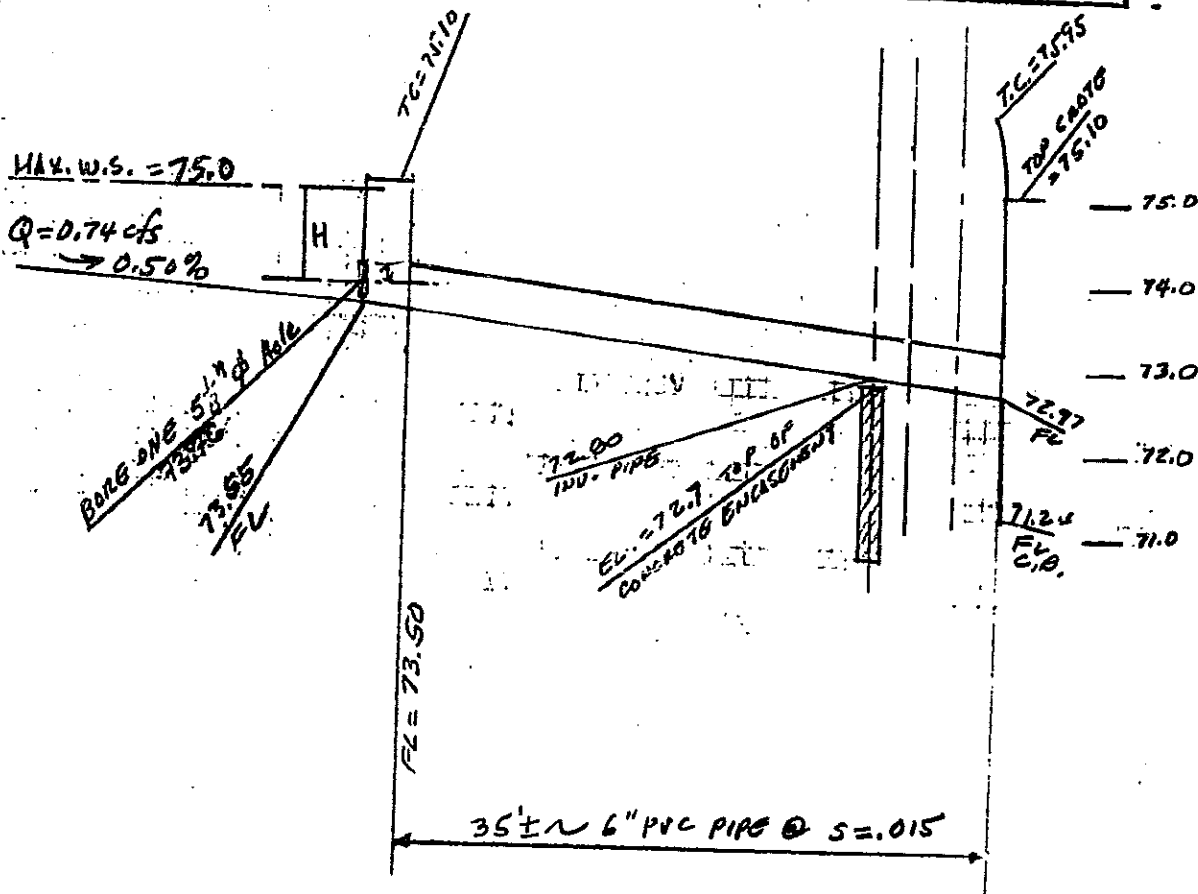
2

BY:

OF 3

PEAK SITE RUNOFF

Time min	5	10	15	20	25	30	35
Direct Runoff cfs	0.63	0.49	0.42	0.36	0.32	0.29	0.26
Detained Runoff cfs	0.51	0.67	0.70	0.72	0.72	0.73	0.73
Total Runoff cfs	1.14	1.16	1.12	1.08	1.04	1.02	0.99



CHECK FOR CAPACITY OF PIPE
USING 6" PVC PIPE:

$$Area = \frac{\pi D^2}{4} = 0.19635, n^{76} = \left(\frac{1}{49}\right)^{76} = 0.24998$$

$$S^{1/2} (60.15)^{1/2} = .12247$$

$$Q_{CAP} = A.V. = 0.19635 \times \frac{1.486}{.012} \times 0.24998 \times .12247 = 0.74$$

Q = 0.74

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DRAINAGE REPORT
405 GRAND AVE

JOB NO. AC 81577

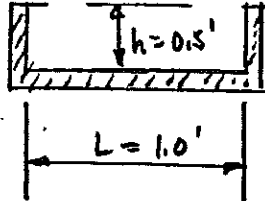
SHT. NO.

DATE: 4/13/82

3

BY:

OF 3



$$\text{Area} = 0.5 \times 1 = 0.50 \text{ ft}^2$$

$$\text{W.P.} = 2.0'$$

$$n^{2/3} = \left(\frac{A}{\text{W.P.}} \right)^{2/3} = 0.3968$$

$$S^{1/2} = (.005)^{1/2} = .0707$$

$$\text{Cap.} = A.V. = 0.50 \times \frac{1.486}{.012} \times .3968 \times .0707 = 1.73 \text{ cfs} > 0.74 \text{ cfs}$$

$$\text{SIZE OF OPEN BOX} = 0.5' \times 1.0'$$