HYDROLOGY E17/D25 WESTERN PROPERTIES OFFICE BLDG.

E17/D45

WESTERN PROPERTIES OFFICE BLDG.

4 PLANS

WILSON & COMPANY
ENGINEERS & ARCHITECTS

505 262-2116

ENGINEERS
ARCHITECTS
PLANNERS

Office Location... 1821 SAN PEDRO N.E. ▪ ALBUQUERQUE, NEW MEXICO 87110

An Equal Opportunity Employer

Mailing Address... P.O. BOX 3548 ▪ ALBUQUERQUE, NEW MEXICO 87190

August 17, 1983

RECEIVED
AUG 17 1983
CITY ENGINEER

Mr. C. D. Sheppard
City Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Drainage Report for Lot 3A(2), Block A, Unit II,
Interstate Industrial Tract
Zone Map E-17-Z45
Western Properties Office Bldg.

Dear Mr. Sheppard:

Enclosed are two copies of the drainage report and grading plan for the above referenced Lot 3A(2) for review and comment.

I will be glad to answer any questions the City might have about this project.

Very truly yours,
WILSON & COMPANY

Robert F. Sykes, P.E.

Enclosures

-sap

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 21, 1983

Mr. Robert F. Sykes, P.E.
Wilson & Company
1321 San Pedro Drive NE
Albuquerque, NM 87110

REF: DRAINAGE PLAN FOR LOT 3A (2), BLOCK A, UNIT II INTERSTATE INDUSTRIAL TRACT (E17-D45)

Dear Mr. Sykes:

These are my comments on the above mentioned plan:

1. Plan needs to show roof drains and door openings.

2. Show more spot elevations and grading around building.

3. The City standard curb cut detail calls for the elevation at the right-of-way to be 1.0 feet above gutter flow line in the street.

4. City Drainage Ordinance (Section 6-F) specifies that all ponding areas shall be drained within 24 hours.

5. The DPM checklist does not allow ponding within 15 ft. of a property line (less the required set back).

6. Offsite flows need to be quantified and taken into consideration for pond volume and over flow calculations.

7. It appears that you are proposing to cut and fill on adjacent properties. This will require permission from those owners.

8. In future submittals please include the information sheet from DPM.

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

Sincerely,

John Armstrong
Civil Engineer/Hydrology

JA:mrk

INFORMATION SHEET

PROJECT TITLE Wilson & Co. OFFICE TYPE OF SUBMITTAL DRAINAGE PLAN

ZONE ATLAS PAGE NO. E-17 CITY ADDRESS

LEGAL DESCRIPTION Lot 3A(2), Block A, Unit II, Interstate Industrial Tract

ENGINEERING FIRM Wilson & Co. CONTACT Robert Sykes

ADDRESS PO Box 3548, Alb. 87190 PHONE 262-2116

OWNER Western Properties CONTACT R.F Sykes

ADDRESS Same As Above PHONE

ARCHITECT CONTACT

ADDRESS PHONE

SURVEYOR CONTACT

ADDRESS PHONE

CONTRACTOR CONTACT

ADDRESS PHONE

DATE SUBMITTED

BY

SAMPLE

Use this Information Sheet when submitting the following:

Drainage report or plan, conceptual grading and drainage plan, engineer's certification plan, erosion plan and grading plan. Provide the information applicable to your submittal.

RECEIVED
NOV 14 1983
HYDROLOGY SECTION

WILSON
& COMPANY
ENGINEERS &
ARCHITECTS

505 262-2116

Office Location... 1321 SAN PEDRO N.E. ▪ ALBUQUERQUE, NEW MEXICO 87110

Mailing Address... P.O. BOX 3548 ▪ ALBUQUERQUE, NEW MEXICO 87190

ENGINEERS
ARCHITECTS
PLANNERS

An Equal Opportunity Employer

November 10, 1983

Mr. John Armstrong
Hydrology Section
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Drainage Plan for Lot 3A(2), Block A, Unit II
Interstate Industrial Tract
Report No. E17-D45

Dear Mr. Armstrong:

Enclosed is revised drainage plan for proposed improvements on Lot 3A(2), Block A, Unit II, Interstate Tract.

I believe I have answered all concerns addressed in your letter. The owners do have consent of adjacent property owners to encroach their property with some slight amount of grading.

I will be glad to discuss this plan with you at any time.

Very truly yours,
WILSON & COMPANY

Robert F. Sykes, P.E.

Enclosures

-sap

RECEIVED
NOV 14 1983
HYDROLOGY SECTION

WILSON & COMPANY
ENGINEERS & ARCHITECTS

505 262-2116

Office Location... 1321 SAN PEDRO N.E. ▪ ALBUQUERQUE, NEW MEXICO 87110

Mailing Address... P.O. BOX 3548 ▪ ALBUQUERQUE, NEW MEXICO 87190

ENGINEERS
ARCHITECTS
PLANNERS

An Equal Opportunity Employer

January 26, 1984

RECEIVED
JAN 26 1984
HYDROLOGY SECTION

Mr. John Armstrong
Hydrology Section
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Amended Drainage Plan
Lot 3A(2), Block A, Unit II, Interstate Industrial Tract
WCEA Office Building (E17-D45)

Dear John:

In regards to our telephone conversation 9 December 1983, I have made the following revisions:

1. Raised the flow line elevation of the curb at the property line to 0.80 ft. above the flow line elevation of the gutter at the curb line.

2. I have calculated the volume of runoff from the Gulton site and our site and have determined if we maintain an elevation of 5112.0 along the west side of the ditch, all runoff will be diverted to the Bear Arroyo.

When Lot 3A(2) is graded, the grading contractor will clean the existing ditch and will raise the west dike to elevation 5112.

I believe this answers your concerns. I will be glad to answer any questions you might have.

Very truly yours,
WILSON & COMPANY

Robert F. Sykes, P.E.

-sap

WILSON
& COMPANY
ENGINEERS &
ARCHITECTS

505 262-2116

ENGINEERS
ARCHITECTS
PLANNERS

Office Location... 1321 SAN PEDRO N.E. ▪ ALBUQUERQUE, NEW MEXICO 87110 ▪ An Equal Opportunity Employer

Mailing Address... P.O. BOX 3548 ▪ ALBUQUERQUE, NEW MEXICO 87190

February 27, 1984

Mr. John Armstrong
Hydrology Section
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Drainage Report Lot 3A(2), Unit II,
Interstate Industrial Tract
Wilson & Co. Office Building

Dear Mr. Armstrong:

Based on the attached routing of inflow and outflow, the proposed ditch within the easement will reach a maximum high water elevation of 5112.38. The top of the dike is set at elevation 5113.0.

Attached are copies of our routing calculations, hydrograph, a graph showing volume in relation to depth and cross sections which will be included in the construction plans.

Please give me a call if you have any questions.

Very truly yours,
WILSON & COMPANY

Robert F. Sykes, P.E.

Attachments

-sap

RECEIVED
FEB 28 1984
HYDROLOGY SECTION

INFORMATION SHEET

PROJECT TITLE Wilson & Co Office Bldg TYPE OF SUBMITTAL Drainage Plan

ZONE ATLAS PAGE NO. E-17 CITY ADDRESS 6611 Gulton Ct. NE

LEGAL DESCRIPTION Lot 3A(2), Block A, Unit II, Industrial Tract

ENGINEERING FIRM Wilson & Co. CONTACT Robert F. Sykes

ADDRESS PO Box 3548 PHONE 262-2116

OWNER Wilson & Co CONTACT

ADDRESS PHONE

ARCHITECT Wilson & Co CONTACT

ADDRESS PHONE

SURVEYOR Wilson & Co. CONTACT

ADDRESS PHONE

CONTRACTOR CONTACT

ADDRESS PHONE

PRE-DESIGN MEETING:

___ YES
X NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 29 Feb 1984

BY: Robert F. Sykes.

FEB 29 1984
HYDROLOGY SECTION

103

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

March 6, 1984

Mr. Robert F. Sykes
Wilson & Co.
P.O. Box 3548
Albuquerque, NM 87190

REF: DRAINAGE PLAN FOR LOT 3A(2), BLOCK A, UNIT II, INTERSTATE INDUSTRIAL TRACT, WCEA OFFICE BUILDING (E17-D45)

Dear Bob:

The above mentioned plan, received February 28, 1984, is hereby approved with the exception that you have shown fill on the adjacent property to the north. We will release the building permit as soon as you gain permission from that property owner or show a retaining wall, or other scheme, to remove fill from the adjoining property.

In all future submittals, please include a copy of the information sheet and reference the drainage file number if one exists.

If you have any further questions, please feel free to contact me at 766-7644.

Thank you,

John Armstrong
Civil Engineer/Hydrology

JA:mrk

ENGINEER'S

DRAINAGE REPORT

LOT 3A(2)

REPLAT OF LOT 3A

BEING A

REPLAT OF LOT 3, BLOCK A

UNIT II

INTERSTATE INDUSTRIAL TRACT

ZONE MAP E-17

WILSON & COMPANY

ENGINEERS & ARCHITECTS

1321 SAN PEDRO DRIVE N.E.

ALBUQUERQUE, NEW MEXICO 87110

ROBERT F. SYKES
NEW MEXICO
4591
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
NOV 14 1983
HYDROLOGY SECTION

AUGUST 1983

REV. NOVEMBER 1983

WILSON & COMPANY
ENGINEERS ARCHITECTS

DRAINAGE REPORT

LOT 3A(2), BLOCK A, UNIT II

INTERSTATE INDUSTRIAL TRACT

ZONE MAP E-17

PURPOSE: The purpose of this drainage report is to present proposed method of handling storm water runoff from Lot 3A(2) after the property has been developed as an office for Wilson & Company Engineers & Architects.

GENERAL: The Rational Method has been used to calculate the rate of runoff using criteria set forth in the City of Albuquerque's Design Procedure Manual.

EXISTING CONDITIONS: At the present time no off site drainage enters the property. The overland flows from the east are intercepted by Gulton Court N.E., which drains north to Osuna Road. The natural slope of the undeveloped property north of the project site is from the southeast to the northwest. The property to the south of the project site is developed and drains to the Bear Arroyo or to a 20 ft. drainage easement along the west side of the tract and then to Bear Arroyo. It is not likely there will be any offsite drainage entering the project site. The natural slope of the project site is from the southeast to the northwest and all runoff from the site now flows in a northwesterly direction.

PROPOSED IMPROVEMENTS: The attached print shows proposed improvements and future improvements. The proposed building will be used for offices.

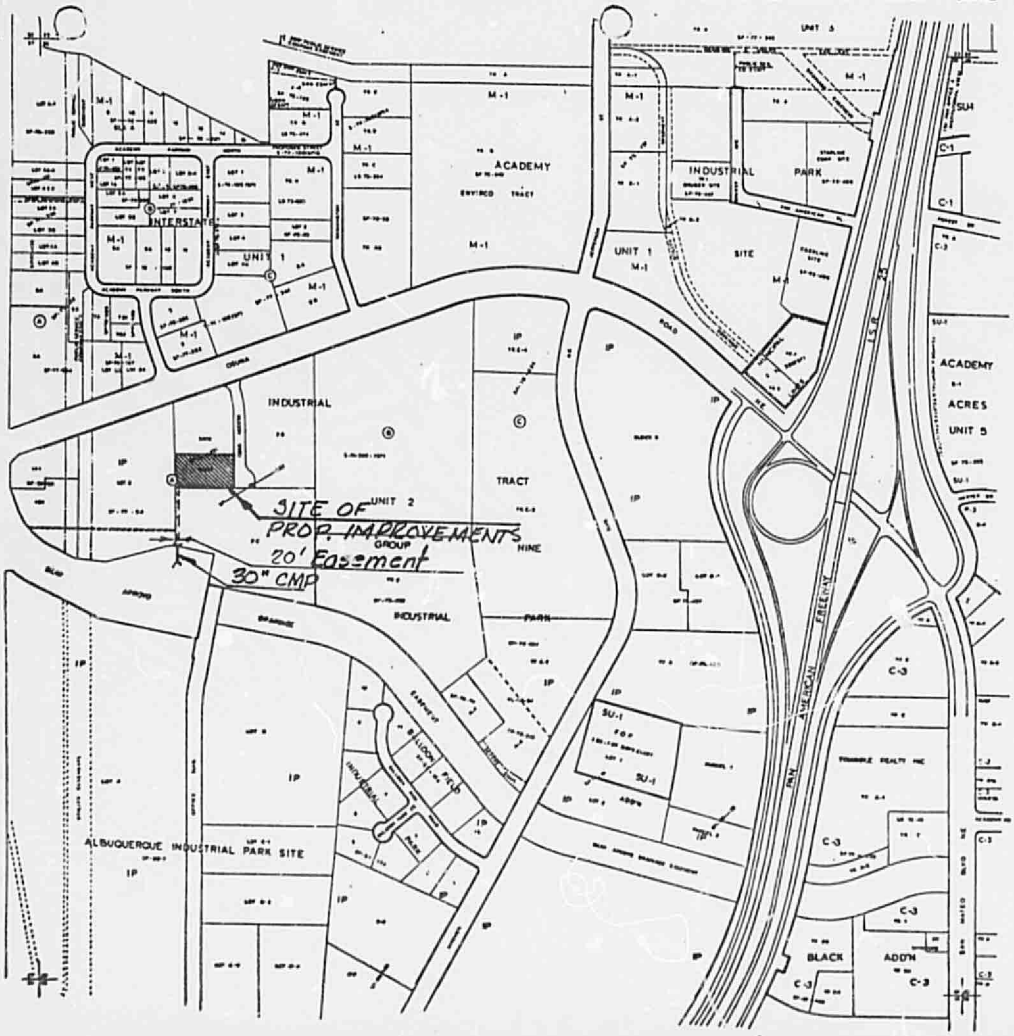
It is proposed to drain the east 92 feet of the property east to Gulton Court. The maximum rate of discharge to Gulton is 1.91 c.f.s.

It is proposed to drain the western portion of the property to the southwest corner of the property thence the storm water will be discharged to an existing drainage ditch which discharges to the Bear Arroyo by way of an existing 30" diameter C.M.P.

The maximum rate of discharge for 100 year event is 4.43 c.f.s. The total volume of runoff for 6 hour - 100 year event is 7309 cu. ft.

ATTACHMENTS:

1. Zone map showing location of project.
2. Calculations.
3. Proposed grading plan and layout plan.
4. Plan showing elevations of existing drainage easement.


ACADEMY
ENVIRO TRACT
INDUSTRIAL
PARK
SITE
UNIT 1
INTERSTATE
UNIT 1
UNIT 5
ACADEMY
ACRES
UNIT 5
INDUSTRIAL
TRACT
UNIT 2
GROUP
NINE
INDUSTRIAL
PARK
SITE OF
PROP. IMPROVEMENTS
20' Easement
30" CMP
ALBUQUERQUE INDUSTRIAL PARK SITE
BLACK
ADD'N
I.S.R. 25
AMERICAN
FREEWAY
JUNE 1982
E-17-Z

COMP. RFS
CK.
DATE 4 Nov 83

WILSON & COMPANY
ENGINEERS ARCHITECTS

LOC. Albuquerque FILE GO
PROJ. WCEA Office SHEET 1
SUBJ. Rev. Drain Rept. OF 1

Lot 3A(2) Block A, Unit II, Interstate Industrial Tract
Zone Atlas Map E-17
Drainage Calculations Based on Ultimate Development
Area = 1.5050 Ac.

Sub Area A (Easterly 100 Ft of Tract)

$$\text{Area} = \frac{194.68 \times 101.37}{43,560} = 0.4530 \text{ Ac}$$

6hr - 100yr rainfall = 2.2"
t_c = 10min
i_{100} = 2.2 x 2.2 = 4.84
C = 0.87
Q_{100} = CiA = .87 x 4.84 x 0.4530 = 1.91 cfs

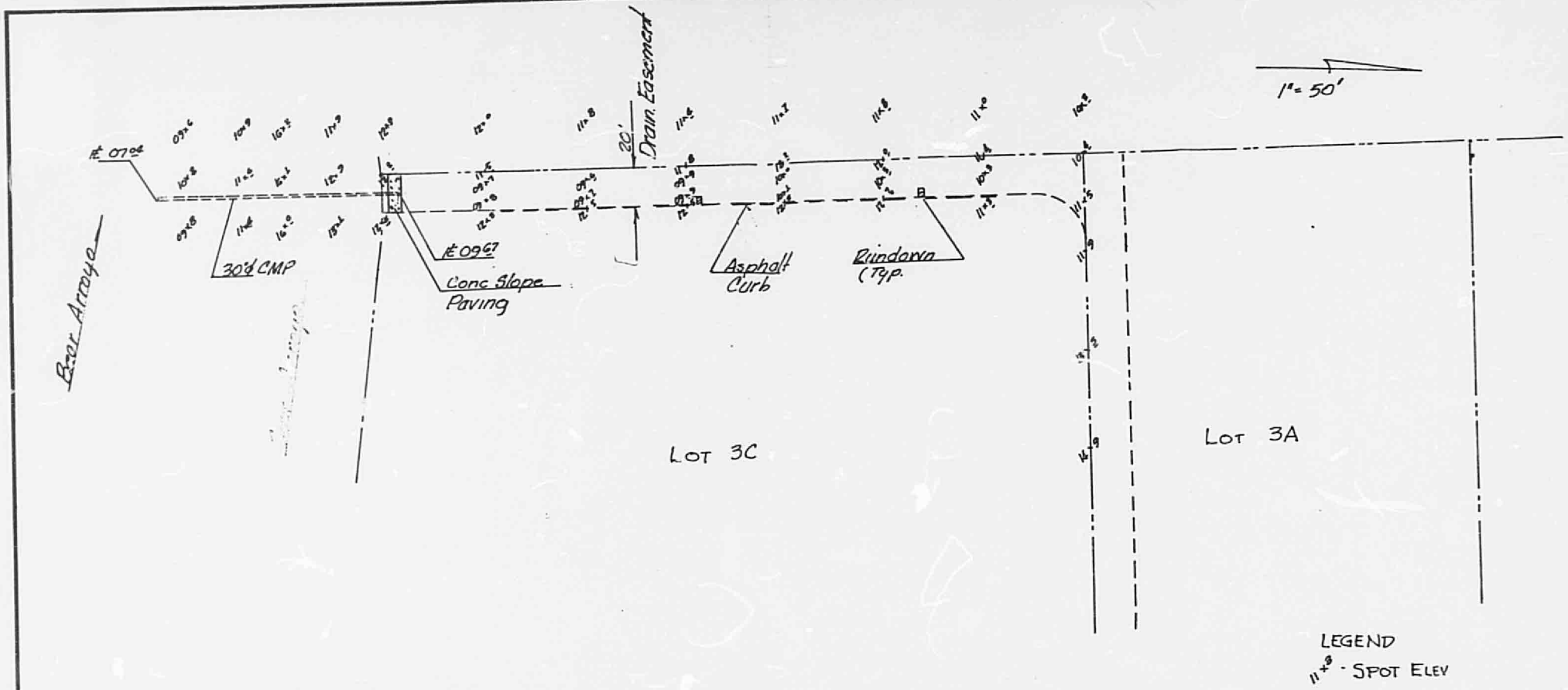
Sub Area B
Area = 1.5050 - 0.4530 = 1.0520 Ac.

Maximum Rate of Runoff
t_c = 10min
i_{100} = 4.84
C = 0.87

Q_{100} = CiA = 0.87 x 4.84 x 1.0520 = 4.43 cfs

Total runoff 6hr - 100yr

$$V = 1.052 \times 43,560 \times \frac{2.2}{12} \times .87 = 7,309 \text{ Cu. Ft.}$$



DRAINAGE EASEMENT ELEVATIONS.	WILSON & COMPANY ENGINEERS & ARCHITECTS	FILE GO
LOCATION ALBUQUERQUE PROJECT WCEA OFFICE		DATE Nov 83
COMP. RFB CHK. APP.		SHEET 1/1

AMENDMENT TO
ENGINEER'S
DRAINAGE REPORT

LOT 3A(2)

REPLAT OF LOT 3A

BEING A

REPLAT OF LOT 3, BLOCK A

UNIT II

INTERSTATE INDUSTRIAL TRACT

ZONE MAP E-17

WILSON & COMPANY

ENGINEERS & ARCHITECTS

1321 SAN PEDRO DRIVE N.E.

ALBUQUERQUE, NEW MEXICO 87110

JANUARY 1984

RECEIVED
JAN 26 1984
HYDROLOGY SECTION

WILSON & COMPANY ENGINEERS ARCHITECTS

AMENDMENT TO

ENGINEER'S DRAINAGE REPORT

DISCUSSION: Concern was expressed by City about the capacity of the ditch along the west side of Lot 3C and Lot 3A, since the flow line elevation of the 30-inch CMP is at elevation 5109.67 and flow from the ditch into pipe will be based on head only.

Based on the attached calculations the maximum rate of inflow from Lot 3C is 24.31 cfs and the maximum rate of inflow from Lot 3A is 4[illegible] cfs with a total maximum inflow rate of 28.74 cfs. The total volume of inflow for the ten minute time of concentration is 8,622 cu.ft. Based on no outflow and a pond length of 340 ft. and having a bottom width of 10 ft. and 2:1 side slope a depth of 1.85 ft. will be required to retain 8,622 cu.ft. of storm water.

The slope of the existing 30 inch CMP is 2.19%. Assuming an "n" value of .025 and a depth of flow in the pipe of 2.18 ft.. the capacity of the 30-inch CMP is 32.91 cfs. Therefore if a dike is constructed along the west side of Lot 3C and Lot 3A to elevation 12.0, the 100 year runoff will be retained in pond prior to discharge to the Bear Arroyo via the 30-inch CMP.

COMP. RFS
CK.
DATE 20 Jan 1984

WILSON & COMPANY
ENGINEERS ARCHITECTS

LOC. Albuquerque FILE 60
PROJ. WCEA Office SHEET 1
SUBJ. Amend to Drainage Report OF 2

Report E17-D13 Gulton Industries – This report was prepared & approved prior to adoption of DPM, and the maximum rate of runoff reported is 37.81 cfs with a rainfall intensity of 7.529 inches/hr.
Based on DPM procedures

LOT 3C Area = 5.580 Acres
$C = 0.90$
$t_c = 10$ min
6 hr. 100yr rainfall = 2.2 inches
$i_{100} = 2.2 \times 2.2 = 4.84$

$Q_{100} = CiA = .90 \times 4.84 \times 5.58 = 24.31$ cfs

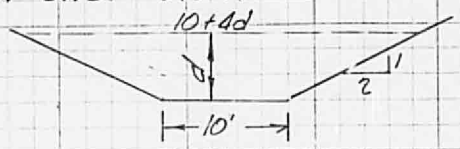
LOT 3A $Q_{100} = 4.43$ cfs

Q_{100} To ditch $= 24.31 + 4.43 = 28.74$ cfs

Volume Inflow @ 10 min $V = \frac{28.74 \times 10 \times 60}{2} = 8,622$ cu ft.

Ditch Length @ elev. 5110 = 340 ft

Section Ditch =



$A = 10d + 2d^2$

Volume = $8622 = 340(10d + 2d^2)$

$8622 = 3400d + 680d^2$

$680d^2 + 3400d - 8622 = 0$

$d^2 + 5d - 12.6794 = 0$ $\quad d = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$d = \frac{-5 \pm \sqrt{5^2 + (4)(1)(12.6794)}}{2}$

$d = \frac{-5 + 8.7016}{2} = \frac{3.7016}{2} = 1.8508'$

COMP RFS
CK.
DATE 20 Jan 1984

WILSON & COMPANY
ENGINEERS ARCHITECTS

LOC Albuquerque FILE 60
PROJ WCEA Offices SHEET 2
SUBJ Amend to Drainage Report OF 2

At 30" CMP = 5107.67
Capacity 30" CMP when water surface elev = 5111.85

$D = 5111.85 - 5107.67 = 2.18$

$d = 30" = 2.50'$ $\quad D/d = \frac{2.18}{2.50} = .87$

Based on attached table for partially filled circular conduit sections

$Area = .7254 d^2 = .7254 \times 2.5^2 = 4.53$

$Hyd. rad = R = .3017 d = .3017 \times 2.5 = .75$

CMP $n = .025$

$slope = S = \frac{9.67 - 7.04}{120} = \frac{2.63}{120} = .0219$ ft/ft

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

$Q = 4.53 \times \frac{1.486}{.025} \times .75^{2/3} \times .0219^{1/2} = 32.91 cfs$

d = Dia Pipe

PARTIALLY FILLED CIRCULAR CONDUIT SECTIONS

D/d	area/d²	wet. per./d	hyd. rad./d	D/d	area/d²	wet. per./d	hyd. rad./d
0.01	0.0013	0.2003	0.0066	0.51	0.4027	1.5908	0.2531
0.02	0.0037	0.2838	0.0132	0.52	0.4127	1.6108	0.2561
0.03	0.0069	0.3432	0.0197	0.53	0.4227	1.6308	0.2591
0.04	0.0105	0.4027	0.0262	0.54	0.4327	1.6507	0.2620
0.05	0.0147	0.4510	0.0326	0.55	0.4426	1.6710	0.2649
0.06	0.0192	0.4949	0.0389	0.56	0.4526	1.6911	0.2676
0.07	0.0242	0.5355	0.0451	0.57	0.4625	1.7113	0.2703
0.08	0.0294	0.5735	0.0513	0.58	0.4723	1.7315	0.2728
0.09	0.0350	0.6094	0.0574	0.59	0.4822	1.7518	0.2753
0.10	0.0409	0.6435	0.0635	0.60	0.4920	1.7722	0.2776
0.11	0.0470	0.6761	0.0695	0.61	0.5018	1.7926	0.2797
0.12	0.0534	0.7075	0.0754	0.62	0.5115	1.8132	0.2818
0.13	0.0600	0.7377	0.0813	0.63	0.5212	1.8338	0.2839
0.14	0.0668	0.7670	0.0871	0.64	0.5308	1.8546	0.2860
0.15	0.0739	0.7954	0.0929	0.65	0.5404	1.8755	0.2881
0.16	0.0811	0.8230	0.0986	0.66	0.5499	1.8965	0.2899
0.17	0.0885	0.8500	0.1042	0.67	0.5594	1.9177	0.2917
0.18	0.0961	0.8763	0.1097	0.68	0.5687	1.9391	0.2935
0.19	0.1039	0.9020	0.1152	0.69	0.5780	1.9606	0.2950
0.20	0.1118	0.9273	0.1206	0.70	0.5872	1.9823	0.2962
0.21	0.1199	0.9521	0.1259	0.71	0.5964	2.0042	0.2973
0.22	0.1281	0.9764	0.1312	0.72	0.6054	2.0264	0.2984
0.23	0.1365	1.0003	0.1364	0.73	0.6143	2.0488	0.2995
0.24	0.1449	1.0237	0.1416	0.74	0.6231	2.0714	0.3006
0.25	0.1535	1.0472	0.1466	0.75	0.6318	2.0944	0.3017
0.26	0.1623	1.0701	0.1516	0.76	0.6404	2.1176	0.3025
0.27	0.1711	1.0928	0.1566	0.77	0.6489	2.1412	0.3032
0.28	0.1800	1.1152	0.1614	0.78	0.6573	2.1652	0.3037
0.29	0.1890	1.1373	0.1662	0.79	0.6655	2.1895	0.3040
0.30	0.1982	1.1593	0.1709	0.80	0.6736	2.2143	0.3042
0.31	0.2074	1.1810	0.1755	0.81	0.6815	2.2395	0.3044
0.32	0.2167	1.2025	0.1801	0.82	0.6893	2.2653	0.3043
0.33	0.2260	1.2239	0.1848	0.83	0.6969	2.2916	0.3040
0.34	0.2355	1.2451	0.1891	0.84	0.7043	2.3186	0.3038
0.35	0.2450	1.2661	0.1935	0.85	0.7115	2.3462	0.3033
0.36	0.2546	1.2870	0.1978	0.86	0.7186	2.3746	0.3026
0.37	0.2642	1.3078	0.2020	0.87	0.7254	2.4038	0.3017
0.38	0.2739	1.3284	0.2061	0.88	0.7320	2.4341	0.3008
0.39	0.2836	1.3490	0.2102	0.89	0.7384	2.4655	0.2996
0.40	0.2934	1.3694	0.2142	0.90	0.7445	2.4981	0.2980
0.41	0.3032	1.3898	0.2181	0.91	0.7504	2.5322	0.2963
0.42	0.3130	1.4101	0.2220	0.92	0.7560	2.5681	0.2944
0.43	0.3229	1.4303	0.2257	0.93	0.7642	2.6061	0.2922
0.44	0.3328	1.4505	0.2294	0.94	0.7662	2.6467	0.2896
0.45	0.3428	1.4706	0.2331	0.95	0.7707	2.6906	0.2864
0.46	0.3527	1.4907	0.2366	0.96	0.7749	2.7389	0.2830
0.47	0.3627	1.5108	0.2400	0.97	0.7785	2.7934	0.2787
0.48	0.3727	1.5308	0.2434	0.98	0.7816	2.8578	0.2735
0.49	0.3827	1.5508	0.2467	0.99	0.7841	2.9412	0.2665
0.50	0.3927	1.5708	0.2500	1.00	0.7854	3.1416	0.2500

WILSON & COMPANY
ENGINEERS
ARCHITECTS

FROM
TO
DATE
FILE
SUBJECT

Mr John Armstrong
Hydrology Section
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

Re: Drainage Study - Lot 3A(2) Unit II Interstate Industrial Tract

Dear Mr. Armstrong

Based on our conversation, I wish to submit a revision to our drainage plan. We have done the following:

1. Revised the grading plan
2. Removed the asphalt curb.

The attached inflow - outflow analysis indicates a highwater elevation in the pond of 5112.2. We will grade the top of the dike to elevation 5113.0. The inflow - outflow analysis is based on projecting pipe with entrance control.

I will be glad to answer any questions you might have.

We are willing to sign a maintenance agreement with the city for maintaining the public easement along the west side of Lot 3L.

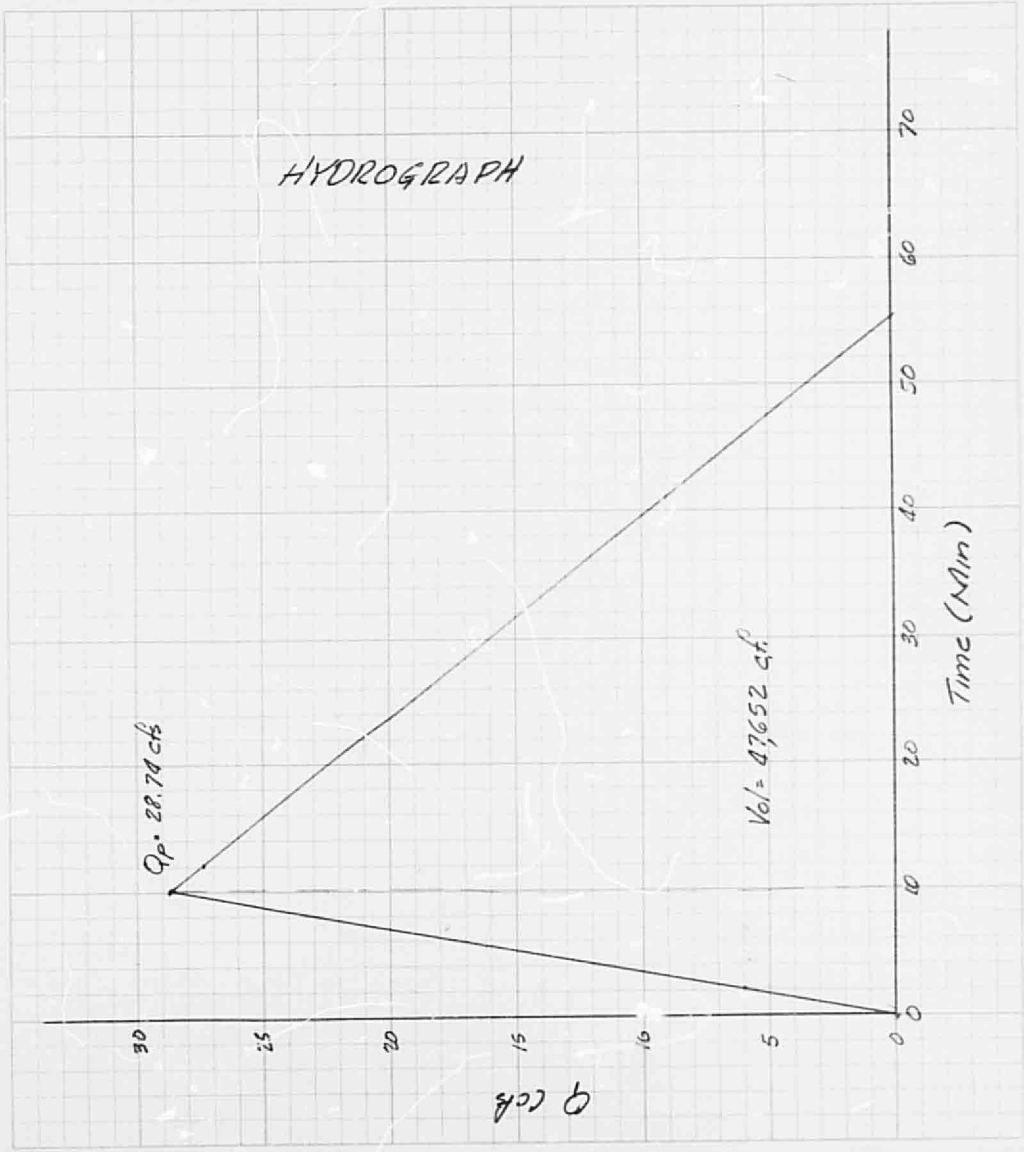
Very truly yours
Wilson & Co.
Robert T. Tyler

COMP. RFS
CK.
DATE 17 Feb 84

WILSON & COMPANY
ENGINEERS & ARCHITECTS

LOC. Alb
PROJ. WCEA Office
SUBJ. Dr. Report

FILE 60
SHEET 1
OF 4



COMP RFS

CK.

DATE 22 Feb 84

WILSON & COMPANY
ENGINEERS ARCHITECTS

LOC Alb

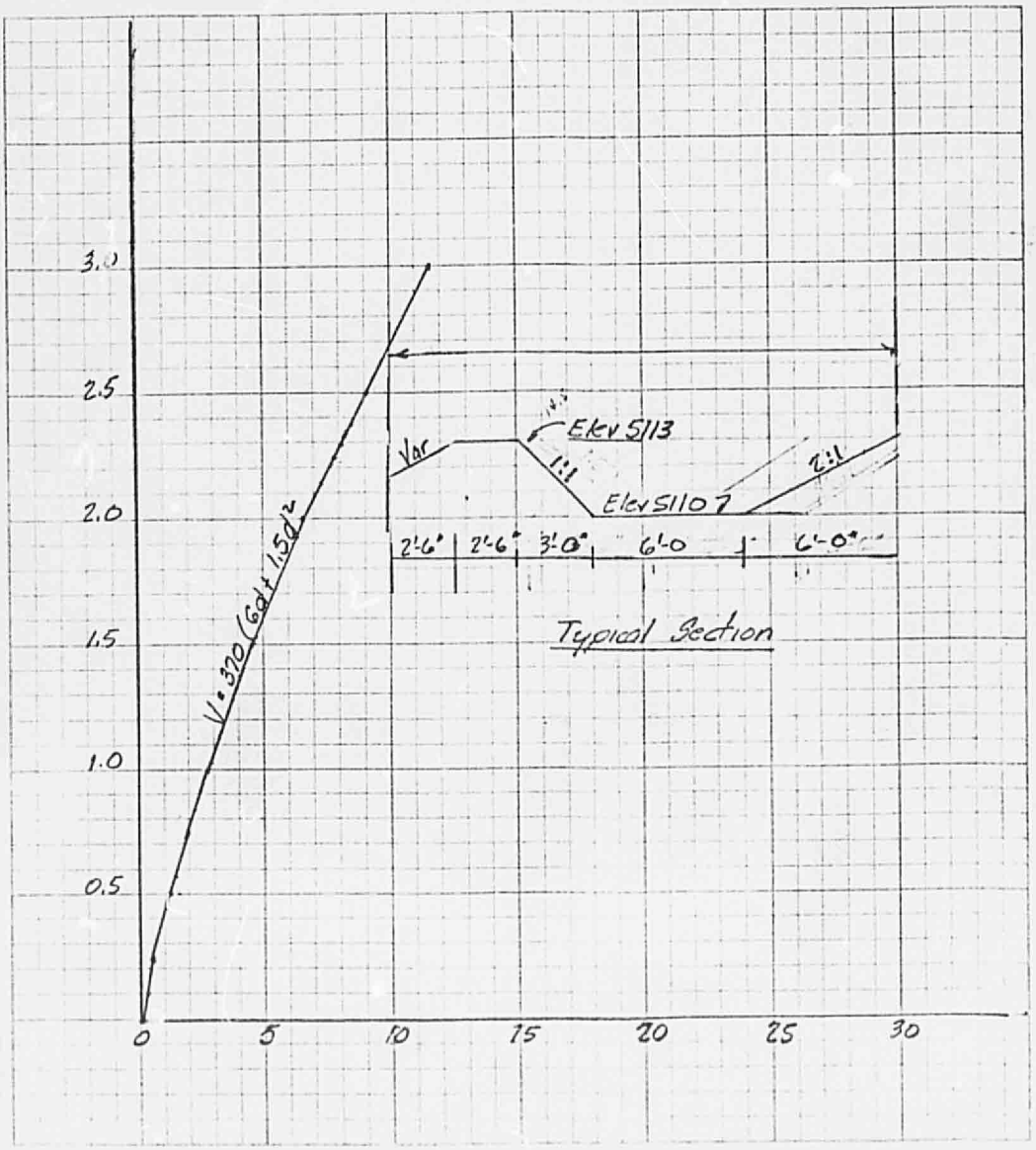
FILE

PROJ

SHEET

SUBJ WCEA Office

OF



1981

WILSON & COMPANY
ENGINEERS & ARCHITECTS

LOC. A/b
PROJ. WCEA Office
SUBJ.
FILE
SHEET
OF

COMP. RFS
CK.
DATE 22 Feb 84

Time Min	Inc Vol Inflow	Total Inflo. cf.	depth d	HW/dia d ^3/2.5 ft	Q Disch cfs	Inc Vol Outflow	Total Outflow cf.	Vol. Stored
0		0					0	0
	86		0	0	0	0		
1		86					0	86
	259		0	0	0	0		
2		345					0	345
	431		0.1	.17	2.38	143		
3		776					143	633
	604		0.22	.22	3.08	185		
4		1380					328	1052
	776		0.45	.31	4.34	260		
5		2156					588	1568
	948		0.58	.36	5.04	302		
6		3104					890	2214
	1121		0.82	.46	6.38	383		
7		4225					1273	2952
	1293		1.02	.54	8.10	486		
8		5518					1759	3759
	1466		1.28	.64	10.3	618		
9		6984					2377	4607
	1638		1.50	.73	12.5	750		
10		8622					3127	5495
	1705		1.71	.82	15.0	900		
11		10327					4027	6300
	1666		1.92	.90	17.5	1050		
12		11,993					5077	6916
	1628		2.05	.95	19.25	1155		
13		13621					6232	7389
	1590		2.13	.98	20.00	1200		
14		15211					7432	7779
	1552		2.20	1.01	21.00	1260		
15		16763					8692	8071
	1514		2.28	1.04	22.00	1320		
16		18277					10,012	8265
	1475		2.33	1.06	22.00	1320		
17		19752					11332	8420
	1437		2.35	1.07	22.00	1320		
18		21189					12652	8537

WILSON & COMPANY
ENGINEERS & ARCHITECTS

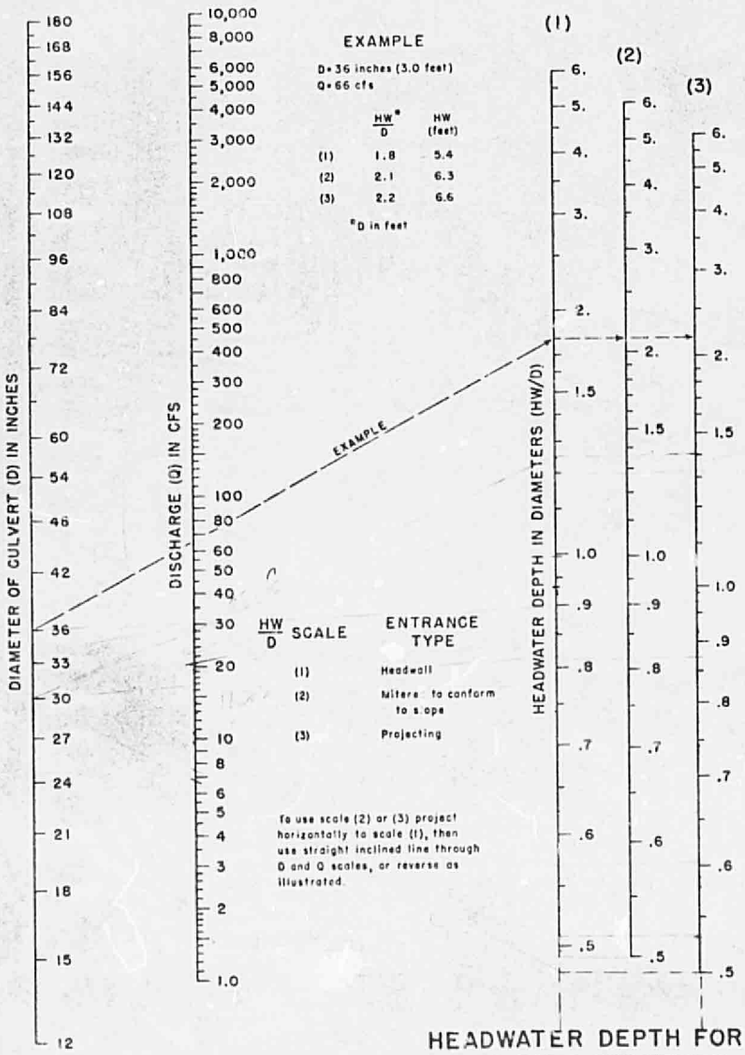
COMP. DFS
CK.
DATE 22 Feb 84

LOC. Alb
PROJ.
SUBJ. NCCA Office

FILE
SHEET
OF

Time Min	Incr. Vol. Inflow	Total Inflow c.f.	depth d	HW/dia $d^{1.33}/2.5$	Q Disch. cfs	Incr. Vol. Outflow	Total Outflow cf	Vol. Stored	
18		21189					12652	8537	
	1349		2.38	1.08	23.0	1380			
19		22588					14032	8556	← PEAK
	1360		2.38	1.08	23.0	1380			
20		23948					15412	8536	
	1322		2.38	1.08	23.0	1380			
21		25270					16792	8478	
	1283		2.36	1.08	23.0	1380			
22		26553					18172	8381	

1983



BUREAU OF PUBLIC ROADS
OCTOBER 1960

HEADWATER DEPTH FOR
C. M. PIPE CULVERTS
WITH INLET CONTROL

1984