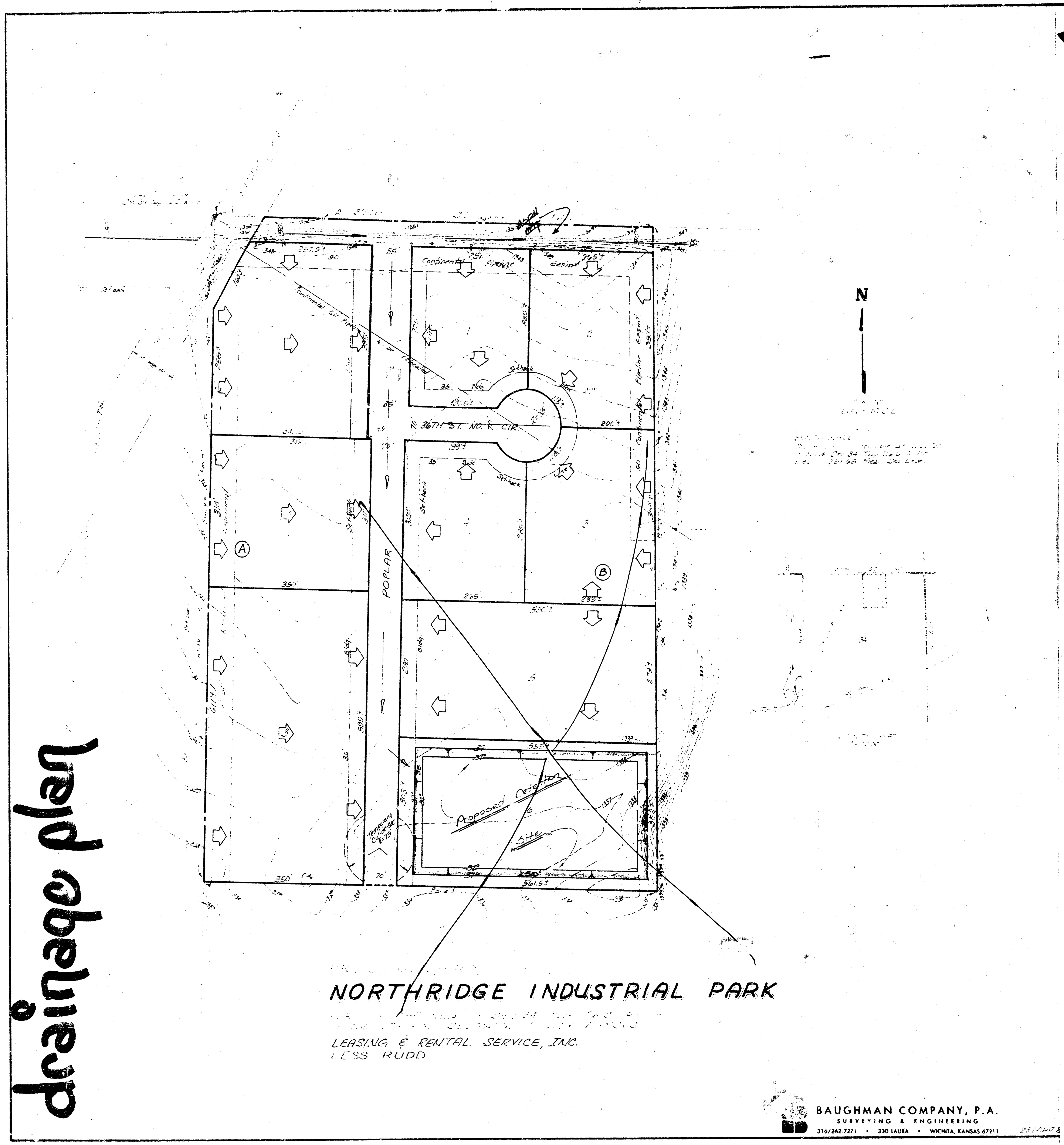
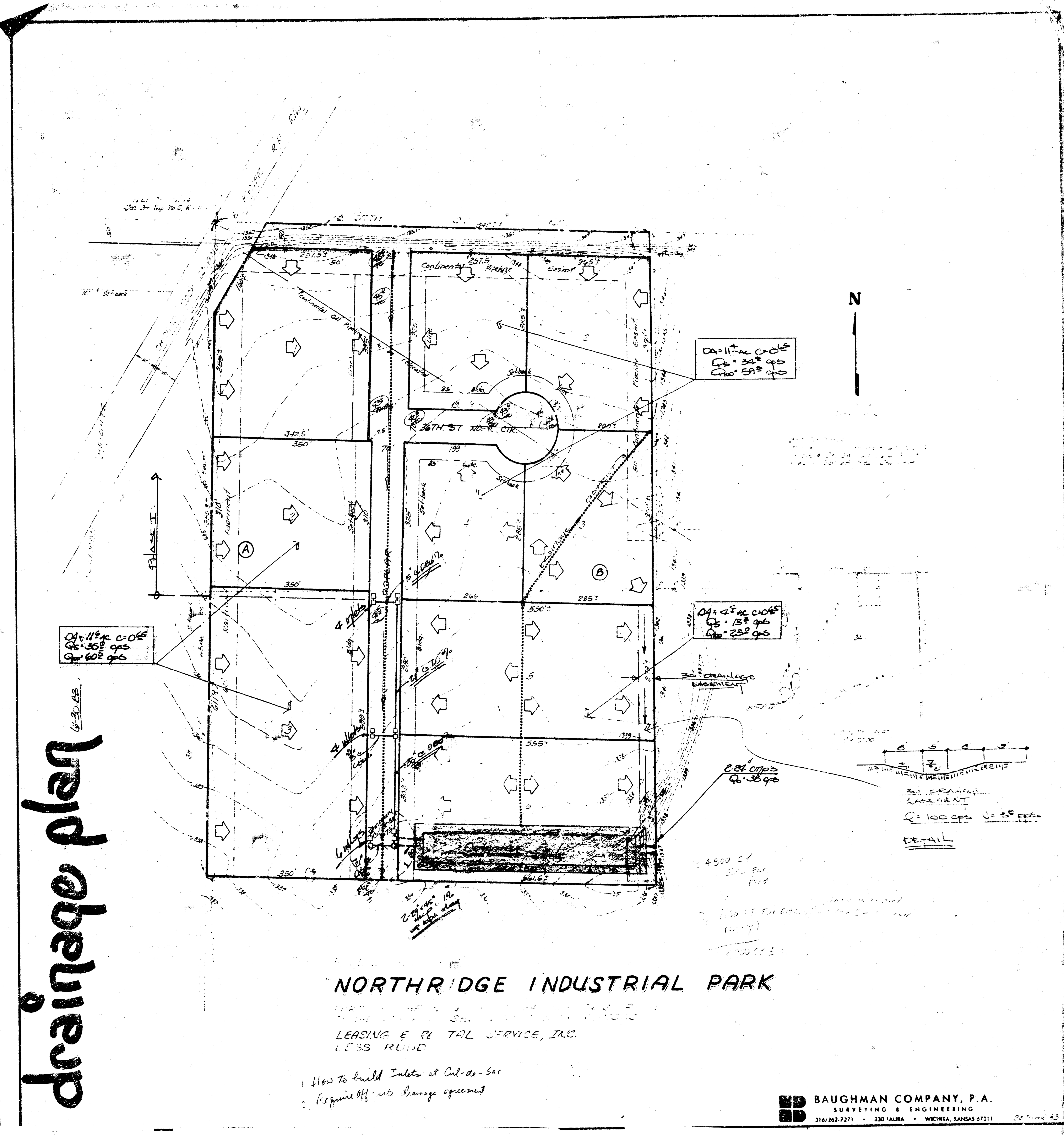




BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
316/262-7271 • 330 LAURA • WICHITA, KANSAS 67211

CONFIRMATION MEMO

SUBJECT: Northridge Industrial Plat — DATE: July 1, 1983

JOB NO. ____ COPIES TO:

TO: Chris Breitenstein

FROM: N. Brent Wooten

REFERENCE: Drainage Plan

[illegible] Plat of Northridge Industrial Park is scheduled for July 7, 1983.

[illegible] the [illegible]h portion of the Plat is being finaled out at this point. The Plat [illegible] be an industrial park development with avg. sloped ground. Runoff factor = 0.65.

The site is presently farnum soil type and group type B. Avg. runoff factor for the existing cultivated soil is 0.16. Area of the total [illegible] is 29.17 acres. The total area will be considered for the storage design area at this point. The site is adjacent to a creek and the design will include discharge into the creek only at the existing con[illegible]tion of runoff rate. The remainder will be detained in a storage area [illegible] the S.E. Corner of the plat.

[illegible] detention pond and the 24" discharge pipes should be constructed [illegible] the first final phase of the plat. The area in the first phase [illegible] approximately 16 acres. The storm sewer system which begins at the [illegible] line of the first phase would be constructed with the second [illegible] when it is final platted and the cost of the total storm sewer [illegible]sed against both Phase I and Phase II.

[illegible] detention pond will adequately serve Phase I without the storm [illegible] for now. Runoff from Phase I will be temporarily ditched south [illegible] pond site.

[illegible] and the hydrograph are presented here.

TIME OF CONC.
LENGTH = 1500 FT. SLOPE 0.66 %
C = 0.85 GUTTER FLO
T_c = 20 MIN. I_{100} = 8.03 IN/HR
I_5 = 4.66 IN/HR

ALLOWABLE FLO OUT
Q_o = 0.16 (8.03)(29.17) = 38 CFS
ASSUME WE USE 2-24" PIPES CMP
@ 19 CFS/PIPE W 3.5 HEAD.

100% DEVELOPED FLO IN.
Q_I = 0.65 (8.03)(29.17) = 152 CFS

VOLUME OF STORAGE —
APPROXIMATE STORAGE
= $Q_I - Q_o$ (t_c)
= (152-38) 20 (60) = 136800 CF
= 5.1 AC-FT.

BASIN DESIGN —
DIMENSIONS WILL BE
520' x 80' x 3.3'
AND WILL BE LOCATED IN LOT 6 AS INDICATED.

INFLOW OUTFLOW HYDROGRAPH CHECK —
OUTFLO = 38 CFS
W. 3.3 HEAD & 24" PIPES (CMP)
Q/PIPE = 19 CFS
SO 2 - 24" PIPES WILL HANDLE DISCHARGE OK.

INFLOW HYDROGRAPH
Q_I = 152 CFS Q_o = 38 CFS
t_p = 20 MIN.

BASIN DESIGN —
520' x 80' x 3.3' = 3.15 AC-FT.

Q_{OUT} = 2 - 24" CMP PIPE

ROUTING —
STAGE STORAGE.

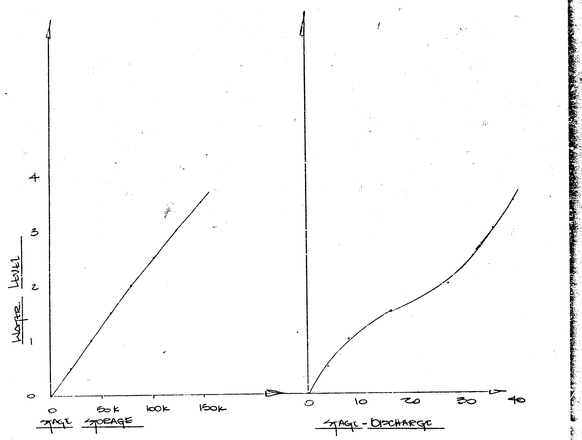
WATER LEVEL	SURFACE AREA	INC. VOL.	TOTAL VOL.
0	36281		0
0.5	38036	18579	18579
1.0	39809	19461	38040
1.5	41600	20352	58392
2.0	43409	21252	79644
2.5	45236	22161	101805
3.0	47081	23079	124884
		24006	

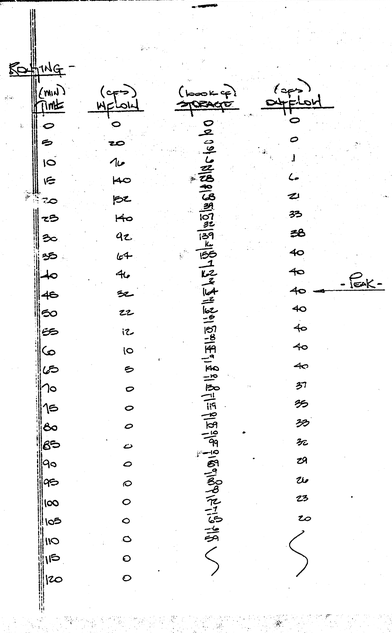
STAGE - DISCHARGE —

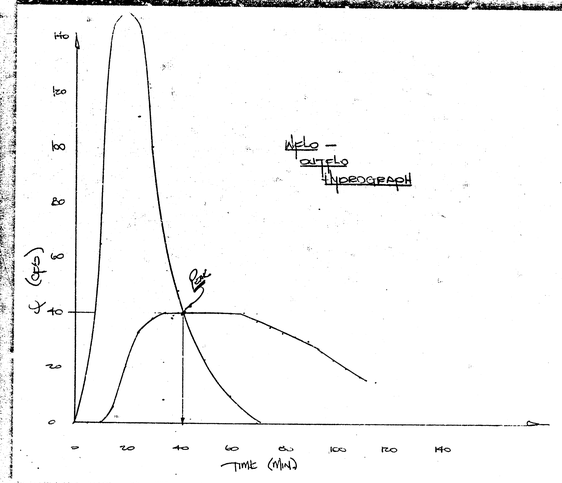
WATER LEVEL	HW/D	Q_o 1 PIPE	Q_o 2 PIPES
0	0	0	0
0.5	0.25	2	4
1.0	0.5	4	8
1.5	0.75	8	16
2.0	1.0	13.5	27
2.5	1.25	16	32
3.0	1.50	18	36
3.5	1.75	20	40

INFLOW HYDROGRAPH — Q = 152 cfs, t = 20 min.

t/t_p	Q/Q_p	t	Q
0	0	0	0
0.5	0.43	10	65
1.0	1.00	20	152







NORTHRIDGE INLUSTRIAL PARK
(DRAINAGE)

BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
316/262-7271 • 330 LAURA • WICHITA, KANSAS 67211

CONFIRMATION MEMO

PROJECT Northridge Industrial Park
JOB NO.
TO Chris Breitenstein
FROM N. Brent Wooten
REFERENCE Drainage Concept

DATE June 6, 1983
COPIES TO.

Preliminary Plat is scheduled for Subdivision for June 9, 1983.

The plan presented is a concept only till future development plans are defined. A detention site will be located on Lot 6 as indicated. The lots will drain to this site. The calculations are shown below.

DA = 29.2 Acres

Soil type for this area is Farnum soil type. Soil group is B. 55% of the area will be industrial and 45% will be cultivated. Average runoff group = 80. For the antecedent storm moisture condition II (6" rainfall) runoff amount = 3.78 inches.

Volume of detention = (3.78/12)(29.2 Acres)
= 9 AC. - FT.

Consider a pond site depth of 3 foot. Volume / 3 FT. = 3 Acre Foot surface area or approximately a 260' x 510' site.

PAGE __ OF ____

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL — SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4331

June 14, 1988

Mr. Don Arnold, Jr.
John T. Arnold Asso.
150 N. Main, Suite 501
Wichita, KS 67202

Dear Mr. Arnold:

As per our discussion on the drainage plan for Northridge Industrial Park, the City concurs with the proposed revision on the attached drainage plan, provided that sufficient drainage easement is obtained to allow for any cross lot drainage to occur.

Sincerely,

Vicky Huang

Vicky Huang, P.E.
Subdivision Engineer

VH:sm/5148A