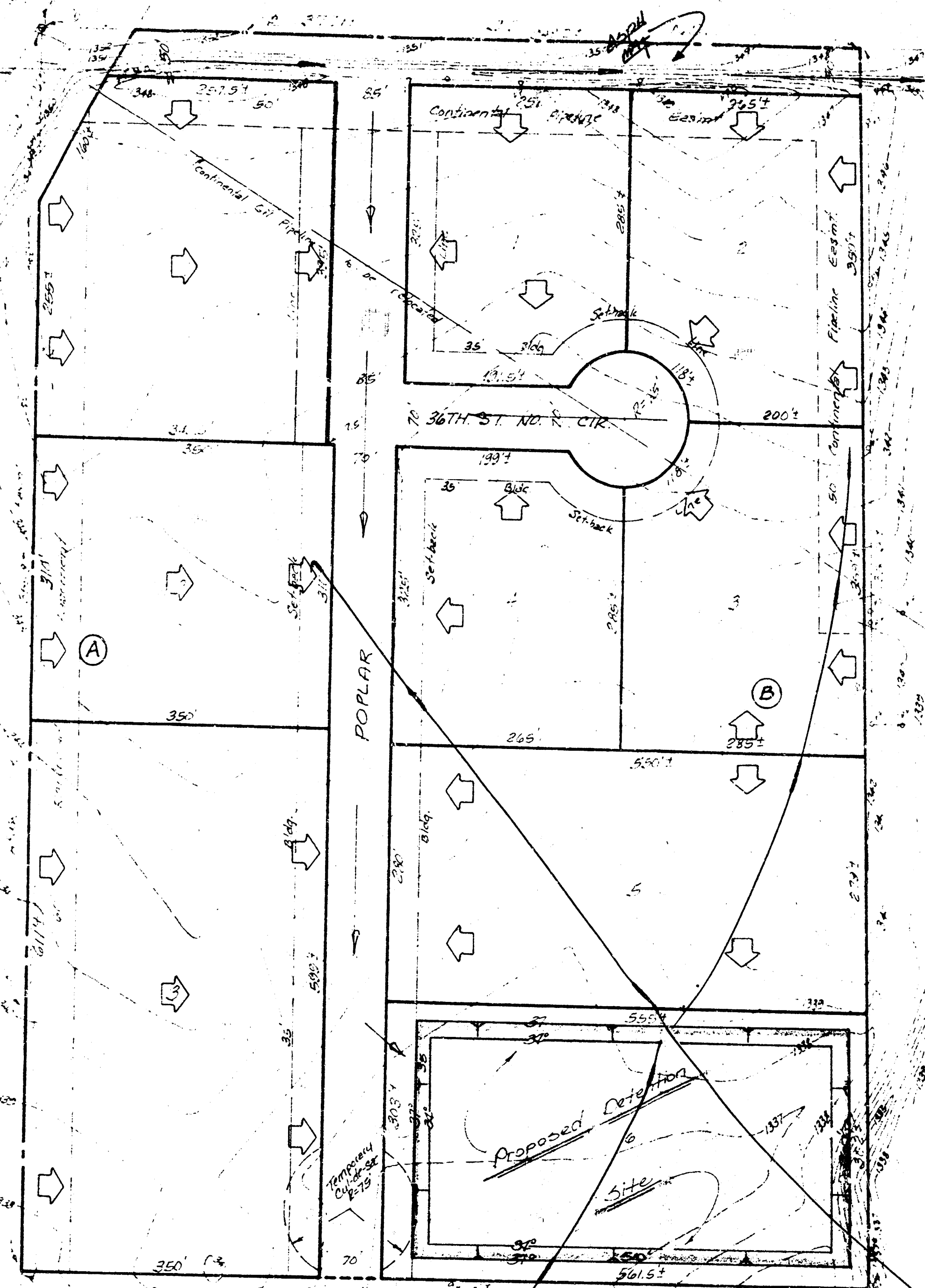


layd abelueup

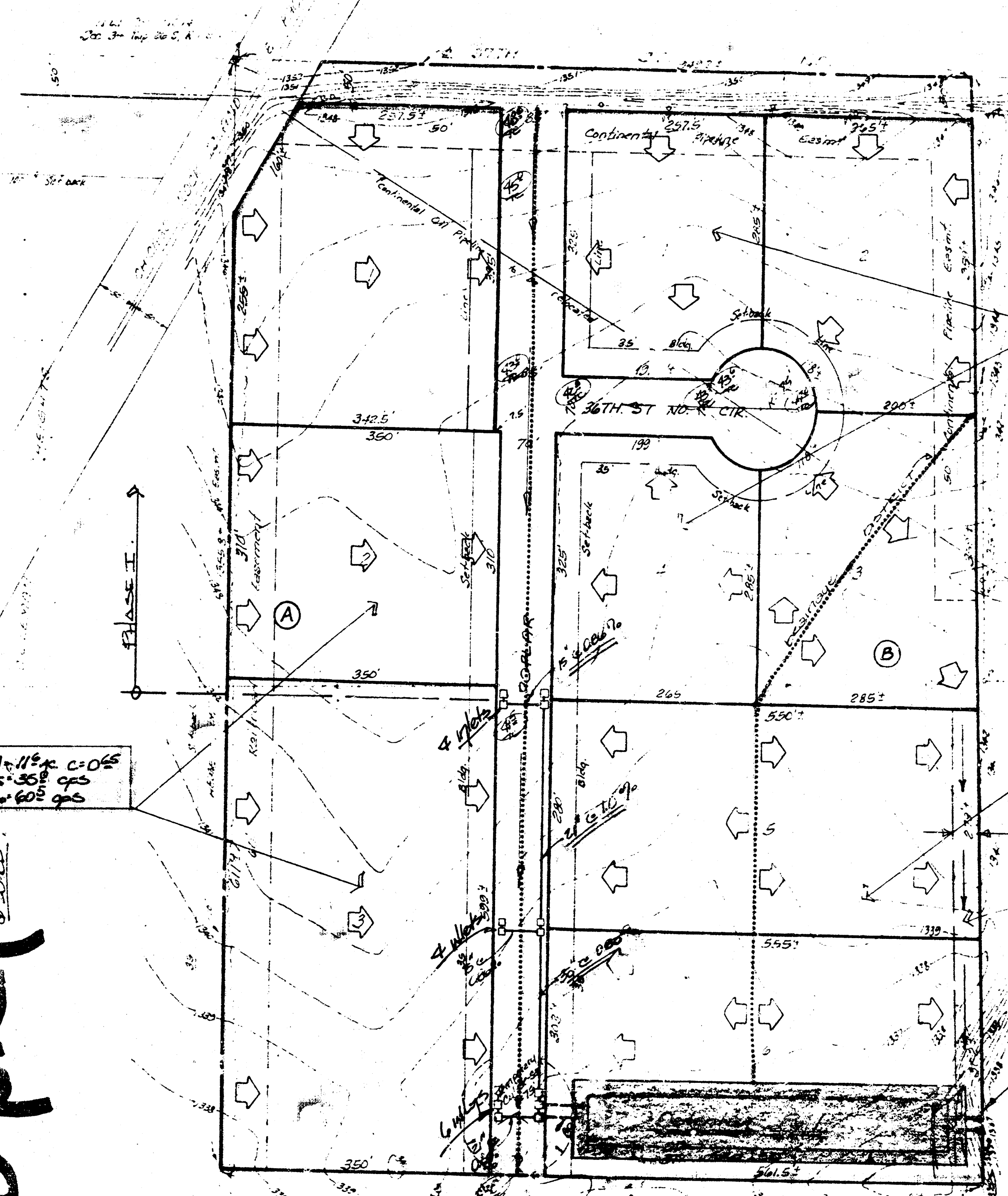


# NORTHRIDGE INDUSTRIAL PARK

LEASING & RENTAL SERVICE, INC.  
LESS RUDD

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

layd abelueup



# NORTHRIDGE INDUSTRIAL PARK

LEASING & RENTAL SERVICE, INC.  
LESS RUDD

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

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

| CONFIRMATION MEMO |                    |
|-------------------|--------------------|
| DATE              | July 1, 1983       |
| COPIES TO         |                    |
| JOB NO.           |                    |
| BY                | Chris Breitenstein |
| FOR               | Mr. Brent Wooten   |
| PROJECT           | Drainage Plan      |

Final Plat of Northridge Industrial Park is scheduled for July 7, 1983. The final portion of the Plat is being finalized at this point. The site will be an industrial park development with avg. sloped ground. Slope factor = 0.65.

The site is presently farmland soil type and group type B. Avg. runoff factor for the existing cultivated soil is 0.16. Area of the total site is 12.11 acres. The total area will be considered for the storage area at this point. The site is adjacent to a creek and the storm will include discharge into the creek only at the existing corner of runoff site. The remainder will be retained in a storage area at the S.W. Corner of the plat.

The detention pond and the 24" discharge pipes should be constructed at the first final phase of the plat. The area in the first phase is approximately 16 acres. The storm sewer system which begins at the S.W. Corner of the first phase would be constructed with the second phase. It is final platting and the cost of the total storm sewer charged against both Phase I and Phase II.

The detention pond will adequately serve Phase I without the storm sewer. Phase II from Phase I will be temporarily ditched south of the pond site.

The hydrograph are presented here.

TIME OF CONC.  
Length = 1500 ft Slope 0.16 to  
C = 0.85 gutter flow  
T<sub>c</sub> = 20 min. I<sub>100</sub> = 8.08 in/hr  
I<sub>2</sub> = 4.16 in/hr  
ALLOWABLE FLO OUT  
Q<sub>2</sub> = 0.16 (8.08) (29.17) = 38 cfs  
ASSUME WE USE 2-24" PIPES CMP  
C = 110 cfs/pipe W 3.5' HEAD  
W/ DEVELOPED FLO IN.  
Q<sub>2</sub> = 0.16 (8.08) (29.17) = 152 cfs

VOLUME OF STORAGE -  
APPROXIMATE STORAGE  
= Q<sub>2</sub> - Q<sub>0</sub> (etc)  
= (152 - 38) 20 (60) = 136800 CF  
= 3.1 AC-FT.

Basin Design -  
DIMENSIONS WILL BE  
820' x 60' x 3.5'  
AND WILL BE LOCATED IN LOT 6 AS  
INDICATED.

Inflow Outflow Hydrograph Check -  
Outflow = 38 cfs  
W 3.5' HEAD & 24" PIPES (CMP)  
Q/PIPE = 19 cfs  
SO 2-24" PIPES WILL HANDLE DISCHARGE OK.

Inflow Hydrograph  
Q<sub>2</sub> = 152 cfs Q<sub>0</sub> = 38 cfs  
T<sub>p</sub> = 20 min.

Basin Design -  
820' x 60' x 3.5' = 3.5 AC-FT.

ROUTING -  
2-24" CMP PIPE

STAGE STORAGE.

| WATER LEVEL | SURFACE AREA | INC. VOL. | TOTAL VOL. |
|-------------|--------------|-----------|------------|
| 0           | 36281        | 13579     | 0          |
| 0.5         | 38036        | 19461     | 13579      |
| 1.0         | 39604        | 26582     | 38040      |
| 1.5         | 41000        | 21262     | 59302      |
| 2.0         | 42404        | 22161     | 81464      |
| 2.5         | 43806        | 23079     | 104603     |
| 3.0         | 45201        | 24000     | 129804     |

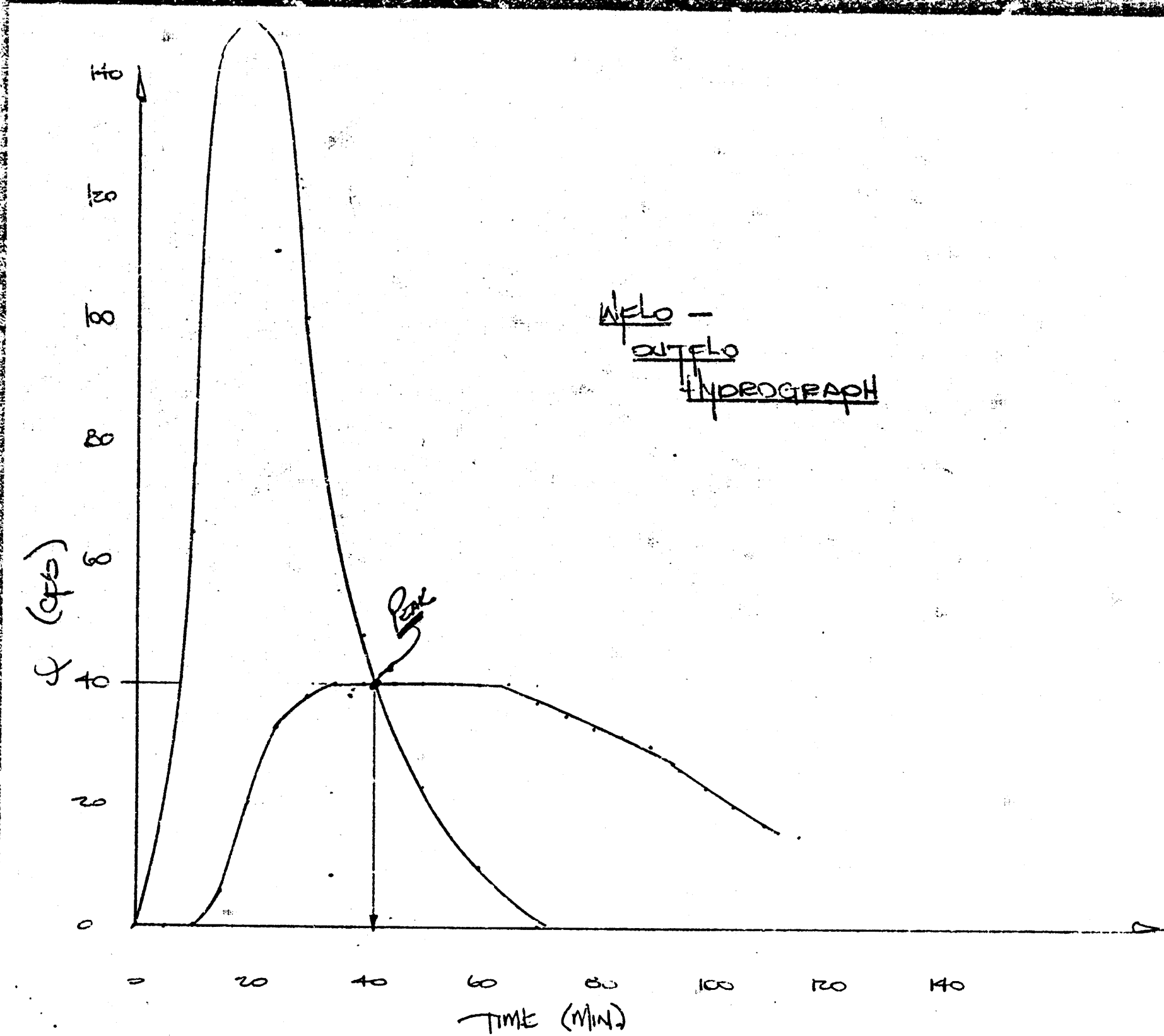
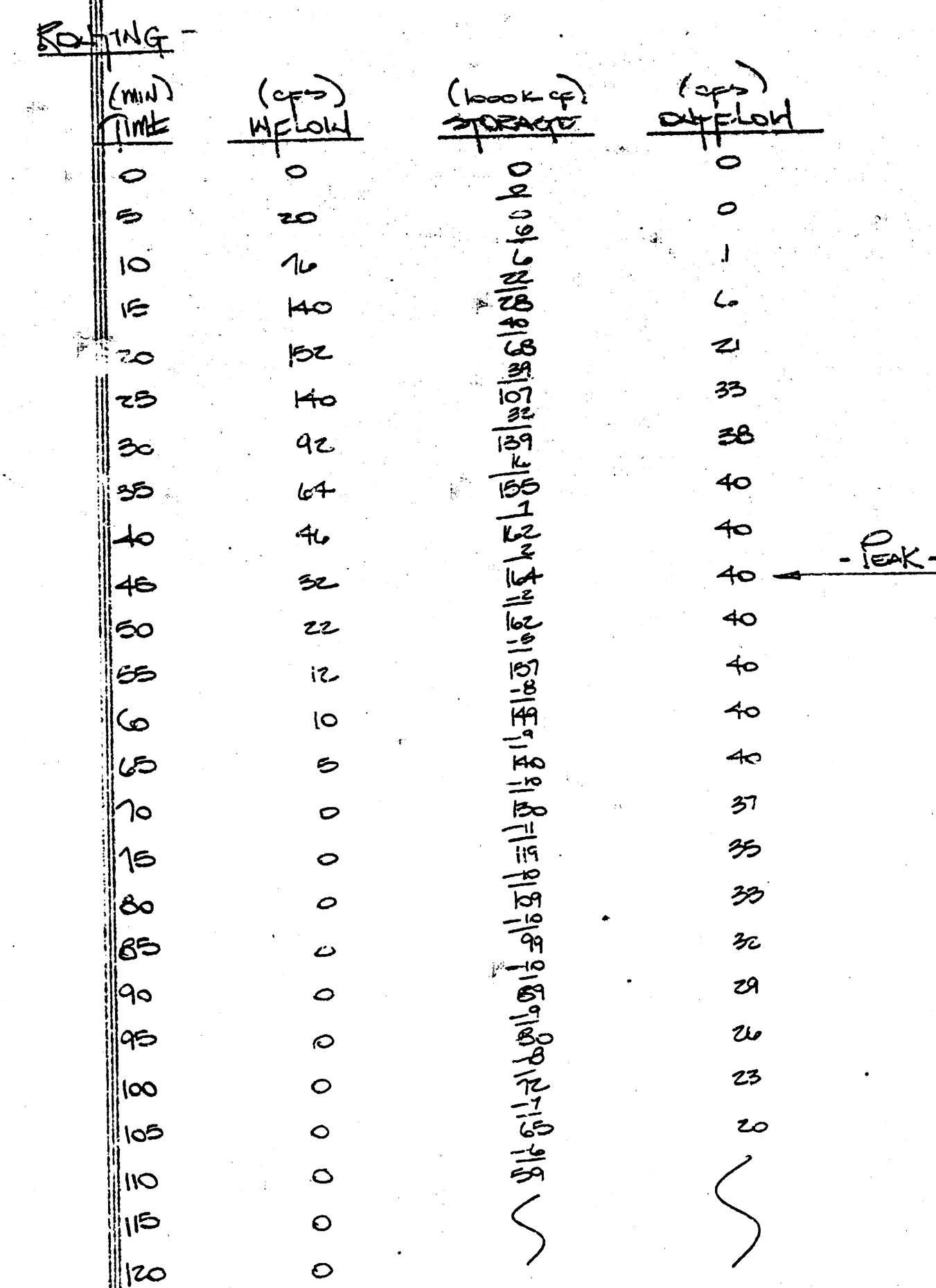
STAGE-DISCHARGE -

| WATER LEVEL | IN D | Q <sub>0</sub> | Q <sub>2</sub> |
|-------------|------|----------------|----------------|
| 0           | 0    | 0              | 0              |
| 0.5         | 0.25 | 2              | 4              |
| 1.0         | 0.5  | 4              | 6              |
| 1.5         | 0.75 | 6              | 16             |
| 2.0         | 1.0  | 15             | 27             |
| 2.5         | 1.25 | 16             | 32             |
| 3.0         | 1.50 | 18             | 36             |
| 3.5         | 1.75 | 20             | 40             |

Inflow Hydrograph -  
Q<sub>2</sub> = 152 cfs  
T<sub>p</sub> = 20 min.

| WATER LEVEL | Q <sub>0</sub> | Q <sub>2</sub> |
|-------------|----------------|----------------|
| 0           | 0              | 0              |
| 0.5         | 0.25           | 0              |
| 1.0         | 1.00           | 20             |





NORTHRIDGE INDUSTRIAL PARK  
(DRAINAGE)

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

CONFIRMATION  
MEMO

PROJECT Northridge Industrial Park

DATE June 6, 1983

\_\_\_\_\_ JOB NO.

COPIES TO:

TO \_\_\_\_\_ Chris Breitensteir

FROM            N. Brent Wooten

REFERENCE Drainage Concept

' 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  
406 NORTH MAIN STREET  
WICHITA, KANSAS 67202  
(313) 296-6971

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

YH: sm/5148A

