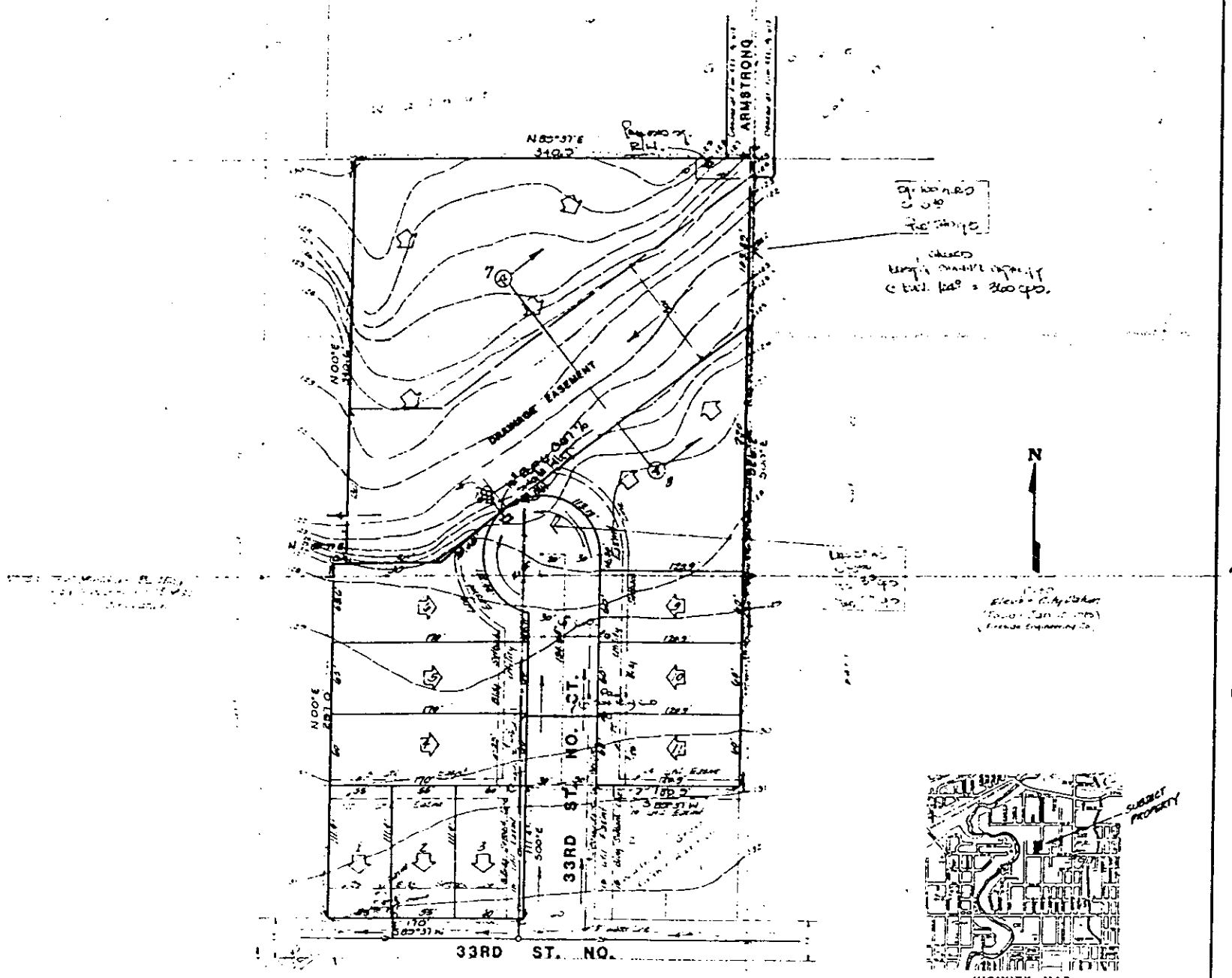


PRELIMINARY PLAT

JESSE ADDITION

REPLAT OF PART OF WALNUT GROVE FIFTH ADDITION,
WICHITA, KANSAS

OWNER: RICHARD P. JESSE

DRAINAGE & UTILITY PLAN

BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
346-397-7271 • 315 ELLIS • WICHITA, KANSAS 67211

BAUGHMAN COMPANY, P.A.
SURVEYING, ENGINEERING & CONSULTING
346-397-7271 • 315 ELLIS • WICHITA, KANSAS 67211

CONFIRMATION MEMO

PROJECT: JESSE ADDITION
JOB NO.:
DATE: March 19, 1990
TO: Vicky Huang, P.E.
COPIES TO:
FROM: W. Brent Wooten, P.E.
REFERENCE: Drainage Plan

I am providing you herein the revised drainage plan for the Jesse Addition plat. Please review the plan and the calculations as provided and advise if you should have any questions regarding the plat or the plan.

Thank you.

Jesse Addition - Drainage
New Jobs 1 3

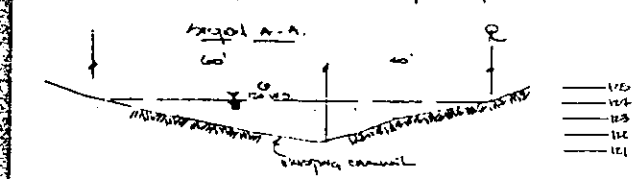
BAUGHMAN COMPANY, P.A.

Drainage plan - Jesse Addition is a proposed 11 lot residential plat which has a drainage way flowing thru the plat from east to west. The plat is proposed to be graded and developed so that surface runoff will remain sheet and drainage into the drainage easement thru a system similar to indicated on the plan.

The drainage basin draining into the area into Jesse Addition is calculated from actual field measurements. The total area equals approximately 100 acres. The 100 year storm is routed thru the plat in order to size the required drainage easement and location of accurate minimum pad elevation.

Existing channel configuration.

Sketch A-A.



---

2 3

BAUGHMAN COMPANY, P.A.

Required calculations -

Q_A: 100 acres average c factor: 0.40

(t_c: 20 minutes, i: 2.00 in/hr) I_{100} = 2.2 min. = 6" rise

$Q = CIA = 0.40(6)(100) = 240$ cfs.

$\therefore Q_{100} = 240$ cfs (minor storm runoff, including pipes)

— channel capacity is checked at elevations 125 & 124 (city datum) for which it flows.

$Q = \frac{1.49}{n}(A)(R)^{2/3}(S)^{1/2}$

@ elevation 125 - A: 70 sf, WP: 58', n: 0.30, S: 0.50% (minimum)

$Q_{capacity} = \frac{1.49}{0.30}(70)(\frac{70}{58})^{2/3}(.005)^{1/2}$

$Q = 100$ cfs. — (insufficient)

at elevation 124 - A: 116 sf, WP: 103', n: 0.30, S: 0.50%

$Q_{capacity} = \frac{1.49}{0.30}(116)(\frac{116}{103})^{2/3}(.005)^{1/2}$

$Q = 240$ cfs. — (this is sufficient)

---

3 3

BAUGHMAN COMPANY, P.A.

Summary -

If 124.0 elevation is assumed to be the average water surface, that is minimum pad elevation of 125.0 should be used for lots 6-7-8.

The drainage easement width should be a minimum of 100 feet to accommodate a proposed water surface of 124.0.