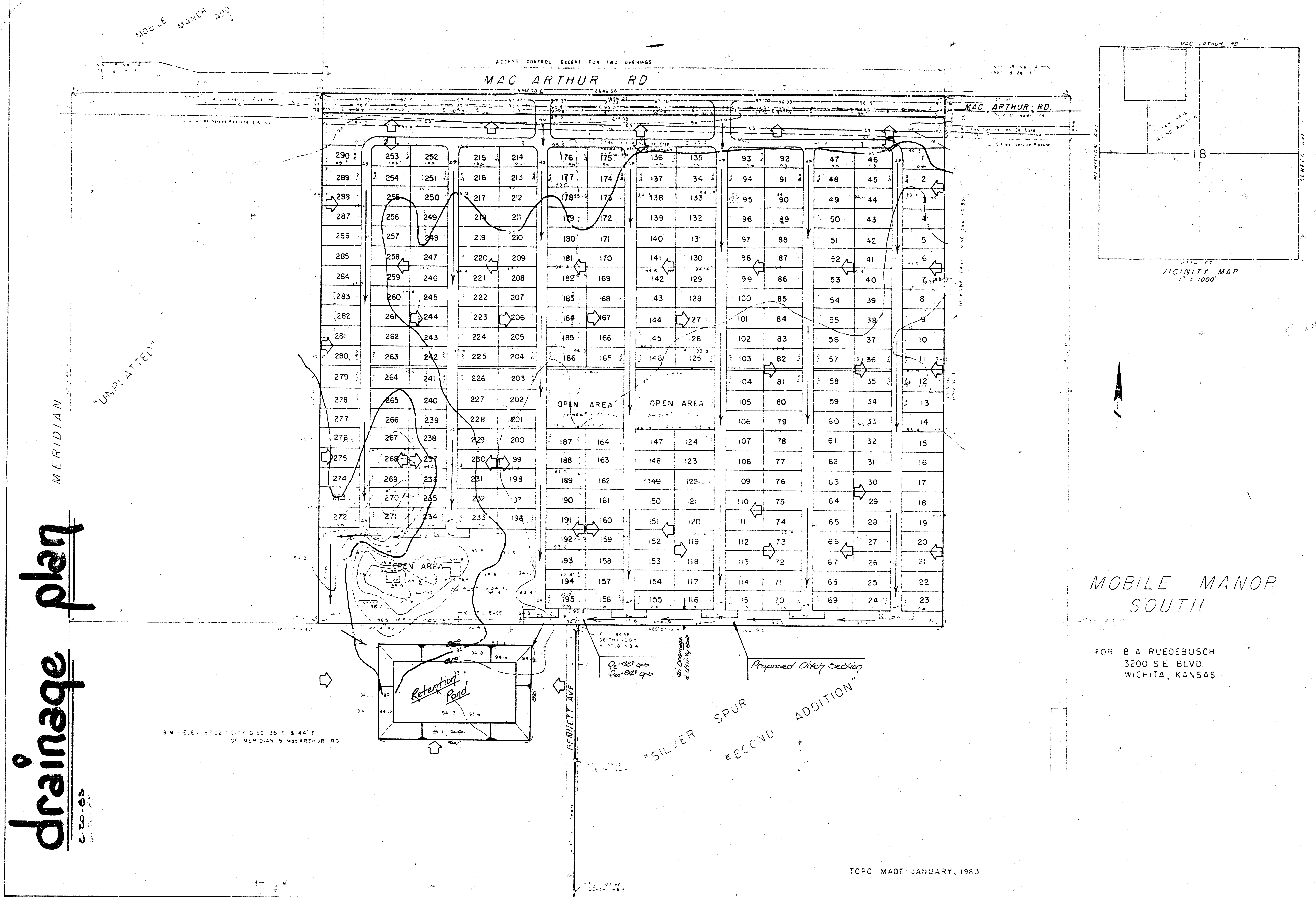


drainage plan

2-20-85



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

CONFIRMATION MEMO

PROJECT: Mobile Manor Addition

DATE: June 20, 1983

TO: Chris Breitenstein

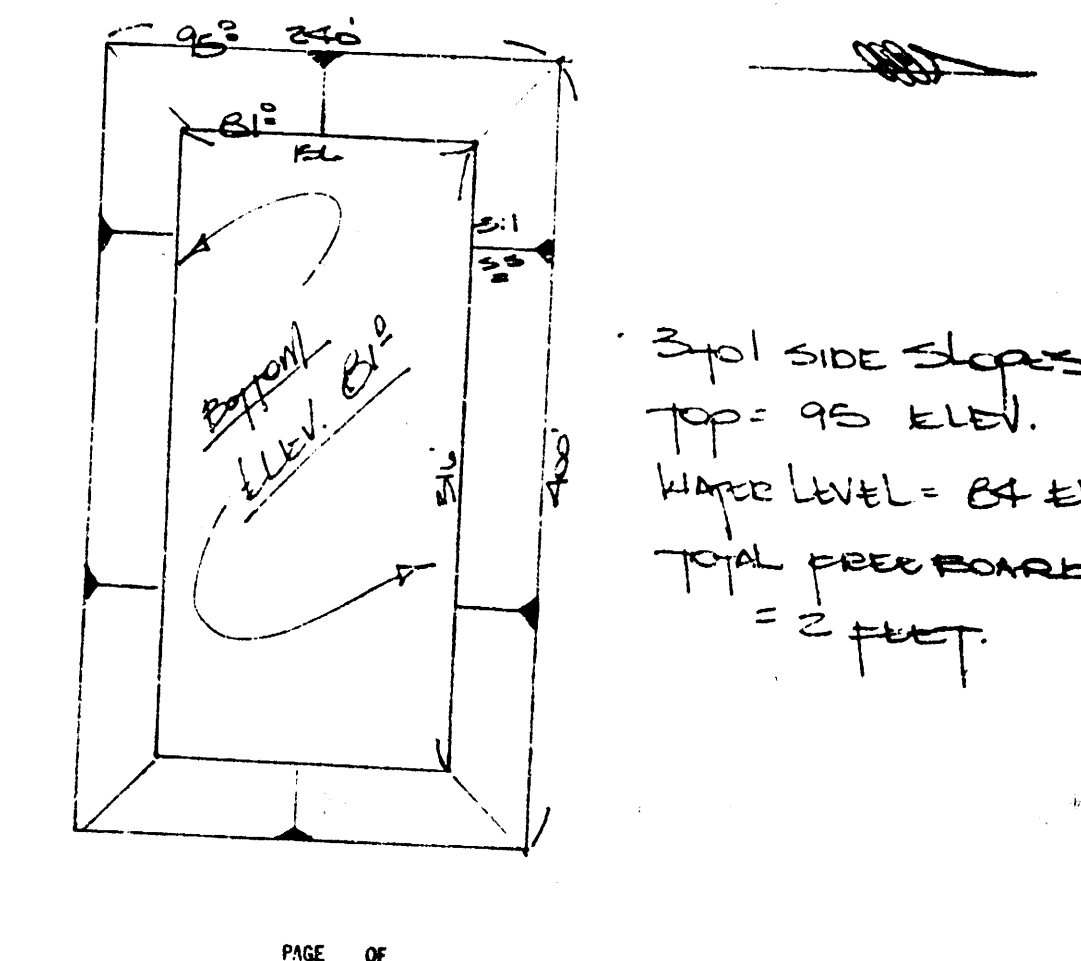
FROM: Brent Mooton

REFERENCE: Drainage Plan Addendum

JOB NO. _____

COPIES TO: _____

THE REQUIRED STORAGE VOLUME FOR THIS SITE IS 82 AC.FT. FOR THE MAJOR STORM DISCHARGE. PROPOSED POND SITE DIMENSIONS FOR THE RETENTION POND ARE INDICATED BELOW.



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MEMO

PROJECT: _____

DATE: _____

TO: _____

FROM: _____

REFERENCE: _____

JOB NO. _____

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EXISTING GROUND ELEVATION AT THE SITE = 95.0.
EXISTING WATER LEVEL GROUND WATER = 84.0

PROPOSED BOTTOM OF POND SITE = 81.0
OR THREE FEET BELOW GROUND WATER.

PROPOSED FREEBOARD FOR SITE = TWO FEET
W/INCH OF REQUIRED ONE FOOT.

POND CAPACITY CONSIDERED ONLY FROM ELEVATION
OF 84 TO 93. AVAILABLE CAPACITY = 15.1 AC.FT.

THE COEFFICIENT OF PERMEABILITY AVG FOR THE SITE
AT THE ELEVATION OF 84.0 IS 34.45 IN./DAY.

FLOW FROM THE SITE VERTICALLY INTO THE WATER TABLE
WOULD BE CALCULATED FROM $Q = K \cdot h \cdot A / L$

$h = 9$ FOOT TOTAL AVERAGE HEAD

$A =$ BOTTOM OF PIT AT ELEV. 84.0 = 58116 SQ. FT.

$L =$ THICKNESS OF SAND LAYER AFFECTING FLOW = 3 FT.

$K =$ PERM. FACTOR

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(VERTICAL FLOW) = $45K(1000 \text{ ft}^2/\text{min})(58116 \text{ ft}^2)/3 \text{ ft}$

$Q = 174 \text{ ft}^3/\text{min}$

SINCE THERE IS SUCH A SMALL AMOUNT OF
SIDE SLOPE AREA TO CONSIDER WE WILL NOT
INCLUDE ANY LATERAL FLOW AND CONSIDER ONLY
THE VERTICAL FLOW.

BY CRITERIA OF DESIGN THE POND IS TO
BE DISCHARGED IN FOUR DAYS TIME.

INFLOW AMOUNT = 82 AC.FT. = 574992 CF.

W. A RATE OF DISCHARGE OF $174 \text{ ft}^3/\text{min}$

TOTAL TIME = $574992 / 174 = 3305 \text{ MIN.}$

= 55 HOURS OR 2.3 DAYS.

SO WITH AVERAGE MAINTENANCE THIS

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NOTE - SIDE SLOPES AND TOP AREA OF
RETENTION SITE SHOULD BE SEEDED AND MULCHED.

THE POND IS A RETENTION POND
DESIGN WITH NO SLOW RELEASE OR PUMP STATION
SYSTEM TO GUARANTEE DISCHARGE OTHER THAN
DESIGN VERTICAL FLOW INTO THE WATER TABLE
LEVELS. THEREFORE IT IS STRONGLY RECOMMENDED
THAT SOME MAINTENANCE PRACTICE OR GUARANTEE
BE ESTABLISHED TO INSURE THAT THE POND WILL
IN FACT REMAIN AS A FUNCTIONABLE PART OF
THIS DEVELOPMENT.

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TO: _____

FROM: _____

REFERENCE: _____

JOB NO. _____

COPIES TO: _____

15 June 1983

Mr. B. A. Ruedebusch
3200 S.E. Boulevard
Wichita, Kansas 67216

Re: Falling Head Permeability Tests
A/L File No. 50-83016-1530

Sir:

We have completed the referenced falling head permeability tests on samples
delivered to the laboratory. Results of the tests are as follows:

1. East Side
Coefficient of permeability "k" = $1.07 \times 10^{-3} \text{ cm/sec}$
= 36.3 in./day

2. West Side
Coefficient of permeability "k" = $9.57 \times 10^{-4} \text{ cm/sec}$
= 32.6 in./day

All tests were conducted in accordance with Chapter VI of Lambe's "Soil Testing
for Engineers".

If there are any questions concerning this data, please call at your convenience.

Respectfully submitted,

ALLIED LABORATORIES

John B. McDaniel, Jr.
Manager, Geo-Test Division