



DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
CITY HALL — SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501

March 4, 1980

Professional Engineering
Consultants
1440 East English
Wichita, KS 67211

Attention: Chris Brennenstuhl, P.E.

Re: Drainage Plan; Oak Knoll and Oak
Knoll 2nd Addition *fill*

Dear Ms. Brennenstuhl:

Thank you for submitting the calculations and the Drainage Concept Plan of the subject plats. We have reviewed the plan and are glad to comment that the plan appears to be feasible. There is, however, some additional information that will help us to arrive at a speedy approval of the plan:

1. As you are aware, the storm water sewer plans for the Oak Knoll Addition (Storm Water Sewer No. 172) are currently in progress and are about 80 percent complete. The outfall of this storm sewer is at elevation 190.0 City Datum which is approximately eight feet below the existing ground surface (198.1 feet elevation City Datum). To this date, we have not received your proposed channel design and cross-sections showing the feasibility of accommodating an eight foot deep channel section in a 50 feet proposed drainage easement.

1376.5 As shown

inadequate
need 75'

2. We acknowledge that the water surface elevation in the pond downstream from the channel is 89.1 feet City Datum, however, we cannot determine whether this water level is the 100 year frequency storm level or normal water surface elevation? In order to determine the feasibility of this drainage concept plan, a backwater curve analysis from the spillway or outlet structure and/or structure under Rock Road (which is not shown on the plan) is requested. We appreciate your submitting, at your earliest convenience, such analysis to our office for review.

In order to help arrive at a speedy approval of this drainage concept plan, we are enclosing a copy of the final drainage plan for the subject Additions. We hope this will help you in your analysis. The size of pipe and location and number of inlets may vary from your preliminary design, however, this should not affect the design of the channel.

Received
RECEIVED MAR 5 1980

Professional Engineers & Consultants
Attention: Chris Bremenstahl
March 4, 1980
Page 2

Please feel free to call us at (316) 268-4235 if you need additional information or have any questions. Your early response will help speedy approval of the drainage concept plan, hence the plat.

Very truly yours,



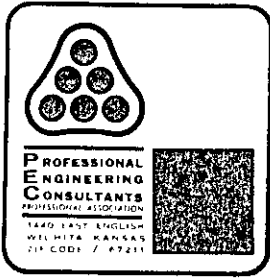
Yash D. Desai
Drainage Chief Engineer

YDD:gf

Enclosure

cc: Jack Galbraith, Planning Department
Paul Johnston, Flood Control ×
Randall Voth, V.P. American Land Development

MEMO



TO: Phil Dietrich
Office Engineer
Sedgwick County Dept. of Public
Works - 1015 Stillwell
Wichita, Kansas 67213

PROJECT NO. 30-78395-1047

PROJECT: Oak Knoll and Oak Knoll
2nd Additions

COPIES TO:

ATTN:

DATE: March 24, 1980

Mike Lindebak ✓

Dick Linn

Gary Wiley

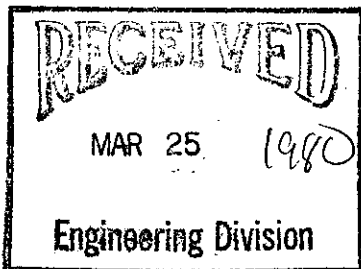
FROM: Chris Brennenstuhl

REFERENCE: Drainage outlet conditions for Oak
Knoll, Oak Knoll 2nd and future Oak Knoll Industrial
Additions

PLEASE ADVISE IMMEDIATELY OF ANY MISCONCEPTIONS OR OMISSIONS YOU BELIEVE TO BE CONTAINED HEREIN.

During our inspection of the above referenced area made on Friday, March 31, 1980, the following existing problems were observed:

1. The elevation of the top of the embankment of the existing pond (located in the southwest corner of the future Oak Knoll Industrial Addition) is higher than the ground and building floor immediately south and downstream of the pond. (Average difference in elevations is 1.5 feet.)
2. The existing pond spillway is poorly defined.
3. Direction of outflow from the pond is perpendicular to the direction of flow in the east road ditch of Rock Road. Location of debris would indicate a high level of flow and probable turbulence within the road ditch at this point.
4. The house entrance located within the Rock Road ditch immediately downstream of the pond outlet is relatively small (18" CMP) and there are indications of erosion at both the upstream and downstream ends of the culvert. A levee has been constructed between the road ditch and the house. There is evidence of overtopping of the drive.
5. The entrance of Arnold Drive onto Rock Road has had erosion protection installed on both the upstream and downstream ends of the culverts (2-30" RCP).
6. To cross Roack Road and continue downstream through McConnell Air Force Base, the flow must make a right angle turn through 2-48" RCP.



Memo
Phil Dietrich
PEC File 30-78395-1047
3/24/80

From our discussion of the existing problems and the possible worsening of these problems with the increased runoff generated by full development of the Oak Knoll Additions, it is understood that the following information will need to be supplied in order to fully analyze the effects of development:

1. Is the pond to remain? If so, what (if any) modifications are proposed? Will any detention take place?
2. What will be the design flow into the Rock Road ditch? Is the existing ditch adequate for this flow rate and what will be the velocities within the ditch and through the culverts?
3. If the existing ditch is not adequate for the design flow rate, how is it planned to either decrease the flow rate or increase the capacity? Will erosion protection be needed? If so, what kind?

If there is any further design information needed, please let us know as soon as possible.

Flood Control and Landfill Div.

July 3, 1980

Louise Olivarez, Sr. Planner, MAPD

Paul Johnston, Acting Director

- Oak Knoll Industrial Park Addn.
Sketch Plat

Reference is made to your request for comments on subject Addition.
Upon initial review of subject sketch plat the following comments are offered.

- 1) The drainage easement shown to be abandoned was a requirement for the Oak Knoll and Oak Knoll 2nd Addition plats. This was to provide a means of directing the drainage from the mentioned plats across the property in question, same to be part of the drainage guarantees and recorded by separate instrument.

Any proposed change will require approval and appropriate easements to handle Q100. Same to be tied into the flowline of the proposed outfall leaving Oak Knoll 2nd Addn.

- 2) The area north of subject sketch plat drains southerly and provision for same should be made.
- 3) At the time Oak Knoll 2nd Addition was platted it was indicated that any future development would require resolving existing drainage problems. Presently no adequate means exist to convey the drainage from the site. Both the roadside ditch adjacent to Rock Road and the culverts crossing same and the northwest corner of McConnell Air Force Base housing are inadequate. The pond shown within the drainage and detention area does not have an approved outlet. In the past overflow has caused flooding to the structures just south requiring a levee to be built for protection.

Any proposed development will require addressing the previous comments.

Paul Johnston,
Acting Director
Flood Control and Landfill Division

cc: Phil Dietrich
Oak Knoll Addn. Plat File
Oak Knoll 2nd Addn. Plat File
Oak Knoll Industrial Park Addn. Plat File

COUNTY OF SEDGWICK
DEPARTMENT OF PUBLIC WORKS



SEDGWICK COUNTY COURTHOUSE

1250 S. SENECA
WICHITA, KANSAS 67213

PHONE 268-7901

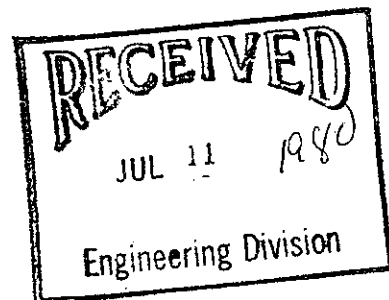
LAWRENCE E. MULLINS
DIRECTOR OF PUBLIC WORKS

DATE: July 7, 1980
TO: Ms. Louise Olivarez, Senior Planner
FROM: L. E. Mullins *LEM*
SUBJECT: Sketch Plat, Oak Knoll Industrial Park Addition

The office has reviewed the above referenced sketch plat and offers the following comments:

1. The proposed east/west road at the south end of the plat would be only 250+ feet from the major intersection of McConnell Air Force Base entrance and base housing.
2. Recommend consideration be given to re-design lots in order to eliminate the lot that is shown to have direct access to Rock Road.
3. We express some concern if the 60 foot right of way is adequate to convey the run-off from the proposed detention pond along with any road improvements such as decel lane, etc. We would suggest some preliminary drainage calculations be submitted along with the preliminary plat to assure adequacy of this right of way.

cc: Mike Lindebak, City Engineer ✓
Paul Johnson, Flood Control
Plat File





Date April 9, 1979 Page 1 of 2

Project DAK KNOLL ADDITION

Item DRAINAGE PLAN - INLETS

NODE 461

$$Q_A = 3.7 \text{ CFS}$$
$$S = 0.35\%$$

$$Q_I/Q_A = 0.773$$

$$Q_I = 2.9 \text{ CFS}$$

$$Q_{I_4} = (0.80)(2.9) = 2.3 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 3.7 - 2.3 = 1.4 \text{ CFS}$$

NODE 460

$$Q_A = 1.0 \text{ CFS}$$
$$S = 0.35\%$$

$$Q_I/Q_A = 1.000$$

$$Q_I = 1.0 \text{ CFS}$$

$$Q_{I_4} = (0.80)(1.0) = 0.8 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 1.0 - 0.8 = 0.2 \text{ CFS}$$

NODE 441

$$Q_A = 4.2 + 1.4 = 5.6 \text{ CFS}$$
$$S = 0.35\%$$

$$Q_I/Q_A = 0.659$$

$$Q_I = 3.7 \text{ CFS}$$

$$Q_{I_4} = (0.80)(3.7) = 3.0 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 5.6 - 3.0 = 2.7 \text{ CFS}$$

APR 10 1979



Date _____ Page 2 of _____

Project _____

Item _____

Node 440

$$\begin{aligned} Q_A &= 1.0 + 0.2 = 1.2 \text{ CFS} \\ S &= 0.35\% \end{aligned}$$

$$Q_I/Q_A = 1.000$$

$$Q_I = 1.2 \text{ CFS}$$

$$Q_{I_x} = (0.80)(1.2) = 1.0 \text{ CFS}$$

$$Q_{BYPASS} = 1.2 - 1.0 = 0.2 \text{ CFS}$$

Node 421

$$\begin{aligned} Q_A &= 3.2 + 2.7 = 5.9 \text{ CFS} \\ S &= 0.75\% \end{aligned}$$

$$Q_I/Q_A = 0.475$$

$$Q_I = 2.8 \text{ CFS}$$

$$Q_{I_x} = (0.80)(2.8) = 2.2 \text{ CFS} \quad \text{USE 2 INLETS}$$

$$Q_{BYPASS} = 5.9 - 2(2.2) = 5.9 - 4.4 = 1.4 \text{ CFS}$$

Node 420

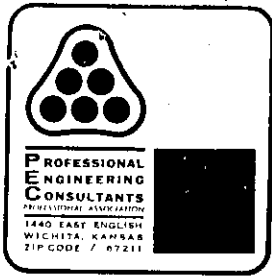
$$\begin{aligned} Q_A &= 1.0 + 0.2 = 1.2 \text{ CFS} \\ S &= 0.75\% \end{aligned}$$

$$Q_I/Q_A = 1.000$$

$$Q_I = 1.2 \text{ CFS}$$

$$Q_{I_x} = (0.80)(1.2) = 1.0 \text{ CFS}$$

$$Q_{BYPASS} = 1.2 - 1.0 = 0.2 \text{ CFS}$$



Date _____ Page 3 of 12

Project _____

Item _____

Node 410

$$Q_A = 3.0 + 0.2 = 3.2 \text{ cfs}$$

JUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ cfs}$$

$$Q_A < Q_c \quad \text{okay}$$

Node 400

$$Q_A = 2.1 \text{ cfs}$$

$$\frac{Q_A}{Q_c} = 0.55\%$$

$$Q_A/Q_c = 0.930$$

$$Q_I = 2.0 \text{ cfs}$$

$$Q_{IT} = (0.80)(2.0) = 1.6 \text{ cfs}$$

$$Q_{\text{BYPASS}} = 2.1 - 1.6 = 0.5 \text{ cfs}$$

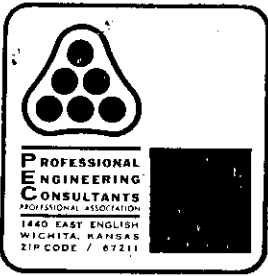
Node 390

$$Q_A = 2.3 + 0.5 = 2.8 \text{ cfs}$$

JUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ cfs}$$

$$Q_A < Q_c \quad \text{okay}$$



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Project _____

Item _____

Node 380

$$Q_A = 1.7 \text{ CFS}$$
$$S = 0.35\%$$

$$Q_I/Q_A = 1.000$$

$$Q_I = 1.7 \text{ CFS}$$

$$Q_{IX} = (0.80)(1.7) = 1.4 \text{ CFS}$$

$$Q_{BYPASS} = 1.7 - 1.4 = 0.3 \text{ CFS}$$

Node 370

$$Q_A = 0.7 + 0.3 = 1.0 \text{ CFS}$$
$$S = 0.32\%$$

$$Q_I/Q_A = 1.000$$

$$Q_I = 1.0 \text{ CFS}$$

$$Q_{IX} = (0.80)(1.0) = 0.8 \text{ CFS}$$

$$Q_{BYPASS} = 1.0 - 0.8 = 0.2 \text{ CFS}$$

Node 360

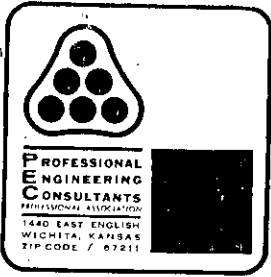
$$Q_A = 2.1 \text{ CFS}$$
$$S = 0.32\%$$

$$Q_I/Q_A = 0.935$$

$$Q_I = 2.0 \text{ CFS}$$

$$Q_{IX} = (0.80)(2.0) = 1.6 \text{ CFS}$$

$$Q_{BYPASS} = 2.1 - 1.6 = 0.5 \text{ CFS}$$



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Project _____

Item _____

Node 351

$$Q_A = 1.9 + 0.2 = 2.1 \text{ CFS}$$

SUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_0 \text{ okay}$$

Node 350

$$Q_A = 0.4 + 0.5 = 0.9 \text{ CFS}$$

$$= 0.32\%$$

$$Q_I / Q_A = 1.0000$$

$$Q_I = 0.9 \text{ CFS}$$

$$Q_{IX} = (0.80)(0.9) = 0.7 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 0.9 - 0.7 = 0.2 \text{ CFS}$$

Node 340

$$Q_A = 0.4 + 0.2 = 0.6 \text{ CFS}$$

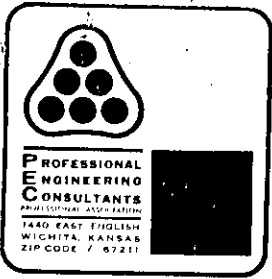
$$= 0.32\%$$

$$Q_I / Q_A = 1.0000$$

$$Q_I = 0.6 \text{ CFS}$$

$$Q_{IX} = (0.80)(0.6) = 0.5 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 0.6 - 0.5 = 0.1 \text{ CFS}$$



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Project _____

Item _____

Node 271

$$Q_A = 3.7 \text{ CFS}$$
$$S = 0.70\%$$

$$Q_I/Q_A = 0.690$$

$$Q_I = 2.6 \text{ CFS}$$

$$Q_{IX} = (0.80)(2.6) = 2.0 \text{ CFS}$$

$$Q_{BYPASS} = 3.7 - 2.0 = 1.7 \text{ CFS}$$

Node 270

$$Q_A = 8.1 \text{ CFS}$$
$$S = 0.70\%$$

$$Q_I/Q_A = 0.370$$

$$Q_I = 3.0 \text{ CFS}$$

$$Q_{IX} = (0.80)(3.0) = 2.4 \text{ CFS}$$

$$Q_{BYPASS} = 8.1 - 2.4 = 5.7 \text{ CFS}$$

Node 261

$$Q_A = 4.3 + 1.7 = 6.0 \text{ CFS}$$

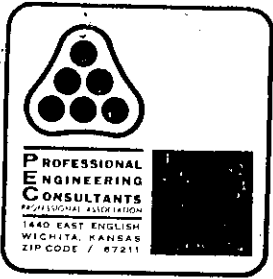
SUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \quad \text{okay}$$

Received

APR 10 1970



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Project _____

Item _____

Node 260

$$Q_A = 0.9 + 5.7 = 6.6 \text{ cfs}$$
$$S = 0.70\%$$

$$Q_I/Q_A = 0.445$$

$$Q_I = 2.9 \text{ cfs}$$

$$Q_{IX} = (0.80)(2.9) = 2.4 \text{ cfs}$$

$$Q_{Bypass} = 6.6 - 2.4 = 4.3 \text{ cfs}$$

Node 251

$$Q_A = 6.7 \text{ cfs}$$

JUMP CONDITION

$$CAPACITY = 8.3 \text{ cfs}$$

$$Q_A < Q_c \text{ okay}$$

Node 250

$$Q_A = 0.9 + 4.3 = 5.2 \text{ cfs}$$
$$S = 0.70\%$$

$$Q_I/Q_A = 0.525$$

$$Q_I = 2.7 \text{ cfs}$$

$$Q_{IX} = (0.80)(2.7) = 2.2 \text{ cfs}$$

$$Q_{Bypass} = 5.2 - 2.2 = 3.0 \text{ cfs}$$



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Project _____

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NODE 241

$$Q_A = 4.8 \text{ CFS}$$

JUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \quad \text{okay}$$

NODE 240

$$Q_A = 0.9 + 3.0 = 3.9 \text{ CFS}$$

$$S = 0.58\%$$

$$Q_E/Q_A = 0.695$$

$$Q_I = 2.7 \text{ CFS}$$

$$Q_{I*} = (0.80)(2.7) = 2.2 \text{ CFS}$$

$$Q_{\text{BYPASS}} = 3.9 - 2.2 = 1.7 \text{ CFS}$$

NODE 146

$$Q_A = 2.6 \text{ CFS}$$

JUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \quad \text{okay}$$



Date _____ Page 2 of 2

Project _____

Item _____

NODE 145

$$Q_A = 3.5 \text{ CFS}$$

SUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \text{ okay}$$

NODE 140

$$Q_A = 0.6 + 0.1 + 1.7 = 2.4 \text{ CFS}$$

SUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \text{ okay}$$



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Project _____

Item _____

NODE 751

$$Q_A = 2.0 \text{ CFS}$$

$$S = 0.40\%$$

$$Q_I/Q_A = 0.945$$

$$Q_I = 2.0 \text{ CFS}$$

$$Q_{IX} = (0.80)(2.0) = 1.6 \text{ CFS}$$

$$Q_{BYPASS} = 2.0 - 1.6 = 0.4 \text{ CFS}$$

NODE 750

$$Q_A = 5.5 \text{ CFS}$$

$$S = 0.40\%$$

$$Q_I/Q_A = 0.630$$

$$Q_I = 3.5 \text{ CFS}$$

$$Q_{IX} = (0.80)(3.5) = 2.8 \text{ CFS}$$

$$Q_{BYPASS} = 5.5 - 2.8 = 2.7 \text{ CFS}$$

NODE 740

$$Q_A = 3.3 + 2.7 = 6.0 \text{ CFS}$$

$$S = 1.25\%$$

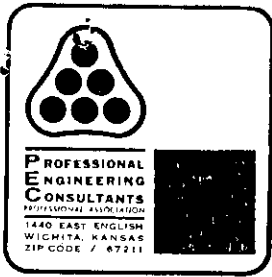
$$Q_I/Q_A = 0.430$$

$$Q_I = 2.6 \text{ CFS}$$

$$Q_{IX} = (0.80)(2.6) = 2.1 \text{ CFS}$$

$$Q_{BYPASS} = 6.0 - 2.1 = 3.9 \text{ CFS}$$

APR 10 1979



Date _____ Page // of //

Project _____

Item _____

NODE 730

$$Q_A = 3.6 + 4.0 = 7.6 \text{ CFS}$$

SUMP CONDITION

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \quad \text{okay}$$

NODE 720

$$Q_A = 1.3 + 0.5 = 1.8 \text{ CFS}$$

$$S = 1.25\%$$

$$Q_I/Q_A = 0.915$$

$$Q_I = 1.7 \text{ CFS}$$

$$Q_{I*} = (0.80)(1.7) = 1.3 \text{ CFS}$$

$$Q_{BYPASS} = 1.8 - 1.3 = 0.5 \text{ CFS}$$

NODE 631

$$Q_A = 4.1 + 1.4 = 5.5 \text{ CFS}$$

$$S = 1.50\%$$

$$Q_I/Q_A = 0.435$$

$$Q_I = 2.4 \text{ CFS}$$

$$Q_{I*} = (0.80)(2.4) = 1.9 \text{ CFS}$$

$$Q_{BYPASS} = 5.5 - 1.9 = 3.6 \text{ CFS}$$



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Project _____

Item _____

Node 630

$$Q_A = 1.3 \text{ CFS}$$

$$S = 1.50\%$$

$$Q_E/Q_A = 1.000$$

$$Q_I = 1.3 \text{ CFS}$$

$$Q_{IX} = (0.80)(1.3) = 1.0 \text{ CFS}$$

$$Q_{BYPASS} = 1.3 - 1.0 = 0.3 \text{ CFS}$$

Node 520

$$Q_A = 4.0 + 0.5 + 0.3 = 4.7 \text{ CFS}$$

Sump Condition

$$\text{CAPACITY} = 8.3 \text{ CFS}$$

$$Q_A < Q_c \text{ okay}$$

Node 510

$$Q_A = 1.7 + 3.6 = 5.3 \text{ CFS}$$

$$S = 1.25\%$$

$$Q_E/Q_A = 0.380$$

$$Q_I = 2.0 \text{ CFS}$$

$$Q_{IX} = (0.80)(2.0) = 1.6 \text{ CFS}$$

$$Q_{BYPASS} = 5.3 - 1.6 = 3.7 \text{ CFS}$$

CITY CLERK'S AGENDA
March 31, 1981

6. PLANS AND SPECIFICATIONS:

Constructing Storm Water Sewer No. 202 (south of Pawnee and east of Rock Road) (CC approved 8/12/80) 468 76 245 81000 000 000 001

Improving Farmview Court from the south line of Farmview Lane to and including cul-de-sac; Lawrence Lane from the south line of Rockhurst Sixth Addition to the south line of Farmview Lane; and reconstruction of the intersection of Gouverneur and Farmview (CC approved 6/17/80) 472 76 245 80965 000 000 001

Improving Garland Circle from the south line of Sherwood Glen Fifth Addition to and including cul-de-sac (CC approved 9/23/80) 472 76 245 80993 000 000 001

Improving intersection at Third and Riverview; Riverview from the north line of Lot 1, Block 2, Park Plaza 2nd Addition to the south line of Lot 44 on Riverview, Waterman's Addition to Waterman's Addition (CC approved 3/25/80) 472 76 245 80943 000 000 001

Improving Mansfield Drive from the west line of Sunnybrook Addition to and including cul-de-sac (CC approved 7/29/80) 472 76 245 80978 000 000 001

Improving Porter Avenue from the north line of Friar Lane to the north line of Nottingham Lane; Nottingham Circle from the east line of Porter Avenue to and including cul-de-sac (CC approved 9/23/80) 472 76 245 80419 000 000 001



MEMO

TO: Chris Breitenstein, P.E.
Drainage Engineer
455 N. Main
City Hall - 7th Floor
Wichita, Kansas 67202

PROJECT NO. 36-80189-1047

PROJECT: Oak Knoll

Industrial Park

DATE: March 6, 1981

COPIES TO:

ATTN:

Phil Dietrich

FROM: Kristen Hart, E.I.T.

Louise Olivarez

REFERENCE: Drainage Plan & Supportive

Mike Lindebak ✓

Calculations

Dick Linn

PLEASE ADVISE IMMEDIATELY OF ANY MISCONCEPTIONS OR OMISSIONS YOU BELIEVE TO BE CONTAINED HEREIN.

Enclosed is a copy of Oak Knoll Industrial Park Drainage Plan, and supportive calculations.

The detention system is designed such that the peak rate of discharge is less than the pre-developed discharge from the area.

The storm sewer system is designed to carry the runoff from the 5-year frequency storm. The difference in the 100-year and 5-year runoff is routed overland and contained in the right-of-way and/or drainage easements.

Should you have any questions, or require any further information in your review of the plan, please contact Dick Linn or myself.

The final plat is to be filed March 6, 1981, and we would appreciate your comments prior to that date.

COMMISSIONERS PROCEEDINGS

JOURNAL 127

MARCH 24, 1981

PAGE 10008

STATEMENTS OF COST (REGULAR):

Pave Lotus

Statement of Cost of excavating, constructing integral curb and paving a cul-de-sac on Lotus 776.5 feet more or less east of east line Elizabeth; and constructing a cul-de-sac on Heiserman Street North of 18th Street North - \$24,137.47, presented. Knight moved that the Statement of Cost be approved and filed. Motion carried 4 to 0.

Right-of-way/SID "B"

Statement of Cost of acquisition of right-of-way for Southwest Industrial Drainage Area "B" - \$173,232.00, presented. Knight moved that the Statement of Cost be approved and filed. Motion carried 4 to 0.

STATEMENTS OF COST (CHESNEY):

Lat. N, Sub. "C"

Statement of Cost of constructing an extension to Lateral N, East Submain "C" on Lincoln Street, Sanitary Sewer No. 1 - \$12,491.97, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

Lat. 153, SIS

Statement of Cost of constructing Lateral 153, Southwest Interceptor Sewer - \$33,465.94, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

Lat. 33, Main 4

Statement of Cost of constructing Lateral 33, Main 4, Southwest Interceptor Sewer - \$166,280.33, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

SWS No. 141

Statement of Cost of constructing Storm Water Sewer No. 141 - \$114,501.11, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

SWS No. 167

Statement of Cost of constructing Storm Water Sewer No. 167 - \$294,782.95, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

SWS No. 172

Oak Knoll 1st Addn

Statement of Cost of constructing Storm Water Sewer No. 172 - \$135,498.77, presented. Knight moved that the Statement of Cost be approved and filed and the City Clerk be instructed to prepare the proposed assessment rolls. Motion carried 4 to 0.

PETITIONS (100%):

Fldwtr. Dent. Struct

100% petition dated 3/20/81, for constructing Floodwater Detention Control Structure to serve the north 1,200 feet of the Southwest Quarter of Section 5, Township 27 South, Range 2 East of the 6th P.M. except the east 1,350 feet thereof (east of Rock Road and north of 21st Street North) Estimated cost is \$60,000.00 - S.A. Knight moved that the petition be approved and the City Attorney be instructed to prepare the necessary resolutions. Motion carried 4 to 0.

Tallgrass Plat

Fldwtr. Dent. Struct

100% petition dated 3/20/81, for constructing Floodwater Detention Control Structure to serve the north 1,200 feet of the east 1,350 feet of the Southwest Quarter of Section 5, Township 27 South, Range 2 East of the 6th P.M. (east of Rock Road and north of 21st Street North) Estimated cost is \$60,000.00 - S.A. Knight moved that the petition be approved and the City Attorney be instructed to prepare the necessary resolutions. Motion carried 4 to 0.

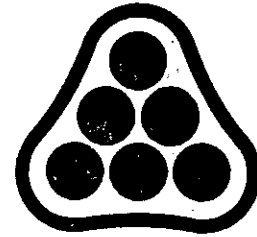
WATER SYSTEM IMPROVEMENT PETITION (100%):

Water Petition

Water System Improvement in and for the property in Phase II, Country Place Estates, 13th and Gatewood, Lot 48. Estimated cost is \$48,300, of which \$8,300 or 17.18% is to be paid from the Water Department Utility Improvement Fund, and \$40,000 or 82.82% is to be paid by the benefit district. Knight moved that the petition be approved, the feasibility report be received and filed and the resolution of findings and the resolution ordering and directing the improvement be adopted. Motion carried 4 to 0.

DIRECTORS

C. O. KNOP, P.E.
R. B. PEUGH, P.E.
C. J. FREUND, P.E.
W. H. KELTNER, P.E.
R. D. PLETCHER, P.E.
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G. D. SCHOCK, P.E.
J. H. BAILEY, P.E., PH.D.



PROFESSIONAL
ENGINEERING
CONSULTANTS
PROFESSIONAL ASSOCIATION

March 13, 1987

Mr. Michael E. Lindebak, P.E.
City Engineer
City Hall - 7th Floor
455 N. Main
Wichita, KS 67202

Attention: Mr. Chris Breitenstein, P.E.

Reference: Sewer Service for 80-Acre Tract
east of Oak Knoll Addition
PEC File No. 34-87000

Dear Mr. Lindebak:

In October, 1979, PEC prepared a sanitary sewer study of Subsystem 8 of the War Industry Sewer to determine whether or not sewer service could be extended to the proposed Oak Knoll Second Addition south of Pawnee Avenue and east of Rock Road. As a result of that study, sewer service was extended to include the Oak Knoll Industrial Park Addition and the Oak Knoll Second Addition. An April, 1980, supplement to the original study included a summary of the sewer service areas, land use, and population distributions in Subsystem 8.

The Subsystem 8 service area extends approximately 1/4 mile south of Pawnee into an 80-acre area west of Webb Road. As summarized in the study supplement, sanitary sewer capacity available to serve this 80-acre area plus the Oak Knoll Addition could accommodate a total of 936 DU's. Of this total, 237 DU's have been committed for the Oak Knoll Addition, leaving 699 DU's for the east-west 80-acre tract. The average residential housing density on this tract is projected to be 8.7 DU per gross acre.

Mr. Raymond Jacoby has inquired about the feasibility of extending the sewer service area to include 40 acres south of the present service area and directly east of Oak Knoll Second Addition. Mr. Jacoby has indicated that he wishes to develop the entire north-south 80-acre tract east of Oak Knoll as single-family residential properties with an average density of approximately 4.0 DU/acre. Mr. Jacoby also has indicated that first-floor gravity sewer service will be adequate to meet his needs on these properties.

1440 EAST ENGLISH
WICHITA, KANSAS 67211
(316) 262-2681

ADG

Mr. Michael E. Lindebak, P.E.
March 13, 1987
Page 2

From our review of the sewer construction records for the Oak Knoll Additions and for Hedgecliff Second Addition with the U.S.G.S. contour maps for the area, it appears that gravity sewer service can be provided for the referenced 40-acre tract. As shown on the enclosed map, sanitary sewer can be extended from Hedgecliff Second Addition to provide service to the southernmost edge of the 40 acres. Approximately 600 linear feet of 18-foot cut would be required to cross the ridge line. The sewer flow line would be approximately 7 feet below existing grade at the southwest end of the proposed sewer extension.

On behalf of Mr. Jacoby, we are requesting that you consider allowing the extension of sanitary sewers into all of the ±80-acre tract, lying north-south, adjacent to Oak Knoll Addition and Oak Knoll Second Addition. The tract would be developed for single-family residences with a maximum of 350 lots. Sanitary sewers would be extended from the northeast corner of Oak Knoll Addition and from Hedgecliff Second Addition to serve this area. We suggest that the western tier of lots in the proposed development be served from the existing sewers along the east edge of Oak Knoll Addition and Oak Knoll Second Addition.

Your consideration of this matter is appreciated. If you require additional information, please call me.

Very truly yours,

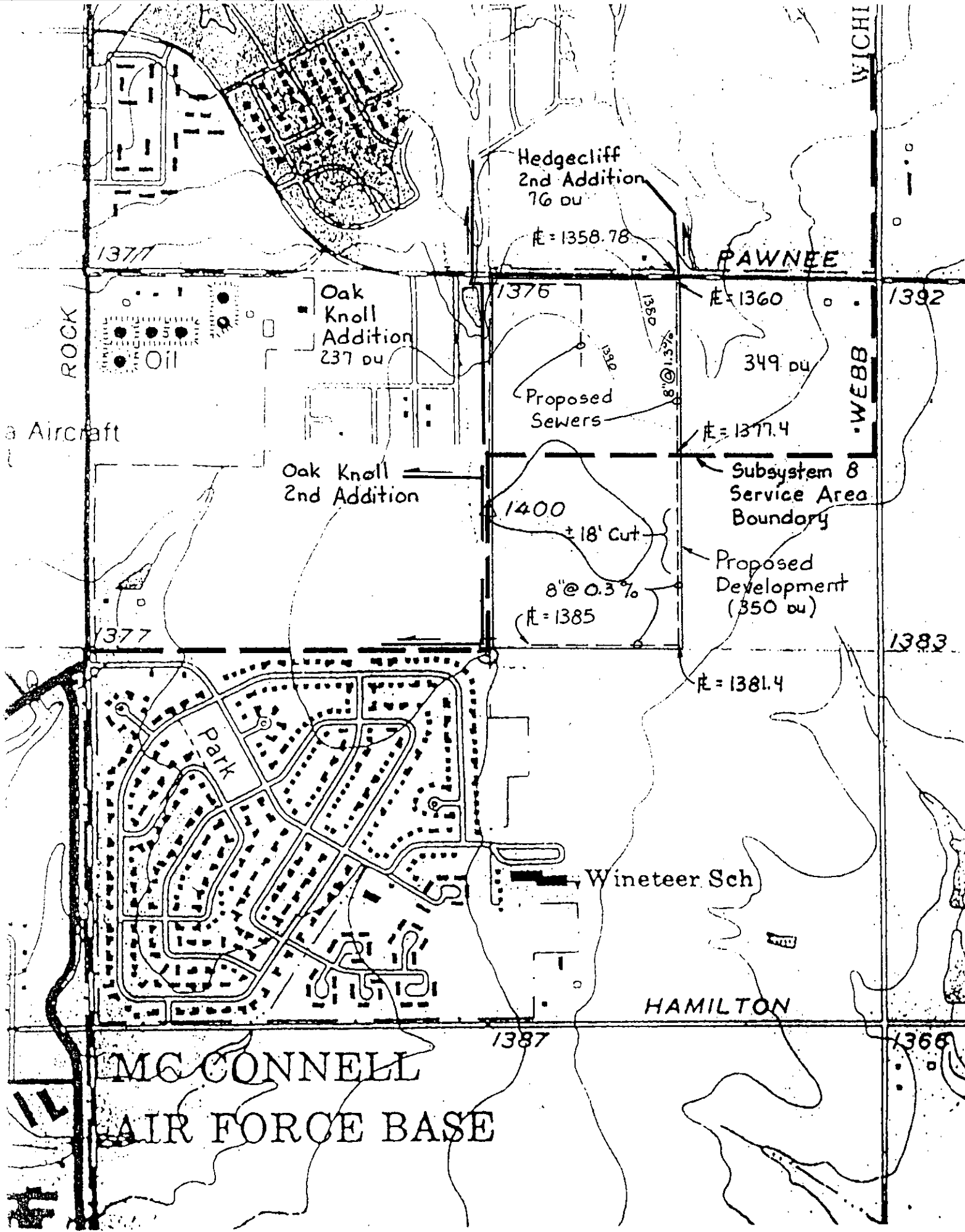
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

Lynn Moore, P.E.
Project Manager

Enc: As noted

cc: Mr. Ray Jacoby

DLM:cas



Hedgecliff
2nd Addition
76 du

E = 1358.78

1377

PAWNEE

WICHI

ROCK

Oak
Knoll
Addition
237 du

1376

E = 1360

1392

349 du

Proposed
Sewers

WEBB

E = 1377.4

Aircraft

Oak Knoll
2nd Addition

Subsystem 8
Service Area
Boundary

1400
± 18' Cut

Proposed
Development
(350 du)

8" @ 0.3%

(E = 1385)

1377

1383

E = 1381.4

Park

Wineteer Sch

HAMILTON

MC CONNELL

1387

1366

AIR FORCE BASE