

THE CITY OF WICHITA

OFFICE OF PUBLIC WORKS ENGINEERING DATE July 1, 1980

TO Louise Olivarez, Senior Planner

FROM Mike Lindebak, Program Development Engineer

SUBJECT Sketch Plat - Oak Knoll
Industrial Park Addition

Subject plat, Oak Knoll Industrial Park Addition, will require drainage plan and all other necessary information.

Sanitary sewer can be extended to the site.

Mike Lindebak M. D.
Mike Lindebak
Program Development Engineer

MI.·md

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

File



SEDGWICK COUNTY COURTHOUSE

COUNTY OF SEDGWICK
DEPARTMENT OF PUBLIC WORKS

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

Received

JUL 10 1980



Date 7-21-80 Page 1 of 5

Project Oak Knoll Industrial Park Add.

Item Detention Volume / Flow Rates

Volume of Detention Available (maximum)

static pool - 1376.5
 embankment 1382.0
 N.S. = 1381.0
 depth = 4.5'

$$Vol = \left[\frac{A_1 + A_2}{2} \right] D$$

$$A_1 = 3.2 ac \quad A_2 = 3.2 ac$$

$$Vol = \frac{(3.2 + 3.2)}{2} 4.5 = 12.6 ac-ft$$

100 Yr Flow Rates

Outflow from Oak Knoll Addition

$$DA = 45.8 ac$$

$$TOC = 57.7 \text{ min (from storm sewer run)}$$

$$COR = 0.5 \text{ (residential)}$$

$$INT_{100} = 100.0 (57.7)^{0.79} = 4.06 \text{ in/hr}$$

$$Q_{100} = (0.5)(45.8)(4.1) = 93 \text{ cfs}$$

Travel time
 $T_p = 4.2 \text{ min} = 0.07 \text{ hr}$

Outflow from North of Plat

$$DA = 30.0 ac$$

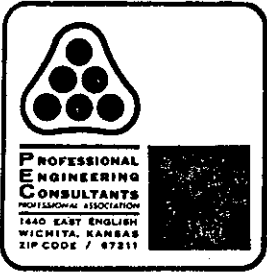
$$\text{Length} = 1250' = 0.24 \text{ miles}$$

$$\text{Fall} = 1390 - 1382 = 8.0'$$

$$TOC = \left(\frac{11.9 (0.24)^3}{8.0} \right)^{0.335} = 0.22 < 0.25 \text{ minimum} \quad \text{USE } 0.25$$

$$q_p = 0.71 \text{ cfs/acre-in}$$

Soil Group - C



Date 7-21-80 Page 1 of 5

Project Oak Knoll Industrial Park Add.

Item Detention Volume / Flow Rates

Volume of Detention Available (maximum)

static pool - 1376.5
 embankment 1382.0
 N.S. = 1381.0
 depth = 4.5'

$$Vol = \left[\frac{A_1 + A_2}{2} \right] D$$

$A_1 = 2.2 \text{ ac}$ $A_2 = 3.2 \text{ ac}$

$$Vol = \frac{(2.2 + 3.2)}{2} 4.5 = 12.2 \text{ ac-ft}$$

100 Yr Flow Rates

Outflow from Oak Knoll Addition

DA = 45.8 acres

TOC = 57.7 min (from storm sewer head)

COR = 0.5 (residential)

$$INT_{100} = 100.0 (57.7)^{0.79} = 4.06 \text{ in/hr}$$

$$Q_{100} = (0.5)(45.8)(4.1) = 93 \text{ cfs} \checkmark$$

Travel time
 $T_t = 4.2 \text{ min} = 0.07 \text{ hr}$

Outflow from North of Plat

DA = 32.0 acres

Length = 1250' - 0.24 miles

Fall = 1390 - 1382 = 8.0'

$$TOC = \left(\frac{11.9 (0.24)^3}{8.0} \right)^{0.385} = 0.22 < 0.25 \text{ minimum use } 0.25$$

$q_p = 0.71 \text{ cfs/acre-in}$

Soil Group - D



Date 7-21-80 Page 2 of 5

Project Oak Knoll Industrial Park Add.

Item Flow Rates / TOC, T_t

CN = 84 (pasture fair condition)

$$I = 1000/84 - 10 = 1.9$$

Precipitation for Wichita - P₁₀₀ = 5.9 in

$$R = \frac{(5.9 - 0.2(1.9))^2}{(5.9 + 0.8(1.9))} = 4.1 \text{ in}$$

$$Q = (4.1 \text{ in})(0.71 \text{ cfs/acre-in})(32 \text{ acre}) = 93 \text{ cfs}$$

Vel pipe = 4.0 ft/sec
Vel channel = 2.5 ft/sec

$$T_t = \frac{350}{(2.5)(60)} + \frac{500}{4(60)} = 4.4 \text{ min}$$

$$T_t = 0.07 \text{ hr}$$

$$\text{Vol} = (32)(4.1)/12 = 10.9 \text{ ac-ft}$$

Outflow from Oak Knoll Industrial Park

Area 1 (North of Pond)

$$D.A. = 18.4 \text{ ac}$$

$$L = 1080' = 0.20 \text{ miles}$$

$$h = 1388 - 1382 = 6.0'$$

$$TOC = \left(\frac{11.9(0.2)^3}{6.0} \right)^{0.25} = 0.2 \text{ hr} \quad 15 \text{ minute minimum}, \quad 0.25 \text{ hr}$$

$$q_p = 0.71 \text{ cfs/acre-in}$$

CN - soil type D, industrial area - 94

$$I = 1000/94 - 10 = 0.64$$

$$T_t = \frac{250'}{4(60)} = 1.04 \text{ min} = 0.02 \text{ hr}$$

$$R = \frac{(5.9 - 0.2(.64))^2}{(5.9 + 0.8(.64))} = 5.2$$

$$Q_p = (0.71)(5.2)(18.4) = 67.9$$

$$\text{Vol} = (18.4)(5.2)/12 = 8.0 \text{ ac-ft}$$

Area 2 (South of Detention Pond)

$$D.A. = 12.7 \text{ acres}$$

$$L = 1080' = 0.2 \text{ mi}$$

$$h = 1388 - 1382 = 6.0'$$

$$TOC = 0.25 \text{ hr}$$

$$q_p = 0.71 \text{ cfs/acre-in}$$

0.2



Date 7-21-80 Page 3 of 5

Project Oak Knoll Industrial Park Add.

Item Flow Rates/Time of Concentration

$$R = 5.2 \text{ in}$$

$$T_c = \frac{200}{4(60)} = 0.83 \text{ min} = 0.01 \text{ hr}$$

$$Q_p = (0.71)(5.2)(12.7) = 47 \text{ cfs} \quad \text{Vol} = (12.7)(5.2)/12 = 5.5 \text{ ac-ft}$$

Area 3 (area that drains directly to pond)

$$DA = 8.2 \text{ acres}$$

$$T_c = 0$$

$$TOC (\text{minimum}) = 15 \text{ min}, 0.25 \text{ hr}$$

$$q_p = 0.71 \text{ cfs/acre-in}$$

$$R = 5.2 \text{ in}$$

$$Q = (5.2)(0.71)(8.2) = 30.3 \text{ cfs}$$

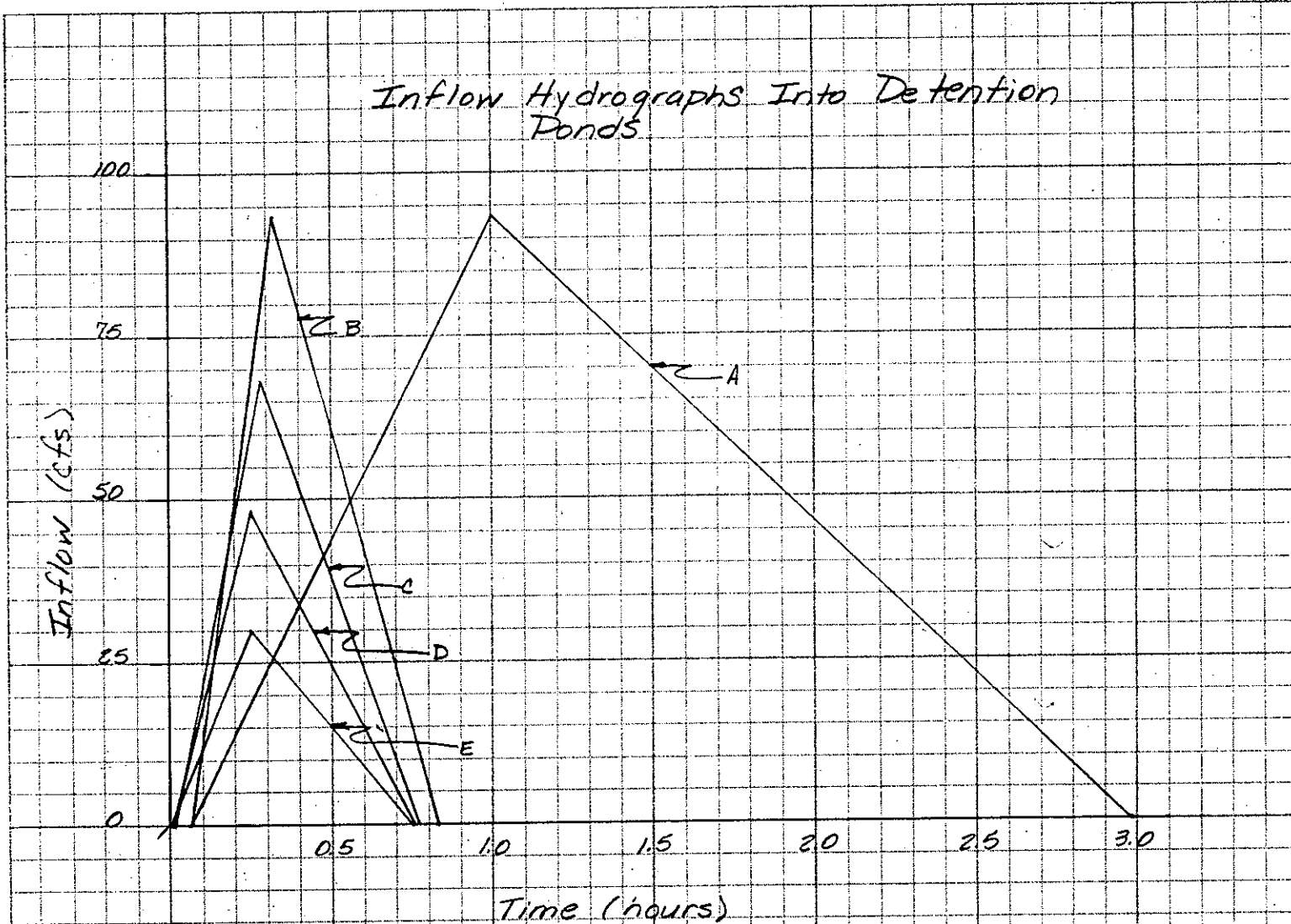
$$\text{Vol} = (8.2)(5.2)/12 = 3.6 \text{ ac-ft}$$



Date 7-21-80 Page 4 of 5

Project Oak Knoll Industrial Park Add.

Item Inflow into Ponds



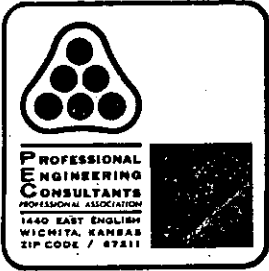
Inflow A - From Oak Knoll Addition

Inflow B - From Area North of Plat

Inflow C - From Oak Knoll Industrial Park (North of Pond)

Inflow D - From Oak Knoll Industrial Park (South of Pond)

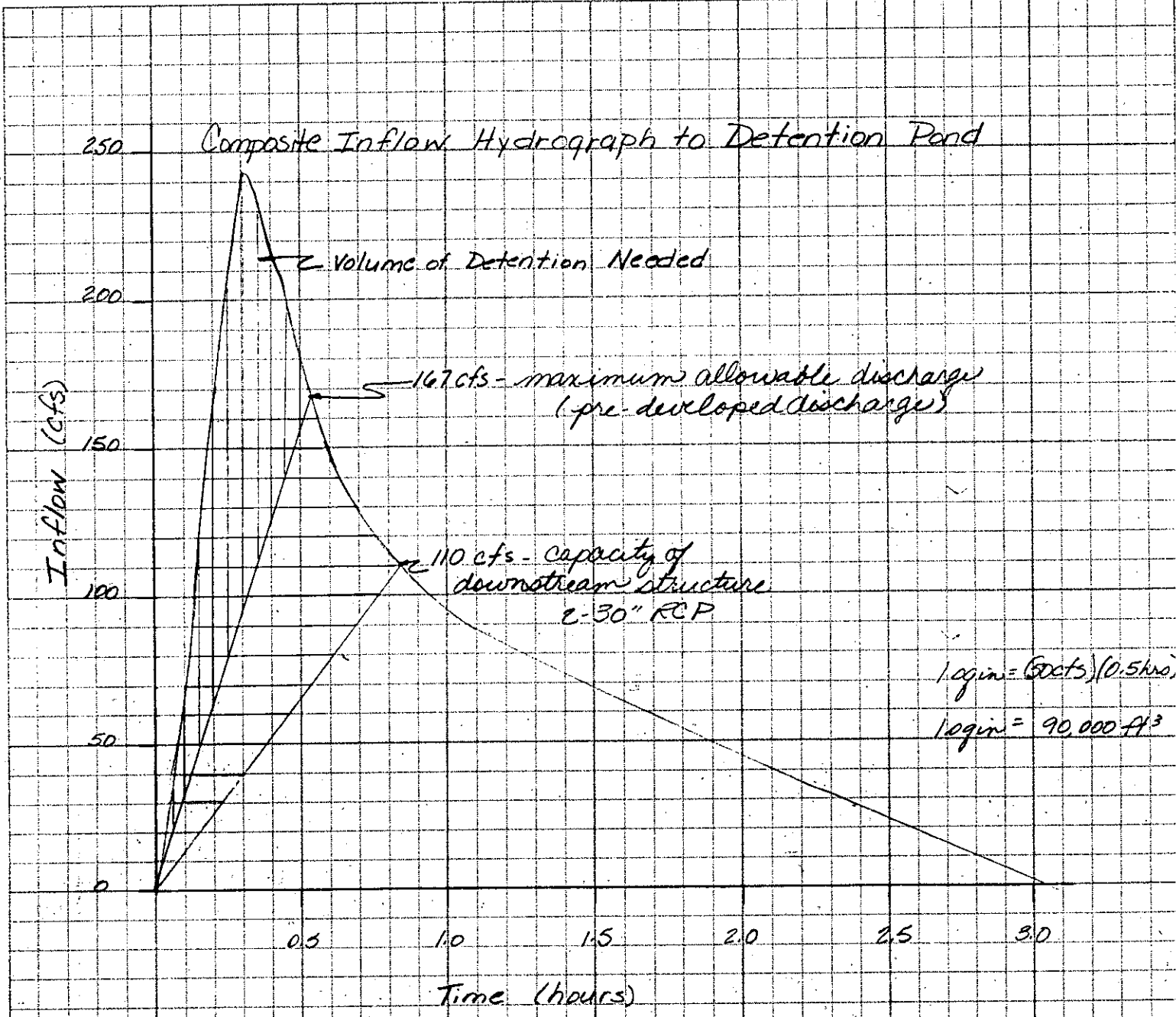
Inflow E - From Pond and surrounding area



Date 7-21-80 Page 5 of 5

Project Oak Knoll Industrial Park Add.

Item Composite Hydrograph / Detention Volume



$$\text{Volume of Detention Needed} = \frac{(1.6)(90,000)}{43,500} = 3.3 \text{ ac-ft}$$

(167 cfs)

$$\text{Volume of Detention Needed} = \frac{(3.1)(90,000)}{43,500} = 6.4 \text{ ac-ft}$$

(110 cfs)

MEMO



TO: Steve Lackey
Chief Design Engineer
City Hall - 7th Floor
455 N. Main
Wichita, Kansas 67202

PROJECT NO. 30-80189-1047

PROJECT: Oak Knoll Industrial
Park Addition

COPIES TO:

ATTN:

DATE: July 30, 1980

Paul Johnston

Mike Lindebak ✓

Phil Dietrich

Dick Linn

Louise Olivarez

FROM: Kristen Hart

REFERENCE: Oak Knoll Industrial Park Addition
Drainage Concept and supportive calculations

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

Enclosed is the Drainage Concept and calculations for Oak Knoll Industrial Park Addition. As noted on the plan, the drainage from Oak Knoll and Oak Knoll 2nd Addition will be directed to the proposed detention pond via the proposed storm sewer system.

The drainage area from north of the Plat has also been accounted for, and will be directed to the proposed storm sewer-detention system. Outflow from the detention pond is restricted as not to exceed the predeveloped flow.

The drainage concept for this site should be approved prior to our submitting the preliminary plat, which we anticipate filing August 22, 1980. We would therefore appreciate your comments as soon as possible.

If any additional information is needed in your review of the plan, please contact Dick Linn or myself.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 381st COMBAT SUPPORT GROUP (SAC)
MCCONNELL AIR FORCE BASE, KANSAS 67221


JUL 16 1990

REPLY TO
ATTN OF: DEEV

SUBJECT: Water Shed Run-off at Rock Rd. and Arnold St., Industrial Park

TO: Phil Dietrich
Dept of Sedgwick County Public Works
Courthouse, 525 North Main
Wichita, KS 67203

1. The proposed Industrial Park will cause water run-off problems during inclement weather as well as safety problems in and around the area.
2. The City of Wichita 1976 Traffic Volume Flow Map shows the annual average daily traffic on Rock Road to exceed 5000 (between 5602 North and 5462 South Rock Rd.) vehicles per day. Traffic flow in and out of the proposed Industrial Park will create severe problems during rush hour traffic on the two lane road.
3. During periods of heavy rainfall, the two 30 inch pipes will flow full under existing circumstances. With the construction of large buildings, streets, and parking areas the run-off will occur sooner and probably overflow the entire road area.
4. There also should be means of preventing spills from hazardous materials that may be used or stored in the Industrial Park, including gasoline and oil from vehicles.
5. For any further questions or comments please contact the McConnell AFB Environmental Planning Office, 681-5525.


RAMON R. JOHNSTON, PE
Deputy Civil Engineer



MEMO

TO: Steve Lackey
Chief Design Engineer
City Hall - 7th Floor
455 N. Main
Wichita, Kansas 67202

PROJECT NO. 30-80189-1047

PROJECT: Oak Knoll Industrial
Park Addition

COPIES TO:

ATTN:

DATE: July 30, 1980

Paul Johnston

FROM: Kristen Hart

Mike Lindebak

REFERENCE: Oak Knoll Industrial Park Addition,

Phil Dietrich

Drainage Concept and supportive calculations

Dick Linn

Louise Olivarez

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

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Received

JUL 30 1980



Date 7-21-80 Page 1 of 5

Project Oak Knoll Industrial Park Add.

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 embankment 1382.0
 H.S. = 1381.0
 depth = 4.5'

$$Vol = \left[\frac{A_1 + A_2}{2} \right] D$$

$A_1 = 2.2 \text{ ac}$ $A_2 = 3.2 \text{ ac}$

$$Vol = \frac{(2.2 + 3.2)}{2} 4.5 = 12.2 \text{ ac-ft}$$

100 Yr Flow Rates

Outflow from Oak Knoll Addition

D.A. = 45.8 acres

TOC = 57.7 min (from storm sewer run)

COR = 0.5 (residential)

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$$Q_{100} = (0.5)(45.8)(4.1) = 9.3 \text{ cfs}$$

Travel time
 $T_t = 4.2 \text{ min} = 0.07 \text{ hr}$

Outflow from North of Plat

DA = 38.0 acres

Length = 1250' - 0.24 miles

Fall = 1390 - 1382 = 8.0'

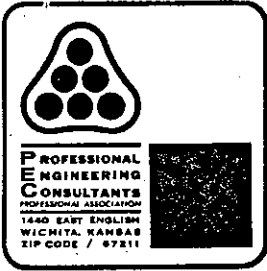
$$TOC = \left(\frac{11.9 (0.24)^3}{8.0} \right)^{0.385} = 0.22 < 0.25 \text{ minimum} \quad \text{use } 0.25$$

$q = 0.71 \text{ cfs/acre-in}$
 OP

Soil Loss - D

Received

JUL 30 1980



Date 7-21-80 Page 2 of 5

Project Oak Knoll Industrial Park Add.

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Precipitation for Wichita - P₁₀₀ = 5.9 in

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Outflow from Oak Knoll Industrial Park

Area 1 (North of Pond)

$$D.A = 18.4 \text{ ac}$$

$$L = 1080' = 0.20 \text{ mi}$$

$$h = 1388 - 1382 = 6.0'$$

$$TOC = \left(\frac{1.9(0.2)^3}{6.0} \right)^{0.585} = 0.2 \text{ hr} \quad 15 \text{ minute minimum}, \quad 0.25 \text{ hr}$$

$$q = 0.71 \text{ cfs/acre-in}$$

CN - soil type D, industrial area = 94

$$I = 1000/94 - 10 = 0.64$$

$$T_t = \frac{250'}{4(60)} = 1.04 \text{ min} = 0.02 \text{ hr}$$

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Date 7-21-80 Page 3 of 5

Project Oak Knoll Industrial Park Add.

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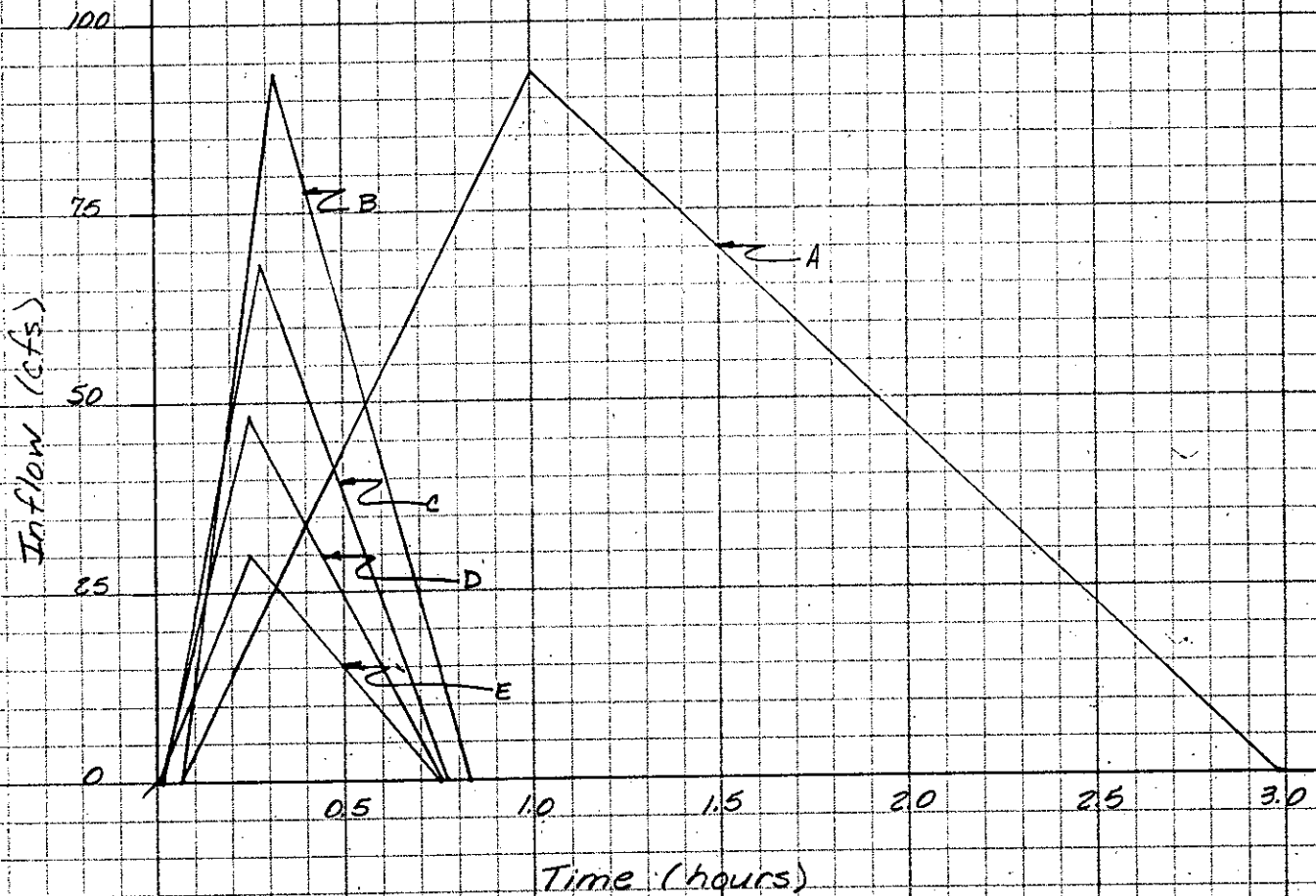


Date 7-21-80 Page 4 of 5

Project Oak Knoll Industrial Park Add.

Item Inflow into Ponds

Inflow Hydrographs Into Detention Ponds



Inflow A - From Oak Knoll Addition

Inflow B - From Area North of Plat

Inflow C - From Oak Knoll Industrial Park (North of Pond)

Inflow D - From Oak Knoll Industrial Park (South of Pond)

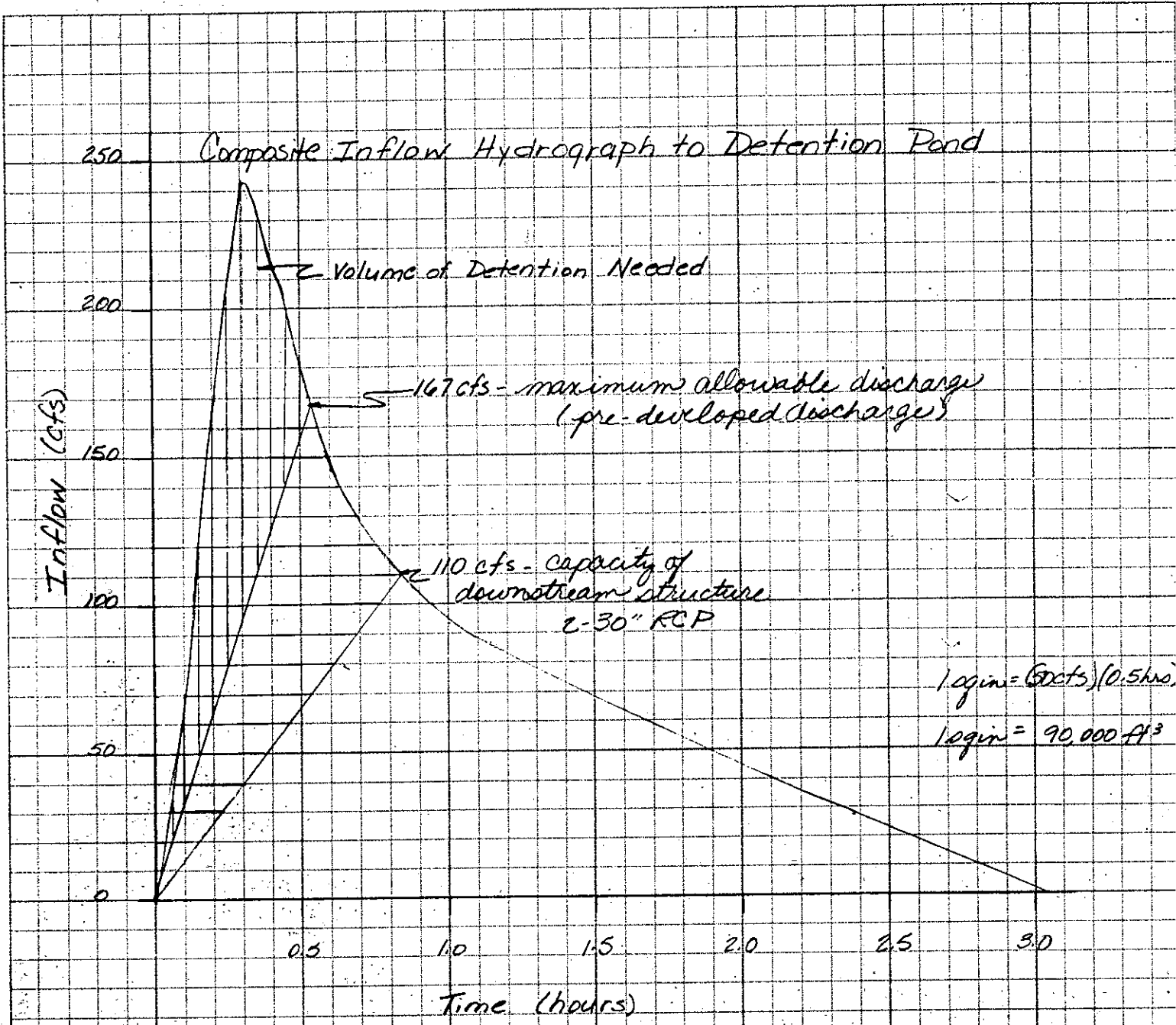
Inflow E - From Pond and surrounding area



Date 7-21-80 Page 5 of 5

Project Oak Knoll Industrial Park Add.

Item Composite Hydrograph / Detention Volume



$$\text{Volume of Detention Needed} = \frac{(1.6)(90,000)}{43,540} = 3.3 \text{ ac-ft}$$

(167 cfs)

$$\text{Volume of Detention Needed} = \frac{(3.1)(90,000)}{43,540} = 6.4 \text{ ac-ft}$$

(110 cfs)



MEMO

TO: Steve Lackey ✓
Chief Design Engineer
City Hall - 7th Floor
455 N. Main
Wichita, Kansas 67202

PROJECT NO. 30-80189-1047
PROJECT: Oak Knoll Industrial
Park Addition
DATE: July 30, 1980

COPIES TO:

ATTN:

Paul Johnston

Mike Lindebak

Phil Dietrich

Dick Linn

Louise Olivarez

FROM: Kristen Hart

REFERENCE: Oak Knoll Industrial Park Addition
Drainage Concept and supportive calculations

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

Enclosed is the Drainage Concept and calculations for Oak Knoll Industrial Park Addition. As noted on the plan, the drainage from Oak Knoll and Oak Knoll 2nd Addition will be directed to the proposed detention pond via the proposed storm sewer system.

The drainage area from north of the Plat has also been accounted for, and will be directed to the proposed storm sewer-detention system. Outflow from the detention pond is restricted as not to exceed the predeveloped flow.

The drainage concept for this site should be approved prior to our submitting the preliminary plat, which we anticipate filing August 22, 1980. We would therefore appreciate your comments as soon as possible.

If any additional information is needed in your review of the plan, please contact Dick Linn or myself.

THE CITY OF WICHITA

OFFICE OF PUBLIC WORKS ENGINEERING

DATE August 1, 1980

TO Jack Galbraith, Chief Planner

FROM Chris J. Breitenstein, Drainage Design Engineer

SUBJECT Drainage Concept - Oak Knoll
Industrial Park Addition

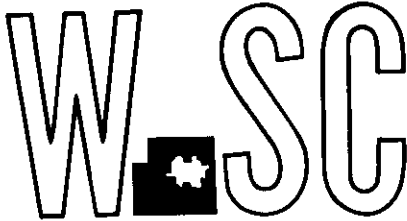
The Drainage Concept as presented is acceptable and is approved.


Chris J. Breitenstein, P.E.
Drainage Design Engineer

CJB:md

cc: Kristen Hart, P.E.C.

WICHITA - SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
COMMISSION

CITY HALL - TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561

October 6, 1980

Mr. Gary Wiley
Professional Engineering Consultants, P.A.
355 Ellis
Wichita, Ks. 67211

Re: S/D 80-44 - Preliminary plat of Oak Knoll Industrial Park

Dear Mr. Wiley:

At the regular meeting of the Subdivision Committee of the Metropolitan area Planning Commission, October 2, 1980, the above captioned plat was considered. The action of the Committee was to approve the preliminary plat and authorize preparation of the final plat, subject to the following.

- A. Since municipal sewer and water are needed for this industrial plat and since this property is contiguous with the City limits, approval of this plat in final form shall be subject to the annexation of this property.
- B. Prior to submission of a final plat, the applicant shall work County Public Works and City Engineering to determine the design of Rock Road improvements and the financing of them to facilitate the increase in traffic which will come with the development of this property. If the design and financing cannot be worked out, the final plat shall show access control to Rock Road except at street intersections.
- C. Prior to or at the time of submission of the final plat, a final drainage plan shall be submitted to City Engineering for review. A covenant providing for the ownership and maintenance of the detention lake will be required.
- D. An avigational easement and restrictive noise covenant shall be submitted for this entire property.
- E. The applicant shall guarantee the extension of sanitary sewer to serve all lots. This property has already been included in a sanitary sewer benefit district.
- F. The applicant shall guarantee the extension of City water to serve all lots.

Mr. Gary Wiley
October 6, 1980
Page 2

- G. The applicant shall guarantee construction of all interior streets to industrial street standards and shall guarantee construction of decel lanes (if required) on Rock Road.
- H. The applicant shall install or guarantee the installation of all utilities and facilities which are applicable and described in Article 8 of the MAPC Subdivision Regulations.
- I. Requirements for a final plat (see pages 20-25, Part 4, Article 5 of the MAPC Subdivision Regulations).

Enclosed herewith is the "marked" copy of the preliminary plat for your information and files.

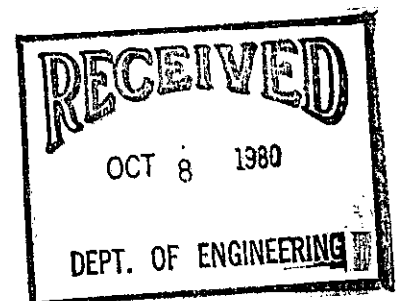
If you should have any questions concerning this matter, please call.

Sincerely,

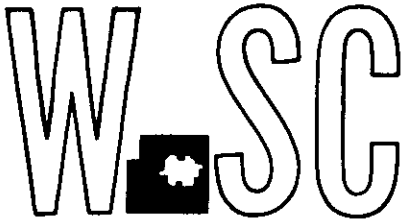

Louise Olivarez
Senior Planner

LO:bh

cc: American Land Development Co., Inc., c/o Randall J. Voth, Vice-Pres.,
Suite 1, 3202 W. 13th, 67203
R. W. Bruggeman, Director, Engineering
Andy Harkness, County Department of Public Works



WICHITA—SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT

CITY HALL — TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561

September 5, 1980

Professional Engineering Consultants
Gary Wiley
355 Ellis
Wichita, Ks. 67211

Re: S/D 80-44 - Preliminary plat of Oak Knoll Industrial Park

Gentlemen:

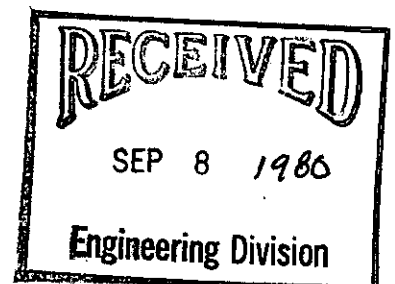
The above-referenced preliminary plat was considered by the Sub-division Committee at their meeting on September 4, 1980. After considerable discussion regarding the drainage and access to Rock Road, their action was to defer this matter for two weeks. This plat will be rescheduled for the next Subdivision Committee meeting to be held on September 18, 1980, beginning at 1:00 p.m., in the Board Room at City Hall.

Sincerely,

Louise Olivarez
Louise Olivarez
Senior Planner

LO:bh

cc: American Dev. Co., Inc., Randall J. Voth, Vice-Pres., Suite 1,
3202 W. 13th, 67203
Ramon Johnston, McConnell AFB, 2801 S. Rock Rd., 67221
Dean Sellers, Assistant City Engineer
Andy Harkness, Co. Dept. of Public Works



WICHITA—SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT

CITY HALL — TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
268-4561

January 23, 1981

RECEIVED
JAN 26 1981
Dept. Of Engineering

Professional Engineering Consultants
c/o Gary Wiley
355 Ellis
Wichita, Kansas 67211

Re: January 22, 1981 Subdivision Committee discussion of access control
for Oak Knoll Industrial Park Addition (S/D 80-44)

Dear Gary:

On the above referenced date, the Subdivision Committee of the Metropolitan Area Planning Commission considered your request to reconsider the access control for this proposed addition. The action of the Committee was to defer final action until their February 5, 1981 meeting. This item will be rescheduled for this meeting.

Should you have any questions about this matter, please call me at 268-4421.

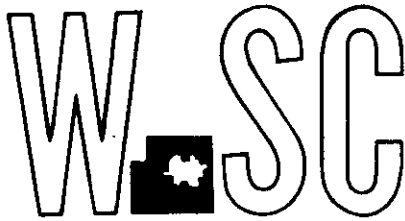
Sincerely,

Forrest L. Nagley
Forrest L. Nagley
Junior Planner

FLN:bh

cc: Andy Harkness, County Department of Public Works
X Mike Lindebak, Department of City Engineering
American Land Development Co., Inc., Randall J. Voth, Vice-President,
Suite 1, 3202 W. 13th Street, 67203

WICHITA - SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT
CITY HALL - TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561

February 6, 1981

Professional Engineering Consultants
Attention: Gary Wiley
1440 E. English
Wichita, Kansas 67211

Re: S/D 80-44 - Oak Knoll Industrial Park - access to Rock Road

Dear Mr. Wiley:

At the February 5, 1981 meeting of the Subdivision Committee, the access to Rock Road from proposed lots in Oak Knoll Industrial Park was discussed. The Committee recommended that one direct access be permitted subject to the applicant guaranteeing construction of both a temporary and a permanent accel-decel lane adjacent to the lot which will have one direct access.

As a result of this action, you are now authorized to submit a final plat which shows one access from Lot 10 to Rock Road.

Sincerely yours,

Louise Olivarez
Senior Planner

LO:bh

cc: American Land Development Company, c/o Randall J. Voth, Vice-President,
Suite 1, 3202 W. 13th, 67203

Andy Harkness, County Department of Public Works

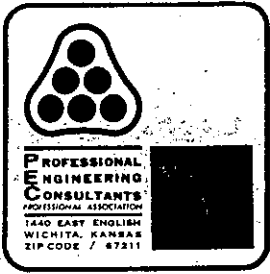
Mike Lindebak, City Engineering

RECEIVED

FEB 9 1981

Dept. Of Engineering

me



Date 3-17-81 Page 4 of

Project Oak Knoll Ind. Park

Item Revised Ditch Section (Rock Rd.)

$$Q_{peak} = 145 \text{ cfs} \quad b = 10'$$

$$S = 0.0067 \quad n = 0.035 \quad z = 4:1$$

$$K' = Q_n / b^{2.49} S^{1/2}$$

$$K' = (145) / (0.035)^{2.49} (10)^{2.49} (.0067)^{1/2} =$$

$$K' = 0.193$$

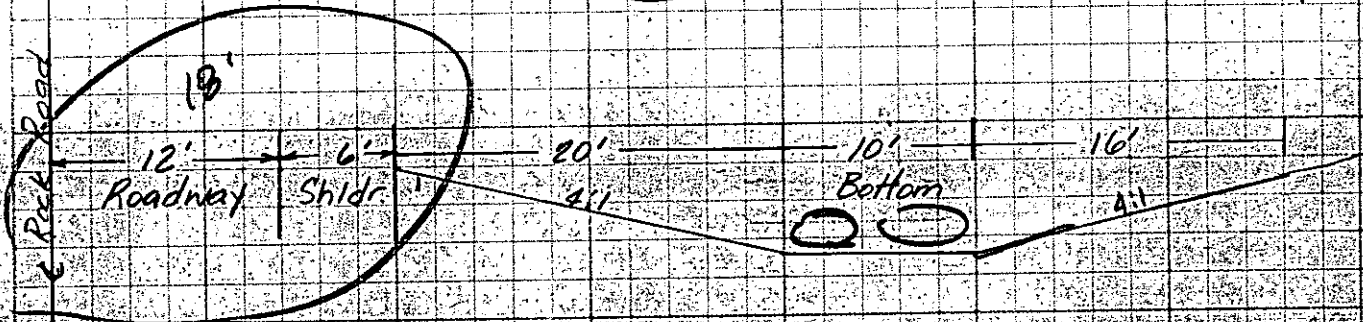
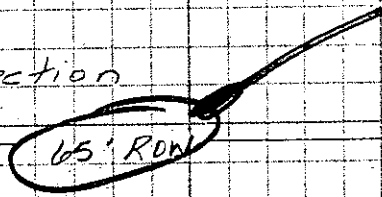
$$D/b = 0.2$$

$$D = 2.0' \quad A = (b + zy)y = 36 \text{ sq ft.}$$

$$V = 145/36 = 4.0 \text{ ft/sec}$$

Average depth 5' to shoulder
" " 4' to RL

Typical Section



NO



MEMO

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

PROJECT NO. 36-80189-1047

PROJECT: Oak Knoll Industrial
Park

DATE: March 20, 1981

COPIES TO:

ATTN:

Phil Dietrich

FROM: Kristen Hart, E.I.T.

Louise Olivarez

REFERENCE: Revisions and supplements to Drainage Pla

Mike Lindebak ✓

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

Enclosed are the revisions and supplemental data for Oak Knoll Industrial Park Drainage Plan as requested for approval of the plan. I hope you will find the revised plan complete and to your satisfaction.

Please contact me immediately if your comments are to the contrary; as we are filing the final plat today (3-20-81) subject to your approval of the drainage plan.

Enclosed also is a copy of the final plat for your file.



MEMO

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

PROJECT NO. 36-80189-1047

PROJECT: Oak Knoll Industrial
Park

DATE: March 20, 1981

COPIES TO:

ATTN:

Phil Dietrich

Louise Olivarez

Mike Lindebak

FROM: Kristen Hart, E.I.T.

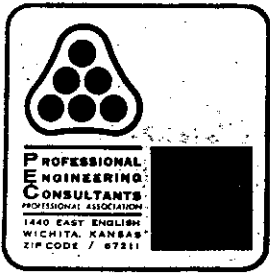
REFERENCE: Revisions and supplements to Drainage Plan

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Enclosed are the revisions and supplemental data for Oak Knoll Industrial Park Drainage Plan as requested for approval of the plan. I hope you will find the revised plan complete and to your satisfaction.

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Date 3/19/81 Page 1 of

Project Oak Knoll Ind. Park

Item Supplement to Drainage Plan

Drainage from Oak Knoll Add.

$$Q_{100} = 103.5 \text{ cfs} \quad (\text{Oak Knoll Add. Drainage Plan})$$

$$Q_{\text{pipe}} = 42 \text{ cfs}$$

$$Q_{\text{overland}} = 61.5 \text{ cfs}$$

$$n = 0.035 \quad (\text{grass lined}) \quad z = 4:1$$

$$\text{let } b = 20' \text{ and } s = .005 \text{ ft/ft}$$

$$K' = Q_n / b^{2/3} s^{1/2} \quad \text{Handbook of Hydraulics}$$

$$K' = (61.5)(0.035) / (20)^{2/3} (.005)^{1/2} =$$

$$K' = 0.010 \quad D/b = 0.05$$

$$\text{Depth} = 1.0'$$

$$A = 24 \text{ sq ft}$$

$$V = 2.6 \text{ ft/sec}$$

$$TN(\text{with } 1' \text{ FB}) = 36' - \underline{40' \text{ Esmt}}$$

Drainage From North

$$Q_{100} = 93 \text{ cfs} \quad n = 0.035 \quad s = 0.003 \text{ ft/ft}$$

$$K' = (93)(0.035) / (20)^{2/3} (.003)^{1/2} =$$

$$K' = 0.020 \quad D/b = 0.07$$

$$\text{Depth} = 1.4'$$

$$A = 35.8 \text{ sq ft}$$

$$V = 2.6 \text{ ft/sec}$$

$$TN(\text{with } 1' \text{ FB}) = 39.2' \quad \text{use } \underline{40' \text{ Esmt}}$$



Date 3/19/81 Page 2 of

Project Oak Knoll Ind. Park

Item Supplement to Drainage Plan

Calculate 100 yr. rear lot drainage at South of plat.

DA = 2.9 acres

Length = 1280' COR = 0.65 (ind. site)

Fall = 14'

Slope = 1.1%

$$T_c = \frac{1.8 * (1.1 - 0.65) (1280)^{0.5}}{(1.1)^{0.35}} = 28.1 \text{ min}$$

$I_{100} = 7.0 \text{ in/hr}$

$Q = CIA = (0.65)(7.0)(2.9) = 13.2 \text{ cfs}$

let $b = 8'$ $S = 1.0\%$ $n = 0.035$

$$K' = (13.2)(0.035) / (8)^{2/3} (0.01)^{1/2}$$

$K = 0.018$ $D/b = 0.07$

let $b = 4'$

Depth = 0.6'

$$K' = 13.2(0.035) / (4)^{2/3} (0.01)^{1/2}$$

$A = 5.7$

$K' = 0.11$ $D/b = 0.18$

$V = 2.3'$

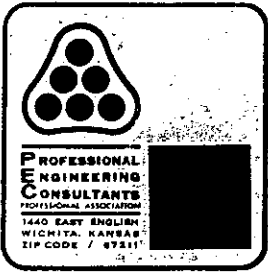
Depth = 0.7'

$TW = 20.8'$

$A = 4.8 \text{ sq ft}$ $V = 2.8$

→ $TW(1' FB) = 17.8'$

Use 20' Priv. Esmt.



Date 3-17-81 Page 3 of

Project Oak Knoll Ind. Park

Item Revisions to Drainage Plan

Outlet from Detention Pond

60" - not sufficient cover in relation to Rock Road Top of Roadway

Go to equivalent pipes

$Q_{max} = 145 \text{ cfs}$

$HW = 5.7'$

From inlet control Nomograph - Corrugated steel pipe

$1/2 Q = 72 \text{ cfs}$

$Dia = 36"$

$HW/D = 1.9$

$HW = (1.9)(3) = 5.7'$

Use 2-36" CMP in place of 1-60"



Date 3-17-81 Page 4 of

Project Oak Knoll Ind Park

Item Revised Ditch Section (Rock Rd.)

$Q_{peak} = 145 \text{ cfs}$ $b = 10'$

$S = 0.0067$ $n = 0.035$ $Z = 4:1$

$K' = Qn / b^{5/3} S^{1/2}$

$K' = (145)(0.035) / 10^{5/3} (0.0067)^{1/2} =$

$K' = 0.133$

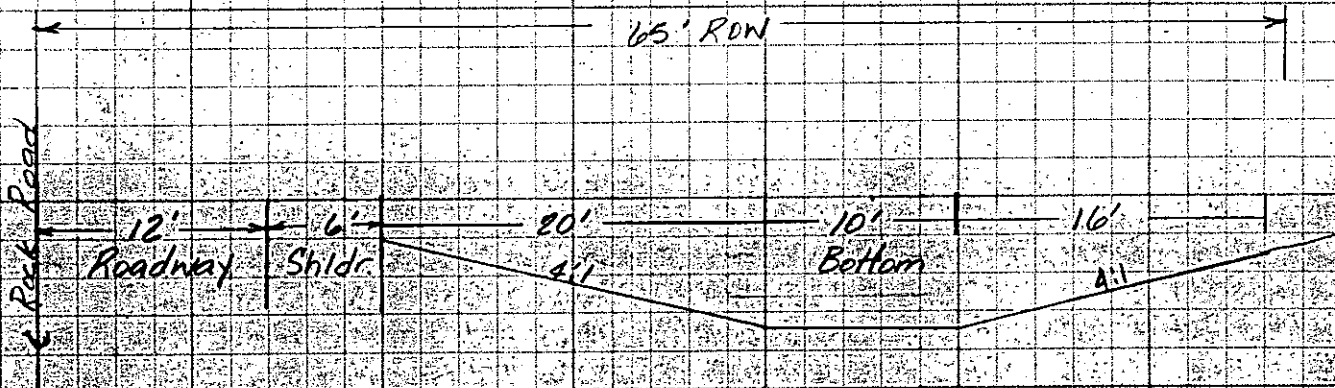
$D/b = 0.2$

$D = 2.0'$ $A = (b + Zy)y = 36 \text{ sq. ft.}$

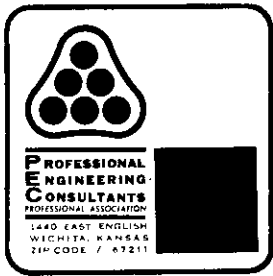
$V = 145/36 = 4.0 \text{ ft/sec}$

Average depth 5' to shoulder
 " 4' to RL

Typical Section



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

Louise Olivarez

Mike Lindebak

Dick Linn

FROM: Kristen Hart, E.I.T.

REFERENCE: Drainage Plan & Supportive
Calculations

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.



Date 10-13-80 Page 2 of 19

Project Oak Knoll Ind. Park

Item Drainage from North

Area North of Plat-

D.A. = 32.0 acres (> 10 acres, use SCS Method)

Length - 1250', 0.24 miles

Fall - 1390 - 1382.0 = 8.0'

$$TOC = \left[\frac{11.9(0.24)^3}{8.0'} \right]^{0.385} \sim 0.25 \text{ in}$$

$q_p = 0.71 \text{ cfs}$

Soil Group - Type D

CN-84 (pasture, fair condition)

$I = 1000/84 - 10 = 1.9$

P_s (Sedgwick Co.) - 3.4 in

$P_{100} = 5.9$

$$R_s = \frac{3.4 - 0.2(1.9)}{3.4 + 0.8(1.9)} = 1.85 \text{ in}$$

$R_{100} = 4.1 \text{ in}$

$$Q = (32)(4.1)(0.71)$$

$$Q = (DA)(R)(q_p)$$

$Q = 93.3 \text{ cfs}$

$$Q = (32)(1.85)(0.71) = 42.1 \text{ cfs}$$

Check Drainage Esmt. Capacity

30' Esmt.

$Q = 93 \text{ cfs}$ $n = 0.035$ $s = 0.002 \text{ ft/ft}$

$z = 4:1$ $b = 8'$

$$K' = Qn / b^{8/3} s^{1/2} = 0.284$$

$D/b = 0.28$ (Handbook of Hydraulics)

Depth = 2.24'

TN = 25.92' > 30'



Date _____ Page 3 of 19

Project Oak Knoll Industrial Park

Item Runoff From Pond Area

Pond Area ✓

D.A. = 8.8 acres

COR-H₂O = 1.0

COR-Ind. = 0.65

~ 4.1 acres pond

~ 4.7 acres ind.

$$\frac{4.1(1.0) + 4.7(0.65)}{8.8} = 0.81$$

T_{0C} = 15 min.

I_NT₁₀₀ = 8.98 in/hr

Q = CIA

$$Q_{100} = (0.81)(8.98)(8.8) = 64.2 \text{ cfs}$$



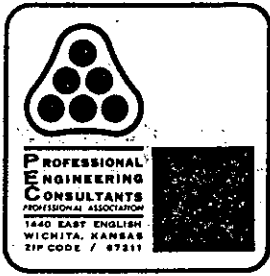
Date 3/5/81 Page 4 of 19

Project Oak Knoll Ind. Park

Item Check Pipe Losses

Node	Hyd. Slope	Loss	Hyd. Elev.	Max. Elev.	Min. Elev.
130	0.56	1.12	80.32	81.34	79.84
120	1.23	0.50	79.20	80.70	78.90
110	—	—	78.70		
110	0.66	1.52	76.52	—	—
100	—	—	75.0		
* 245	0.17	0.59	81.85	—	81.65
240	0.22	0.34	81.26	81.9	
235	0.60	0.18	81.10	81.5	
230	0.68	1.57	80.92	81.4	
220	0.86	0.35	79.35	80.7	
210	—	—	79.0	—	
210	0.98	2.25	78.15	80.70	
200	—	—	75.0	—	

Tic into 48" stub out from Oak Knoll Addition



Date 3/5/81 Page 5 of 19

Project Oak Knoll Ind.

Item Check Esmt. Width

Q_{100} FROM AREA 200 = 244 cfs
 $Q_{\text{pipe}} = 99 \text{ cfs}$

$Q_{\text{overland}} = 145 \text{ cfs}$

$n = 0.035$ (grass lined)

$z = 4:1$

$b = 8'$

$s = 0.003$

$K_1 = Q_n / b^{2/3} s^{1/2}$

Handbook of Hydraulics
Brater + King

$K_1 = .36$

$D/b = 0.32$

$D = 2.6'$

$TW = 29'$

Q_{100} FROM AREA 100 = 56 cfs
 $Q_{\text{pipe}} = 33 \text{ cfs}$

$Q_{\text{overland}} = 23 \text{ cfs}$

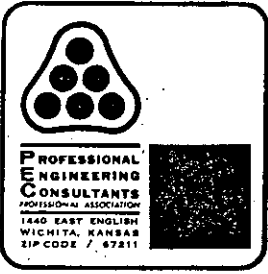
$n = 0.035$ $z = 4:1$ $b = 8'$

$s = .00171$

$K_1 = 0.099$ $D/b = 0.17$

$D = 1.36$

$TW = 19'$

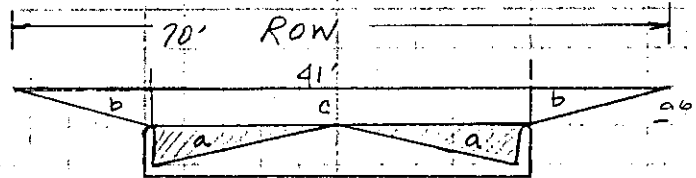


Date 3/5/81 Page 6 of 19

Project Oak Knoll Ind.

Item Row Capacity

Check Row capacity



Area a

$$\chi\text{-slope} = 3/8" / 1' = 0.03125'$$

$$Z = 32$$

$$n = 0.015$$

$$Z/n = 2133$$

$$d = 0.63'$$

$$S = 0.32\%$$

From nomograph

$$Q_{1/2} = 20 \text{ cfs}$$

$$Q_T = 40 \text{ cfs}$$

Area b

$$\chi\text{-slope} = 1/4" / 1'$$

$$Z = 48$$

$$n = 0.035$$

$$Z/n = 1371$$

$$S = 0.32\%$$

$$d = 0.6$$

$$Q_{1/2} = 12.5$$

$$Q_T = 25 \text{ cfs}$$

Area c

$$\text{Area} = (41 \times 0.6) = 24.6'$$

$$P = 42.2$$

$$n = 0.015$$

$$S = 0.032'$$

$$Q = \frac{1.486 A R^{2/3} S^{1/2}}{n}$$

$$Q = 96.2 \text{ cfs}$$

NOTE: Property Line must be 0.6 feet above TOC for the ROW to carry Q overland.

$$Q_{\text{TOTAL}} = 141 \text{ cfs} >> 145$$

$$Q_{100} = 244 \text{ cfs}$$

$$Q_{\text{PIPE}} = 99 \text{ cfs}$$



Date 3/2/81 Page 7 of 19

Project Oak Knoll Industrial Park

Item Outlet capacity, storage capacity

$$A_1 (h=0) = 2.3 \text{ ac-ft}$$

$$\text{Volume} = h/3 (A_1 + A_2 + \sqrt{A_1 A_2})$$

Outlet Q based on inlet control nomograph
60" RCP

Elev.	H	H/D	Q	Area	Volume
1375.0	0	—	0	2.33	0
1375.5	0.5	0.1	6	2.41	1.2
1376.0	1.0	0.2	13	2.49	2.4
1376.5	1.5	0.3	22	2.57	3.7
1377.0	2.0	0.4	32	2.65	4.9
1377.5	2.5	0.5	40	2.73	6.2
1378.0	3.0	0.6	55	2.81	7.6
1378.5	3.5	0.7	72	2.89	9.1
1379.0	4.0	0.8	90	2.97	10.6
1379.5	4.5	0.9	105	3.04	12.1
1380.0	5.0	1.0	123	3.12	13.5
1380.5	5.5	1.1	140	3.20	15.1
1381.0	6.0	1.2	155	3.28	16.7

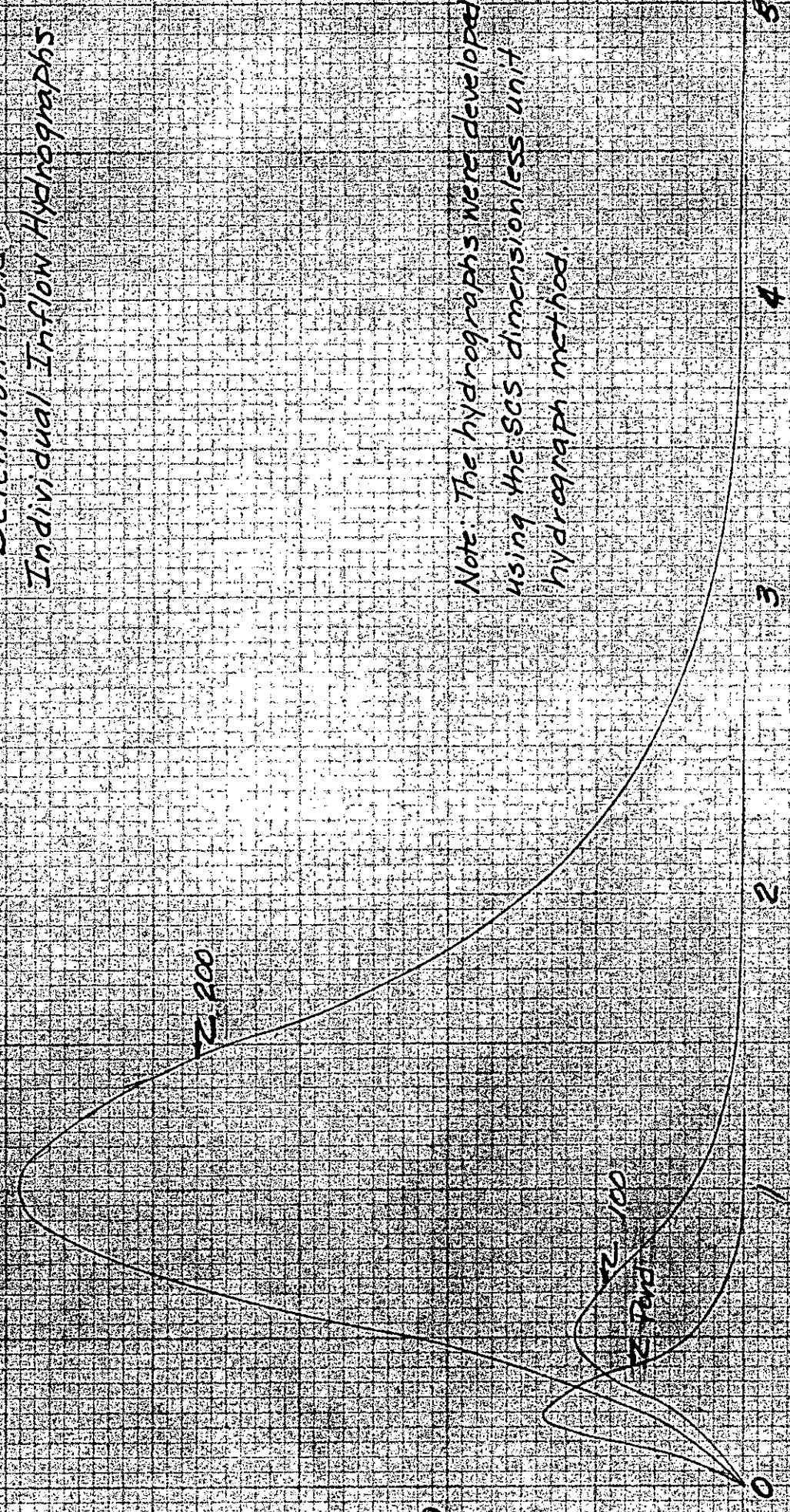
Oak Knoll Industrial Park
 Detention Pond
 Individual In-flow Hydrographs

300

200

100

FLOW RATE (CFS)



Note: The hydrographs were developed
 using the SCS dimensionless unit
 hydrograph method.

Time (hours)

Oak Knoll Industrial Park
Detention Pond
Composite Inflow Hydrograph
Outflow Hydrograph

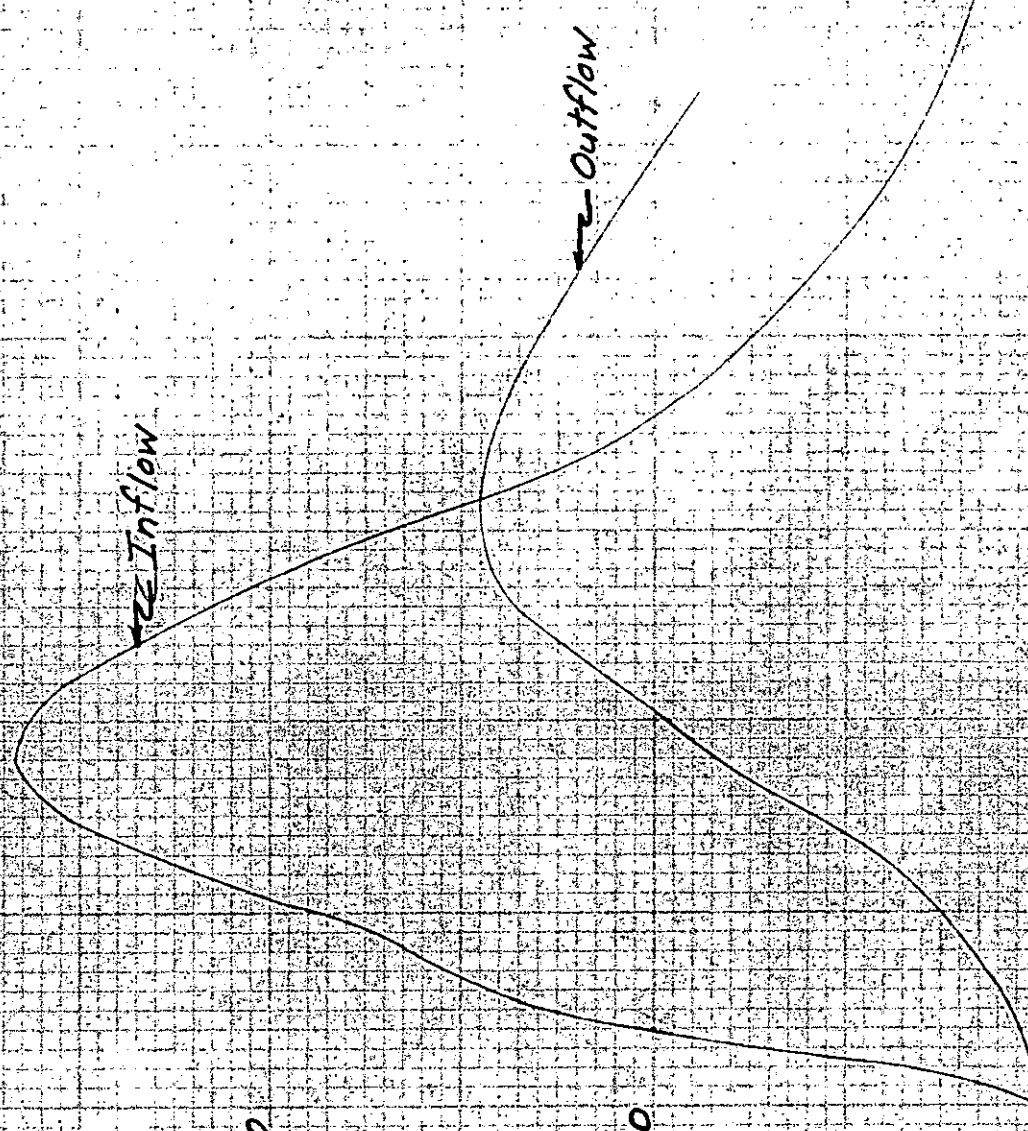
300

200

100

0

FLOW RATE (CFS)



3

4

5

Time (hours)

Oak Knoll Industrial Park
Stage Storage Curve
Stage - Discharge Curve

1381

1380

1379

1378

1377

1376

1375

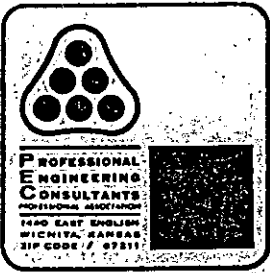
Stage

Discharge
Storage

0	2	4	6	8	10	12	14	16
0	20	40	60	80	100	120	140	160

Storage (Ac-ft)

Discharge (cfs)



Date 3/2/81 Page 11 of 19

Project Oak Knoll Ind. Park

Item Flood Routing

1	2	3	4	5	6	7	8	9	10	11	12	13
Time (hr)	ΔT (hrs)	Inflow at Time T (cfs)	Ave. rate of inflow in stream (cfs)	Inflow (cfs)	Trial reservoir elevation (ft)	Outflow at first T (cfs)	Ave. rate of outflow for ΔT (cfs)	outflow (cfs)	Incremental storage (acre-ft)	TOTAL STORAGE (acre-ft)	Reservoir Elevation (ft)	Remarks
0	0	0	17	0.14	1375.0	0	0.5	.004	0.14	0	1375.0	
0.1	0.1	34	69	0.57	1375.1	1	2	.017	0.55	0.14	1375.1	
0.2	0.1	104	123.5	1.02	1375.3	3	6	.050	0.97	0.69	1375.3	
0.3	0.1	143	153	1.26	1375.7	9	13	0.11	1.15	1.66	1375.7	
0.4	0.1	163	173	1.43	1376.2	17	20.5	0.17	1.26	2.81	1376.2	
0.5	0.1	183	201.5	1.67	1376.6	24	30	0.25	1.42	4.07	1376.6	
0.6	0.1	220	232	1.92	1377.2	36	43	0.36	1.56	5.49	1377.2	
0.7	0.1	244	252	2.08	1377.8	50	59	0.49	1.59	2.05	1377.8	
0.8	0.1	260	263.5	2.18	1378.4	68	77	0.64	1.54	8.64	1378.4	
0.9	0.1	267	265.5	2.19	1378.9	86	91	0.75	1.44	10.18	1378.9	
1.0	0.2	264	249.5	4.12	1379.3	96	110.5	1.83	2.29	11.62	1379.3	
1.2	0.2	235	214.5	3.55	1380.1	125	133.5	2.21	1.34	13.91	1380.1	
1.4	0.2	194	166.0	2.74	1380.6	142	143.5	2.37	0.37	15.25	1380.6	
1.6	0.2	138	117.0	1.93	1380.7	145	142.5	2.35	-0.43	15.62	1380.7	
1.8	0.2	96	82.5	1.36	1380.5	140	134.5	2.22	-0.86	15.19	1380.5	
2.0	0.2	69	59.5	0.98	1380.2	129	123.5	2.04	-1.06	14.32	1380.2	
2.2	0.2	50	42.5	0.70	1379.9	118	111.5	1.84	-1.14	13.26	1379.9	
2.4	0.2	35	30.5	0.50	1379.5	105	98	1.62	-1.12	12.11	1379.5	
2.6	0.2	26			1379.1	91				10.99	1379.1	



Date 3/3/81 Page 12 of 19

Project Oak Knoll Industrial Park

Item Cross-road culvert

Sizing pipe under Wassall

$Q_{peak} = 145 \text{ cfs}$

2 lines $Q = 72.5$

Exist. shoulder elev. - 1378.3

Regrade ditch elev. 1373.9

$H_w = 4.4'$

From Inlet Control Nomograph for corrugated steel pipe

Try 42" Dia.

$H_w/D = 4.4/3.5 = 1.3$

$Q = 72 \text{ cfs}$ OK

Soffit elev. = 77.4'

Use 2 - 33" x 49" CMMAC due to cover on pipe



Date 3/3/81 Page 13 of 19

Project Oak Knoll Ind. Park

Item _____

Check Velocity Pond Outlet

$$Q_{\text{peak}} = 145 \text{ cfs}$$

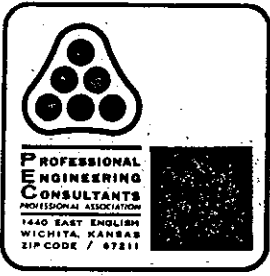
$$V = Q/A$$

$$A = 19.635$$

$$V = 145/19.6 = 7.4 \text{ ft/sec}$$

Channel protection is to be provided.

Details to be worked out at construction plan stage.



Date 3/4/81 Page 14 of 19

Project Dak Knoll Ind Park

Item _____

Ditch along Rock Rd

Regrade ditch from Arnold north to outlet of pond

\bar{E} (north) pipe under Arnold - 1371.4

Length \approx 490'

\bar{E} - outlet pipe - 1374.7

Slope = $3.3/490' = .0067 \text{ ft/ft}$

Regrade ditch from outlet of pond north 230' to match existing \bar{E}

\bar{E} outlet - 1374.7

Length - 230'

\bar{E} - 1378.0

Slope = $3.3/230' = 0.014 \text{ ft/ft}$

Sizing Ditch

$Q_{\text{peak}} = 145 \text{ cfs}$ $b = d'$

$S = 0.0067$ $n = 0.035$ (grass lined) $z = 4.1$

$K' = Q^n / b^{2/3} S^{1/2}$ (Handbook of Hydraulics)

$K' = 145(0.035) / (14)^{2/3} (.0067)^{1/2} = 1.53$

$D/b = 0.61$

$D = (.61)(d) = 2.44'$

$A = 33.6 \text{ sq ft}$

$V = 145/33.6 = 4.3' \text{ /sec}$



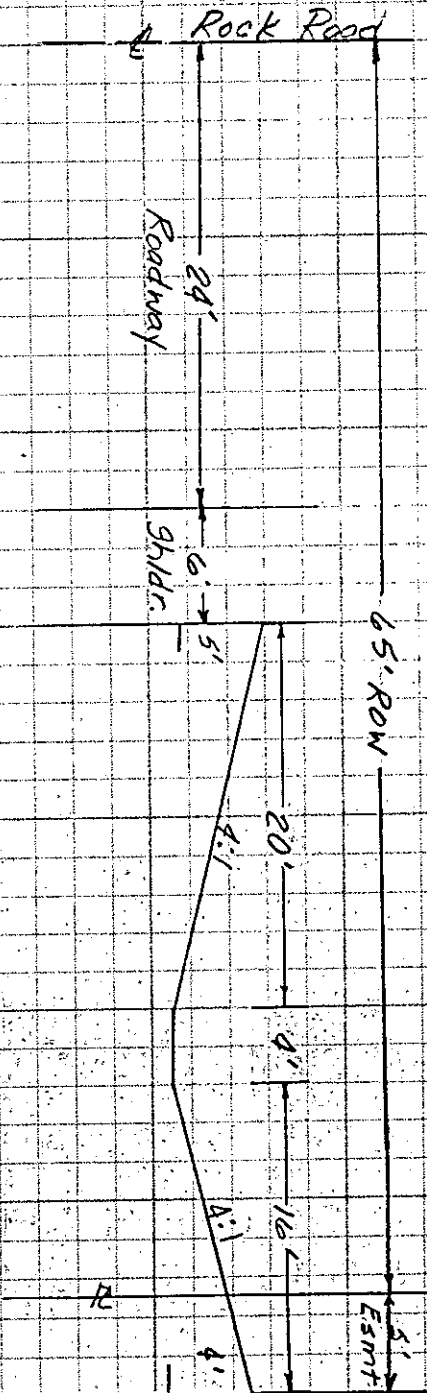
Date 1/8/81 Page 15 of 19

Project Oak Knoll Ind Park

Item Ditch Section - ROW

Average depth from existing shoulder to proposed R is 5 feet.

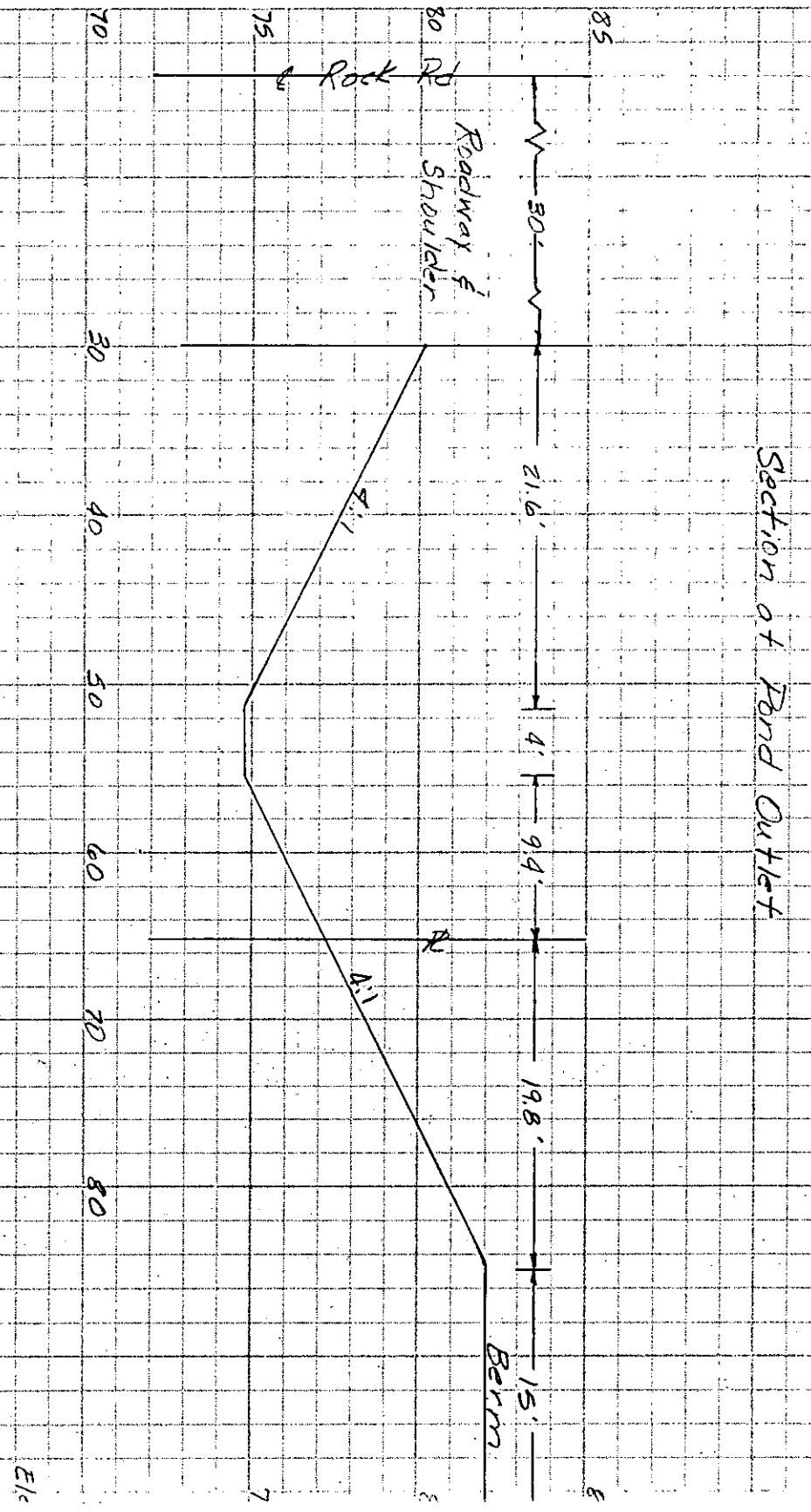
Property line is on the average 1 foot below shoulder



Typical Section



Date 3/3/81 Page 14 of 19
 Project Oak Knoll Ind. Park
 Item Cross-section



Capacity of Typical Section
Existing Section

$$Q = \frac{1.486 A R^{4/3} S^{1/2}}{n} \quad S = 0.0084 \quad \text{from profile}$$

$$n = 0.03$$

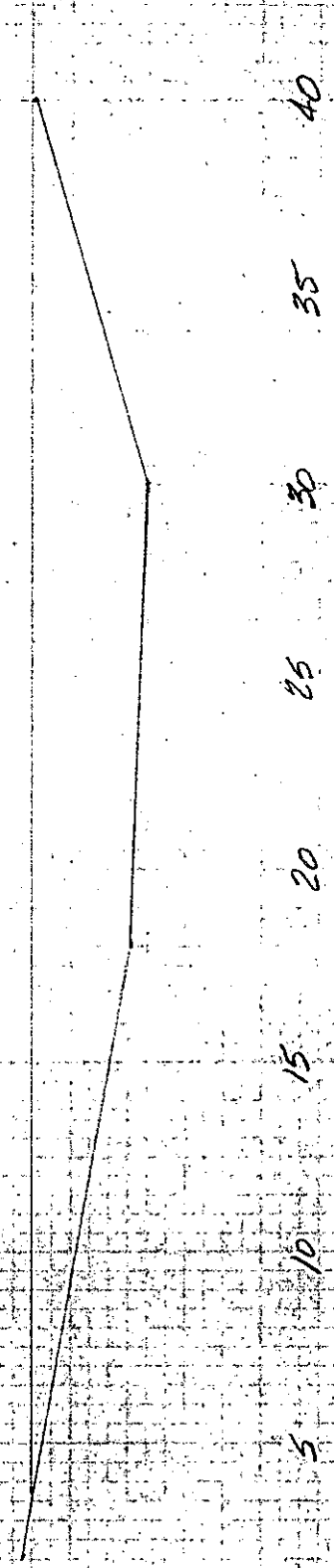
$$A = 70.58 \text{ ft.}$$

$$NP = 37'$$

$$R = 1.9$$

$$Q = \frac{1.486 (70)(1.9)^{4/3} (0.0084)^{1/2}}{0.03} >> 145 \text{ cfs}$$

1380





Date 1/18/81 Page 18 of 19

Project Oak Knoll Ind. Park

Item Pipe Capacity

Effect of Pre-developed Q thru 2-48" RCP
under Rock Road.

~ 170 cfs pre-developed discharge (as previously determined,
85 cfs each RCP (4-10-80))

From Inlet Control Nomograph

Dia. - 48"
 Q - 85 cfs

HW/D - 1.05

$HW = (1.05)(4) = 4.2'$

H - 1370.5

$HW = 1374.7$

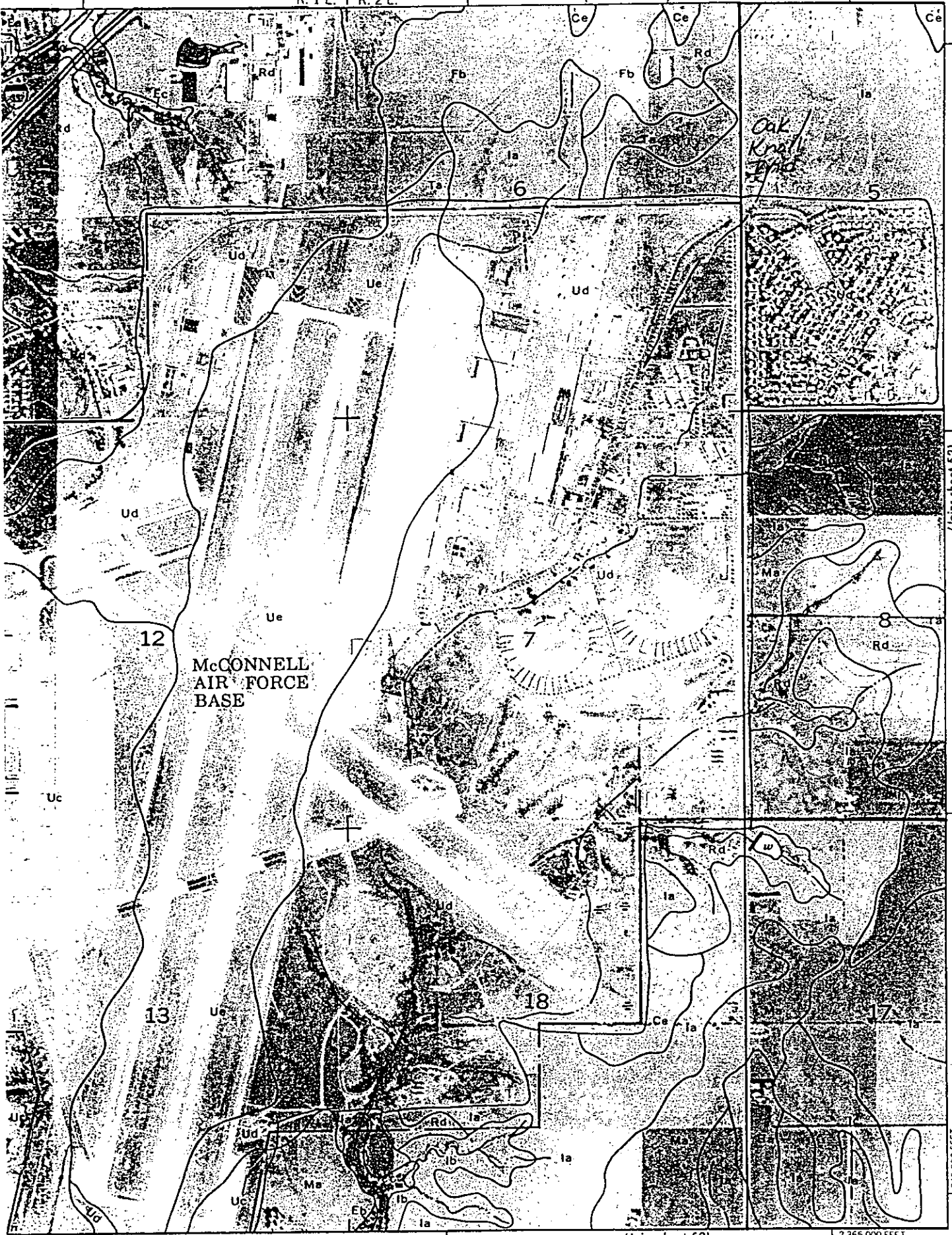
Shoulder - 1375.0

The 2-48" RCP under Rock Rd. will pass the
pre-developed discharge without overtopping the
road

Note - The outlet discharge from the pond
is less than Q predeveloped

R.1.E. | R.2.E.

(Joins sheet 43)



McCONNELL
AIR FORCE
BASE



(Joins sheet 59)

2 365 000 FEET

THE CITY OF WICHITA

OFFICE OF DEPARTMENT OF ENGINEERING DATE March 31, 1981

TO Jack Galbraith, Chief Planner
FROM Chris Breitenstein, Drainage and Flood Control Engineer
SUBJECT Various Drainage Plans

The following items are approved:

L/S 0498 - Site Grading Plan. It does appear additional on-site storm sewer will be required.

Kissire Addition - Drainage Plan.

➤ Oak Knoll Industrial Park - Drainage Plan. A 10' private drainage easement adjacent to the South Line of plat will be required by separate instrument.

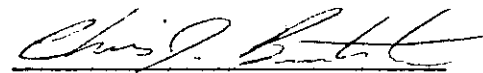
Oak Cliff Estates 2nd Addition - Drainage Plan.

Hedgecliff 3rd Addition - Drainage Concept. Drainage Plan should conform with plan for Storm Water Sewer #205.

Tallgrass Clubhouse Addition - Drainage Plan. Any structures put in should be approved by this office.

Bonnie Brae 3rd Addition - Site Grading Plan. Drainage Plans should be submitted to this department at time of issuing building permits.

Silver Springs Addition - Drainage Concept.

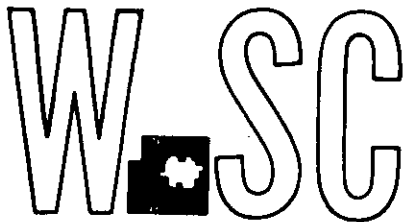


Chris J. Breitenstein, P.E.
Drainage & Flood Control
Engineer

CJB:md

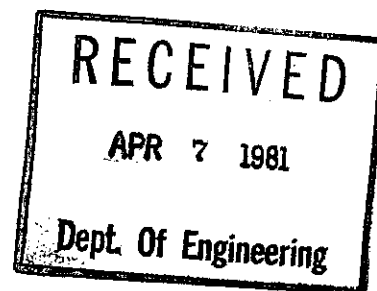
cc: Louise Olivarez
Mike Lindebak

WICHITA—SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT

CITY HALL — TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561



April 3, 1981

Professional Engineering Consultants, P.A.
1440 E. English
Wichita, Ks. 67211

Re: S/D 80-44 - Final plat of Oak Knoll Industrial Park

Gentlemen:

At the regular meeting of the Subdivision Committee of the Metropolitan Area Planning Commission on April 2, 1981, the above-captioned plat was considered. The action of the Committee was to recommend that this plat be approved, subject to:

- A. The applicant shall guarantee the construction of the floodway/detention pond.
 - B. The final plat tracing shall indicate a 10-foot drainage easement adjacent to Rock Road from the floodway south to the south line of this plat.
 - C. The applicant shall guarantee the extension of sanitary sewer to serve all lots. This property has already been included in a sanitary sewer main benefit district.
 - D. The applicant shall guarantee the extension of City water to serve all lots.
 - E. The applicant shall guarantee the paving and construction of all interior streets to industrial street standards.
 - F. The applicant shall guarantee construction of both a temporary and a permanent accel-decel lane to serve Lot 10, Block 2.
 - G. If improvements are guaranteed by petition, a notarized certificate listing the petitions shall be submitted to the Planning Department for recording.
- To The applicant shall submit a restrictive covenant providing for the ownership and maintenance of the detention lake. The covenant shall contain a provision which gives the City authority to maintain the drainage facility and charge the costs to the owner(s) in the event the owner(s) fail to maintain the detention lake.

P.E.C., P.A.
4-3-81
Page 2

- I. An avigational easement and restrictive noise covenant shall be submitted for this entire property.
- J. The final plat tracing shall indicate the easements requested by K.G.&E. and which were "marked" on the engineer's copy of the final plat.
- K. The final plat tracing shall indicate a 10-foot utility easement adjacent to the north line of Lots 8-12, Block 1.
- L. The final plat tracing shall indicate a 10-foot private drainage easement adjacent to the south line of this plat. This easement shall be established by separate instrument & recorded. Recording data shall be shown on the final plat tracing.
- M. Recording of the plat within 30 days after approval by the Board of City Commissioners.

Enclosed with the applicant's copy of this letter is a list of the five methods which have been adopted as being acceptable for guaranteeing improvements required in the approval of plats. The certificate will be required if petitions are submitted. Forms for the bond and irrevocable letter of credit are available from this office.

The enclosed "marked" copy of the final plat is for your information and files.

This matter will be forwarded to the Planning Commission for its consideration on Thursday, April 9, 1981, at 1:30 p.m. If you should have any questions concerning this matter, please call.

Sincerely,


Forrest L. Nagley
Junior Planner

FLN:bh

cc: American Land Dev. Co., Inc., Attention: Randall J. Voth, Vice-President, Suite 1, 3202 W. 13th St., 67203
Mike Lindebak, City Engineering
Andy Harkness, Co. Dept. of Public Works

Oak Knoll
Ind. Park

COMMISSIONERS PROCEEDINGS

JULY 14, 1981

PAGE 261

128

V-1075 - VACATION OF UTILITY EASEMENT SOUTHWEST SIDE OF STONERIDGE LANE IN AN AREA WEST OF LONGFORD LANE, presented.

The Planning Commission recommended approval subject to:

1. Any relocation or reconstruction of utilities necessitated by the vacation being at the sole expense of the applicant.
2. All proceedings being without cost to the City, County or any utility company.

Motion -- carried Brown moved that the request be approved as recommended by the MAPC and the ordinance be placed on first reading. Motion carried 5 to 0.

ORDINANCE

V-1075 An Ordinance vacating a portion of the 10-foot Easement on the rear of Lot 30, Block 3, Brookhollow Third Addition, Wichita, Sedgwick County, Kansas, introduced and under the rules laid over.

S/D 80-44 - PLAT OF OAK KNOLL INDUSTRIAL PARK S/D 80-44 - PLAT OF OAK KNOLL INDUSTRIAL PARK LOCATED 1/2 MILE SOUTH OF OAK KNOLL ON THE EAST SIDE OF ROCK ROAD, presented.

A 22-lot, industrial plat containing 40+ acres.

The Planning Commission recommended approval subject to recording within 30 days.

Certificate Certificate from American Land Development Company, Inc., dated June 17, 1981, for storm water detention pond, sanitary sewers, street and storm drains, water and accel-decel lane on Lot 10.

Covenant Covenant from American Land Development Company, Inc., dated June 17, 1981.

Avigational Easem. Avigational Easement from American Land Development Company, Inc., dated June 17, 1981.

Restrictive Cov. Restrictive Covenant from American Land Development Company, Inc., dated June 17, 1981.

Water petition Water system improvement petition for the property served by the supply line for Oak Knoll Industrial Park, Rock Road from 295 feet north of Oak Knoll to Wassall. (Benefit District - 882-81)

Water petition Water system improvement petition for the property adjacent to Marion and Eastmoor, Oak Knoll Industrial Park, Phase I. (Benefit District - 883-81)

Water petition Water system improvement petition for the property adjacent to Wassall and Eastmoor, Oak Knoll Industrial Park, Phase II. (Benefit District - 884-81)

Sewer petition 100% petition, dated 6/24/81, for sanitary sewer lateral to serve Lots 5-10 inclusive, Block 2, Oak Knoll Industrial Park (1/2 mile south of Oak Knoll on the east side of Rock Road) Phase I. (S.A. - \$72,300)

Sewer petition 100% petition, dated 6/24/81, for sanitary sewer lateral to serve Lots 8-12 inclusive, Block 1, Oak Knoll Industrial Park (1/2 mile south of Oak Knoll on the east side of Rock Road) Phase II. (S.A. - \$58,800)

Paving petition 100% petition, dated 6/24/81, for pavement on Marion and Eastmoor from the east line of Rock Road to the south line of Lot 5, Block 2, Oak Knoll Industrial Park Addition. (S.A. - \$308,000)

Accel/decel lane 100% petition, dated 6/24/81, for acceleration/deceleration lane on Rock Road from the north line of Wassall to the south line of Marion. (S.A. - \$30,000)

Paving Petition 100% petition, dated 6/24/81, to construct pavement on Wassall and Eastmoor from the east line of Rock Road to the north line of Lot 4, Block 2, Oak Knoll Industrial Park Addition. (S.A. - \$200,000)

FWDR Petition 100% petition, dated 6/24/81, for Floodwater Detention Reservoir to serve Oak Knoll Industrial Park Addition (1/4 mile south of Oak Knoll on the east side of Rock Road. (S.A. - \$137,000)

COMMISSIONERS PROCEEDINGS

NAL 128

JULY 14, 1981

PAGE 262

Motion --

Brown moved that the water engineering feasibility reports be received and filed, the resolutions of finding and the resolutions ordering and directing the water system improvements be adopted; the petitions be approved and the Director of Law be instructed to prepare the necessary resolutions; the letter of credit be received and filed; the avigational easement be accepted; the City Clerk be instructed to record the detention pond covenant, the avigational easement, restrictive noise covenant and the certificate of petitions with the Register of Deeds, the recording costs of which shall be billed to the applicant; the plat be approved as approved by the MAPC and the Mayor be authorized to sign. Motion carried 5 to 0.

-- carried

RESOLUTION

Oak Knoll Ind Park

A Resolution of findings as the the advisability and a Resolution authorizing construction and ordering and directing under and pursuant to K.S.A. 12-6a, an improvement consisting of a waterworks system to make water and water service available to the supply line for Oak Knoll Industrial Park, Rock Road from 295 feet north of Oak Knoll to Wassall, pursuant to findings of advisability made by the governing body of the City of Wichita, Kansas, presented. Brown moved that the resolution be adopted. Motion carried 5 to 0. Yeas: Casado, Kirk, Knight, Wright, Brown.

RESOLUTION

Marion & Eastmoor

A Resolution of findings as the the advisability and a Resolution authorizing construction and ordering and directing under and pursuant to K.S.A. 12-6a, an improvement consisting of a waterworks system to make water and water service available to the property adjacent to Marion and Eastmoor, Oak Knoll Industrial Park - Phase I, pursuant to findings of advisability made by the governing body of the City of Wichita, Kansas, presented. Brown moved that the resolution be adopted. Motion carried 5 to 0. Yeas: Casado, Kirk, Knight, Wright, Brown.

RESOLUTION

Wassall & Eastmoor

A Resolution of findings as the the advisability and a Resolution authorizing construction and ordering and directing under and pursuant to K.S.A. 12-6a, an improvement consisting of a waterworks system to make water and water service available to the property adjacent to Wassall and Eastmoor, Oak Knoll Industrial Park - Phase 2, pursuant to findings of advisability made by the governing body of the City of Wichita, Kansas, presented. Brown moved that the resolution be adopted. Motion carried 5 to 0. Yeas: Casado, Kirk, Knight, Wright, Brown.

S/D 80-92 - PLAT OF
SCHOLFIELD BROS.

S/D 80-92 - PLAT OF SCHOLFIELD BROTHERS ADDITION LOCATED ON THE NORTH-
WEST CORNER OF KELLOGG DRIVE AND ELLSON, presented.

A one-lot, commercial plat containing 2.94 acres.

The Planning Commission recommended approval subject to recording within 30 days.

Cert. of Sidewalk

A Certificate of Sidewalk, dated 7/03/81, for construction of sidewalk on the north side of Kellogg Drive in Scholfield Brothers Addition.

Motion --

Brown moved that the City Clerk be instructed to file the sidewalk certificate with the Register of Deeds, the recording costs of which shall be billed to the applicant; the plat be approved as approved by the MAPC and the Mayor be authorized to sign. Motion carried 5 to 0.

-- carried

S/D 81-25 - PLAT OF
PEARSON'S LITTLE
RIVER ADDN

S/D 81-25 - PLAT OF PEARSON'S LITTLE RIVER ADDITION LOCATED ON THE
SOUTH SIDE OF 69TH STREET NORTH IN AN AREA WEST OF THE LITTLE ARKANSAS RIVER,
presented.

A one-lot, residential plat containing 1.7 acres.

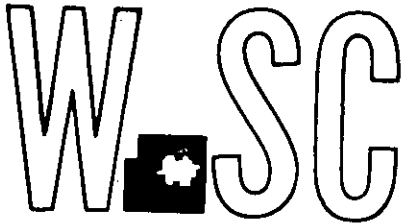
The Planning Commission recommended approval subject to recording within 30 days.

Motion --

Brown moved that the plat be approved as approved by the MAPC and the Mayor be authorized to sign. Motion carried 5 to 0.

-- carried

WICHITA—SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT

CITY HALL — TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561

RECEIVED

FEB 16 1983

Dept. Of Engineering

February 16, 1983

American Land Development Company, Inc.
Suite 1, 3202 W. 13th Street
Wichita, Kansas 67203

Re: Letter of credit guaranteeing the construction of a
temporary accel-decel lane into Lot 10, Oak Knoll
Industrial Park (S/D 80-44) Credit Number 874

Gentlemen:

Your letter of credit from Fourth National Bank in the amount of \$6,250.00 guaranteeing the above-referenced improvement is nearing maturity. The terms of your letter of credit reference a completion date of April 9, 1983. A recent field check of the property has verified that no development has occurred and, consequently, the accel-decel lane has not been constructed.

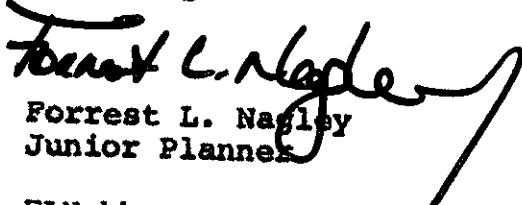
Since the property has remained undeveloped, we can authorize a two years extension of time to complete the improvement provided an amendment to your letter of credit is submitted which references the following:

- A new default or completion date of April 9, 1985;
- A new expiration or negotiation date of July 1, 1985.

The existing dollar amount of the letter of credit is adequate for a two year extension of time.

The amendment to the letter of credit needs to be submitted to this office prior to April 9, 1983. Should you have any questions, please call me at 268-4421.

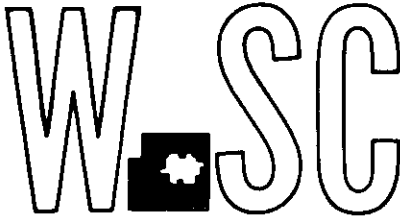
Sincerely,


Forrest L. Nagley
Junior Planner

FLN:bh

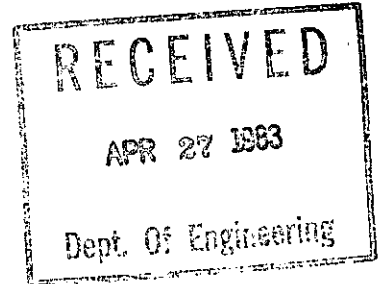
cc: Fourth National Bank and Trust Company, Attention: Marilyn
B. Pauly, 100 N. Broadway, 67202
* Mike Lindebak, Project Development Engineer, City Engineering

WICHITA - SEDGWICK COUNTY



METROPOLITAN AREA PLANNING
DEPARTMENT

CITY HALL — TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4561



April 27, 1983

American Land Development Co., Inc.
Attention: Randell J. Voth
902 N. West Street
Wichita, Kansas 67203

Re: Letter of credit guaranteeing the construction of a
temporary accel-decel lane into Lot 10, Oak Knoll
Industrial Park (S/D 80-44) Credit Number 874

Dear Randy:

This letter acts as follow up to my letter to you dated February 16, 1983, about the above-referenced matter and our subsequent telephone conversation of March 11, 1983. As of this date, we have not received the necessary amendment to your letter of credit. The amendment needs to reference the following:

1. A new default or completion date of April 9, 1985;
2. A new expiration or negotiation date of July 1, 1985.

The amendment needs to be submitted to this office as soon as possible. Should you have any questions, please call me at 268-4421.

Sincerely,

Forrest L. Nagler
Forrest L. Nagler
Junior Planner

FLN:bh

cc: Fourth National Bank and Trust Company, Attention: Marilyn
B. Pauly, 100 N. Broadway, 67202
Mike Lindebak, Project Development Engineer, City Engineering

rust

Draft.
A. Staley
8-23-87

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

Reference: Rock Road Project - Oak Knoll
Industrial Park

Dear Mr. Lindebak:

American Land Development Company, Inc., plans to proceed with the development of Oak Knoll Industrial Park. We wish to have the construction of improvements coordinated with the adjacent Rock Road paving project.

We request that the decel lane to serve Lot 10, Block 2, be included in the Rock Road project. Attached is the letter of credit for this project.

We also request that the intersection returns for Wassall and Marion be included in the Rock Road project.

We request that the City enter into a 2 party agreement with Professional Engineering Consultants, P.A., to provide the design engineering services for the decel lane to serve Lot 10, Block 2 and the intersection returns. Professional Engineering Consultants, P.A., provided the engineering services for the platting of Oak Knoll Industrial Park.

If additional information is desired, please advise.

Very truly yours,

9-5-87
Awaiting approval from Sedgewick County
Mef

September 17, 1984

Mr. Randell J. Voth
American Land Development Co., Inc.
902 North West Street
Wichita, Kansas 67203

Subject: Oak Knoll Industrial Park Addition

Dear Mr. Voth:

The letter of credit currently on file with the Metropolitan Area Planning Department guaranteeing a temporary decel lane can be released at the time a letter of credit is filed for the guarantee of special assessments for the permanent decel lane.

Please advise if you have any questions concerning this matter.

Yours truly,


Michael E. Lindebak, P.E.
City Engineer

ME L:gr

cc: Dick Linn, Professional Engineering Consultants
Jack Galbraith, Chief Planner - Current Plans

ASPHALTIC CONCRETE
PAVING PETITION

(ACCEL/DECEL LANE)

To the Board of Commissioners
Wichita, Kansas

Dear Commissioners:

1. We, the undersigned owners of record as below designated, of Lots, Parcels,
and Tracts of real property described as follows:

Lot 10, Block 2,

Oak Knoll Industrial Park Addition.

472 - 76 - 245 - 81092

150' taper, 70' decel, 70' taper @ 30'
entrance (with 20' rad.)

220 s.y. pvt @ 30 = 6,600

" " subgr. tr. @ 2 = 440

1620 SF dr. @ 3 = 4860

11,900

+ 20% 2,380

14,280

L.C.
x .35 = \$4,998

Letter of Credit = \$5,000

WICHITA - SEDGWICK COUNTY
METROPOLITAN AREA PLANNING DEPARTMENT

To: Larry Henry, Program Development Engr. Date: February 19, 1985
From: Barbara R. Bonanni, Junior Planner
Subject: Status of the improvement guaranteed as a condition of approval for Oak Knoll Industrial Park - S/D 80-44, (Credit No. 874 - Expiration date: April 9, 1985)

When the plat, referenced above, was reviewed by the Subdivision Committee, a requirement for approval was for the applicant to guarantee the construction of a temporary accel/decel lane into Lot 10, Block 2. Please advise me on the status of the improvement, i.e., if a Letter of Credit has been filed for the guarantee of special assessments for the permanent decel lane as the letter (copy attached) from Mike Lindebak to Randall J. Voth, dated September 17, 1984, pertains to.

Should you have any questions, please call.

Barbara R. Bonanni
Barbara R. Bonanni
Junior Planner

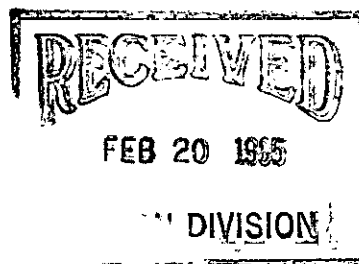
BRB:mlh

Attachment

cc: Mike Lindebak, City Engineer
Gary Wiley, Professional Engineering Consultants, P.A., 1440 East English, Wichita, KS 67211

Letter of Credit No. 1454
This is O.K. to
release! URH
2/21/85

Vicky,
Please ✓
L



September 17, 1984

Mr. Randell J. Voth
American Land Development Co., Inc.
902 North West Street
Wichita, Kansas 67203

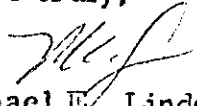
Subject: Oak Knoll Industrial Park Addition

Dear Mr. Voth:

The letter of credit currently on file with the Metropolitan Area Planning Department guaranteeing a temporary decel lane can be released at the time a letter of credit is filed for the guarantee of special assessments for the permanent decel lane.

Please advise if you have any questions concerning this matter.

Yours truly,


Michael E. Lindebak, P.E.
City Engineer

ME L:gr

cc: Dick Linn, Professional Engineering Consultants
Jack Galbraith, Chief Planner - Current Plans ✓

RECEIVED

SEP 17 1984

METROPOLITAN PLANNING
ROUTE Forest

W I C H I T A - S E D G W I C K C O U N T Y
M E T R O P O L I T A N A R E A P L A N N I N G D E P A R T M E N T

To: Larry Henry, Program Development Engr. Date: February 19, 1985

From: Barbara R. Bonanni, Junior Planner

Subject: Status of the improvement guaranteed as a condition of
approval for Oak Knoll Industrial Park - S/D 80-44.
(Credit No. 874 - Expiration date: April 9, 1985)

When the plat, referenced above, was reviewed by the Subdivision Committee, a requirement for approval was for the applicant to guarantee the construction of a temporary accel/decel lane into Lot 10, Block 2. Please advise me on the status of the improvement, i.e., if a Letter of Credit has been filed for the guarantee of special assessments for the permanent decel lane as the letter (copy attached) from Mike Lindebak to Randall J. Voth, dated September 17, 1984, pertains to.

Should you have any questions, please call.

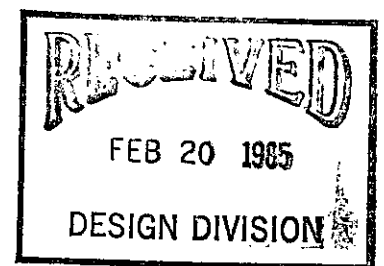
Barbara R. Bonanni

Barbara R. Bonanni
Junior Planner

BRB:mlh

Attachment

cc: ✓ Mike Lindebak, City Engineer
Gary Wiley, Professional Engineering Consultants, P.A., 1440 East
English, Wichita, KS 67211



WJL

THE CITY OF WICHITA

OFFICE OF MAPD/DESIGN

DATE March 27, 1985

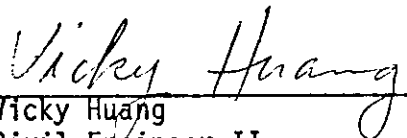
TO Barbara Bananni, Junior Planner

FROM Vicky Huang, C.E. II

SUBJECT Oak Knoll Industrial Park

The letter of credit guaranteeing a temporary decel lane into Lot 10, Block 2 of the subject plat is due to expire on April 9, 1985. Since a permanent decel lane is included in the County paving project on Rock Road which was successfully bid by Ritchie Paving, Inc. on March 21, 1985 and is scheduled for County Commission's approval on April 3, 1985, the temporary decel lane is no longer required. We recommend the letter of credit be released.

Should you have any questions, please call.



Vicky Huang
Civil Engineer II

VH:gf

THE CITY OF WICHITA

OFFICE OF PUBLIC WORKS - ENGINEERING

DATE SEPTEMBER 16, 1987

TO LYLE BOTKIN, CONTROLLER

FROM MIKE LINDEBAK, CITY ENGINEER

SUBJECT Irrevocable Letters of Credit:
Oak Knoll Industrial Park Addition

Attached for your files please find Irrevocable Letters of Credit issued for the account of Carl Chuzy (555 N. Woodlawn, Wichita, KS 67208). They replace previous Letters of Credit issued for the following projects in Oak Knoll Industrial Park Addition:

448 76 245 88089 000 000 001 WATER DISTRIBUTION SYSTEM
(Letter of Credit No. 2464 - \$15,710.00)

448 76 245 88090 000 000 001 WATER DISTRIBUTION SYSTEM
(Letter of Credit No. 2465 - \$9,100.00)

468 76 245 81142 000 000 001 LATERAL 2, MAIN 23, WAR INDUSTRIES SEWER
(Letter of Credit No. 2463 - \$20,600.00)

468 76 245 81144 000 000 001 FLOODWATER DETENTION RESERVOIR NO. 16
(Letter of Credit No. 2461 - \$32,100.00)

472 76 245 81088 000 000 001 MARION AND EASTMOOR
(Letter of Credit No. 2462 - \$87,560.00)

Please release the previous Letters of Credit issued for these projects and phone Randy Voth at 265-4991.

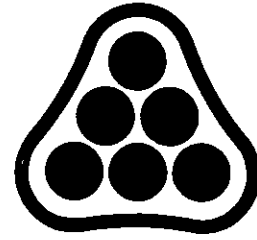
/ck

Attachment(s)

(0008L)

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.
- F. D. MIDDLETON, JR., P.E.
- D. E. MALTBY, P.E.
- M. D. SCHOMAKER, P.E.
- G. D. SCHOCK, P.E.
- J. H. BAILEY, P.E., PH.D.



PROFESSIONAL
ENGINEERING
CONSULTANTS
PROFESSIONAL ASSOCIATION



September 24, 1987

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

Re: Oak Knoll Industrial Park
 Minimum Pad Elevation

Dear Mr. Lindebak:

The above-referenced plat requires a minimum pad elevation of 1382.0 m.s.l. for all lots in Block 2. This pad elevation was established based on a Drainage Plan including a retention/detention pond which discharged into an open ditch along the east side of Rock Rd.

The recent Rock Rd. paving project included an underground structure which eliminated the existing open ditch and provided a better outfall system for the retention/detention pond. The Floodwater Detention Reservoir No. 16 Project (468 76 245 81144) was constructed at a lower elevation than proposed in the original Drainage Plan for the Plat. The top of the berm on the project was set at elevation 1380.0. Utilizing this elevation for the construction of adjacent Wassall St. and development of the adjacent lots will eliminate unnecessary fill.

The minimum pad elevation of 1382.0 on the recorded plat should be "vacated" and replaced with elevation 1380.0.

An application for vacation of the minimum pad elevation will be submitted to the Planning Department. If additional information is desired, please advise.

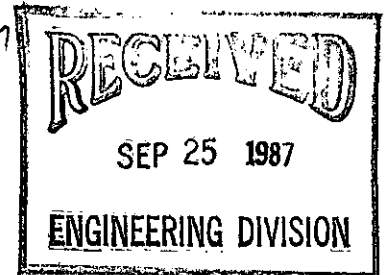
Very truly yours,

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

Richard W. Linn, P.E.
 Project Manager,
 Land Development

*This letter is consistent with
 the construction plan of Detention
 Reservoir No. 16.
 Vicky 9/28/87*

cc: Carl Chuzy
 Jack Galbraith, MAPD



RWL/kss

THE MISSION BANK

P.O. Box 130, Mission, Kansas 66201 • 913-831-2400

RECEIVED

AUG 25 1987

L.T.I.C.

WICHITA, KANSAS

August 24, 1987

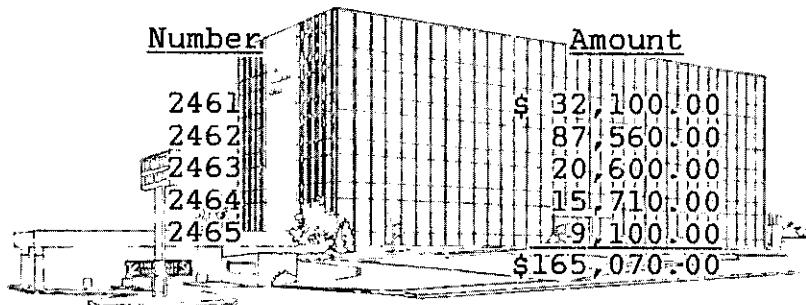
Mr. Jeff Otto
Lawyers Title Insurance Corp.
400 North Broadway
Wichita, Kansas 67202

RE: Carl Chuzy

Dear Mr. Otto:

We are pleased to enclose the following Irrevocable Letters of Credit issued in favor of City of Wichita for the account of Carl Chuzy as they relate to Oak Knoll Industrial Park. It is our understanding that you will forward these directly to City of Wichita.

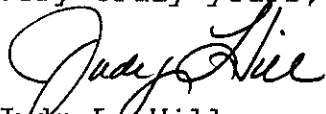
Number	Amount
2461	\$ 32,100.00
2462	87,560.00
2463	20,600.00
2464	15,710.00
2465	9,100.00
	<u>\$165,070.00</u>



Mr. Otto, should you have any questions relating to the Letters of Credit, please do not hesitate to call.

Thank you.

Very truly yours,



Judy L. Hill
Assistant Secretary

enclosures

cc: Mr. Brian E. Cuddy

87-140

468-81144

472-81088

468-81142

448-88089

448-88090