

PRELIMINARY PLAT
DIVISION REPORT

SUBDIVISION COMMITTEE
METROPOLITAN AREA
PLANNING COMMISSION

NO. 70-75 Name SANTA FE MIDLAND INDUSTRIAL DISTRICT
Date Application Rec'd. 11-5-71 Preliminary Approval _____
Scheduled S/D Meeting 11-18-71

DESCRIPTION

General Location On the east side of Hydraulic in an area between
Industrial and I-35W

Owner Santa Fe Land Improvement Company
Surveyor/Engineer Baughman Company, Local Surveyor, Wichita, Kansas
Address 2522 East Kellogg Phone _____

- | | |
|---|--|
| 1. Gross Acreage of Plat <u>47.27</u> | 7. Lineal Feet of New Streets: |
| 2. Number of Lots: | a. <u>70</u> R/W <u>1830</u> ft. |
| Residential _____ | b. <u>70</u> R/W <u>831</u> ft. |
| Commercial _____ | c. _____ R/W _____ ft. |
| Industrial <u>19</u> | d. _____ R/W _____ ft. |
| Other _____ | e. _____ R/W _____ ft. |
| Total Number of Lots <u>19</u> | TOTAL <u>2661</u> ft. |
| 3. Minimum Lot Frontage <u>200</u> ft. | 8. Sidewalk adjacent to all
streets? <u>yes</u> <input checked="" type="checkbox"/> <u>no</u> |
| 4. Minimum Lot Area <u>45,738</u> sq.ft. | |
| 5. Existing Zoning <u>E</u> | |
| 6. Proposed Zoning <u>E</u> | |
| 9. Public Water Supply <u>Yes</u> (Yes-No), Name <u>City of Wichita</u> | |
| 10. Public Sanitary Sewers <u>Yes</u> (Yes-No), Name <u>City of Wichita</u> | |
| 11. Health Department Approval (where applicable) _____ (Yes-No) | |
| 12. City of Wichita _____: Three-Mile Area _____ | |

STAFF COMMENTS:

1. This preliminary plat involves the northern portion of property within an overall sketch plat of property generally bounded by Hydraulic on the west, Interstate I-35W on the east and south, and Industrial Avenue on the north. Said sketch plat has been reviewed by the Planning Department, and comments and discussions resulting from said review have taken place periodically since December of last year.
2. The applicant's preliminary plat reflects most of the changes recommended in the sketch plat review and subsequent correspondence and meetings with the applicants. There are however, some unresolved questions concerning opening and improvements of interior streets, sidewalk requirements, setbacks, etc., which will need to be discussed at the Subdivision Committee meeting.
3. The labeling of the Interstate highway on the face of the plat shall be corrected as follows: "Interstate Highway I-35W."
4. The applicant shall install or guarantee the construction of a sidewalk on the east side of Hydraulic; the total estimated construction cost to be in the amount of \$1,310.
5. 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.
6. Requirements for a final plat (see pages 20 through 25, Part 4, Article 5 of the MAPC Subdivision Regulations).

FINAL PLAT
SUBDIVISION REPORT

SUBDIVISION COMMITTEE
METROPOLITAN AREA
PLANNING COMMISSION

S/D NO. 70-75 Name SANTA FE MIDLAND INDUSTRIAL DISTRICT
Date Application Rec'd. 11-5-71 Preliminary Approval 11-18-71
Scheduled S/D Meeting 8-21-75

DESCRIPTION

General Location On the east side of Hydraulic in an area between
Industrial and I-35W
Owner Santa Fe Land Improvement Company
Surveyor/Engineer Baughman Company
Address 330 Laura Phone 262-7271

- | | | | |
|---|-----------------------|----------------------------------|-----------------|
| 1. Gross Acreage of Plat | <u>47.27</u> | 7. Lineal Feet of New Streets: | |
| 2. Number of Lots: | | a. <u>70</u> R/W <u>1830</u> ft. | |
| Residential | | b. <u>70</u> R/W <u>831</u> ft. | |
| Commercial | | c. _____ R/W _____ ft. | |
| Industrial | <u>19</u> | d. _____ R/W _____ ft. | |
| Other | | e. _____ R/W _____ ft. | |
| Total Number of Lots | <u>19</u> | TOTAL | <u>2661</u> ft. |
| 3. Minimum Lot Frontage | <u>200</u> ft. | 8. Sidewalk adjacent to all | |
| 4. Minimum Lot Area | <u>45,738</u> sq. ft. | streets? <u>yes</u> <u>X</u> no | |
| 5. Existing Zoning | <u>E</u> | | |
| 6. Proposed Zoning | <u>E</u> | | |
| 9. Public Water Supply <u>Yes</u> (Yes-No), Name <u>City of Wichita</u> | | | |
| 10. Public Sanitary Sewers <u>Yes</u> (Yes-No), Name <u>City of Wichita</u> | | | |
| 11. Health Department Approval (where applicable) _____ (Yes-No) | | | |
| 12. City of Wichita <u>X</u> : Three-Mile Area _____ | | | |

STAFF COMMENTS:

- A. The title of the plat shall be correctly labeled "Santa Fe Midland Industrial District".
- B. The 40 foot building setback indicated from Hydraulic Avenue on Lot 1, Block 1, shall be increased to 60 feet as required in the approval of the preliminary plat.
- C. The applicant shall install or guarantee the installation of a sidewalk adjacent to the east side of Hydraulic Avenue.
- D. The applicant shall be advised that sidewalk construction will be required prior to final building inspection for lots where the sidewalk has been previously required as a condition of platting.
- E. The applicant shall install or guarantee the extension of sanitary sewer to serve all lots being platted.
- F. The applicant shall install or guarantee the concrete Encasement, including manholes, of the existing 36-inch sanitary sewer in Tulsa Avenue where proposed to be crossed by a railroad spur track.
- G. The applicant shall contact the Wichita Water Department and make satisfactory arrangements and guarantee for extension of water lines to serve all lots being platted.
- H. The applicant shall install or guarantee the paving of Tulsa Street and Madison Avenue. *including acquisition of R/W*
- I. The applicant shall install or guarantee the construction of a storm water sewer system in accordance to specifications of the City Engineer, said system to serve the area now being platted as well as the balance of the ownership to the south that was included in the sketch plat.
- J. Recording of the plat within 30 days after approval by the Board of City Commissioners.

1-12-75
JAB

Constr. Imp. Type 8" Conc. Pavt & Int Cb
on Tulsa & Madison Streets from
EL Hydraulic to SL Industrial

205 1/2 118 1/2
2476.67 2366.21

$$4843.38 \times 205 \div 9 = 11,035.87$$

$$11,035 \times 21/21 = 231,735$$

Use \$ 235,000 Plus Agt of PWS
 10,000
 245,000 Property
 6,000 City
 251,000

7-17-75
DRB

Santa Fe midland

Bldg has to move by April next year

Stalling	Mitchell
Bettis	Green
Merritt	Sellers
Korber	Brewer

No R/W on Greenburg

8" Conc. Pav't & Cb.
Chesney
Teller & Madison
S.F.

Ben Dist

lots 1 2 3 5 6 7 8 9 10 Blk 1
lots 1, 2, 3 4 5 6 7, Res A & B
M & S News Service
Sara Greenburg

Include acq. of R/W on Madison
& access to Ben. Dist.

Drainage Items Check Elev.

Bldg Pad Elev. 940 ^{20' H2O}
91 + 3'

S.W.S. System Underground
Dedicate Drainage Easmt &
install undergrd sys for Blk
2 lots 1 2 3 4 incl Temp
Channel to I-35W

Ben Dist to be area served
Furnish info for location RR
for location S.W.S.

Change loc to Teller

San, Sewers.

$$\begin{array}{r} 79 \\ 3 \frac{1}{2} \\ \hline 82 \frac{1}{2} \end{array}$$

$$\begin{array}{r} 79.85 \\ 35 \\ \hline 83.35 \end{array}$$

All lots in Ben list

9-11-75
EAB

Santa Fe Midland Ind. Dist
E of Hyd & S of Industrial

Sidewalk Adj to E side Hydraulic
N. Tulsa to N. Res. C. in sd plat
346.67 @ ~~\$450~~ / LF = ~~156,300~~ 1600

San Sewer to serve lots 4 & 5 Bk 2
Use line on N side Industrial Run S
across St Paul Const. MH @
Common line of lot 4 & 5 Est 70'
& 1 MH plus Pave. Rem. & Replaced
5,000.00 Est. Cost

San Sewer to serve lot 4 Bk 1 use
line N side Industrial Run S across
St Paul Const. MH @ NE cor of
lot Est Cost \$5,000.00

San Sewer lot 5 Bk 1 Const. line along W
side Madison from 36" in Tulsa N to lot 5
Est Cost \$12,000 (410 x 25 + MH) = \$12000

Permit lots 2 & 3 Bk 2 to make conn. to
MH on 36" line if easmt on 36
can be expanded S on lot 3, Bk 2 to
S. line of sd lot & across sd lot

Sewer to serve lot 1, Bk 2 & lots 1 & 2 Bk 1
use MH @ W. lot 1, Bk 2 Const. outside
drop N & S Approx 45' S + MH & Approx
45' N thence W approx 250' & E 150' with
MH 490' line + 4 MH + 2 outside drops \$25,000

1000
11

Oct 29, 1976

TEMPORARY EASEMENT

THIS EASEMENT made this 21ST day of October, 1976,

by and between Santa Fe Land Improvement Company

of the first part and the City of Wichita of the second part.

WITNESSETH: That the said first party, in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt whereof is hereby acknowledged, do hereby grant and convey unto the said second party a temporary right-of-way and easement for the purpose of constructing drainage system according to the plans and specifications now on file in the office of the City Engineer of the City of Wichita, Kansas, over, along and across the following described real estate situated in Sedgwick, County, Kansas, to wit:

All of Lot 2, Block 2, of Santa Fe Midland Industrial District, Wichita, Kansas.

Said temporary easement shall expire at the time a permanent drainage structure is constructed from Tulsa Street to the south along the west side of said Lot 2.

This easement does not include a right-of-way over land occupied by a permanent structure. Said easement shall expire upon completion of drainage system.

IN WITNESS WHEREOF: The said first party has signed these presents the day and year first written.

Santa Fe Land Improvement Company

By J. R. Scott
Its President

STATE OF ILLINOIS X
 X
COUNTY OF COOK X

Be IT REMEMBERED, That on this 21ST day of October, 1976, before me, the undersigned, a Notary Public, in and for the County and State aforesaid, came J. R. Scott, who is personally known to me to be the person who executed the foregoing instrument of writing as the President of SANTA FE LAND IMPROVEMENT COMPANY, and said person duly acknowledged the execution of the same to be the act of said corporation, and that the seal thereto affixed is the common or corporate seal of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

G. J. Dickey
NOTARY PUBLIC

My commission expires:

November 6, 1977.

Santa Fe Midland Ind. Drainage

Outlet Storm Sewer on Tulsa St

$$D.A. = 26 \text{ Ac.}; L = 1200'; H = 5'; T_c = 30 \text{ Min.}$$

$$I_{10} = 4.56 \text{ in/hr}; I_{100} = 6.79 \text{ in/hr.}$$

$$Q_{10} = 0.7 \times 4.56 \times 26 = 83 \text{ cfs} - 48" @ 0.34\%$$

$v = 6.7 \text{ fps}$ require headwall.

$$Q_{100} = 0.7 \times 6.79 \times 26 = 124 \text{ cfs}$$

Ex. Pipe under I 35 W

$$D.A. = 70 \text{ Ac.}; L = 2700'; H = 10'; T_c = 30 \text{ Min.}$$

$$I_{25} = 5.31 \text{ in/hr.}; I_{100} = 6.79 \text{ in/hr.}$$

$$I_{50} = 6.08$$

$$Q_{25} = 0.7 \times 5.31 \times 70 = 260 \text{ cfs.}$$

$$Q_{50} = 0.7 \times 6.08 \times 70 = \underline{298 \text{ cfs}}$$

$$Q_{100} = 0.7 \times 6.79 \times 70 = \underline{\underline{333 \text{ cfs}}}$$

Ex. Structure Design (From Highway Plans)

$$D.A. = 100' \quad C = 0.3 \quad I_{25} = 5.31 \text{ in/hr.}$$

$$Q_{25} = 0.3 \times 5.31 \times 100 = 159 \text{ cfs.}$$

Used 42" pipe with 56 cfs

short 100 cfs for Q_{25}

$$Q_{50} = 298 \text{ cfs} - 56 \text{ cfs (Ex)} = \underline{242 \text{ cfs needed}}$$

Use - 60" RCP

$$Q_{100} = 333 \text{ cfs} - 56 \text{ cfs (Ex)} = 277 \text{ cfs needed}$$

Use - 60" RCP

$$H_{dw} = 9.4'$$



Open Channel

$$DA = 60 \text{ Ac} \quad I_{100} = 6.79 \text{ in/hr.}$$

$$Q_{100} = 0.7 \times 6.79 \times 60 = 285 \text{ cfs.}$$

Try 10' Bottom ; 4:1 slopes ; $D = 4.0'$; $S_0 = 0.001 \text{ ft/ft}$

$$A = 104.0 ; r = 2.42$$

$$Q = \frac{1.49}{.03} \times 104.0 \times 1.802 \times 0.0316 = 267 \text{ cfs}$$

$$V_0 = 2.57 \text{ f.p.s.}$$

Santa Fe Midland Drainage

Outlet Storm Sewer on Tulsa St.

$$DA = 26 \text{ Ac} ; L = 1200' ; H = 5'$$

$$T_c = \left(\frac{11.9 \times 0.2273^3}{5} \right)^{0.385} = 0.2522 \times 60 = 15 \text{ Min}$$

$$I_{100} = 8.98 \text{ in/hr}$$

$$Q_{100} = 0.7 \times 8.98 \times 26 = 163.4 \text{ cfs}$$

$$\text{Use } 54" @ 0.7\% \quad V_0 = 10 \text{ fps}$$

$$\text{or } 60" @ 0.4\% \quad V_0 = 8.2 \text{ fps}$$

I. 35 W Crossing

$$DA = 70 \text{ Ac} ; L = 2700 ; H = 10'$$

$$T_c = \left(\frac{11.9 \times 0.5114^3}{10} \right)^{0.385} = 0.4928 \times 60 = 29 \text{ Min}$$

$$I_{50} = 6.16 \text{ in/hr}$$

$$I_{100} = 6.95 \text{ in/hr}$$

$$Q_{50} = 0.7 \times 6.16 \times 70 = 302 \text{ cfs}$$

$$Q_{100} = 0.7 \times 6.95 \times 70 = 341 \text{ cfs}$$

Existing 42" CMP will carry 56 cfs

New Structure Requirements:

$$Q_{50} = 302 - 56 = 246 \text{ cfs}$$

$$60" - HW = 8.5'$$

$$66" - HW = 7.4'$$

$$Q_{100} = 341 - 56 = 285 \text{ cfs}$$

$$76 \times 42" - 7.6' \quad 60" - HW = 9.2' ; 72" - 7.1'$$

$$66" - HW = 8.0' ; 73" \times 53" - 6.4'$$

$$HW = 1.5 \times 5.5 = 8.3'$$

$$1.5 \times 53 / 12 = 6.8'$$

Open Channel

$$DA = 60 \text{ A c.} \quad T_{100} = 6.95 \text{ in/hr.}$$

$$Q_{100} = 0.7 \times 6.95 \times 60 = 292 \text{ cfs}$$

Try 10' Bottom, 4:1 slopes, $D = 4.1'$

$$S_0 = 0.001 \text{ ft/ft}; \quad A = 108.28; \quad r = 2.47$$

$$Q = \frac{1.49}{0.03} \times 108.28 \times 1.827 \times 0.0016 = 310 \text{ cfs}$$

$$V_0 = 2.87 \text{ f.p.s.}$$

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That, we Santa Fe Land Improvement Company as Principal, and Continental Casualty Company as Surety, are held and firmly bound unto the City of Wichita, County of Sedgwick and State of Kansas, in the sum of Four hundred Seventeen Thousand and No/100 (\$417,000.00) Dollars, lawful money of the United States, for payment of which will and truly to be made, we bind ourselves, our successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, said Principal will make the following improvements. All improvements and other work as set forth to be done and performed in accordance with the plans, specifications and provisions as determined by the City of Wichita for the development and improvement in Santa Fe Midland Industrial District Plat located in Section Three (3), Township Twenty-Eight South (28S), Range One East, Sedgwick County, Kansas.

NOW, THEREFORE, the said Principal Santa Fe Land Improvement Company shall perform the following obligations and conditions:

1. Construction of sidewalk adjacent to the east side of Hydraulic Avenue at a maximum cost of \$1,600.00.
2. Construction of extension of sanitary sewer to serve all Lots being platted at a maximum cost of \$47,000.00.
3. Construction of extension of water lines to serve all Lots being platted at a maximum cost of \$28,400.00.
4. Paving of Tulsa Street and Madison Avenue, including right-of-way acquisition costs for the additional street right-of-way for Madison Avenue at a maximum cost of \$245,000.00.
5. Construction of an open ditch sewer system across the property south of said plat to the Turnpike at a maximum cost of \$85,000.00.
6. Construction of a concrete encasement, including manholes, of the existing 36-inch sanitary sewer in Tulsa Avenue where proposed to be crossed by a railroad spur track at a maximum cost of \$10,000.00.

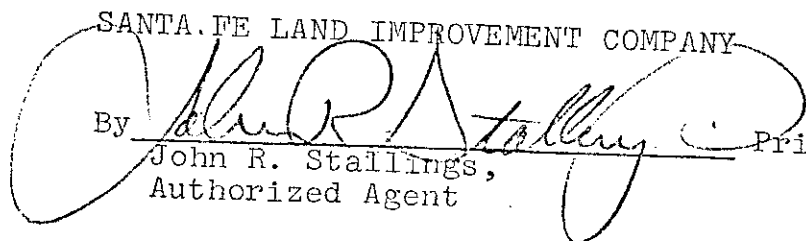
7. Reimbursement to the City of Wichita at an actual cost figure, all costs and expenses related to the preparation of plans and specifications and the inspection of construction of the above listed projects.

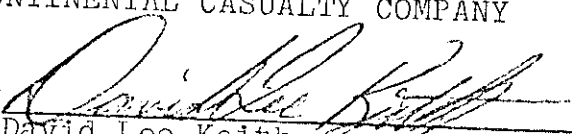
which obligations and each of them shall be performed on or before August 28, 1977 and all of which shall be performed and accomplished in accordance with presently established standards and specifications of the Department of Public Works of the City of Wichita.

NOW, THEREFORE, if the said Principal shall fully and faithfully perform all the work specified to be done and performed within the time prescribed, and in accordance with the plans, specifications and provisions, therefore, to which reference is here made; then this obligation shall be void; otherwise to remain in full force and effect in law; it being expressly understood and agreed that the liability of the Surety for any or all claims hereunder, shall in no event exceed the penal amount of this obligation, as herein stated. It is expressly understood that the City may declare said bond forfeited if the conditions herein have not been fully complied with in every respect and further, that the City may install said projects and pay for same out of said forfeited bond funds.

The said Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the plans or specifications therefore, or any extension of time, shall in any wise affect the obligation of said Surety on its bond.

IN WITNESS WHEREOF, we have hereunto set our hand and seals on this 23rd day of September, 1975.

SANTA FE LAND IMPROVEMENT COMPANY
By  Principal
John R. Stallings,
Authorized Agent

CONTINENTAL CASUALTY COMPANY
By  Surety
David Lee Keith,
Attorney in Fact

STATE OF KANSAS)
) ss.
SEDGWICK COUNTY)

The foregoing instrument was acknowledged before me this 25th day of September, 1975, by JOHN R. STALLINGS, Authorized Agent, of Santa Fe Land Improvement Company, a California corporation, on behalf of the corporation.

Paula J. Hill
Notary Public

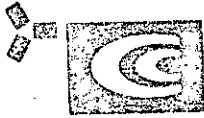
My Commission Expires: September 4, 1979

STATE OF MISSOURI)
) ss.
Jackson COUNTY)

The foregoing instrument was acknowledged before me this 23 day of September, 1975, by DAVID LEE KEITH, Attorney in Fact, of Continental Casualty Company, a ILLINOIS corporation, on behalf of the corporation.

Barbara M. Lee
Notary Public

My Commission Expires: My Commission Expires May 4, 1976



CONTINENTAL CASUALTY CO.

Chicago, Illinois

AN ILLINOIS CORPORATION

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men by these Presents, That CONTINENTAL CASUALTY COMPANY, a corporation duly organized and existing under the laws of the State of Illinois, and having its principal office in the City of Chicago, and State of Illinois, does hereby make, constitute and appoint DAVID LEE KEITH, INDIVIDUALLY

of KANSAS CITY, MISSOURI
its true and lawful Attorney-in-Fact with full power and authority hereby conferred to sign, seal and execute in its behalf bonds, undertakings and other obligatory instruments of similar nature as follows:
WITHOUT LIMITATIONS

and to bind CONTINENTAL CASUALTY COMPANY thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of CONTINENTAL CASUALTY COMPANY and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company.

"Article IX—Execution of Documents

Section 3. Appointment of Attorney-in-fact. The President or a Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The President or any Vice President or the Board of Directors may at any time revoke all power and authority previously given to any attorney-in-fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 3rd day of April, 1957.

"Resolved, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to Section 3 of Article IX of the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

In Witness Whereof, CONTINENTAL CASUALTY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed to this 29TH day of JANUARY, 19 74.

CONTINENTAL CASUALTY COMPANY

State of Illinois }
County of Cook } ss



R. J. Wall
R. J. WALL

Vice President.

On this 29TH day of JANUARY, 19 74, before me personally came

R. J. WALL to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Western Springs, State of Illinois; that he is a Vice-President of CONTINENTAL CASUALTY COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



Carol Walczak
CAROL WALCZAK Notary Public.

CERTIFICATE My Commission Expires October 3, 1976

I, HAROLD P. SCHULER, Assistant Secretary of CONTINENTAL CASUALTY COMPANY, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that Section 3 of Article IX of the By-Laws of the Company and the Resolution of the Board of Directors, set forth in said Power of Attorney are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said Company this 23 day of September, 19 75.



Harold P. Schuler
HAROLD P. SCHULER Assistant Secretary.

CNA insurance

TEMPORARY DRAINAGE EASEMENT

THIS EASEMENT made this ____ day of September, 1975, by and between Santa Fe Land Improvement Company of the first part and the City of Wichita on the second part.

WITNESSETH:

That the said first party, in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt whereof is hereby acknowledged, does hereby grant and convey unto the said second party a temporary right-of-way and easement for the purpose of constructing, maintaining, and repairing a drainage system according to the plans and specifications now on file in the office of the City Engineer of the City of Wichita, Kansas, over, along and under the following described real estate situated in Sedgwick County, Kansas; to wit:

A tract of land in the Northwest Quarter of Section 10, Township 28[✓] South, Range 1[✓] East of the 6th P.M. in Wichita, Sedgwick County, Kansas, being more particularly described as follows:

Beginning at a point on the North line of said Northwest Quarter, said point being 1345.6[✓] feet Easterly of the Northwest corner of said Northwest Quarter; thence South along the East line of Lot 1, Block 2 of Santa Fe Midland Industrial District, as shown on recorded plat extended, a distance of 393.0[✓] feet to a point of curve to the right having a radius of 90.0[✓] feet; thence continuing around said curve; a distance of 62.8[✓] feet to the end of said curve; said point being 60.0[✓] feet Northwesterly of the Northerly property line of Interstate Highway I-35; thence continuing in a Southwesterly direction and parallel with said Highway property line a distance of 430.0[✓] feet to a point of curve to the left having a radius of 110.0[✓] feet; said point being 60.0[✓] feet Northwesterly of the Northerly property line of Interstate Highway I-35; thence continuing around said curve a distance of 80.6[✓] feet to end of curve; thence tangent to last described course a distance of 50.0 feet Southerly to the intersection of the Northerly property line of Highway I-35; thence in a Northeasterly direction along said Highway property line a distance of 27.8[✓] feet; thence Northerly a distance of 22.0 feet to a point of curve to the right having a radius of 90.0[✓] feet; thence continuing around said curve a distance of 65.9 feet, said point being 40.0 feet Northwesterly of the Northerly property line of Highway I-35; thence Northeasterly continuing parallel with said Highway property line a distance of 430.0 feet a point of curve to the left having a radius of 110 feet; said point being 40.0 feet Northwesterly of the property line of Highway I-35; thence Northerly continuing around said curve a distance of 76.8 feet to end of curve; thence continuing in a Northerly

direction a distance of 393.0 feet to a point on the North line of Northwest Quarter of Section 10; thence West along said North line a distance of 20.0 feet to the point of beginning, containing (20,118) Sq. feet (0.46 acres) of land; more or less.

20,041

And said second party is hereby granted the right to enter upon said premises at any time for the purpose of constructing, operating, maintaining, and repairing such drainage system. Said easement shall expire upon the platting of the above described real estate.

IN WITNESS WHEREOF: The said first party has signed these presents the day and year first written.

SANTA FE LAND IMPROVEMENT COMPANY

By

J.R. SCOTT, President

ATTEST

Secretary

ACKNOWLEDGEMENT

STATE OF _____)
) ss.
 _____ COUNTY)

The foregoing instrument was acknowledged before me this _____ day of _____, 1975 by J. R. Scott, President of Santa Fe Land Improvement Company, a California corporation, on behalf of the corporation.

Notary Public

My Commission Expires:

SUMMARY - DRAINAGE MIDLAND INDUSTRIAL DISTRICT

ON Tulsa Street

File Plan 16-3-2-19 → Q_{50} of 105 cfs consider OK
 2 inlets + 2-24" pipe flood outfall line = 42 cfs ± (Requires 105 cfs)
~~Requires 11 cfs inlets & loads (number of existing)~~
 Need 62 cfs ± additional flood to outfall line if it is to be utilized.
~~on ponds storage water~~

outfall line from Tulsa St. considered OK

Outfall line from Area B Pond considered OK although peak rate of flow is 87.6 cfs when pond is at maximum. Average flow from pond is 62 cfs. (Flow given on AT&SF Report is 103 cfs)

POND Volume by AT&SF Report is approx 8.2 Ac Ft
 Max possible volume can be approx 9.3 Ac Ft
 (Water Surface @ 85.4; Bottom @ 79.0, Area @ 86.0 = 1.82 Ac)

Q_{50} inflows, 62 cfs outflow, requires 5.84 Ac Ft
 (bottom @ 79.0, 4:1 sides, DWS = 83.31)

62 cfs requires 83.79
 87.6 cfs requires 85.29

Above corrected for DWS @ 84.54 & Pond of 7.82 Ac Ft

Outflow: 75.87 cfs peak (2.25' drop)

53.65 cfs average (1.125' drop)

Min. Pad Area "B" = 87.5

All proposed facilities
~~design~~ OK except area above the 54" CMP
 on Tulsa St.

Outfall channel OK if OK with flood control section

Existing 42" under I-135 considered OK although FE is high

Q_{50} 46 cfs from area "C" ($V = 4.78$) (DSFL not given) ($L = 160$)
 87.0 87.64

$K_M = 1$ $K_X = 0.50$ Drop = 0.64' (Est. DWS @ ~~87.0~~ USWS @ ~~87.64~~)

Min. Pad Area "C" = 90.6 → replace 42" pipe (lower approx 3')

Midland Industrial District Drainage

Area A (1800'± x 800'±) by AT&SF Used 31.3 Ac consider QK

by AT&SF $Q_{50} = 105$ Considered Q $\frac{Q_n}{A} = 3.35 \text{ cfs/Ac}$

Outfall = 3 curb Inlet (30" RCP to be plugged)

$$\therefore Q/\text{inlet} = \frac{105}{3} = 21 \text{ cfs/inlet } \underline{\text{No}}$$

(For 3 inlets requires head of 3.62' or 3.07' above curb)

With head at Top of curb (6.4 cfs/inlet) requires 16.4 inlets

With head at 0.3' above TC (9.75 cfs/inlet) requires 11 inlets Use
on Tulsa Street

(Area A)

Outfall Line (by AT&SF) 54" CMP @ 0.70% @ 117 cfs (V = 7.357)

$$n = \frac{1.486 (1.125)^{2/3} (.007)^{1/2}}{7.357} = 0.018 \text{ considered QK}$$

Area B Outfall Line (by AT&SF) 103 cfs 48" pipe (V = 8.197) $s = 0.20\%$

$$n = \frac{1.486 (1)^{2/3} (.002)^{1/2}}{8.197} = .0072 \underline{\text{No}}$$

$$\left. \begin{array}{l} \text{Let } n = 0.015 \quad K_m = 1.7 \\ K_f = \left[\frac{5.397 (.015)^2}{1^{2/3}} \right]^{3/4} = 2.26 \end{array} \right\} K = 3.97$$

$$\text{Water Drop} = K \frac{V^2}{2g} = 3.97 \frac{8.197^2}{2g} = 4.15' \text{ water drop}$$

$$s = \frac{\text{Drop}}{L} = 1.20\%$$

DSWS @ Pipe Top = 82.29 \therefore USWS = 86.43 @ pond
about 1' to high

Let Drop = 3' \therefore V = 6.97 fps & Q = 87.6 cfs peak 62 cfs average

Pond volume 1.82 Ac @ elev 86.0 with 4:1 sides

zero area @ elev 15.6

$$\text{Vol} = \frac{1}{3} Ah \quad A = [8(\text{elev} - 50.805)]^2$$

$$h = \text{elev} - 50.805$$

$$Ah = 64 (\text{elev} - 50.805)^3$$

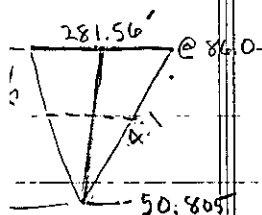
$$V = \frac{64}{3} (\text{DWS} - 50.805)^3 - \frac{64}{3} (\text{bottom} - 50.805)^3$$

$$V = \frac{64}{3} [(\text{DWS} - 50.805)^3 - (\text{bottom} - 50.805)^3]$$

Bottom @ 79.0 DWS @ 85.4 Depth 6.4'

$$\text{Vol.} = \frac{64}{3} [41,403.781 - 22,413.842] 405, 118.71 \text{ CF} = \underline{9.3 \text{ Ac Ft}}$$

Check $(1.82 - 1.22) 6.4 = 9.73 \text{ Ac}$ Consider 9.3 Ac as QK



$$L = 2 (\text{elev} - 50.805) 4$$

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Pond @ B Area = 31.3 + 18.7 = 50 Ac $t_c = 21 \text{ mins}$

Permissible Ponding = 9.3 Ac Ft

Outflow = 87.6 cfs peak (Use 62 cfs Average)
 $\frac{1}{2}$ ponded, $\frac{1}{2}$ turf

	inches R_{50}	inch R_c	Log	Vol. Runoff			Δ Ponding	Pond	
10	1.210	0.321	.2805	45,260 (2)	75.43	13.43	8060	8060 CF	0.19 Ac ft
20	1.899	0.369	.5929	164,645 (3)	198.98	136.98	82,186	90,245	2.07
30	2.381	.402	.8027	288,321 (2)	206.13	144.13	86,425	176,721	4.07
40	2.747	.431	.8824	370,920 (3)	137.67	75.67	45,400	222,120	5.10
50	3.036	.457	.9213	431,250 (2)	100.54	38.54	23,130	245,250	5.63
60	3.271	.481	.9433	477,673 (3)	77.37	15.37	9223	254,473	5.84 Ac Ft max
70	3.466	.523	.9662	544,860 (2)	55.99	-6.01	-7213	247,260	5.68
100	3.896	.560	.9774						
120	4.103	.593	.9837						
140	4.274	.624	.9877						
160	4.419	.653	.9903						
180	4.548	.680	.9922						

9.3 Ac Ft Permissible

Pond OK



$A = 4(10) + 4^2(4) = 104 \text{ SF}$

$P = 10 + 2\sqrt{4^2 + 16^2} = 42.98$

$r = 2.42 \quad r^{2/3} = 1.8022$

$V = \frac{1.486}{n} r^{2/3} S^{1/2}$

$V = \frac{1.486}{.03} 1.8022 (.502)^{1/2} = 3.99$

$Q = 415 \text{ cfs}$

requires $62 + 46 = 108 \text{ cfs}$
 + Area of Interstate
 + Area south of Interstate

Channel OK