CITY OF WICHITA, KANSAS

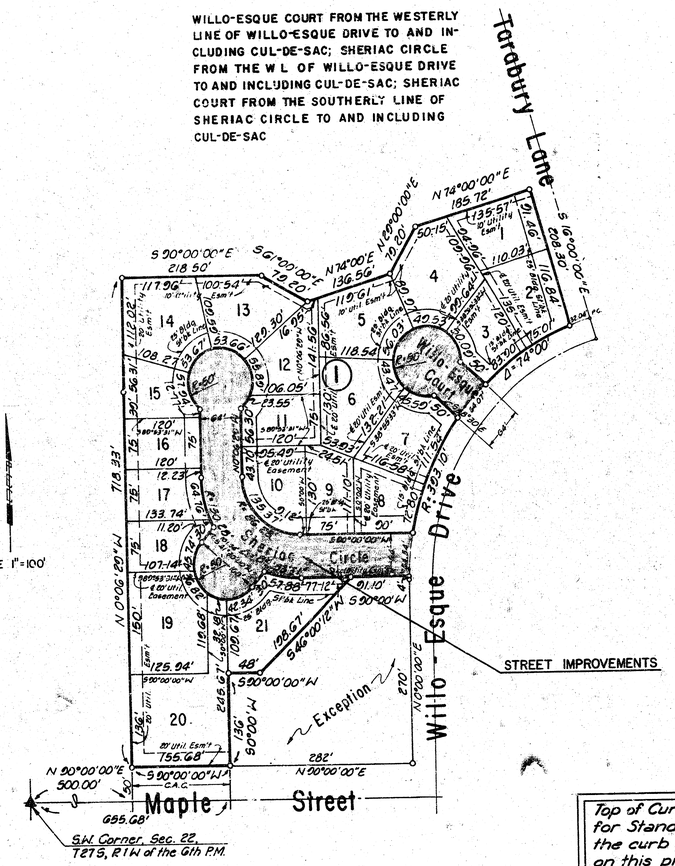
STREET IMPROVEMENTS

(WILLO-ESQUE 5TH ADDITION)

R. W. BRUGGEMAN - DIRECTOR OF ENGINEERING / CITY ENGINEER

PROJECT NO. 472 - 76 - 245 - 81106 - 000 - 000 - 001

WILLO-ESQUE COURT FROM THE WESTERLY LINE OF WILLO-ESQUE DRIVE TO AND INCLUDING CUL-DE-SAC; SHERIAC CIRCLE FROM THE W L OF WILLO-ESQUE DRIVE TO AND INCLUDING CUL-DE-SAC; SHERIAC COURT FROM THE SOUTHERLY LINE OF SHERIAC CIRCLE TO AND INCLUDING CUL-DE-SAC



BENCH MARKS

B.M- C.O.W. Disc., 52' S. & 32' W. of ℄'s Woodchuck & Maple. Elev. = 141.10

B.M- 3/4" I.P., NE Cor Lot 5. Elev. = 140.24

B.M- Chiseled □ on B/C; W. Side of Willo-Esque Drive; 67½' W. of Tarabury Lane. Elev. = 141.30

B.M- Chiseled □ on B/C; W. Side of Willo-Esque Drive; 96' S. of ℄ Sheriac Circle. Elev. = 136.14

S.W. Corner Sec. 22, T27S, R1W of the 6th P.M.

INDEX OF SHEETS

1. TITLE SHEET
2. TYPICAL SECTION
3. VALLEY GUTTER DETAILS
4.-5. PLAN SHEETS
6.-8. CROSS SECTIONS

NOTE: All excess excavated material from street construction shall be wasted on lots 18, 19, 20, and 21 block 1.

Top of Curb elevations are given for Standard Curb & Gutter. Since the curb and gutter to be const. on this project is to be Roll Type, subtract 0.25 feet from the top of curb elevations shown. The walk grades on the plans are with respect to full curb elevations and these are the elevations the walk and property lines are to be graded to.

JULY, 1981

BRENT E. REMSBERG LICENSED 8168 KANSAS PROFESSIONAL ENGINEER

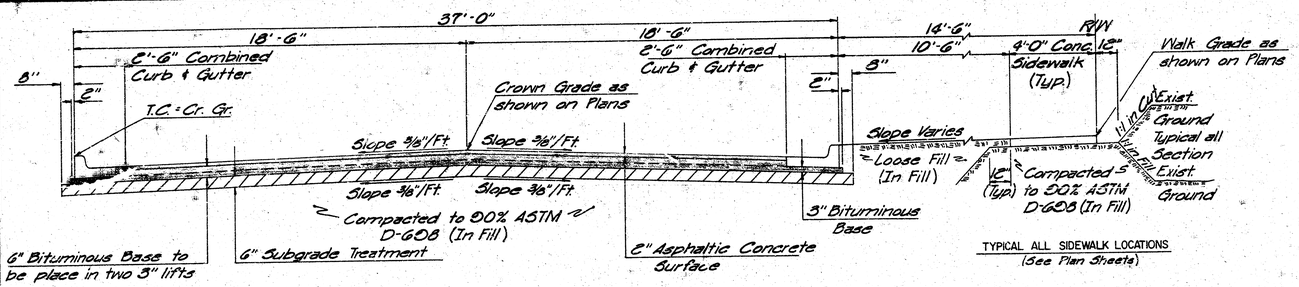
No.	Revision	By	Date

CITY OF WICHITA, KANSAS

TITLE SHEET
STREET IMPROVEMENTS
PROJ. NO. 472-76-245-81106-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

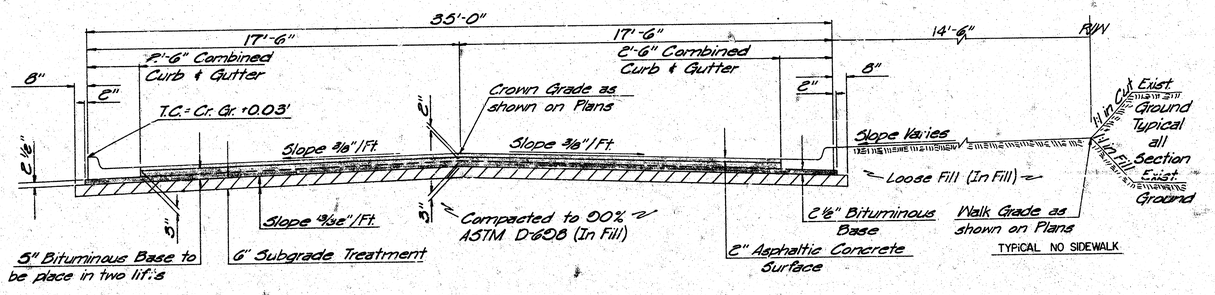
Designed by BR | Job No. 81180 | Sht. 1 of 8
Drawn by BS | Date July, 1981



TYPICAL ALL SIDEWALK LOCATIONS
(See Plan Sheets)

TYPICAL SECTION

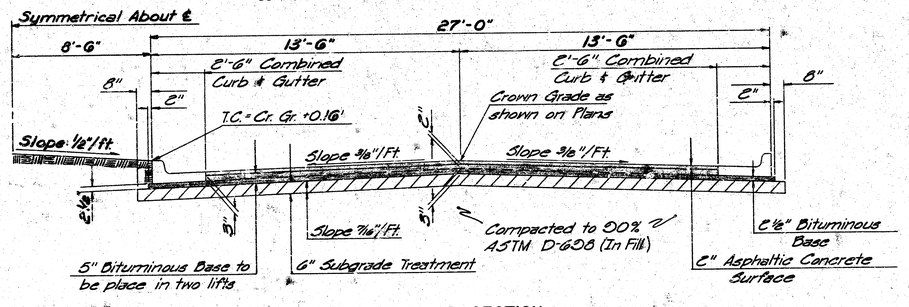
37' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE

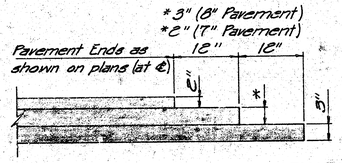


TYPICAL NO SIDEWALK

TYPICAL SECTION

35' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE



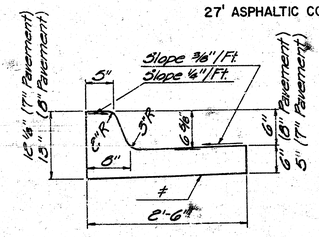


DETAIL OF TRANSVERSE CONSTRUCTION JOINTS

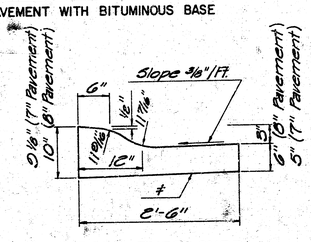
Transverse Construction Joints shall be constructed in flexible base pavements at locations where pavement temporarily ends to facilitate future pavement construction as shown by detail. The cost of constructing the Transverse Construction Joints shall not be measured or paid for directly but shall be included in the bid price for square yards of asphaltic concrete pavement.

TYPICAL SECTION

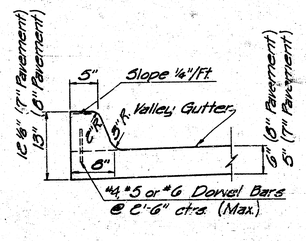
27' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE



STANDARD CURB & GUTTER DETAIL

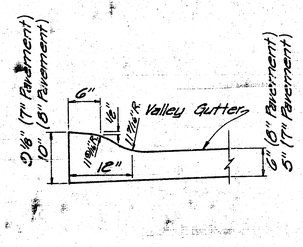


ROLL TYPE CURB & GUTTER DETAIL



STANDARD INTEGRAL CURB & GUTTER DETAIL

Note: Integral Curb shall be tied to the pavement base with short deformed dowel bars spaced at 2'-6" intervals. These dowel bars shall be not less than 1/2" or more than 3/4" in diameter.



ROLL TYPE INTEGRAL CURB & GUTTER DETAIL

Note: Roll Type Integral Curb shall be poured monolithic with Valley Gutter.

(#) Slope 3/8"/Ft. (37' Pavement)
(#) Slope 7/16"/Ft. (35' Pavement)
(#) Slope 15/32"/Ft. (27' Pavement)

GENERAL NOTES

1. A TACK COAT OF EMULSIFIED ASPHALT (SS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE 0.05 GALLONS PER SQUARE YARD BETWEEN LIFTS OF ASPHALTIC MATERIALS WHEN ORDERED BY THE ENGINEER. TACK COAT WILL NOT BE PAID FOR DIRECTLY AND SHALL BE CONSIDERED AS SUBSIDIARY TO PRICE BID FOR ASPHALTIC PAVEMENT.

   BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR CROWN AND GRADE. CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF 1 FOOT WITH JOINTS IN PRECEDING LIFTS AND SUCH THAT A JOINT WILL BE CONSTRUCTED ON THE PAVEMENT CENTERLINE IN THE TOP LIFT.

2. THE A.C. PAVEMENT BETWEEN COMBINED CURB AND GUTTER ON 35' BACK TO BACK AND 29' BACK TO BACK STREETS SHALL BE PAID AS SQUARE YARDS 7" A.C. PAVEMENT (5" BITUMINOUS BASE). THE BITUMINOUS BASE UNDER THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS 2-1/2" BITUMINOUS BASE.

3. SIDEWALKS INDICATED ON THE TYPICAL SECTION ARE FOR LOCATION ON THAT SECTION ONLY. SIDEWALKS SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLAN SHEET AS PART OF THIS PROJECT.

4. CONTRACTION JOINTS MAY BE CONSTRUCTED IN INTEGRAL CURB BY SAWING WITH AN APPROVED CONCRETE SAW. THE SAW SHALL EXTEND THROUGH THE CURB TO THE PAVEMENT. SAWED CONTRACTION JOINTS SHALL HAVE A MAXIMUM SPACING OF 10'.

5. STANDARD INTEGRAL CURB SHALL BE TIED TO THE PAVEMENT BASE WITH SHORT DEFORMED DOWEL BARS SPACED AT 2'-6" INTERVALS. THESE DOWEL BARS SHALL NOT BE LESS THAN 1/2" NOR MORE THAN 3/4" IN DIAMETER, AND SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO INTEGRAL CURB. ROLL TYPE INTEGRAL CURB SHALL BE POURED MONOLITHIC WITH THE VALLEY GUTTER.

6. THE 6" SUBGRADE TREATMENT SHALL BE PAID FOR PER SQUARE YARD OF MANIPULATION AND PER TON OF LIME OR CEMENT, COMPUTED AT THE RATE OF 25 POUNDS PER SQUARE YARD. THE ACTUAL RATE OF LIME OR CEMENT SHALL BE DETERMINED BY THE ENGINEER AND NO ALTERATION OF THE UNIT PRICE BID FOR LIME OR CEMENT WILL BE MADE. IF THE ENGINEER DETERMINES, BASED UPON SOIL TESTS OF THE SUBGRADE MATERIAL IN PLACE, THAT NO SUBGRADE TREATMENT IS REQUIRED, THE TOP 6" OF THE SUBGRADE SHALL BE COMPACTED TO 90" ASTM D-1557 OR 95% ASTM D-698. IN THIS EVENT, THE BID ITEMS OF MANIPULATION AND LIME OR CEMENT SHALL BE UNDERRUN AND THE BID ITEM COMPACTED FILL SHALL BE INCREASED BY THE AMOUNT OF MANIPULATED FILL SHOWN ON THE PLANS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH APPLICABLE STATE LAWS.

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

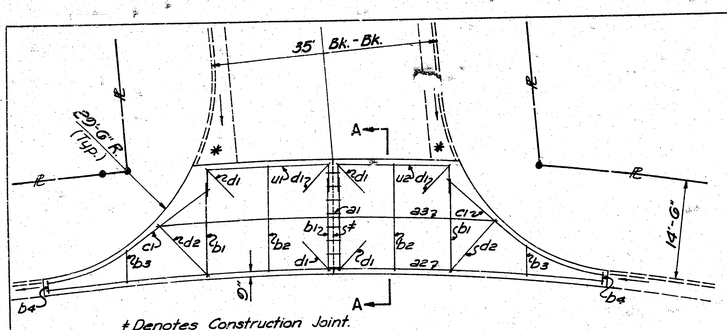
TYPICAL SECTIONS

STREET IMPROVEMENTS
WILLO-ESQUE 5th ADDITION
PROJ. NO. 472-76-245-81106-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by BR	Job No 81180	Sht. 2 of 8
Drawn by PS	Date July, 1981	

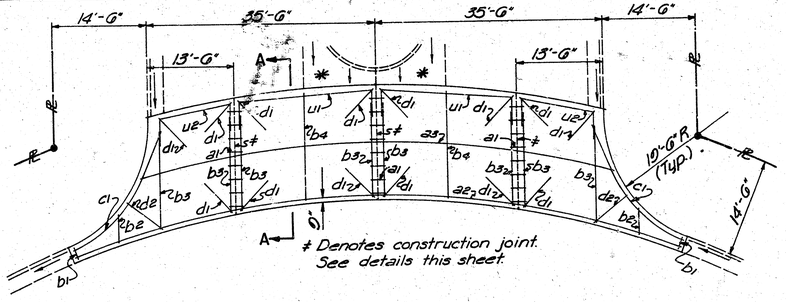
SHEET NO.	TOTAL SHEETS
3	8



\# Denotes Construction Joint.
See Details this sheet.

VALLEY GUTTER DETAIL
For Willo-Esque Court & Sheriac Circle

* Any additional materials or labor required due to flare from typical section shall be subsidiary to base bid for combined Curb & Gutter.



\# Denotes construction joint.
See details this sheet.

VALLEY GUTTER DETAIL
For Sheriac Court

WILLO-ESQUE COURT
VALLEY GUTTER BAR LIST

Bar	No.	Size	Length
a1	8	#4	3'-0"
a2	1	#6	85'-0"
a3	1	#6	50'-0"
b1	4	#6	13'-6"
b2	2	#6	15'-6"
b3	2	#6	5'-0"
b4	2	#6	2'-0"
c1	2	#6	30'-0"
d1	6	#6	6'-0"
d2	2	#6	12'-0"
u1	1	#6	25'-0"
u2	1	#6	25'-0"
Reinf. Steel =			620 Lbs.



u1, u2 bars



c1 bars

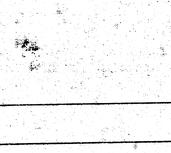
BENDING DIAGRAMS
For Willo-Esque Court & Sheriac Circle

SHERIAC COURT
VALLEY GUTTER BAR LIST

Bar	No.	Size	Length
a1	24	#4	3'-0"
a2	1	#6	95'-6"
a3	1	#6	75'-0"
b1	2	#6	2'-0"
b2	2	#6	4'-0"
b3	8	#6	13'-6"
b4	2	#6	15'-6"
c1	2	#6	23'-0"
d1	14	#6	6'-0"
d2	2	#6	6'-6"
u1	2	#6	28'-6"
u2	2	#6	19'-0"
Reinf. Steel =			900 Lbs.



u1 & u2 bars

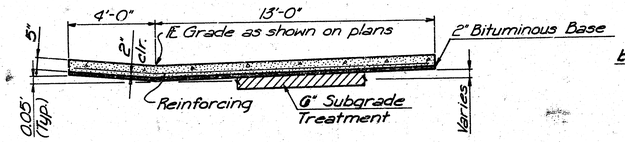


c1 bars

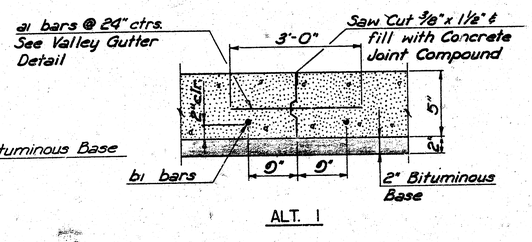
BENDING DIAGRAMS
For Sheriac Court

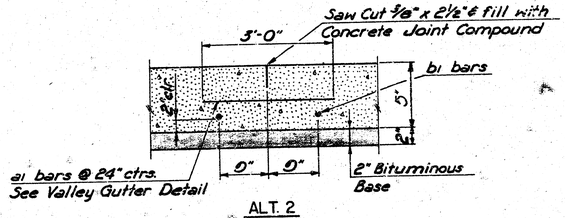
SHERIAC CIRCLE
VALLEY GUTTER BAR LIST

Bar	No.	Size	Length
a1	8	#4	3'-0"
a2	1	#6	87'-0"
a3	1	#6	53'-0"
b1	4	#6	13'-6"
b2	2	#6	15'-6"
b3	2	#6	5'-0"
b4	2	#6	2'-0"
c1	2	#6	30'-0"
d1	6	#6	6'-0"
d2	2	#6	11'-0"
u1	1	#6	27'-0"
u2	1	#6	25'-0"
Reinf. Steel =			630 Lbs.



SECTION A-A





CONSTRUCTION JOINT DETAILS

CITY OF WICHITA, KANSAS

VALLEY GUTTER DETAILS

STREET IMPROVEMENTS
WILLO-ESQUE 5th ADDITION

PROJ. NO. 472-76-245-81106 -000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by	BR	Checked by		3/8
Drawn by	GH	Date	July, 1981	Job No. 81180

Sheet 3 of 8

CURVE DATA BASED ON ℄ RADIUS Δ/2 = 44°56'45.5"					
STATION	℄ ARC LENGTH	CHORD LENGTH 8' OFF LEFT FACE CURB	CHORD LENGTH 8' OFF RIGHT FACE CURB	℄ DEFLECTION ANGLE	℄ TOTAL DEFLECTION
22+05.01	——	——	——	0°00'00"	0°00'00"
+25	10.99'	24.19	15.75'	4°50'30"	4°50'30"
+47.86	22.86'	27.65'	——	5°32'12"	——
+50	25.00'	——	10.72'	6°03'18.5"	10°53'48.5"
+75	"	30.28'	"	" " "	16°57'07.0"
23+00	"	"	"	" " "	23°00'25.5"
+25	25.00'	30.28'	10.72'	6°03'18.5"	29°03'44.0"
+33.50	8.50'	10.30'	——	2°03'31"	——
+50	25.00'	——	10.72'	6°03'18.5"	35°07'02.5"
+75'	25.00'	30.28'	10.72'	6°03'18.5"	41°10'21.0"
23+90.58	15.58'	18.87'	12.20'	3°46'24.5"	44°56'45.5"

SCALE 1" = 20'

Wk. Gr. +0.10'
Lt. +2.72 %
Lt. +1.70%
Lt. +1.48 % ℄ +1.70%
50' V.C.
P.I. +05.01
P.C. +05.01
EXCEPTION
10' Util. Esmt
*5'-0" Transition
Sta. 2+70.00 P.C.
30' R. (Typ.)
Sta. 20+00.00 ℄ Sheriac Cl. = Sta. 3+06.06 ℄ Willo-Esque Dr.
℄ Sheriac Cl.
358.10' R.
℄ Willo-Esque Dr.
Construct 7" Valley Gutter See Sheet No. 3 Remove 88.4 L.F. Comb. Curb & Gutter
8" Sanitary Sewer
Sta. 22+00.68 ℄ Sheriac Cl. = Sta. 60+00.00 ℄ Sheriac Ct.
Rt. ℄ +2.72 %
Wk. Gr. +0.40'
Rt. ℄ +1.70%
No V.C.
Rt. +1.08%
Rt. +0.426%
Rt. +0.32%
+0.72%
Wk. Gr. +0.10'
+0.32%
50' R. (Typ.)
Construct 7" Valley Gutter See Sheet No. 3
+00.58 P.T.
Lt. +0.32%
Wk. Gr. +0.10'
℄ Curve Data
Δ = 89°53'31"
D = 48°26'27"
R = 118.28'
T = 118.06'
L = 185.57'
Lc = 167.18'

* Match Existing.

* Note: All Top of Curb (T.C.) Elevations shown are for Standard Curb & Gutter. Roll Type Curb & Gutter shall be constructed on Sheriac Circle & Sheriac Court beginning with a 5'-0" transition at the West side of the Valley Gutter at Sheriac Circle & Willo-Esque Drive.

See Sheet No. 5

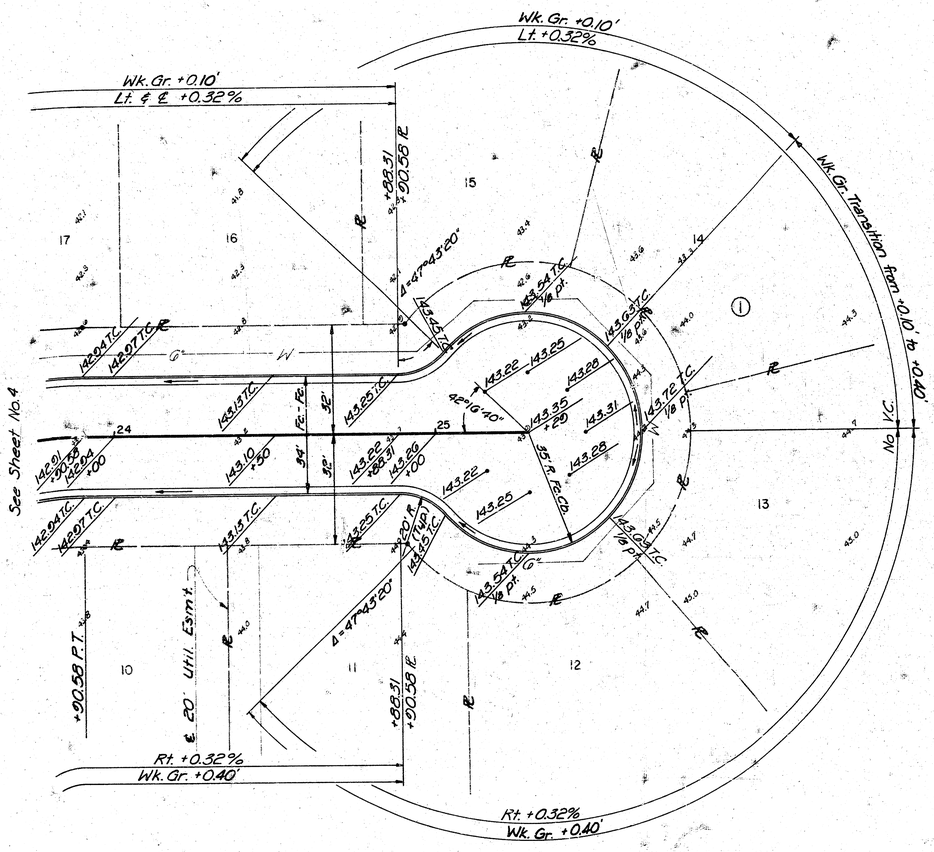
No.	Revision	By	Date

CITY OF WICHITA, KANSAS
SHERIAC CIRCLE
STA. 20+00.00 TO STA. 23+90.58
SHERIAC COURT
STA. 60+00.00 TO STA. 60+53.44
PROJ. # 472-76-245-81106-000-000-001

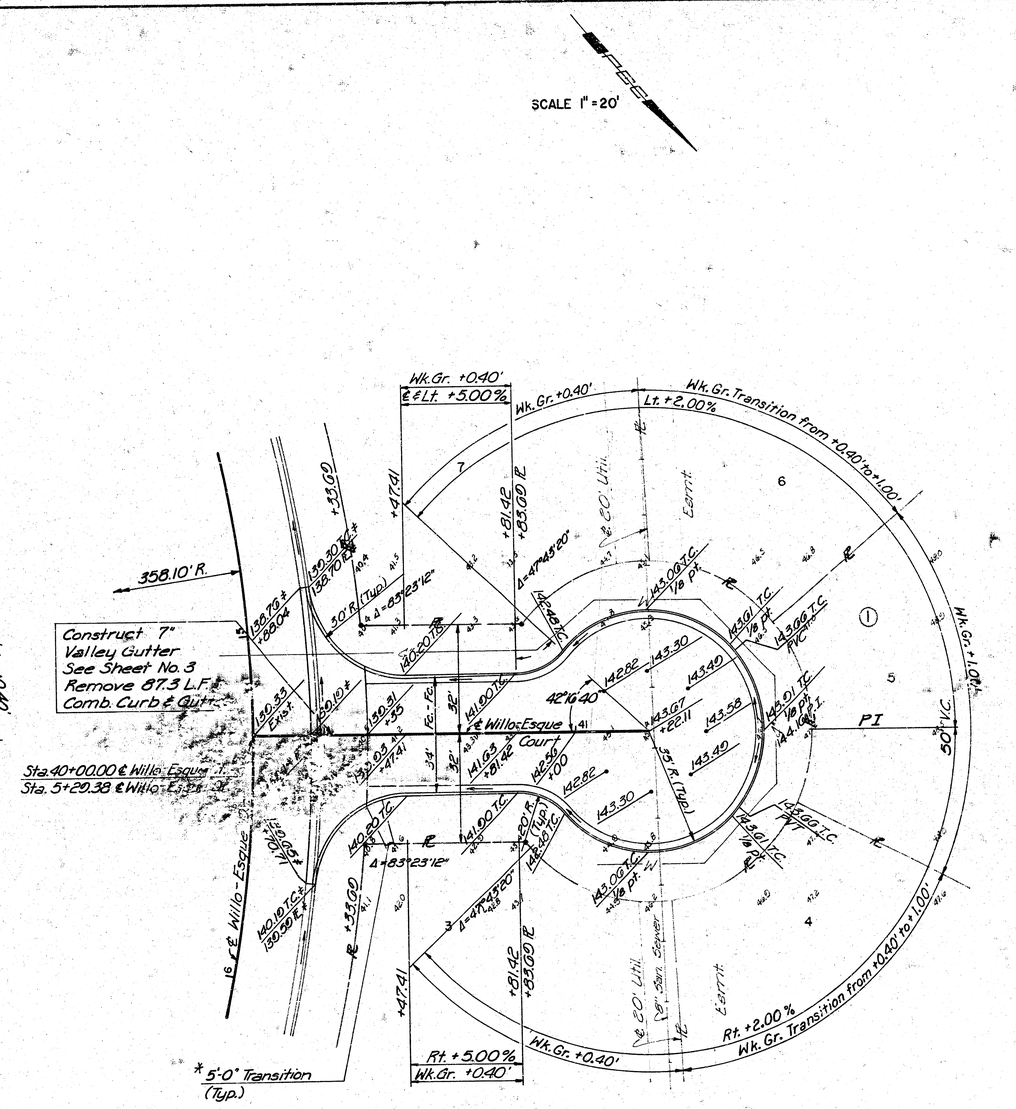
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by BR	Job No. 81180	Sht. 4 of 8
Drawn by GH	Date July, 1981	

SCALE 1" = 20'



SCALE 1" = 20'



358.10' R.

Construct 7" Valley Gutter See Sheet No. 3 Remove 87.3 L.F. Comb. Curb & Gutter

Sta. 40+00.00 ℄ Willo-Esque Court
Sta. 5+20.38 ℄ Willo-Esque Court

16 ℄ Willo-Esque

* 5'-0" Transition (Typ.)

Match Existing
* All Top of Curb (T.C.) Elevations shown are for Standard Curb & Gutter. Roll Type Curb & Gutter shall be constructed on Willo-Esque Court beginning with a 5'-0" Transition as shown.

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

SHERIAC CIRCLE
STA. 23190.58 TO STA. 25129.00

WILLO-ESQUE COURT
STA. 40100.00 TO STA. 41122.11

PROJ. NO. 472-76-245-81106-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by BR	Job No. 81180	Sht. 7 of 8
Drawn by GH	Date July, 1981	

50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50

145 / 140

142.04 T.C.

Sta. 23+90.58

C=40.5
LF=4

57.08'

142.73 T.C.

Sta. 23+33.50

C=43.5 LF=4

142.65 T.C.

13.95'

Sta. 23+19.55

C=55.5 ↓ C=40.5 ↑ LF=3.5 ↑

28.87'

Area = (28.83 × 25.68) − (π × 28.83² × 82.38 / 360) = 195.5 S.F.
Average depth = 0.85'
Vol. = 4.27 C.Y.

142.57 T.C.

Sta. 22+90.68

C=67

28.87'

Area = (28.83 × 25.68) − (π × 28.83² × 83.38 / 360) = 135.5 S.F.
Average depth = 0.75'
Vol. = 3.76 C.Y.

142.35 T.C.

Sta. 22+61.81

C=63 ↑ C=49 ↑ LF=3 ↑

142.13 T.C.

13.95'

Sta. 22+47.86

C=73

42.85'

141.40 T.C.

Sta. 22+05.01

C=84
LF=.5

55.01'

140.41 T.C.

Sta. 21+50.00

C=91.5
LF=.5

50'

130.11 T.C.

Sta. 21+00.00

C=150.5

53'

137.67 T.C.

Sta. 20+47.00

C=126

13'

137.45 T.C.

137.61 T.C.

Sta. 20+34.00

C=78

14'

130.76 T.C.

137.71 T.C.

Sta. 20+20.00

C=93

Total Earthwork Quantities

Excavation:	2,733.7 C.Y.	Compacted Fill:	0 C.Y.	Loose Fill:	151.5 C.Y.	Manipulated Fill:	0 C.Y.
10%:	273.3 C.Y.		0 C.Y.		15.2 C.Y.		0 C.Y.
Total:	3,007.0 C.Y.		0 C.Y.		166.7 C.Y.		0 C.Y.

Sheriac Circle
Sta. 20+20.20 to Sta. 23+90.58

Proj. No. 472-79-245-8106-000-000-001

Sheet No. 6 of 8 6/8

50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50

50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50

145
140
Sta. 61+03.44
15'
Sta. 60+88.44
$A_1 = (36.17^2 - 7.83^2) \times \pi/2 = 1958.7$ S.F.
Average depth (cut) = 0.62'
Vol. = 44.81 C.Y. (Exc.)
7.83'
50'
36.17'
$A_2 = (50^2 - 36.17^2) \times \pi/2 = 1872.4$ S.F.
Average depth (fill) = 1.27'
Vol. = 87.75 C.Y. (L.F.)
35'
Sta. 60+53.44
C = 35
LF = 35
21.44'
Sta. 60+32.00
C = 81.5
LF = 13

50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50

145
140
Sta. 25+79.00
15'
Sta. 25+64.00
$A_1 = 36.17^2 \times \pi/2 = 2054.7$ S.F.
Average depth (cut) = 1.50'
Vol. = 114.53 C.Y. (Exc.)
50'
36.17'
$A_2 = (50^2 - 36.17^2) \times \pi/2 = 1872.4$ S.F.
Average depth (cut) = 0.47'
Vol. = 32.36 C.Y. (Exc.)
35'
143.54 T.C.
Sta. 25+29.00
C = 03
LF = 13
40.68'
143.25 T.C.
Sta. 24+88.30
C = 50
LF = 5
44.30'
143.10 T.C.
Sta. 24+40.00
C = 47
LF = 5.5
Sta. 23+00.58
40.42'

Shariac Circle
Sta. 24+40.00 to Sta. 25+79.00
Shariac Court
Sta. 60+32.00 to Sta. 61+03.44

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Shariac Circle & Shariac Court 7

50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50

150 145 150 145 150 145 150 145 150 145 150 145 150 145 140 145 140 145 140 145 140 135

Sta. 41+72.11

15'

Sta. 41+57.11

$A_1 = 36.17^2 \times \frac{1}{2} = 2054.7$ S.F.
Average depth (cut) = 3.10'
Vol. = 235.91 C.Y. (Exc.)

$A_2 = (130^2 - 36.17^2) \times \frac{1}{2} = 1872.4$ S.F.
Average depth (cut) = 2.70'
Vol. = 187.24 C.Y. (Exc.)

35'

Sta. 41+22.11

143.06 T.C.

Fold Back

C = 280

11.11'

Sta. 41+11.00

142.83 T.C.

Fold Back

Fold Back

C = 260

20.58'

141.00 T.C.

Sta. 40+81.42

C = 140

34.01'

140.20 T.C.

Sta. 40+47.41

C = 106.25

12.41'

130.03 T.C.

140.16 T.C.

Sta. 40+35.00

C = 82

15'

130.30 T.C.

140.10 T.C.

Sta. 40+20.00

C = 103

Hillo-Esque Court
Sta 40+20.00 to Sta 41+72.11

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Sheet No. 8 of 8 Sheets

Hillo-Esque Court