SHEET NO.	TOTAL SHEETS
1	6

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

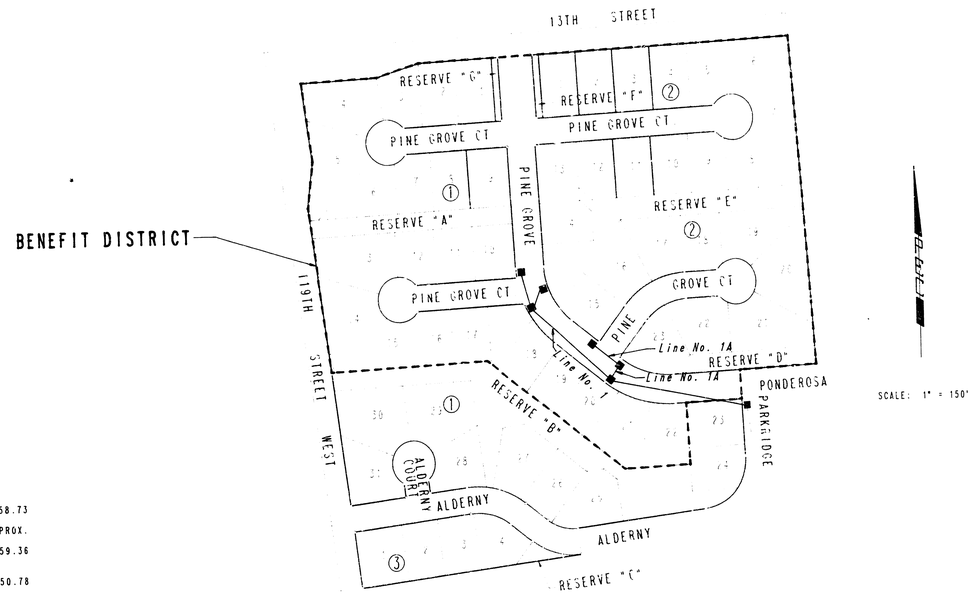
STORM WATER SEWER NO. 307

BRIARWOOD ESTATES 5TH ADDITION

CITY OF WICHITA PROJECT NO. 468-76-245-81552-000-000-001

INDEX OF SHEETS

1. TITLE SHEET
2. PLAT
3.-4. STORM WATER SEWER PLAN AND PROFILE
5. DETAIL STANDARD TYPE 1A CURB INLET (L=6'-4")
6. MANHOLE FRAME AND COVER DETAIL



PROJECT SURVEY CONTROL

VERTICAL DATUM:	CITY OF WICHITA DATUM
DATUM BENCH MARK:	C.O.W. BM DISC 1/2 MILE EAST OF 13TH ST. N. AND 119TH ST. W., 40.5' N. ℄ 13TH ST. N. AT 1/4 CORNER. ELEV.=158.73
BENCH MARK:	CHISELED "□" ON BK. CB. N. SIDE 13TH ST. APPROX. 60' E. OF ⊕ PINE GROVE BY H.L.P. ELEV.=159.36
BENCH MARK:	N. HEADBOLT FIRE HYDRANT AT S.E. CORNER PONDEROSA AND PARKRIDGE. ELEV.=150.78

AS BUILTS
3/87
GREENE

NOVEMBER, 1986

PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

CHARLES E. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

1/6

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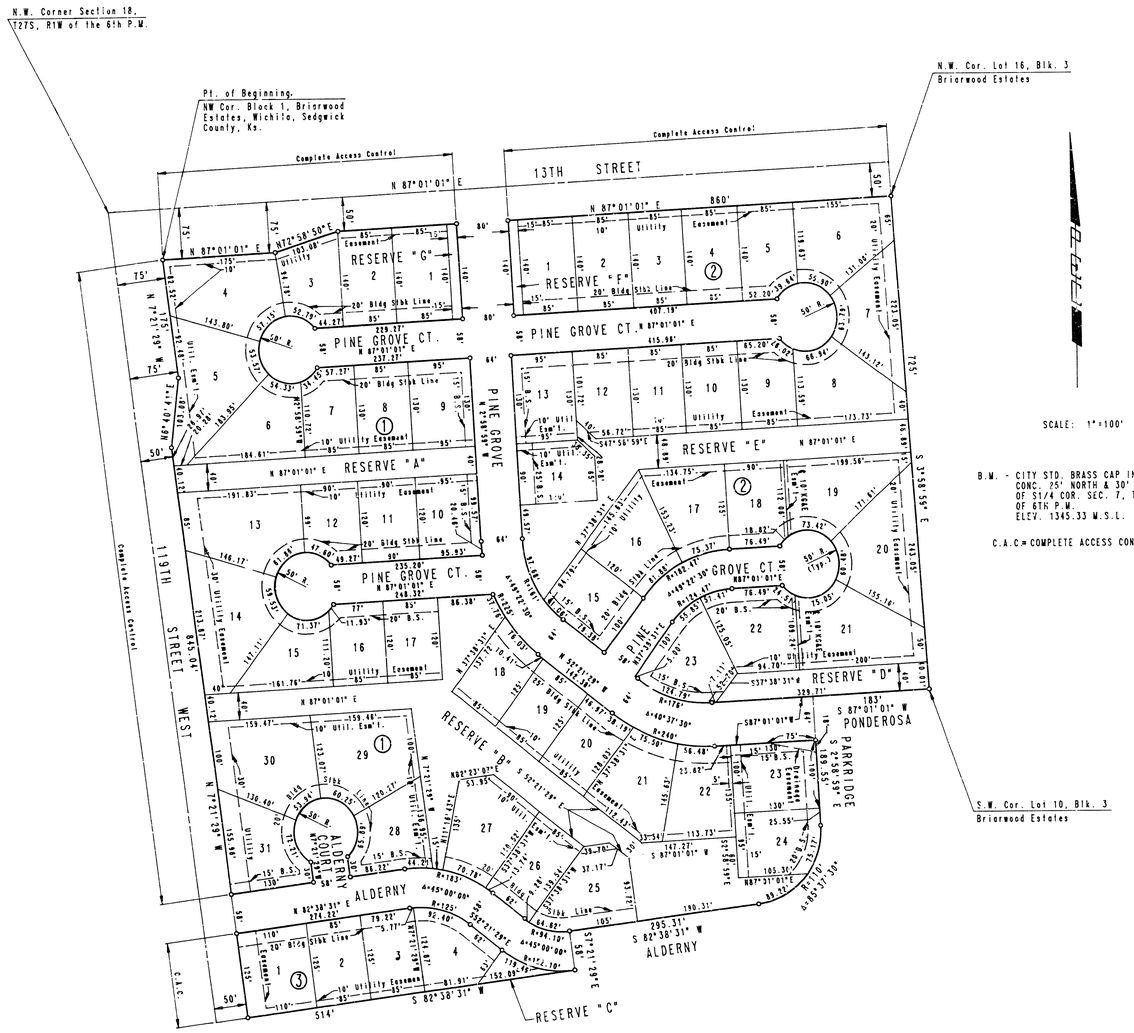
PROJECT NO	SHEET NO	TOTAL SHEETS
472-76-243-81552-000-000-001	2	6

BRIARWOOD ESTATES 5TH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



PLAT

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

2/6

Designed by		Checked by	
Drawn by	DEP	Date SEPT., 1986	Job No. 86323-1

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Sta. 1+00.0, Line No. 1
Exist. Type 1A Curb Inlet
Install 319.3 L.F. 30" RCP
SWS (NW). Connect to
Exist. Inlet. Subsidiary

29' Bk -Bk.

PARKRIDGE

Existing Pavement

PONDEROSA

Remove Flagpole.
Salvage and Stockpile
For Owner to Reclaim

Prop. 8" San. Sew.

32'

35' Bk.-Bk.

32'

Proposed Pavement

Line No. 1

19+73.35
P.T.

Proposed 8" Water

Proposed 8" Sanitary Sewer

SS MH
E In=138.53(W)
E Out=136.43(S)

SS MH
Top=149.6
E Out=139.09
E In=139.19

RESERVE "D"

To Be Removed
By Others

Sta. 21+27.57 ℄ Pine Grove/Ponderosa=
℄ Parkridge

SCALE: 1" = 20'

①

Sta. 4+19.3, Line No. 1, =Sta. 0+00, Line No. 1A=
℄ Pine Grove Sta. 18+30.63, 21.17' Lt.
Const. Std. Type 1A Curb Inlet
L=6'-4" W=5'-4"
Top Elev.=~~148.84~~ 148.60'
Install 41.8 L.F. 18" RCP SWS (NE) ~~to~~
Install ~~243.5 L.F.~~. 24" RCP SWS (NW) 247.0 LF
See Sh. No. 5

Sta. 1+28.3, Line No. 1A=
℄ Pine Grove Sta. 17+54.27, 20.67' Lt.
Const. Std. Type 1A Curb Inlet
L=6'-4" W=4'-4"
Top Elev.=~~148.77~~ 148.83
See Sh. No. 5

Sta. 0+41.8, Line No. 1A=
℄ Pine Grove Sta. 18+30.63, 20.67' Lt.
Const. Std. Type 1A Curb Inlet
L=6'-4" W=4'-4"
Top Elev.=~~148.34~~ 148.81
Install ~~86.5 L.F.~~ 15" RCP SWS (NW) 86.7 LF
See Sh. No. 5

②

Sta. 17+92.27 ℄ Pine Grove/Ponderosa=
Sta. 50+00.00 ℄ Pine Grove Ct.

℄ CURVE DATA
Δ=40°37'30"
R=208.00'
T=76.99'
L=147.48'

Line No. 1A

See Sh. No. 4 for Profile

PINE GROVE

PINE GROVE CT.

29' Bk.-Bk.

Proposed 8" Water

Sta. 1+00.0 Line No. 1
Connect to Existing
Type 1A Curb Inlet

1+40 Prop. 8" San. Sew.
E=139.34

Sta. 4+19.3 Line No. 1
Const. Std. Type 1A Curb
Inlet Top Elev. ~~148.84~~ 148.60

Proposed Ground Line
(By Others)

Exist. Ground

Line No. 1

E=143.53
Exist. 24" RCP (NW)

Exist. 36" HCP (S)

319.3
~~313.3~~ L.F. 30" RCP @ 0.75%

2270 LF
~~246.5~~ L.F. 24" RCP @ 0.30%

E=143.87
18" (NE)

143.13
E In=~~143.42~~

143.50
E Out=~~144.50~~
E In=~~144.79~~

150
148
146
144
142
140

1 2 3 4 5+00

As Builts
3/87
GREENE

CITY OF WICHITA, KANSAS
S.W.S. NO. 307 IMPROVEMENTS
STA. 1+00 TO STA. 5+00
LINE NO. 1

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

Job No. 32 86525.1
Date OCTOBER, 1986
Designed By CSB, BDB
Drawn By DEP

3/6
Sheet 3 of 6

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SCALE: 1" = 20'

PINE GROVE

PINE GROVE CT.

RESERVE "B"

RESERVE "E"

Line No. 1

32'

35' BK.-BK.

16+83.69 P.T.

Top Prop. 8" Water =143.38

Prop. 8" Water

Sta. 17+92.27 ℄ Pine Grove/Ponderosa
Sta. 50+00.00 ℄ Pine Grove Ct.

Sta. 15+67.56 ℄ Pine Grove/Ponderosa=
Sta. 40+00.00 ℄ Pine Grove Ct.

115+17 P.C.

Sta. 6+64.9, Line No. 1=
℄ Pine Grove Sta. 15+92.89, 21.17' Rt.
Const. Std. Type 1A Curb Inlet
(L=6'-4" W=5'-4")
Top Elev.=~~149.79~~ 149.69
Install ~~72.9 L.F.~~ 24" RCP SWS (NNW) 72.8LF
Install ~~60.9 L.F.~~ 15" RCP SWS (NE) 51.0 LF
See Sh. No. 5

Sta. 7+37.8, Line No. 1=
℄ Pine Grove Sta. 15+26.85, 21.17' Rt.
Const. Std. Type 1A Curb Inlet
(L=6'-4", W=5'-4")
Top Elev.=~~149.00~~ 149.55
See Sh. No. 5

℄ Pine Grove Sta. 15+63.73, 20.67' Lt.
Const. Std. Type 1A Curb Inlet
(L=6'-4" W=4'-4")
Top Elev.=~~149.68~~ 149.67
℄ Out=~~145.11~~ 145.47
See Sh. No. 5

℄ CURVE DATA
Δ=49°22'30"
R=193.00'
T=88.72'
L=166.32'

Prop. 8" Water

Prop. 8" Water

Prop. 8" Water

Prop. 8" Water

Bov

WV

TH

PINE GROVE CT.

Sta. 0+00 Line No. 1A
Sta. 1+19.4 Line No. 1
See Sh. No. 3 for PVan

℄ Pine Grove

Sta. 0+41.8 Line No. 1A
Const. Std. Type 1A
Curb Inlet
Top Elev. ~~148.14~~ 148.81

℄ Pine Grove Ct.

Sta. 1+28.3 Line No. 1A
Const. Std. Type 1A
Curb Inlet
Top Elev. ~~149.17~~ 149.33

Sta. 6+64.9 Line No. 1
Const. Std. Type 1A
Curb Inlet Top Elev. ~~149.79~~ 149.69
Prop. 8" Water

℄ Pine Grove Ct.

Sta. 7+37.8 Line No. 1
Const. Std. Type 1A
Curb Inlet
Top Elev. ~~149.00~~ 149.55

Prop. Ground Line (By Others)

Exist. Ground Line

℄ = 144.00
24" (NW)

℄ = 143.50
30" (SE)

41.8 L.F. 18" RCP @ 0.30%

LINE NO. 1A
See Sh. No. 3 for PVan

66.1 LF
~~66.5 L.F.~~ 15" RCP @ 0.38%

LINE NO. 1

2870 LF x 24" RCP
See Sh. No. ~~3~~

℄ = 145.24
15" (NE)

Top of Pipe=
143.18
~~72.9 L.F.~~ 72.8LF 24" RCP
@ 0.40%

As Builts
3187
Carlene

℄ In=143.87
℄ Out=144.00
℄ In=144.25
℄ Out=144.58
℄ In=144.47
℄ Out=144.88
℄ In=144.99
℄ Out=144.99
℄ In=144.59
℄ Out=144.87
℄ In=144.39
℄ Out=144.49
℄ In=144.39
℄ Out=144.87

0+00 1 5+00 6 7

150 148 146 144 142

CITY OF WICHITA, KANSAS
S.W.S. NO. 307 IMPROVEMENTS
STA. 5+00 TO STA. 7+79.2
LINE NOS. 1 AND 1A

C.O.W. Proj. No. 448 80 245 Bitter Con Co

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

Designed By CSB, HDB | Job No. 52 86323 1
Drawn By DLP | Date OCTOBER, 1986

Sheet 4 of 6

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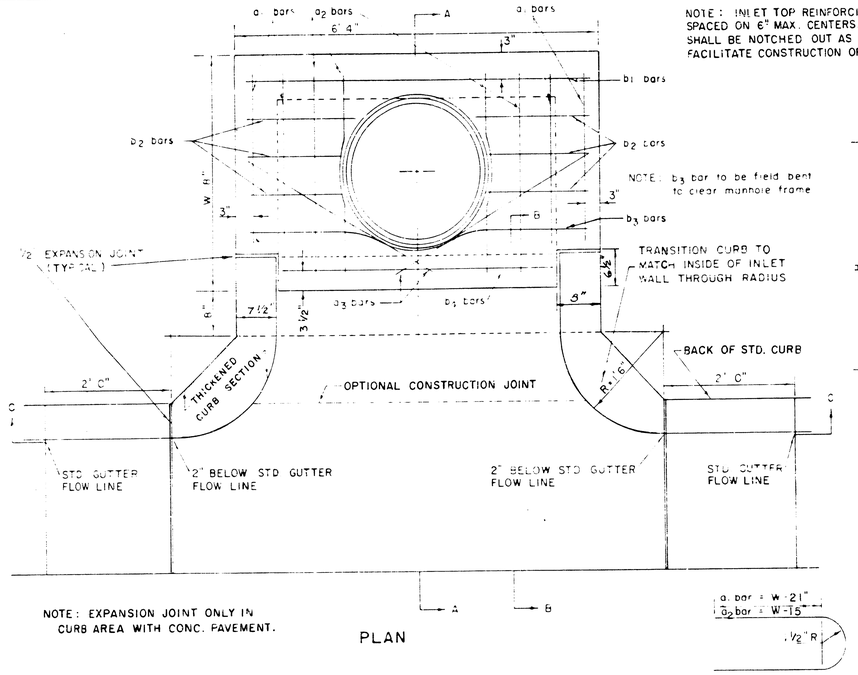
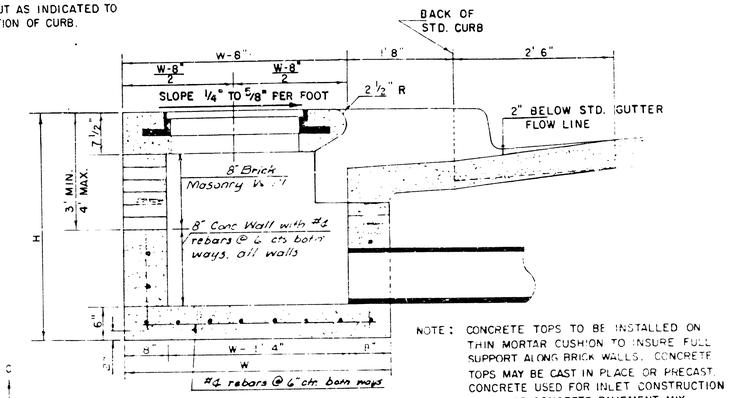


NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

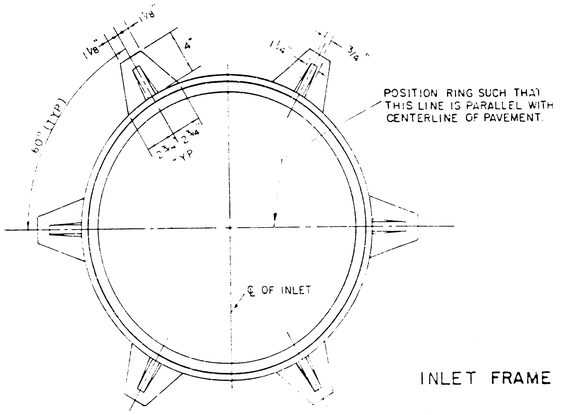
NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE: b_3 bar to be field bent to clear manhole frame



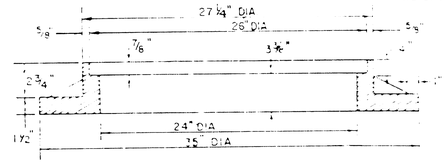
SECTION A-A

NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.



INLET FRAME

WEIGHT = 180 LBS



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

BENDING DIAGRAM

STEEL SCHEDULE

BAR		a_1	a_2	a_3*	C W=4'4"	W=5'4"	W=6'4"	W=7'4"	W=8'4"	b_2	b_3	b_4	WT LBS
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'4"	5'7"	6'7"	4'0"	6'1"	–	–	–	–	1'9"	6'2"	4'8"	60±
	W=5'4"	7'7"	8'7"	5'0"	–	6'1"	–	–	–	1'9"	6'2"	4'8"	81±
	W=6'4"	9'7"	10'7"	6'0"	–	–	6'1"	–	–	1'9"	6'2"	4'8"	101±
	W=7'4"	11'7"	12'7"	7'0"	–	–	–	6'1"	–	1'9"	6'2"	4'8"	121±
	W=8'4"	13'7"	14'7"	8'0"	–	–	–	–	6'1"	1'9"	6'2"	4'8"	141±

* NOTE: a_3 BARS TO BE PLACED APPROX 2" BELOW TOP OF INLET COVER

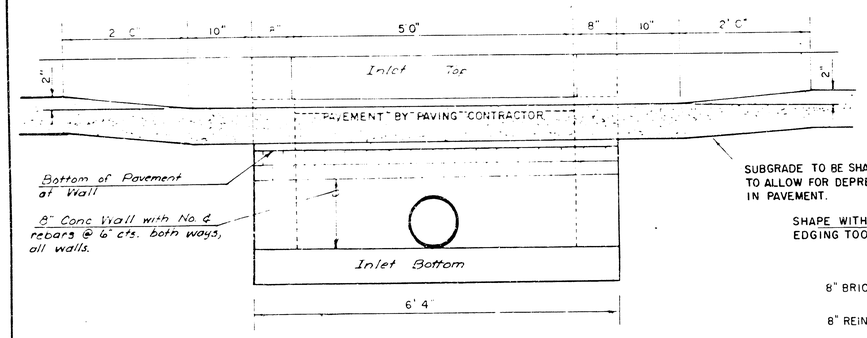
STANDARD CURB INLET PRECAST TOPS			
W	PRECAST TOP SIZE	PIPE SIZE	CU YD CONC
4' 4"	3'8" x 6'4" x 7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8" x 6'4" x 7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8" x 6'4" x 7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8" x 6'4" x 7 1/2"	48" & 54"	0.77 ±
8' 4"	7'8" x 6'4" x 7 1/2"	60" & 66"	0.90 ±

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

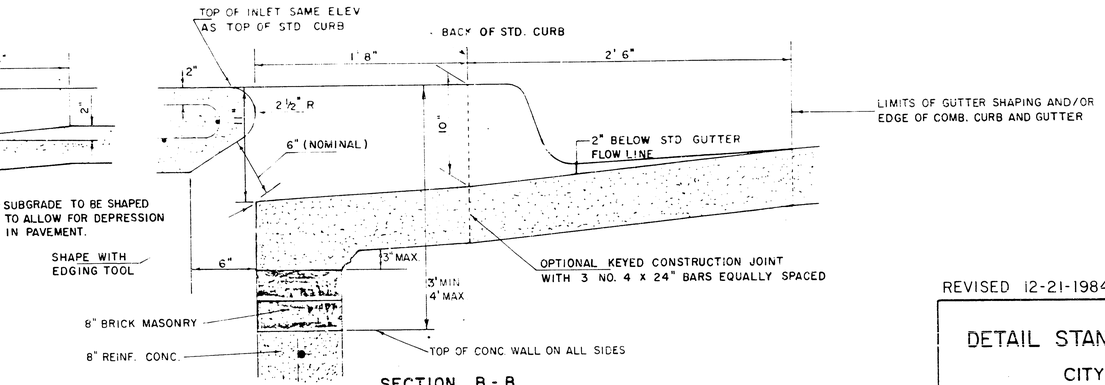
ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.



SECTION C-C



SECTION B-B

REVISED 12-21-1984

Proj. No. 468 76 845 81552 000 000 001

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

INLET OPENING = 6" × 5' 0"

JUNE 1984

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MANHOLE FRAME AND COVER DETAIL

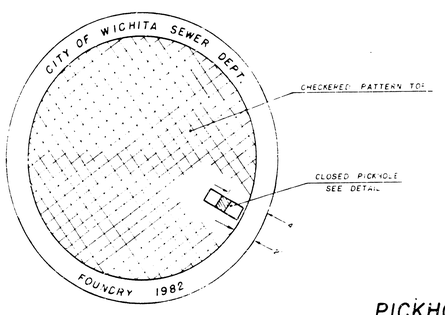
ADOPTED AS STANDARD DESIGN

BY

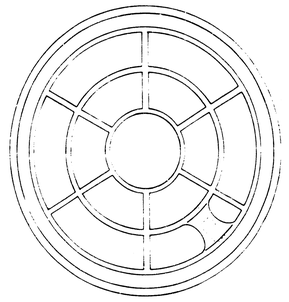
City of Wichita, Kansas

MANHOLE COVER

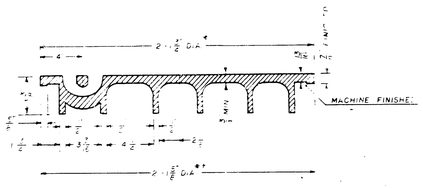
Weight: 180 Lbs.



TOP VIEW



BOTTOM VIEW

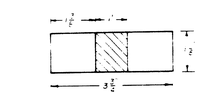


SECTION VIEW

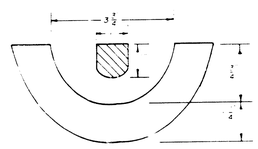
* OUTSIDE D.A. TOP OF COVER

** OUTSIDE D.A. BOTTOM OF COVER

PICKHOLE DETAIL



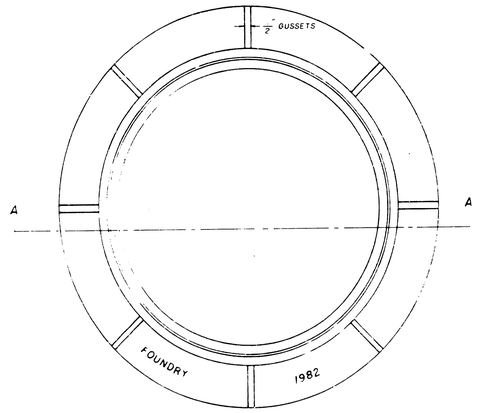
TOP VIEW



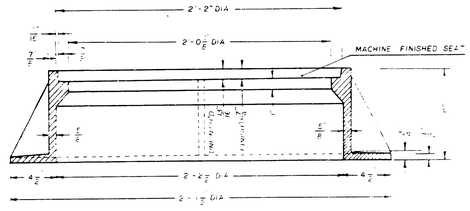
SECTION VIEW

MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTE

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING T CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DE TAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATION FRO THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL B OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY WITH A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED TO A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO DELINEATE THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

C. 1981

Project No. 468 76 225 81538 000.000 001