

STORM WATER SEWER NO. 231 WATERFORD NORTH

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

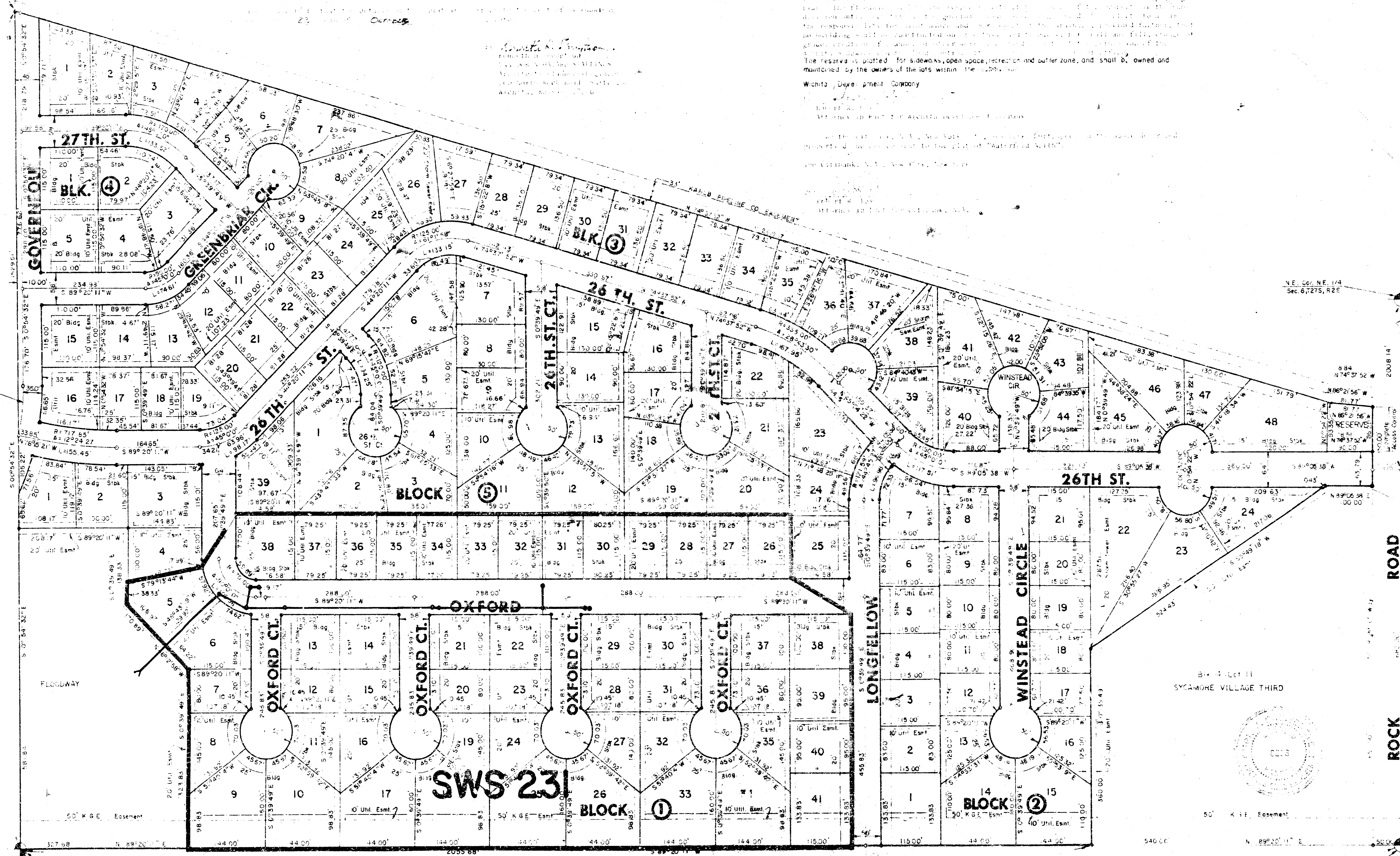
9TH

OCTOBER

James L. Bruggeman
Robert J. Bruggeman

[Signature]

SCALE: 1"=100'
•=IRON



ROAD

ROAD

CITY OF WICHITA, KANSAS
DEPARTMENT OF ENGINEERING

DIRECTOR OF ENGR./CITY ENGR.
R.W. BRUGGEMAN

DATE

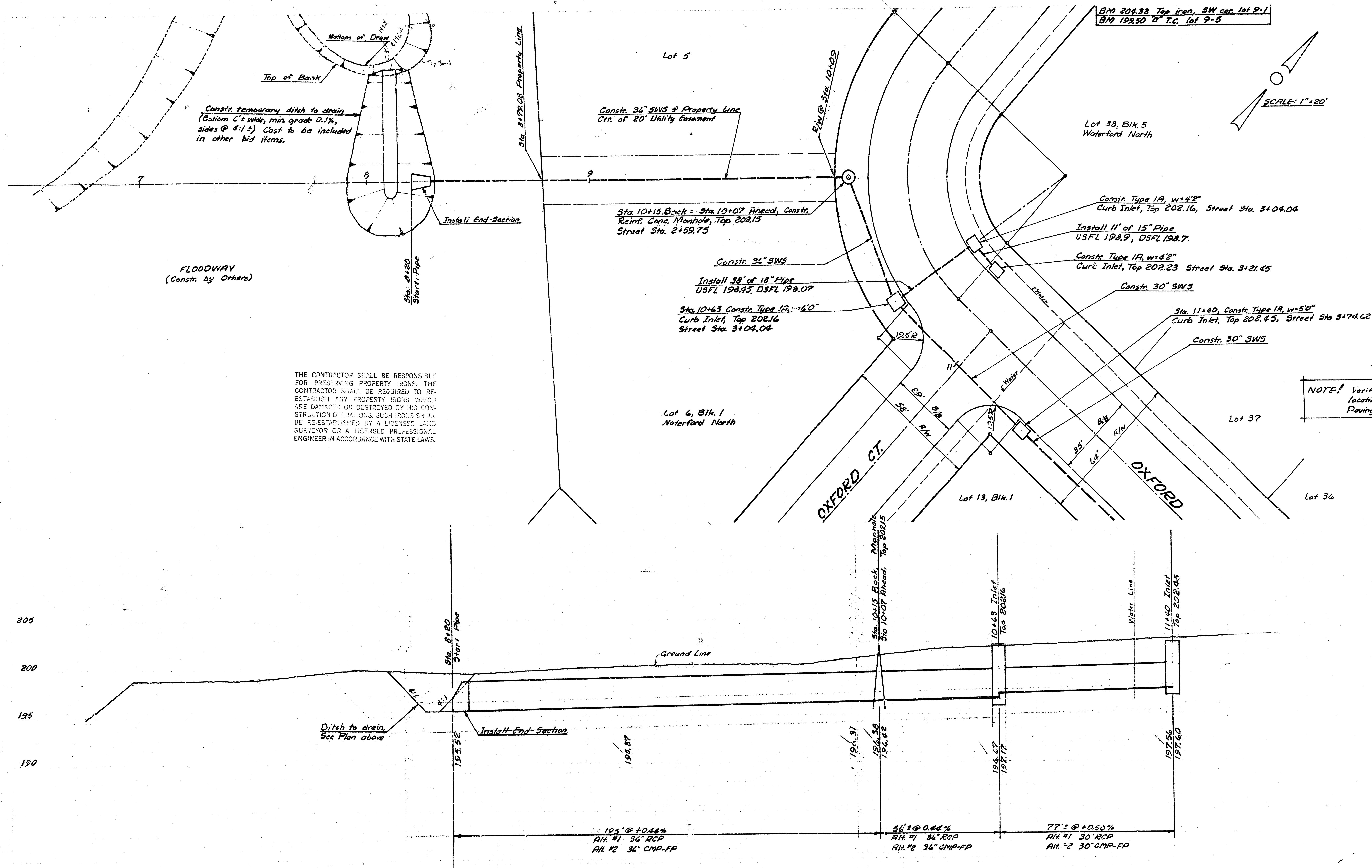
SWS 231

PROJECT NO. 438-76-245-8114-000-000-001

SHEET 1 OF 5

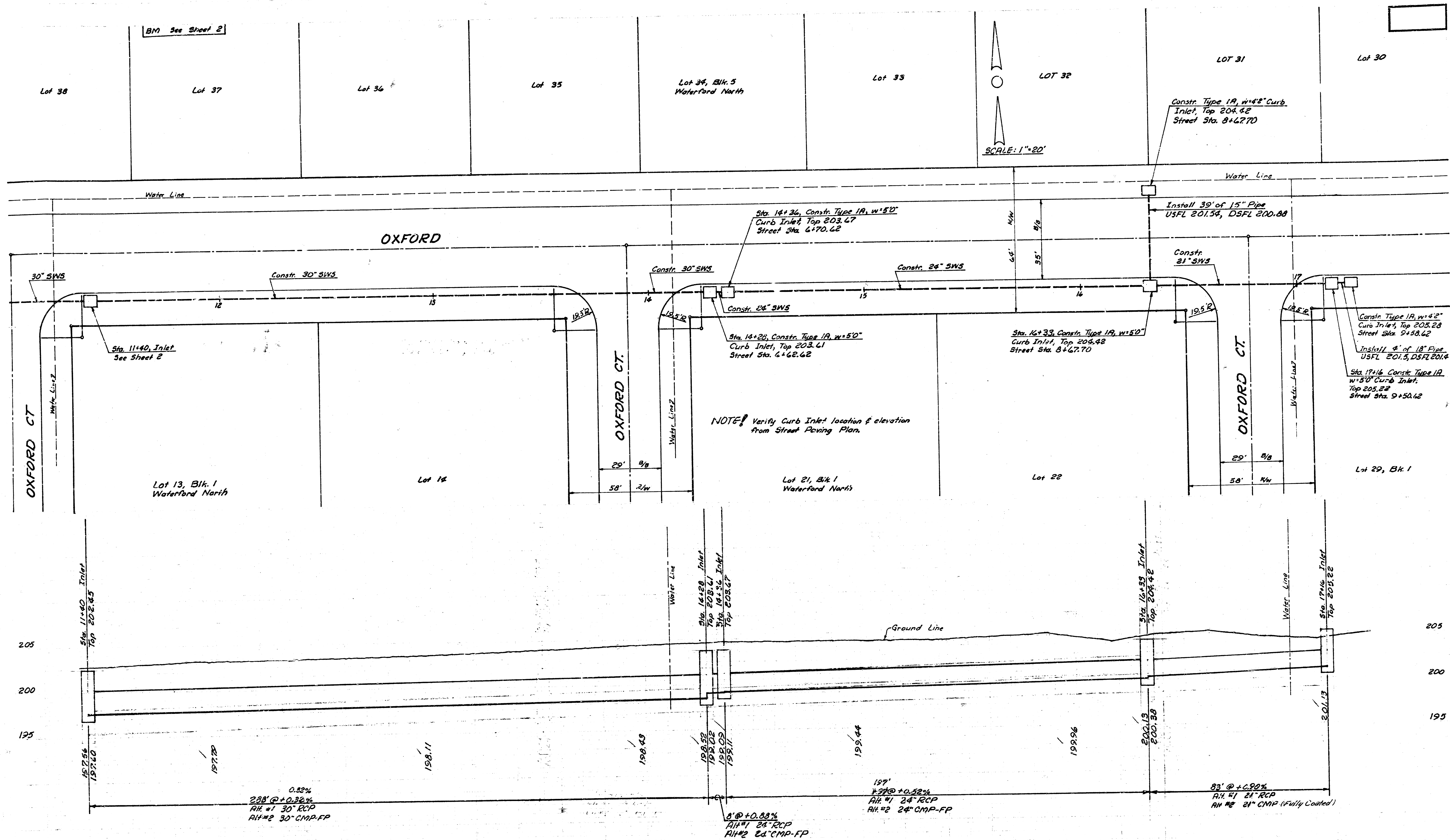
1/5

Mid-Continent Engineering Co., Inc.
Cyril



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PROJECT DESCRIPTION
SWS #231
PROJECT NUMBER
448-76-245-8114-000-000-001
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Major Kansas Eng. Consultant



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PROJECT DESCRIPTION

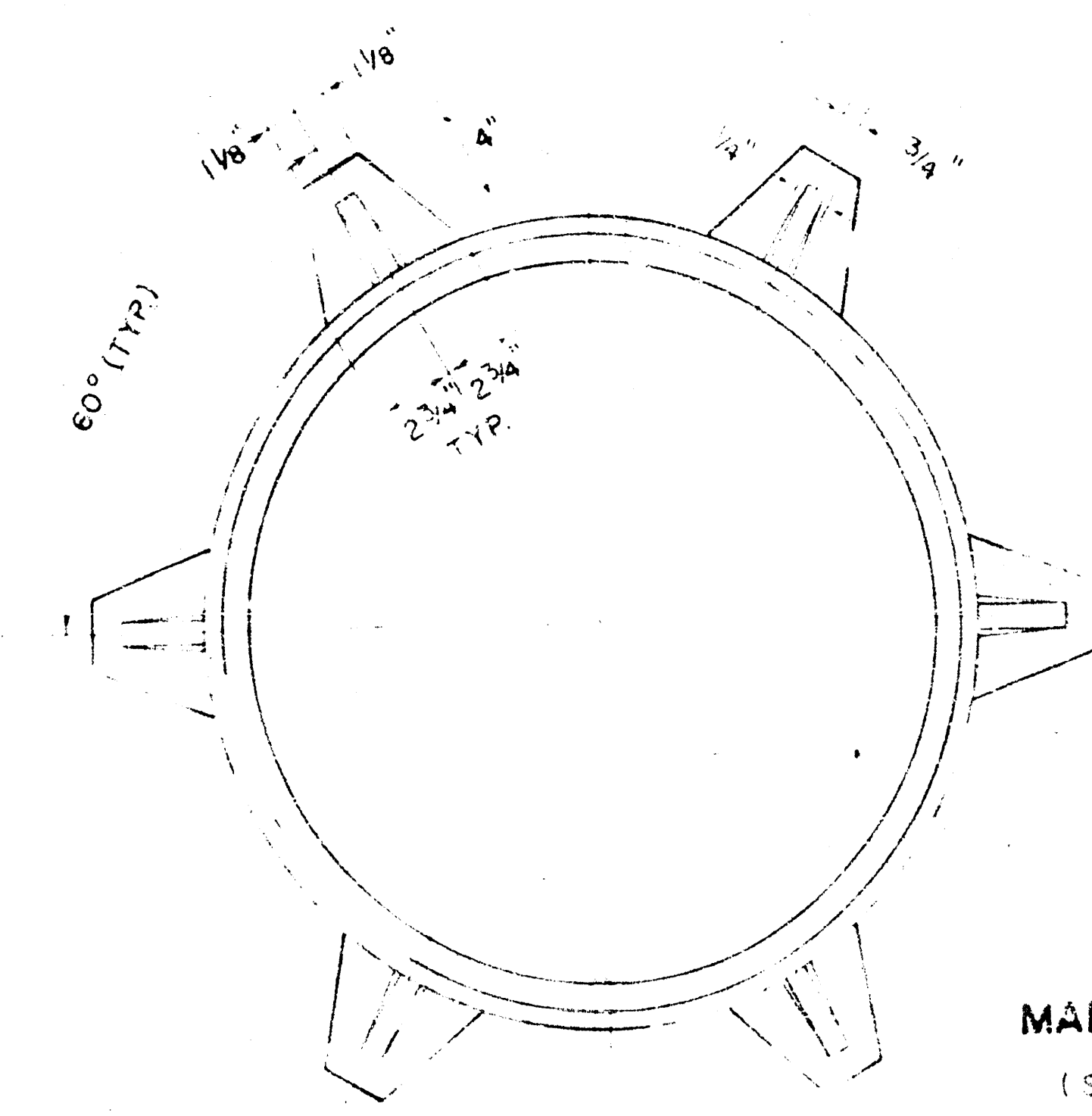
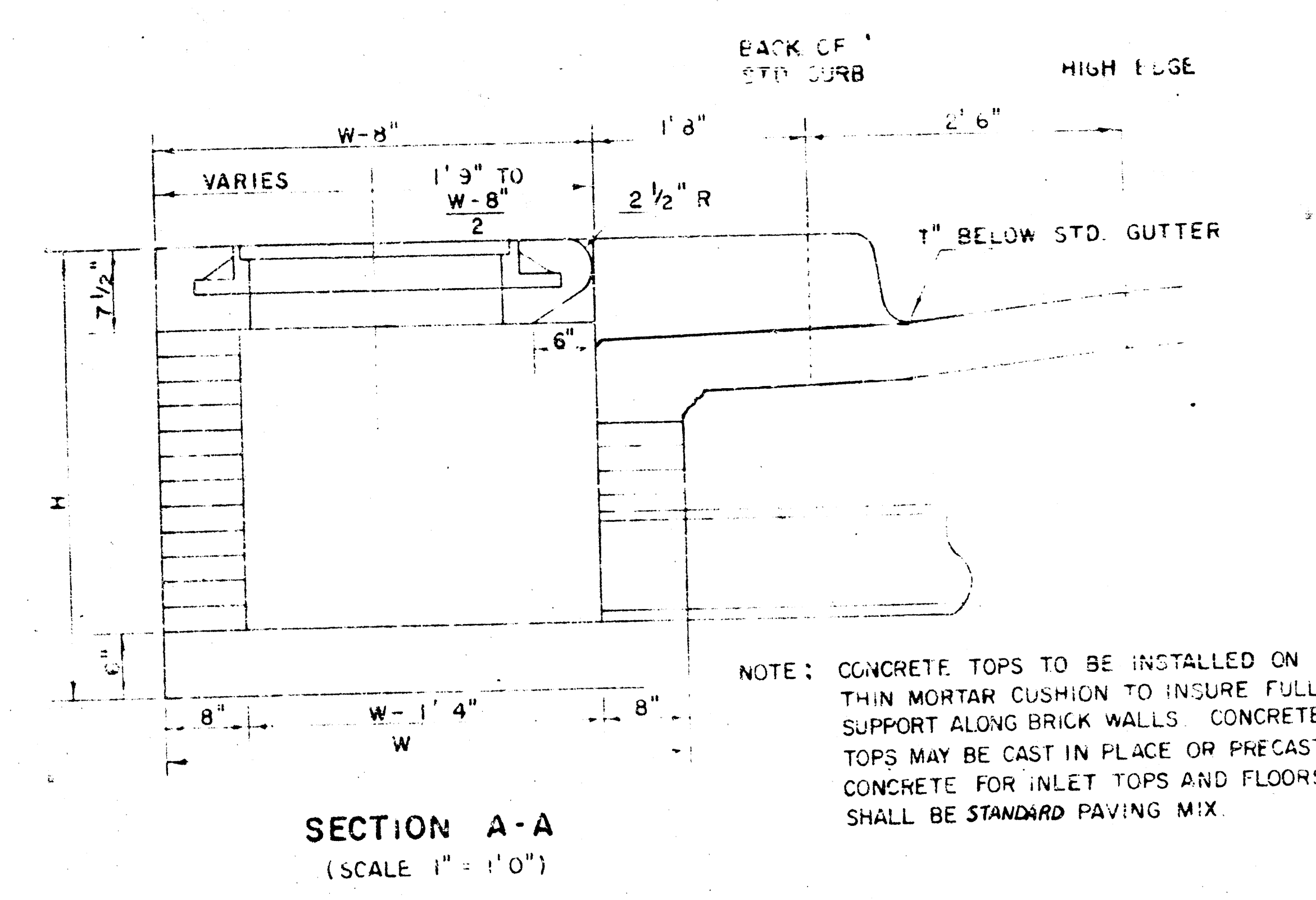
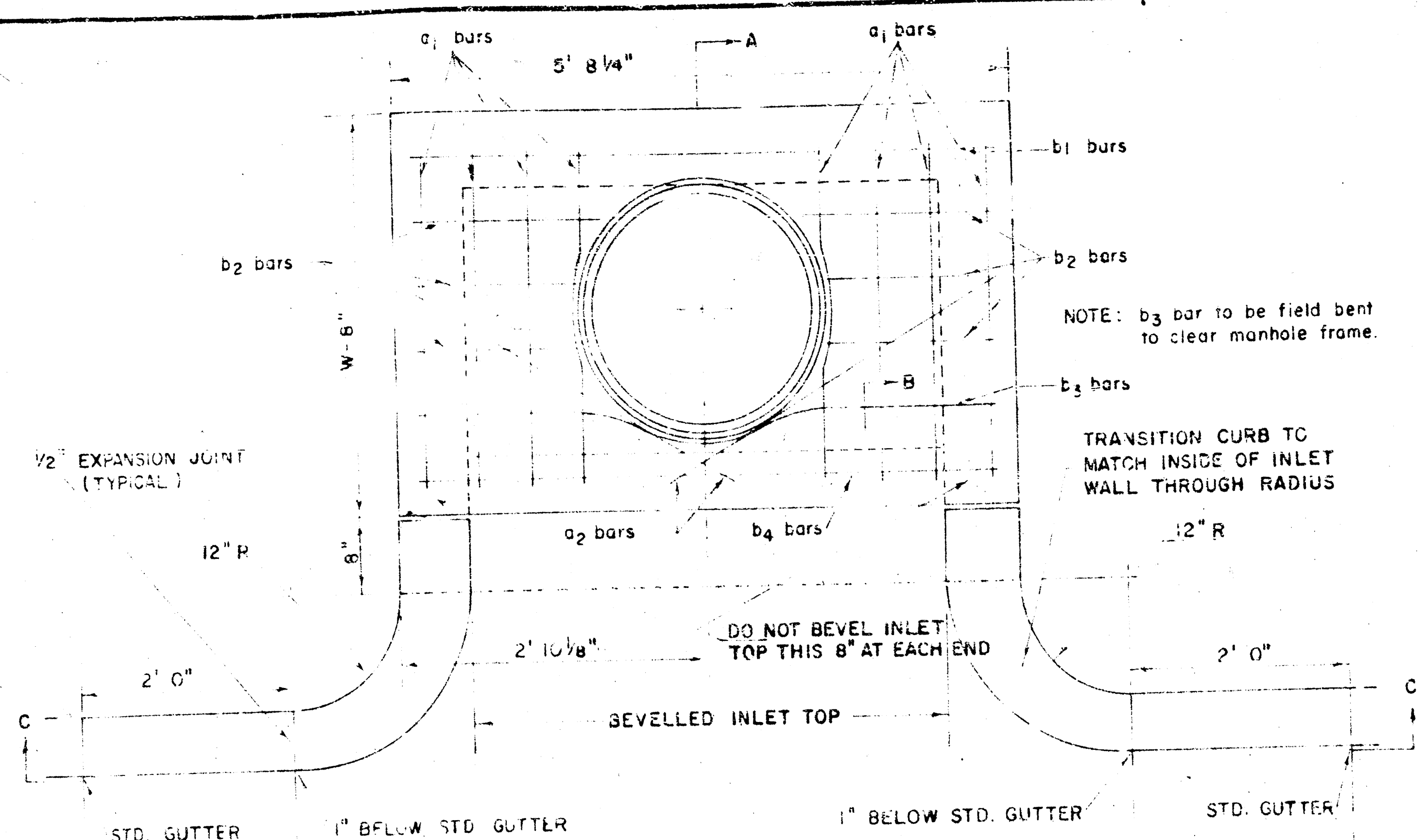
SWS # 231

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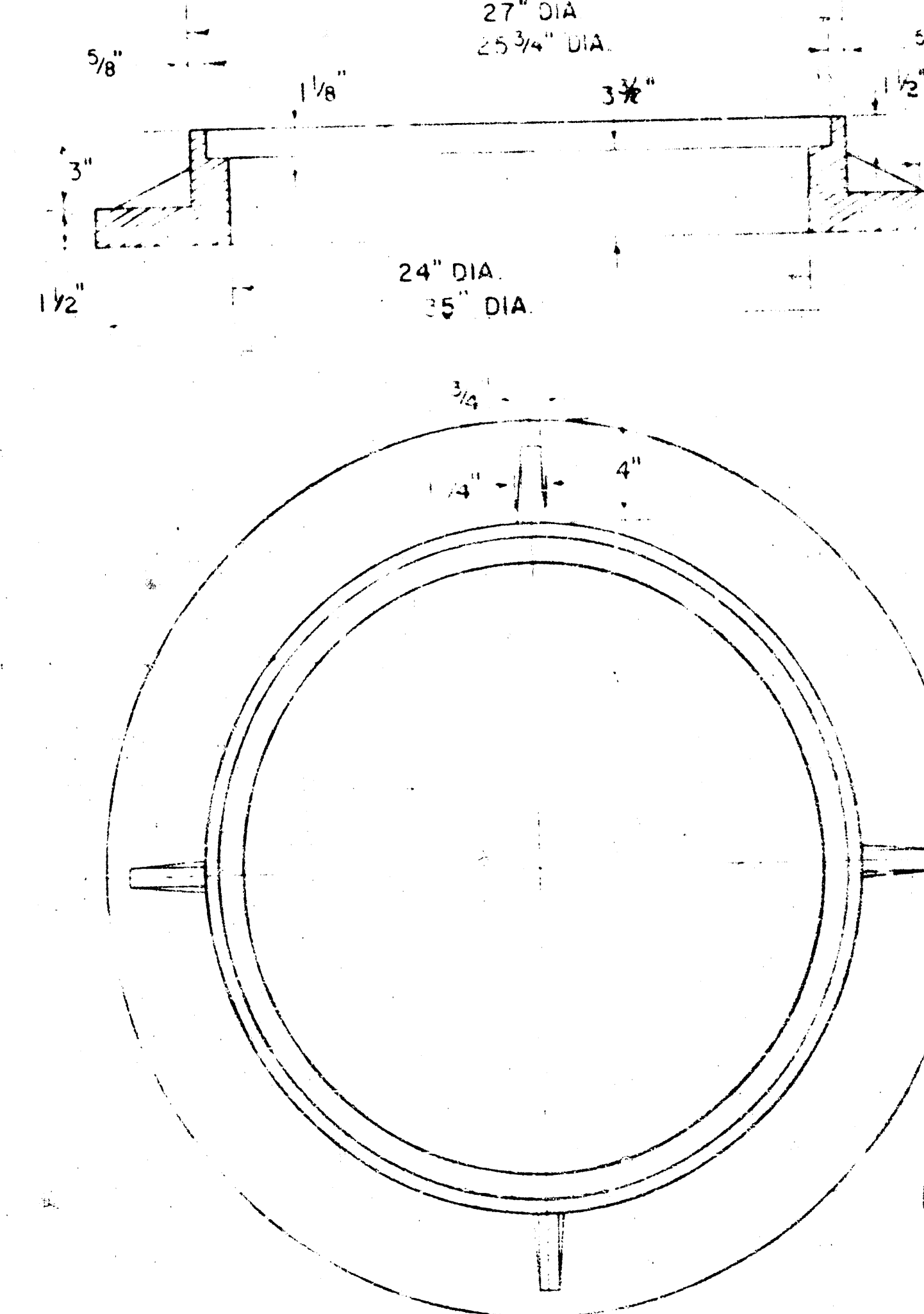
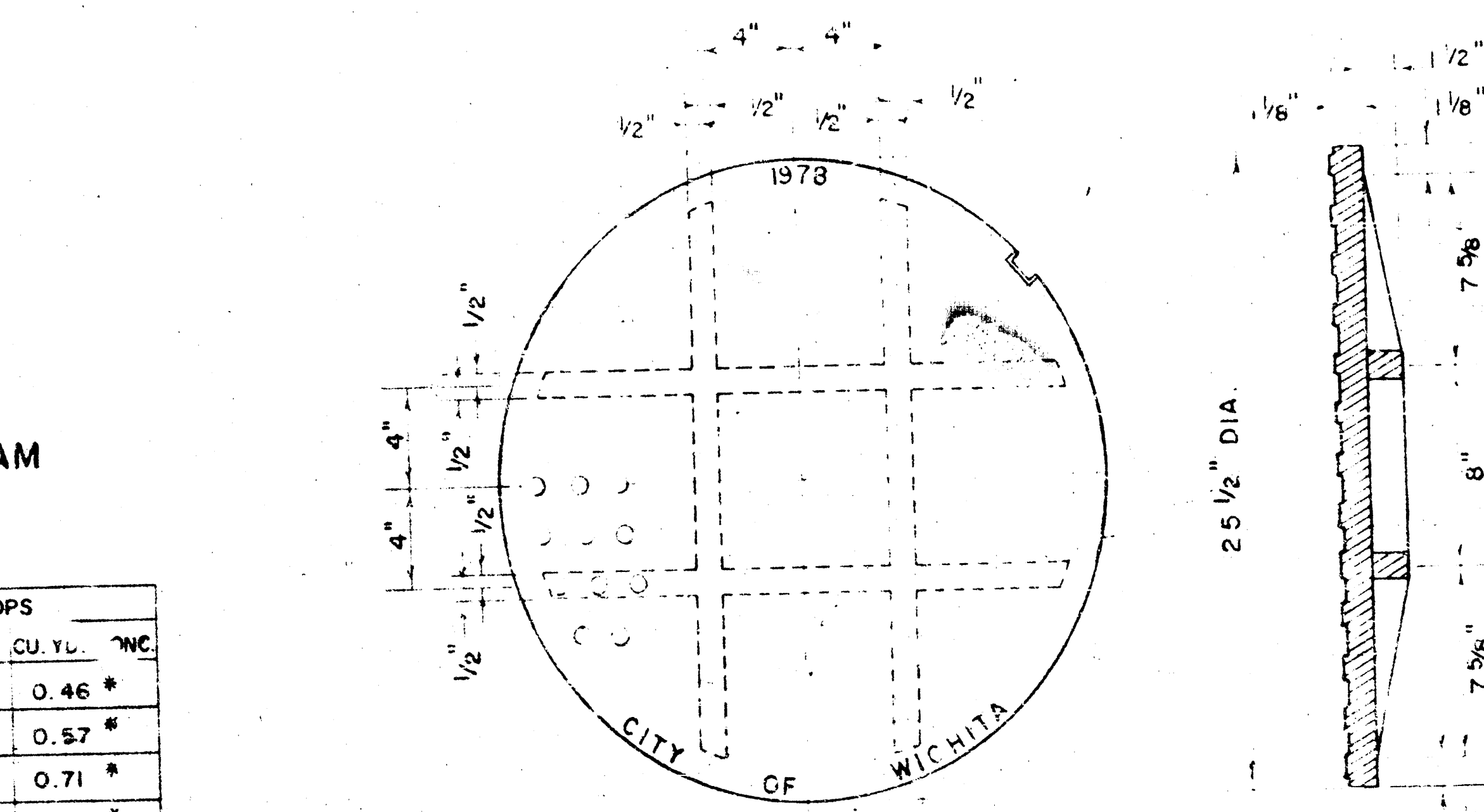
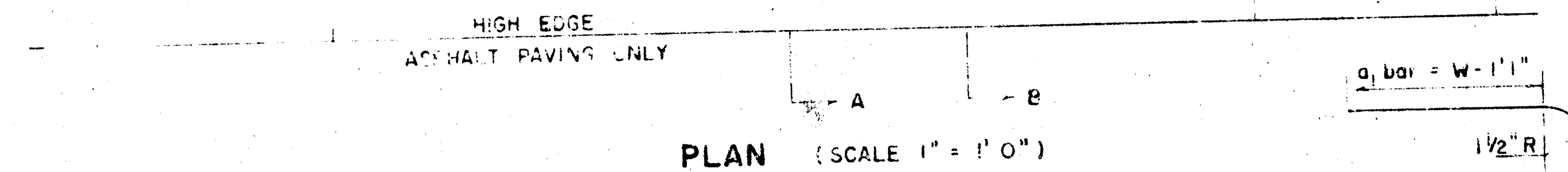
448-76-245-8117-000-000-001

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MANHOLE FRAME
(SCALE 1" = 6")
WEIGHT = 180 LBS.



MANHOLE FRAME (ALTERNATE)
(SCALE 1" = 6")
WEIGHT = 180 LBS.

STEEL SCHEDULE

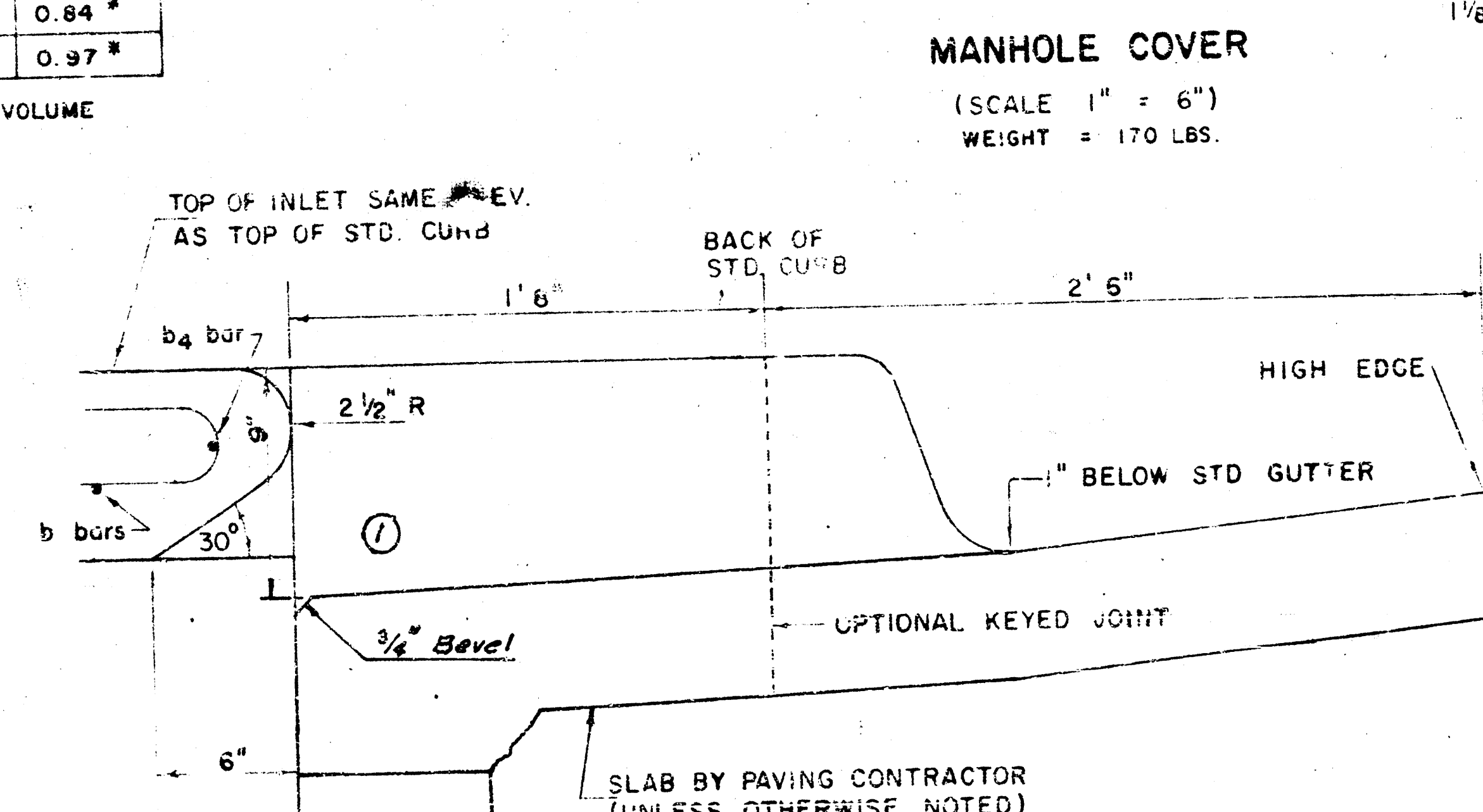
BAR	a1	a2	b1	b2	b3	b4	WT. LBS.
NUMBER	8	2	7	9	6	1	
SIZE	#4	#4	#4	#4	#4	#6	
W=4'2"	6'5"	3'4"	5'5"	-	-	-	60*
W=5'0"	8'1"	4'4"	5'5"	-	-	-	77*
W=6'0"	10'1"	5'4"	5'5"	-	-	-	97*
W=7'0"	11'1"	5'4"	5'5"	-	-	-	111*
W=8'0"	12'1"	7'4"	5'5"	1'5"	5'6"	5'5"	124*

* NOTE: a2 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

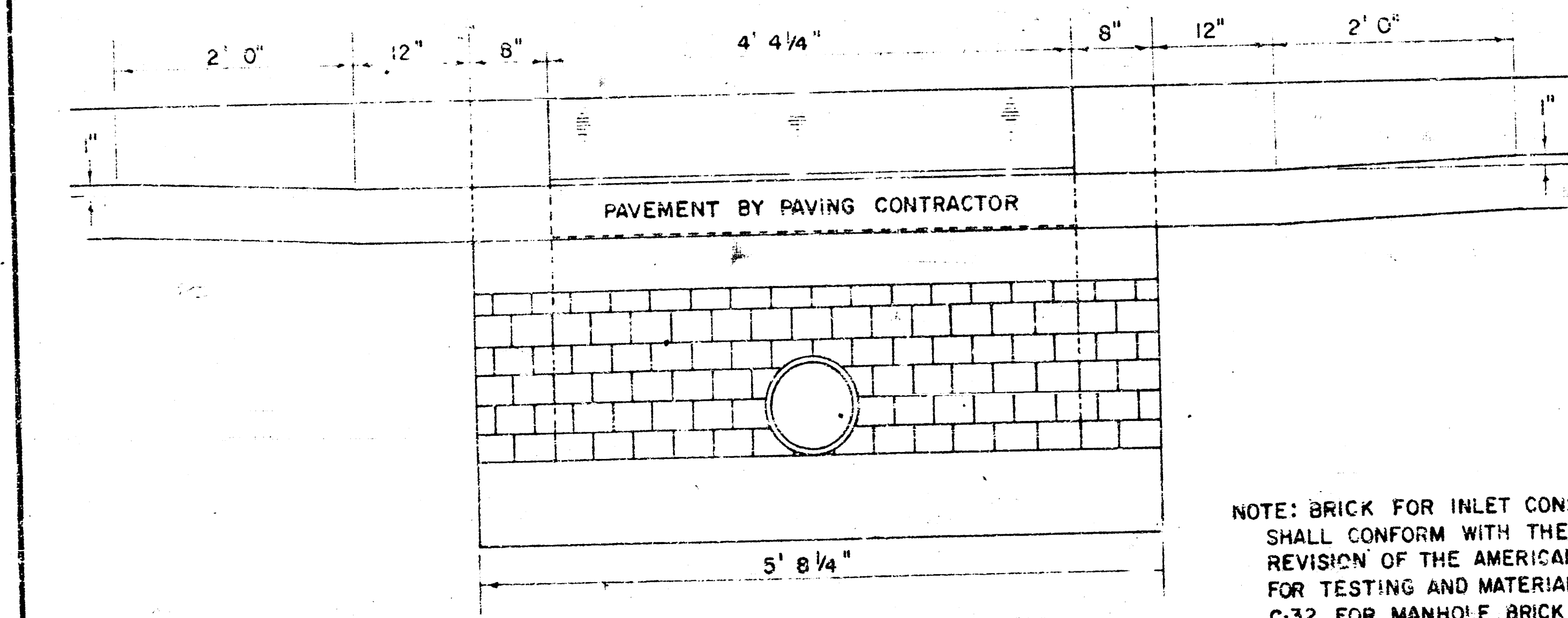
BENDING DIAGRAM

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YL.	WT.
4' 2"	36" x 5'8 1/4" x 7 1/2"	21" & SMALLER	0.46 *	
5' 0"	44" x 5'8 1/4" x 7 1/2"	24" & 30"	0.57 *	
6' 0"	54" x 5'8 1/4" x 7 1/2"	36" & 42"	0.71 *	
7' 0"	64" x 5'8 1/4" x 7 1/2"	48" & 54"	0.84 *	
8' 0"	74" x 5'8 1/4" x 7 1/2"	60" & 66"	0.97 *	

* GROSS VOLUME



SECTION B-B
(SCALE 1" = 6")



SECTION C-C
(SCALE 1" = 1'0")

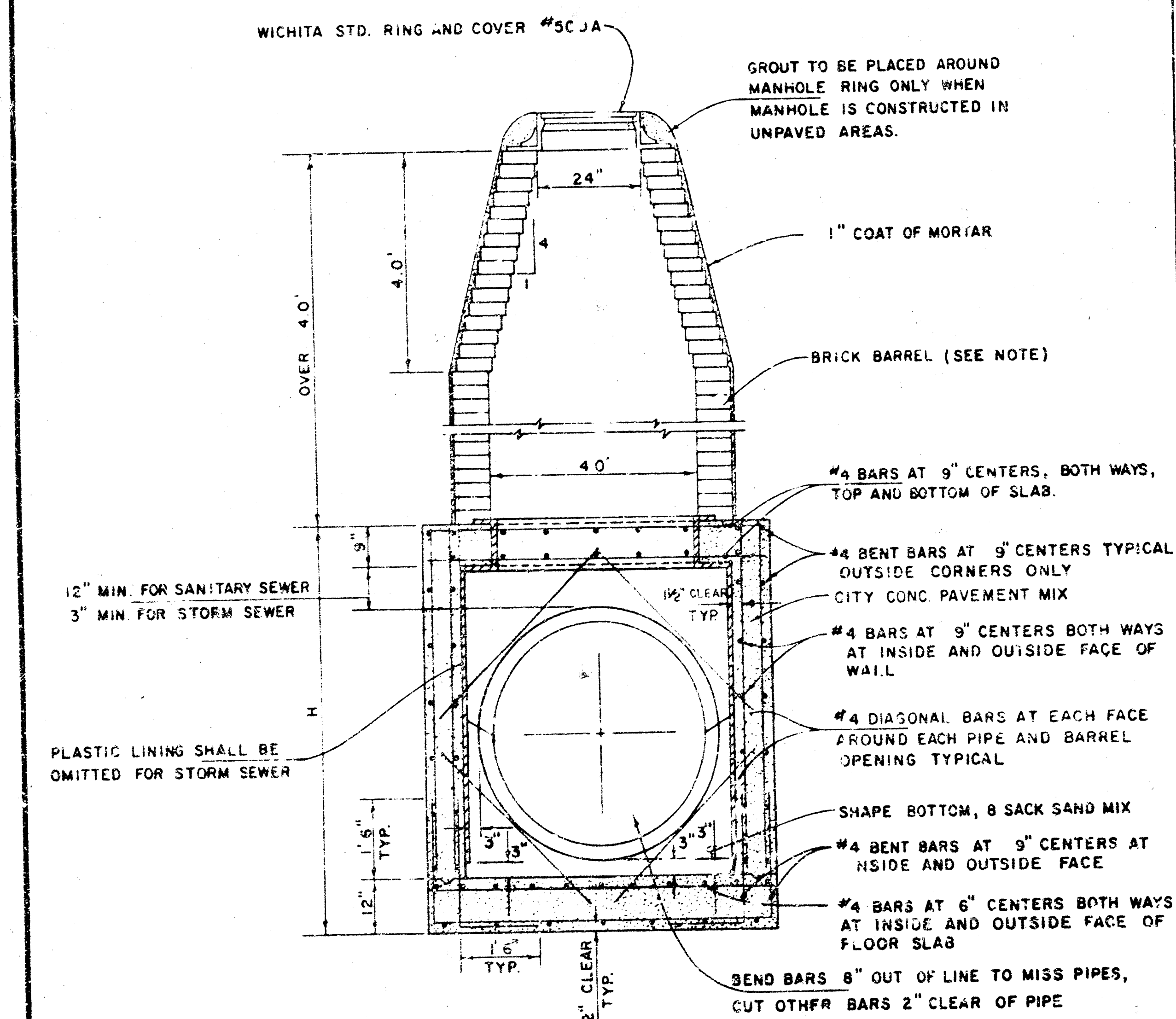
NOTE: BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C-32 FOR MANHOLE BRICK GRADE MS.

NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL. DESIGNS AS FOLLOWS:
FRAME: 524-L6
FRAME (ALTERNATE): 500 A4
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/
CITY ENGINEER

JUNE, 1981

SW3 #231
Sheet 4 of 5



A cross-sectional diagram of a trench repair using the sacking method. The diagram shows a vertical trench with a concrete wall on the right and a sloped sand mix on the left. Labels with leader lines point to various components: 'PLASTIC LINING' at the top left, '3" MINIMUM' indicating a thickness or gap, 'CLAY PIPE STUB WITH PLUG' pointing to a horizontal pipe section, '8 SACK SAND MIX FLOOR CHAPING' pointing to the sloped sand area, 'CITY CONC. PAVEMENT MIX' pointing to the concrete wall, and 'REINFORCING STEEL' pointing to vertical bars within the concrete wall.

6 SACK CITY PAVING MIX

RAM-NEK OR KENT-SEAL TYPE JOINT SEALING COMPOUND

BELL TYPE WALL FITTING (TYPICAL) WELD TO REINFORCE

PLASTIC LINING

GROUT

8 SACK SAND MIX CONCRETE FILL FLOOR SHAPING

REINFORCING STEEL

CITY CONC. PAVEMENT MIX

12"

WICHITA STD. RING AND COVER #500A

GROUT TO BE PLACED AROUND MANHOLE RING ONLY WHEN MANHOLE IS CONSTRUCTED IN UNPAVED AREAS.

24"

2' 3.3"

1" COAT OF MORTAR

BRICK BARREL (SEE NOTE)

9"

12" MIN. FOR SANITARY SEWER
3" MIN. FOR STORM SEWER

PLASTIC LINING SHALL BE OMITTED FOR STORM SEWER

REINFORCING STEEL PATTERN TO BE THE SAME AS FOR REINFORCED CONC. MANHOLE WITH DEPTH OF STACK OVER 4.0 FT.

CITY CONC PAVEMENT MIX

SHAPE BOTTOM, 8 SACK SAND MIX

12"

WICHITA STD. WIDE FLANGE
RING AND COVER #500AS

GROUT TO BE PLACED AROUND MANHOLE RING
ONLY WHEN MANHOLE IS CONSTRUCTED IN
UNPAVED AREAS

1" COAT OF MORTAR

BRICK BARREL
(SEE NOTE)

3' 2"

0' TO 2' 3"

9"

12" MIN. FOR SANITARY SEWER
3" MIN. FOR STORM SEWER

PLASTIC LINING SHALL BE
OMITTED FOR STORM SEWER

REINFORCING STEEL PATTERN TO
BE THE SAME AS FOR REINFORCED
CONC. MANHOLE WITH DEPTH OF
STACK OVER 4.0 FT.

CITY CONC. PAVEMENT MIX

SHAPE BOTTOM, 8 SACK SAND MIX

3" 13" 3" 3"

12"

NOTE :
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12" BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS.