

CITY OF WICHITA, KANSAS

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

STORM WATER SEWER NO. 431

FOR OXFORD ADDITION

CITY OF WICHITA PROJECT NO. 468-76-245-82202-000-000-001
INDEX CODE NO. 750349

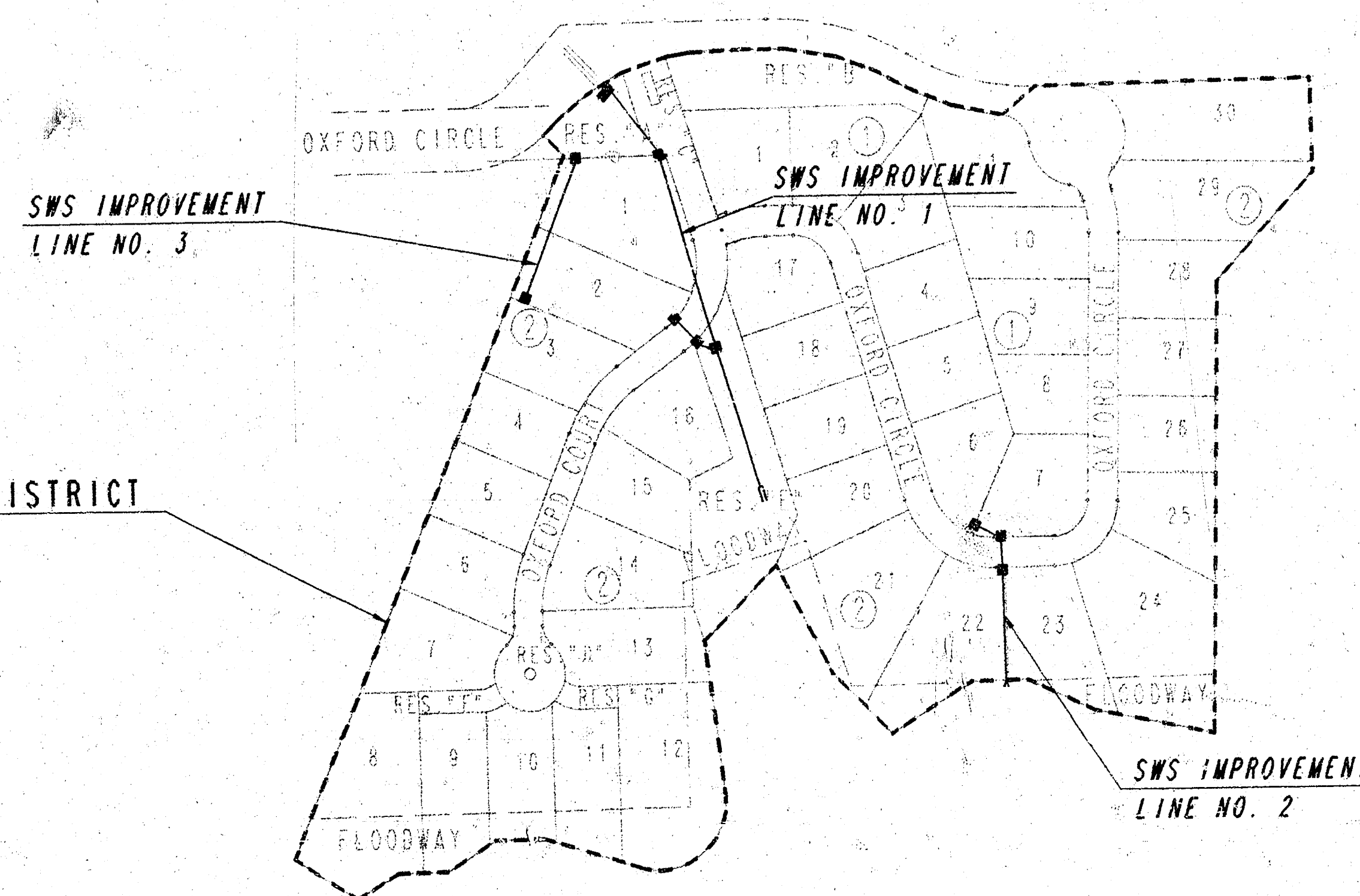
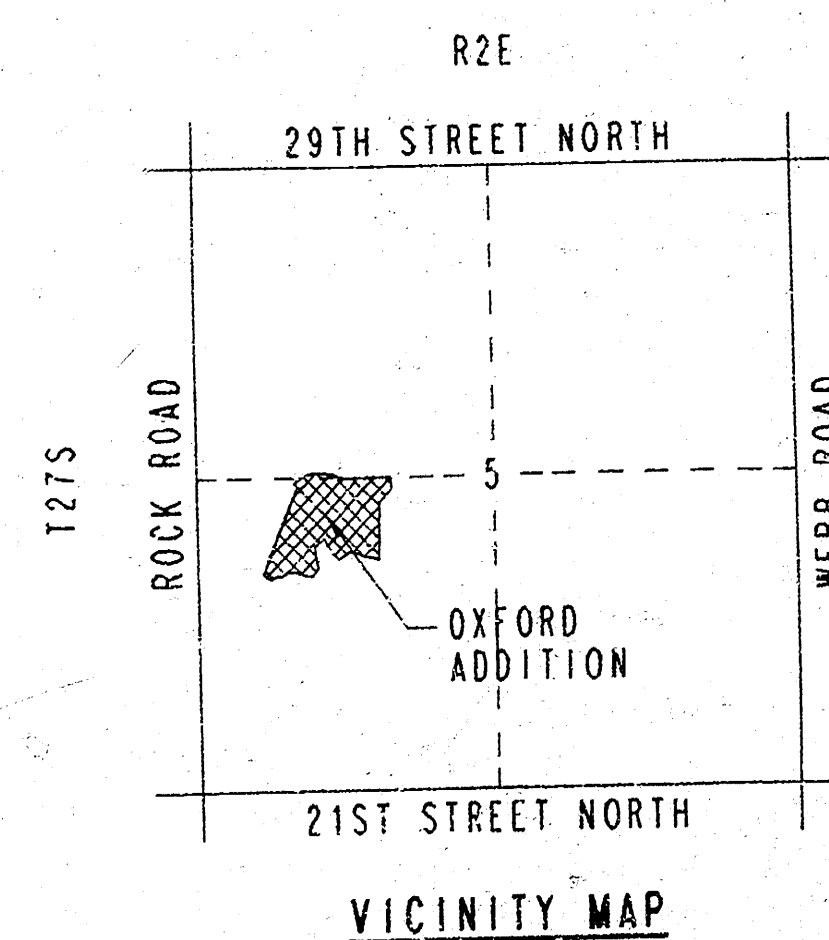
SHEET NO.	TOTAL SHEETS
1	11

INDEX OF SHEETS

1. TITLE SHEET
2. PLAT
3. PLAN AND PROFILE - LINE NO. 1
4. PLAN AND PROFILE - LINE NO. 2
5. PLAN AND PROFILE - LINE NO. 3
6. POND AND SWALE PLAN
7. STD. R.C. MANHOLE
8. DROP INLET DETAILS
9. 30" & 54" R.C. HEADWALL DETAILS
10. STD. TYPE 1A CURB INLET DETAILS
11. MANHOLE FRAME AND COVER DETAILS

PROJECT SURVEY CONTROL

DATUM BENCH MARK:	CHIS. "D" ON WEST SIDE CONC. BASE OF "Y" SHAPED HIGH VOLTAGE ELEC. POLE, 0.5' BELOW GROUND SURFACE, 30' NORTH AND 75' EAST OF W. 1/4 COR. SEC. 5, T27S, R2E.	ELEV. +218.63
BENCH MARK:	CHIS. "D" NORTH BACK OF CURB OXFORD CIRCLE AT OXFORD COURT NEAR S.E. CORNER INLET, 110' EAST AND 27' NORTH OF "Y" SHAPED HIGH VOLTAGE ELEC. POLE.	ELEV. +205.56
BENCH MARK:	CHIS. "D" ON WEST SIDE CONC. BASE "Y" SHAPED HIGH VOLTAGE ELEC. POLE NORTH OF OXFORD CIRCLE CUL-DE-SAC.	ELEV. +208.95
BENCH MARK:	1-POST AT GROUND LEVEL 16' ± EAST OF P.C. ON WEST SIDE LOT 6, BLOCK 1.	ELEV. +205.20
BENCH MARK:	1-POST AT GROUND LEVEL 16' ± EAST OF P.C. ON WEST SIDE LOT 14, BLOCK 2.	ELEV. +205.76
BENCH MARK:	1-POST AT GROUND LEVEL 16' ± SOUTH OF P.C. ON N.E. SIDE LOT 17, BLOCK 1.	ELEV. +205.41



GENERAL NOTES

UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

CONTRACTOR SHALL SATISFY HIMSELF OF SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION.

TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

ALL TREE TRIMMINGS OR TREES REMOVED SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

EXCESS EXCAVATED MATERIAL AND EXCESS TOPSOIL SHALL BE STOCKPILED OR WASTED WITHIN THE PLAT LIMITS. THE CONTRACTOR SHALL CONTACT THE OWNER'S ENGINEER AT 262-2691 FOR INFORMATION PERTAINING TO THE ACCEPTABLE LOCATIONS FOR THE DISPOSITION OF EXCESS MATERIAL. WASTE MATERIAL SHALL BE GRADED SMOOTH AND SLOPED TO DRAIN. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO "POND AND SWALE GRADING".

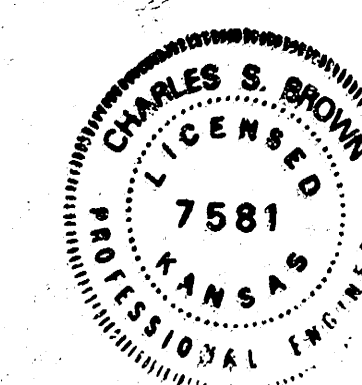
CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 887-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: KPL/IAS SERVICE, K.O.A.E., SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL 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 IN ACCORDANCE WITH STATE LAWS.

THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

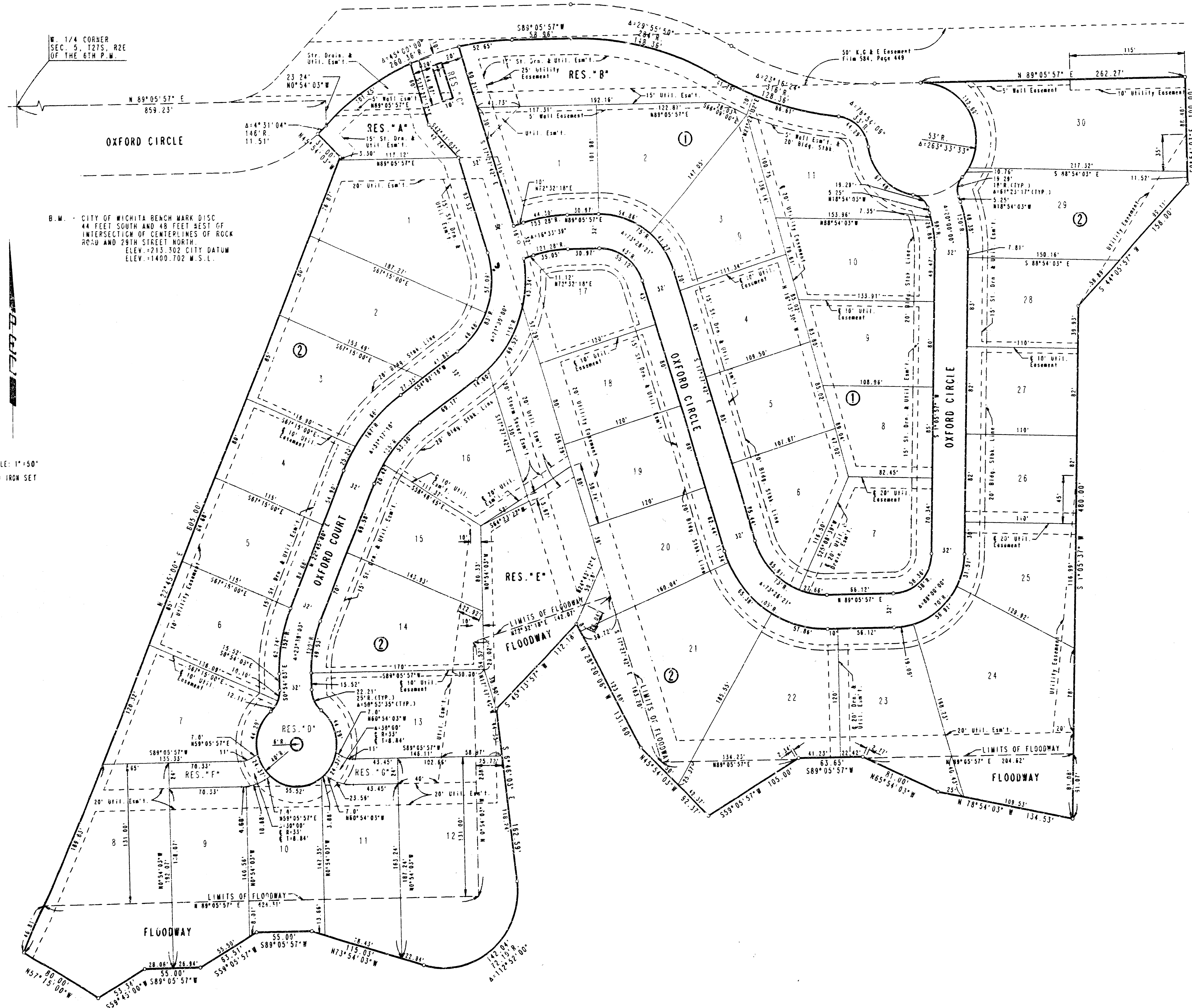
Booked Per Plan
2-2-93

APRIL, 1992
PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS



DRAWING NAME: 36-91837-3 TITLE
LOCATION:
CENTER COORDINATES:
DATE: 10/1/92
DATE LAST WORKED ON:
SPECIAL INSTRUCTIONS:

PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-245-82202-000-000-001	2	1



OXFORD ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

PLAN	DATE	BY
SURVEYED		
NOTE BOOK		
ALIGNED		
CHECKED		
NO.		

DRAWING NAME: 32-92049 PLAT
 LOCATION: 84 447
 DATE: 10/1/92
 DATE LAST WORKED ON:
 SPECIAL INSTRUCTIONS:

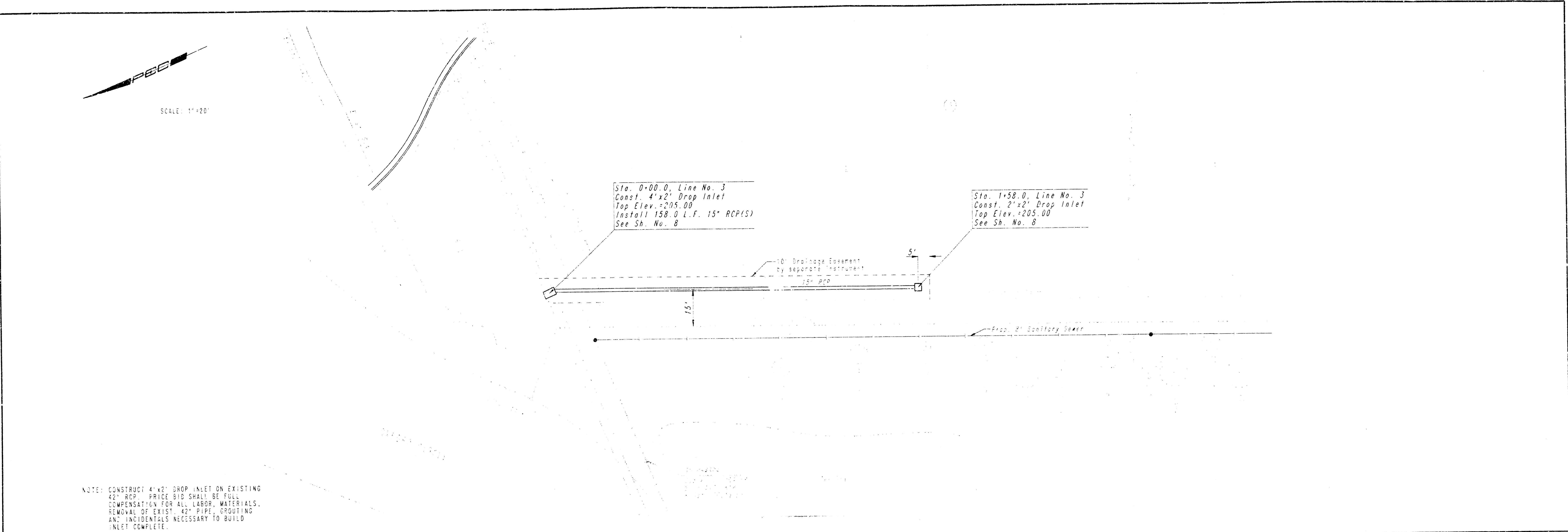
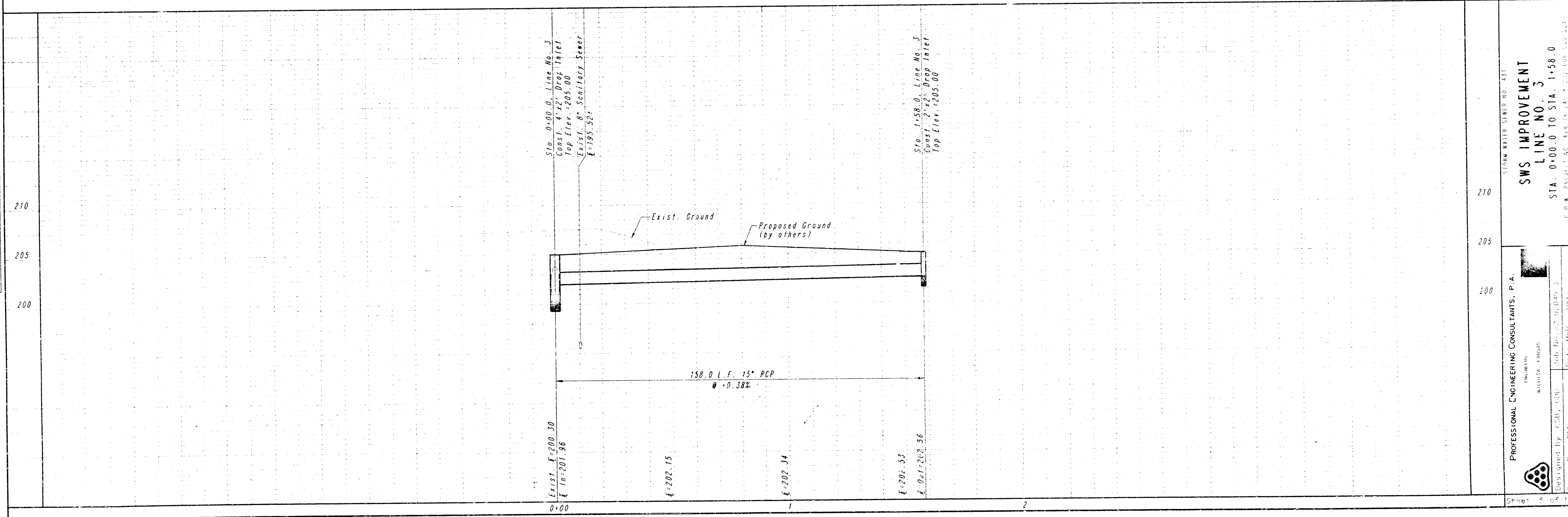
STORM WATER SEWER NO. 431	
PLAT	
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS	
Designed by	Checked by
Drawn by	Date: MAR., 1992 Job No. 92049-3

DRAWING NAME: 32-92019 3 SW5
LOCATION: 04-08
CENTER COURTESY:
LOCATION: ANGLES
DATE: 14-08-01
CREATED ON:
SPECIAL INSTRUCTIONS:

DRAWING NAME: 12-92045-S-SWS-5
LOCATION: DA 4117
DESIGN: CONSULTING
DATE: 10-1-2010
SPECIAL INSTRUCTIONS:

PROFILE	DATE
NO. 1000	BY
NO. 1000	DATE
NO. 1000	DATE
NO. 1000	DATE

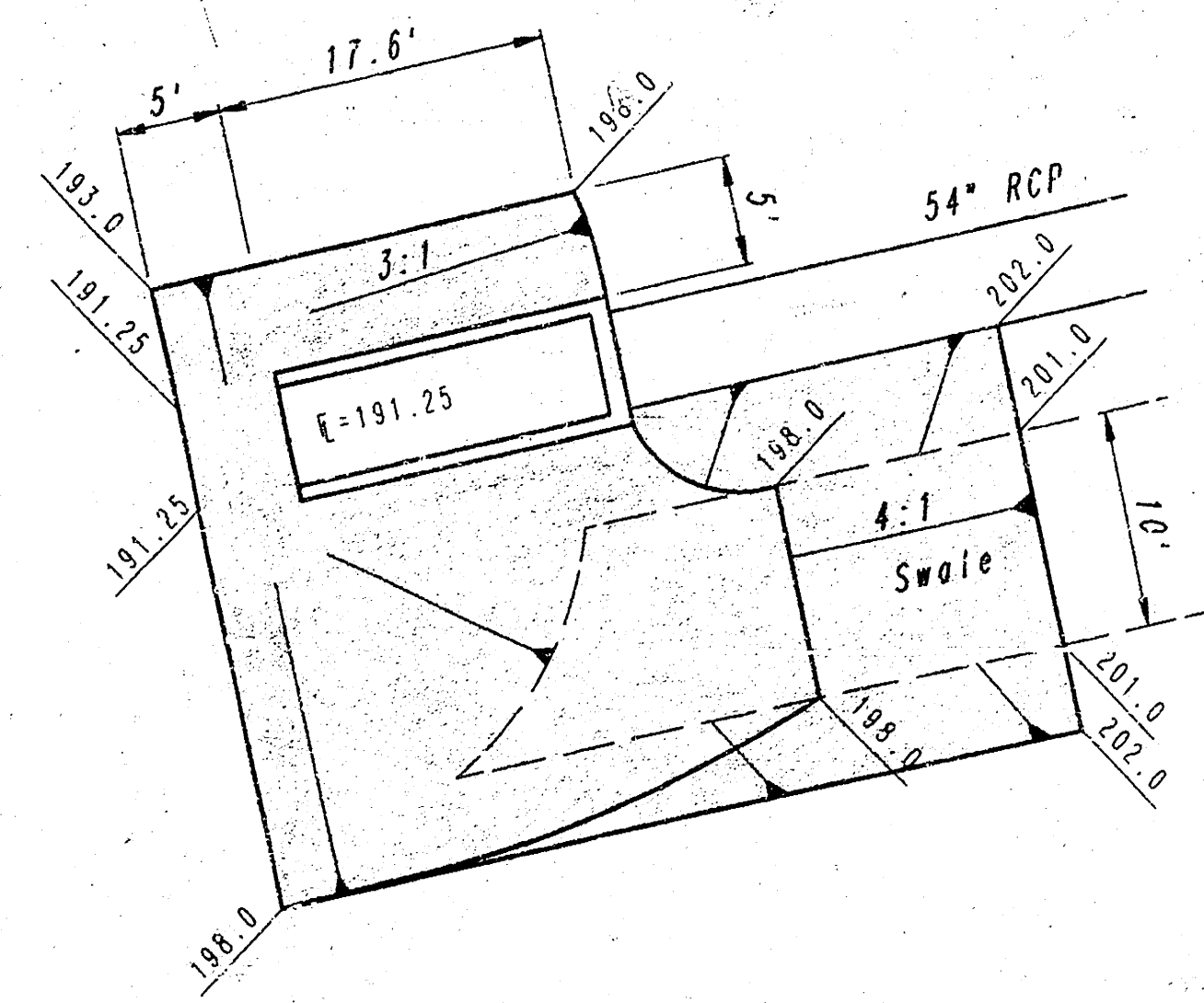
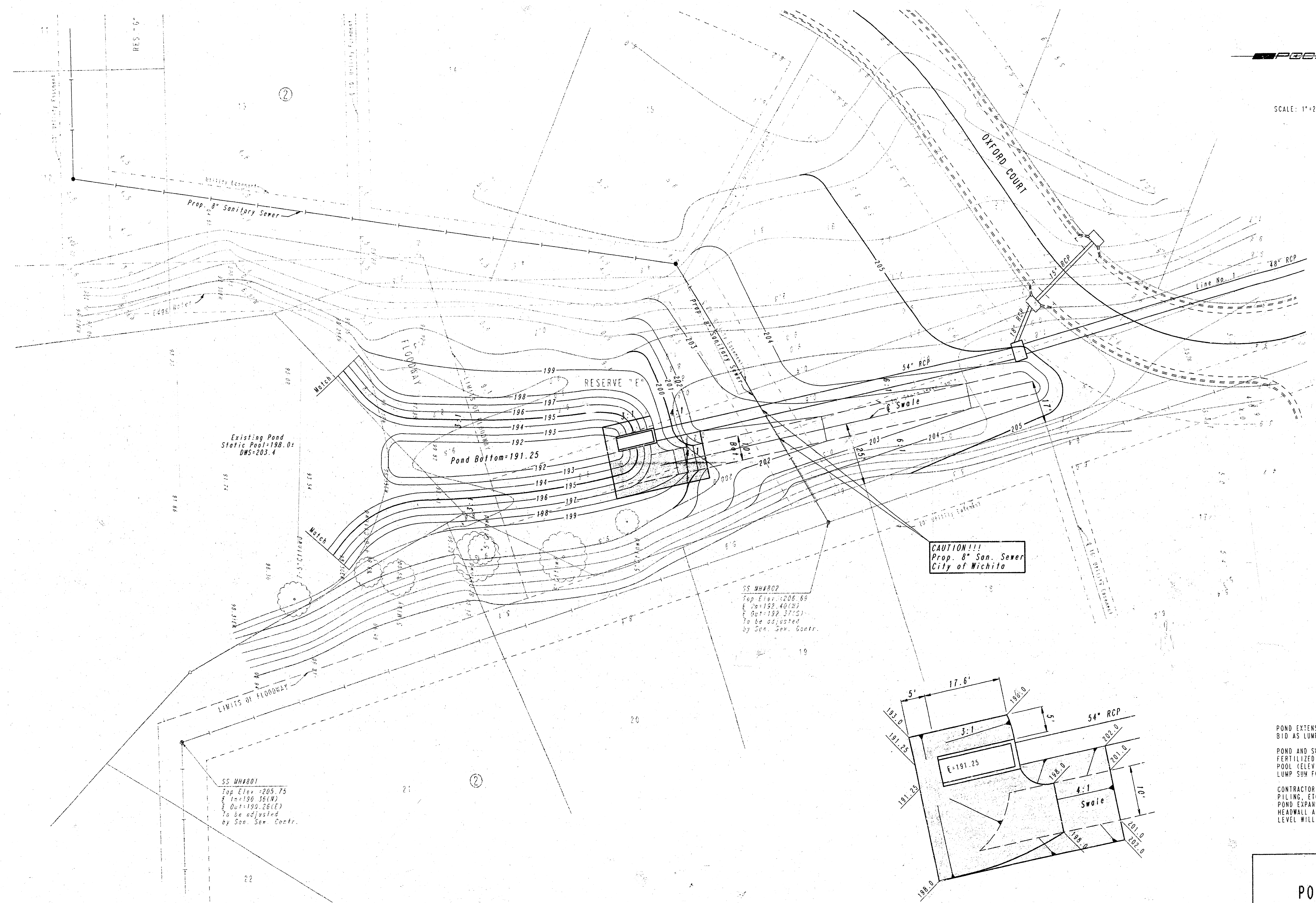
PLAN	DATE
NO. 1000	BY
NO. 1000	DATE
NO. 1000	DATE
NO. 1000	DATE



NOTE: CONSTRUCT 4"x2" DROP INLET ON EXISTING 42" RCP. PRICE BID SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, REMOVAL OF EXIST. 42" PIPE, GROUTING AND INCIDENTALS NECESSARY TO BUILD INLET COMPLETE.

PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-245-82202-000-000-001	5	11

SCALE: 1"=20'



RIPRAP DETAIL
SEE SHEET NO. 4 FOR
RIPRAP TOEWALL DETAIL

SCALE: 1"=10'

NOTES

- POND EXTENSION AND SWALE CONSTRUCTION SHALL BE BID AS LUMP SUM FOR "POND AND SWALE GRADING".
- POND AND SWALE SHALL BE SEEDED, MULCHED AND FERTILIZED TO C.O.W. SPECIFICATION ABOVE STATIC POOL ELEV. 198.02. THIS WORK SHALL BE BID AS LUMP SUM FOR "SEEDING".
- CONTRACTOR SHALL CONSTRUCT COFFER DAM, SHEET PILING, ETC. AS REQUIRED TO PROPERLY EXCAVATE THE POND EXPANSION AND TO PROPERLY INSTALL THE HEADWALL AND RIPRAP. LOWERING THE EXISTING POND LEVEL WILL NOT BE ALLOWED.

STORM WATER SEWER NO. 431

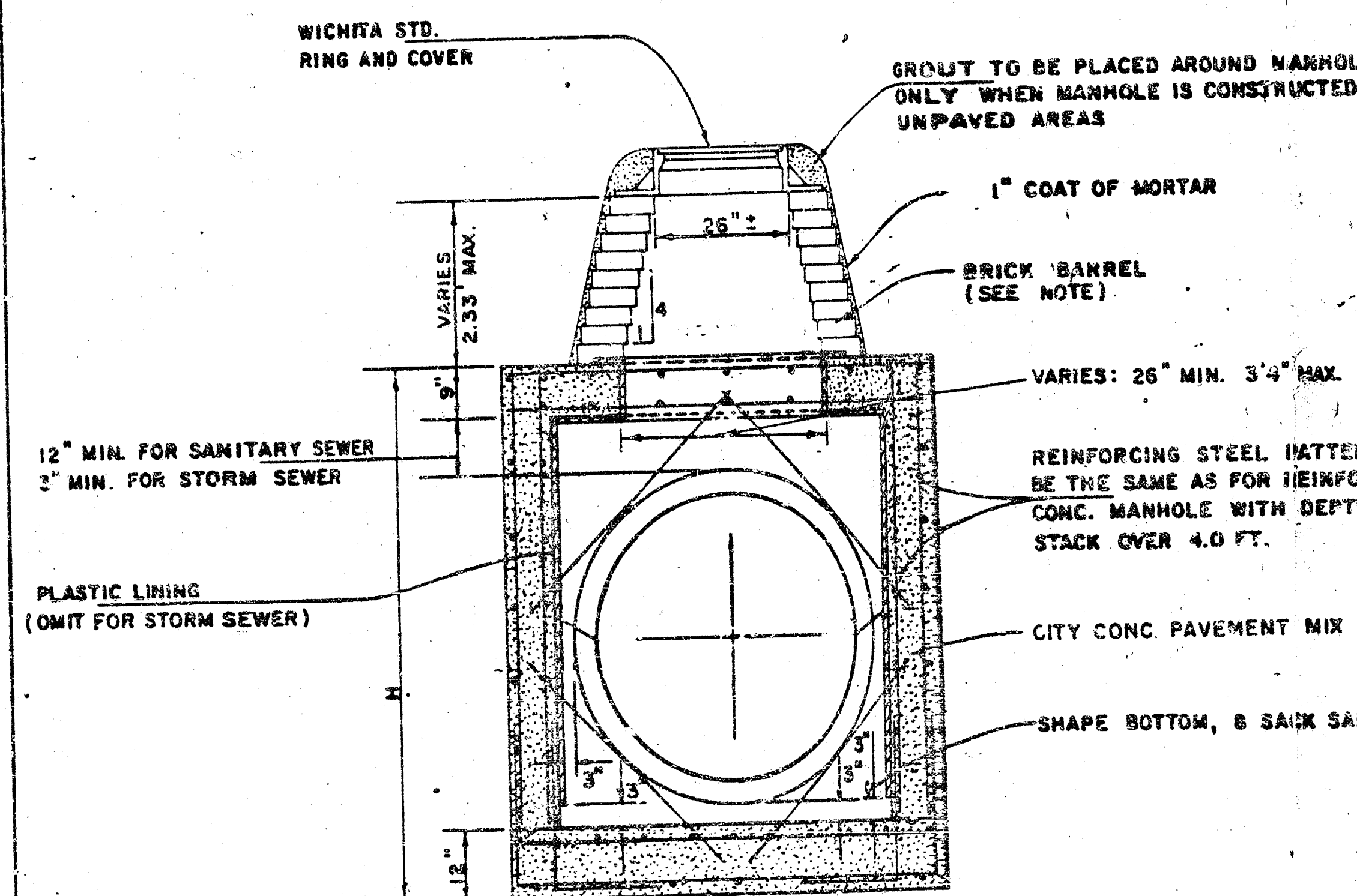
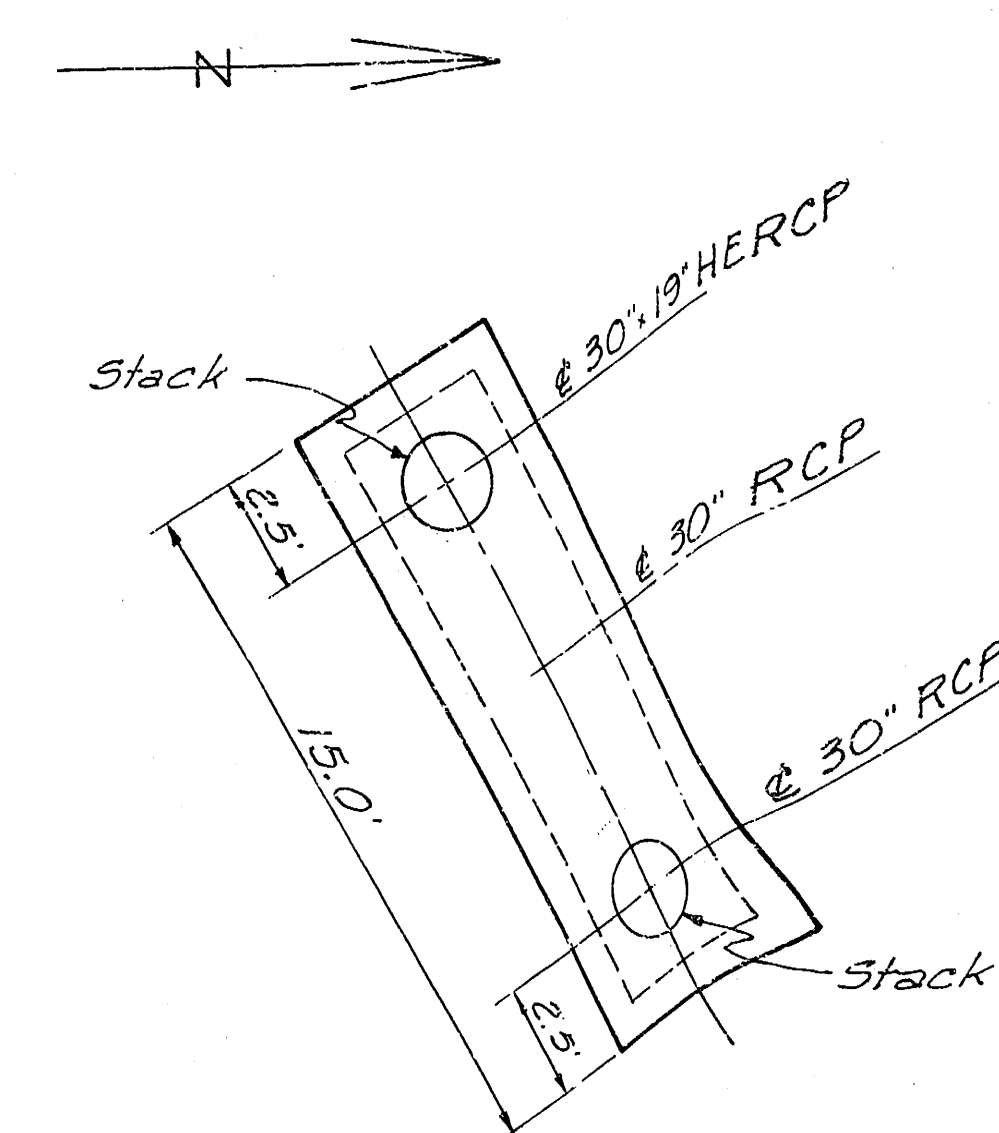
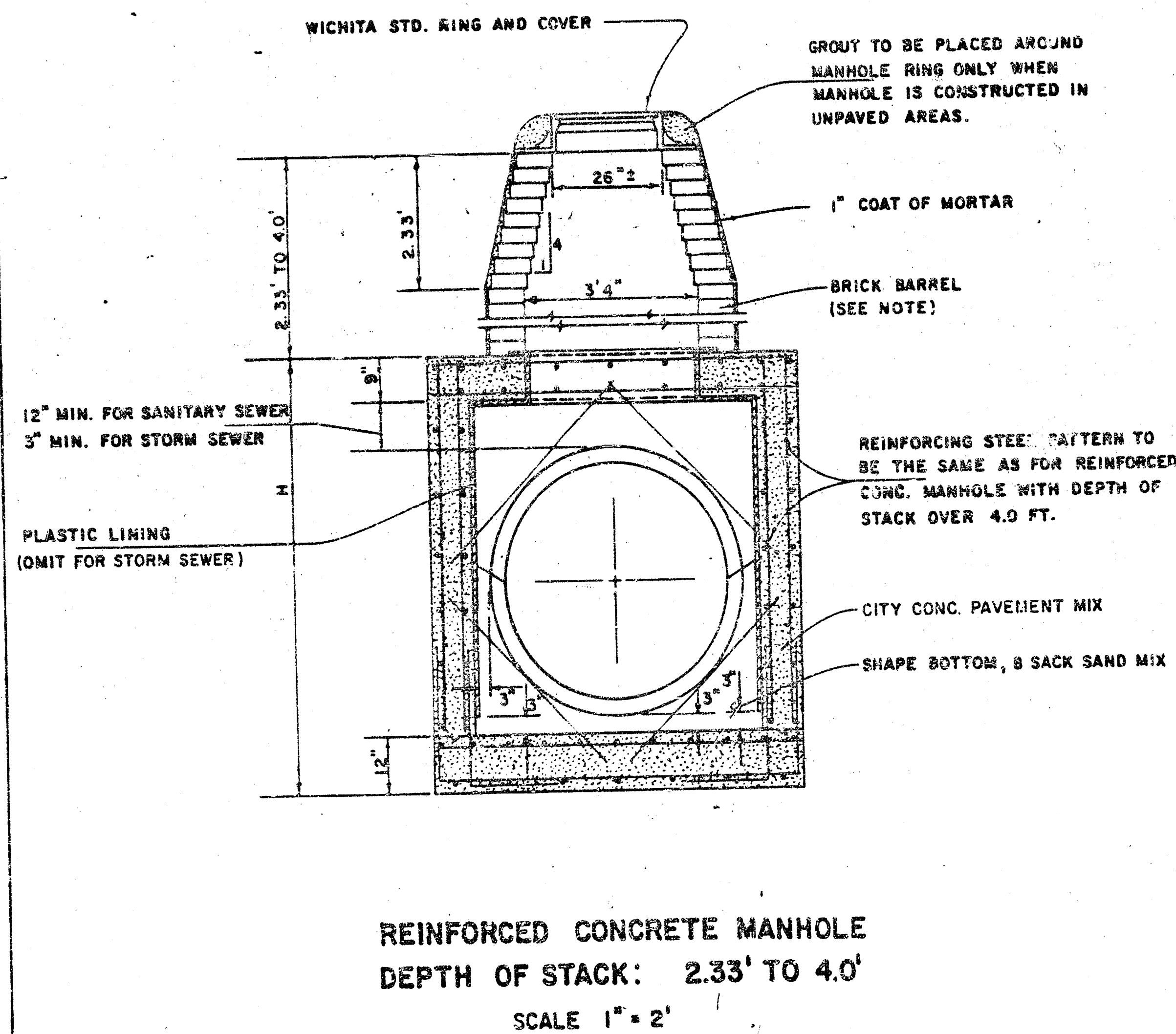
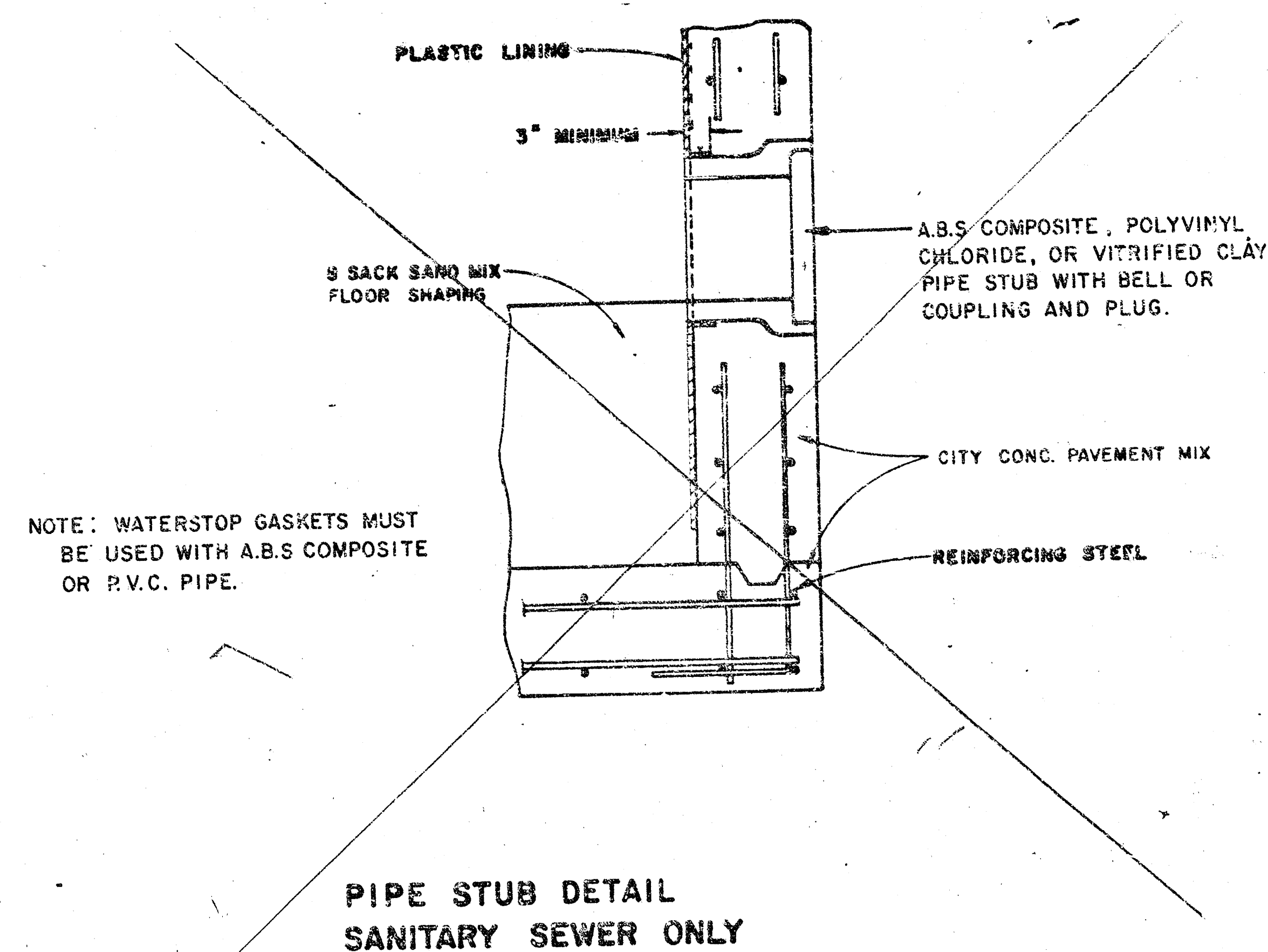
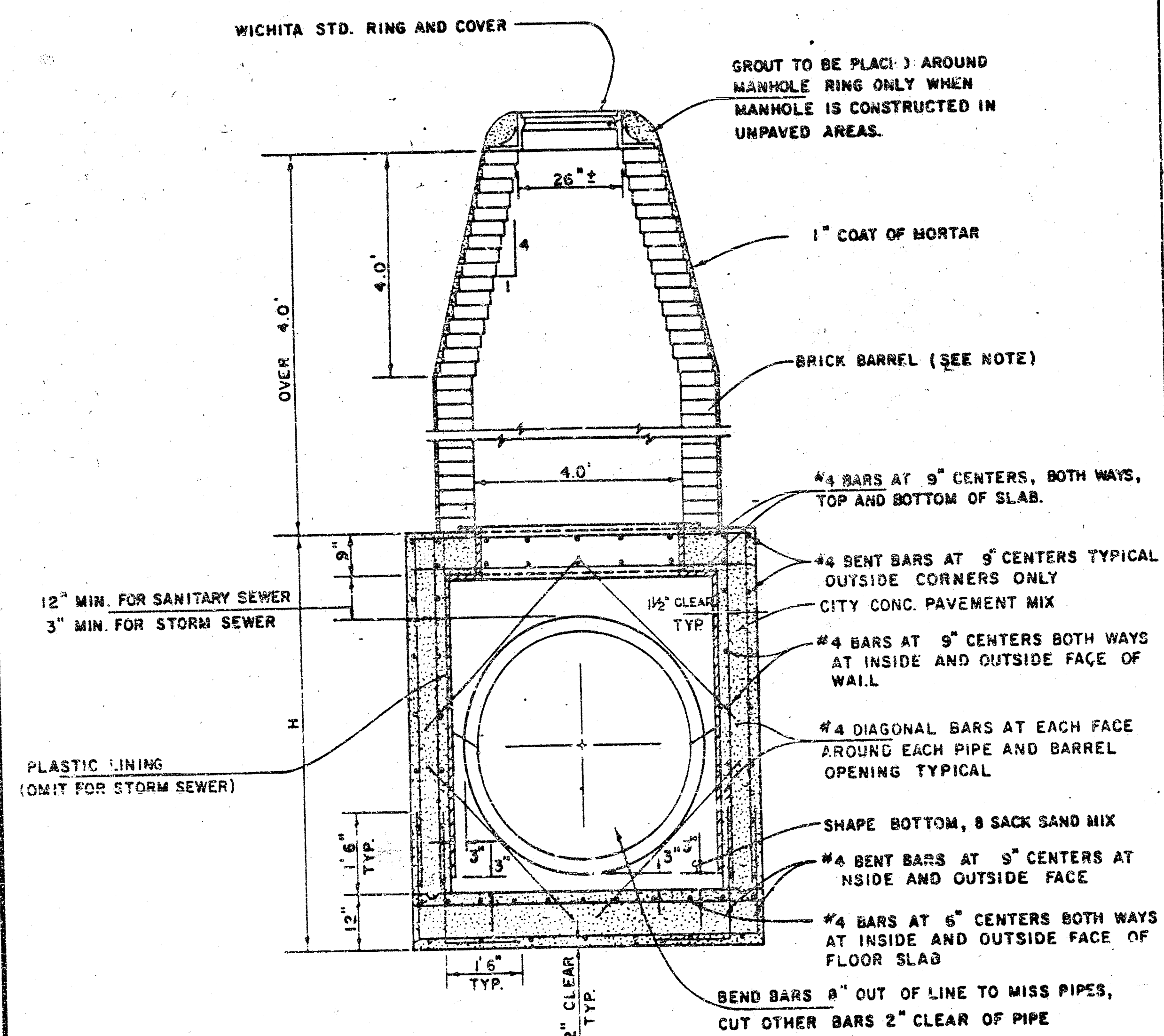
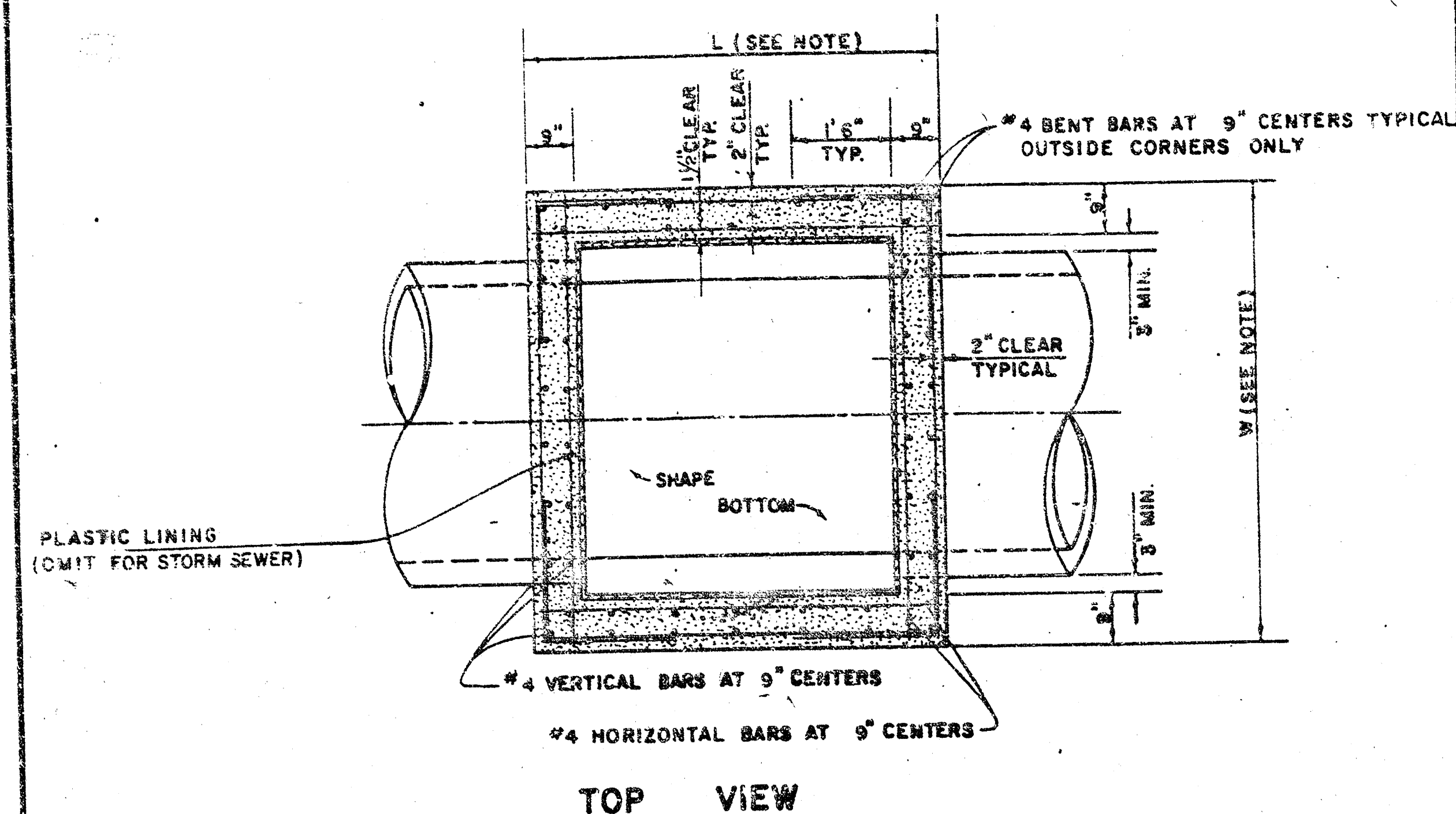
POND AND SWALE PLAN

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

Designed by	CSB, GDD	Checked by	
Drawn by	DEP	Date	MAR., 1992 Job No. 92049-3

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	REVISIONS		
	BY	DATE	
	BY	DATE	

DRAWING NAME: 32-92049-3 SMS 4
LOCATION: 32-92049-3 SMS 4
DATE LAST WORKED ON:
SPECIAL INSTRUCTIONS:



NOTE 1: BRICK BARRELS LESS THAN 16" DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12" BRICK BARRELS MORE THAN 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 WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATERTIGHT.

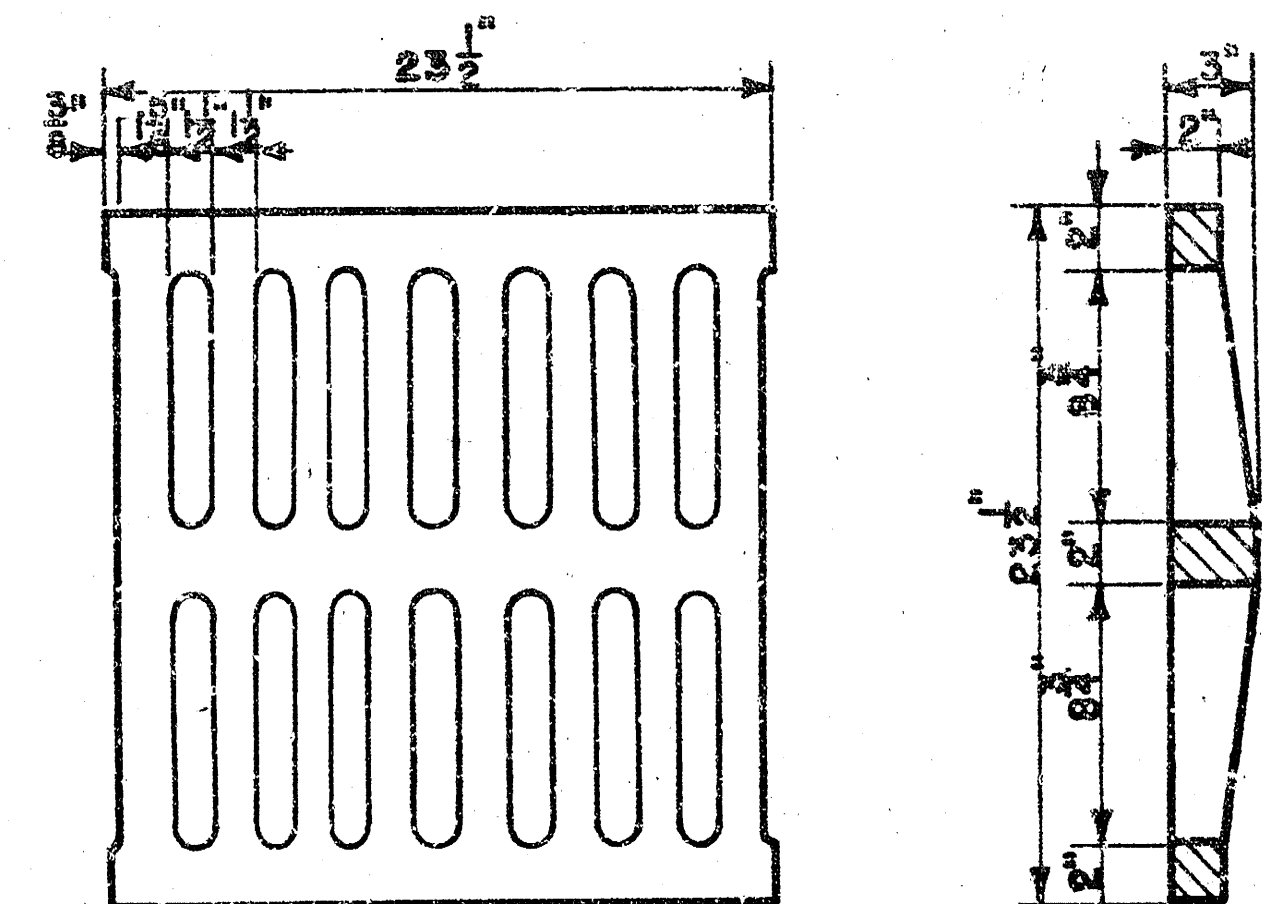
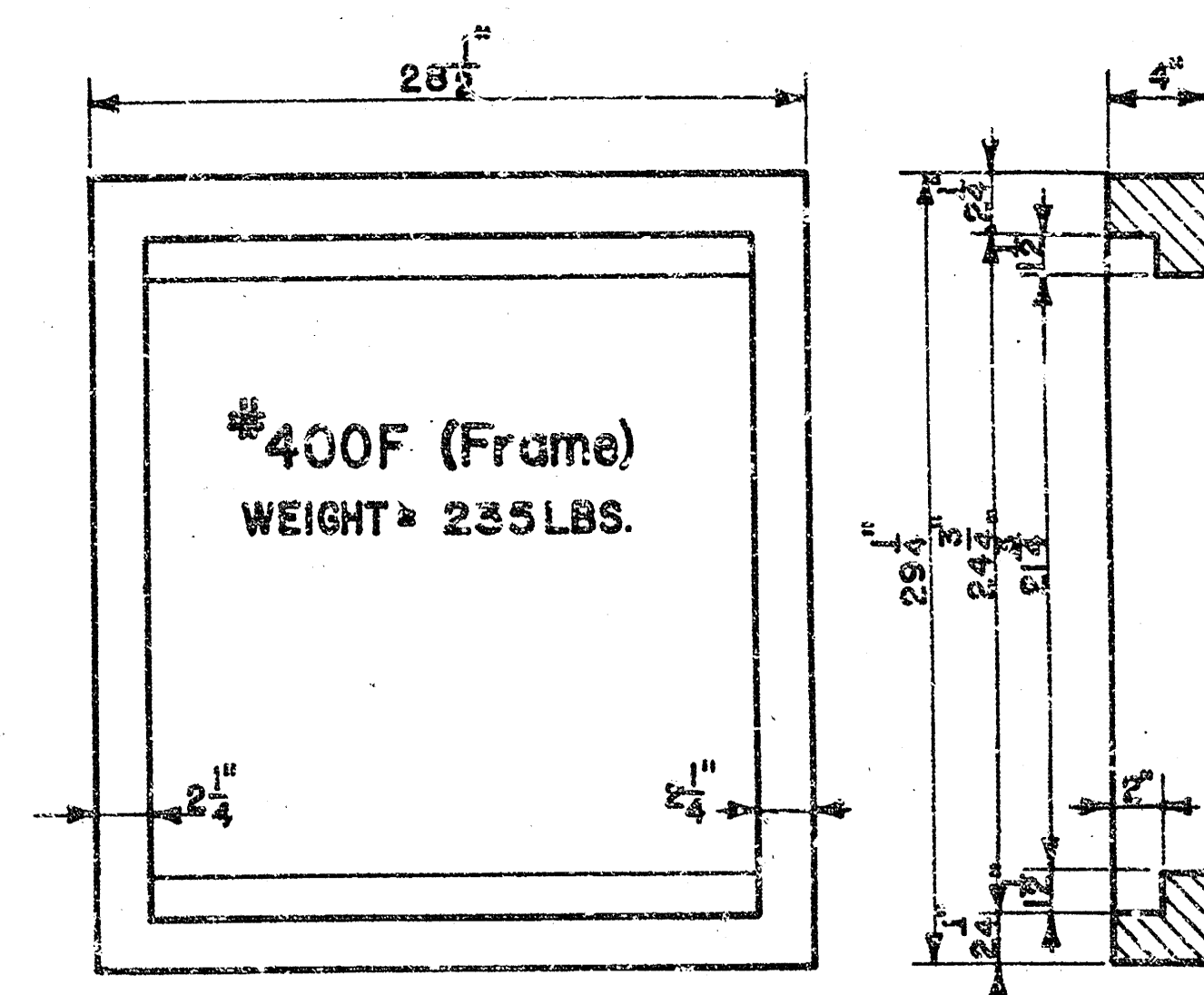
REVISIED 1-7-85

STANDARD DETAILS
REINFORCED CONCRETE MAN
CITY OF WICHITA

FEBRUARY 1984

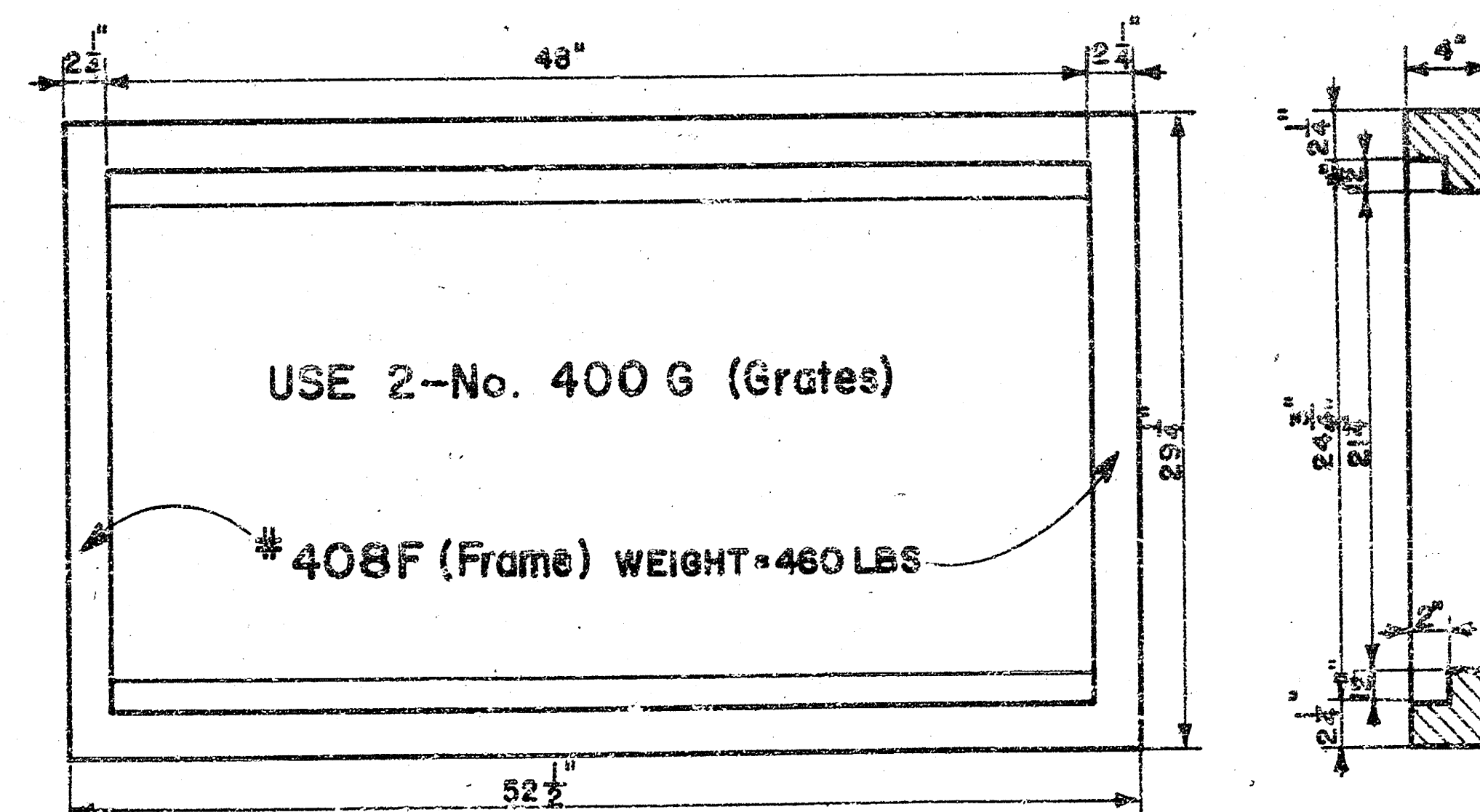
C.O.W. Proj No. 468-76-245-82202-000-000-001

NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be used only if approved by the engineer.

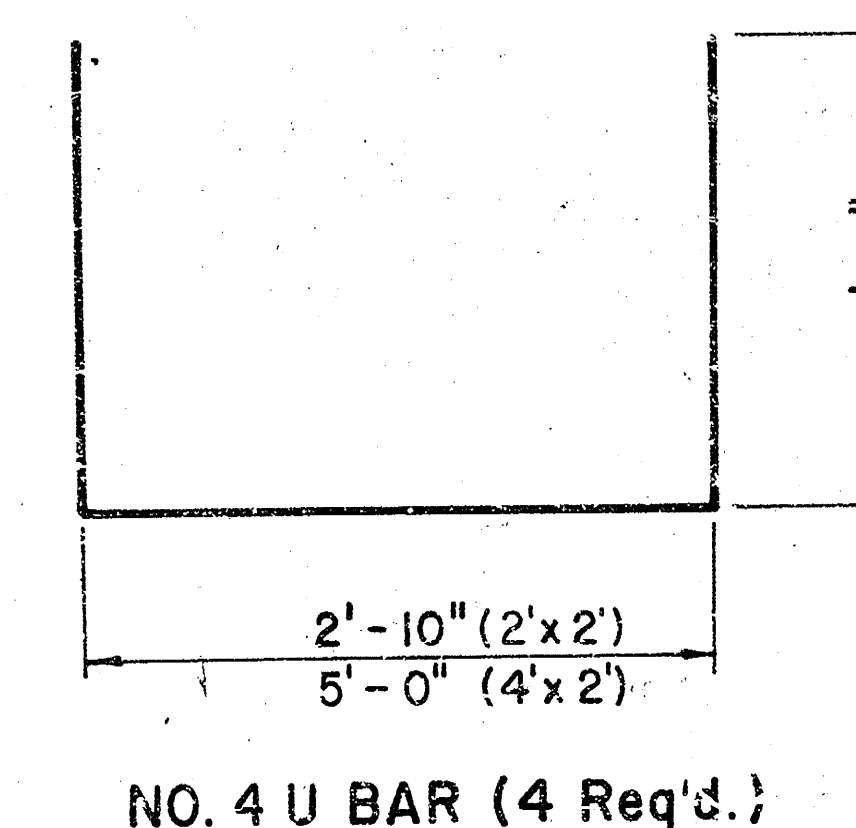
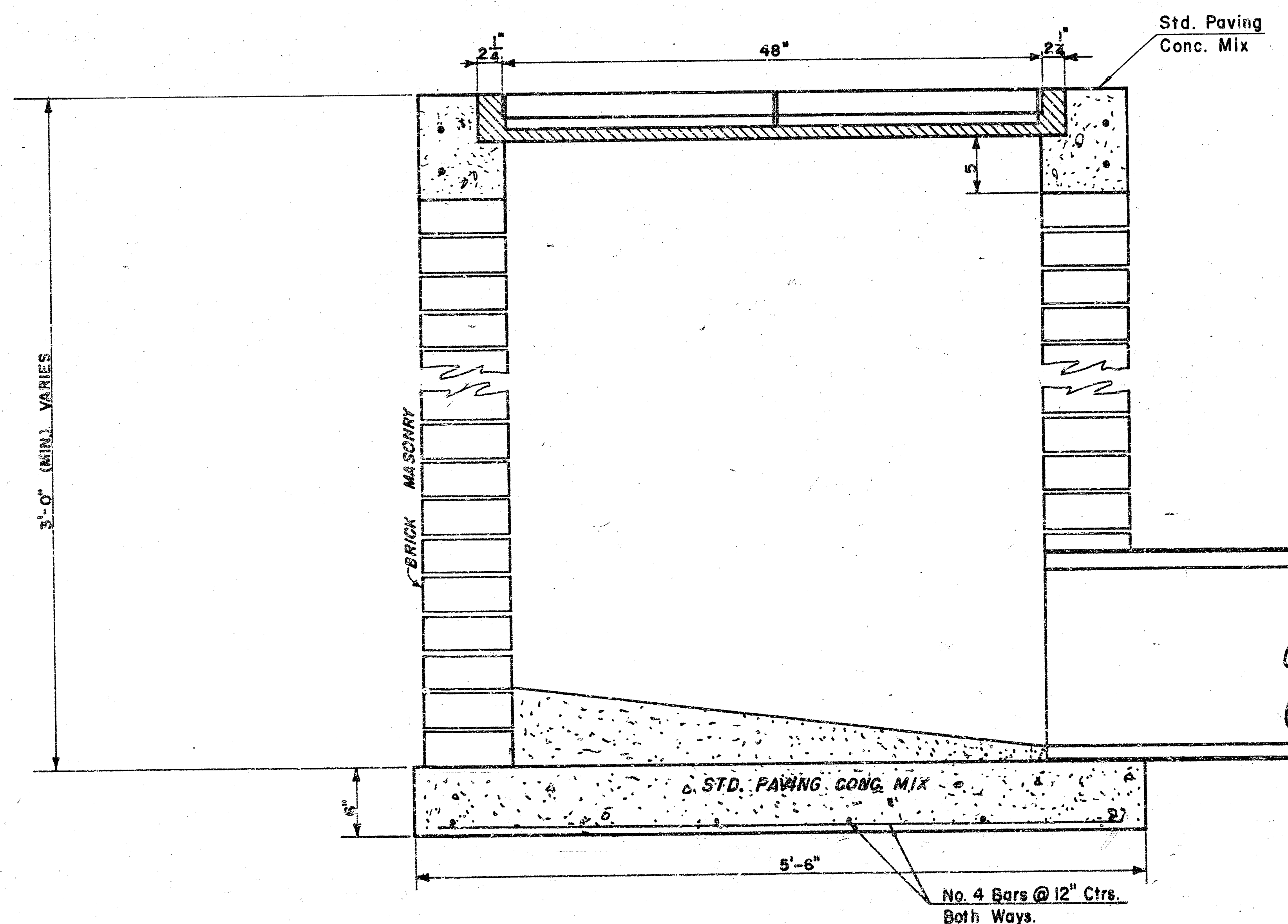
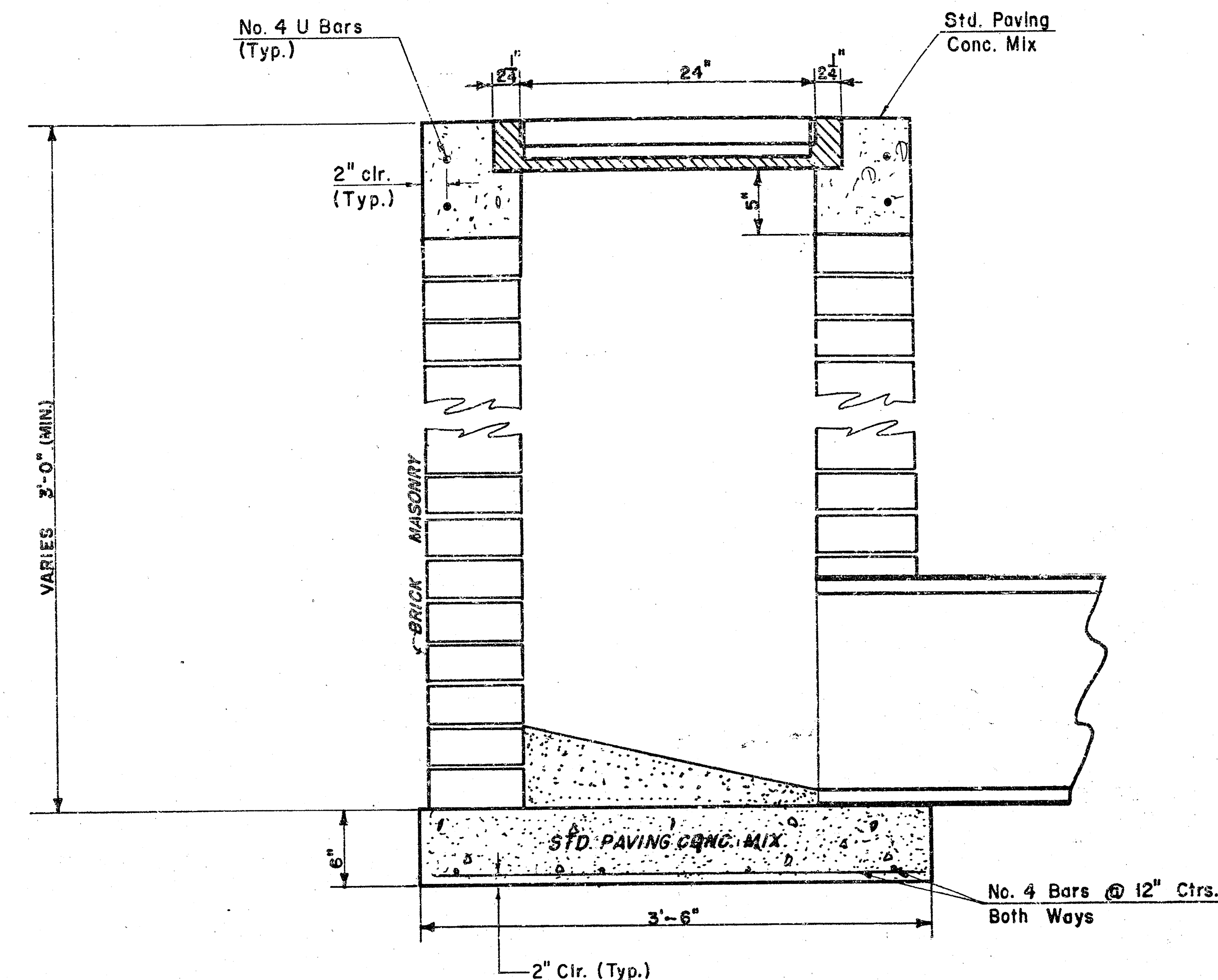
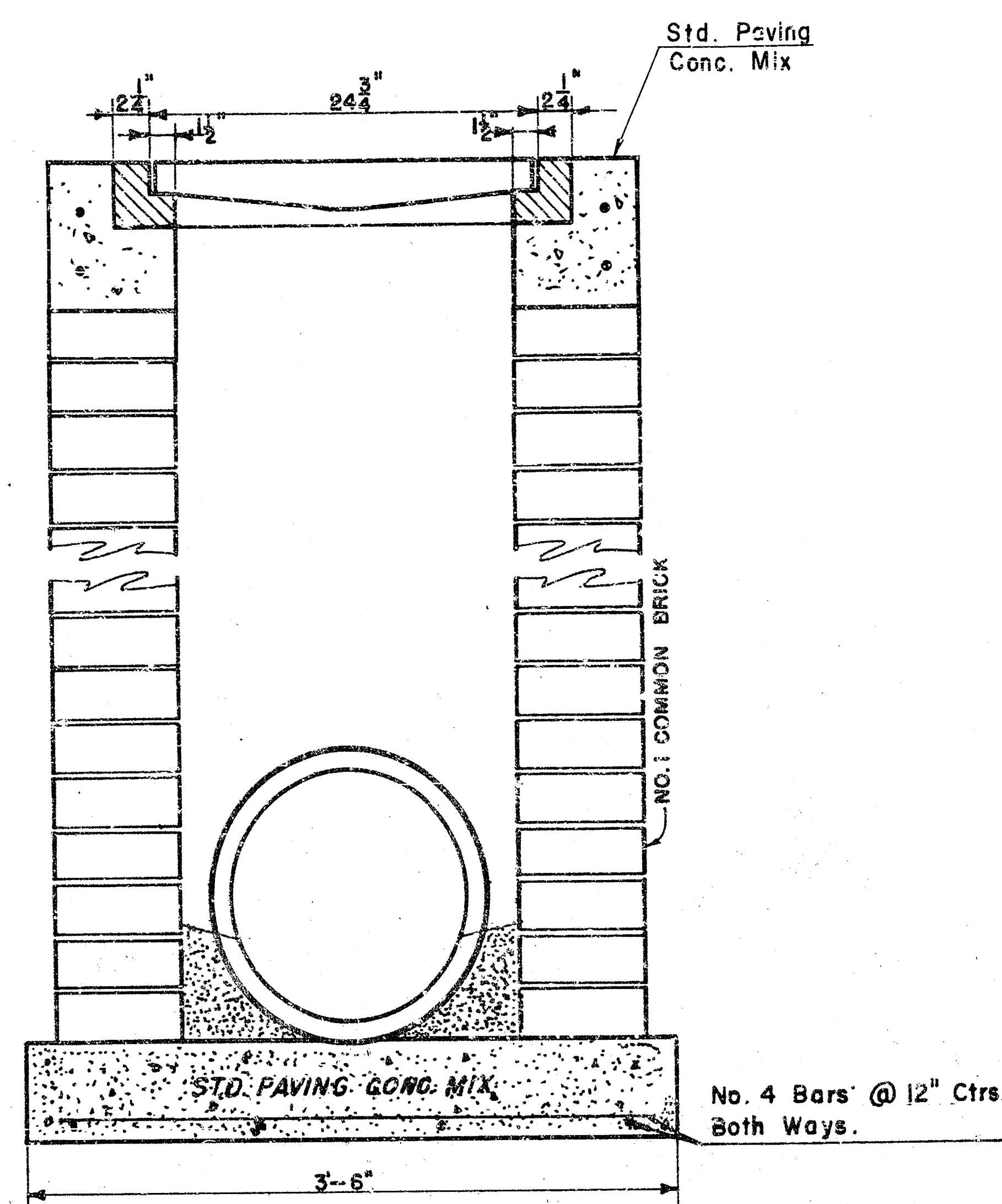


#400G (Grate)
WEIGHT = 235 LBS

24"x24" Frame & Grate Detail

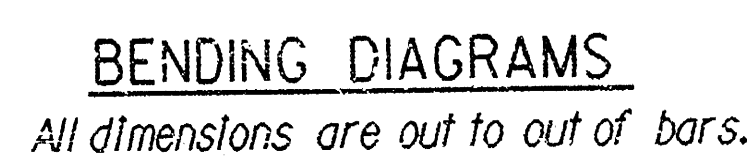


Double 24"x24" Frame Detail



DROP INLET DETAILS

M.E. Lindebak, City Engineer
City of Wichita, Kansas
Project Oxford Add. S.W.S. No. 431
Project No. 468-76-245-82202
Date: April, 1992
Scale: 1-1/2" = 1'-0"



All Concrete Reinforcement
to be #4 bars.



All dimensions are out to out of bars.



CONCRETE: BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOLDING OR FINISH WITH AN APPROVED EDGING TOOL. CONCRETE SHALL BE AS PER CITY OF WICHITA STANDARD SPECIFICATIONS FOR CONCRETE PAVING MIX EXCEPT THAT IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO THE HEADWALL.

REINFORCING STEEL: ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED. ALL CLEARANCES SHALL BE 2" UNLESS OTHERWISE NOTED. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A615 GRADE 60 AND SHALL BE EPOXY COATED.

PAYMENT: A DEDUCTION IN CONCRETE QUANTITIES HAS BEEN MADE FOR
PIPING PENETRATING THE HEADWALL (54") (REINFORCED CONCRETE)
AND THE HEADWALL (30") (REINFORCED CONCRETE) SHALL BE PAID FOR
AT THE UNIT PRICE BID PER EACH IN PLACE INCLUDING CONCRETE,
REINFORCING STEEL, EXCAVATION AND ALL OTHER MISCELLANEOUS
MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY
TO COMPLETE THE WORK. QUANTITIES SHOWN ARE FOR INFORMATION
ONLY.

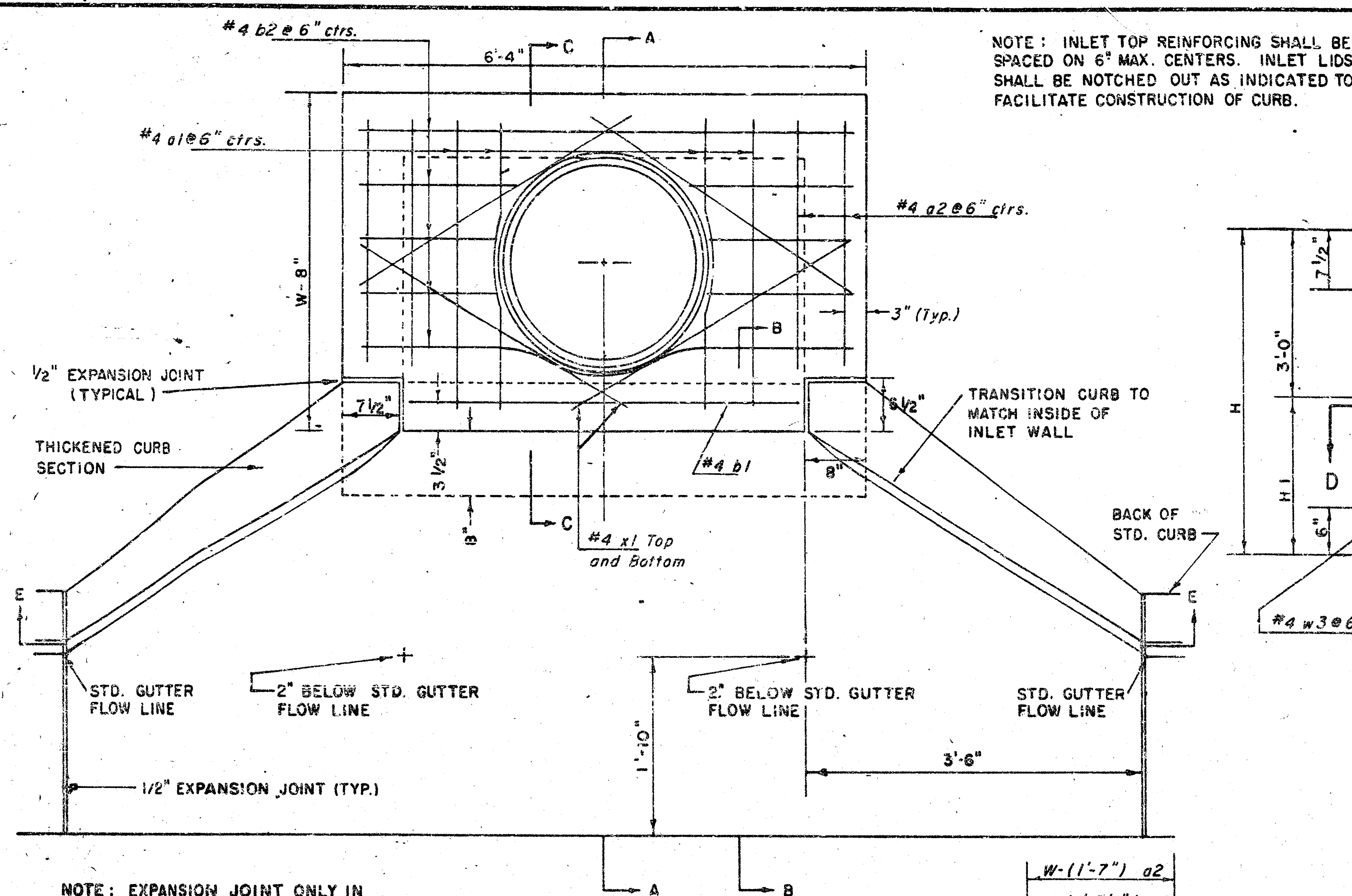
SEE SHEET NO. 3 AND 5 FOR ADDITIONAL DETAILS.

RE-BAR SCHEDULE				
Mark	Shape	No.	Length	Weight
A1		1	12'-5"	8.29
A2		1	11'-1"	7.40
A3		1	10'-5"	6.96
A4		1	9'-9"	6.51
A5		1	9'-1"	6.07
A6		1	8'-5"	5.62
A7		1	7'-9"	5.18
A8		1	7'-3"	4.84
B1		2	7'-2"	9.57
B2		2	6'-6"	8.68
B3		2	4'-0"	5.34
B4		2	1'-6"	2.00
C		6	9'-5"	37.74
D1		4	3'-0"	8.02
E		3	4'-10"	9.69
F		2	7'-6"	10.02
Total Rebars			142	Lbs.
Concrete			2.34	C.Y.

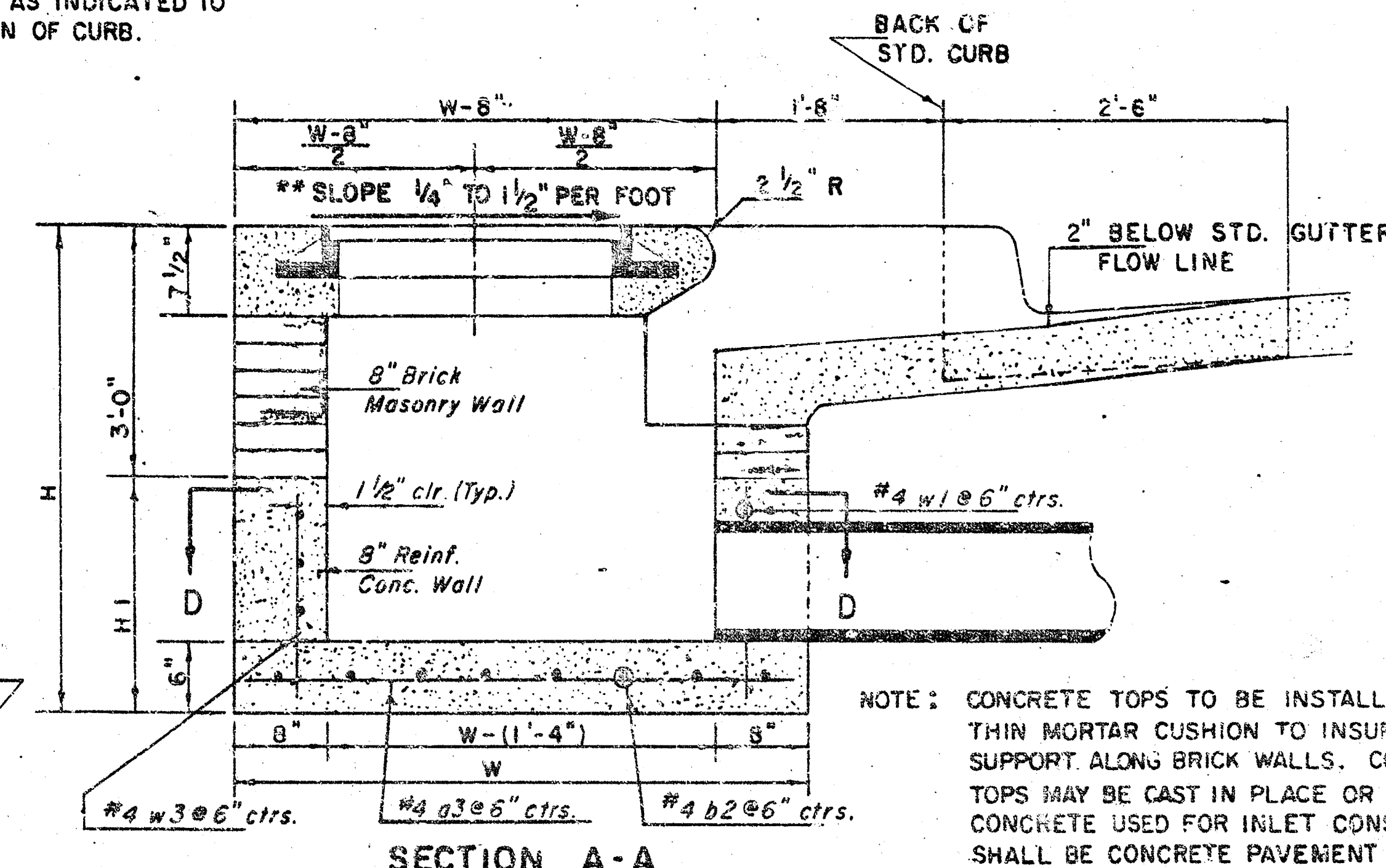
All Concrete Reinforcement
to be #4 bars.



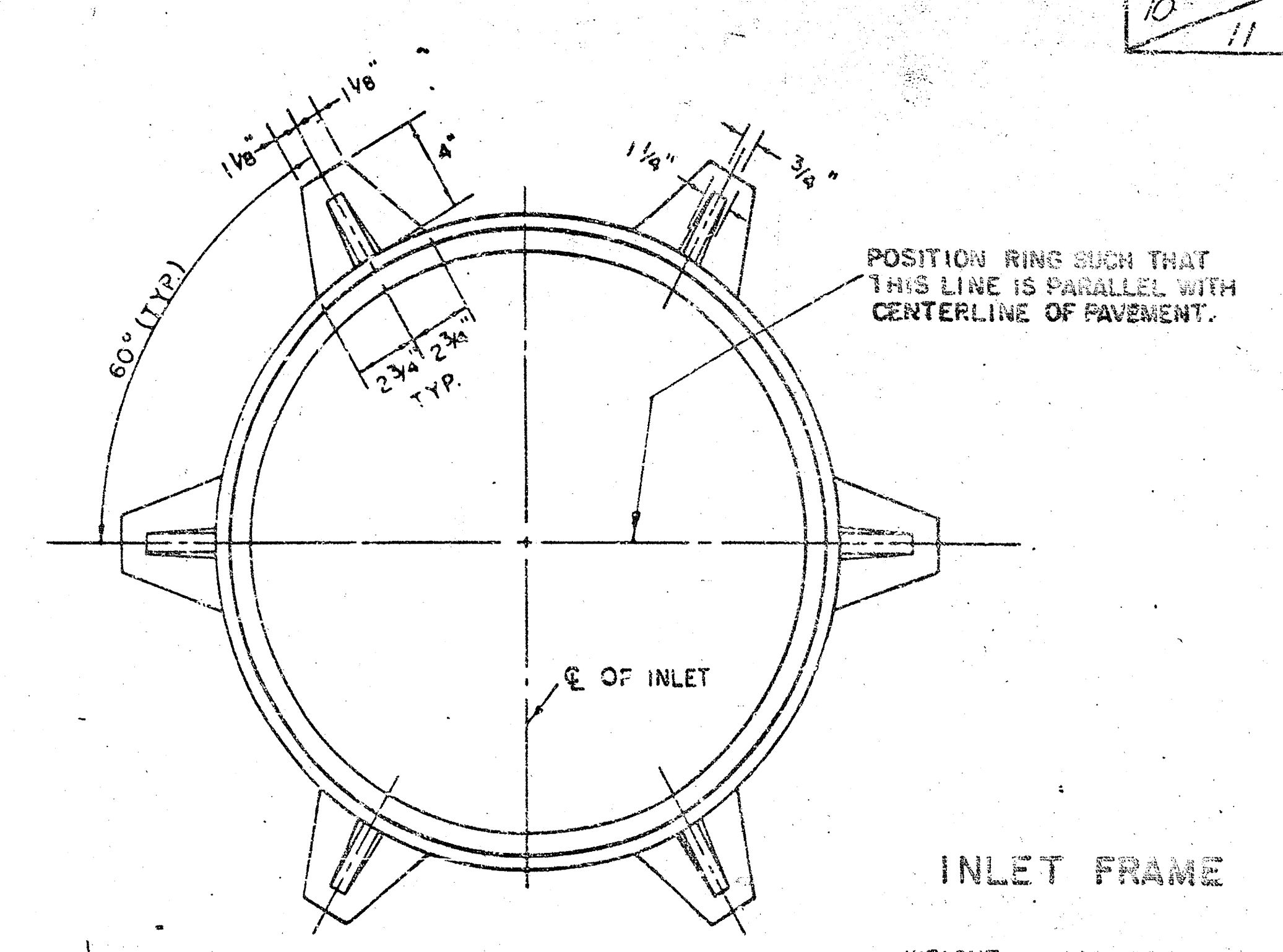
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No.	Revisions	By	Date
STORM WATER SEWER NO. 431			
54" HEADWALL AND 30" HEADWALL			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. DORCHESTER WICHITA, KANSAS			
Designed by	RAS	Checked by	RWA
Drawn by	RAS/JRA	Date	April 11-82 Job No. 92049-3



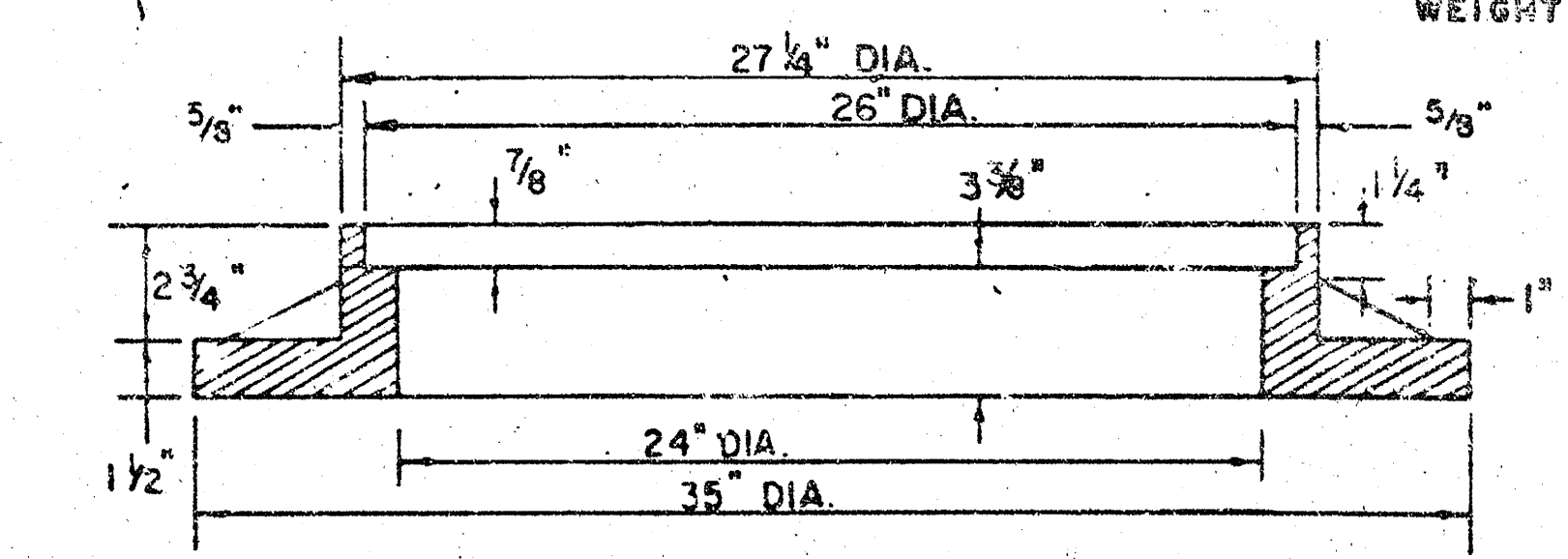
PLAN



SECTION A-A



WEIGHT = 180 LBS.



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

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.

BENDING DIAGRAM

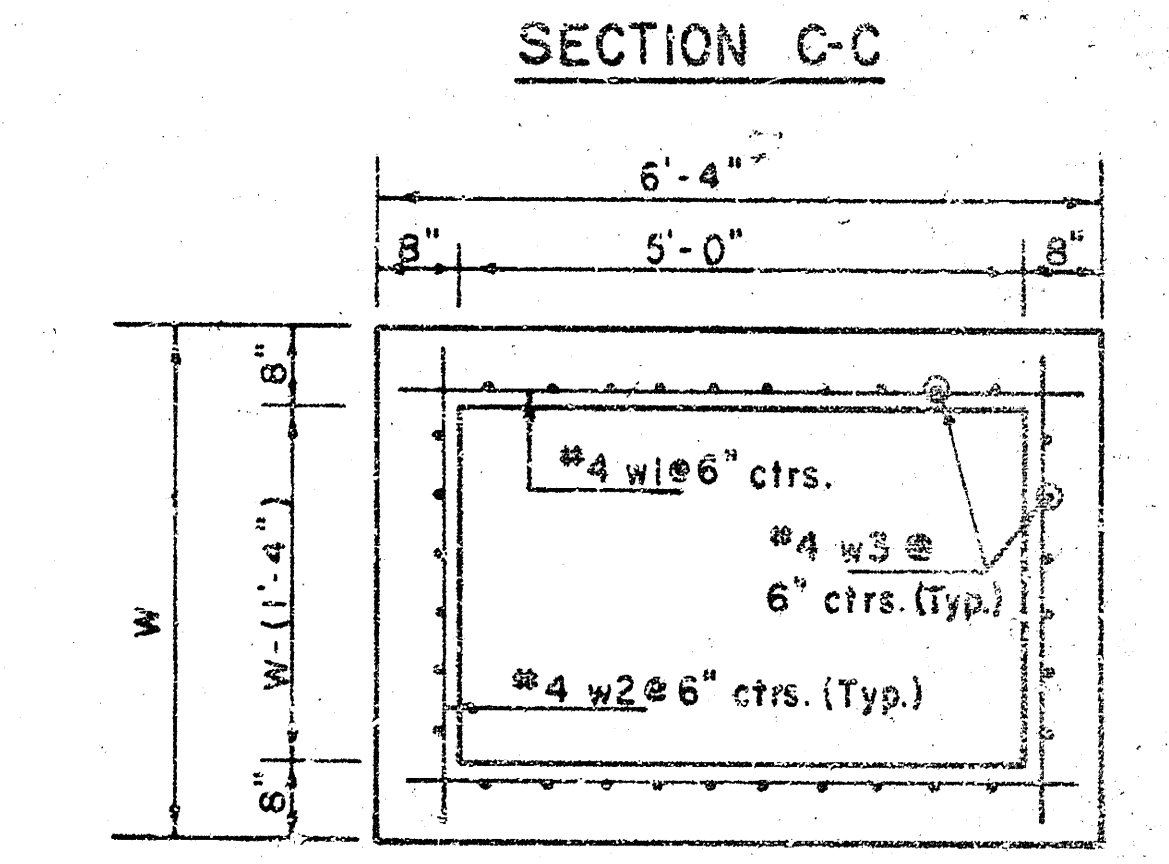
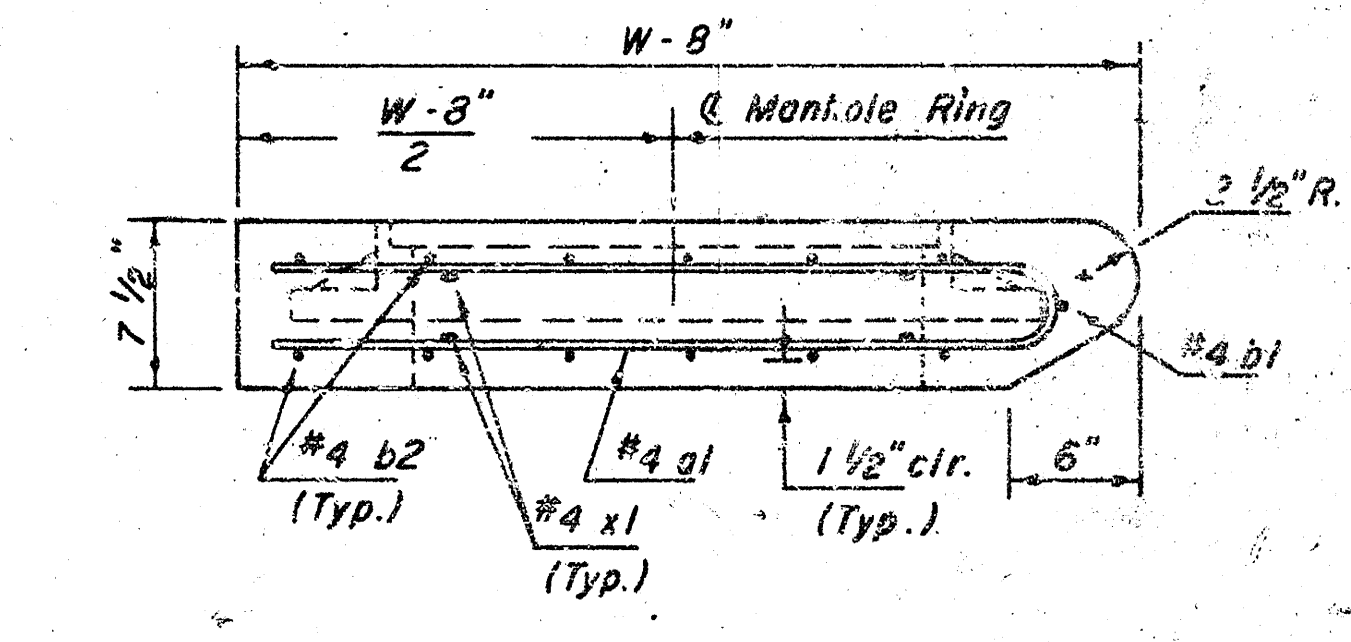
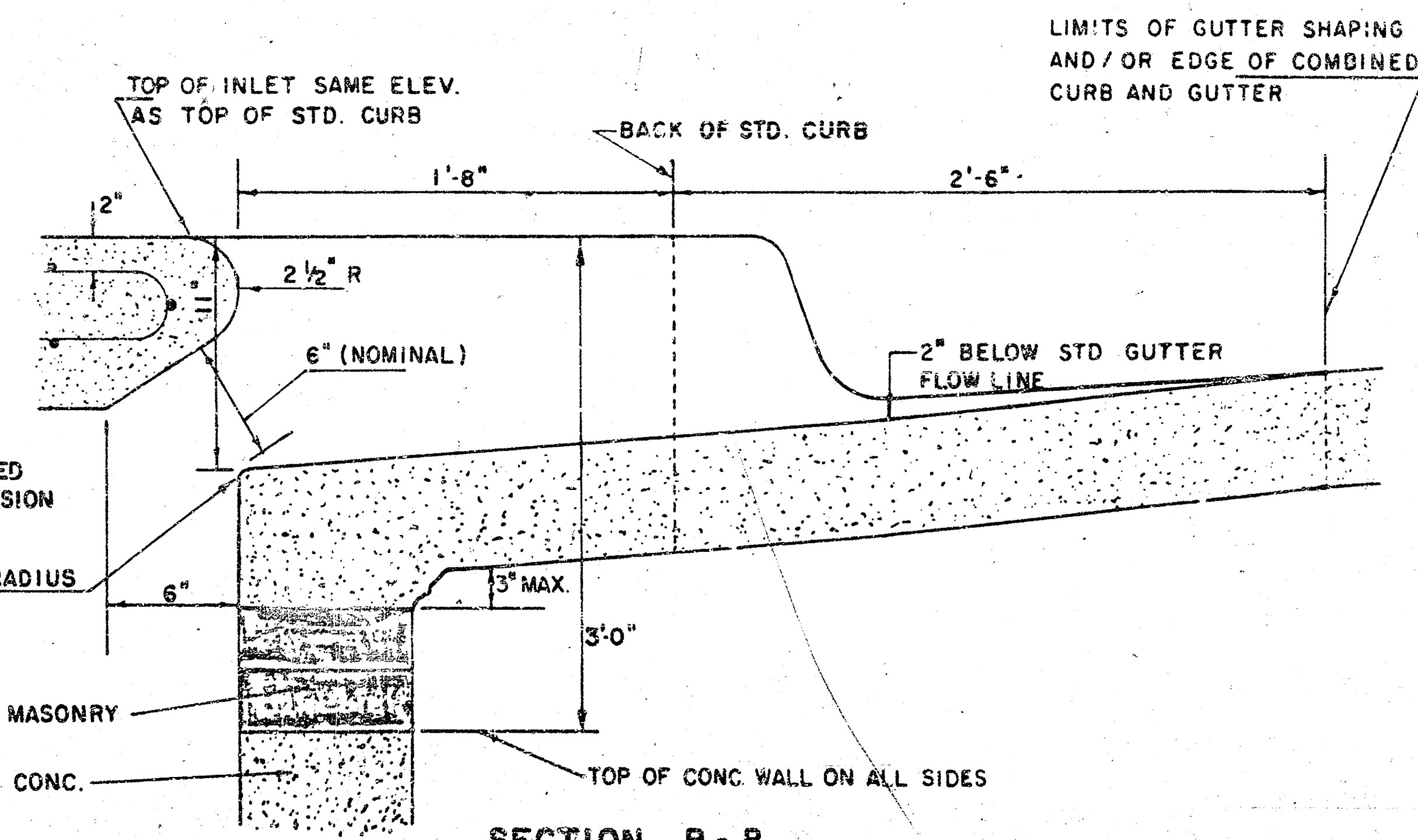
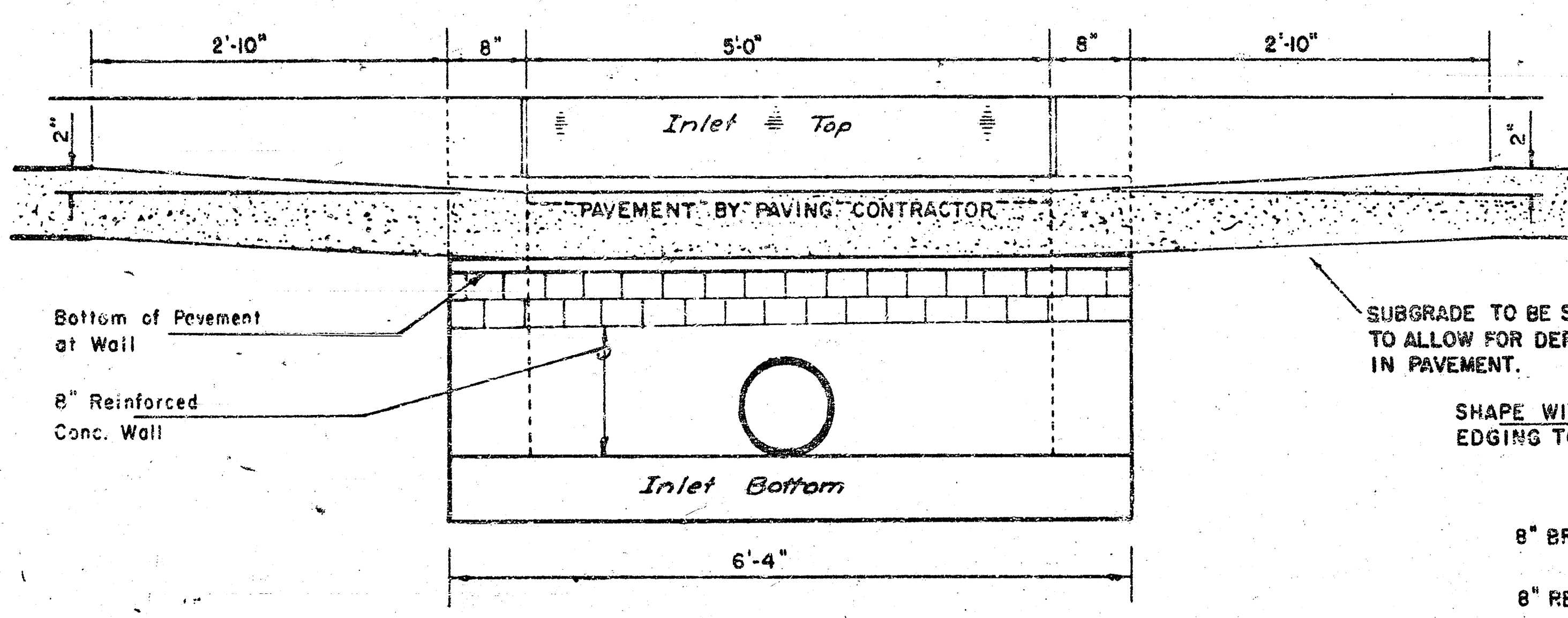
W	PRECAST TOP SIZE	PIPE SIZE	C.U.YD. CONC.
4' 4"	3'6" x 6'4" x 7 1/2"	21" Ø SMALLER	0.38 ±
5' 4"	4'6" x 6'4" x 7 1/2"	24" Ø 30"	0.51 ±
6' 4"	5'6" x 6'4" x 7 1/2"	36" Ø 42"	0.64 ±
7' 4"	6'6" x 6'4" x 7 1/2"	48" Ø 54"	0.77 ±
8' 4"	7'6" x 6'4" x 7 1/2"	60" Ø 66"	0.90 ±

**NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.

Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	5'-7"	5	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	3'-1"	13	5'-1"	13	7'-1"	13	9'-1"	13	11'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	5'-1"	23	5'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-5"	8	4'-10"	8	5'-2"

Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	0	5'-1"	0	5'-1"	0	5'-1"	0	5'-1"	0	5'-1"
w2	#4	0	4'-1"	0	5'-1"	0	6'-1"	0	7'-1"	0	8'-1"
w3	#4	32	2	36	2	40	2	44	2	48	2

* Field bend or cut Reinforcing as required for clearance.
 ① 4(HI-12") (HI-12") Round down to nearest 0.5"
 ② HI-3"



REVISIONS: H-30-1988
 REVISED 12-31-1984
 Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET
 CITY OF WICHITA, KANSAS
 INLET OPENING = 6" x 6" 0"

MANHOLE FRAME AND COVER DETAIL

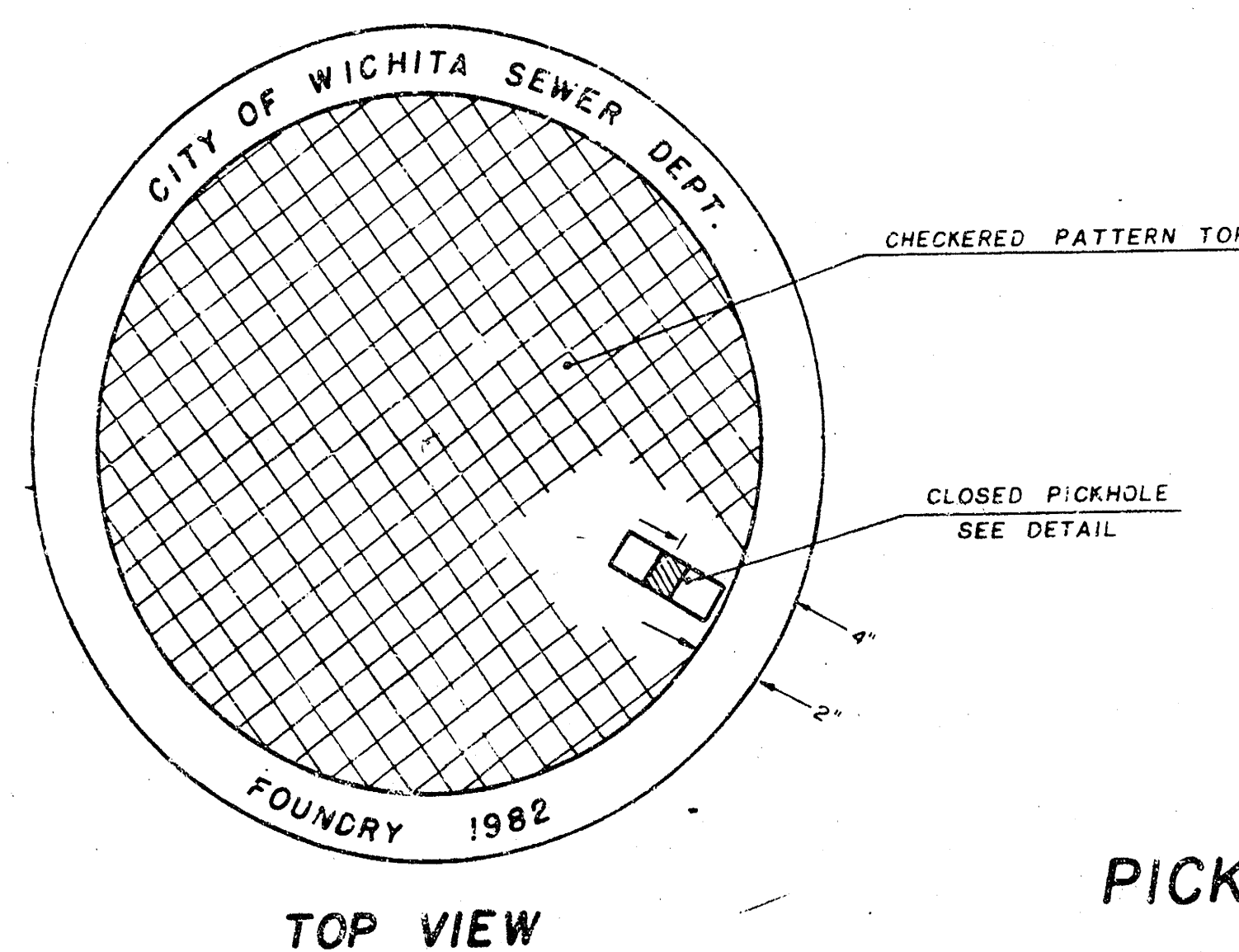
ADOPTED AS STANDARD DESIGN

BY

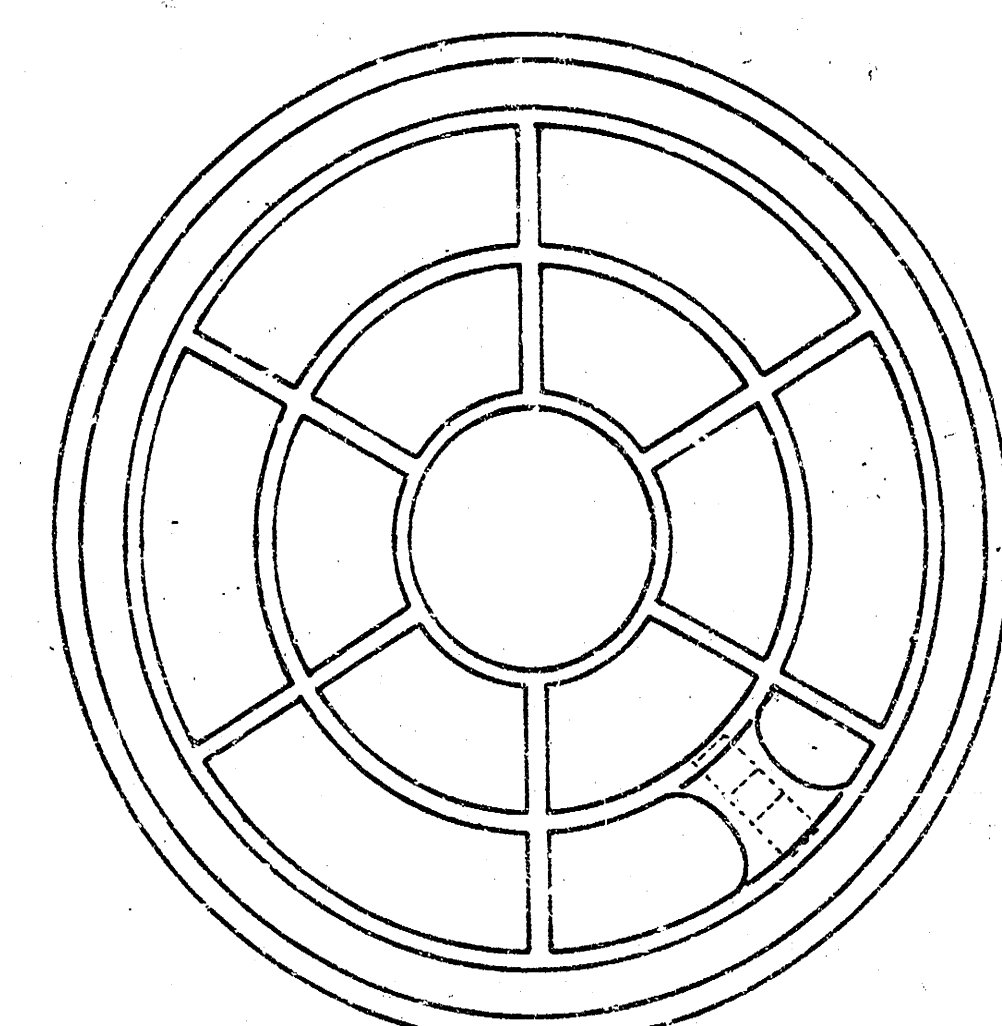
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

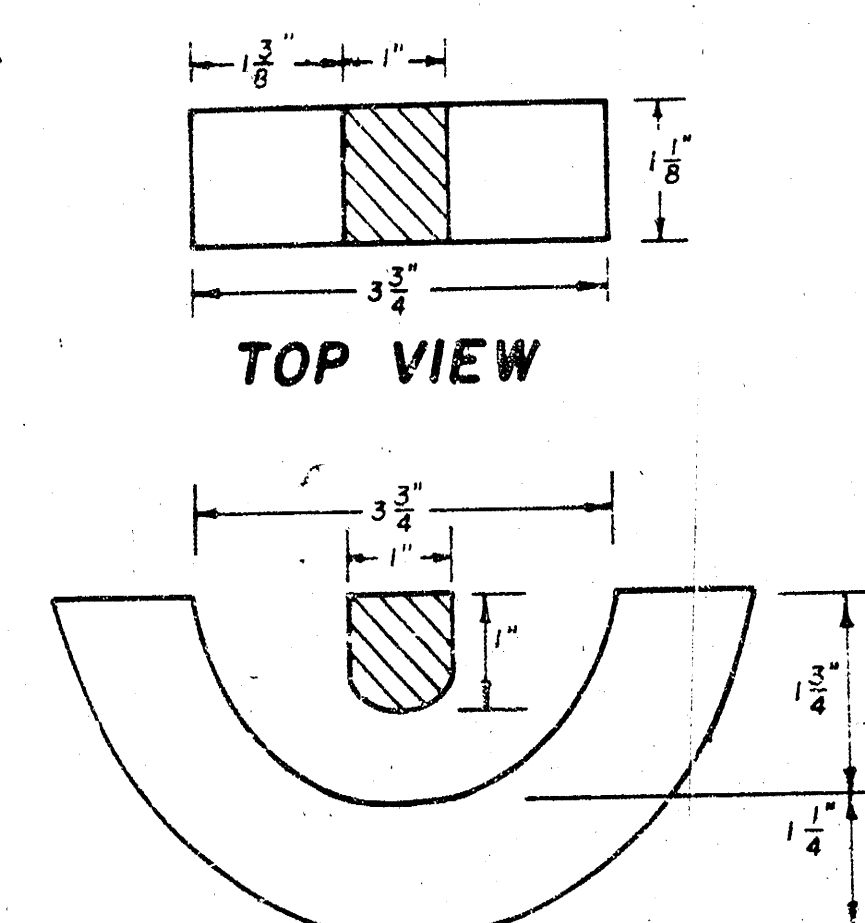


TOP VIEW

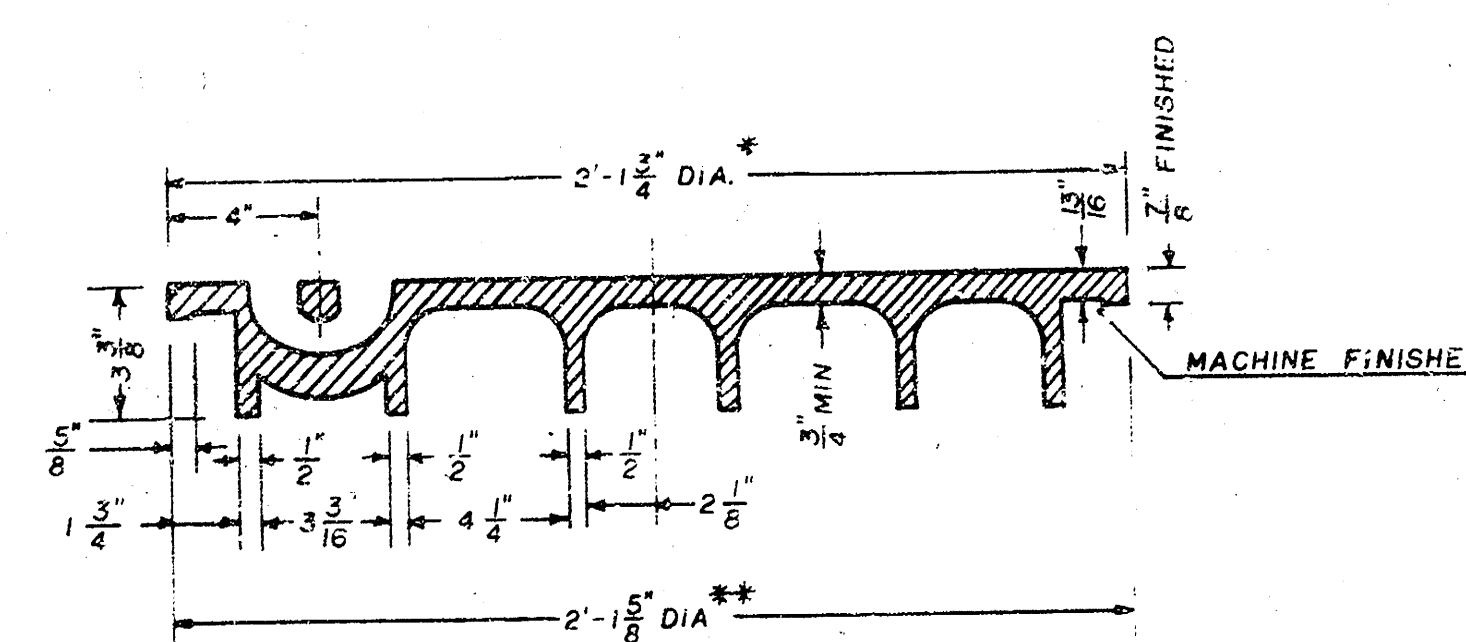


BOTTOM VIEW

PICKHOLE DETAIL



SECTION VIEW

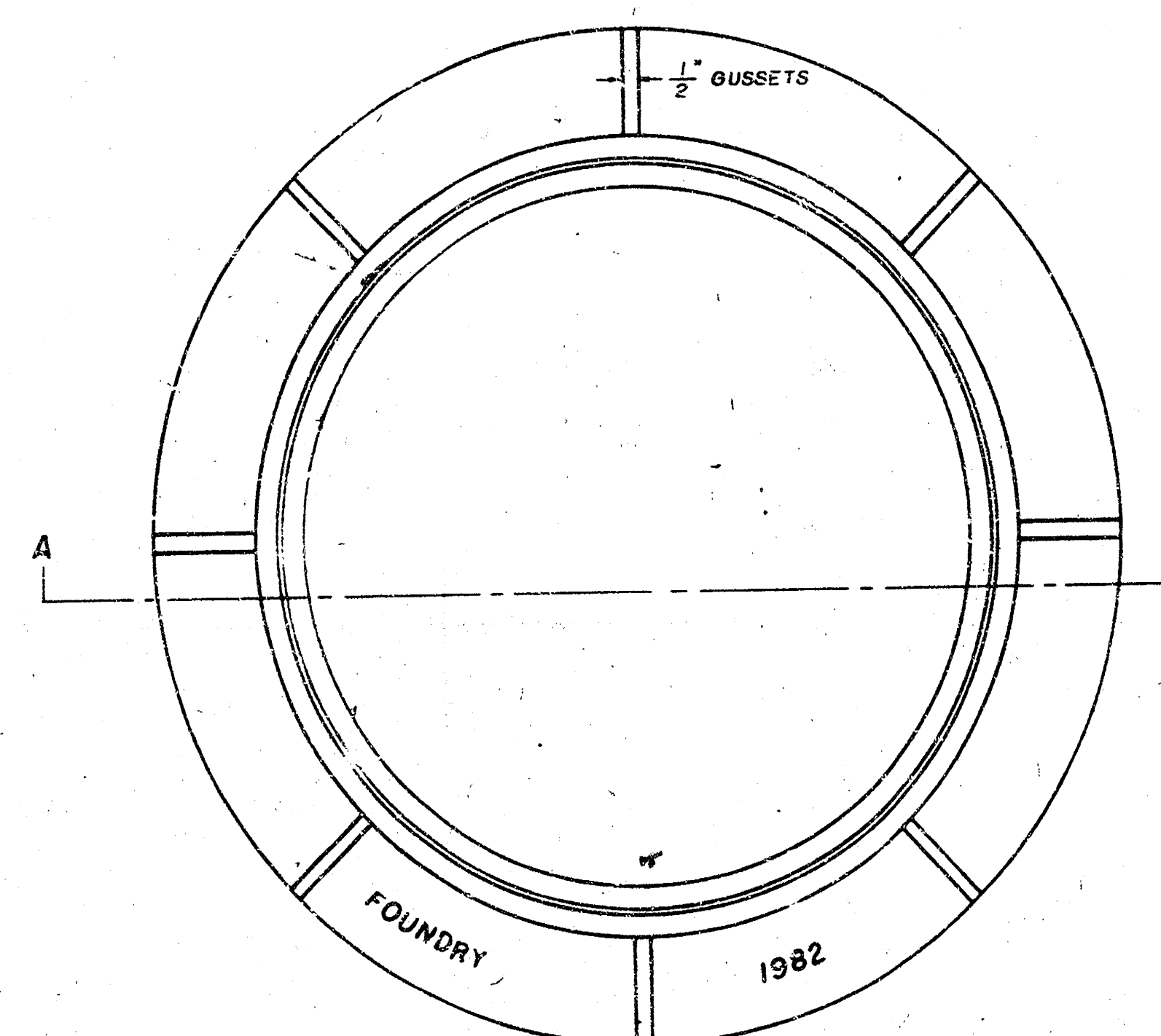


SECTION VIEW

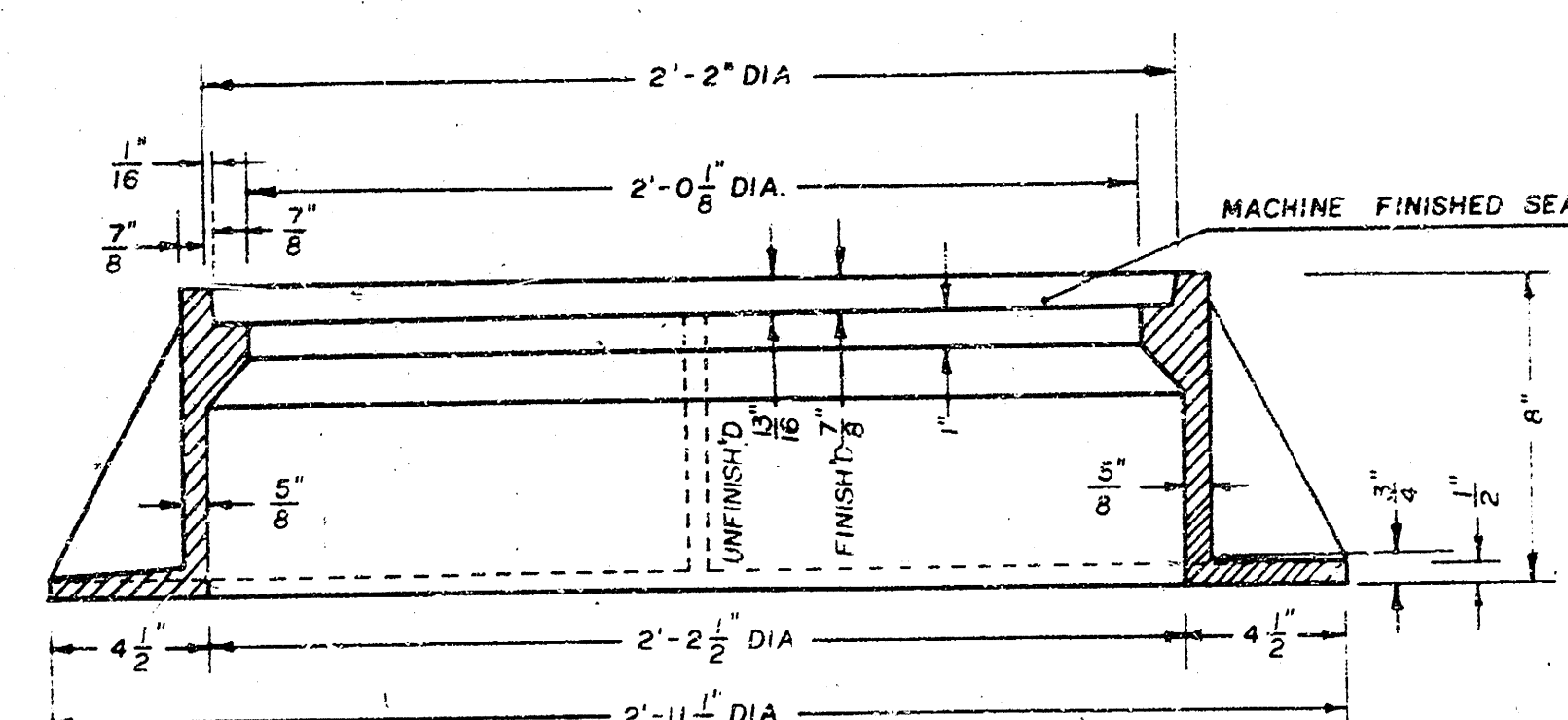
* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER

MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAIL DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS 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 INTO 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 IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT 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.