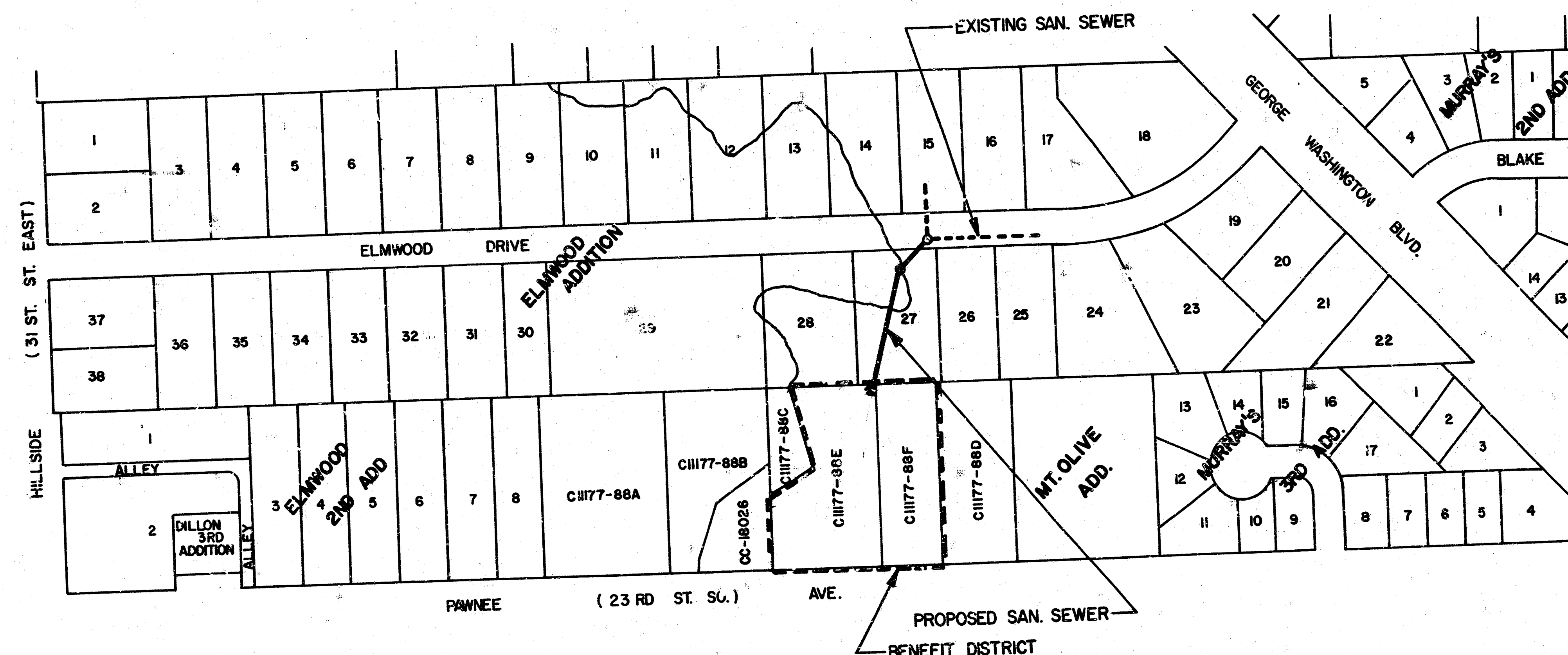


SANITARY SEWER EXTENSIONS LAT. 71, MAIN I, SAN. SEWER NO. 12

PROJECT NO. 468-76-245-82043-000-000-001
INDEX CODE 740340

CITY OF WICHITA, KANSAS
MICHAEL E LINDEBAK CITY ENGINEER
APRIL 1990

- GENERAL NOTES**
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-FOUR (24) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
KANSAS ONE-CALL 687-2470
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
CABLEVISION 262-4270 OR 263-2061
KPL GAS SERVICE COMPANY 263-7511
KANSAS GAS & ELECTRIC 264-1141
ARMA GAS COMPANY 942-8350 OR 263-8161
SOUTHWESTERN BELL TELEPHONE CO. 1-571-2611
CITY OF WICHITA STREET MAINTENANCE 268-6071
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY LINES. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH PROPERTY LINES WHICH ARE DAMAGED OR DESTROYED BY HIS OPERATIONS. OPERATIONS SUCH LINES SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.
 - A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOVED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GRADE. SUCH MATERIAL SHALL BE CONTROLLED WITH A SIX (6) FOOT CURB. THE ELEVATION OF THE FLAT TOP OF THE CURB SHALL BE 0.4 FEET BELOW THE TOP OF THE MANHOLE.
 - EXISTING UTILITIES AND THEIR LOCATIONS, 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 RECORDS OR CURRENTLY PROVIDED FIELD LOCATIONS. THE PLANS LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE DISCOVERED. UNDERGROUND UTILITY SERVICE LINES AND CONDUIT 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 OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY THE OWNER DURING CONSTRUCTION. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT COMPLY WITH EXISTING CONSTRUCTION.
 - ALL STUES AND PLACED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TIPS IN THE SAME MANNER AS RISERS. LOCATIONS OF THE ENDS OF THE PIPE STUES SHALL BE MARKED BY PLASTIC GREEN COLORED PLASTIC TIPS TO THE END OF THE PIPE STUE WHICH SHALL BE EXTENDED TO THE GRADE SURFACE AS THE EXCAVATION IS BACKFILLED SUCH THAT THE COLORED TIPS WILL BE VISIBLE WHEN THE PROJECT IS COMPLETED. SUCH GREEN PLASTIC TIPS SHALL BE 4 MIL POLYETHYLENE FILM WITH A MINIMUM WIDTH OF 3" SPECIALLY MANUFACTURED FOR THE PURPOSE OF IDENTIFICATION OF UNDERGROUND STUES. THE ENDS OF MANHOLE STUES SHALL BE CHIPPED OR PLUCKED USING FITTERS FURNISHED BY THE MANUFACTURER OF THE PIPE.
 - CUT OF EXCAVATION, HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.
 - WASTE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF AT SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNDESIRABLE APPEARANCE WILL NOT BE APPROVED.
 - UNLESS OTHERWISE NOTED ON THE PLANS MANHOLES MAY BE TYPE "A", "B", OR "C". MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
 - MANHOLES WITHIN THE LIMITS OF THE PROJECT SHALL BE REMOVED AND REPAID BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. CONTRACTOR WILL BE REQUIRED TO MAKE SATISFACTORY PROVISION FOR HALL DELIVERY TO PROGRESSIVE APPLICABLE BY THIS PROJECT DURING ITS CONSTRUCTION.
 - THE SANITARY SEWER LINES SHALL BE CONSTRUCTED ON THE ALIGNMENT AND GRADE SHOWN BY THE PLANS. THE COST FOR ANY NECESSARY TIES TO EXISTING LINES, CLEANING AND/OR GRADING SHALL BE INCLUDED IN THE PRICE BID FOR THE INSTALLED SANITARY SEWER PIPE. TIES AND SHEDS 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. TIES AND SHEDS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
 - THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DECREASED PROPERTY ADVISING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
 - A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED TIE-INS OR REMOVAL OF EXISTING SURFACE COURSES OR PAVEMENT FOR CONSTRUCTION OF NEW SANITARY SEWER LINES IS REQUIRED. WHEN A SAW CUT IS REQUIRED, IT SHALL BE MADE WITHIN THREE (3) FEET OF THE EXISTING JOINT. SUCH SAW CUTS SHALL NOT BE PERMITTED AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.
 - PAVEMENT REMOVAL AND/OR REPLACEMENT WILL BE REQUIRED AND PAID FOR ON THE LINEAL FOOT BASIS AS INDICATED ALONG THE CENTERLINE OF THE GRADE RECONSTRUCTION OF NEW OR EXISTING. MINIMUM LIMITS OF SUCH PAVEMENT REMOVAL AND REPLACEMENT SHALL BE ONE FOOT BEYOND THE LIMITS OF THE EXCAVATION HOLE FOR THE SEWER OR THE BEYOND THE LIMITS OF "TIE-IN" ARE WITHIN THREE (3) FEET OF AN EXISTING JOINT. REMOVAL AND REPLACEMENT OF EXISTING PAVEMENT SHALL COMPLY TO THE APPLICABLE SECTIONS OF THE CITY OF WICHITA STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWER THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED PLAN OF SEWER THROUGH CONSTRUCTION SHALL BE APPROVED BY THE METHOD FOR MAINTAINING SEWER FLOW SHALL BE APPROVED BY THE ENGINEER. COST OF MAINTAINING FLOW OF SEWER THROUGH CONSTRUCTION WILL NOT BE PAID FOR EXCEPT AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.
 - THE CONTRACTOR SHALL NOTIFY OVERHEAD CONDUITS AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING UNDERTAKEN ABOVE AND/OR ADJACENT TO PIPELINES.



NOTE:
THE CITY OF WICHITA WILL AIR TEST AND TELEVIEW THE NEW LINE PRIOR TO ACCEPTANCE.

DRAWING INDEX

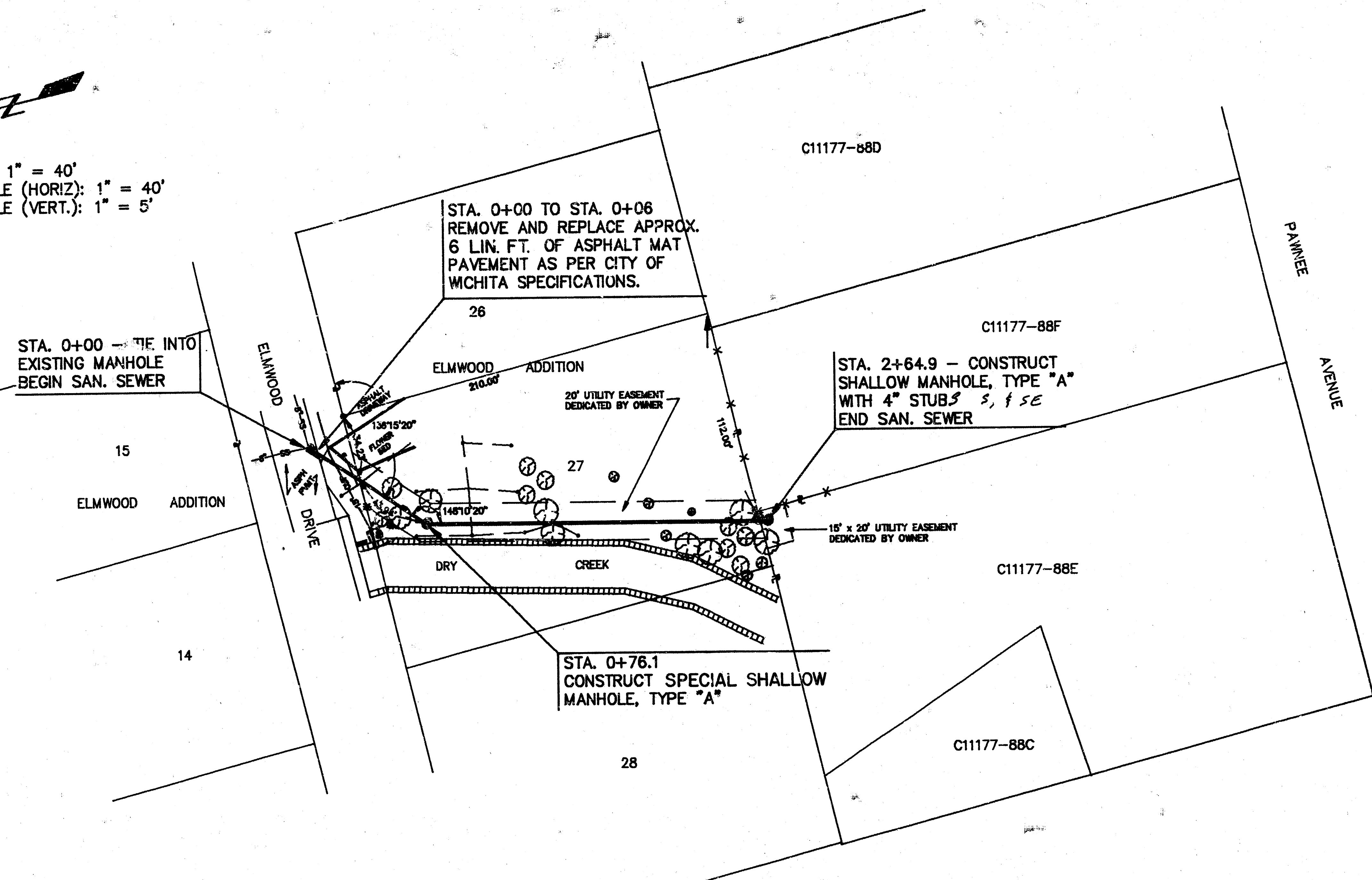
SHEET	TITLE
1	MAP AND BENEFIT DISTRICT
2	PLAN AND PROFILE
3	STANDARD SHALLOW MANHOLES
4	TYPE "A" AND TYPE "B" MANHOLE FRAME AND COVER DETAILS

BUILT PER PLAN
RDL
9-90

REV. A	5 JUN 90	JMC	REMOVED GENERAL NOTE NO. 16
WICHITA, KANSAS			
SANITARY SEWER EXTENSIONS			
MAP AND BENEFIT DISTRICT			
LAT 71, MAIN I, SAN. SEWER NO. 12			
PROJECT NO. 468-76-245-82043-000-000-001			
CASTLE & ASSOCIATES ENGINEERS WICHITA, KANSAS		DRG DR CH	DWG FILE NO 9020-D-60,064
DATE	APRIL 1990	APP	SHEET NO. 1 OF 4

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AVAILABLE COPY

PLAN SCALE: 1" = 40'
 PROFILE SCALE (HORIZ): 1" = 40'
 PROFILE SCALE (VERT.): 1" = 5'



- LEGEND**
- = EXISTING SAN. SEWER AND SIZE
 - = PROPOSED SAN. SEWER LINE
 - +— = UNDERGROUND SPRINKLER LINE w/HEADS
 - x— = CHAIN LINK FENCE
 - ▤ = GABION CREEK LINER
 - ⊙ = TREE
 - * = EVERGREEN TREE

BENCHMARK

CITY OF WICHITA BRASS DISC ON THE SE CORNER OF RCBC @ PAWNEE AVE. AND DRY CREEK (WEST OF ROOSEVELT). ELEV. = 115.50

CITY OF WICHITA BRASS DISC @ EAST END OF THE SOUTH HUSGUARD ON BRIDGE OVER DRY CREEK ON ELMWOOD DRIVE. ELEV. = 118.77

NOTE:

COMPACT BACKFILL IN STREET RIGHT-OF-WAY FROM STA. 0+00 TO STA. 0+35 AS PER CITY OF WICHITA SPECIFICATIONS.

NOTE:

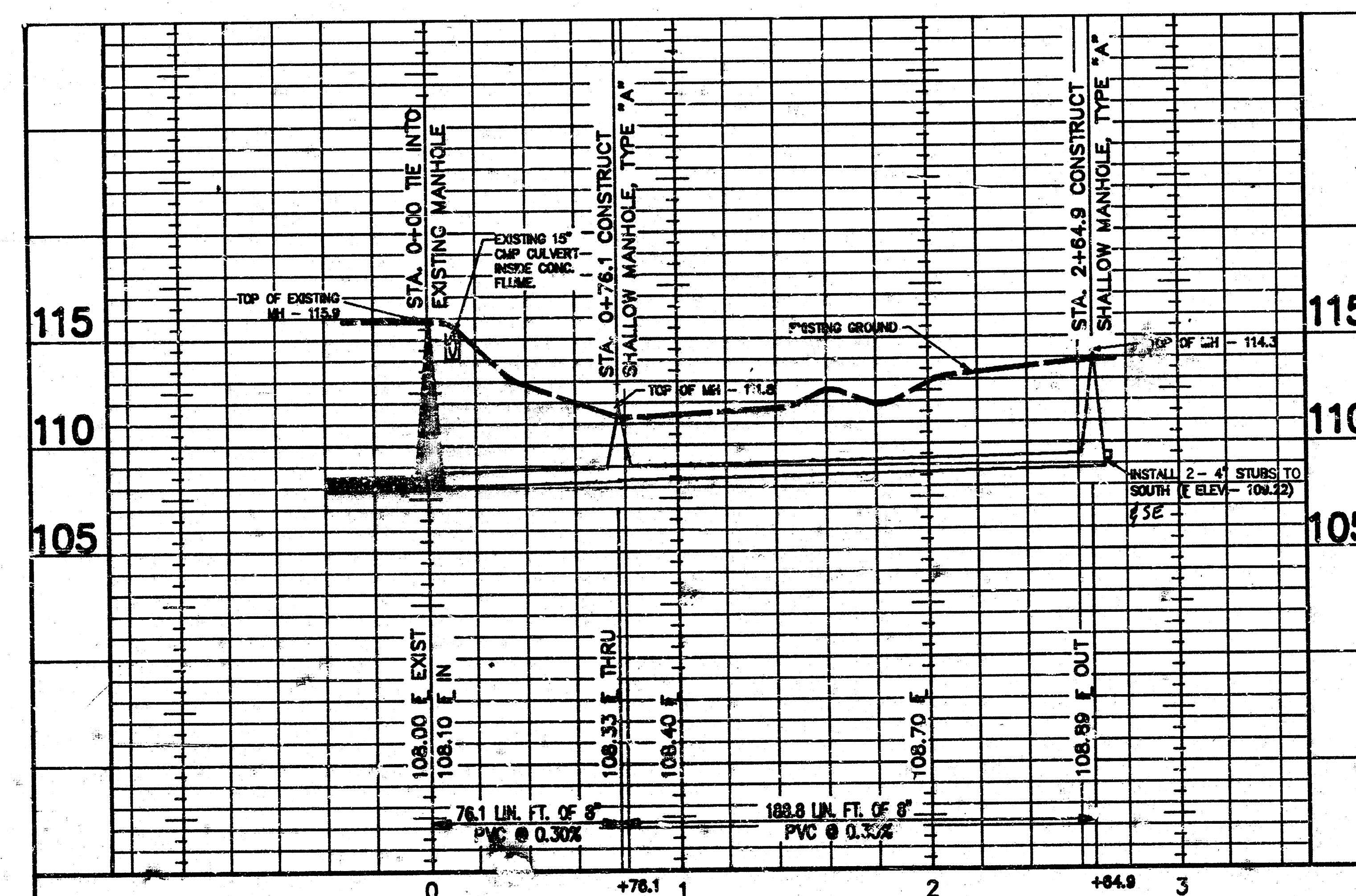
REMOVE AND REPLACE SPRINKLER SYSTEM TO A GOOD WORKING CONDITION. THE COST SHALL BE INCLUDED IN SITE RESTORATION.

NOTE:

CONTRACTOR SHALL RESEED AND FERTILIZE ANY AREAS THAT ARE DAMAGED DUE TO CONSTRUCTION OF THE SANITARY SEWER LINE.

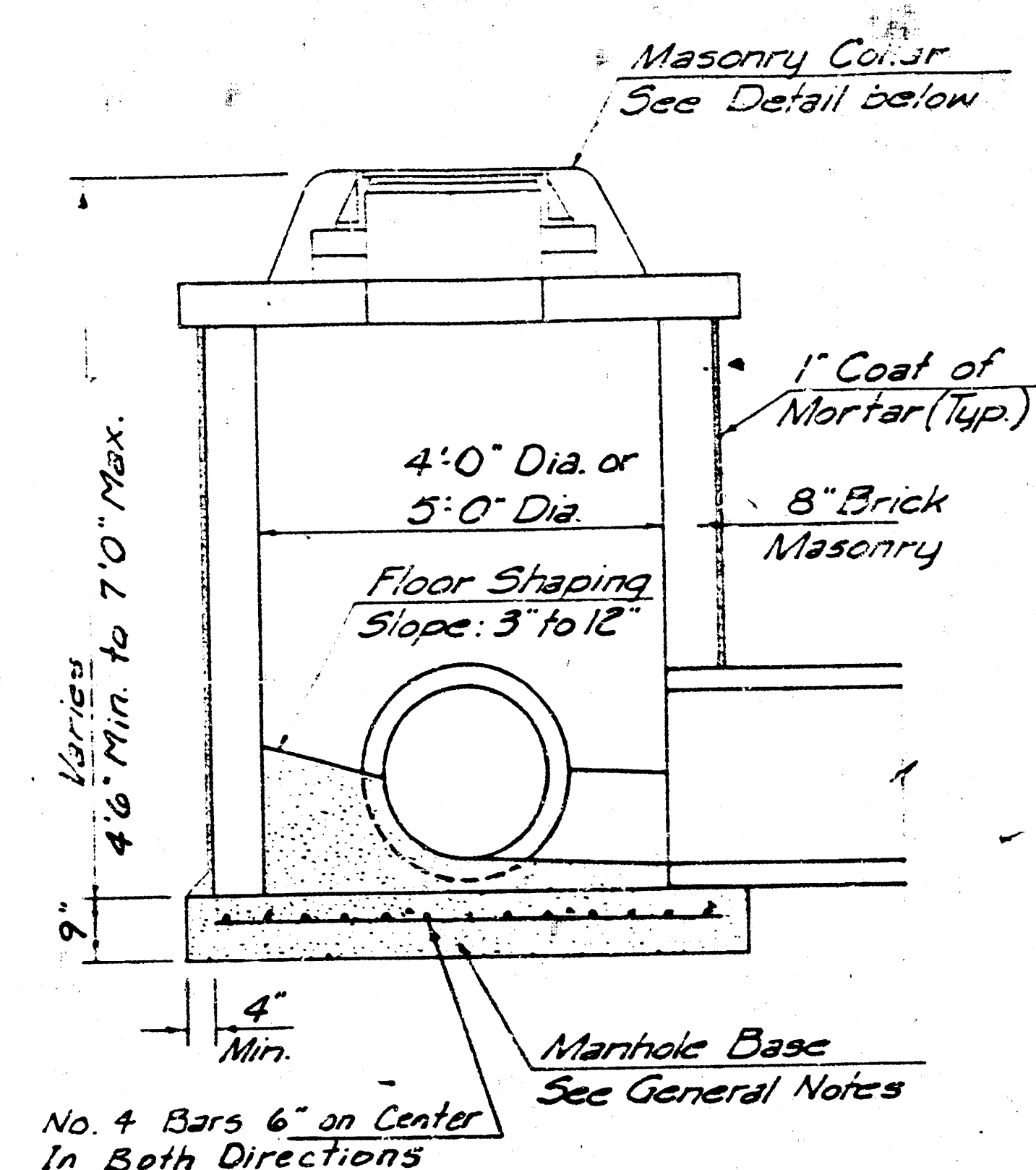
NOTE:

CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 30 INCHES OF GROUND COVER OVER THE TOP OF PIPE AND GRADE THE AREA TO DRAIN.

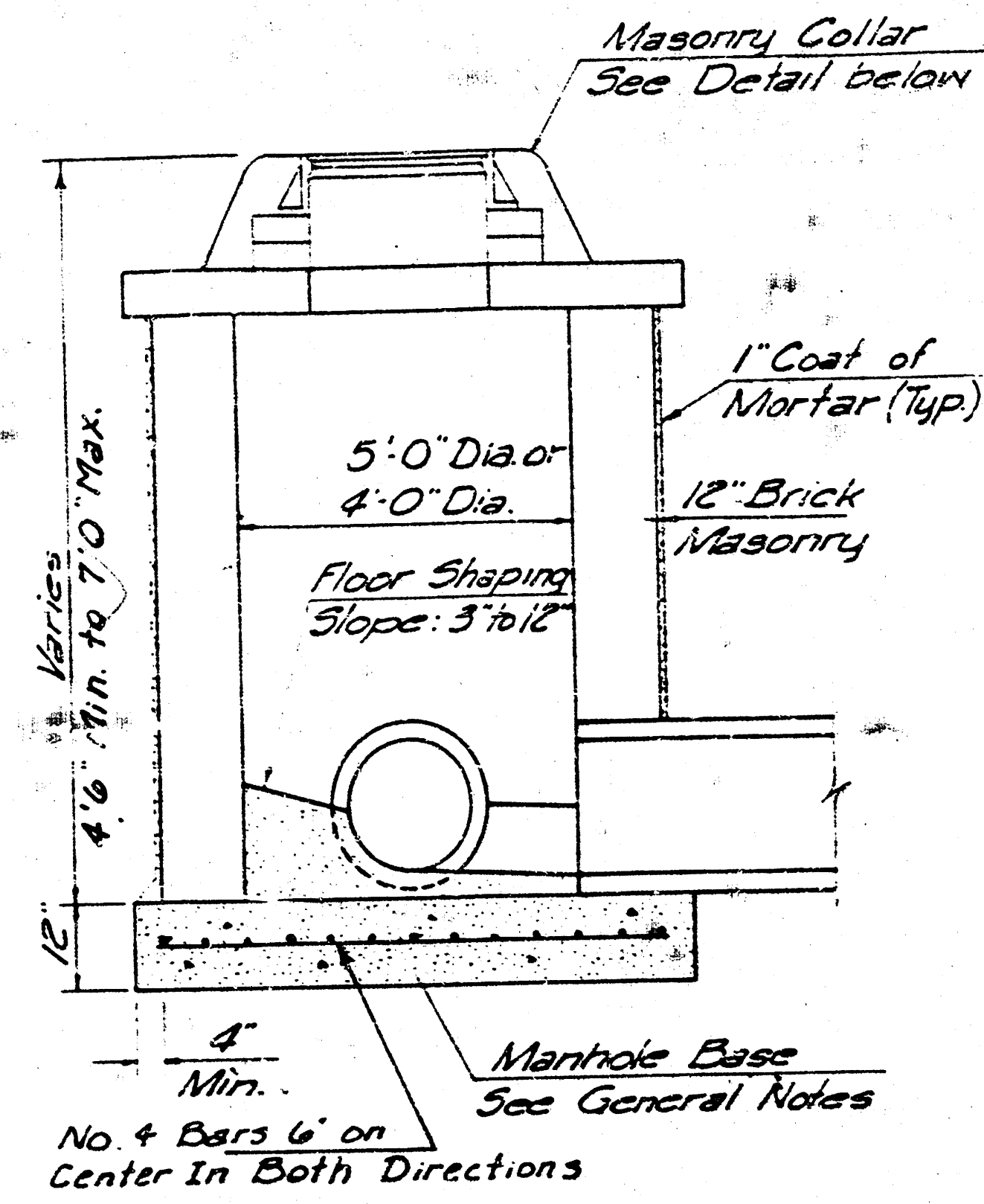


REV. A	5 JUN 90	JMC	CHANGED NOTE ON SPRINKLERS
WICHITA, KANSAS			
SANITARY SEWER EXTENSIONS			
PLAN AND PROFILE			
LAT. 71, MAIN 1, SAN. SEWER NO. 12			
PROJECT NO. 468-76-245-82043-000-000-001			
CASTLE & ASSOCIATES		DSG	DWG FILE NO
ENGINEERS		DR	9020 - D - 60,065
WICHITA, KANSAS		CH	
DATE		APP	SHEET NO 2 OF 4
APRIL 1990			REV. A

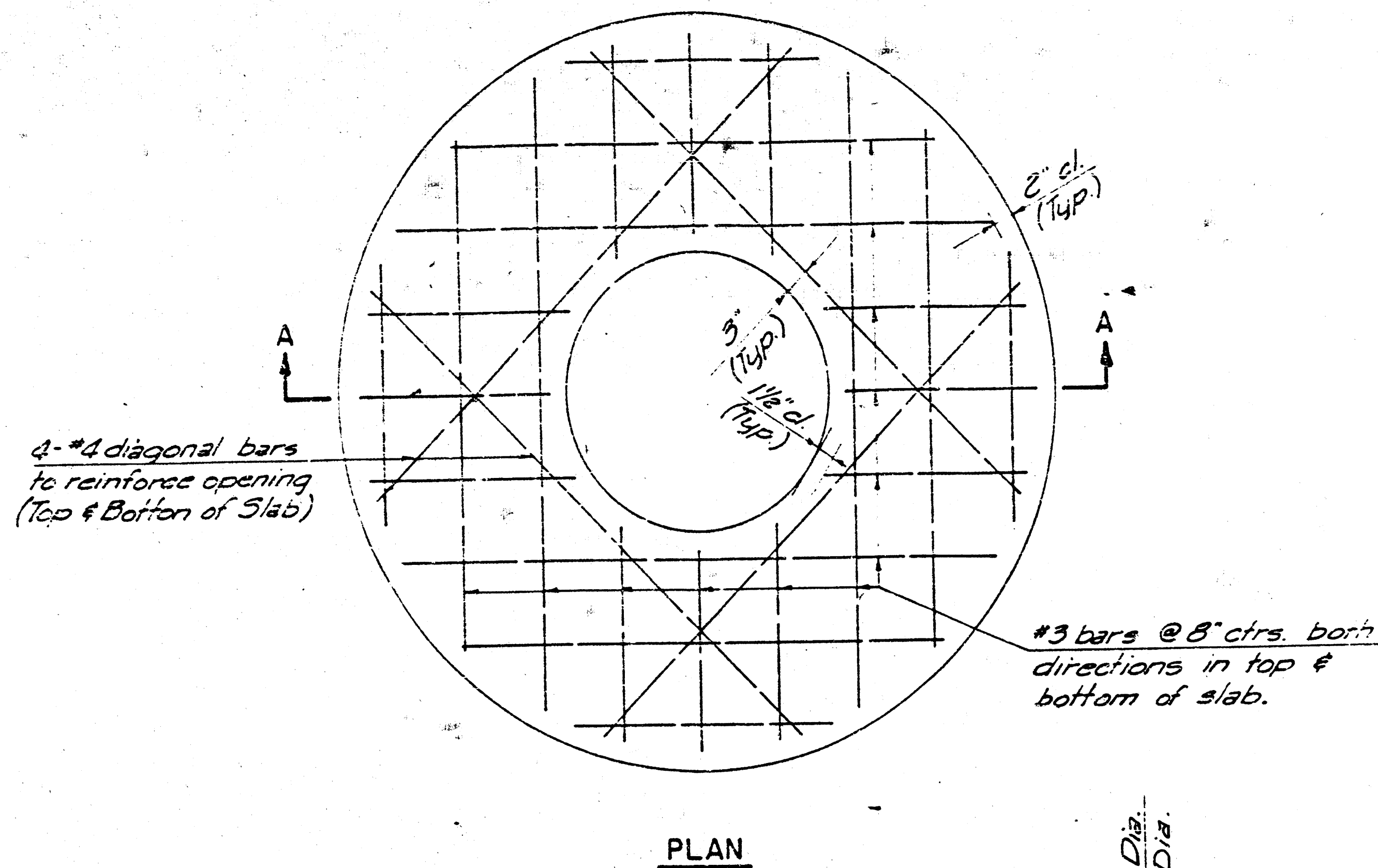
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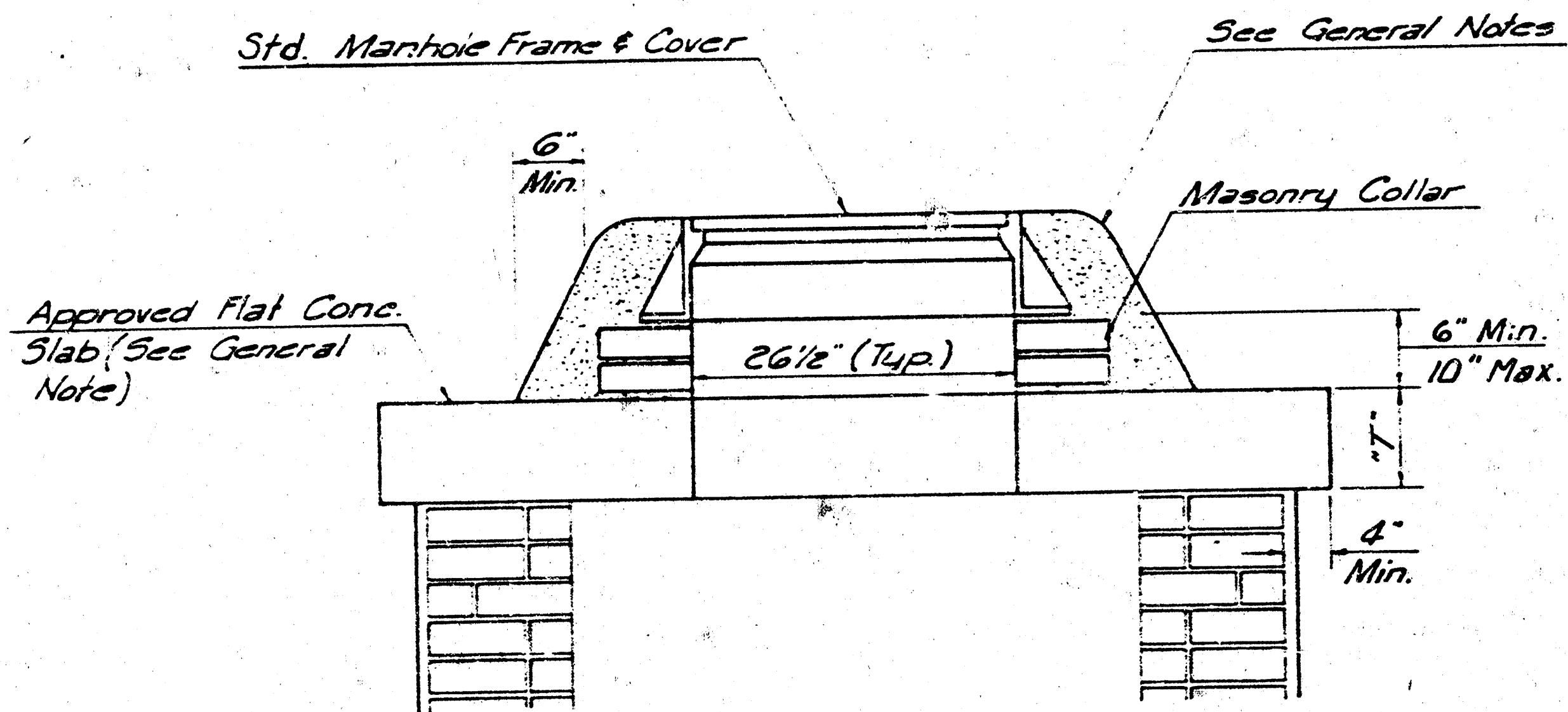
SHALLOW TYPE "A" MANHOLE



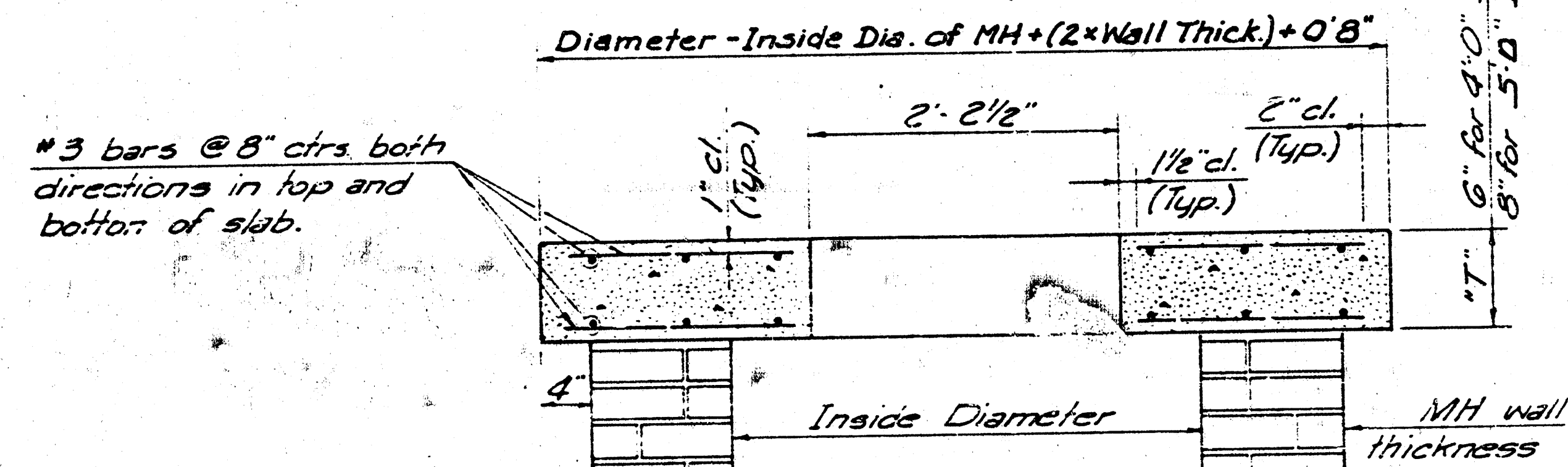
SHALLOW TYPE "B" MANHOLE



PLAN

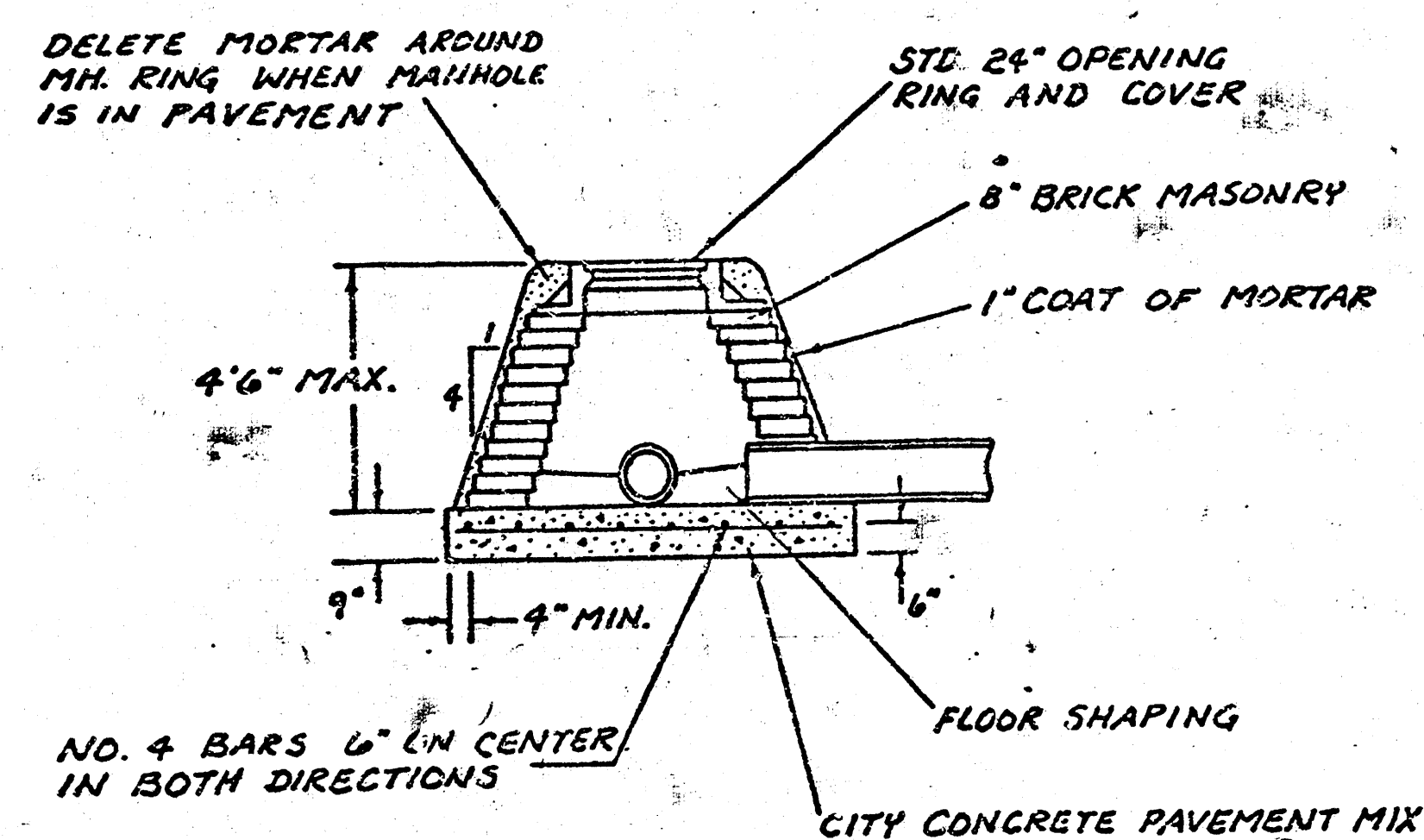


MASONRY COLLAR DETAIL

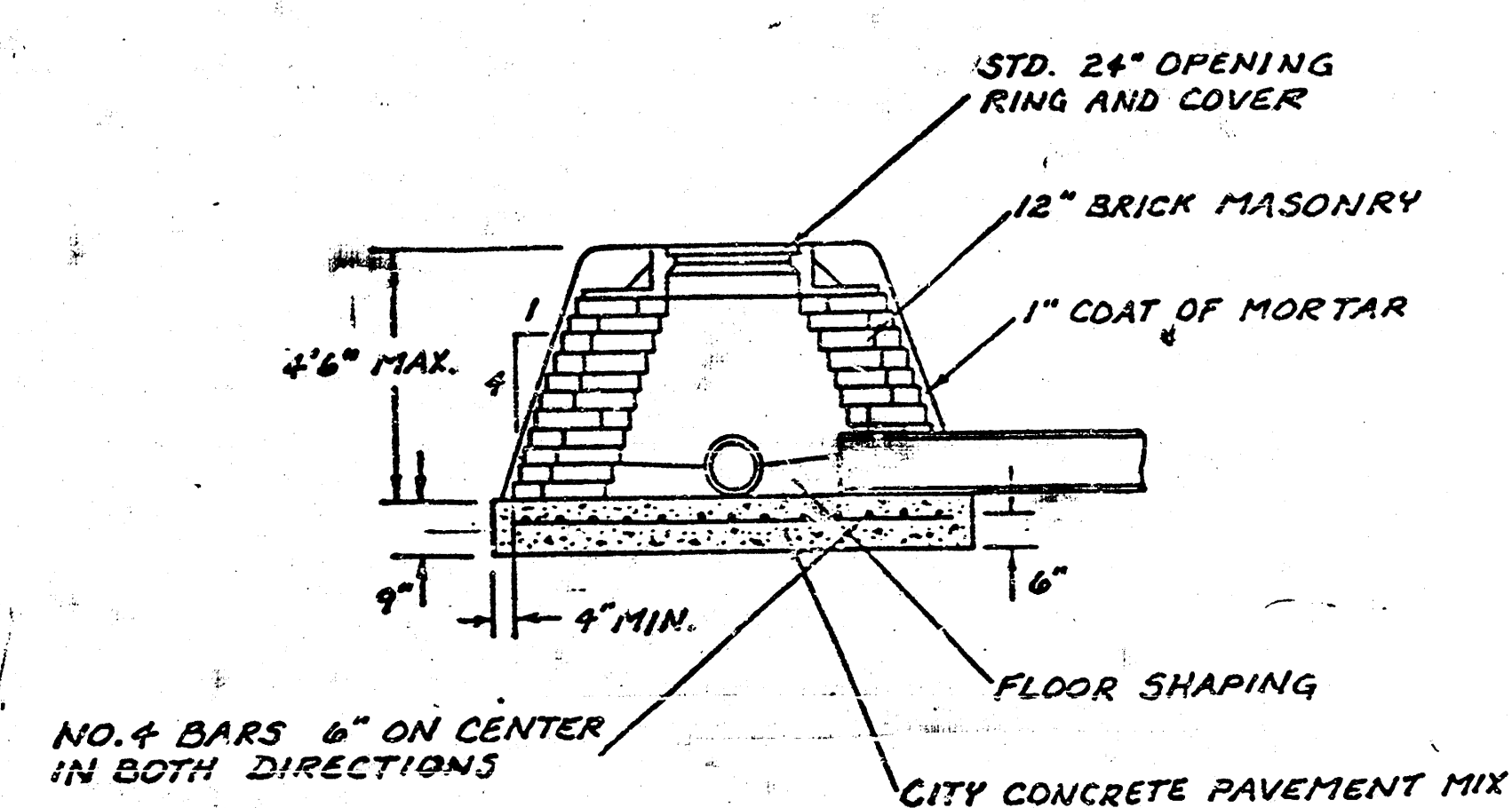


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
- THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

CITY OF WICHITA, KANSAS STANDARD SHALLOW MANHOLES TYPE "A" AND TYPE "B"

PROJECT NO. 468-76-245-82043-000-000-001

9020-D-60,066 SHEET NO. 3 OF 4

Designed by _____ Checked by _____
Drawn by _____ Date _____ Job No. _____

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MANHOLE FRAME AND COVER DETAIL

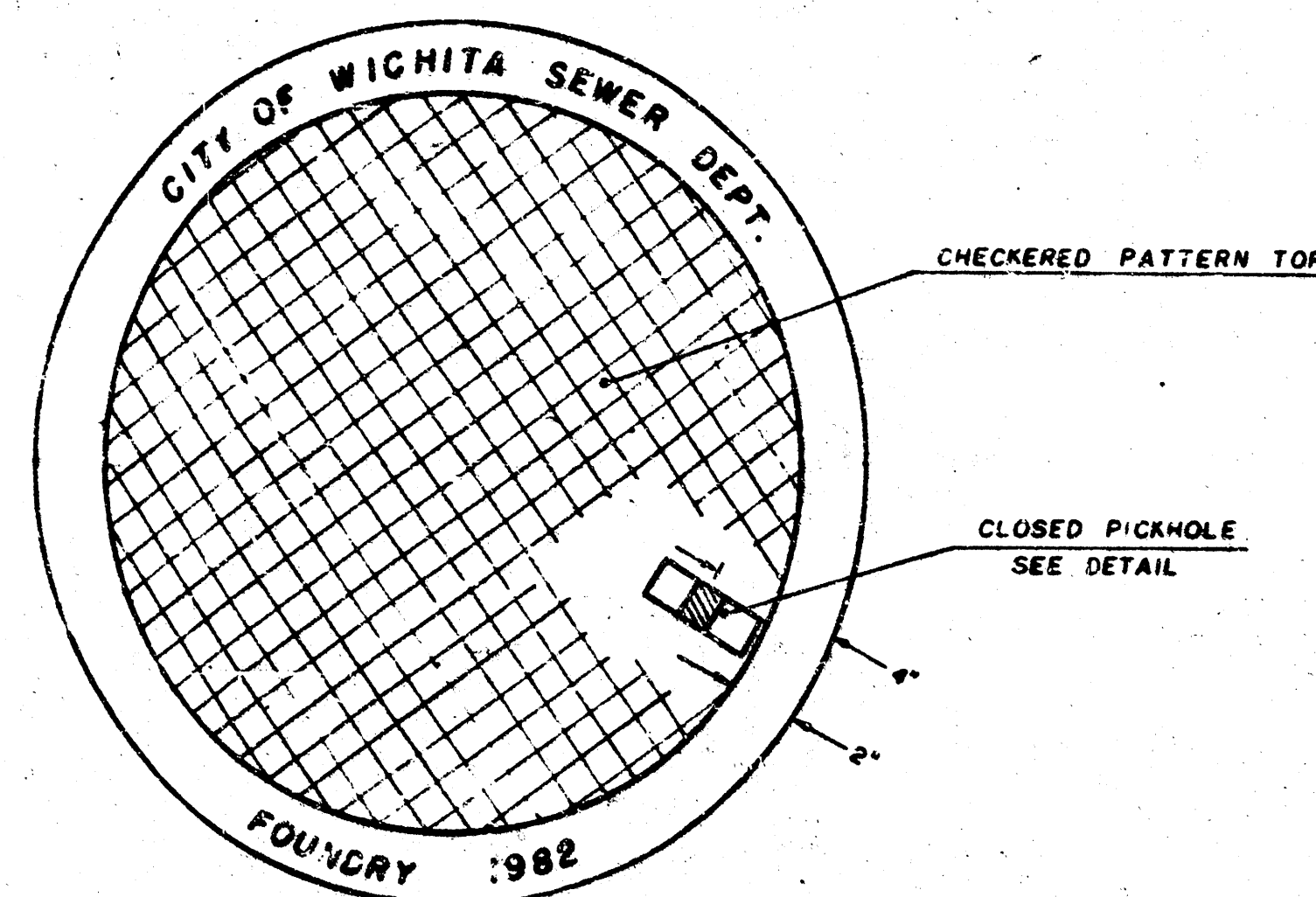
ADOPTED AS STANDARD DESIGN

BY

City of Wichita, Kansas

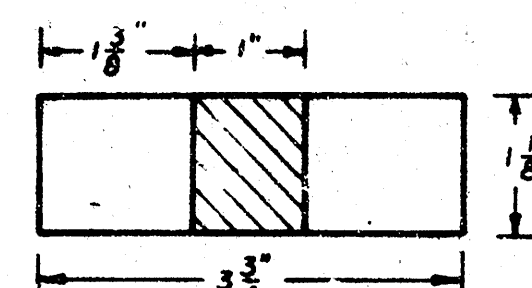
MANHOLE COVER

Weight: 180 Lbs.

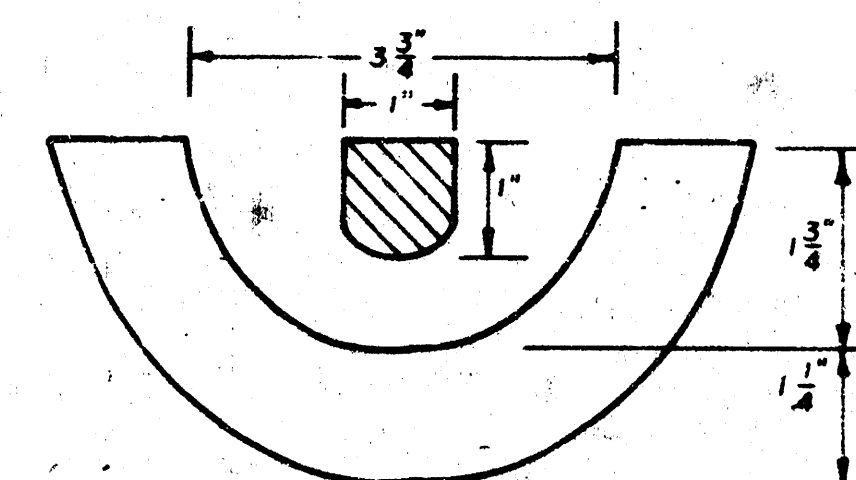


TOP VIEW

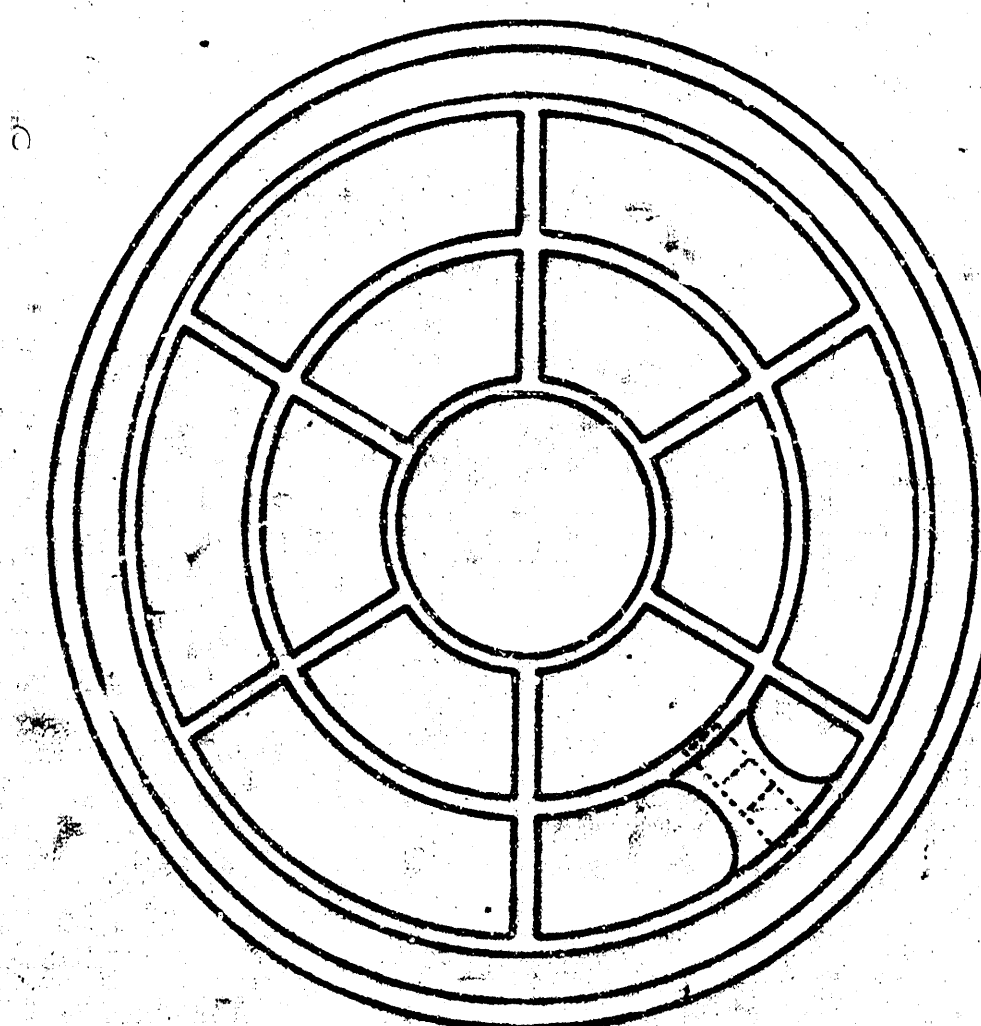
PICKHOLE DETAIL



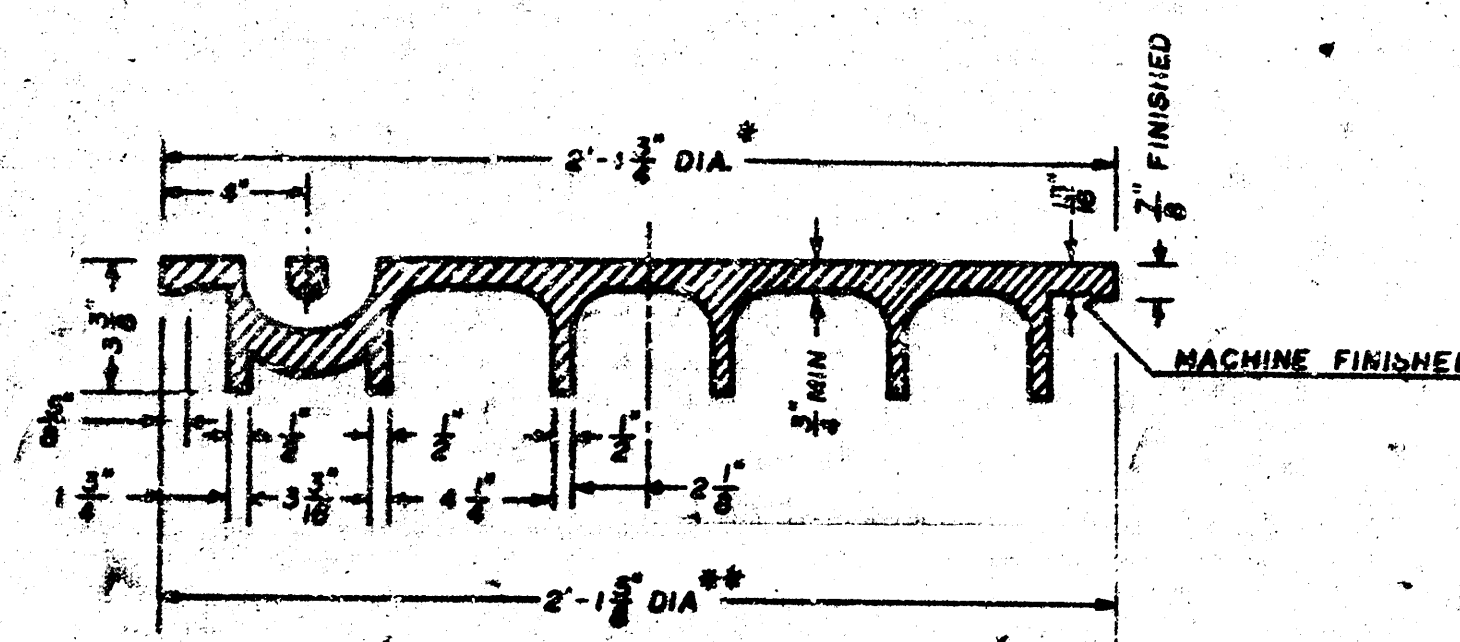
TOP VIEW



SECTION VIEW



BOTTOM VIEW

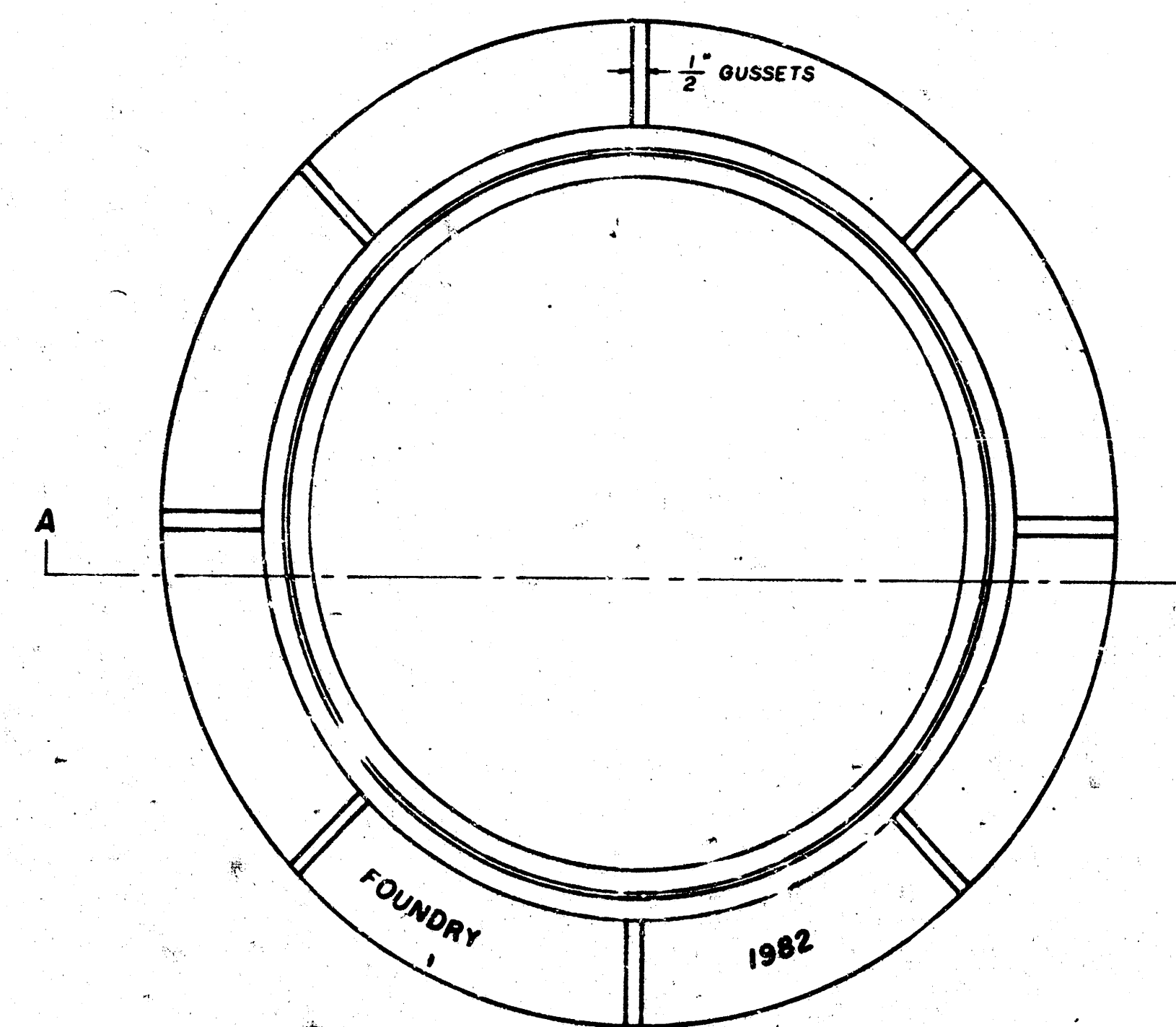


SECTION VIEW

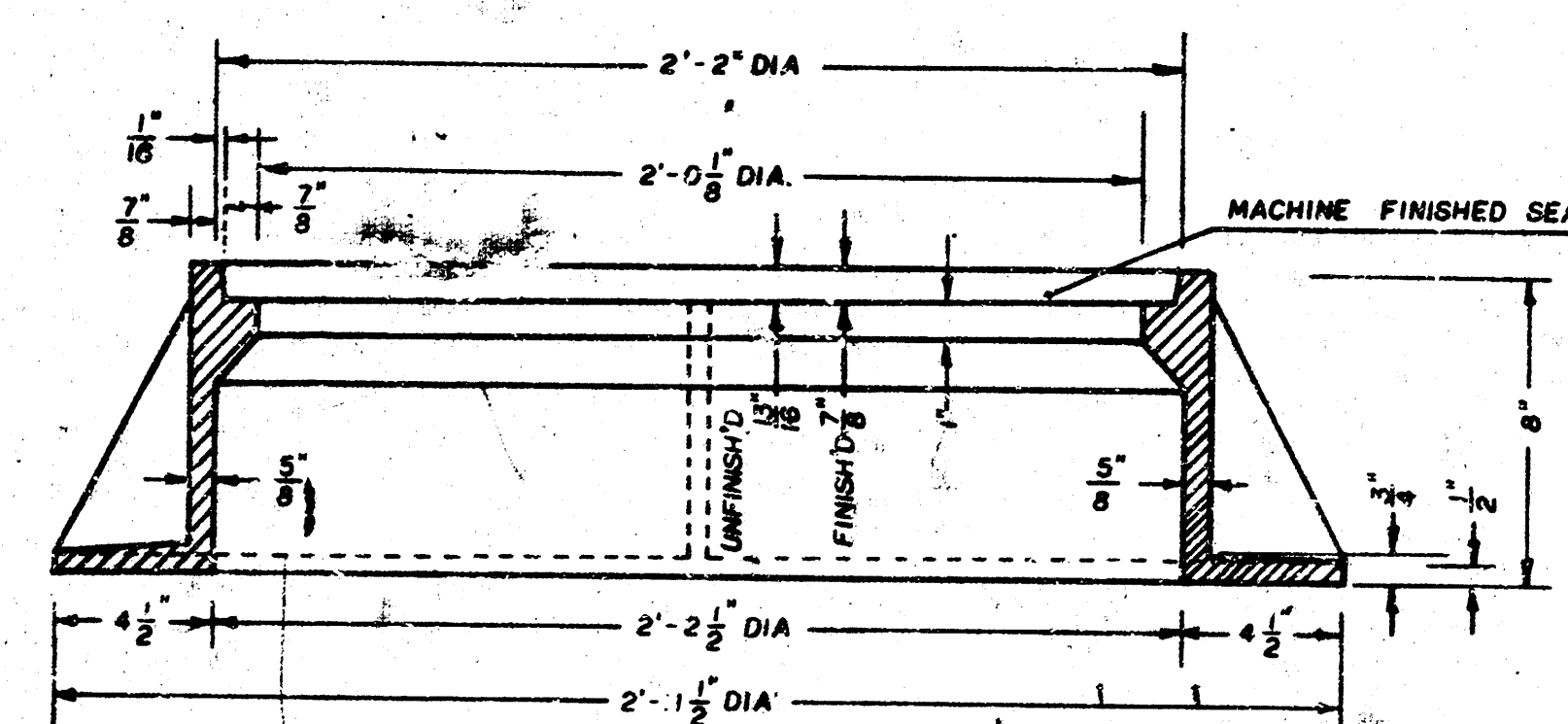
* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER

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.