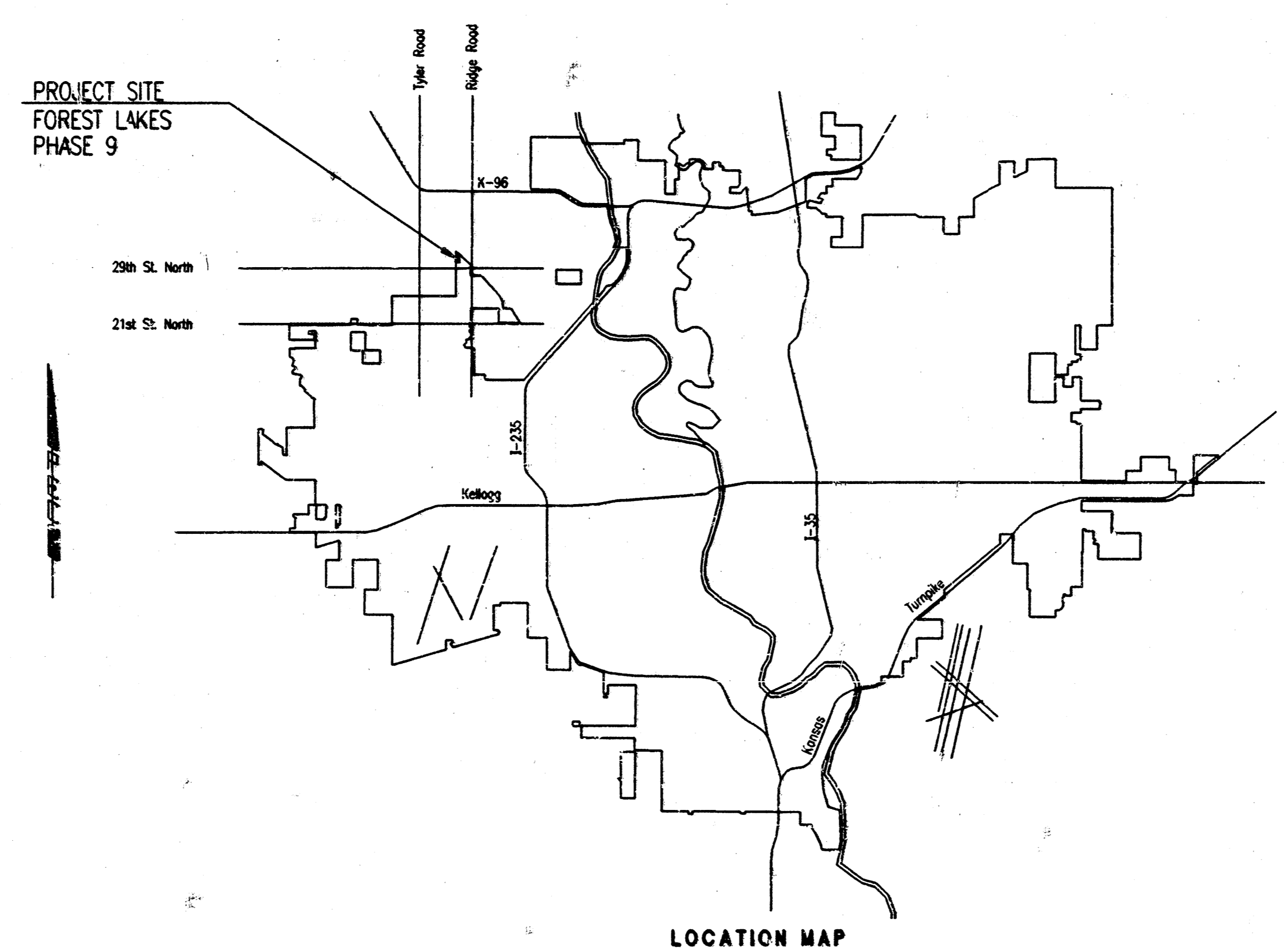


82307

CONSTRUCTION PLANS FOR  
**LATERAL 9, MAIN 17**  
 OF THE  
**SOUTHWEST INTERCEPTOR SEWER**  
 IN  
**THE CITY OF WICHITA,**  
 SEDGWICK COUNTY, KANSAS  
 MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER



INDEX OF SHEETS

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	KEY MAP
SHEET NO. 3	EASEMENT GRADING PLAN
SHEET NO. 4-5	FLAT
SHEET NO. 6-8	PLAN/PROFILE
SHEET NO. 9	TYPE "P" MANHOLE DETAILS
SHEET NO. 10	FRAME AND COVER DETAILS
SHEET NO. 11	RISER DETAILS
SHEET NO. 12	MANHOLE ADJUSTMENT DETAILS

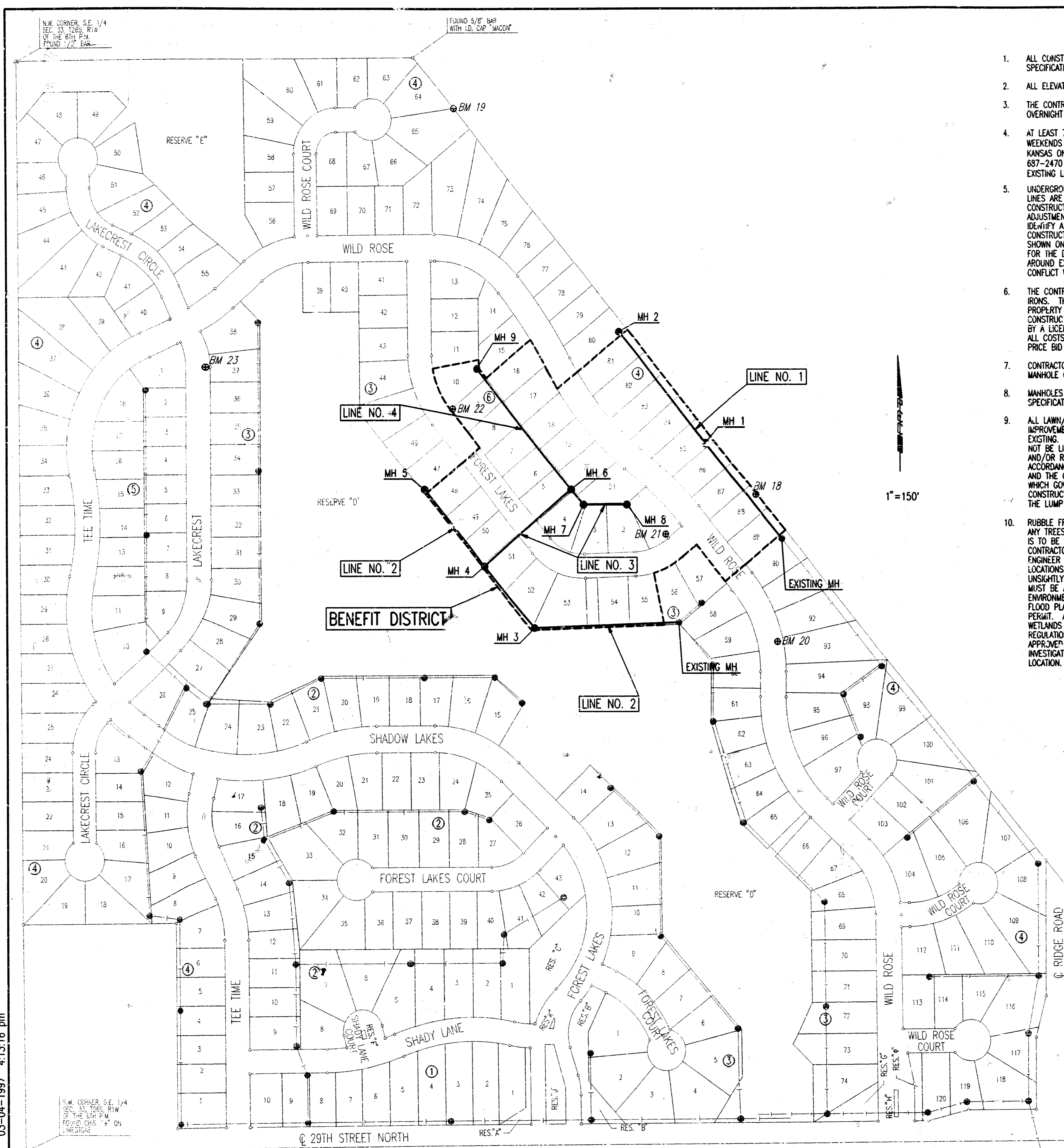
*AS BUILT  
 8/25/97  
 Booked  
 N-269*



INDEX CODE 743013  
 CITY OF WICHITA PROJECT NO. 468-76-245-82307-000-000-001  
**MARCH 1997**  
 PLANS PREPARED BY  
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
 ENGINEERS  
 WICHITA, KANSAS

OSNR, REF, OPER, REF, SCALE, 1=1/8"=1'-0"  
 C:\1996\86746\001\SS\1.E.DWG 03-04-1997 4:17:30 pm

DSNR: REF OPER: REJ SCALE: 1"=150.00  
 0:\1996\96746\001\SSKEYMAP.DWG 03-04-1997 4:13:16 pm



**GENERAL NOTES**

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM.
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
5. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE LOCATED 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 ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
6. 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. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
7. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
8. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
9. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO: TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
10. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL 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 APPLICABLE CONSTRUCTION LIMITS MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
11. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER. COSTS FOR TREE/SHRUB REMOVAL AND TRIMMING REGARDLESS OF SIZE SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE CLEARING".
12. CONTRACTOR SHALL GRADE THE SANITARY SEWER ALIGNMENT TO THE PROFILE AND ELEVATIONS SHOWN ON THE EASEMENT GRADING PLAN. ALL COSTS FOR EASEMENT GRADING SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "EASEMENT GRADING".
13. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL OBTAIN ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJACENT TO THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
15. ALL APPROVED EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE STOCKPILED WITHIN FOREST LAKES ADDITION AT NO ADDITIONAL COST TO THE OWNER. STOCKPILE LOCATIONS SHALL BE AS DIRECTED BY MR. MARVIN SCHELLENBERG, AT (316) 721-2153 AND IN ACCORDANCE WITH GENERAL NOTE NO. 10 ABOVE.
16. CONTRACTOR IS REQUIRED TO MAINTAIN CONTINUOUS FLOW OF SEWAGE IN EXISTING MAINS AT ALL TIMES.
17. THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 9 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
18. THE CONTRACTOR SHALL NOT BURY MANHOLES THAT HAVE RIM ELEVATIONS WHICH ARE LOWER THAN EXISTING GROUND AT THE MANHOLE. THE GROUND AROUND SUCH MANHOLES AND ALONG THE SEWER ALIGNMENT SHALL BE BACKFILLED TO THE APPROXIMATE ELEVATION OF THE PROPOSED GROUND ELEVATION SHOWN ON THE PLAN/PROFILE SHEETS. THE CONTRACTOR SHALL PROVIDE DRAINAGE AWAY FROM THESE MANHOLES AND SEWER LINES BY CONSTRUCTION OF TEMPORARY DITCHES OR SLOPING THE GROUND AS REQUIRED. ALL COSTS FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE INSTALLED BID PRICE FOR MANHOLES OR PIPE.
19. THE CONTRACTOR SHALL PROVIDE MOUNDING EARTH AT MANHOLES AND CLEANOUTS THAT HAVE TOP ELEVATIONS GREATER THAN 1 FOOT ABOVE FINISHED GRADE, AS SHOWN ON THE PLANS. COSTS FOR MOUNDING SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "EASEMENT GRADING".
20. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

1"=150'

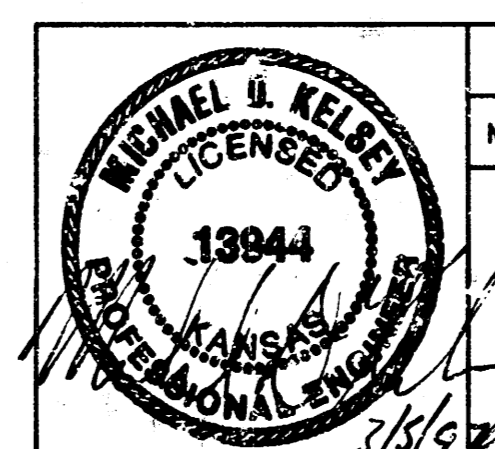
**SEWER SERVICE TABLE**  
 (See detail and notes, sheet no. 11)

NO.	TYPE	LOCATION		FOR INFORMATION ONLY		RECORD INFORMATION (TO BE COMPLETED BY PROJECT INSPECTOR)		NO.
		LOT NO.	BLOCK NO.	STATION/ DIRECTION	APPROXIMATE LENGTH 4" PIPE	UPSTREAM	DOWNSTREAM	
1	8"x4" Tee Saddle	89	4	1	0+35/LL	5'	4'	1
2	8"x4" Tee Saddle	88	4	1	1+05/LL	5'	4'	2
3	8"x4" Tee Saddle	87	4	1	1+95/LL	5'	4'	3
4	8"x4" Tee Saddle	86	4	1	2+45/LL	4'	4'	4
5	8"x4" Tee Saddle	85	4	1	3+20/LL	4'	4'	5
6	8"x4" Tee Saddle	84	4	1	3+90/LL	4'	4'	6
7	8"x4" Tee Saddle	83	4	1	4+60/LL	4'	4'	7
8	8"x4" Tee Saddle	82	4	1	5+30/LL	4'	4'	8
9	8"x4" Tee Saddle	81	4	1	6+00/LL	4'	4'	9
10	8"x4" Tee Saddle	55	3	2	0+70/RL	3'	14'	10
11	8"x4" Tee Saddle	54	3	2	1+55/RL	2'	14'	11
12	8"x4" Tee Saddle	53	3	2	2+85/RL	3'	14'	12
13	8"x4" Tee Saddle	52	3	2	4+10/RL	4'	10'	13
14	8"x4" Tee Saddle	51	3	2	5+15/RL	4'	13'	14
15	8"x4" Tee Saddle	50	3	2	5+95/RL	4'	12'	15
16	8"x4" Tee Saddle	49	3	2	6+70/RL	4'	14'	16
17	8"x4" Tee Saddle	48	3	2	7+50/RL	3'	14'	17
18	8"x4" Tee Saddle	4	6	3	3+08/RL	3'	4'	18
19	8"x4" Tee Saddle	21	6	3	3+13/LL	3'	14'	19
20	8"x4" Tee Saddle	3	6	3	3+80/RL	3'	7'	20
21	8"x4" Tee Saddle	2	6	3	4+10/RL	3'	5'	21
22	4" MH Set Cover	1	6	3	4+44.8/E	2'	12'	22
23	8"x4" Tee Saddle	20	6	4	0+15/RL	4'	14'	23
24	8"x4" Tee Saddle	5	6	4	0+20/LL	4'	4'	24
25	8"x4" Tee Saddle	19	6	4	0+85/RL	3'	14'	25
26	8"x4" Tee Saddle	6	6	4	0+90/LL	3'	4'	26
27	8"x4" Tee Saddle	18	6	4	1+55/RL	3'	14'	27
28	8"x4" Tee Saddle	7	6	4	1+60/LL	3'	4'	28
29	8"x4" Tee Saddle	17	6	4	2+30/RL	3'	14'	29
30	8"x4" Tee Saddle	8	6	4	2+35/LL	3'	4'	30
31	8"x4" Tee Saddle	16	6	4	3+00/RL	2'	14'	31
32	8"x4" Tee Saddle	9	6	4	3+05/LL	2'	4'	32
33	8"x4" Tee Saddle	10	6	4	3+70/LL	2'	4'	33

- NOTES:  
 1. Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

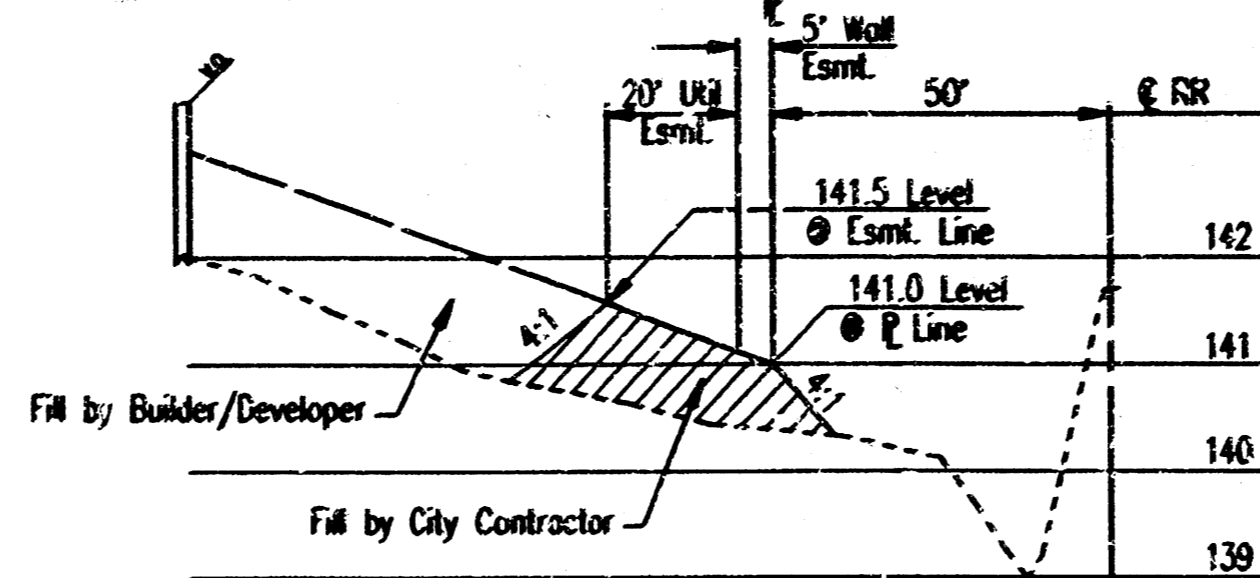
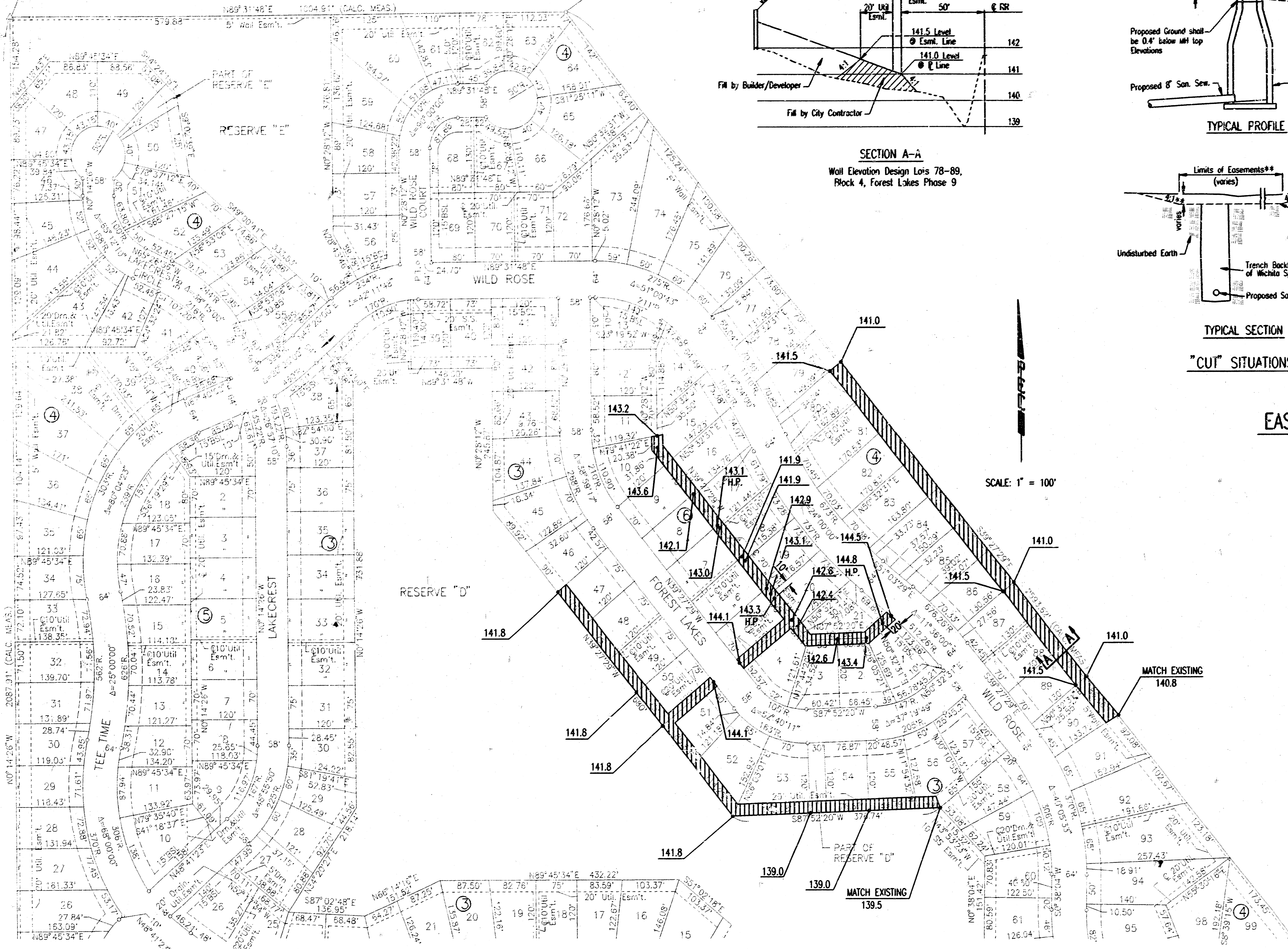
**BENCHMARK LIST**

B.M. 18 - "U" POST AT NORTHEAST SIDE OF LOT 88, BLOCK 4, FOREST LAKES ADDITION. ELEV. = 139.72	B.M. 21 - "T" POST 10' WEST OF RIGHT-OF-WAY AT P.C. OF LOT 1, BLOCK 6, FOREST LAKES ADDITION. ELEV. = 143.58
B.M. 19 - "U" POST AT NORTHEAST CORNER OF LOT 65, BLOCK 4, FOREST LAKES ADDITION. ELEV. = 139.12	B.M. 22 - "T" POST 5' NORTHEAST OF RIGHT-OF-WAY AT P.C., LOT 9, BLOCK 6, FOREST LAKES ADDITION. ELEV. = 142.97
B.M. 20 - "U" TOP OF CURB AT THE SOUTHEAST CORNER OF CURB INLET AT LOT CORNERS 92 & 93, BLOCK 4, FOREST LAKES ADDITION. ELEV. = 143.18	B.M. 23 - "U" TOP OF EAST CURB AT LAKECREST AT THE P.C. IN LOT 37, BLOCK 3, FOREST LAKES ADDITION. ELEV. = 142.97

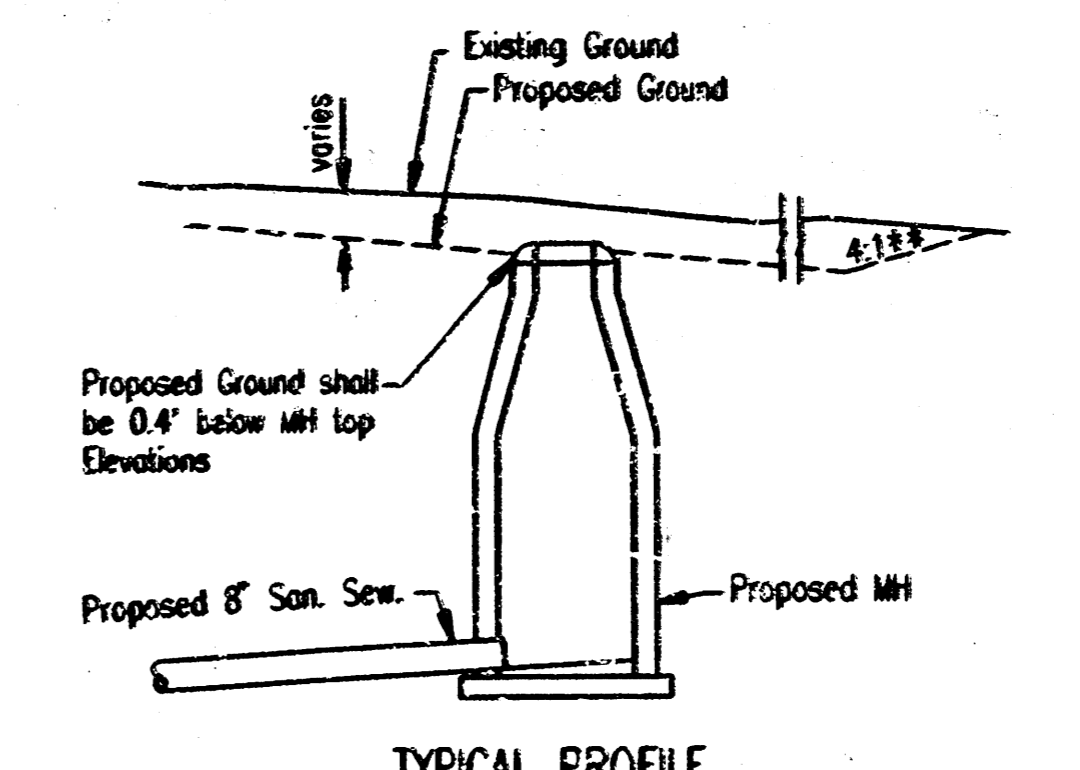


Revision	By	Date
LATERAL 9, MAIN 17 SOUTHWEST INTERCEPTOR SEWER		
<b>KEY MAP</b>		
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER C.O.W. Proj. No. 468-76-245-82307-000-000-001		
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS		
Designed by	MDK	Job No. 34-96746-1
Drawn by	BB	Date October 1996
		Sht. 2 of 12

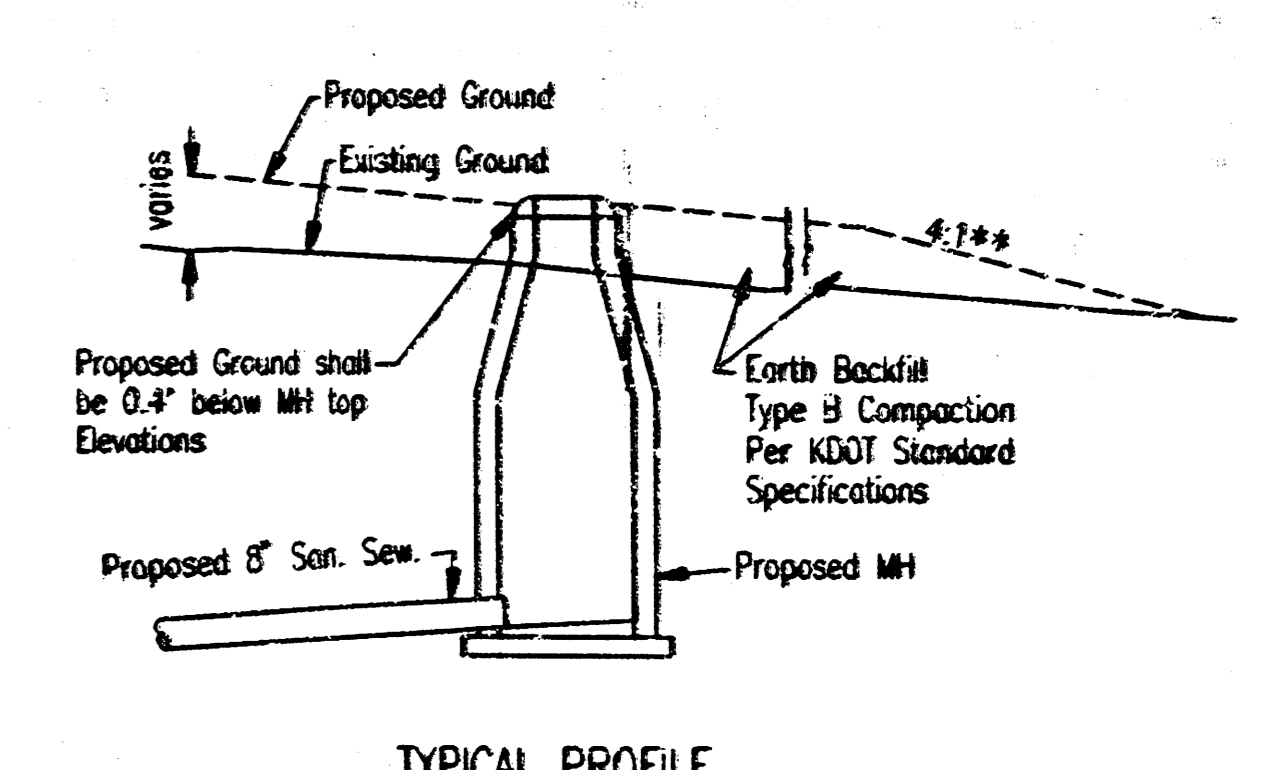
N.W. CORNER, S.E. 1/4  
 SEC. 33, T26S, R1W  
 OF THE 6TH P.M.  
 FIGURE 1/2" BAR



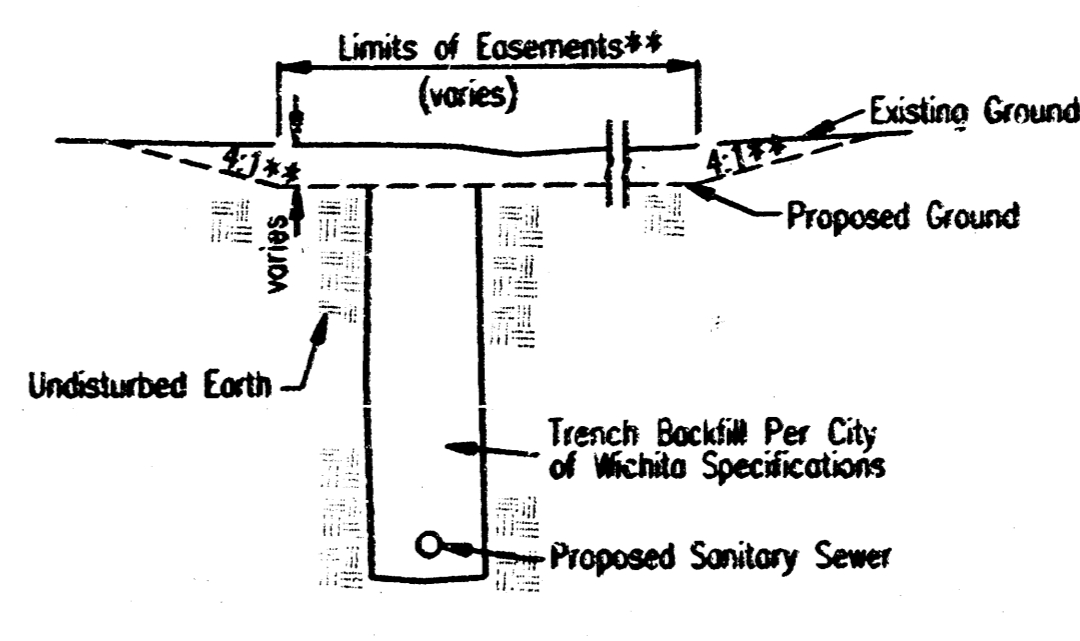
SECTION A-A  
 Wall Elevation Design Lois 78-89,  
 Block 4, Forest Lakes Phase 9



TYPICAL PROFILE

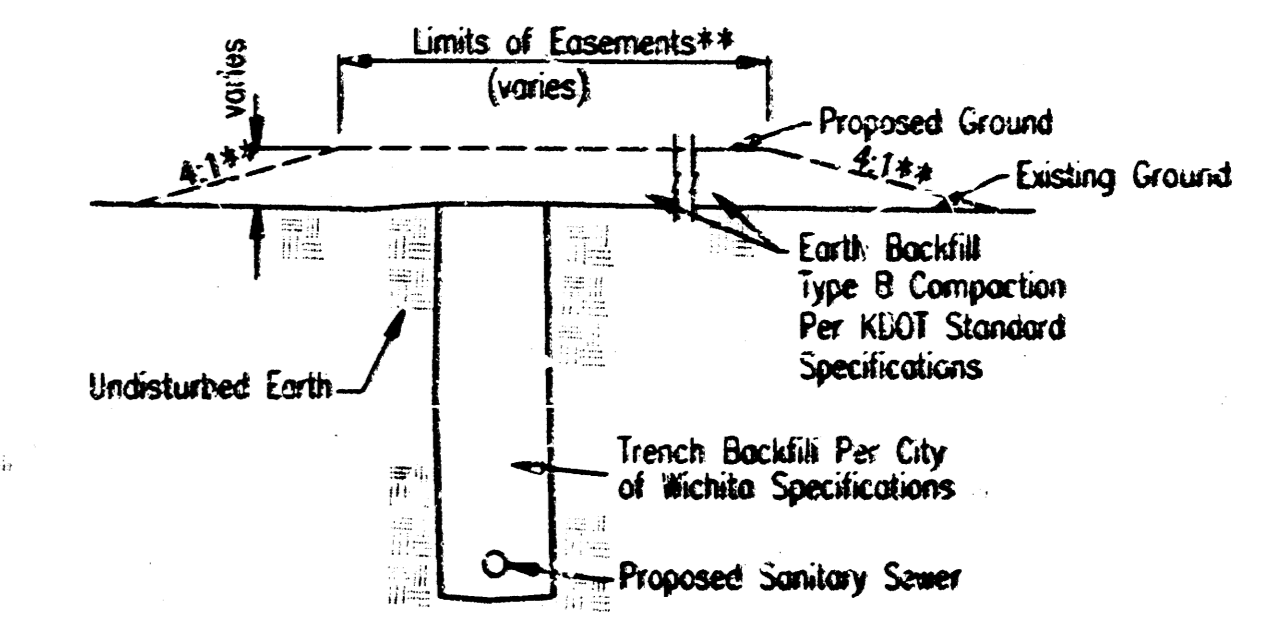


TYPICAL PROFILE



TYPICAL SECTION

"CUT" SITUATIONS



TYPICAL SECTION

"FILL" SITUATIONS

EASEMENT GRADING DETAILS

- = AREAS TO BE GRADED
- H.P. = HIGH POINT
- M.E. = MATCH EXISTING

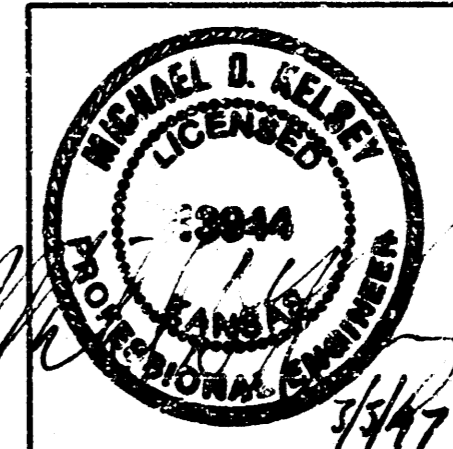
\*\* Graded widths and slopes may vary as approved by the Engineer to minimize conflicts with existing trees.

Easement Grading will be bid on a lump sum basis for grading the easements to the profile and elevations shown on the Easement Grading Plan (this sheet). Approximate quantities of earthwork for easement grading are shown below. These approximate quantities are given for information only. The Contractor should verify the quantities when preparing the proposal.

Cut 1074 C.Y. (Approximate)  
 Fill 786 C.Y. (Approximate)

SCALE: 1" = 100'

DSWR: RCJ OPER: BEJ SCALE: 1"=100.00  
 CA:\1996\96746\001\ESMGRD.DWG 03-04-1997 4:07:54 pm



No.	Revision	By	Date
LATERAL 9, MAIN 17 OF THE SOUTHWEST INTERCEPTOR SEWER <b>EASEMENT GRADING PLAN</b> MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82307-000-000-001 <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	MDK	Job No.	34-96746-1
Drawn by	TLS	Date	OCTOBER 1996
			Sheet 3 of 12



# FOREST LAKES

## AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

o = 3/4" IRON PIPE WITH I.D. CAP (PEC PA)  
SET UNLESS OTHERWISE NOTED.

DATUM BM - CHISELED "o" ON NE CORNER OF EAST HEADWALL OF RCB UNDER RIDGE RD. AT 200'+ NORTH OF EAST 1/4 CORNER, SEC. 4, T27S, R1W. ELEV. 138.46

BM F.L.-2 - CHISELED "o" ON NORTH END OF WEST HEADWALL OF RCB UNDER WILD ROSE ON SOUTH SIDE OF 29TH STREET NORTH. ELEV. 1325.84 M.S.L.

BM F.L.-8 - RAILROAD SPIKE IN SOUTH FACE OF 18" ELM IN NORTH TO SOUTH TREE ROW AT 25'E. EAST AND 125'E. NORTH OF EAST CORNER OF LOT 26, BLOCK 2, FOREST LAKES ADDITION. ELEV. 141.51

ALL BUILDING SETBACK LINES ARE 25' UNLESS OTHERWISE LABELED.

MINIMUM PAD ELEVATIONS (LOWEST OPENING) SHALL BE AS FOLLOWS:

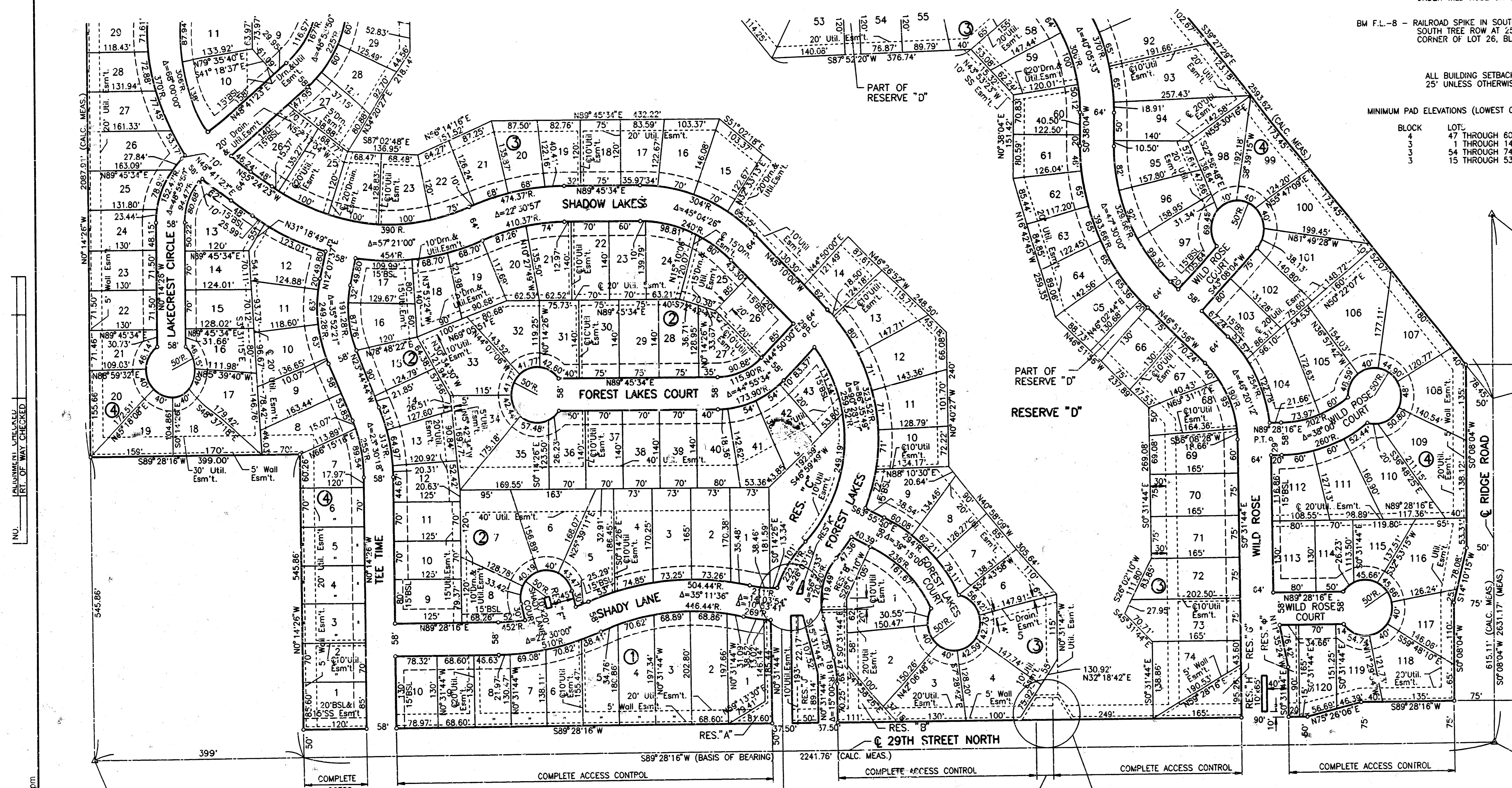
BLOCK	LOT	CITY DATUM	M.S.L.
4	47 THROUGH 60	144.82	1332.0
3	1 THROUGH 14	140.32	1327.5
3	54 THROUGH 74	140.32	1327.5
3	15 THROUGH 53	141.82	1329.0

NE CORNER, SE 1/4 SEC. 33, T26S, R1W OF THE 6TH P.M. FOUND 1/2" IRON PIPE IN THIMBLE.

NO MONUMENT SET

SCALE: 1"=100'

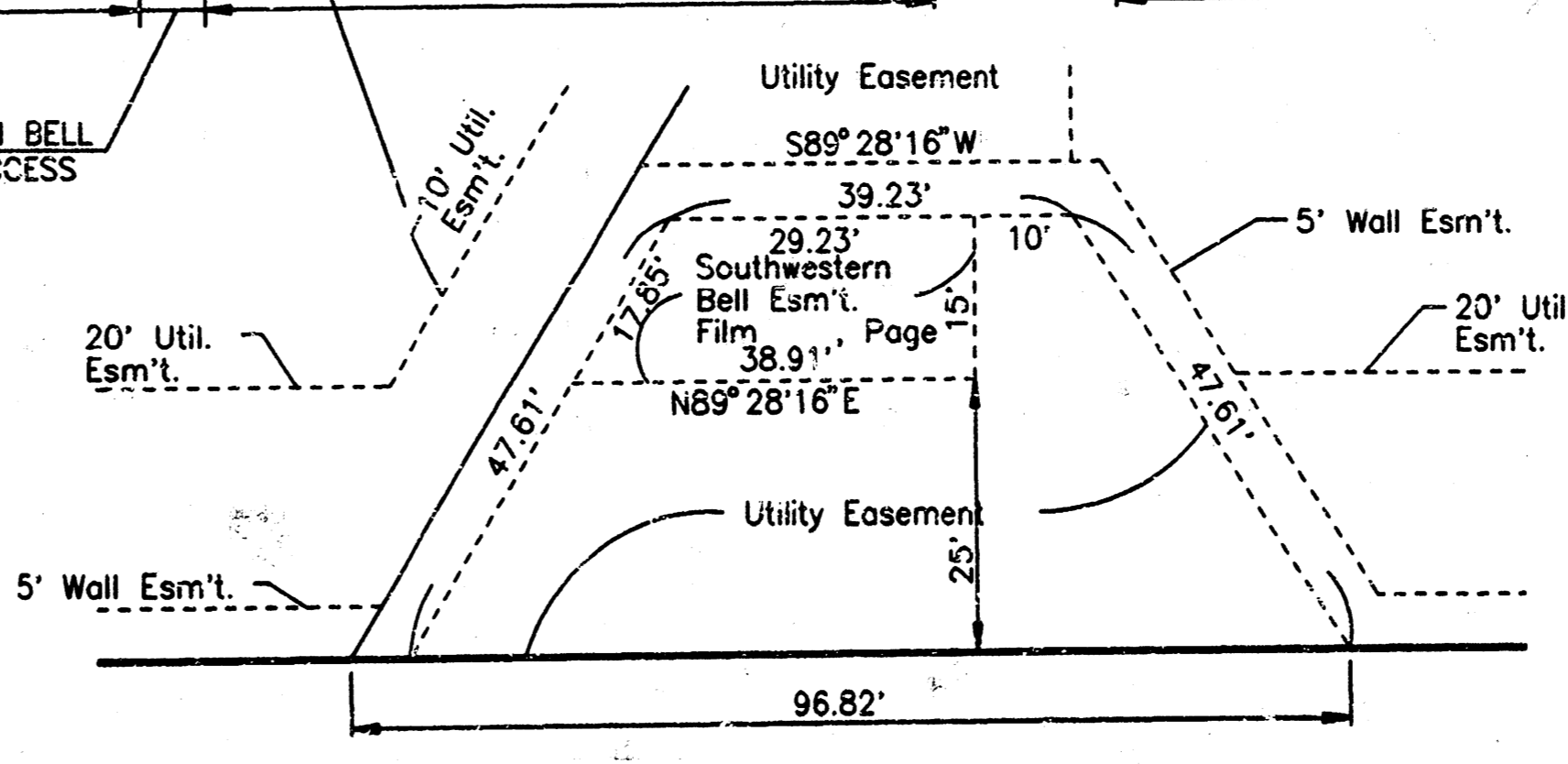
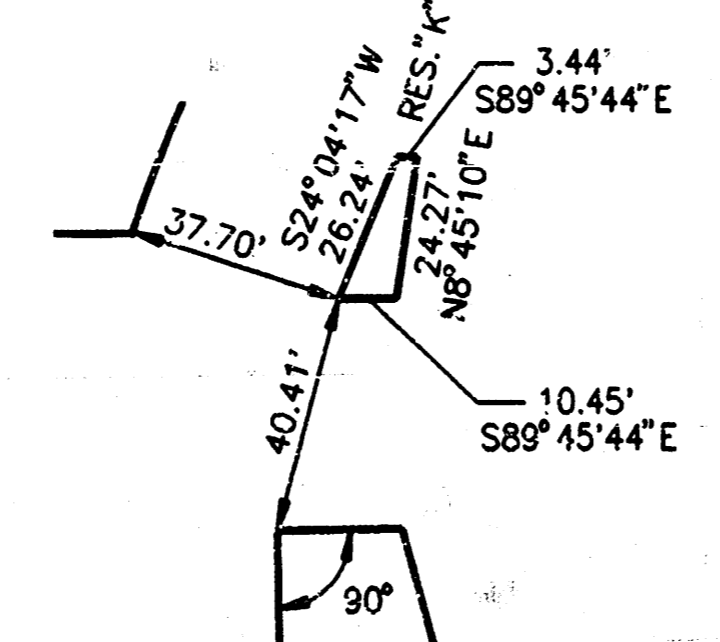
S.E. CORNER, S.E. 1/4 SEC. 33, T26S, R1W OF THE 6TH P.M. FOUND 5/8" BAR IN THIMBLE.



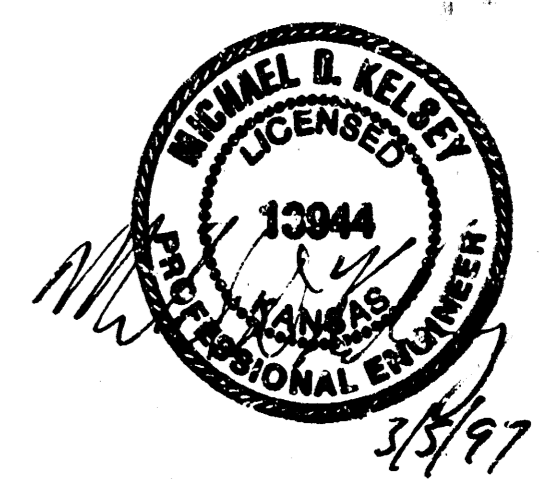
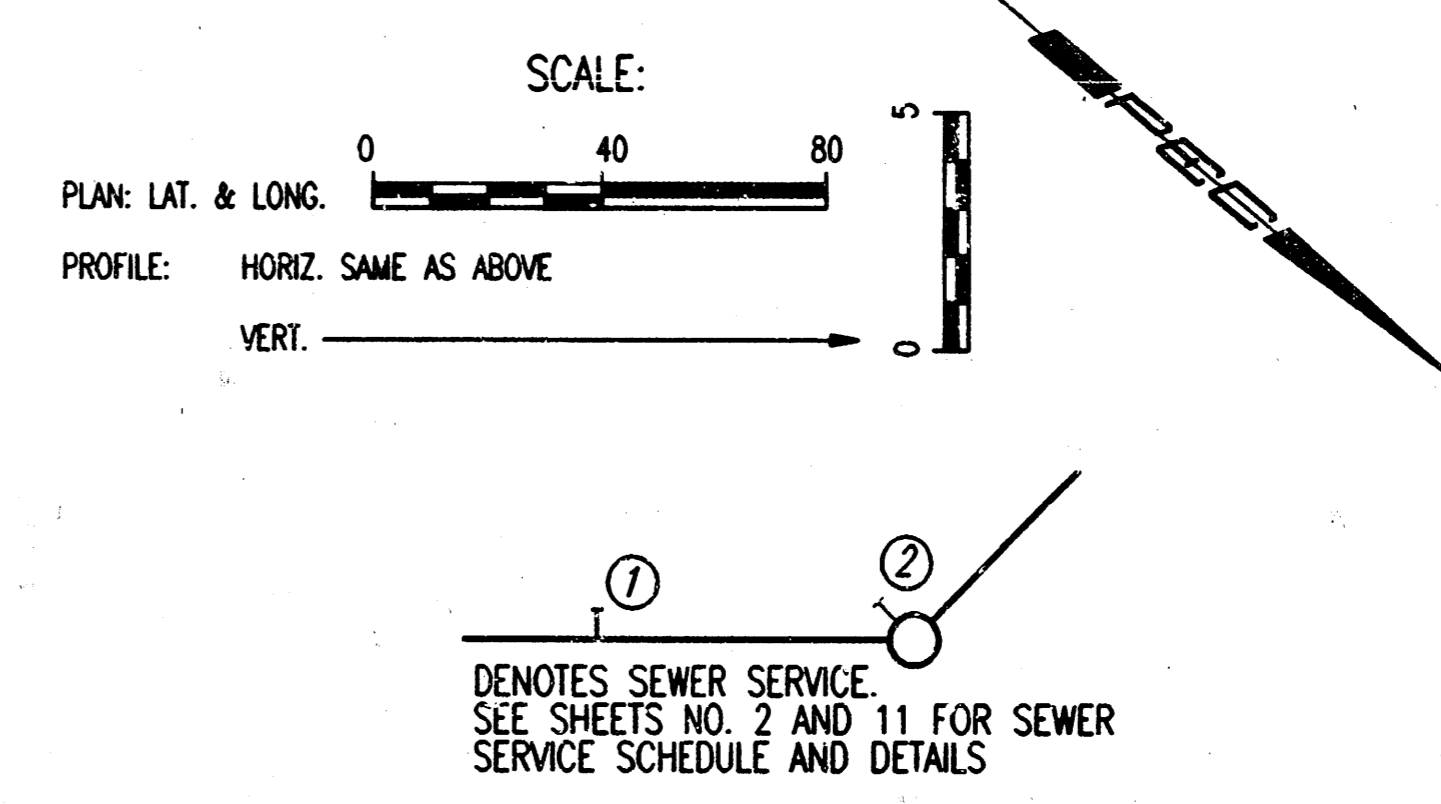
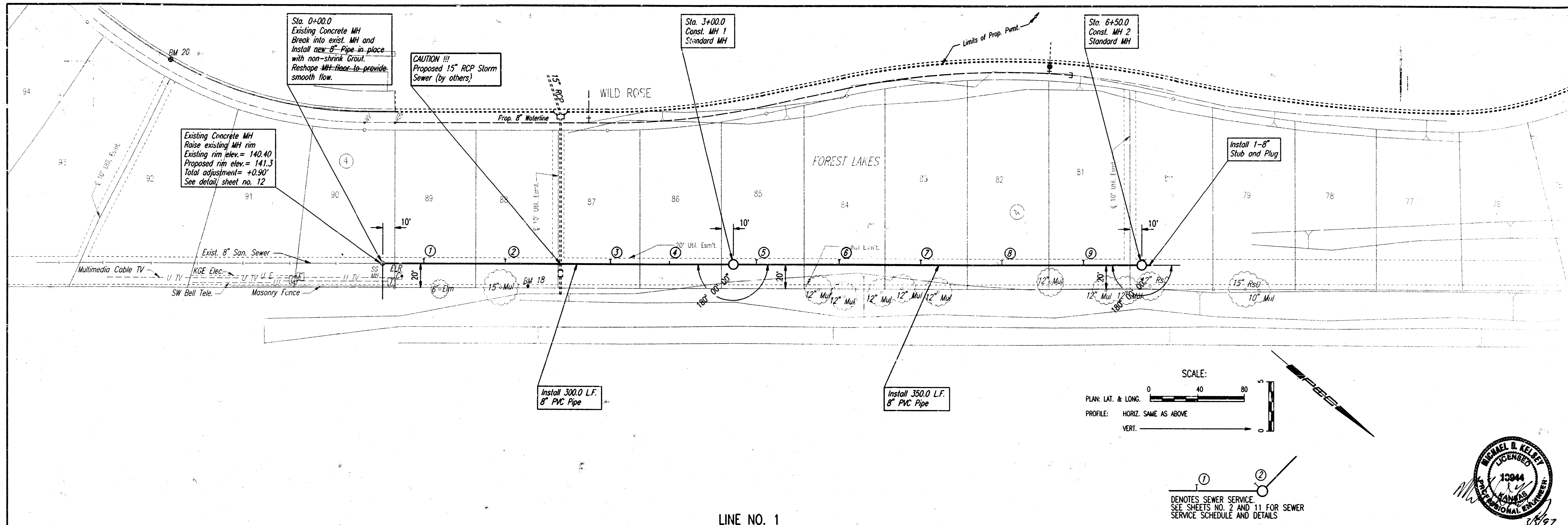
INSTRUMENT VERIFIED BY: W.A. WICK

DSNR REF. OPER. REJ. SCALE: 1"=100.00  
C:\Y:\98\367\451\01\PLM-2.DWG: 03-04-1997 4:10:11 pm

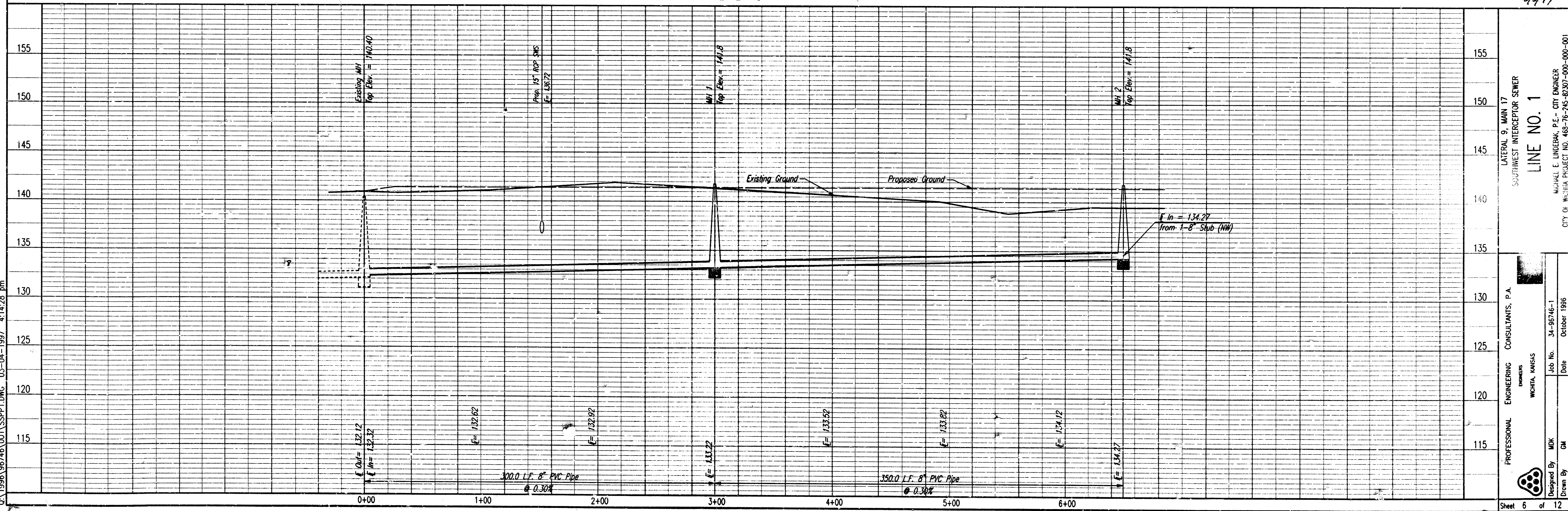
S.W. CORNER, SE 1/4 SEC. 33, T26S, R1W OF THE 6TH P.M. FOUND CHIS. "x" ON LIMESTONE.



No.	Revision	By	Date
LATERAL 9, MAIN 17 OF THE SOUTHWEST INTERCEPTOR SEWER <b>PLAT</b> MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-76-245-82307-000-000-001 <b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> WICHITA, KANSAS			
Designed by	Job No. 34-96746-1		Sht. 5 of 12
Drawn by	Date	September 1995	



LINE NO. 1



DSNR, REF. OPER. REF. SCALE: 1=40.00  
 CA:\1996\96746\01\SSP1.DWG\_03-04-1997 4:14:28 pm

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 488-76-745-82307-000-001  
 LATERAL 91, MAIN 17  
 SOUTHWEST INTERCEPTOR SEWER  
**LINE NO. 1**  
 Designed By: MKK  
 Drawn By: GH  
 Job No. 34-98746-1  
 Date: October 1996  
 Sheet 6 of 12



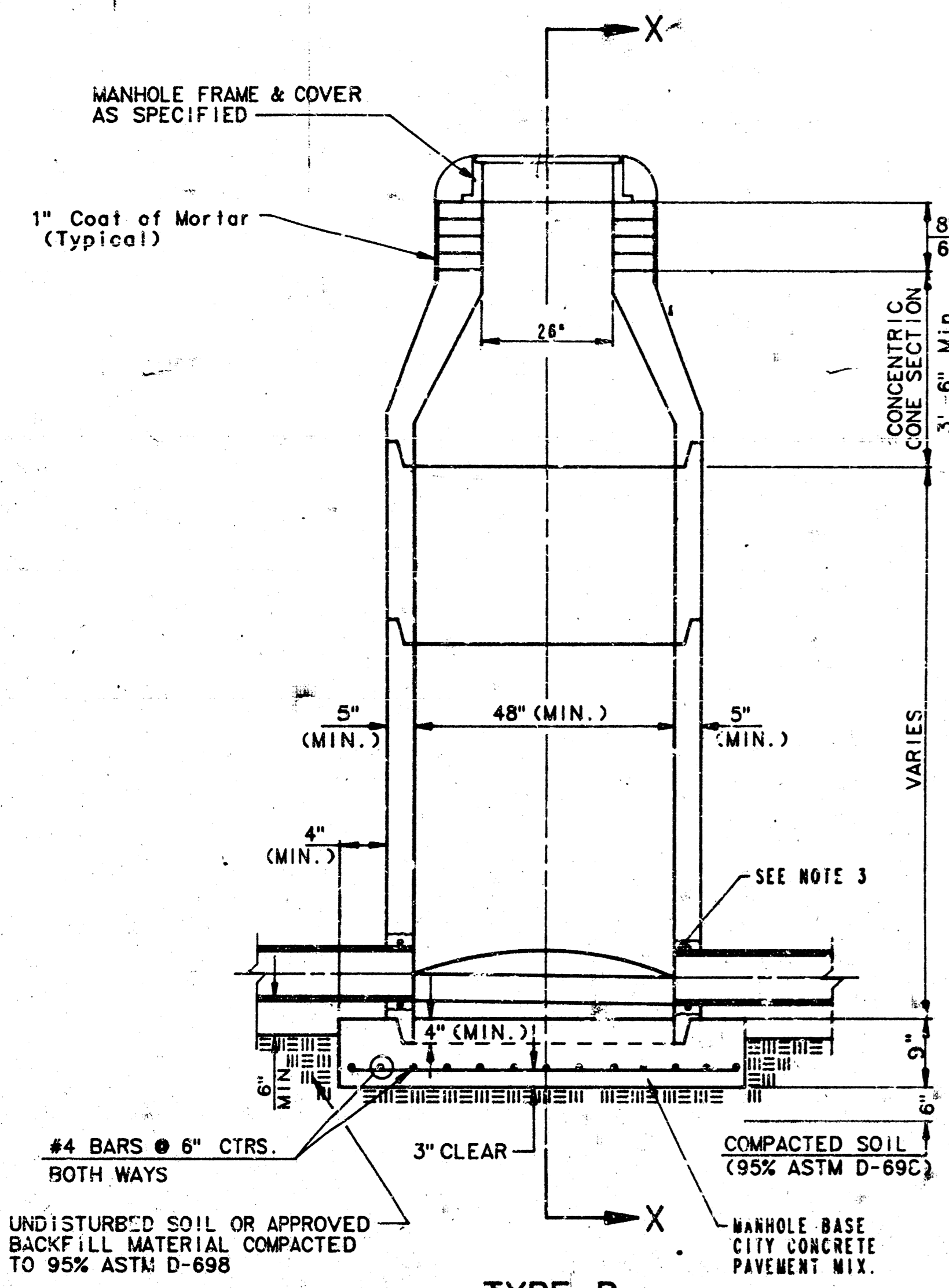


# SEWER APPURTENANCES DETAILS

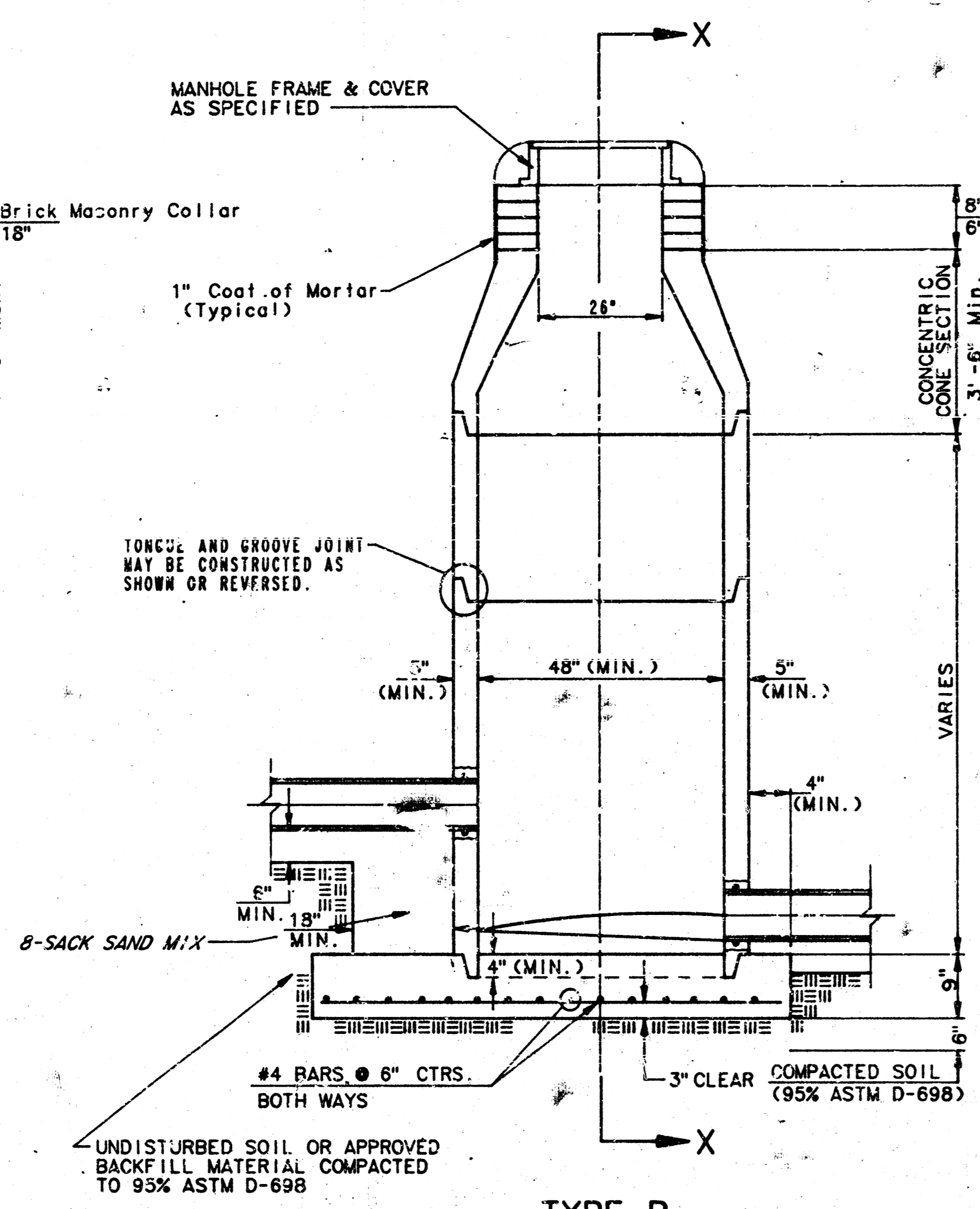
## ADOPTED AS STANDARD DESIGN

### BY

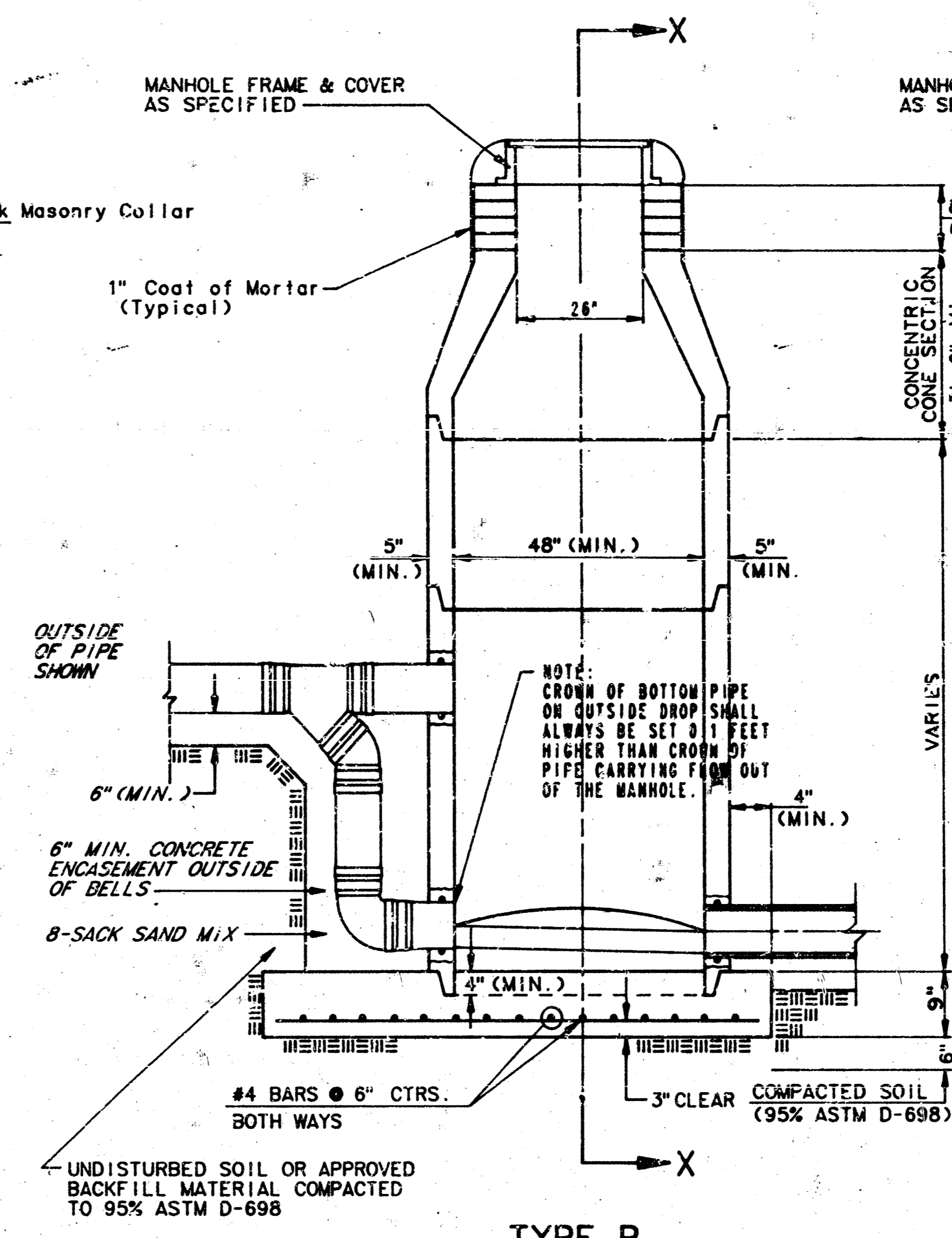
## CITY OF WICHITA



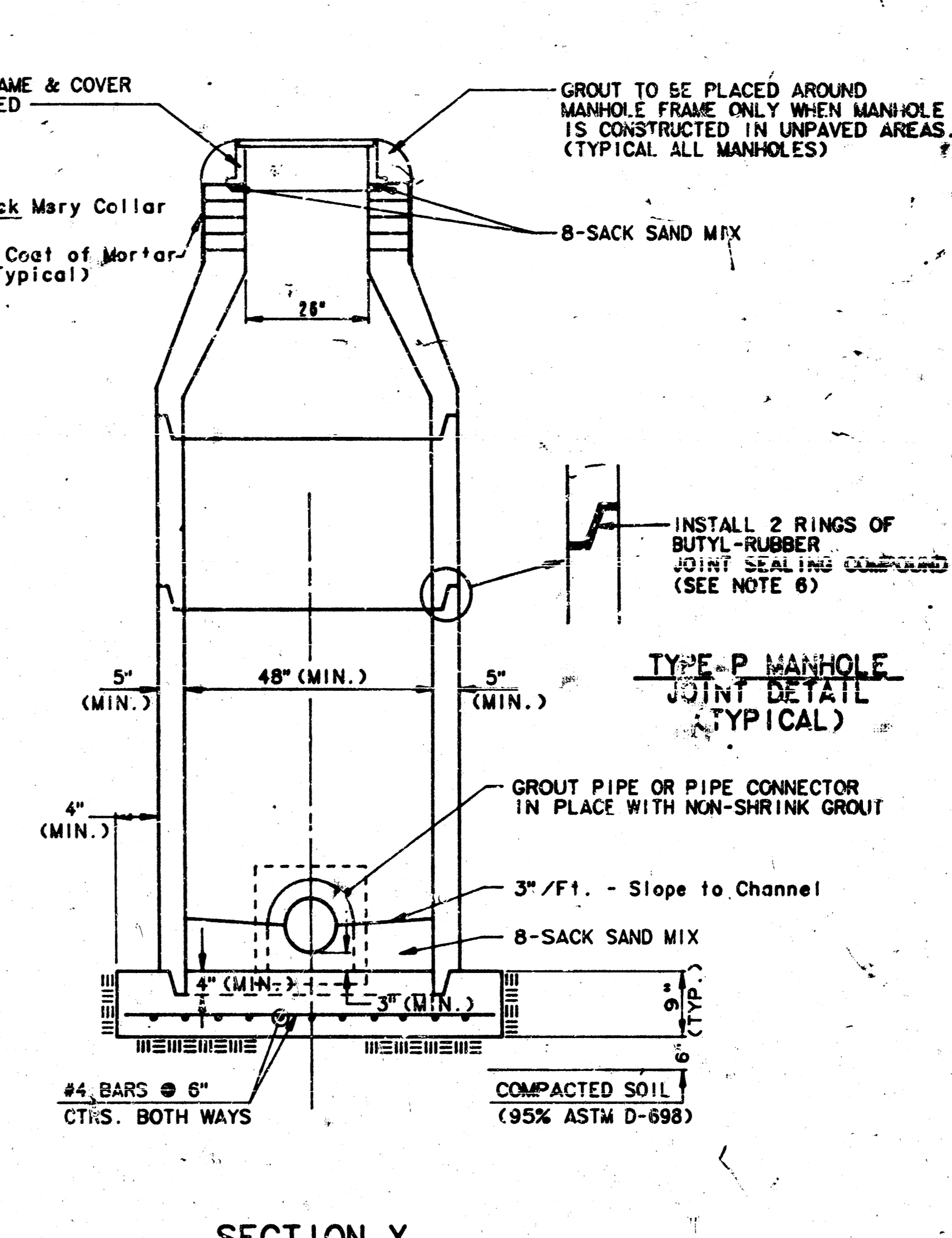
**TYPE P  
STANDARD MANHOLE**



**TYPE P  
INSIDE DROP MANHOLE**



**TYPE P  
OUTSIDE DROP MANHOLE**



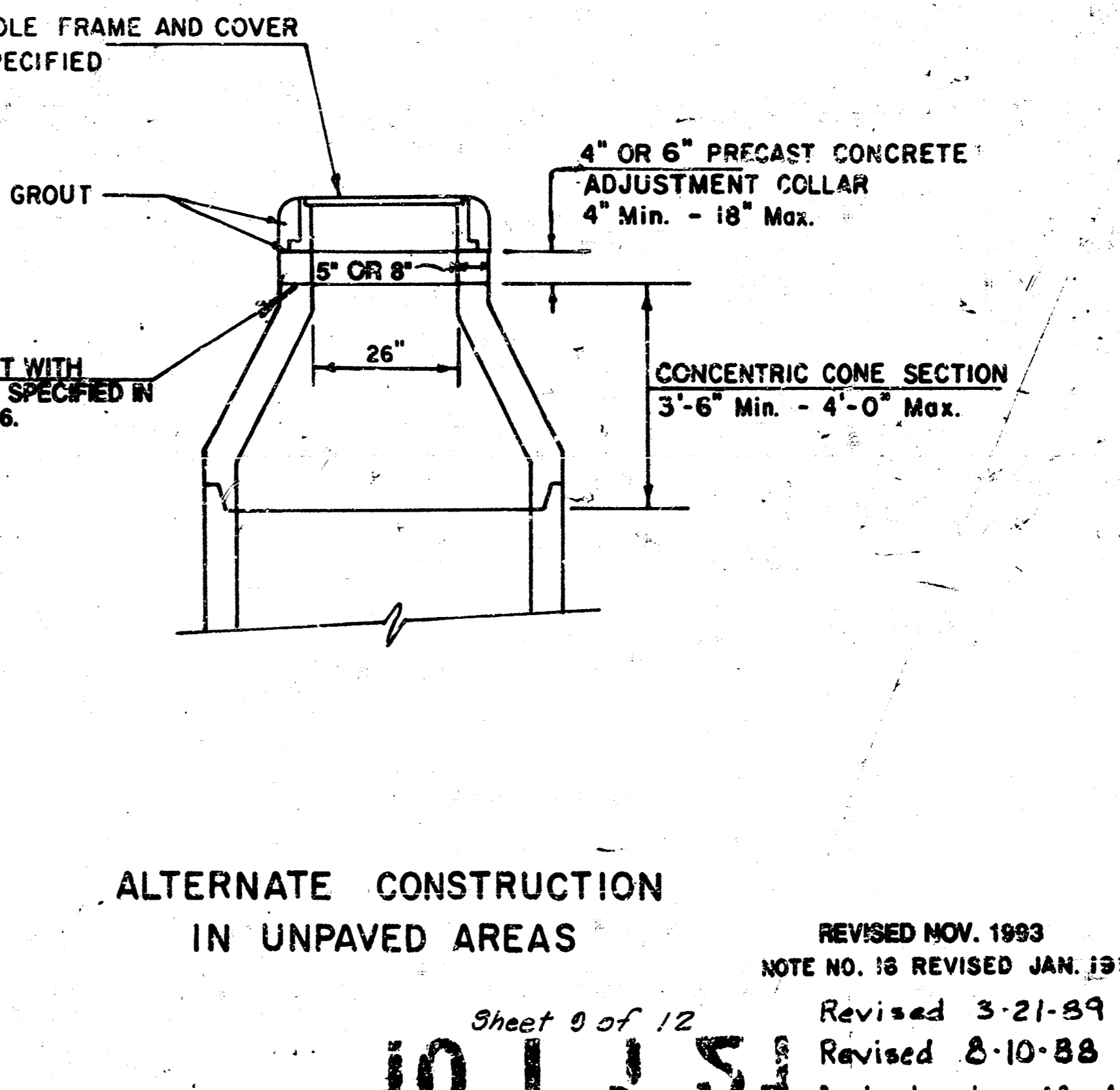
**SECTION X  
(TYPICAL)**

**GENERAL NOTES**

- PRECAST MANHOLE NOTES**
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF A.S.T.M. C475 AS MODIFIED BY THE SPECIFICATIONS.
  2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
  3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUDED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
  4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TRADE SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
  5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINUS COATING.
  6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
  7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
  8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
  9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
  10. 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 PAVEMENT 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. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24\"/>

11. REINFORCING STEEL SHALL BE INSTALLED IN THE BASES AND SIDES AND THE OUTFLOWING PIPES IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3\"/>
- 12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUDED THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUDED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. AN APPROVED EXTERIOR OF THE COMPLETED CONNECTION SHALL BE APPROVED BITUMINOUS COATING SUCH THAT THE JOINT IS WATER TIGHT. FLOOR OF MANHOLE SHALL BE MADE OF CRADLE WITH FLOW CHANNEL FOR THE NEW CONNECTION AS SHOWN. THIS WORK, INCLUDING MODIFICATION OF P.I.D. FOR AT THE UNIT PRICE BID FOR OUR CONSTRUCTION ON EXISTING MANHOLE.
- 13. THE FLOORS OF ALL MANHOLES SHALL BE SUCH THAT THE MANHOLES WILL BE SELF WHERE SOLIDS COULD BE DEPOSITED AS MANHOLE FROM ALL INLET PIPES TO THE SHALL BE FORMED TO MATCH THE BOTTOM PIPES AND THE OUTFLOWING PIPE AS SHOWN FOR INSIDE DROP MANHOLES. FLOW CHANNEL MANHOLES SHALL BE CONSTRUCTED AS INDICATED. MANHOLE FLOORS SHALL HAVE SLOPES OF 3\"/>
- 14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE GRADED 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.

15. 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 DRAWING.
16. THE VERTICAL FREE FALL DROP INSIDE MANHOLES SHALL NOT EXCEED 2'. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4\"/>
- 18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8\"/>

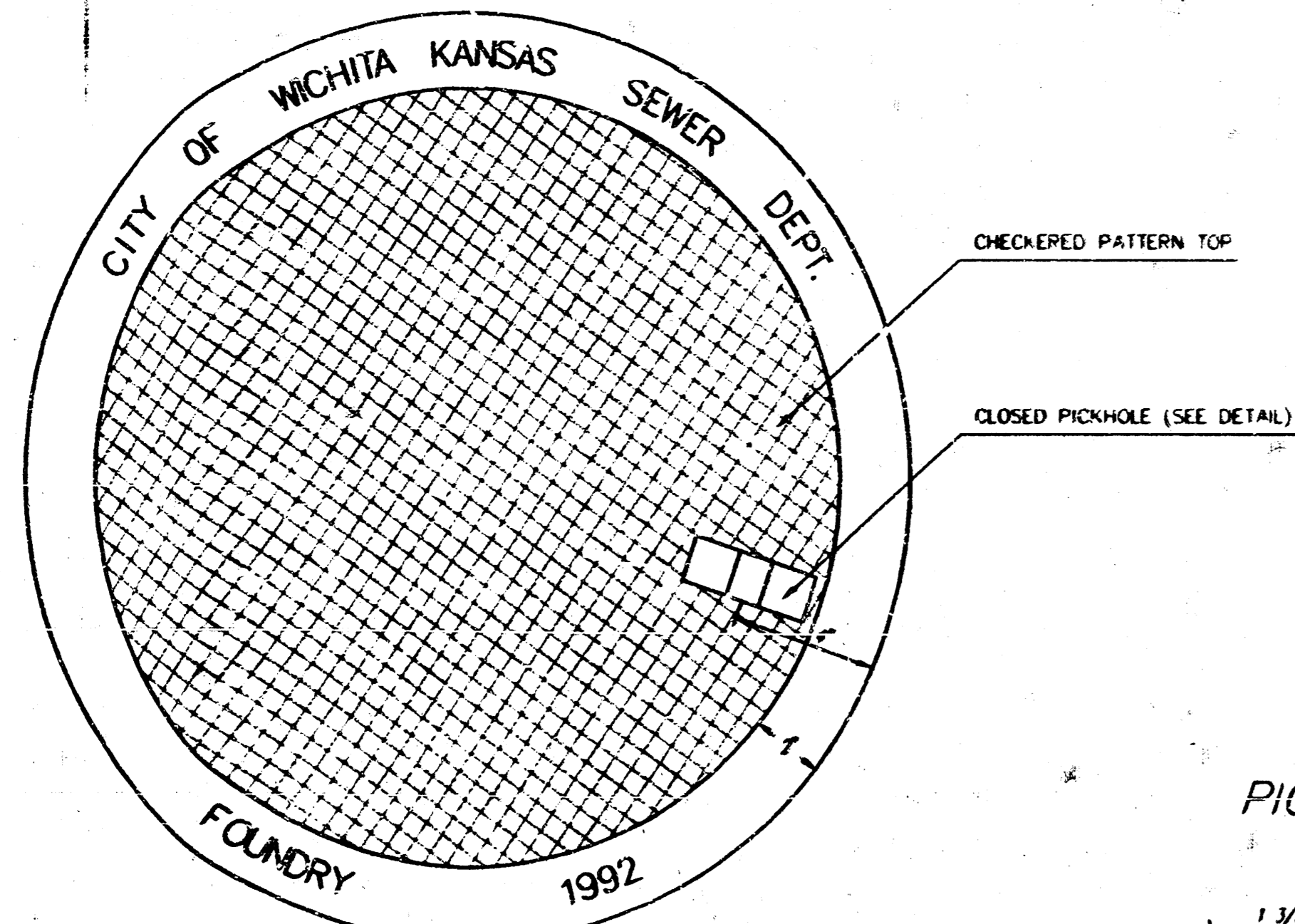


**ALTERNATE CONSTRUCTION  
IN UNPAVED AREAS**

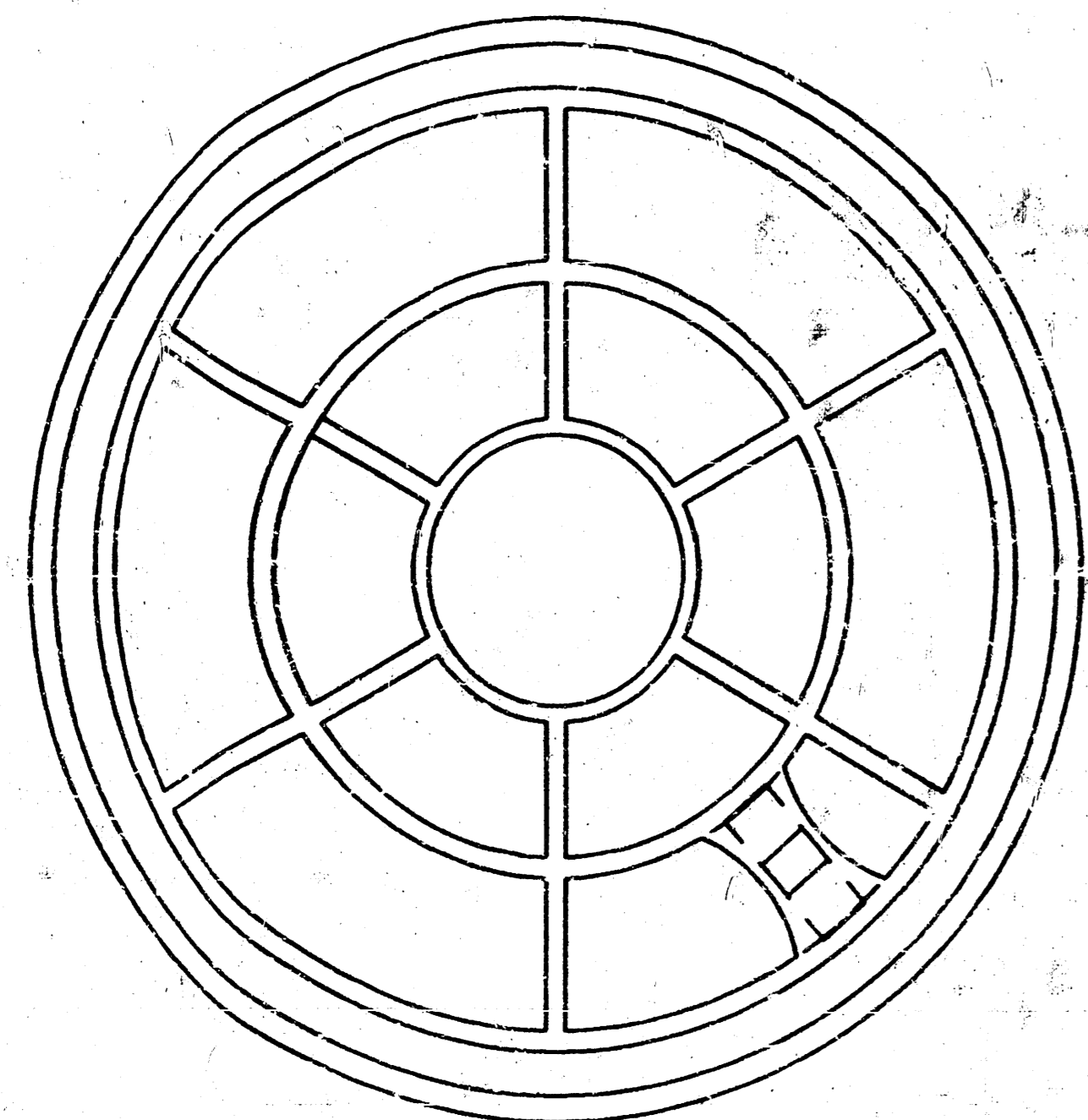
REVISED NOV. 1993  
 NOTE NO. 16 REVISED JAN. 1991  
 Revised 3-21-89  
 Revised 8-10-88  
 Revised: June 12, 1986

Sheet 8 of 12  
**101151**

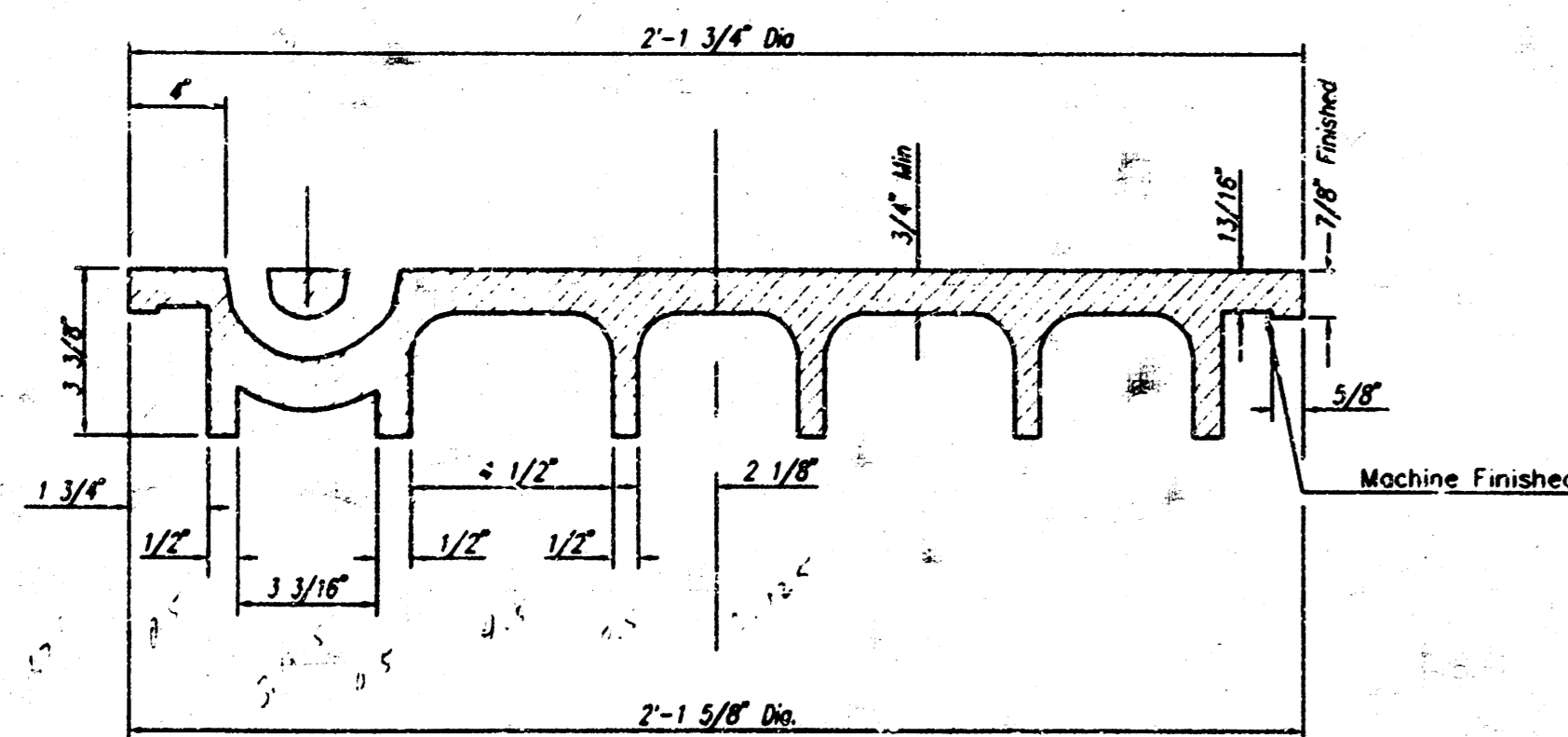
MANHOLE COVER  
Weight = 180 Lbs.



TOP VIEW



BOTTOM VIEW

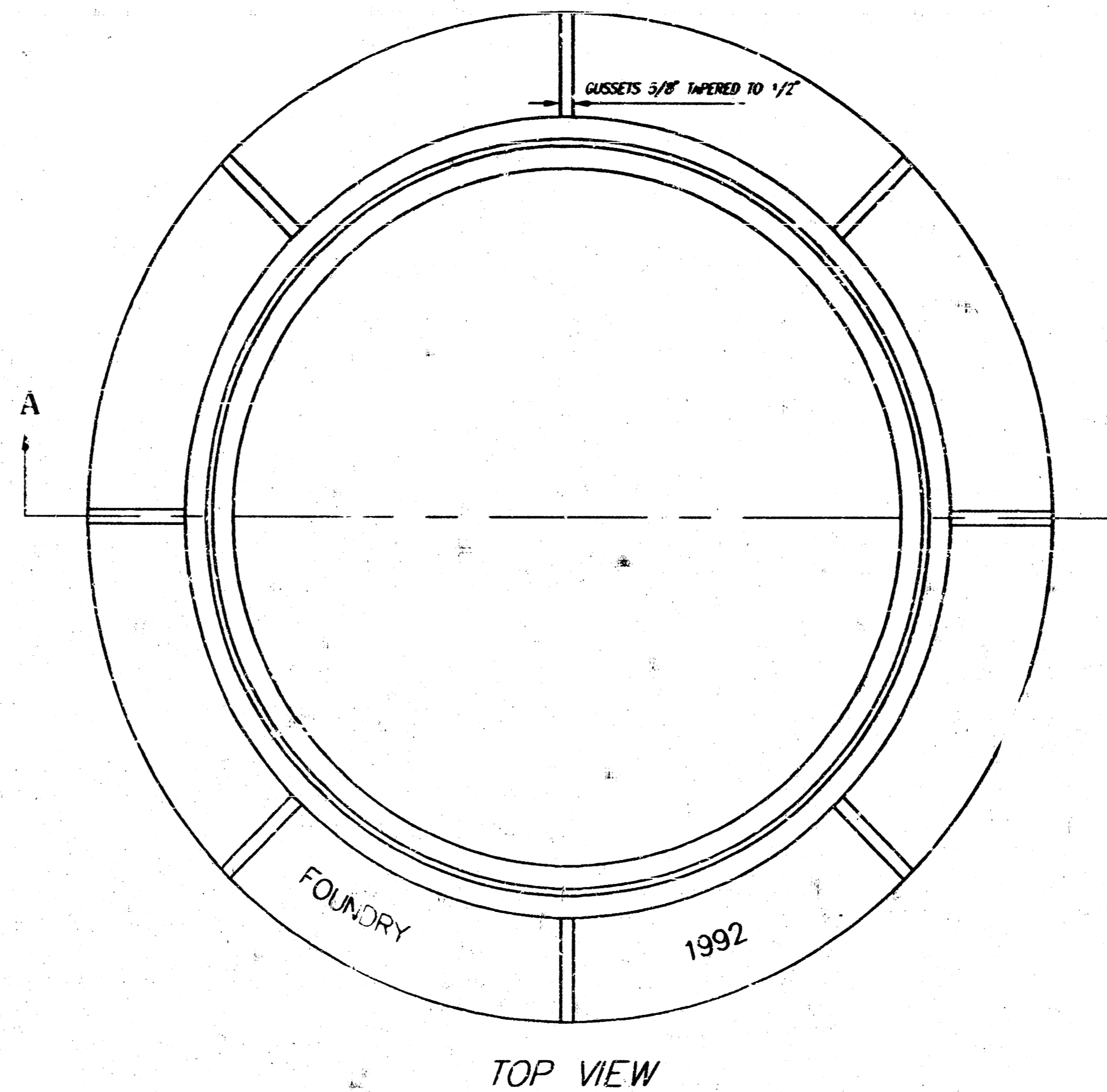


SECTION VIEW

# MANHOLE FRAME AND COVER DETAIL

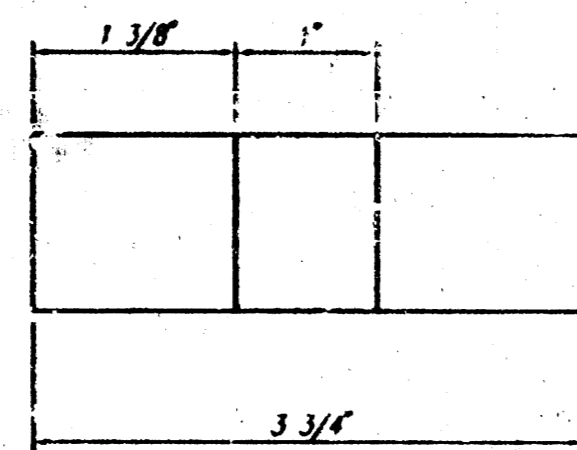
ADOPTED AS STANDARD DESIGN BY  
CITY OF WICHITA, KANSAS

MANHOLE FRAME  
Weight = 240 Lbs.

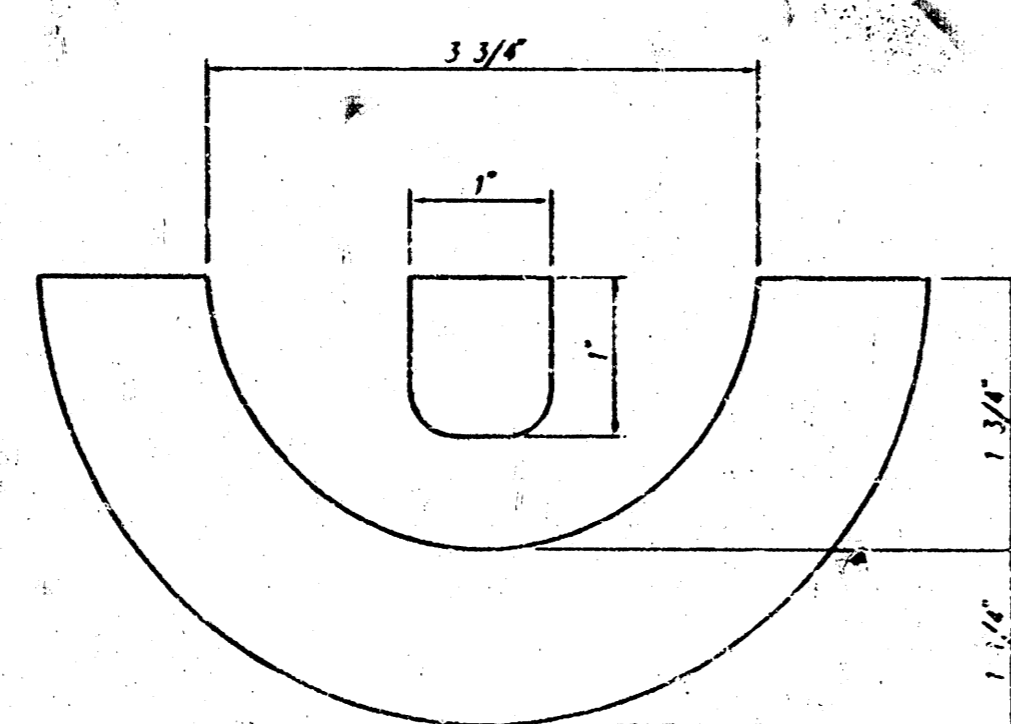


TOP VIEW

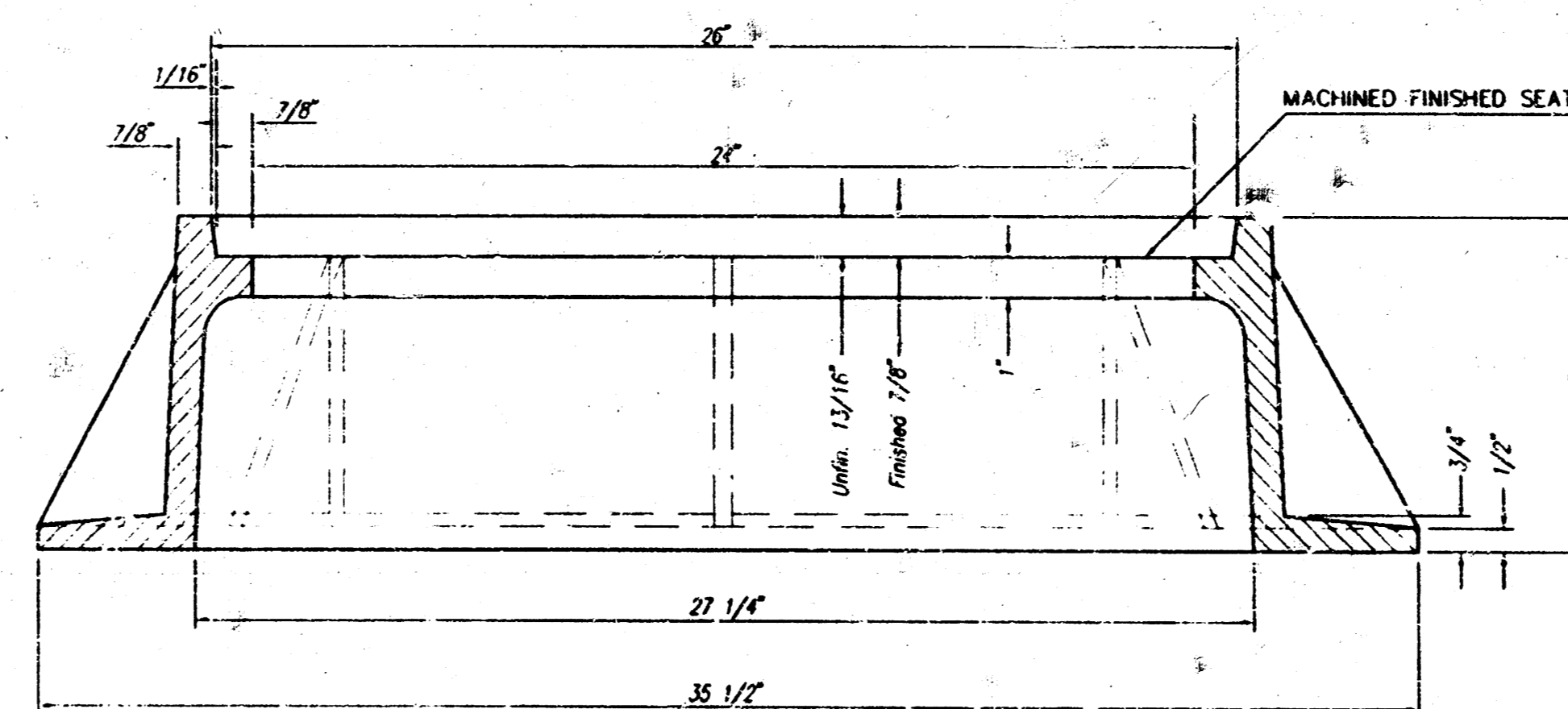
PICKHOLE DETAIL



TOP VIEW



SECTION VIEW



SECTION A-A

## GENERAL NOTES

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 DETAILED 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.

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.

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 AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

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 INCH 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.

MANHOLE CASTINGS SHALL WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.

TO INSURE CONFORMANCE TO TENSILE STRENGTH REQUIREMENTS ALL CASTINGS SHALL BE JULIAN HEAT DATED WITH THE FOLLOWING REQUIREMENTS:

TWO TEST BAR SPECIMENS MUST BE POURED WHEN PRODUCING CITY OF WICHITA CASTINGS. ONE OF THE TEST BAR SPECIMENS SHALL BE SENT TO AN INDEPENDENT LABORATORY FOR TENSILE STRENGTH VERIFICATION TESTING. A TEST REPORT SHALL ACCOMPANY EACH SHIPMENT OF CASTINGS. THE HEAT DATE(S) ON THE CASTINGS SHALL RESPOND TO THE TENSILE STRENGTH REPORT(S). THE TEST REPORT WILL BE PAID FOR BY THE SUPPLIER. THE REMAINING TEST BAR SPECIMEN WILL BE SHIPPED TO SEWER MAINTENANCE AT 715 W. HARRY, WICHITA, KANSAS 67213.

## MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY  
CITY OF WICHITA, KANSAS

M. E. LINDEBAK - CITY ENGINEER

PROJ. NO. 468-76-245-82307-000-000-001

REVISED

8/27/95

SHEET

10

OF

12

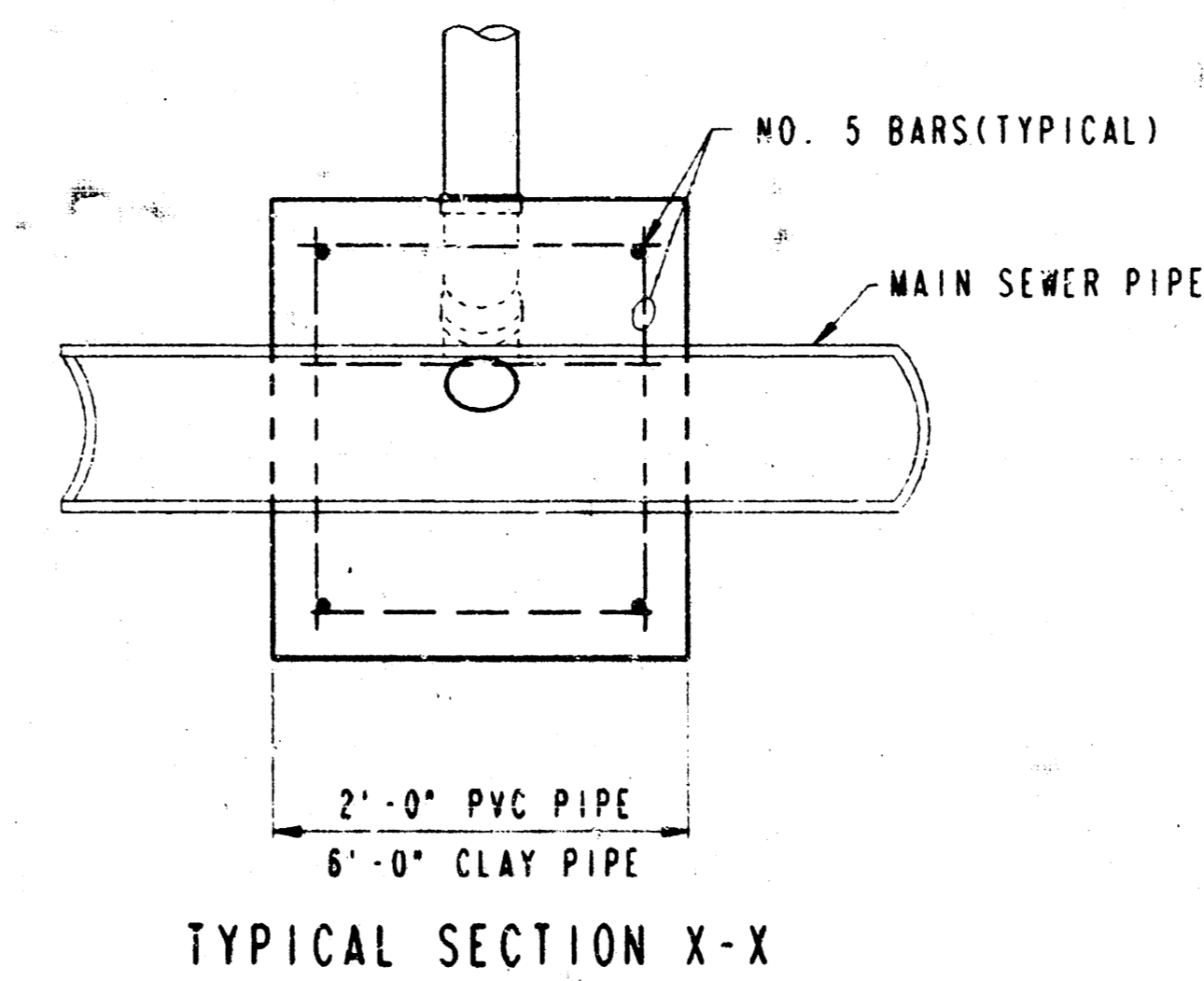
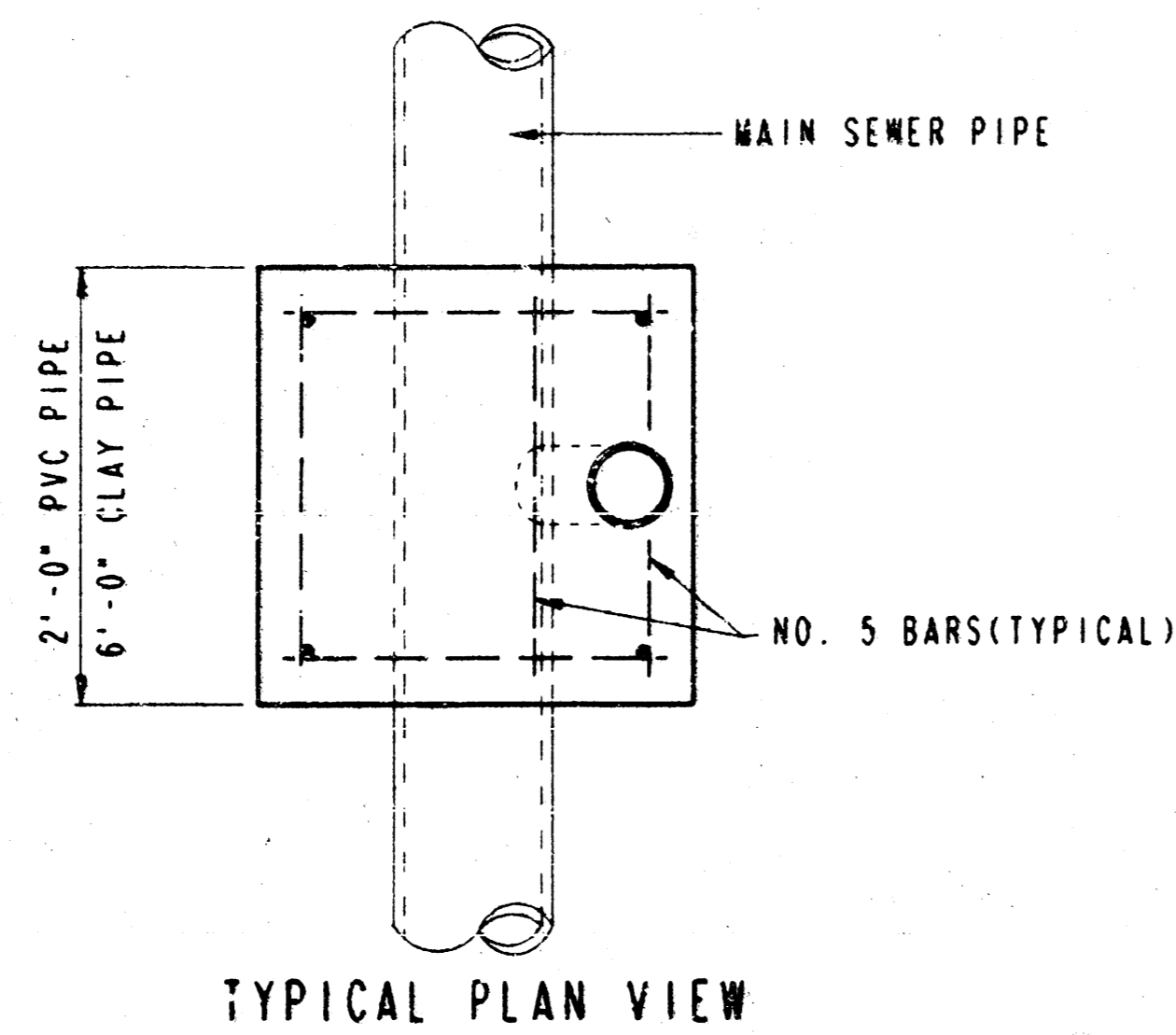
# VERTICAL RISER DETAILS

## ADOPTED AS STANDARD DESIGN

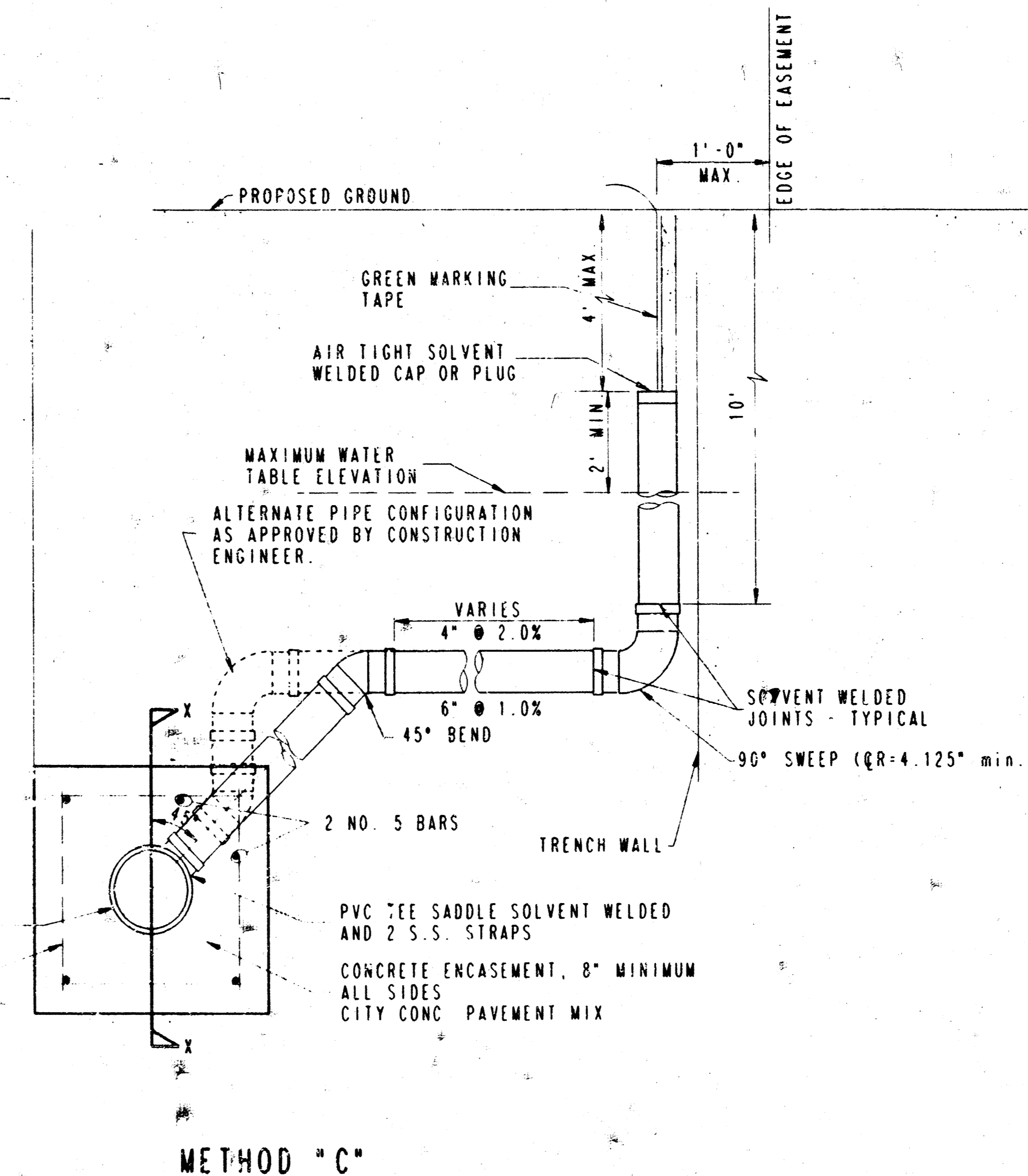
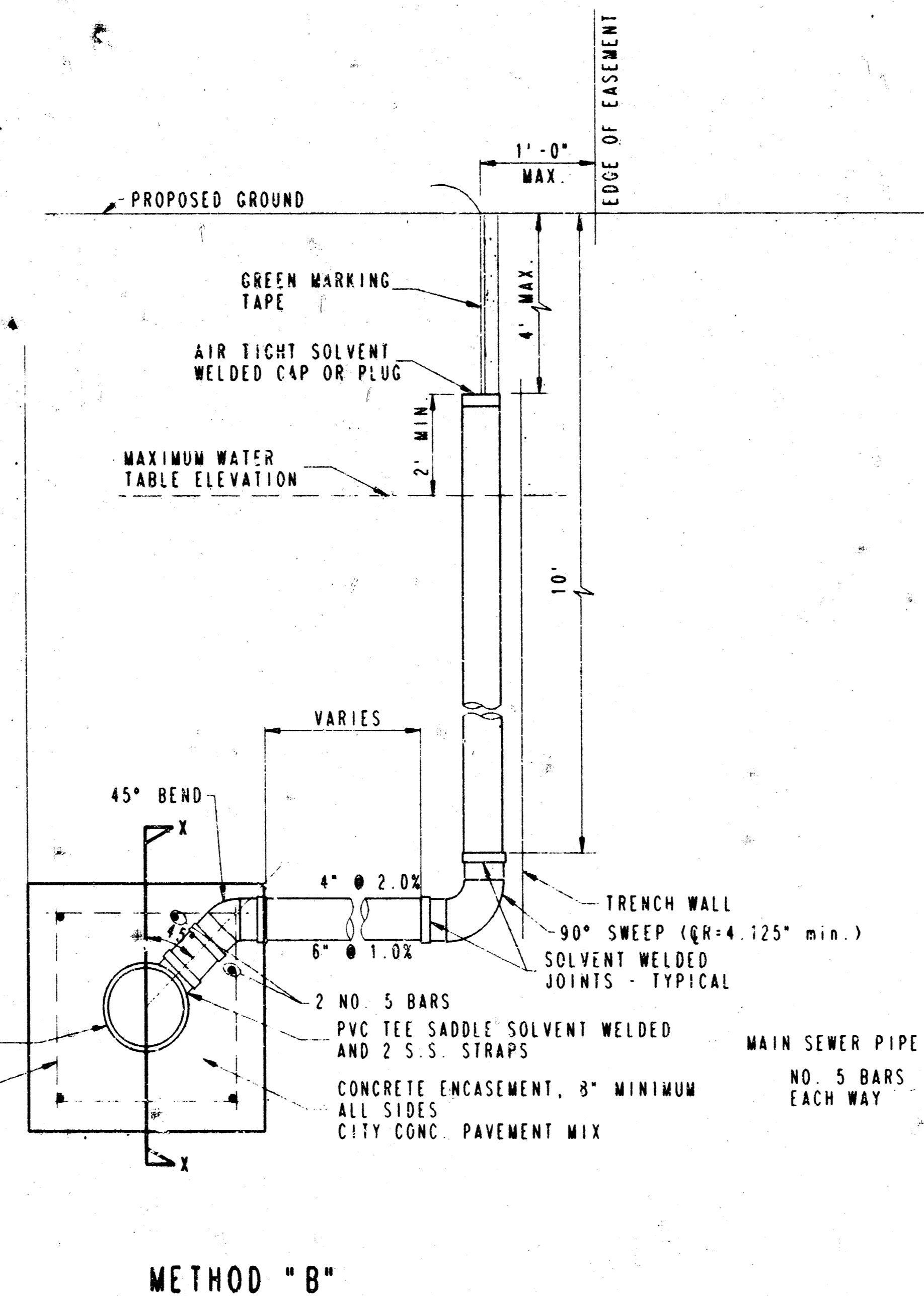
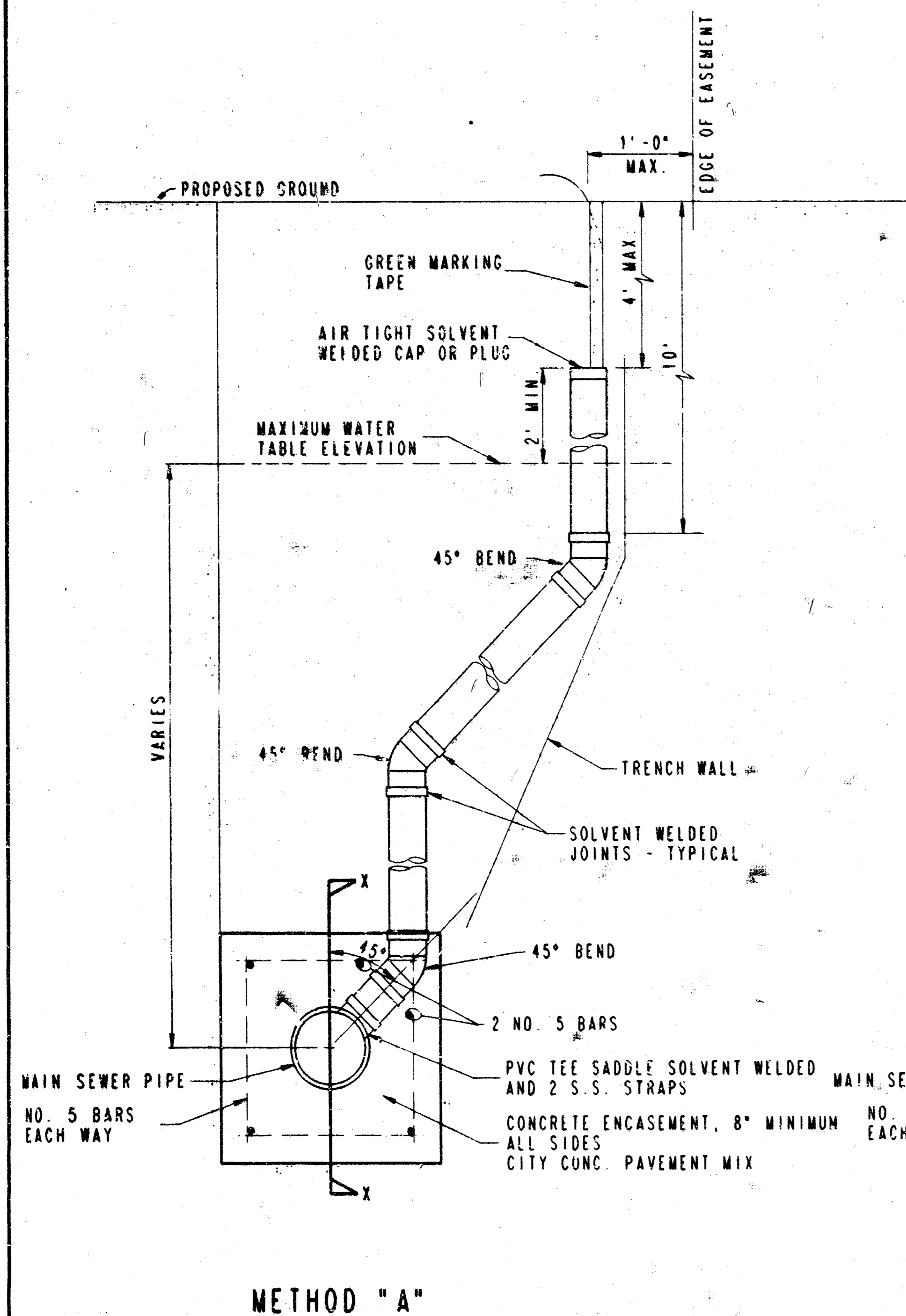
### BY

## CITY OF WICHITA, KANSAS

### OCTOBER 1992



DATE	
BY	
CHECKED	
PLAN	

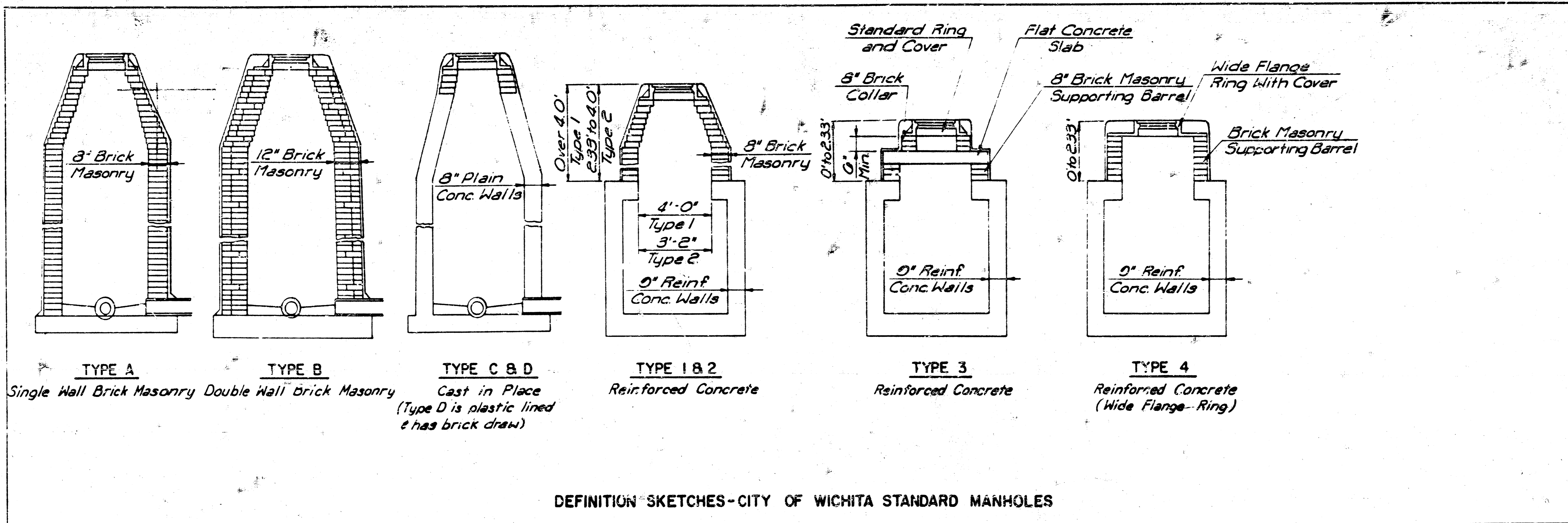


NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

#### GENERAL NOTES

1. **RISERS.** Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
2. **PIPE STUBS.** Pipe stubs shall be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole pipe stub and the flowline of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.
3. **SIZING.** Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
4. **RISER OR STUB MATERIAL.** Risers and stubs shall be constructed of SDR 35 PVC Pipe or Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. All pipe joints shall be solvent welded.
5. **REINFORCED CONCRETE ENCASUREMENT.** Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains shall be reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced with reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
6. **BEDDING.** Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
7. **SUPPORT OF RISERS.** Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
8. **PLUGGING.** The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
9. **TOP OF THE RISER PIPE.** The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
10. **MARKING.** Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
11. **LOCATION MEASURES.** The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating true direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
12. **RISER LOCATION.** The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
13. **PAYMENT.** "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

"Manhole stubs" shall be paid for at the contract unit price per each, which shall be full compensation for all labor, material, and incidentals necessary to complete the work, including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".



MANHOLES DESIGNATED FOR ADJUSTMENT SHALL BE RAISED OR LOWERED AS NECESSARY SUCH THAT THE CASTING WILL CONFORM TO THE REQUIRED ELEVATION. TOPS OF STORM OR SANITARY SEWER MANHOLES LOCATED IN PAVED AREAS SHALL BE SET FLUSH WITH THE PAVEMENT. TOPS OF SANITARY SEWER MANHOLES LOCATED IN GRASSED AREAS SHALL BE SET FOUR TENTHS OF ONE FOOT (0.4') HIGHER THAN THE FINISHED GRADE. TOPS OF STORM SEWER MANHOLES LOCATED IN GRASSED AREAS SHALL BE SET FLUSH WITH THE FINISHED GRADE. TOPS OF STORM OR SANITARY SEWER MANHOLES LOCATED IN UNPAVED TRAVEL WAYS SHALL BE SET SIX INCHES (6") BELOW FINISHED GRADE.

THE NEW TOP ELEVATION SPECIFIED ON THE PLANS WAS ESTABLISHED FROM THE BEST INFORMATION AVAILABLE AT THE TIME THE PLANS WERE PREPARED. THE ACTUAL TOP ELEVATION SHALL BE VERIFIED OR ESTABLISHED, IN THE FIELD, BY THE ENGINEER AT THE TIME THE ADJUSTMENT IS BEING MADE. NO ADJUSTMENT IN BID PRICE SHALL BE MADE FOR A CHANGE IN TOP ELEVATION DEEMED NECESSARY BY THE ENGINEER.

THE ADJUSTMENT OF ALL MANHOLES WHICH ARE TO BE LOWERED OR RAISED TWELVE INCHES (12") OR LESS SHALL BE ACCOMPLISHED BY REMOVING THE EXISTING RING AND COVER AND REMOVING OR ADDING THE APPROPRIATE COURSE(S) OF BRICK AND REPLACEMENT OF THE RING AND COVER. ALL WORK SHALL BE IN ACCORDANCE WITH NOTES BELOW.

ALL UPWARD OR DOWNWARD ADJUSTMENTS IN EXCESS OF TWELVE INCHES (12") SHALL BE IN ACCORDANCE WITH DETAILS AND NOTES SHOWN ON THIS SHEET.

NEW BRICK USED IN THE ADJUSTMENT OF MANHOLES SHALL CONFORM TO THE REQUIREMENTS SPECIFIED FOR GRADE MS IN A.S.T.M. C-32-73 OR GRADE SW IN A.S.T.M. C-62-92. BRICK SHALL HAVE NOMINAL DIMENSIONS WHICH WILL PERMIT THE ADJUSTED PORTION TO MATCH THE DIMENSIONS OF THE WALLS OF THE STRUCTURE BEING ADJUSTED. UNDAMAGED EXISTING BRICK, SALVAGED AS PART OF EXISTING MANHOLE ADJUSTMENT(S), FOR THIS PROJECT, MAY BE REUSED IN COMPLETING ADJUSTMENT(S) IF THOROUGHLY CLEANED OF EXISTING MORTAR AND IF APPROVED AS TO SUITABILITY BY THE ENGINEER.

ALL BRICK SHALL BE LAID WITH SHOVE JOINTS. PORTLAND CEMENT MORTAR, AS SPECIFIED BELOW, SHALL BE USED IN LAYING THE BRICK. THE ENTIRE OUTSIDE SURFACE OF THE MANHOLES, ADJUSTED WITH BRICK, SHALL BE PLASTERED WITH A MINIMUM OF ONE (1") OF THE CEMENT MORTAR. ALL CONTACT SURFACES BETWEEN BRICK AND FLAT CONCRETE SLABS (IF REQUIRED), AND CAST IRON RINGS SHALL BE SEALED WITH A LAYER OF THE CEMENT MORTAR. BACKFILL OF ADJUSTED SECTIONS SHALL NOT BE ACCOMPLISHED UNTIL THE MORTAR HAS CURED FOR TWENTY-FOUR (24) HOURS.

MORTAR USED IN ADJUSTMENT OF MANHOLES SHALL CONTAIN EIGHT (8) SACKS OF PORTLAND CEMENT PER CUBIC YARD, FINE AGGREGATE, AND SUFFICIENT WATER TO PRODUCE A WORKABLE AND PLASTIC MIX OF SUCH CONSISTENCY AS TO PERFORM PROPERLY THE FUNCTION OF MASONRY CONSTRUCTION.

CEMENT USED FOR MORTAR SHALL BE TYPE I COMPLYING WITH THE REQUIREMENTS OF THE LATEST REVISION OF A.S.T.M. DESIGNATION C-150.

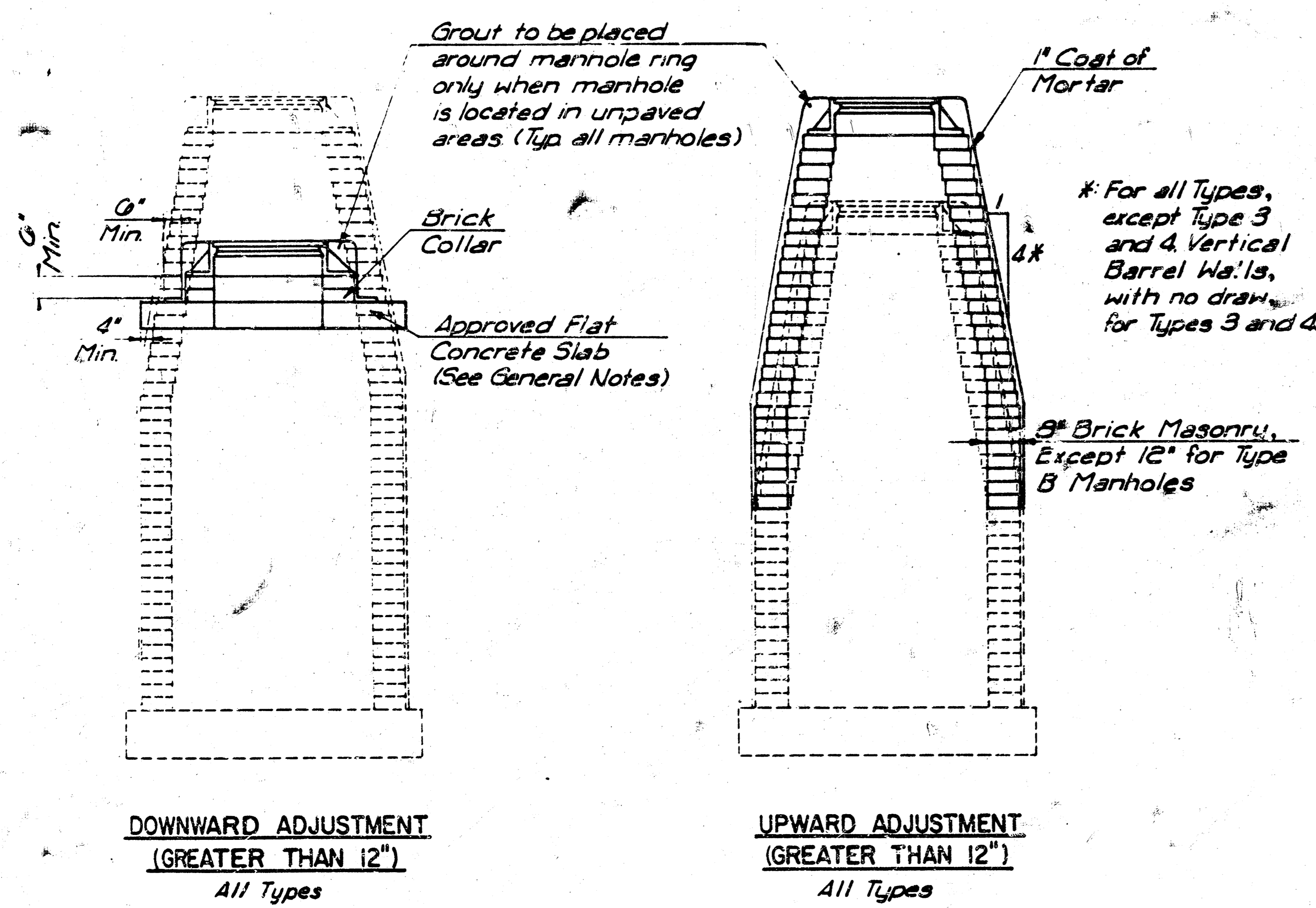
FINE AGGREGATE USED FOR MORTAR SHALL MEET THE REQUIREMENTS FOR TYPE F-A-A, DIVISION 1102, OF THE 'STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION,' KANSAS DEPARTMENT OF TRANSPORTATION, 1980 EDITION.

WATER USED FOR MORTAR SHALL MEET THE REQUIREMENTS OF DIVISION 2401, OF THE MENTIONED STANDARD SPECIFICATIONS.

AN APPROVED TYPE OF FLAT CONCRETE SLAB, CONFORMING TO THE REQUIREMENTS OF A.S.T.M. C-478, SHALL BE USED TO SUPPORT THE MANHOLE RING AND COVER WHERE IT IS NECESSARY TO LOWER MANHOLES MORE THAN TWELVE INCHES (12"). ALL SURFACES OF THE FLAT CONCRETE SLAB, FOR SANITARY SEWER MANHOLES WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE PROTECTED BY A PLASTIC LINING. A MINIMUM SIX INCH (6") BRICK COLLAR CONFORMING TO THE SAME TYPE OF CONSTRUCTION AS SPECIFIED ABOVE SHALL BE INSTALLED BETWEEN THE MANHOLE RING AND THE FLAT CONCRETE SLAB TO FACILITATE MINOR ADJUSTMENTS IN ELEVATION.

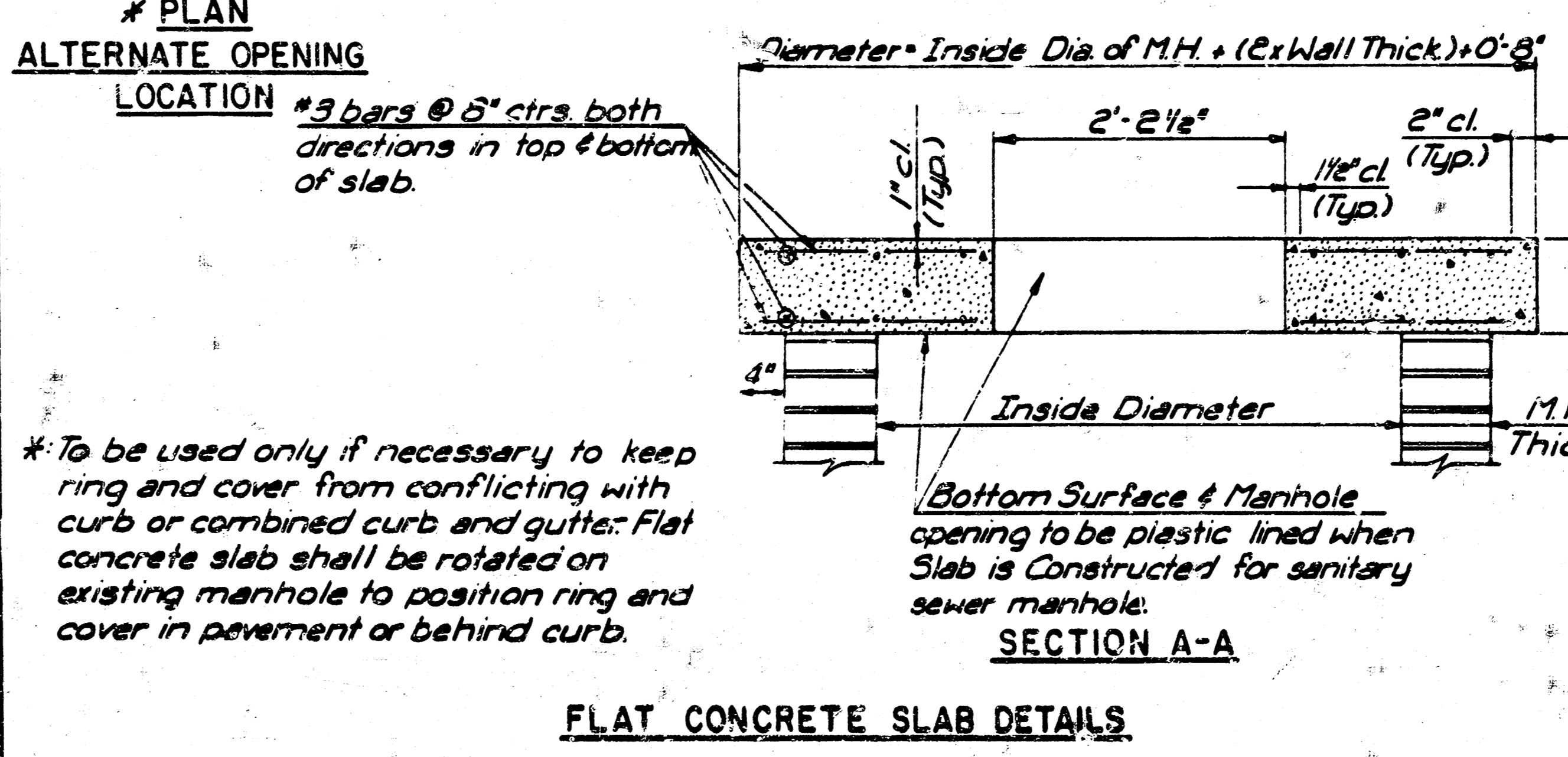
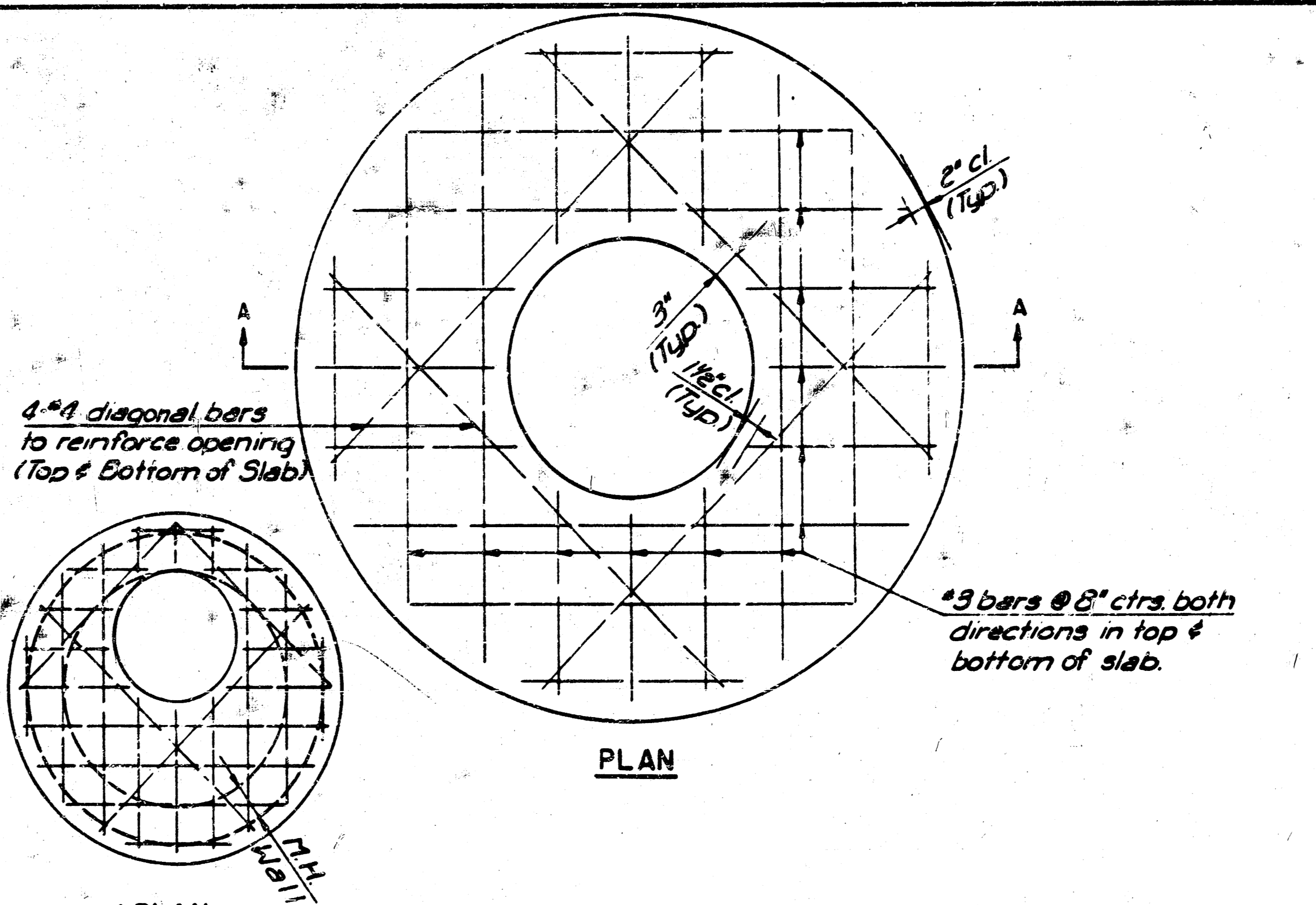
PLASTIC LINING REQUIRED FOR FLAT CONCRETE SLABS, TO BE PLACED IN CONNECTION WITH THE ADJUSTMENT OF SANITARY SEWER MANHOLES, MAY BE AMER-PLATE T-LOCK LINER PLATE, B.F. GOODRICH LOK-RIB KOR-SEAL, OR AN APPROVED EQUAL. THE PLASTIC LINING MANUFACTURER'S RECOMMENDATIONS FOR INSTALLING, SEALING JOINTS, TESTING AND INSPECTION OF THE LINING SHALL BE CONSIDERED AS INCORPORATED IN AND FORMING A PART OF THESE SPECIFICATIONS. THREE (3) COPIES OF THE PLASTIC LINING MANUFACTURER'S RECOMMENDATIONS FOR LINING INSTALLATION SHALL BE FURNISHED TO THE ENGINEER FOR APPROVAL PRIOR TO THE FABRICATION OF ANY FLAT SLABS REQUIRING PLASTIC LINING.

DEFINITION SKETCHES-CITY OF WICHITA STANDARD MANHOLES



THE APPROPRIATE PORTIONS OF THE DRAW AND BARREL OF TYPE A, B, C, D, 1 AND 2 MANHOLES SHALL BE REMOVED. A FLAT CONCRETE SLAB SHALL BE PLACED AND THE RING AND COVER RESET. ALL WORK AND MATERIALS SHALL CONFORM TO THE DETAILS SHOWN AND THE GENERAL NOTES.

THE ENTIRE DRAW OF TYPES A, B, C, D, 1 AND 2 MANHOLES SHALL BE REMOVED, THE MANHOLE BARREL RAISED THE APPROPRIATE AMOUNT, A NEW DRAW CONSTRUCTED, AND THE RING AND COVER RESET. THE UPPER PORTION OF TYPE 3 MANHOLES SHALL BE REMOVED TO THE BOTTOM OF THE FLAT CONCRETE SLAB. THE BRICK MASONRY BARREL SUPPORTING THE SLAB SHALL BE RAISED THE APPROPRIATE AMOUNT, AND THE SLAB AND RING AND COVER RESET. THE WIDE FLANGE RING AND COVER OF TYPE 4 MANHOLES SHALL BE REMOVED, THE BRICK MASONRY BARREL SUPPORTING THE RING SHALL BE RAISED THE APPROPRIATE AMOUNT AND THE RING AND COVER RESET. ALL WORK REQUIRED FOR A GREATER THAN TWELVE INCH (12") UPWARD ADJUSTMENT OF ANY MANHOLE SHALL BE ACCOMPLISHED WITH BRICK MASONRY IN ACCORDANCE WITH THE DETAILS SHOWN AND THE GENERAL NOTES.



\*To be used only if necessary to keep ring and cover from conflicting with curb or combined curb and gutter. Flat concrete slab shall be rotated on existing manhole to position ring and cover in pavement or behind curb.

**MANHOLE ADJUSTMENT DETAILS**

CITY OF WICHITA, KANSAS  
M. E. LINDEBAK - CITY ENGINEER

Designed by \_\_\_\_\_ Checked by \_\_\_\_\_ 19-10-5-e  
Drawn by \_\_\_\_\_ Date \_\_\_\_\_ JOB No. \_\_\_\_\_  
Sheet 72 of 12