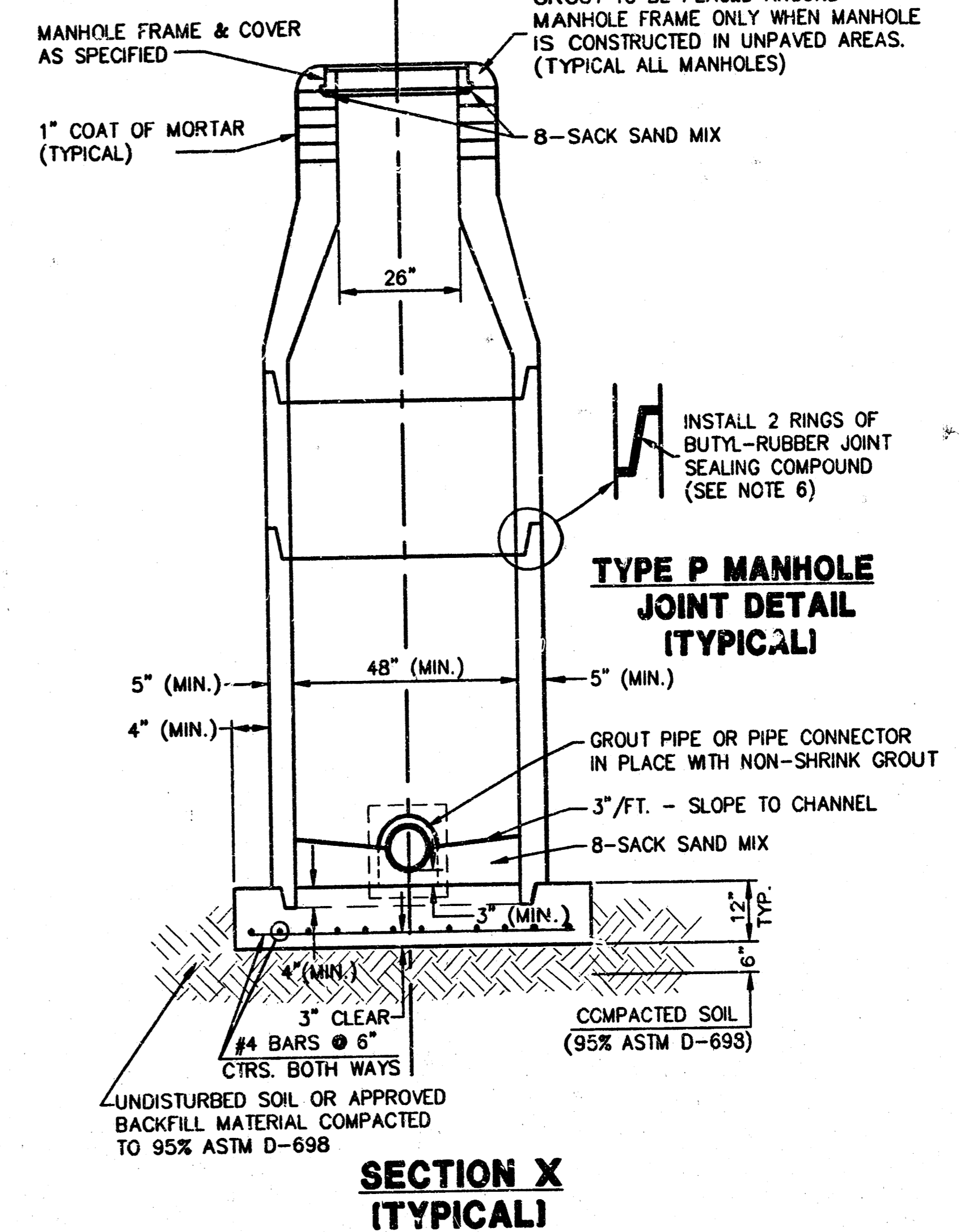
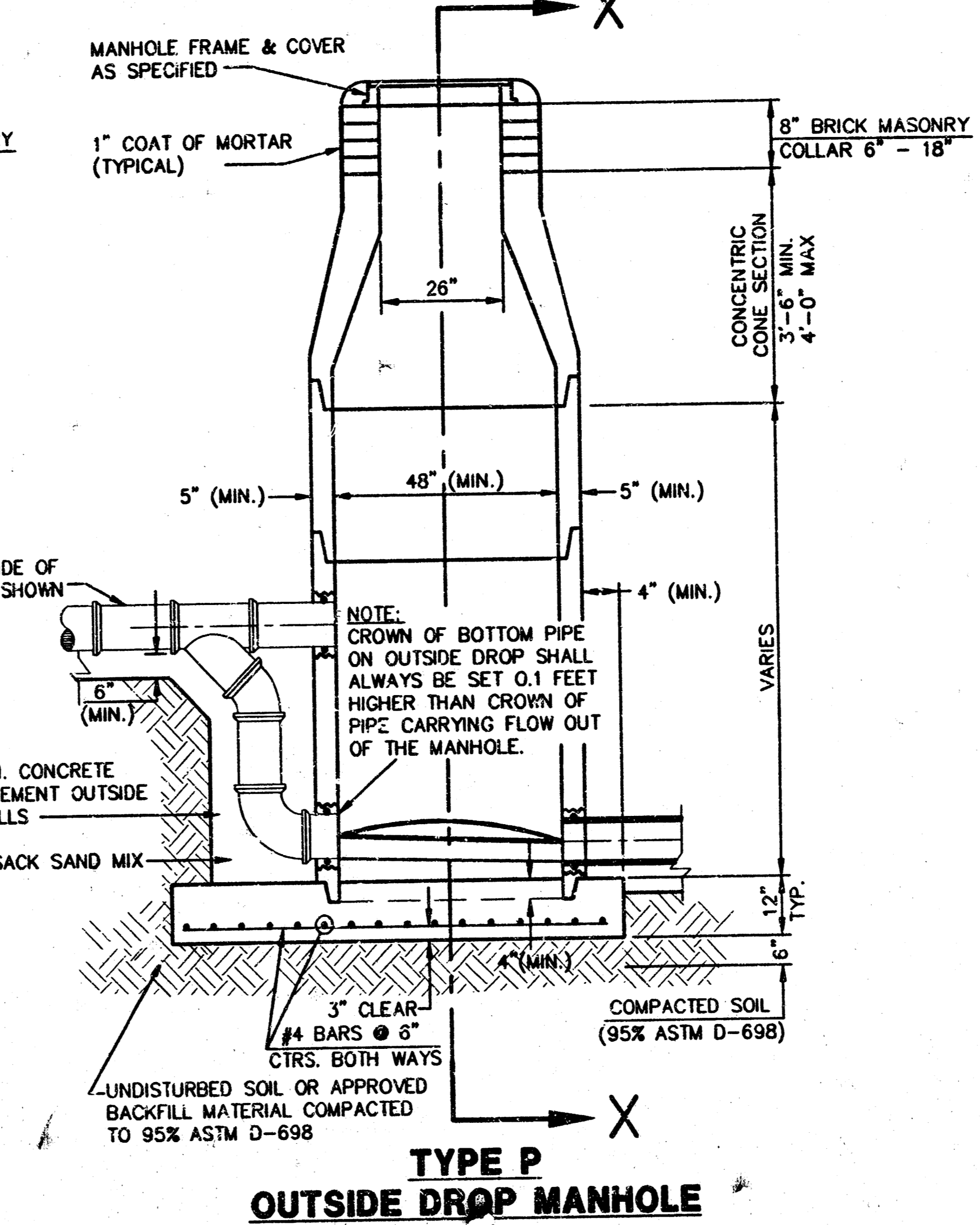
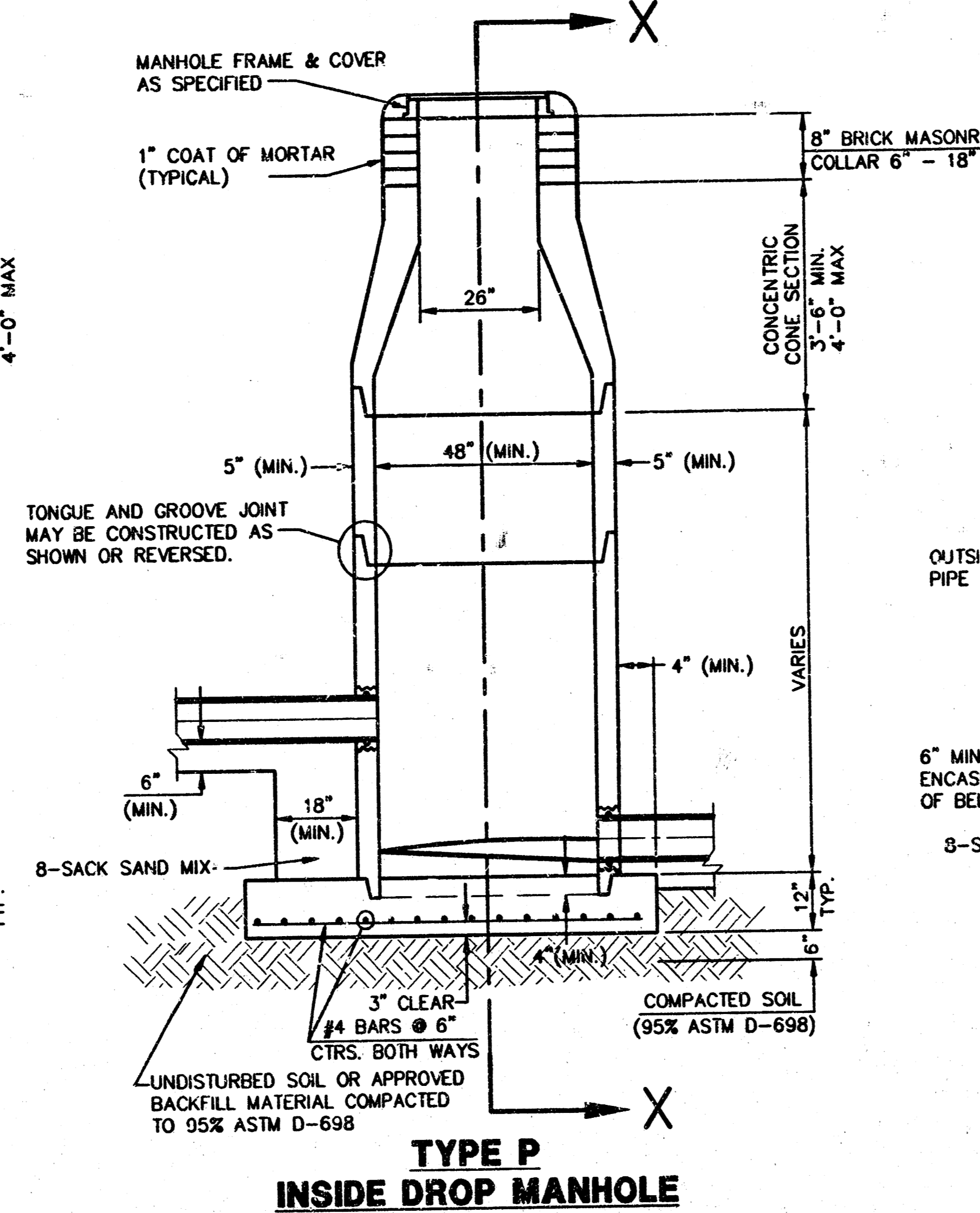
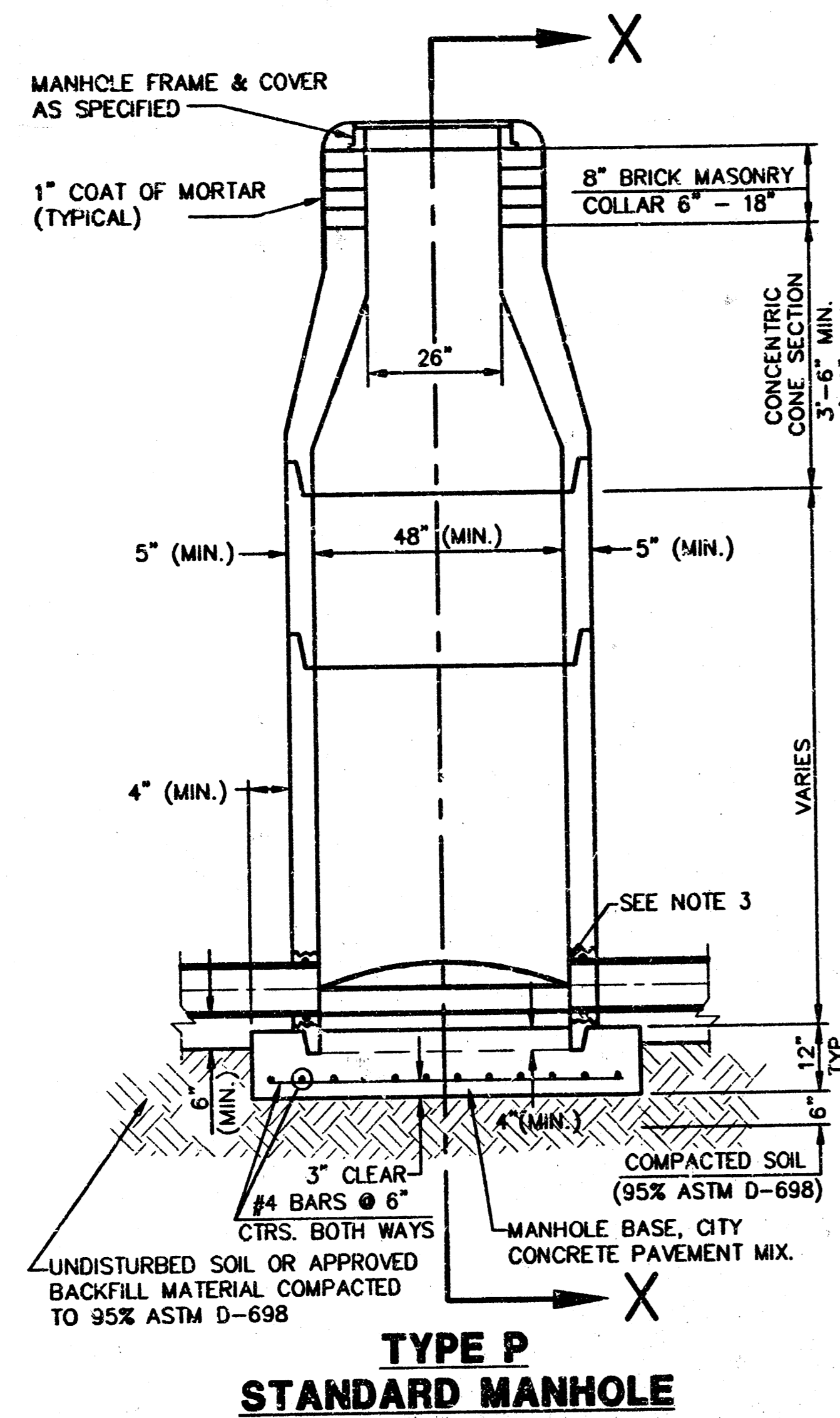


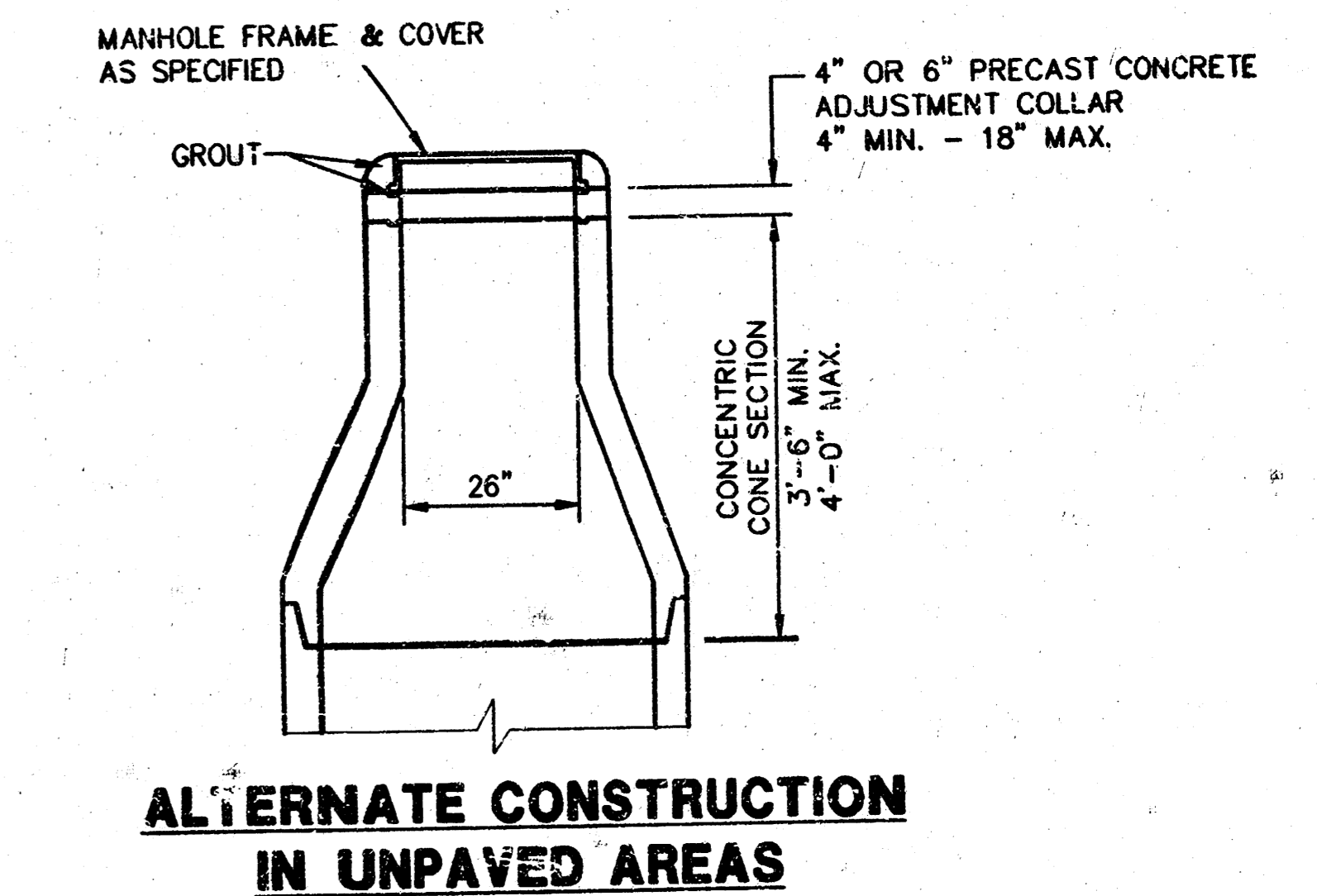


# SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN  
BY  
CITY OF WICHITA



SECTION X (TYPICAL)



## GENERAL NOTES - PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- 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 GROUTED 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.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEPEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- 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.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- 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" 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 AT LEAST 3" 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.
- 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 GROUTING 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 GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING 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 EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. 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 DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- 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' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.

REVISED: 6-12-86

## MANHOLE DETAILS

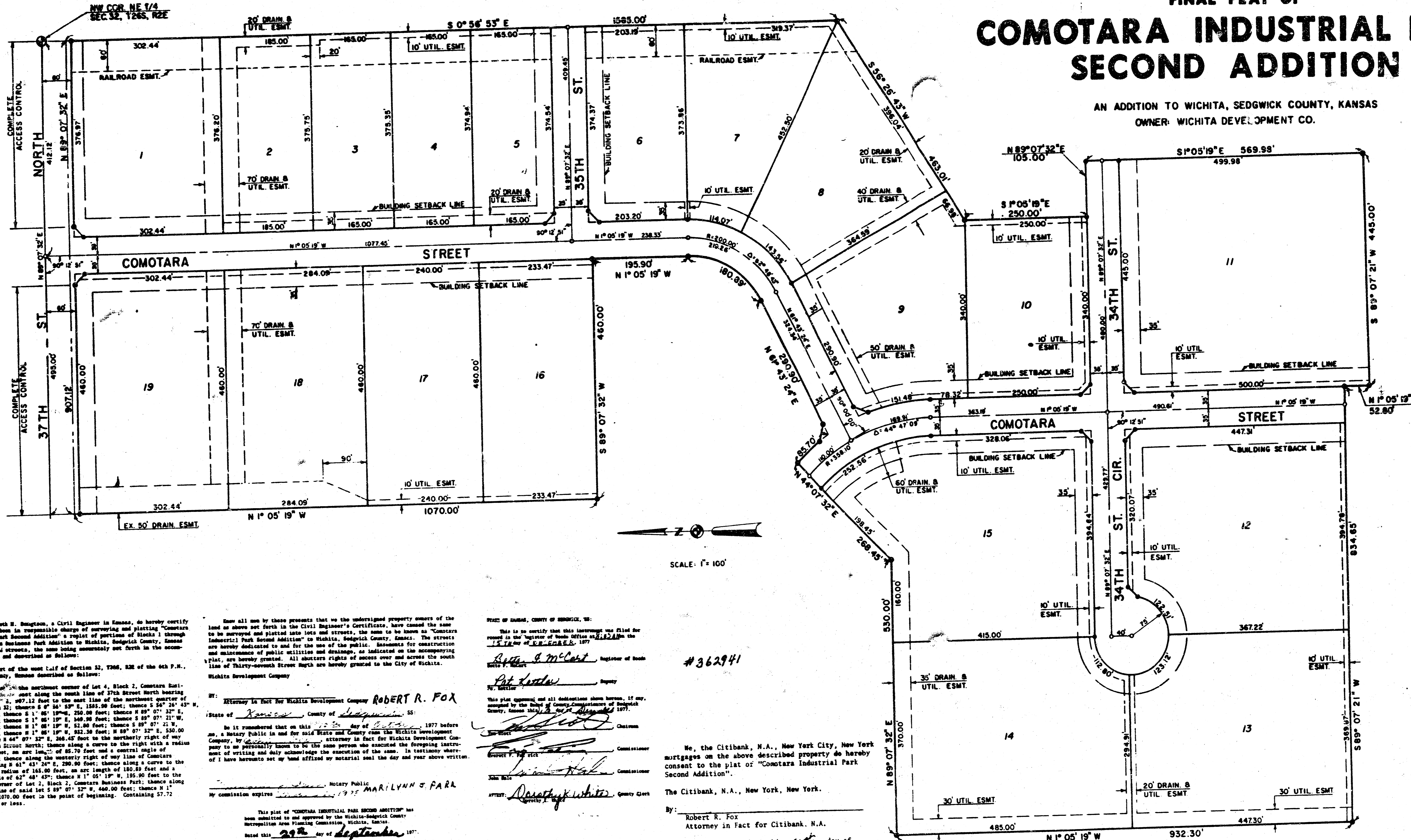
CITY OF WICHITA, KANSAS

Design	C.O.W.	Checked by	Checked by	2 / 4
Drawn by		Date	OCT. 1998	Job No. SAN15_BD



# FINAL PLAT OF COMOTARA INDUSTRIAL PARK SECOND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS  
OWNER: WICHITA DEVELOPMENT CO.



I, Kenneth H. Bengtson, a Civil Engineer in Kansas, do hereby certify that I have been in responsible charge of surveying and plotting "Comotara Industrial Park Second Addition" a plat of portions of Blocks 1 through 4 of Comotara Industrial Park Addition to Wichita, Sedgewick County, Kansas lots and streets, the same being annexed hereto in the accompanying plat and described as follows:

That part of the west half of Section 32, T26S, R22E of the 6th P.M., Sedgewick County, Kansas described as follows:

Block 1, the northeast corner of Lot 4, Block 2, Comotara Industrial Park, 187.12 feet to the west line of the north-south bearing of 89° 07' 32" E, 107.12 feet to the west line of the north-south bearing of said Section 32; thence S 89° 07' 32" E, 188.00 feet; thence S 54° 26' 43" W, 463.81 feet; thence S 1° 05' 19" W, 250.00 feet; thence N 89° 07' 32" E, 188.00 feet; thence S 1° 05' 19" W, 460.00 feet; thence S 89° 07' 32" E, 530.00 feet; thence N 89° 07' 32" E, 268.45 feet to the northerly right of my line of 34th Street North; thence along a curve to the right with a radius of 382.10 feet, an arc length of 85.70 feet and a central angle of 12° 29' 28"; thence along the westerly right of my line of Comotara Street bearing N 44° 43' 24" E, 298.90 feet; thence along a curve to the left with a radius of 164.90 feet, an arc length of 180.89 feet and a central angle of 62° 48' 43"; thence S 1° 05' 19" W, 188.00 feet to the southeast corner of Lot 2, Block 2, Comotara Industrial Park; thence along the south line of said Lot 2 bearing S 89° 07' 32" W, 460.00 feet; thence N 1° 05' 19" W, 1070.00 feet to the point of beginning. Containing 57.72 acres, more or less.

Know all men by these presents that the undersigned property owners of the land or shares not forth in the Civil Engineer's Certificate, have caused the same to be surveyed and plotted into lots and streets, the same to be known as "Comotara Industrial Park Second Addition" in Wichita, Sedgewick County, Kansas. The streets are hereby dedicated to and for the use of the public. Easements for construction and maintenance of public utilities and drainage, as indicated on the accompanying plat, are hereby granted. All abstracts rights of access over and across the south line of Thirty-seventh Street North are hereby granted to the City of Wichita, Wichita Development Company.

WITNESSETH my hand and the seal of my office as Notary Public in and for Sedgewick County, Kansas, this 29th day of September, 1977.

Notary Public  
MARILYNN G. PARR

STATE OF KANSAS, COUNTY OF SEDGWICK, SS:  
This is to certify that this instrument was filed for record in the "Register of Deeds Office" of Sedgewick County, Kansas, this 29th day of September, 1977.

Robert R. Fox, Register of Deeds  
Wichita, Kansas

Notary Public  
MARILYNN G. PARR

By: Robert R. Fox, Attorney in Fact for Citibank, N.A.  
The Citibank, N.A., New York, New York.

By: Robert R. Fox, Attorney in Fact for Citibank, N.A.

Be it remembered that on this 29th day of September, 1977 before me, a Notary Public in and for said State and County, case the Citibank, N.A., New York City, New York, by Robert R. Fox, attorney in fact for Citibank, N.A., to be personally known to be the same person who executed the foregoing instrument of writing and duly acknowledge the execution of the same. In testimony whereof I have hereunto set my hand and affixed my Notarial seal the day and year above written.

Notary Public  
MARILYNN G. PARR  
My Commission Expires 12-31-78

I, hereby certify that the details of the plat are correct to the best of my knowledge and belief this 29th day of October, 1977.

Kenneth H. Bengtson  
Civil Engineer  
260 North Rock Road  
Wichita, Kansas

This plat of "COMOTARA INDUSTRIAL PARK SECOND ADDITION" has been submitted to and approved by the Wichita-Sedgewick County Metropolitan Area Planning Commission, Wichita, Kansas.

Noted this 29th day of September, 1977.

Wichita-Sedgewick County Metropolitan Area Planning Commission  
Chairman  
Secretary

Notary Public  
MARILYNN G. PARR  
My Commission Expires 12-31-78

STATE OF KANSAS, COUNTY OF SEDGWICK, SS:  
This is to certify that this instrument was filed for record in the "Register of Deeds Office" of Sedgewick County, Kansas, this 29th day of September, 1977.

Robert R. Fox, Register of Deeds  
Wichita, Kansas

Notary Public  
MARILYNN G. PARR

By: Robert R. Fox, Attorney in Fact for Citibank, N.A.  
The Citibank, N.A., New York, New York.

By: Robert R. Fox, Attorney in Fact for Citibank, N.A.

Be it remembered that on this 29th day of September, 1977 before me, a Notary Public in and for said State and County, case the Citibank, N.A., New York City, New York, by Robert R. Fox, attorney in fact for Citibank, N.A., to be personally known to be the same person who executed the foregoing instrument of writing and duly acknowledge the execution of the same. In testimony whereof I have hereunto set my hand and affixed my Notarial seal the day and year above written.

Notary Public  
MARILYNN G. PARR  
My Commission Expires 12-31-78

ENGINEER: VAN DOREN-HAZARD-STALLINGS