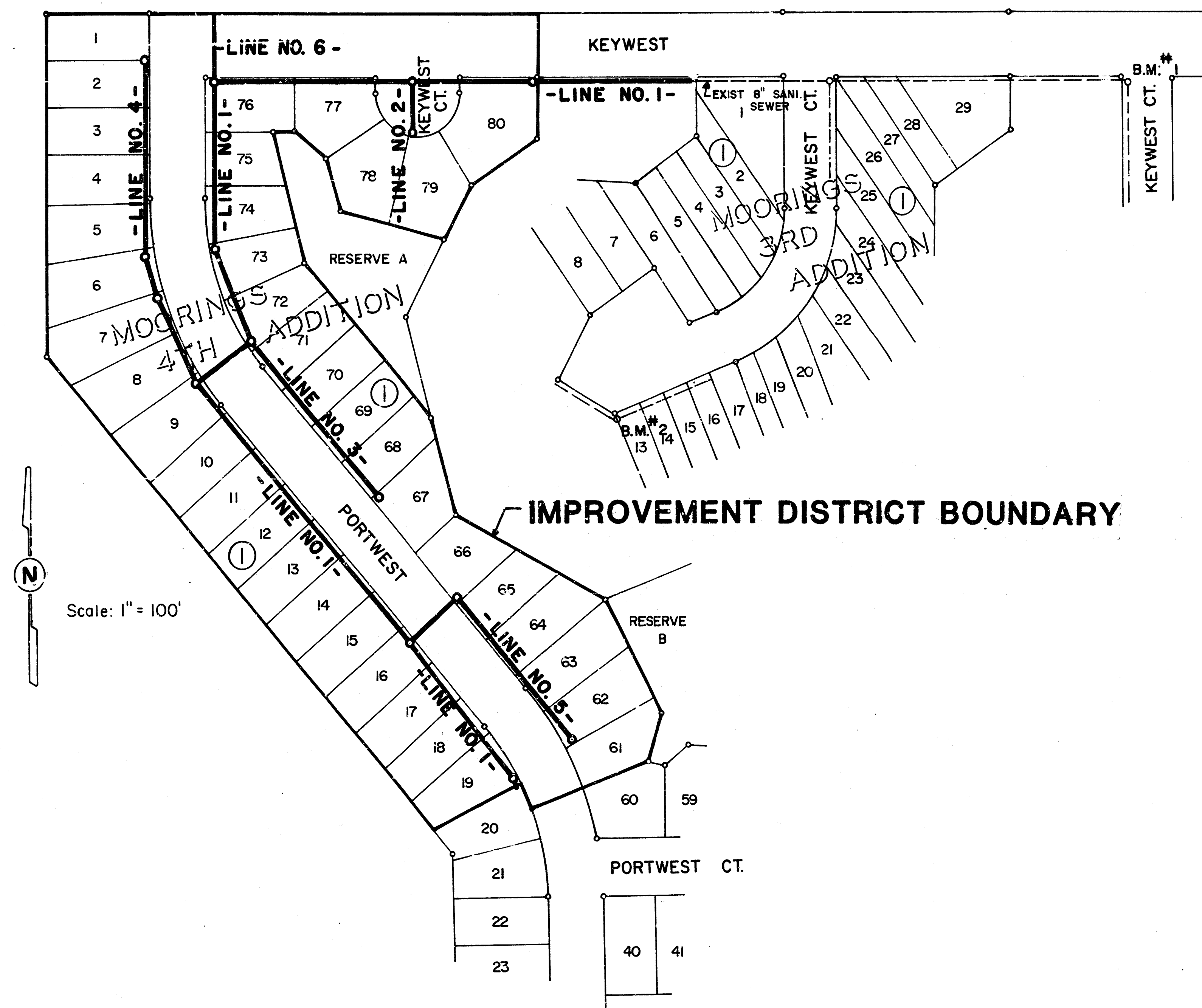


CONSTRUCTION PLANS
LATERAL 82, SANITARY SEWER NO. 23
THE MOORINGS 4TH ADDITION
 TO
THE CITY OF WICHITA, KANSAS
 MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
 PROJECT NO. 468-76-245-81761-000-000-001

GENERAL NOTES:

- Underground utility service lines and overhead poles lines are to be adjusted as necessary by others prior to construction unless this 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 location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on 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 unsightly appearance will not be approved.
- The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractor's proposed method for maintaining sewage flow shall be approved by the Engineer. Cost of maintaining flow of sewage through construction will not be paid for directly and this cost shall be considered as subsidiary to the other pay items of work.
- 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 or a licensed professional engineer in accordance with state laws.



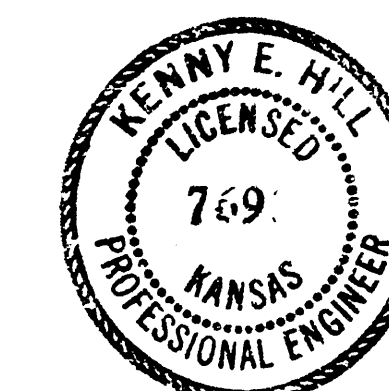
INDEX

TITLE SHEET	SHEET 1
LINE NO. 1 & 2	SHEET 2
LINE NO. 1	SHEET 3
LINE NO. 3, 4 & 5	SHEET 4
STANDARD MANHOLE TYPE "P"	SHEET 5
STANDARD MANHOLE TYPE "C"	SHEET 6
RECORDED PLAT OF:	
THE MOORINGS 4TH ADDN.	SHEET 7

BENCH MARKS

- "BM" cut on MH ring at SW Cor. Keywest on Keywest Ct. 401' E and 5' S of the NE Cor. Lot 1, Block 1 of the Moorings 3rd Addition. Elev. 142.64
- "BM" cut N. side MH ring at NE Cor. Lot 12 Blk. 1 in The Moorings 3rd Addn. Elev. 146.00
- "BM" cut in S. Hdwl. of culvert at 45th Street No. and Meridian. Elev. 141.07
- All BM's are City of Wichita Datum.

*Booked
 AS PER PLAN
 RPL
 10-88*

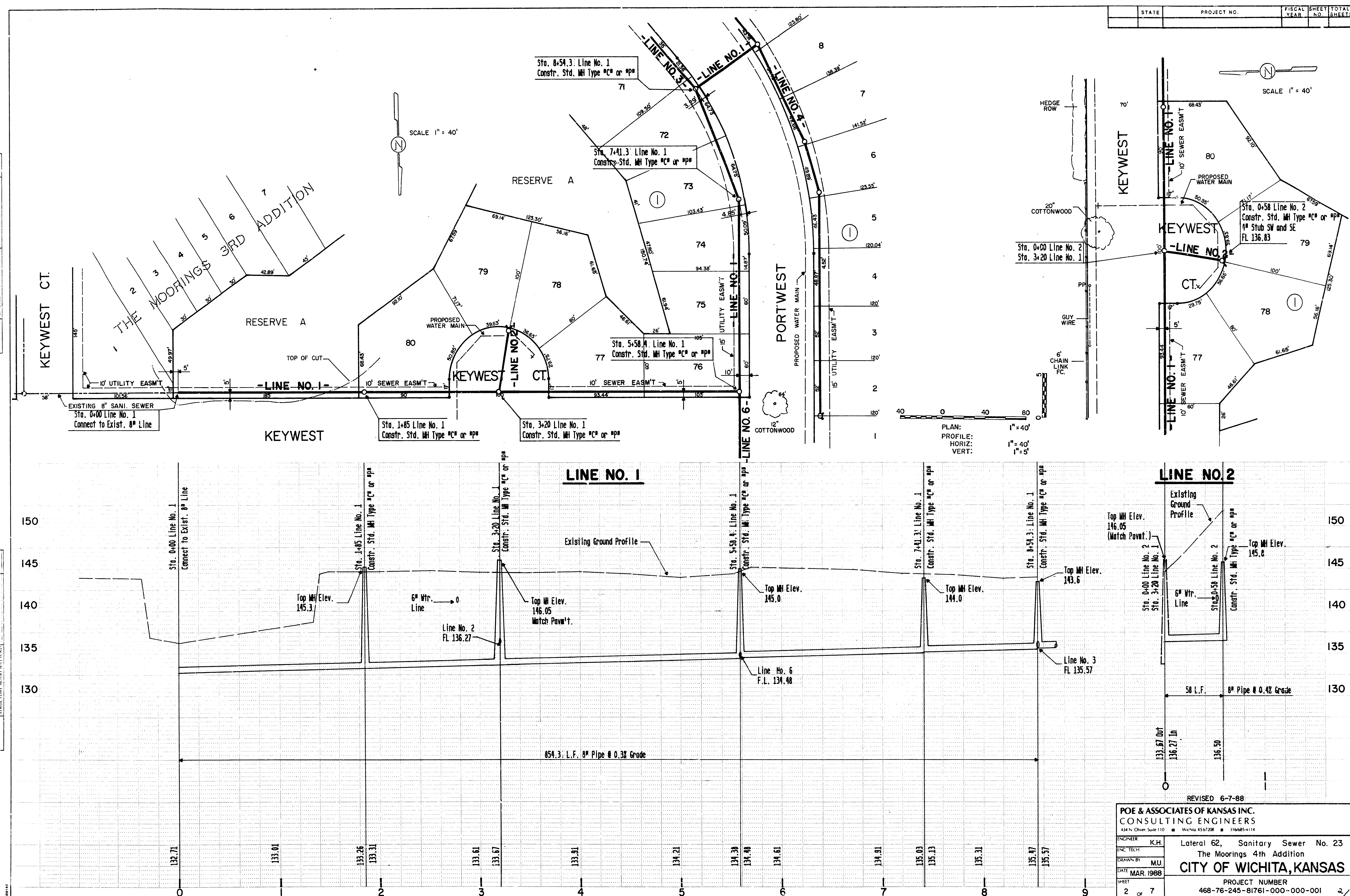
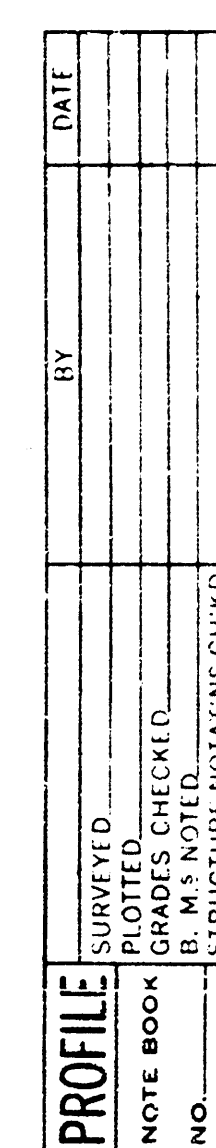


MARCH 1988

PLANS PREPARED

BY

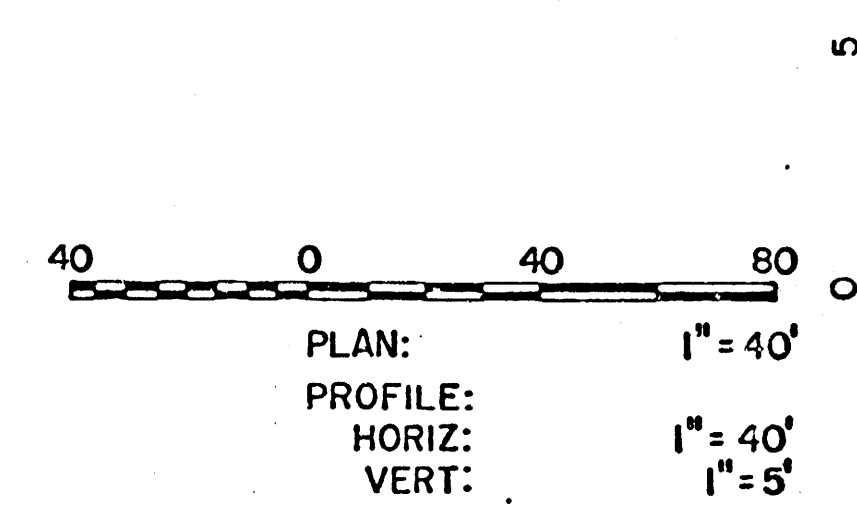
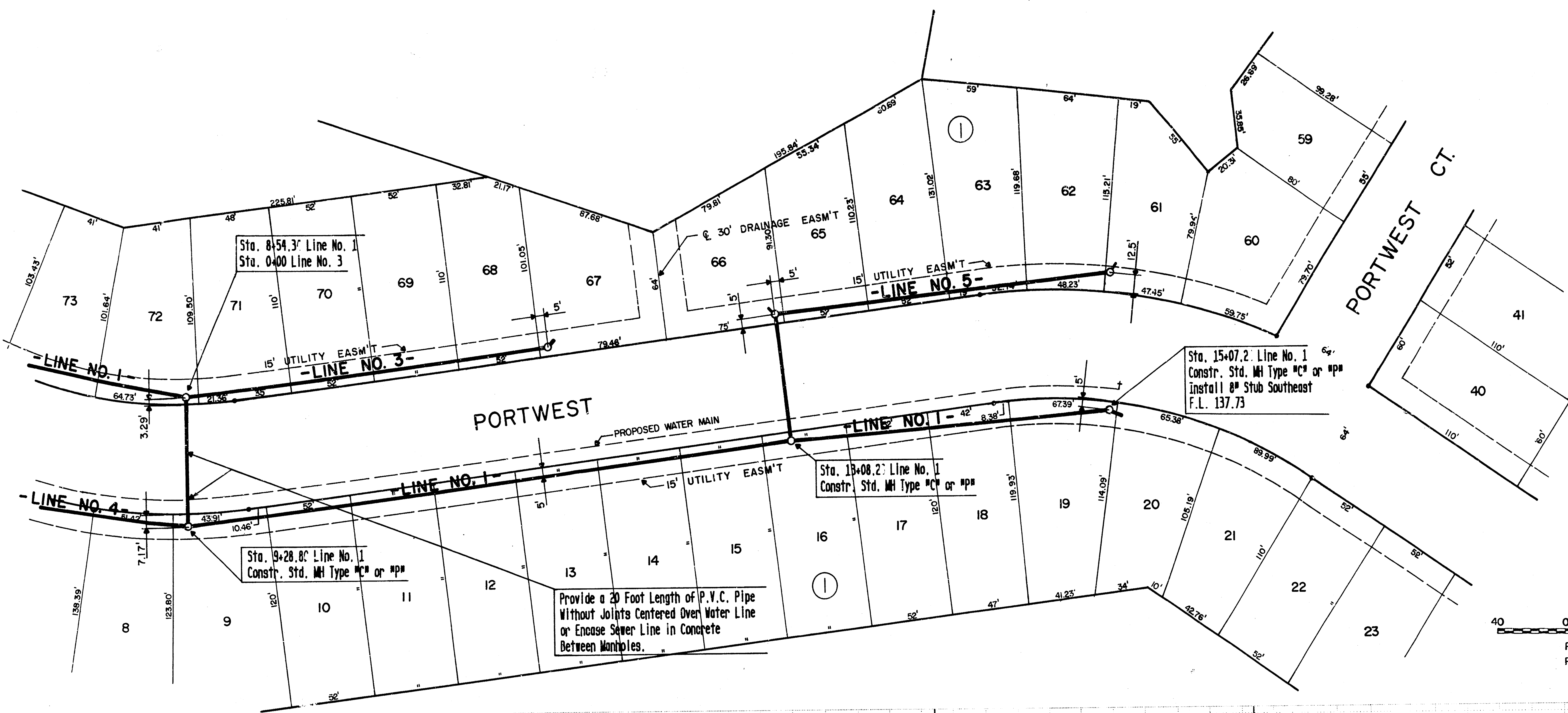
POE & ASSOCIATES OF KANSAS INC.
 CONSULTING ENGINEERS
 434 N. Oliver, Suite 110 • Wichita, KS 67208 • 316/855-4114



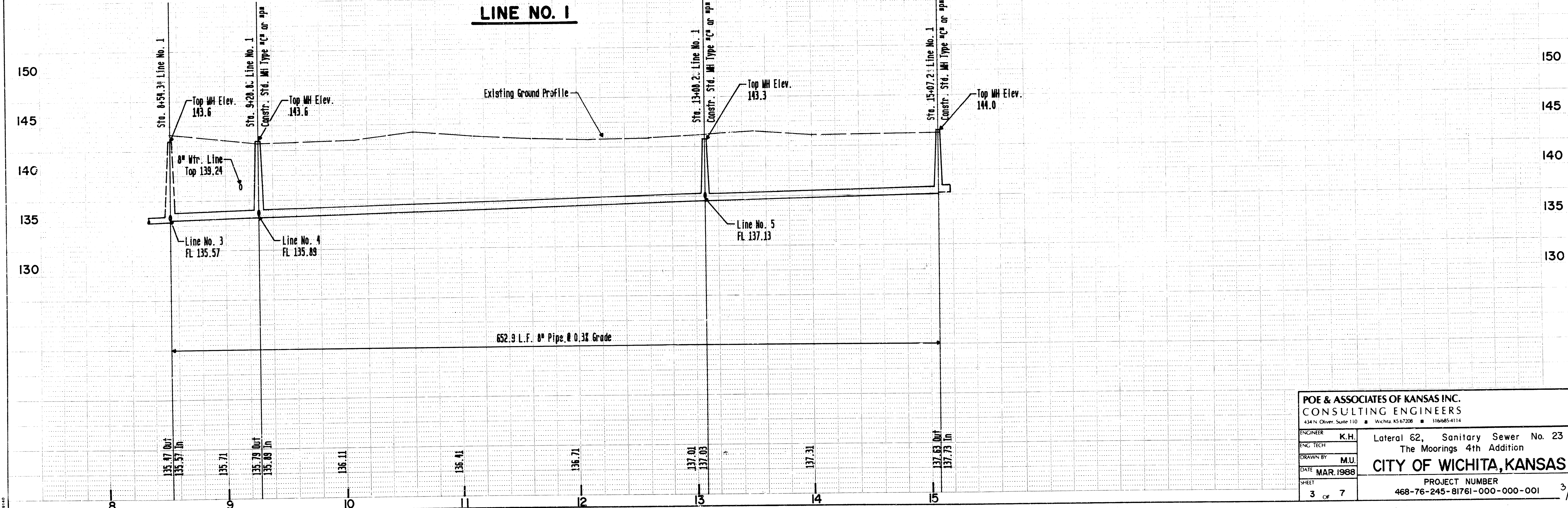
POE & ASSOCIATES OF KANSAS INC. CONSULTING ENGINEERS 434 N. Oliver, Suite 110 • Wichita, KS 67208 • 316-845-1114	
ENGINEER K.H.	Lateral 62, Sanitary Sewer No. 23 The Moorings 4th Addition CITY OF WICHITA, KANSAS
ENG. TECH. DRAWN BY MU	PROJECT NUMBER 468-76-245-81761-000-000-001
DATE MAR. 1988	SHEET 2 OF 7

STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

PLAN	DATE	BY	CHECKED
NO.			



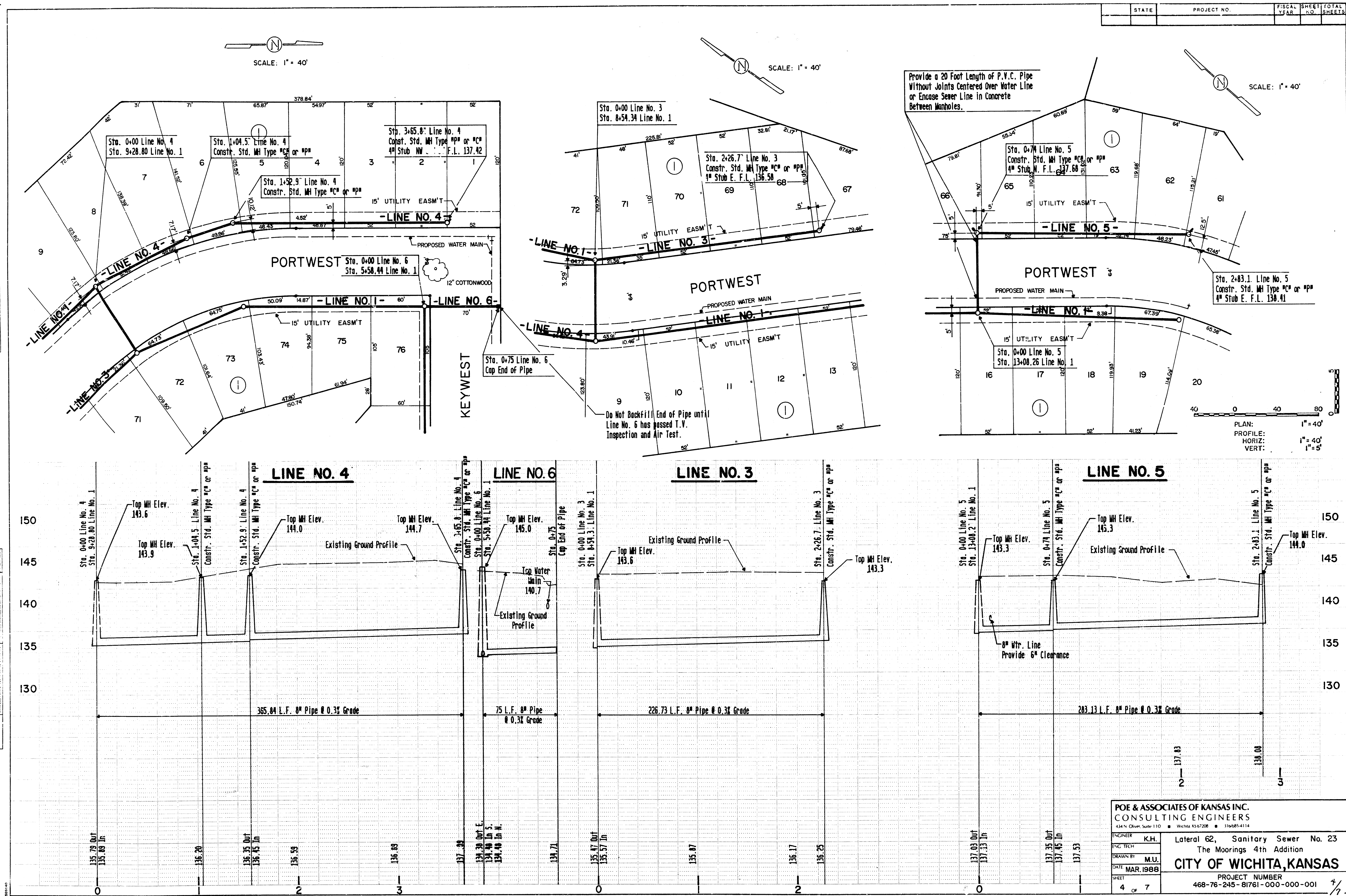
PROFILE	DATE	BY	CHECKED
NO.			



POE & ASSOCIATES OF KANSAS INC. CONSULTING ENGINEERS 434 N. Oliver, Suite 110 • Wichita, KS 67208 • 316-685-4114	
ENGINEER: K.H.	Project: Lateral 62, Sanitary Sewer No. 23
ENC. TECH:	Location: The Moorings 4th Addition
DRAWN BY: M.U.	CITY OF WICHITA, KANSAS
DATE: MAR. 1988	PROJECT NUMBER: 468-76-245-81761-000-000-001
SHEET: 3 OF 7	3/7

PLAN	DATE
NO.	

PROFILE	DATE
NO.	

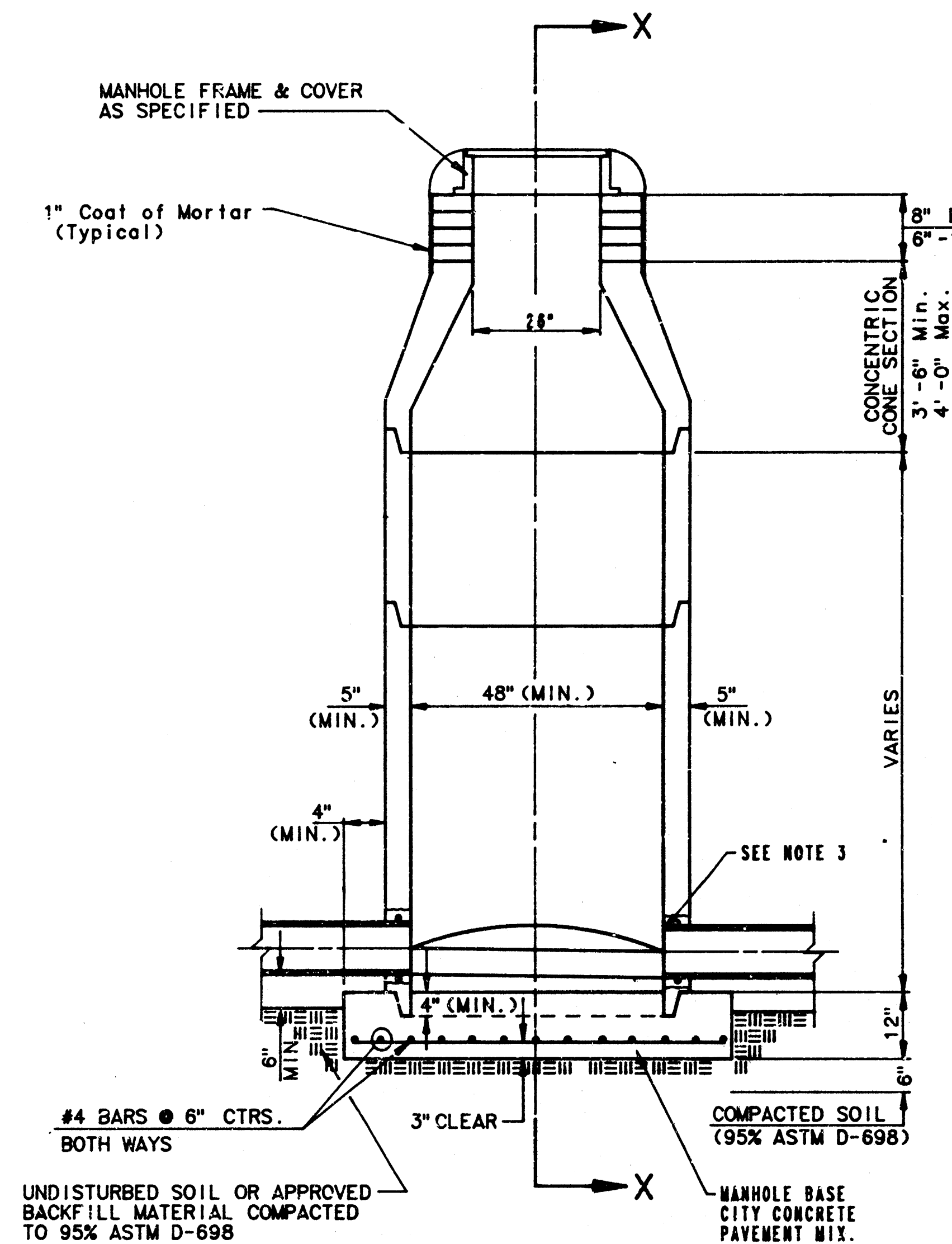


SEWER APPURTENANCES DETAILS

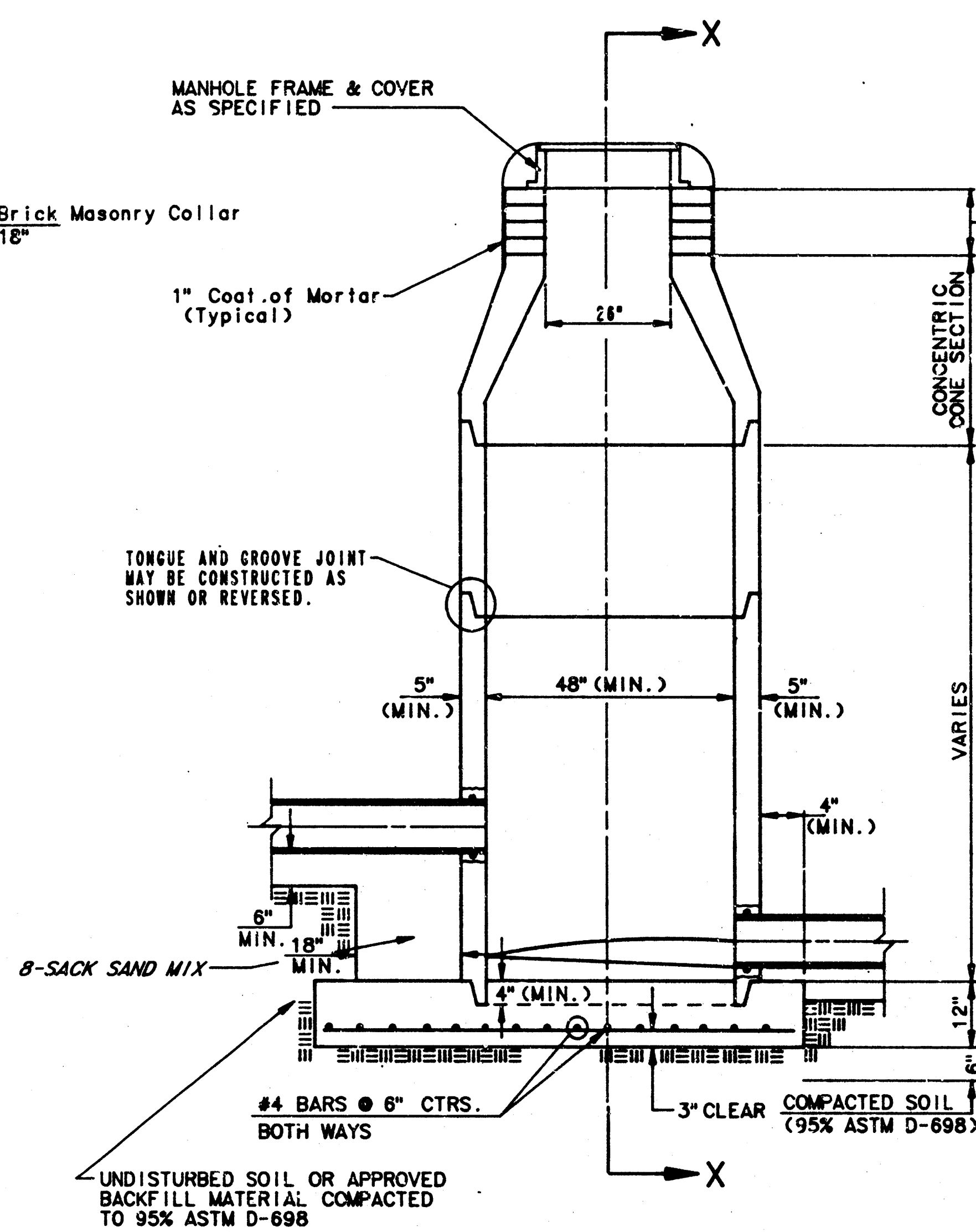
ADOPTED AS STANDARD DESIGN

BY

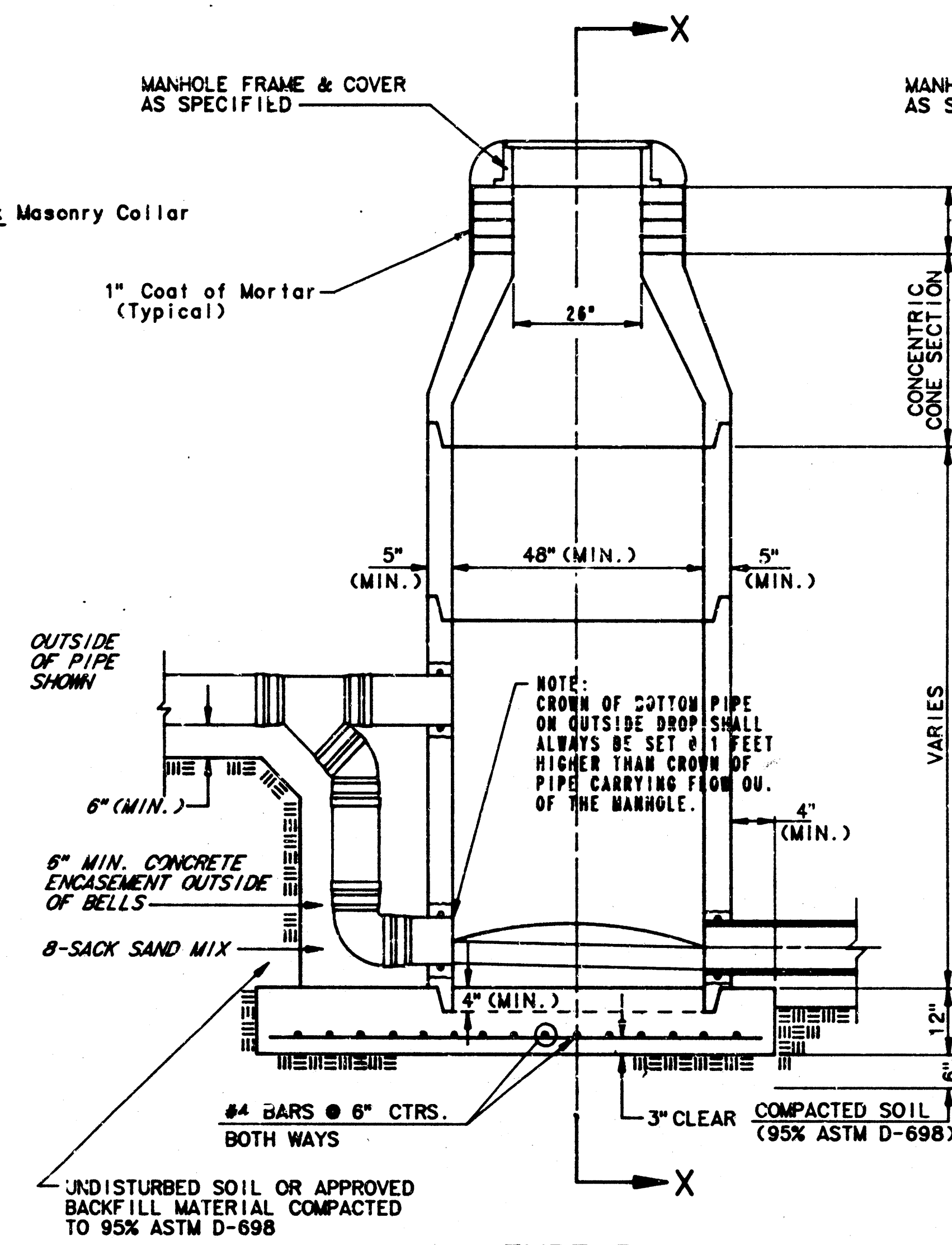
CITY OF WICHITA



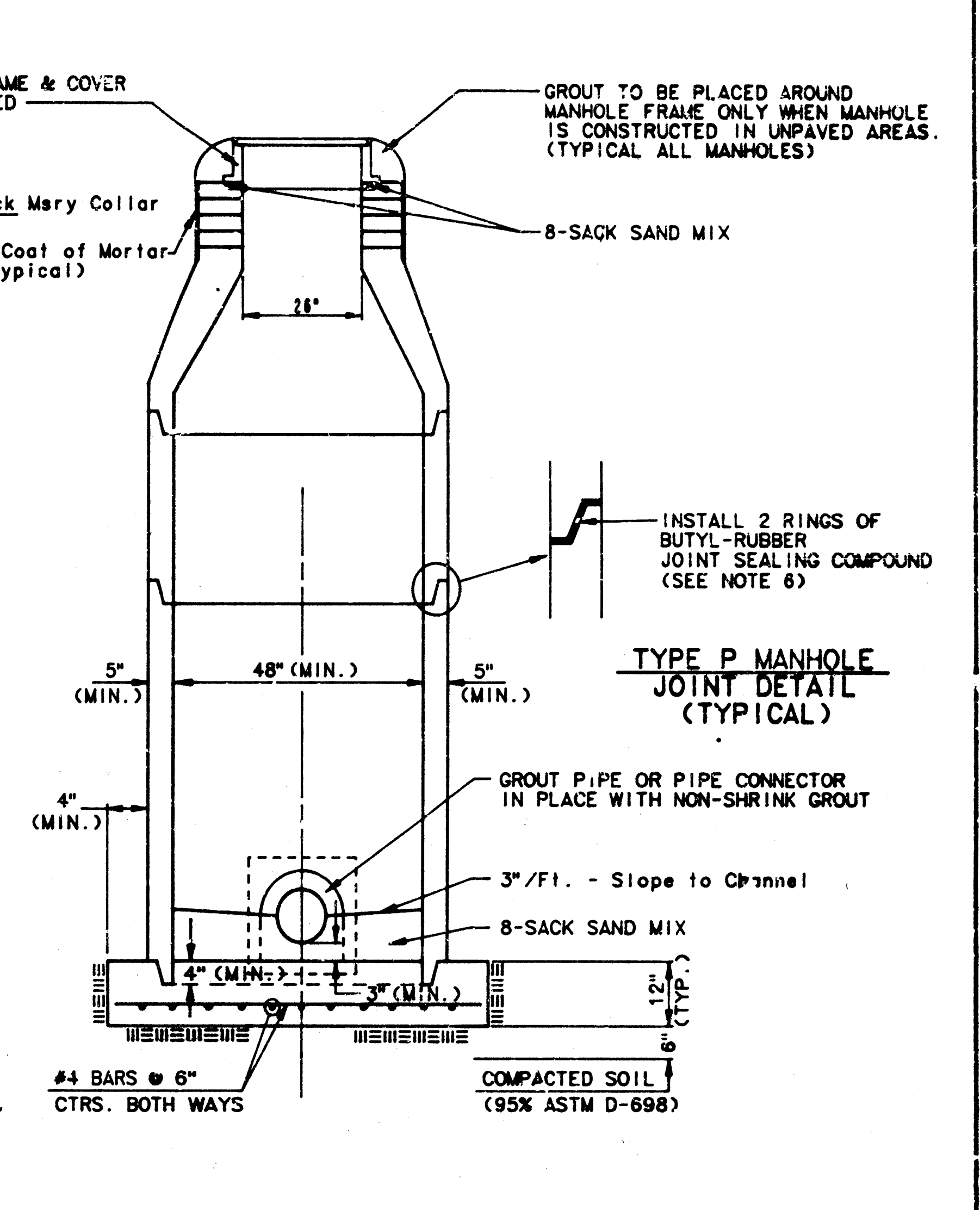
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION 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 PIPE SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASUREMENT 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 TREMEC SERIES 86 HI-BUILD EPOXYLINE, 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 EXTRINSING 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 MAKE 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 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE 1/2" 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.

PROJECT NO.
468-76-245-81761-000-000-001

Revised: June 12, 1988

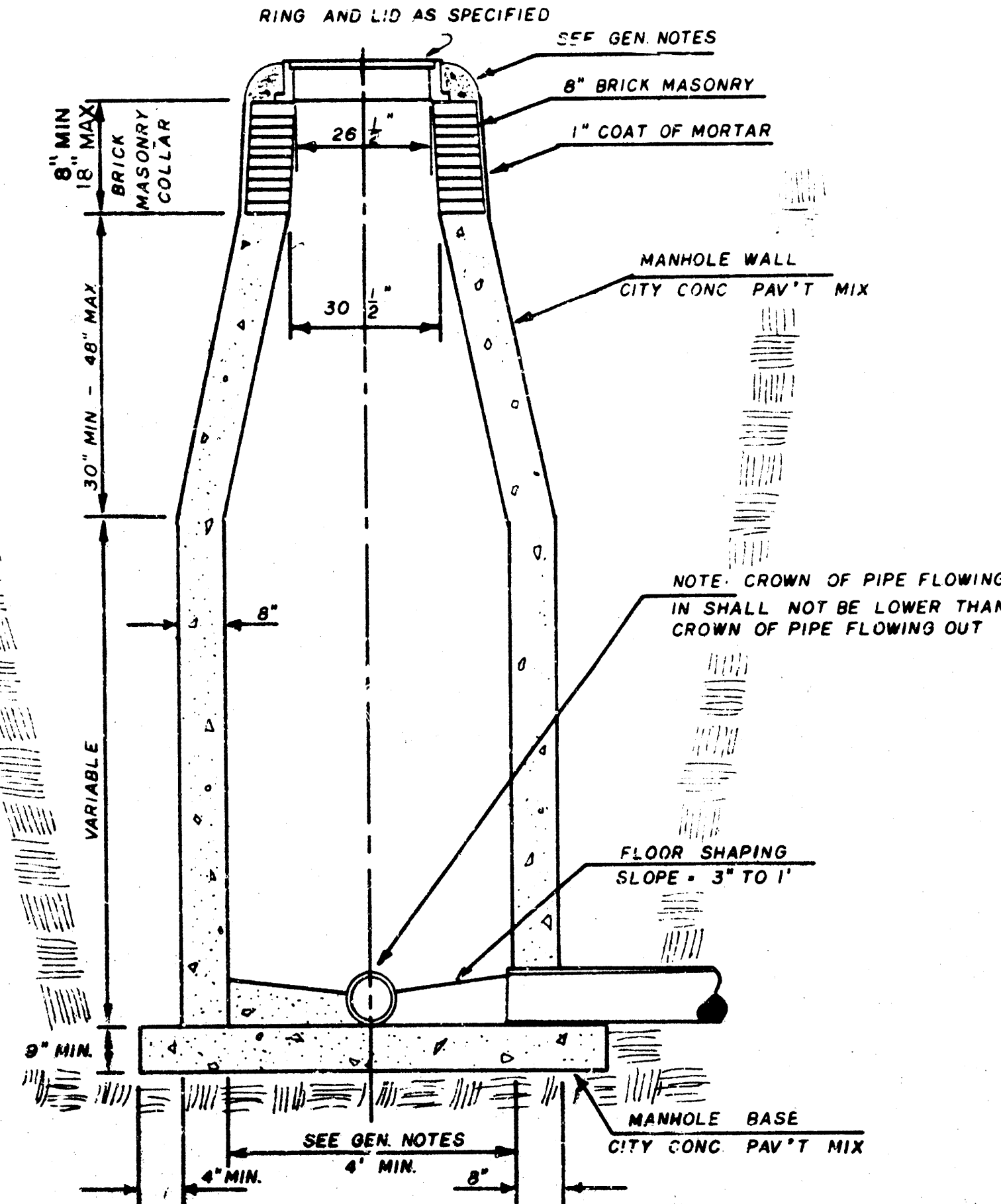
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN

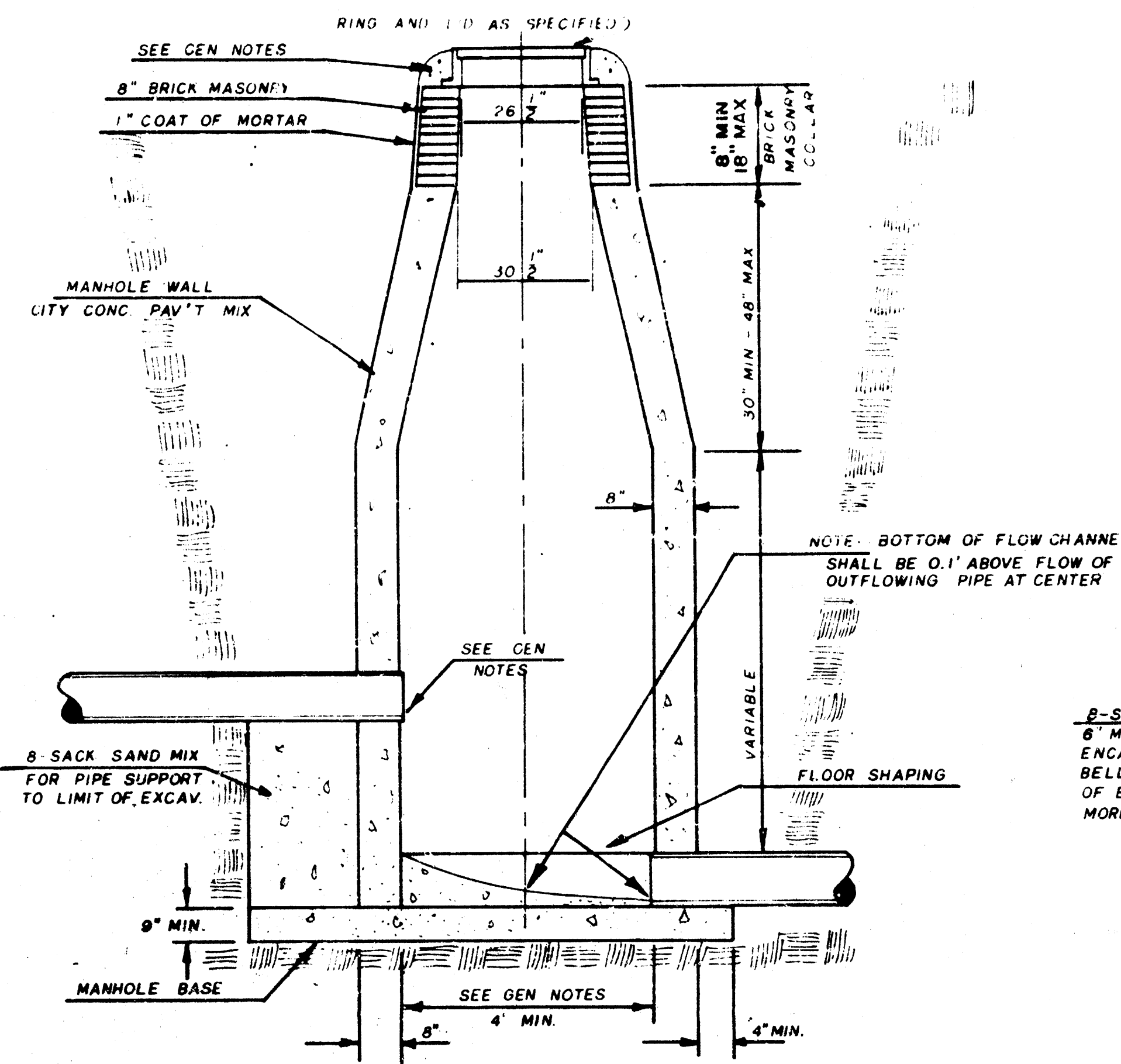
BY

City of Wichita, Kansas

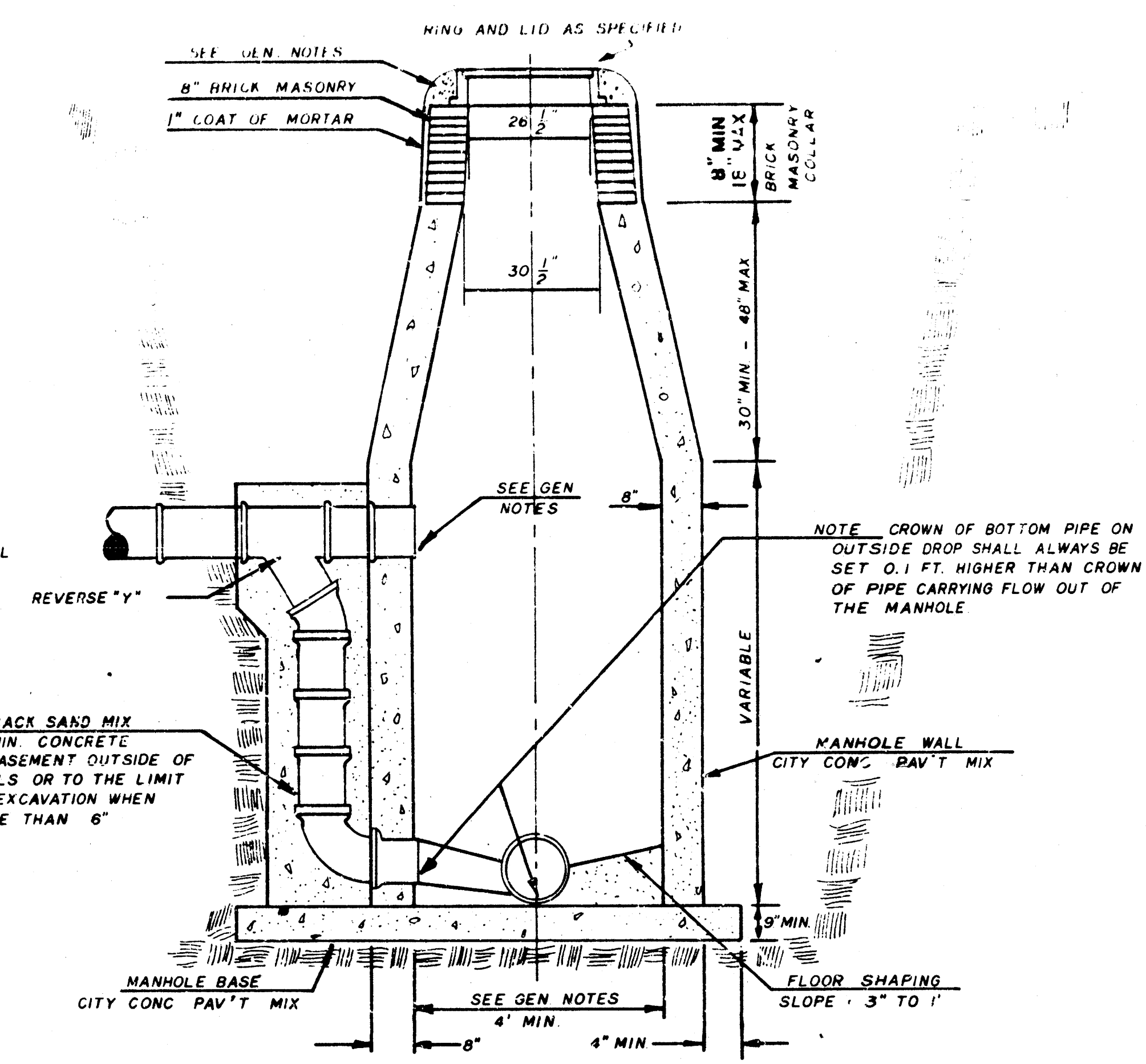
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INSIDE DROP MANHOLE TYPE "C"



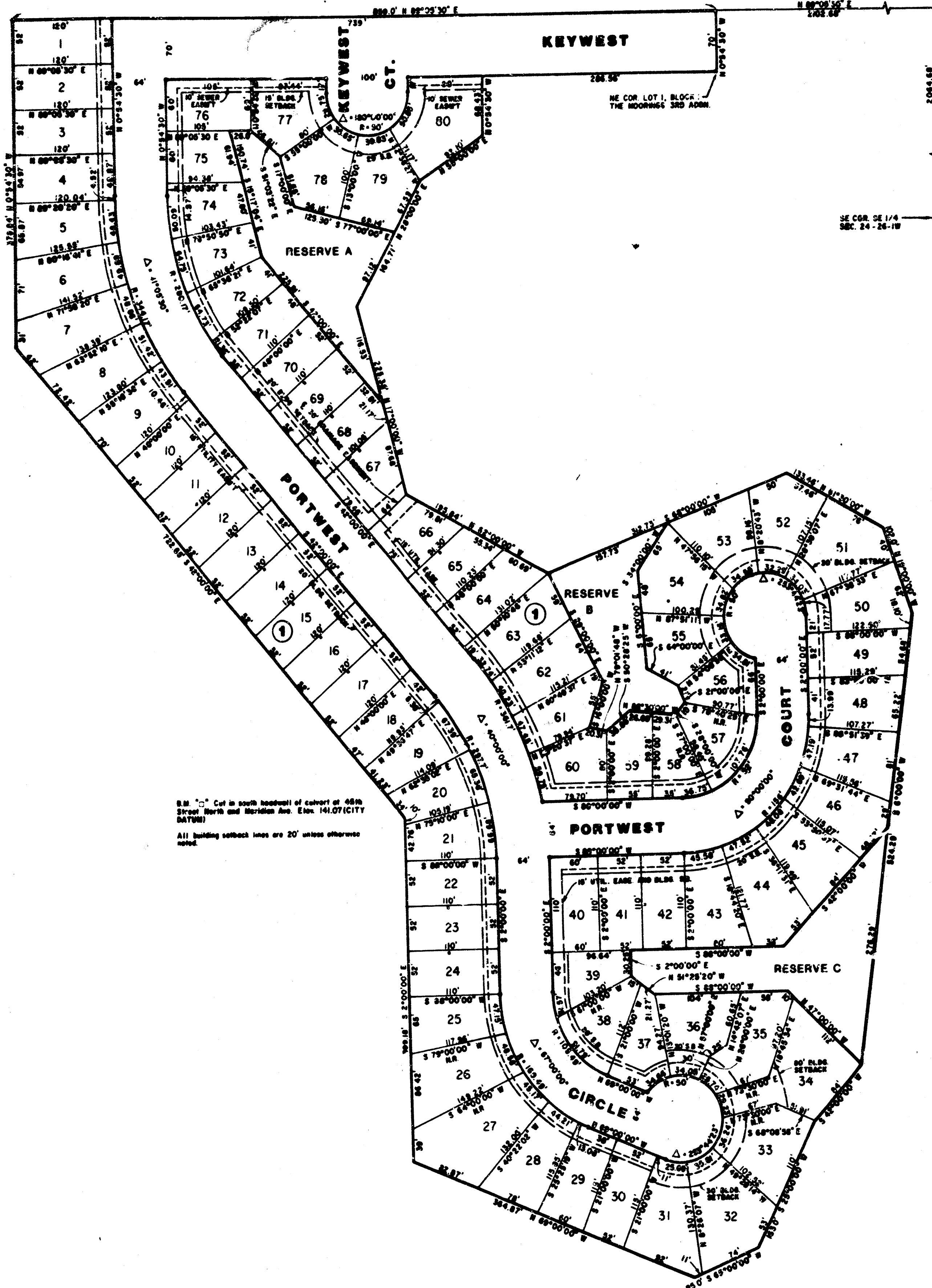
OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND 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. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
4. 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

5. 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 MANHOLE SHALL HAVE THE TOP HALF REMOVED TO HEAT 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.
6. 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.
7. 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.
8. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
9. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.



THE MOORINGS 4TH ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS

Book of Covenants & Restrictions F 927, Pg 758

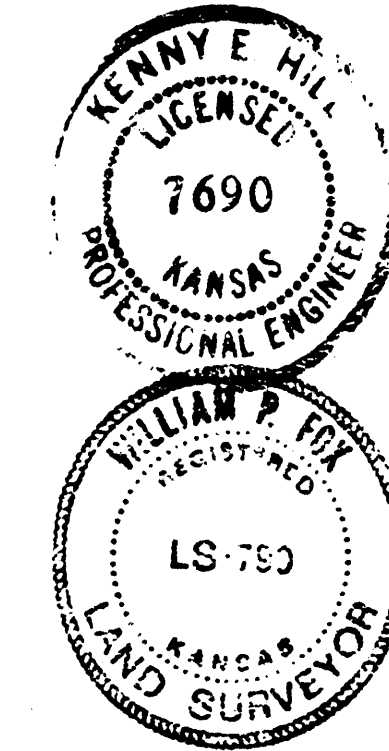
STATE OF KANSAS } COUNTY OF SEDGWICK } SS.

We, Kenny E. Hill, and William P. Fox, being duly licensed respectively as a Professional Engineer and Land Surveyor in said County and State, do hereby certify that we have plotted and surveyed THE MOORINGS 4th ADDITION to Wichita, Sedgwick County, Kansas, being described as follows:

Commencing at the Southeast Corner of the Southeast Quarter (SE1/4) of Section 24, Township 26 South, Range 1 West of the 6th P.M. Sedgwick County, Kansas; thence N 0°00'30" W for a distance of 2054.68 feet to the Northeast Corner of THE MOORINGS, an addition to Wichita, Sedgwick County, Kansas; thence S 89°05'30" W for a distance of 2102.68 feet to the point of beginning, thence S 0°54'30" E for a distance of 70 feet to the Northeast Corner of Lot 1, Block 1 of THE MOORINGS 3rd ADDITION; thence continuing on the boundary of THE MOORINGS 3rd ADDITION for the next 7 courses S 89°05'30" W for a distance of 286.56 feet; thence S 0°54'30" E for a distance of 68.43 feet; thence S 55°00'00" W for a distance of 92.10 feet; thence S 28°00'00" W for a distance of 164.71 feet; thence S 17°00'00" E for a distance of 225.38 feet; thence S 62°00'00" E for a distance of 195.84 feet; thence N 68°00'00" E for a distance of 312.73 feet; thence S 51°30'00" E for a distance of 133.46 feet; thence S 19°00'00" E for a distance of 102.0 feet; thence S 6°00'00" W for a distance of 524.29 feet; thence S 42°00'00" W for a distance of 84.00 feet; thence S 25°00'00" W for a distance of 163.00 feet; thence S 65°00'00" W for a distance of 85.00 feet; thence N 69°00'00" W for a distance of 364.87 feet; thence N 2°00'00" W for a distance of 399.18 feet; thence N 42°00'00" W for a distance of 722.65 feet; thence N 0°54'30" W for a distance of 378.84 feet; thence N 89°05'30" E for a distance of 859.00 feet to the point of beginning, containing 18.21 acres more or less. The bearing of the East line of said Southeast Quarter (SE1/4) is assumed to be N 0°00'30" W. The accompanying plat is a true and correct exhibit of property surveyed.

Dated this 16th day of SEPTEMBER, 1987.

Kenny E. Hill, P.E. (SEAL)
William P. Fox, L.S. (SEAL)



KNOW ALL MEN BY THESE PRESENTS:

That we, MIBAC, Inc., have caused the land described in the Engineer's Certificate to be platted into lots, a block, streets and reserves. The streets are hereby dedicated to and for the use of the public. Easements are hereby granted as indicated for the construction and maintenance of drainage and utilities. Reserve "A", "B" and "C" are reserved for open space and a lake to be owned and maintained by a lot (or home) owners' association. Development of this property shall be in accordance with The Moorings Community Unit Plan a copy of which is on file in the Metropolitan Area Planning Department.

MIBAC, INC.

C. Bill Bachman
C. Bill Bachman, President

STATE OF KANSAS } COUNTY OF SEDGWICK } SS.

Be it remembered that on this 16th day of SEPTEMBER, 1987, before me, a Notary Public in and for said County and State, came MIBAC, Inc., by its President, C. Bill Bachman, to me known to be the same person who executed the foregoing instrument duly acknowledged by me. In testimony whereof, I have hereunto set my hand and affixed my Notarial Seal the day and year above written.

My Appointment Expires 4-28-88

Carol A. Bruns, Notary Public (SEAL)

This Plat of THE MOORINGS 4th ADDITION to Wichita, Sedgwick County, Kansas has been submitted and approved by this WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION, Wichita, Kansas.

Dated this 20th day of August, 1987

WICHITA SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION
Mary Ellen Conlee, Vice-Chairman
Marvin S. Krout, Secretary (SEAL)

This Plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 13th day of OCT, 1987.

Robert E. Knight, Mayor
Dale E. Rea, Deputy City Clerk (SEAL)

Entered on transfer record this 23rd day of October, 1987.

Don Wright, County Clerk

STATE OF KANSAS } COUNTY OF SEDGWICK } SS.

This is to certify that this instrument was filed for record in the Register of Deeds office at 12:30 A.M. on the 23rd day of OCTOBER, 1987.

Pat Kettler, Register of Deeds
Ed Resa, Chief Deputy

PROJECT NO. 468-76-245-81761-000-000-001

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7/7