

PRIVATE SANITARY SEWER TO SERVE PART OF COLEMAN COMPANY ADDITION PRIVATE PROJECT NUMBER 1957 PPS (607861)

GENERAL NOTES

- Contractor will be required to provide a minimum advance notice of forty-eight (48) hours to utility companies prior to starting any excavation as follows:

Kansas One-Call 811

The Contractor must notify the following in case of an emergency:

Cox Communications 262-0661
 Kansas Gas Service 383-8600
 Westar 383-8600
 Southwestern Bell Telephone Company 1-800-286-8313
 City of Wichita Water Department 262-6000
 City of Wichita Sewer Maintenance 262-6000

- Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- This project is to be constructed in accordance with City of Wichita Standard Specifications for the Construction of City Projects, and Policy on Construction of Public Works Improvements by Private Contract.
- No work shall begin on this project before required bonds are submitted to the City of Wichita, and the project inspector has been notified.
- All areas of public R/W disturbed by construction of this project are to be restored in accordance with Administrative Regulation AR 78 of the City of Wichita.
- Contractor shall contact Dale Demaree, BNSF Trainmaster at (913) 284-3232 and Jason Moyer, WTA Superintendent at (316) 262-0441 at least 72 hours prior to construction.

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers *Giuliano Kallman 7-21-09*

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

Paving _____

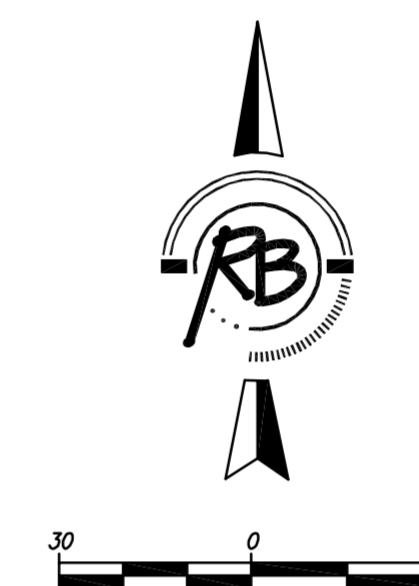
NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.



INDEX OF SHEETS

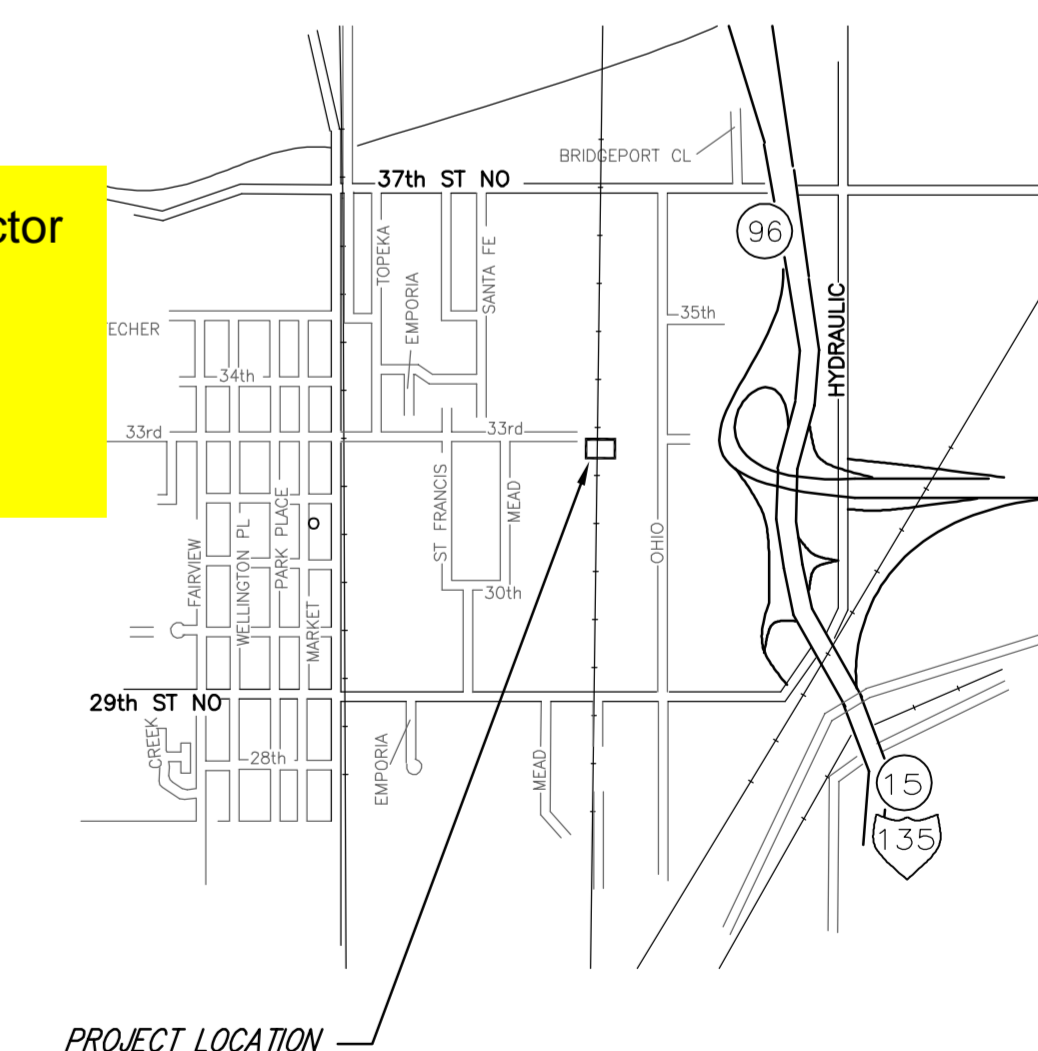
- COVER SHEET
- LINE 1 PLAN & PROFILE
- MANHOLE DETAILS



Nowak Construction - Contractor
 T. Young - R&B, Inspector
 As-built
 Release Date: 11/17/2009
 APRosas 11/17/2009

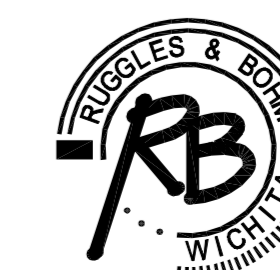
"AS-BUILT"
 11/02/09
 KWL

CONTROL POINTS		
CP 1	E 19958.2841	N 22690.3440
CP 2	E 19961.2600	N 21888.4300



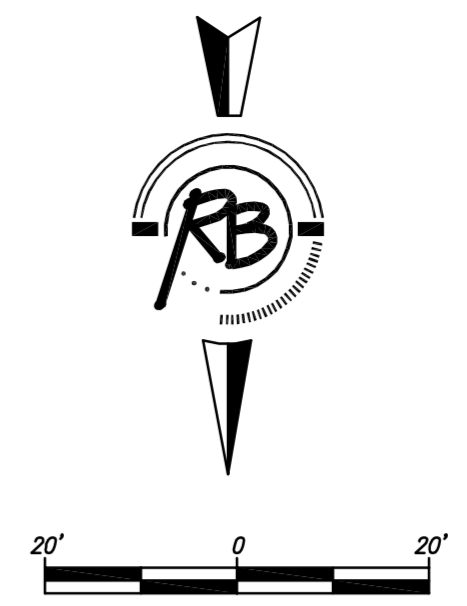
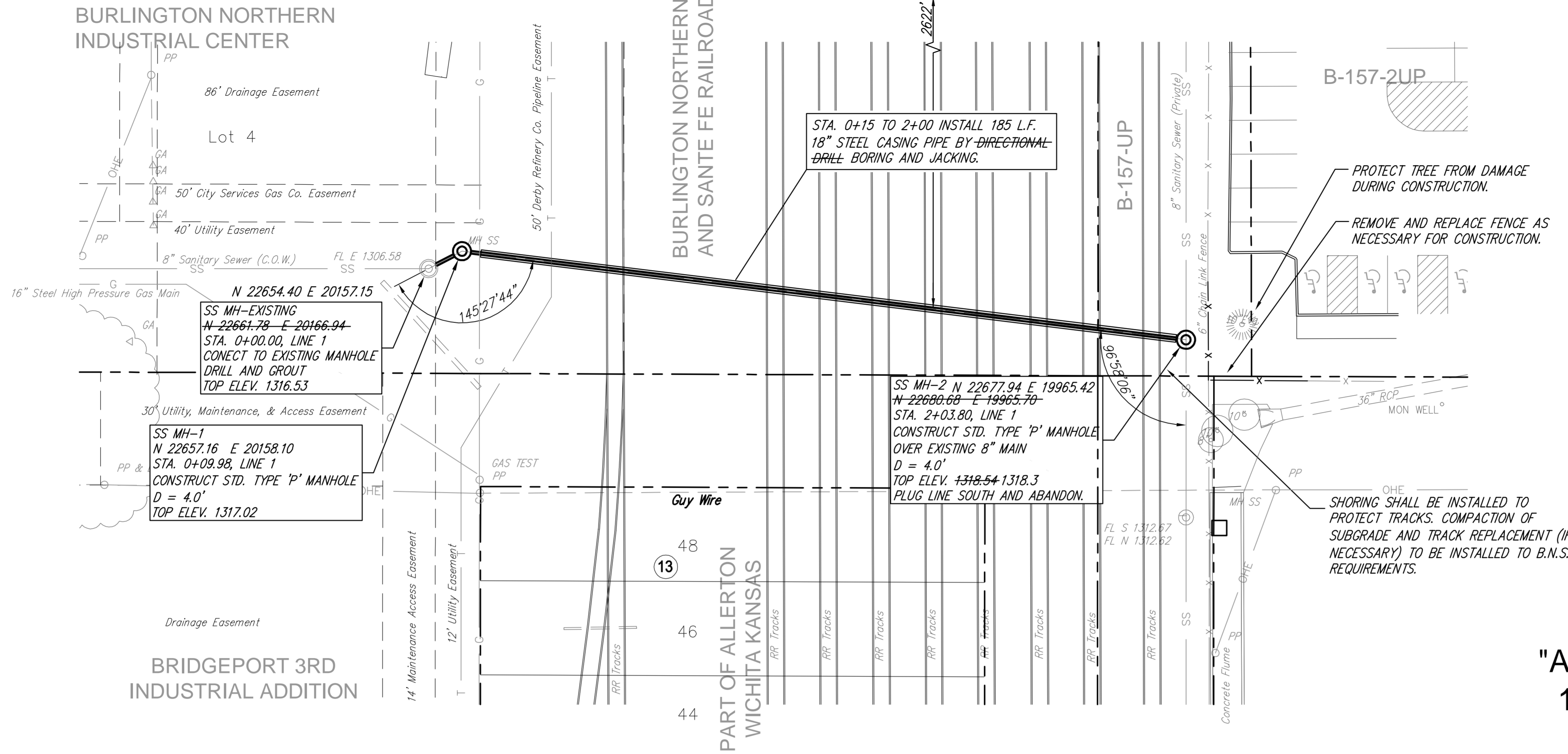
VICINITY MAP

CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E., CITY ENGINEER



Ruggles & Bohm, P.A.
 Engineering, Surveying, Land Planning
 924 North Main (316) 264-8008
 Wichita, Kansas 67203 (316) 264-4621 fax
 www.rbkansas.com E-mail: info@rbkansas.com

BURLINGTON NORTHERN INDUSTRIAL CENTER

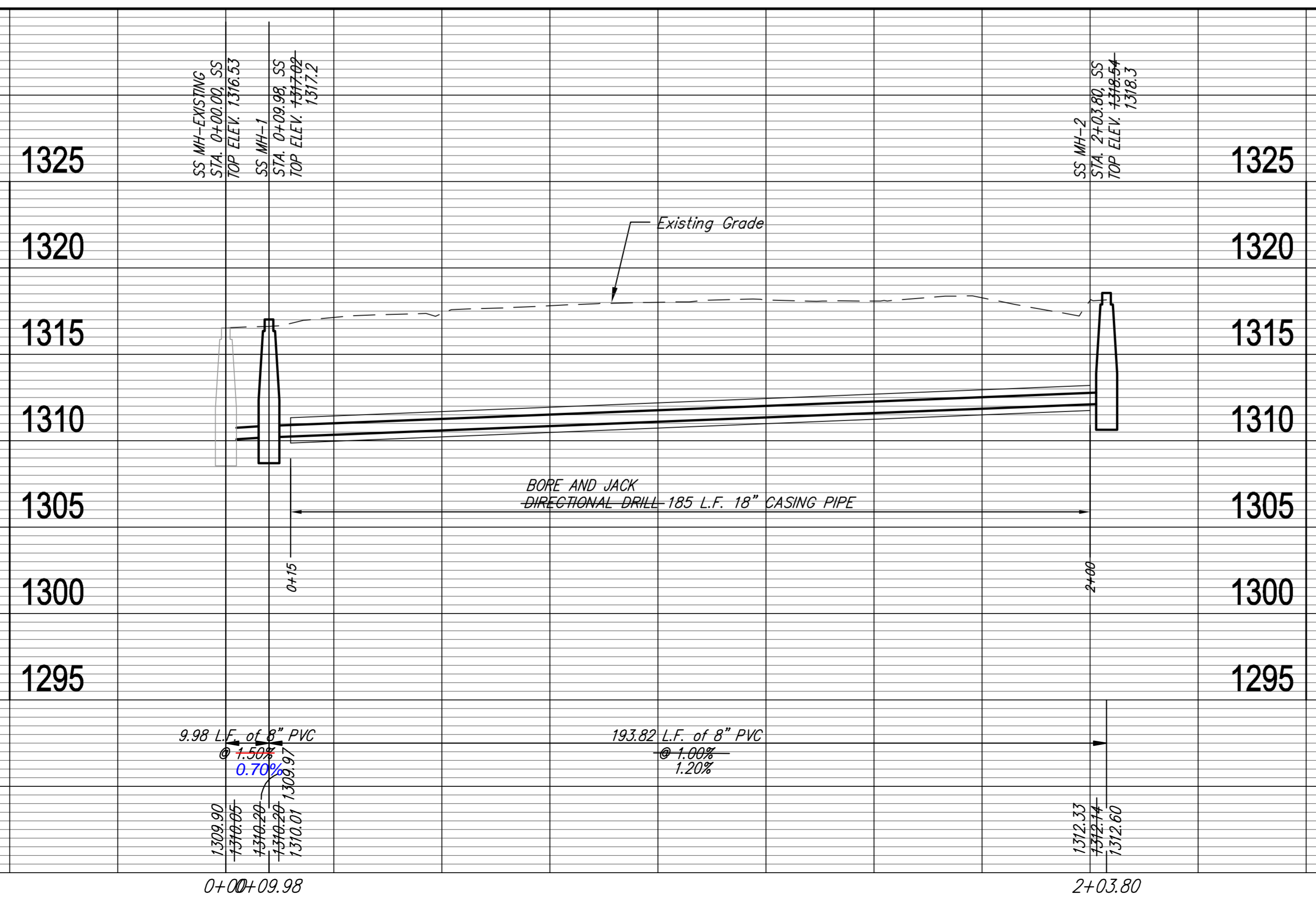


- NOTES:**
- CONSTRUCTION EQUIPMENT SHALL REMAIN 20' CLEAR OF TRACKS EXCEPT AS APPROVED BY B.N.S.F.
 - CONSTRUCTION FENCING AND LIGHTED BARRICADES SHALL BE ERECTED AROUND ALL OPEN EXCAVATIONS UNTIL BACKFILL IS COMPLETE.
 - COMPACTION TESTING WILL BE REQUIRED ON EVERY-IN FOOT LIFT OF BACKFILL PLACED IN RAILROAD RIGHT OF WAY. 95% STANDARD PROCTOR DENSITY IS REQUIRED FOR ALL BACKFILL IN RAILROAD RIGHT OF WAY.
 - PRIVATE MANHOLES INDICATED ON THE COVER SHEET SHALL HAVE THEIR TOPS REMOVED AND ABANDONED IN ACCORDANCE WITH CITY OF WICHITA SPECIFICATIONS.
- Note 3: Flowable Fill used to backfill holes in Railroad R/W.

"AS-BUILT"
11/02/09
KWL

BM 1
SQUARE CUT T.C. WEST OF 1st INLET EAST OF MEAD SOUTH SIDE OF 33rd STREET.
ELEV. 1317.15

BM 2
SQUARE CUT EAST T.C. OF MEAD WEST OF 4th P.P. FROM 33rd STREET & MEAD.
ELEV. 1317.71



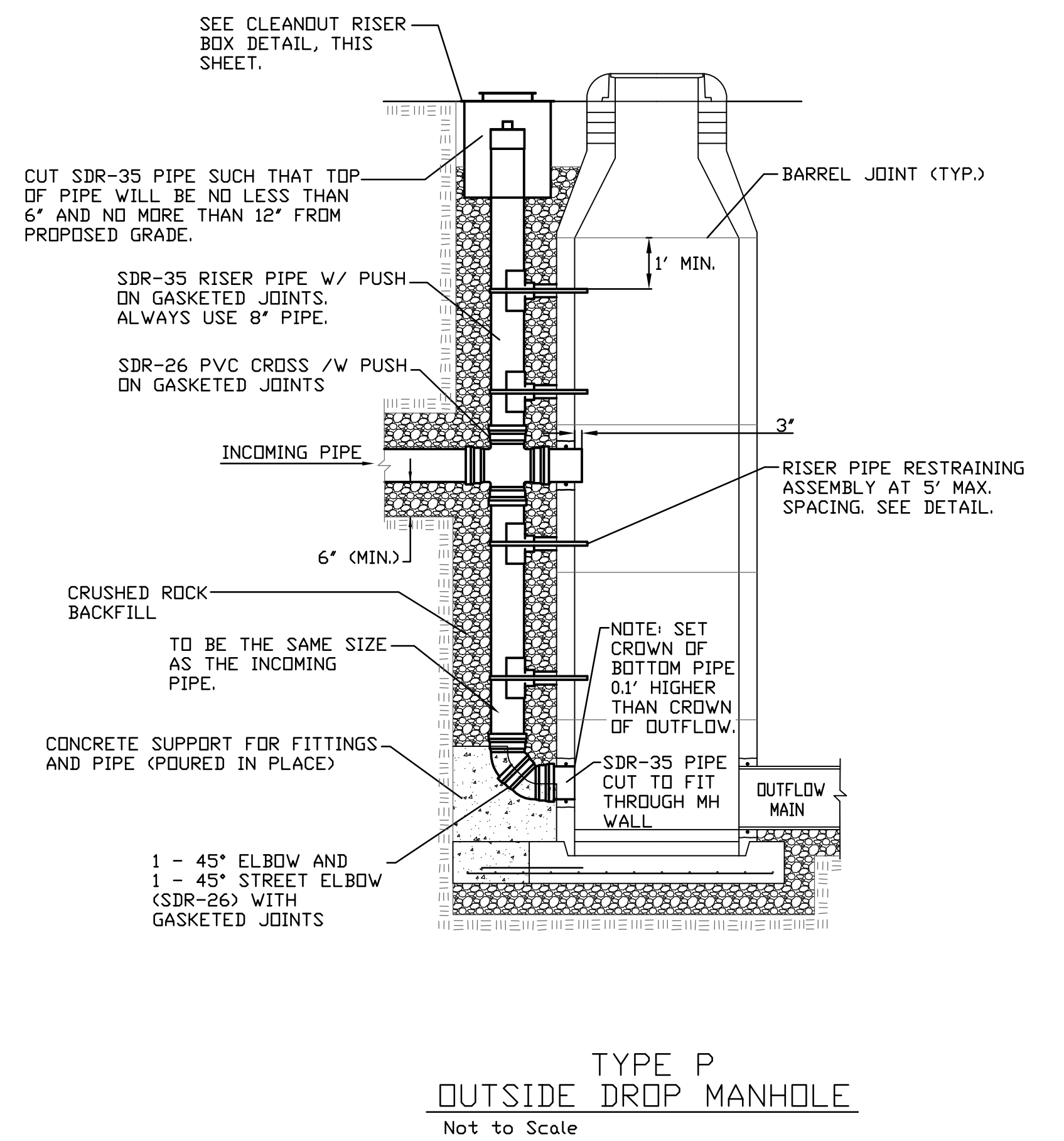
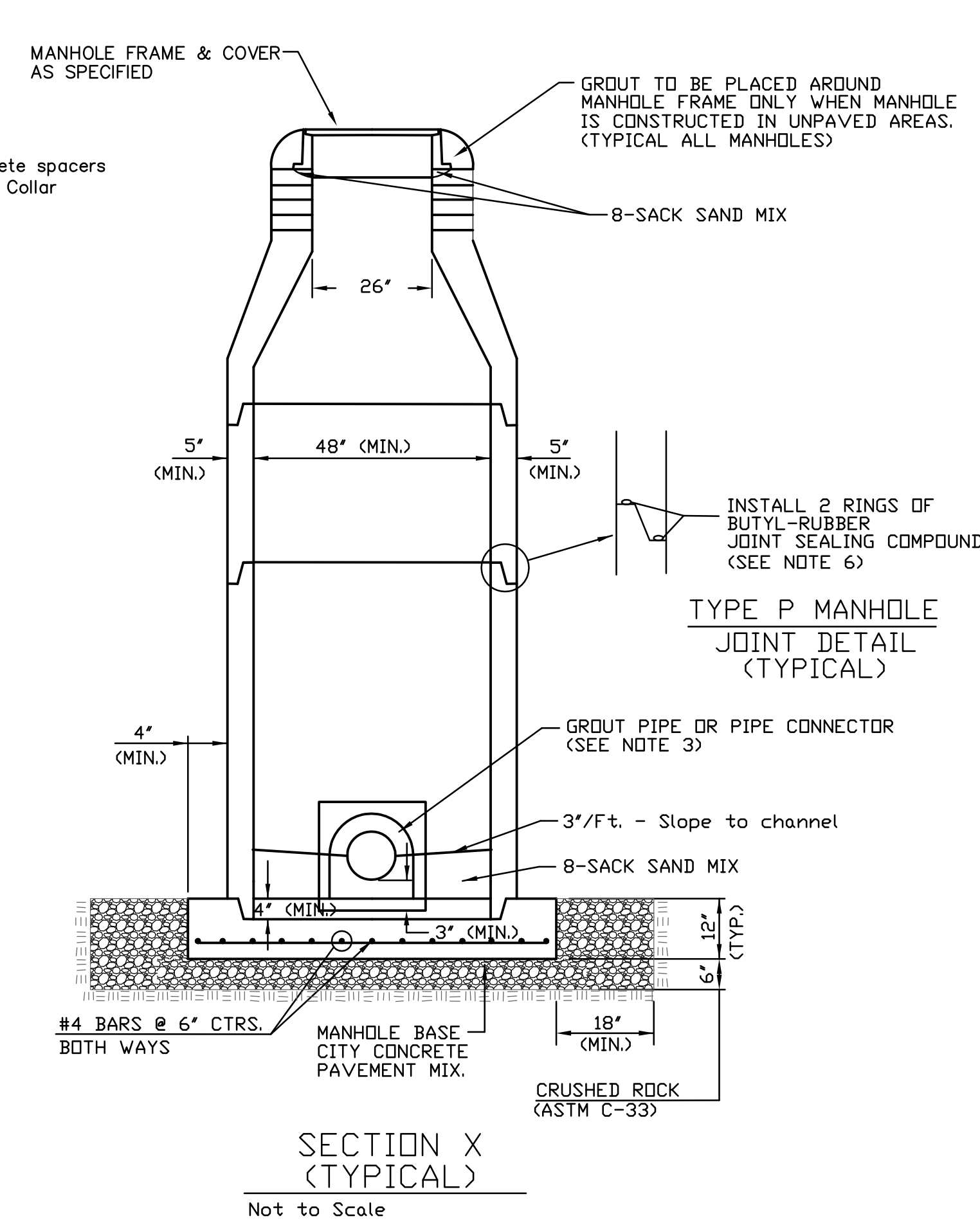
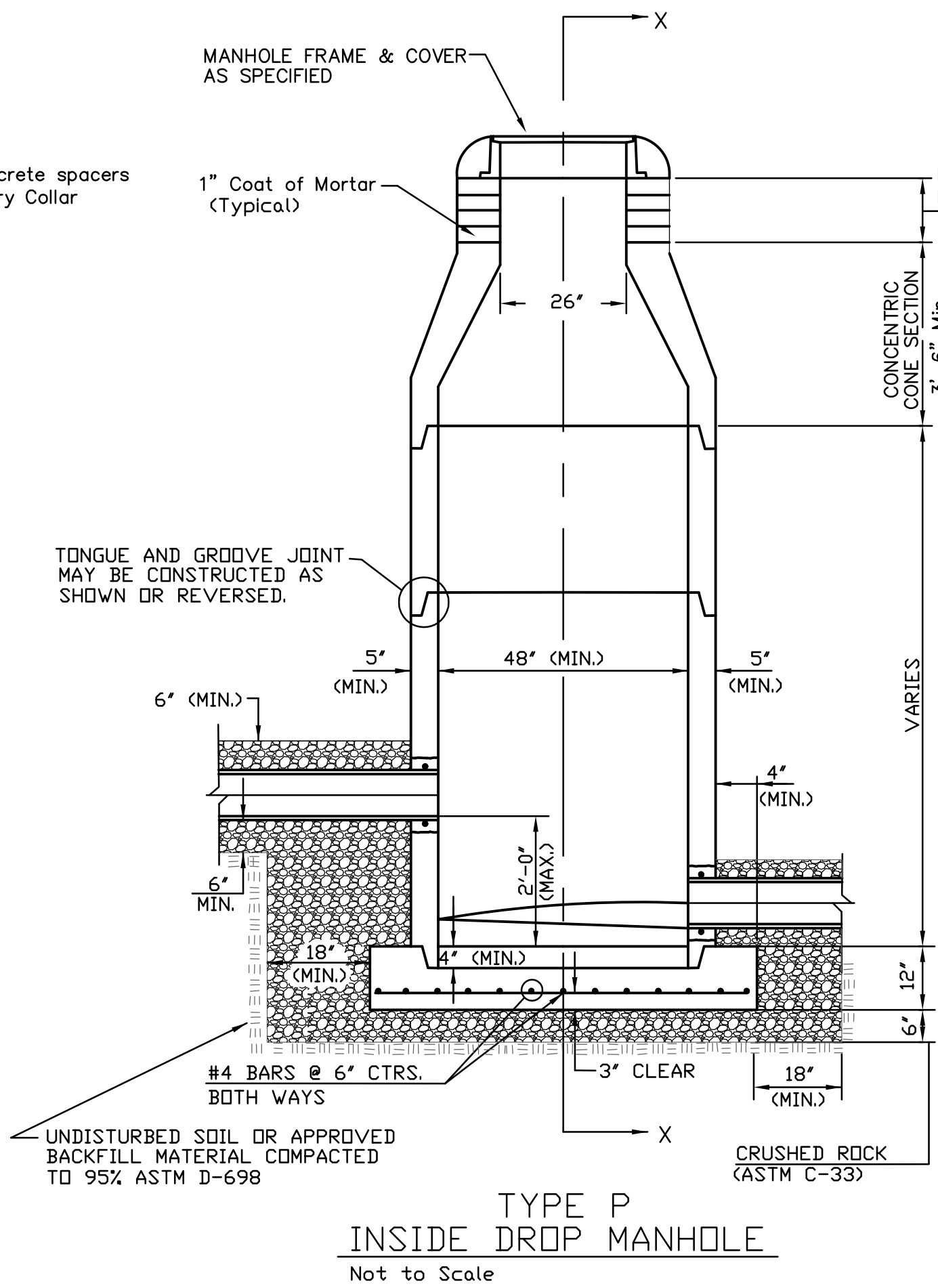
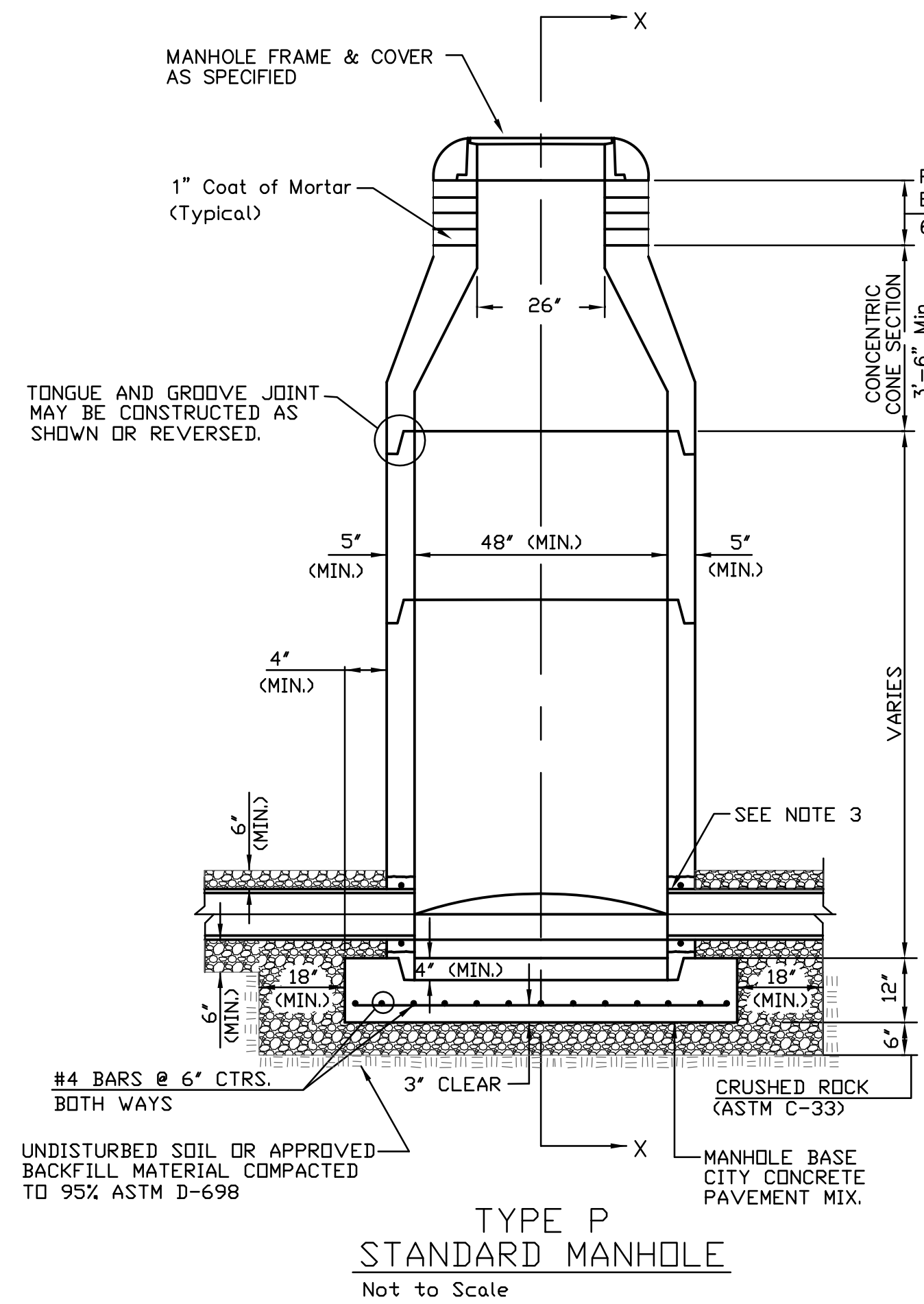
REVISIONS

REVISION	DATE	BY

DESIGN: KWL
DRAWN: RA
PROJECT NUMBER: 33668F
PROJECT NAME: SANITARY SEWER EXTENSIONS LINE 1 WICHITA, KANSAS
DATE: Jun. 5, 2009
DRAWING FILE:

RB JOB 33668F SHEET 2 OF 3

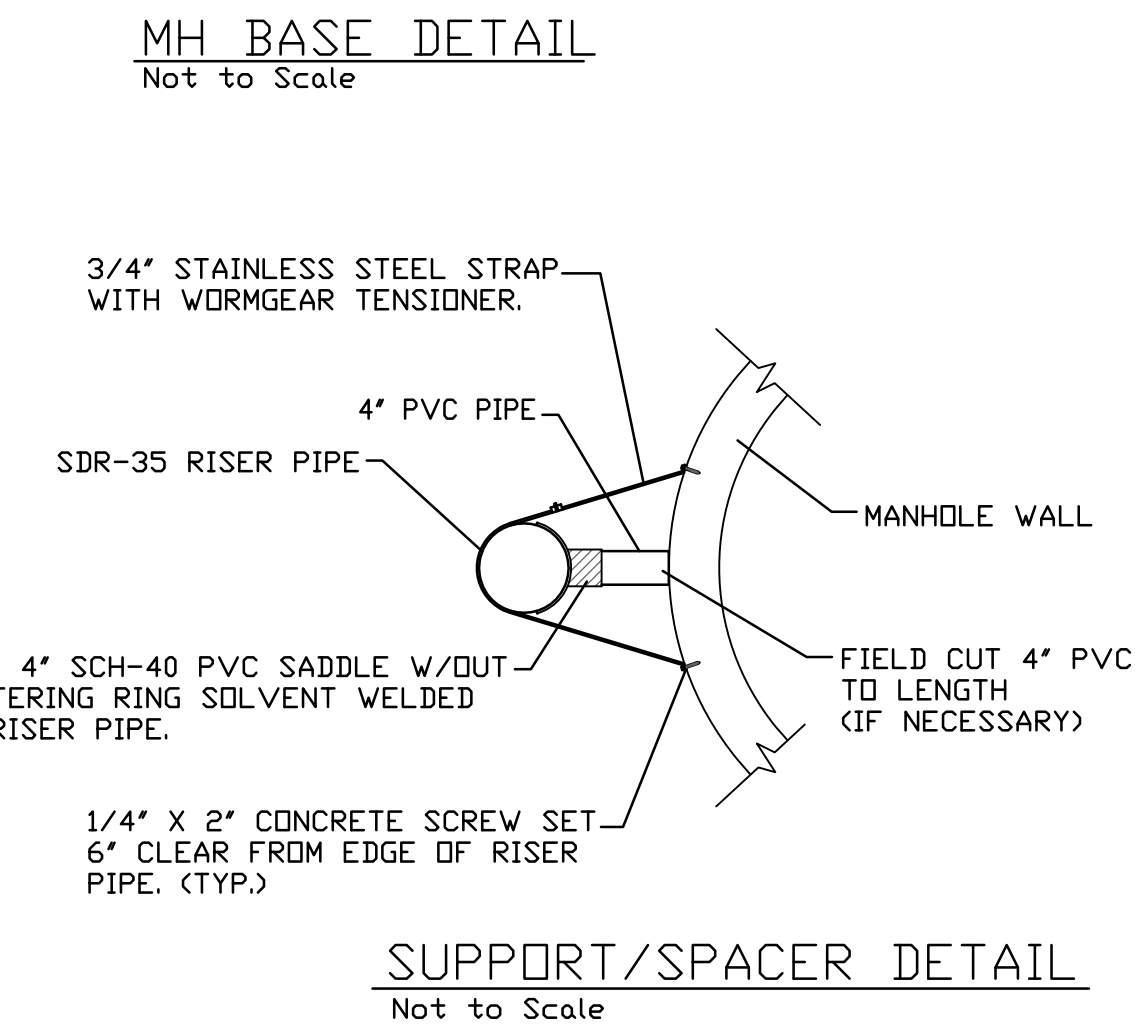
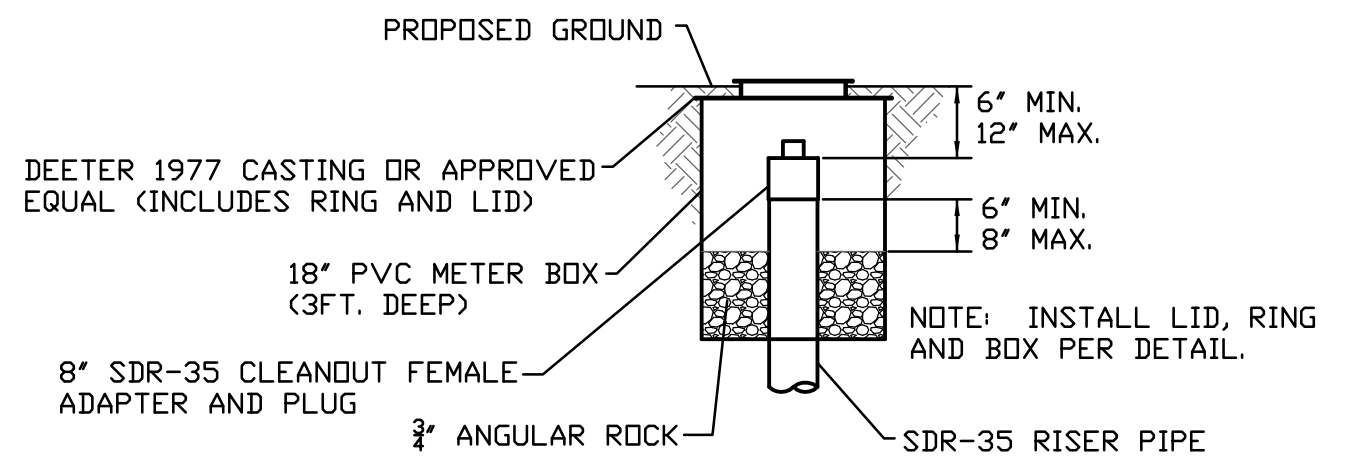
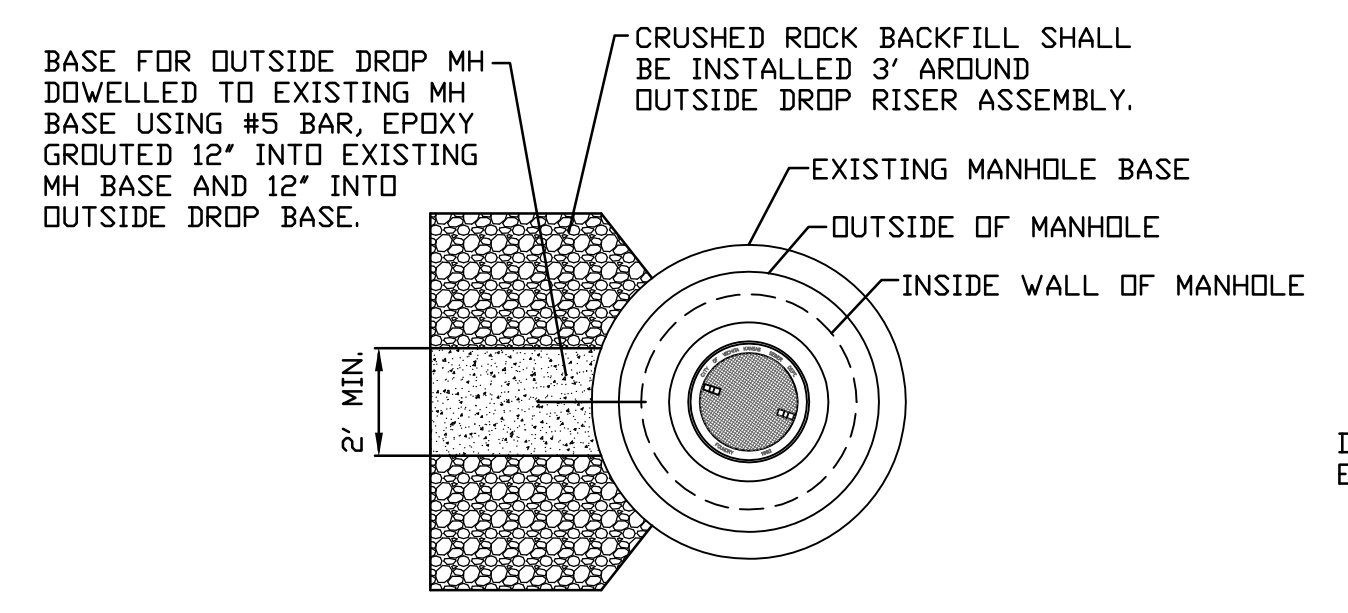
SEWER APPURTENANCES DETAILS



= CRUSHED ROCK *

= UNDISTURBED SOIL

* CRUSHED ROCK USED FOR ENCASEMENT AND BEDDING SHALL CONFORM TO ASTM C-33, GRADATION NO. 67, AND SHALL MEET ALL REQUIREMENTS FOR PORTLAND CEMENT CONCRETE PAVEMENT COARSE AGGREGATE, SECTION 406.2, CITY OF WICHITA STANDARD SPECIFICATIONS. ALL CRUSHED ROCK FOR BEDDING AND ENCASEMENT SHALL EXTEND TO THE LIMITS OF THE MANHOLE EXCAVATION.



- PRECAST MANHOLE GENERAL 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 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 CRUSHED ROCK 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 PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
 - EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
 - JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
 - 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 9 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. 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.
 - WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
 - OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED 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. 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 SHAPED 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.
 - 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' REGARDLESS OF PIPE SIZE. 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. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
 - THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
 - REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.

STANDARD TYPE 'P' MANHOLES

CITY ENGINEER
JAMES L. ARMOUR, P.E., L.S.

PROJECT NUMBER	OCA NUMBER	DATE
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CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 (316) 268-4114 FAX	DESIGN	DRAWN	SHEET
			3 OF 3