

SANITARY SEWER IMPROVEMENTS
FOR
LATERAL 232, S.W. INTERCEPTOR
THE NETT PARK ADDITION

Lots 1 through 51, Block B

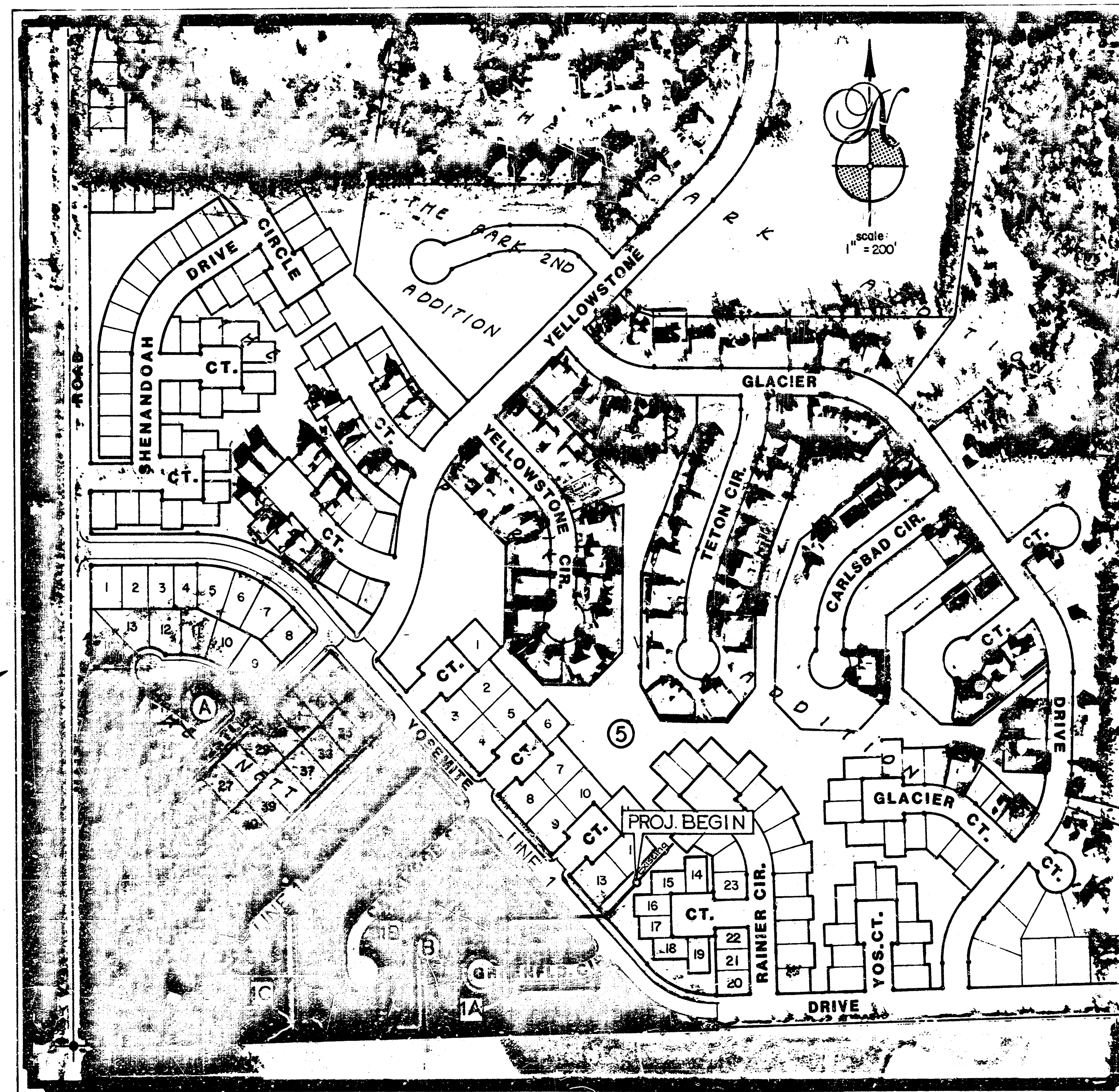
PROJECT NUMBER
468-76-245-81643-000-000-001

GENERAL NOTES

1. Underground utility service lines and overhead 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. 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.
2. Trees and shrubs 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. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
3. 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.

 BENCHMARKS

- 1) Square cut in top of curb, south side of Yosemite, near the S.E. corner of lot 51, block B, The Nett Park Addition (see plan sheet 2). Elevation = 135.15
- 2) City disc at Maize Road and 27th Street South, 25 feet east and 4 feet south of quarter section corner
Elevation = 145.54 City Datum
- 3) City disc at the SE Corner, NW 1/4 of Section 5-28-1W
Elevation = 128.38 City Datum



BENEFIT DISTRICT

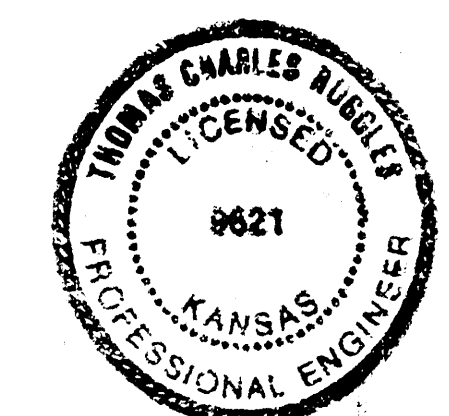
THE CITY of WICHITA, KANSAS

MICHAEL E. LINDEBAK
CITY ENGINEER

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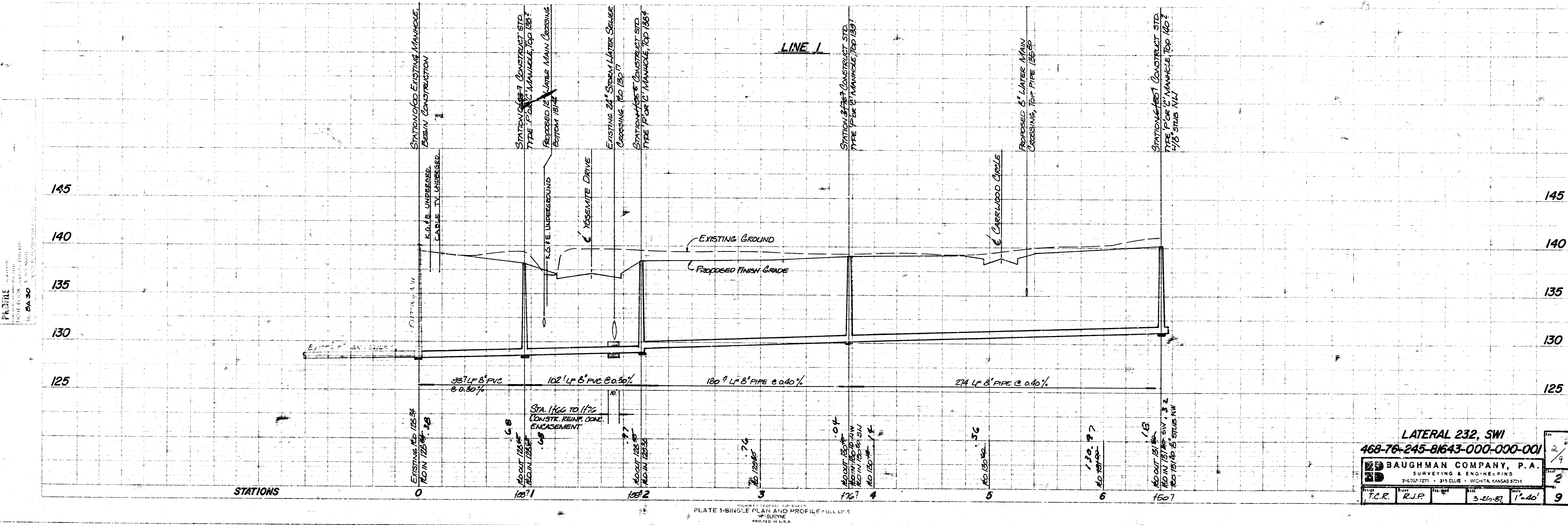
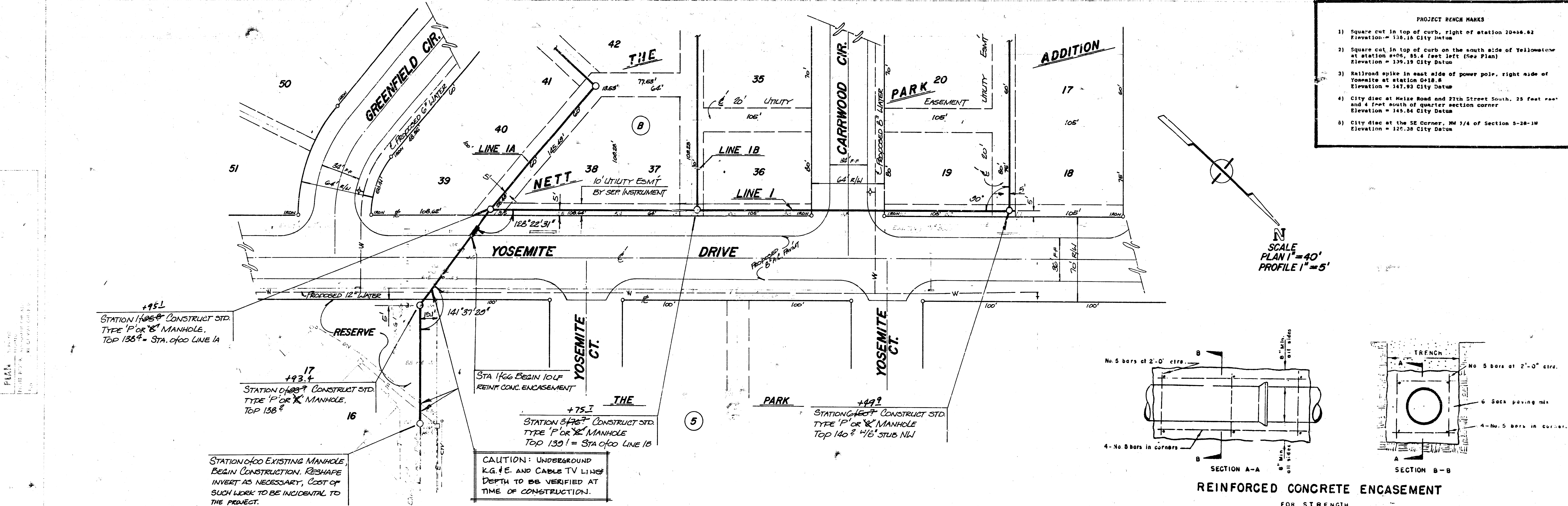
*AS BUILT
R/L
8-87*



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Design: T.C.R.	Drawn: R.J.P.	Approved:	Date: 5-26-87	Scale:

Sheet:
1 of
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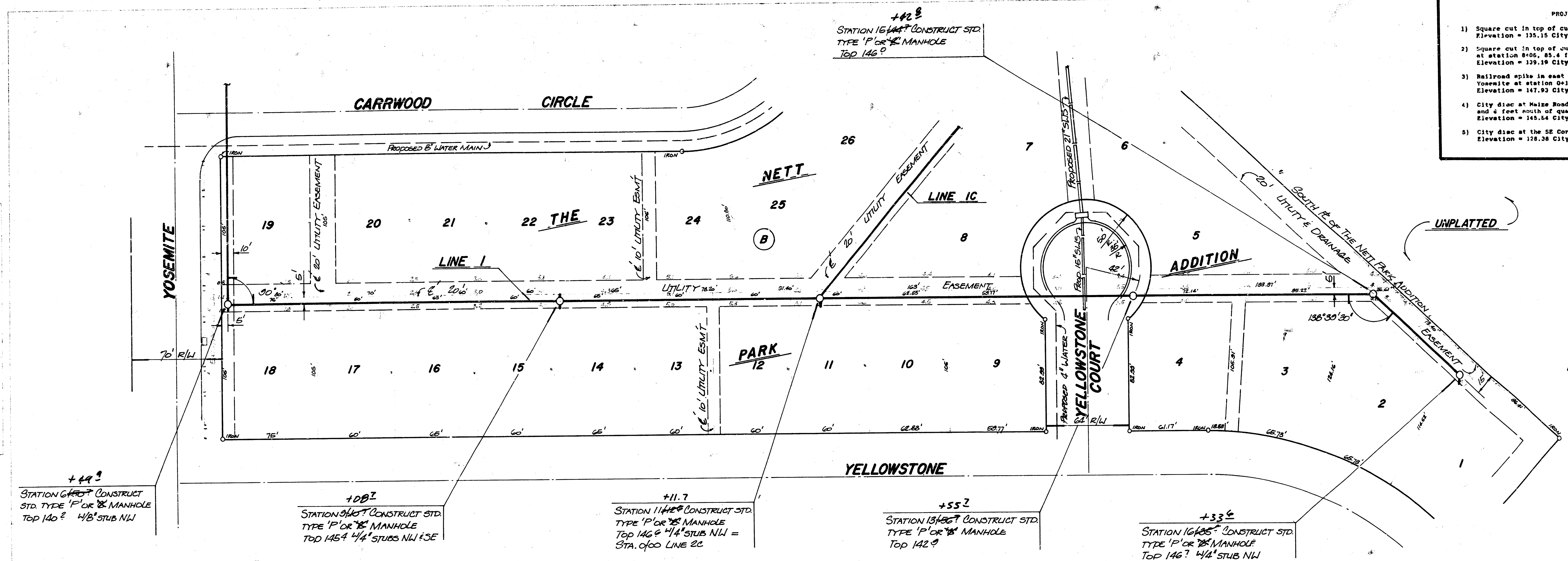
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FOR R.R. 3-21-81 1"=40' 9

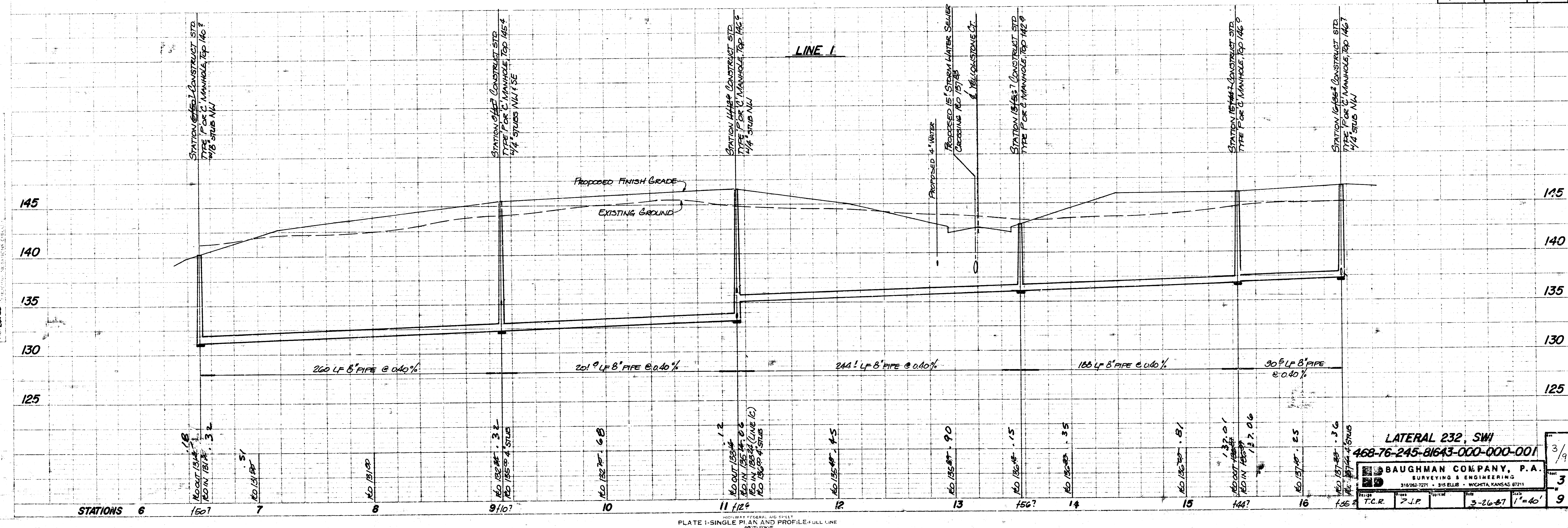
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- PROJECT BENCH MARKS
- 1) Square cut in top of curb, right of station 20-16.63
Elevation = 135.15 City Datum
 - 2) Square cut in top of curb on the south side of Yellowstone at station 8+06, 85.4 feet left (See Plan)
Elevation = 139.19 City Datum
 - 3) Railroad spike in east side of power pole, right side of Yosemite at station 0+19.5
Elevation = 147.93 City Datum
 - 4) City dike at Waize Road and 27th Street South, 28 feet east and 4 feet north of quarter section corner
Elevation = 145.64 City Datum
 - 5) City dike at the SE Corner, NW 1/4 of Section 5-28-1W
Elevation = 128.36 City Datum



4" RISER

STATION	RED 8"	TOP OF RISER
8+10 (LT)	131.04	136.0
8+60 (RT)	132.14	136.7
9+30 (LT)	132.42	136.9
9+65 (RT)	132.64	136.8
10+45 (RT)	132.88	137.2
10+75 (LT)	133.00	137.3



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T.C.R. T.J.P. 3-26-87 1"=40' 9

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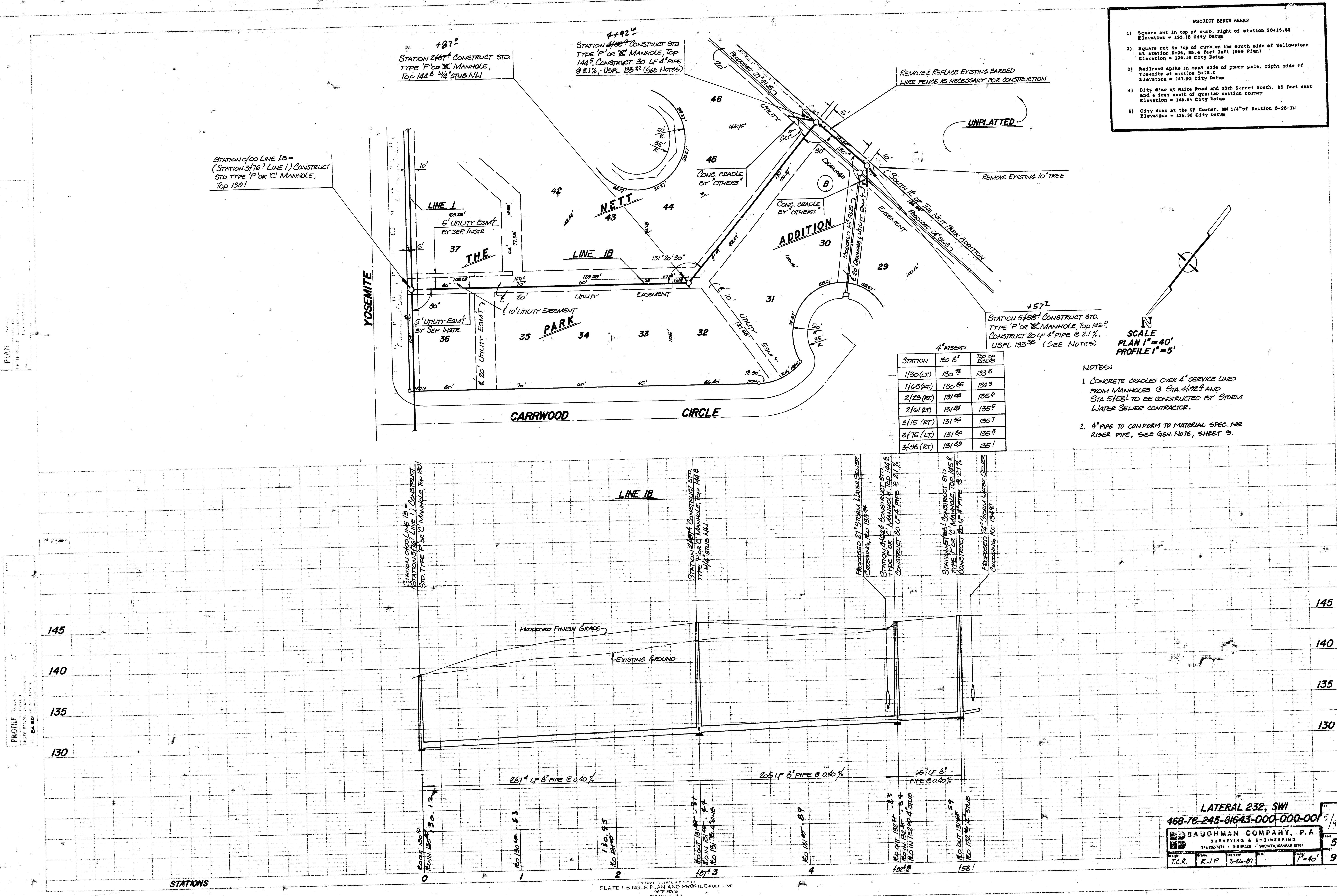
- PROJECT BENCH MARKS**
- 1) Square cut in top of curb, right of station 20+16.62
Elevation = 135.16 City Datum
 - 2) Square cut in top of curb on the south side of Yellowstone at station 8+08, 83.4 feet left (See Plan)
Elevation = 139.19 City Datum
 - 3) Railroad spike in east side of power pole, right side of Yosemite at station 5+18.6
Elevation = 147.89 City Datum
 - 4) City disc at Halse Road and 27th Street South, 25 feet east and 4 feet south of quarter section corner
Elevation = 146.5 City Datum
 - 5) City disc at the SE Corner, NW 1/4 of Section 8-28-14
Elevation = 128.38 City Datum

SCALE
PLAN 1"=40'
PROFILE 1"=5'

- NOTES:**
1. CONCRETE CRADLES OVER 4" SERVICE LINES FROM MANHOLES @ STA. 4+02.8 AND STA. 5+18.6 TO BE CONSTRUCTED BY STORM WATER SEWER CONTRACTOR.
 2. 4" PIPE TO CONFORM TO MATERIAL SPEC. FOR RISER PIPE, SEE GEN. NOTE, SHEET 9.

4" RISERS

STATION	TO 6"	TO TOP OF RISES
1+30 (LT)	130.78	133.8
1+03 (RT)	130.85	134.3
2+23 (RT)	131.08	135.9
2+61 (LT)	131.24	135.5
3+15 (RT)	131.56	135.7
3+75 (LT)	131.80	135.3
3+08 (RT)	131.83	135.1



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T.C.R. R.J.P. 5-26-81 7'-40' 9

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SCALE
PLAN 1"=40'
PROFILE 1"=5'

4' RIDGES

STATION	160.8'	TOP OF
OF 80 (LIT)	133.56	136.1

LINE 1C

205' 4" 8" PIPE @ 0.40%

STATIONS

PLATE 1 - SINGLE PLAN AND PROFILE - FULL LINE
PRINTED IN U.S.A.

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T.C.R.	R.J.P.	DATE	3-26-87	SCALE	1"=40'
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- PROJECT BENCH MARKS
- 1) Square cut in top of curb, right of station 20+16.62
Elevation = 135.15 City Datum
 - 2) Square cut in top of curb on the south side of Yellowstone at station 6+06, 85.4 feet left (See Plan)
Elevation = 139.19 City Datum
 - 3) Railroad spike in east side of power pole, right side of Yellowstone at station 6+18.8
Elevation = 147.93 City Datum
 - 4) City disc at Wallace Road and 27th Street South, 25 feet east and 4 feet south of quarter section corner
Elevation = 145.84 City Datum
 - 5) City disc at the SE Corner, NW 1/4 of Section 5-25-1W
Elevation = 128.38 City Datum

ALIGNMENT DETAIL

NO SCALE

MANHOLE @ STATION 21+05.5 LINE 1C

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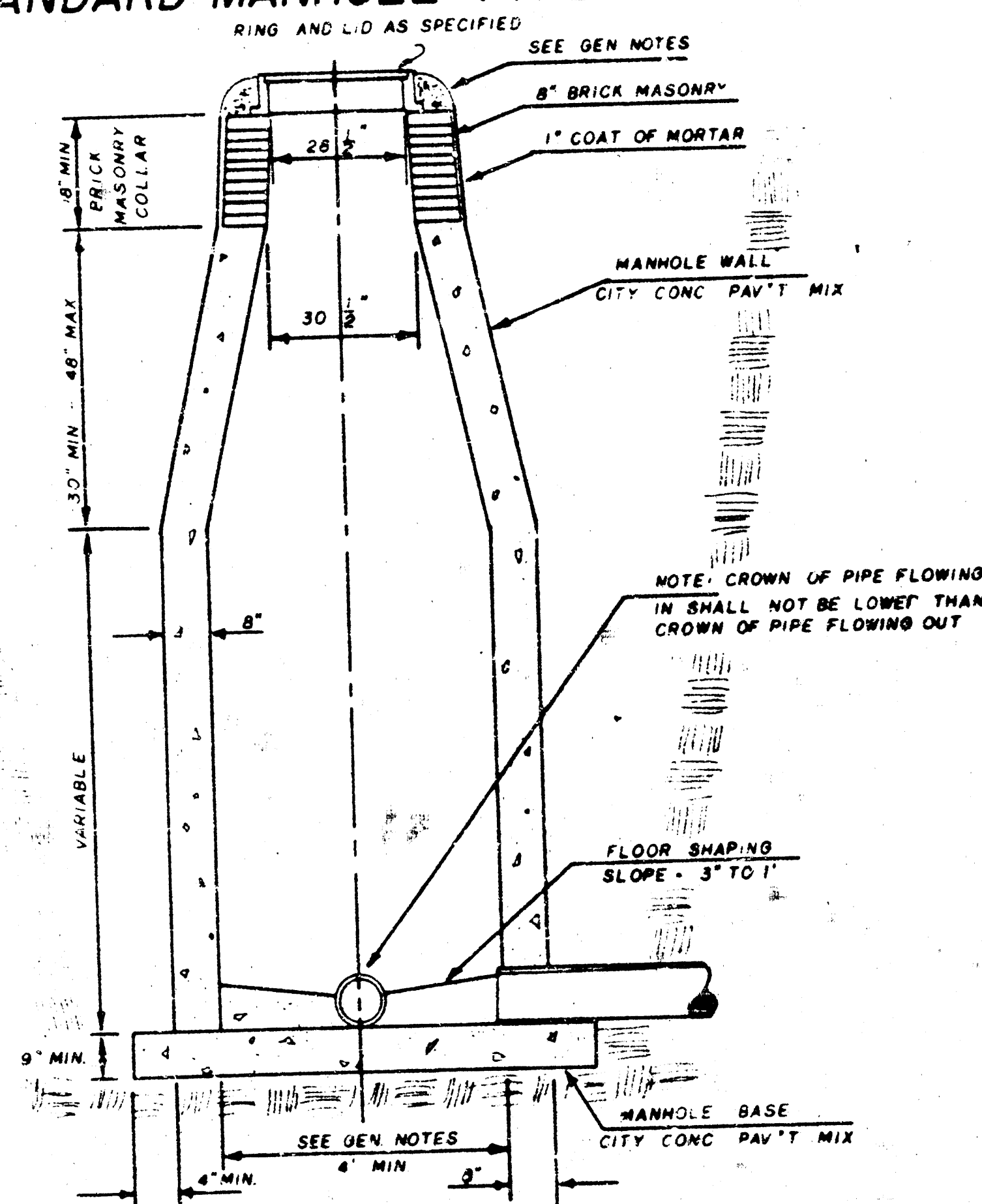
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN

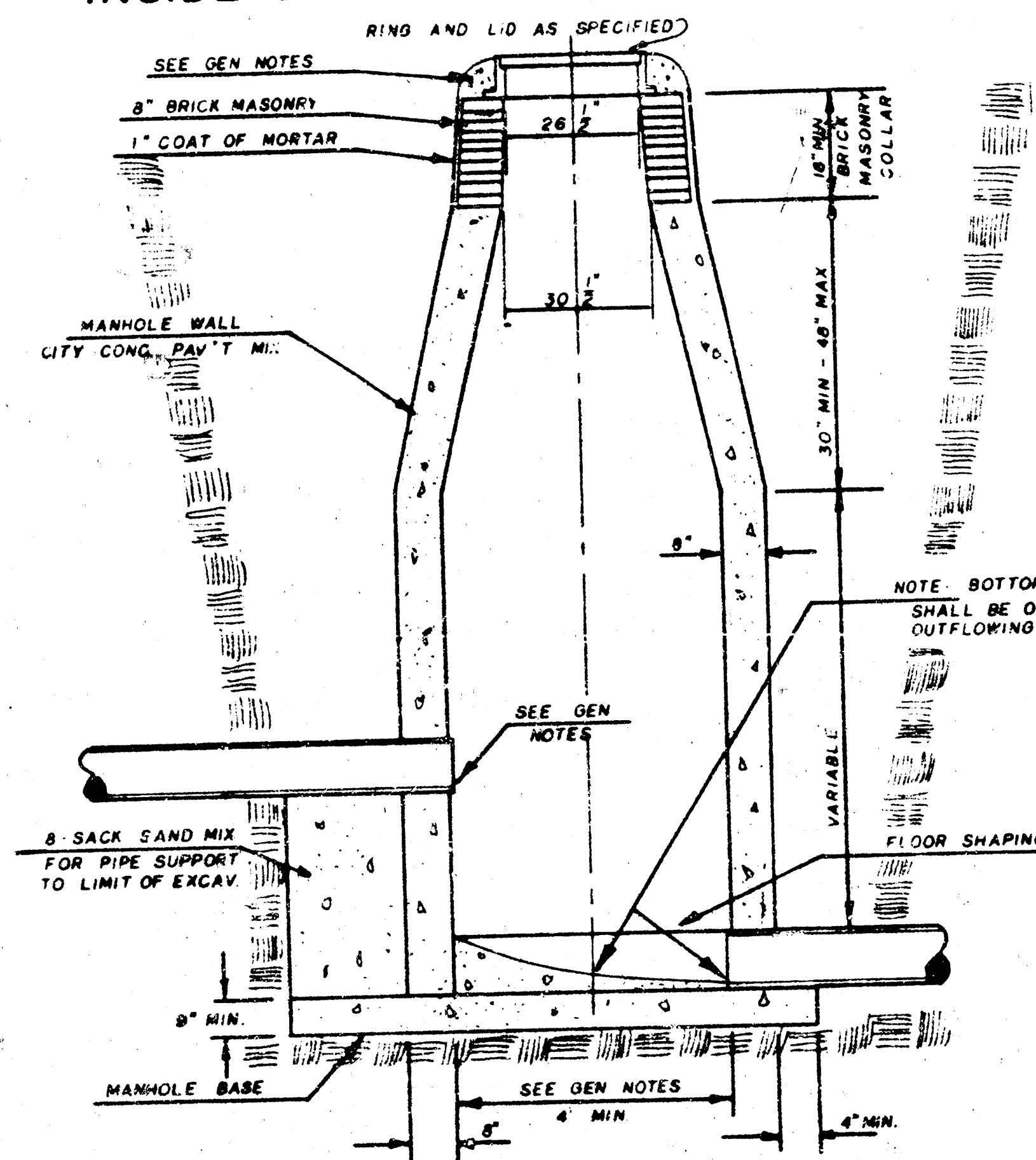
BY

City of Wichita, Kansas

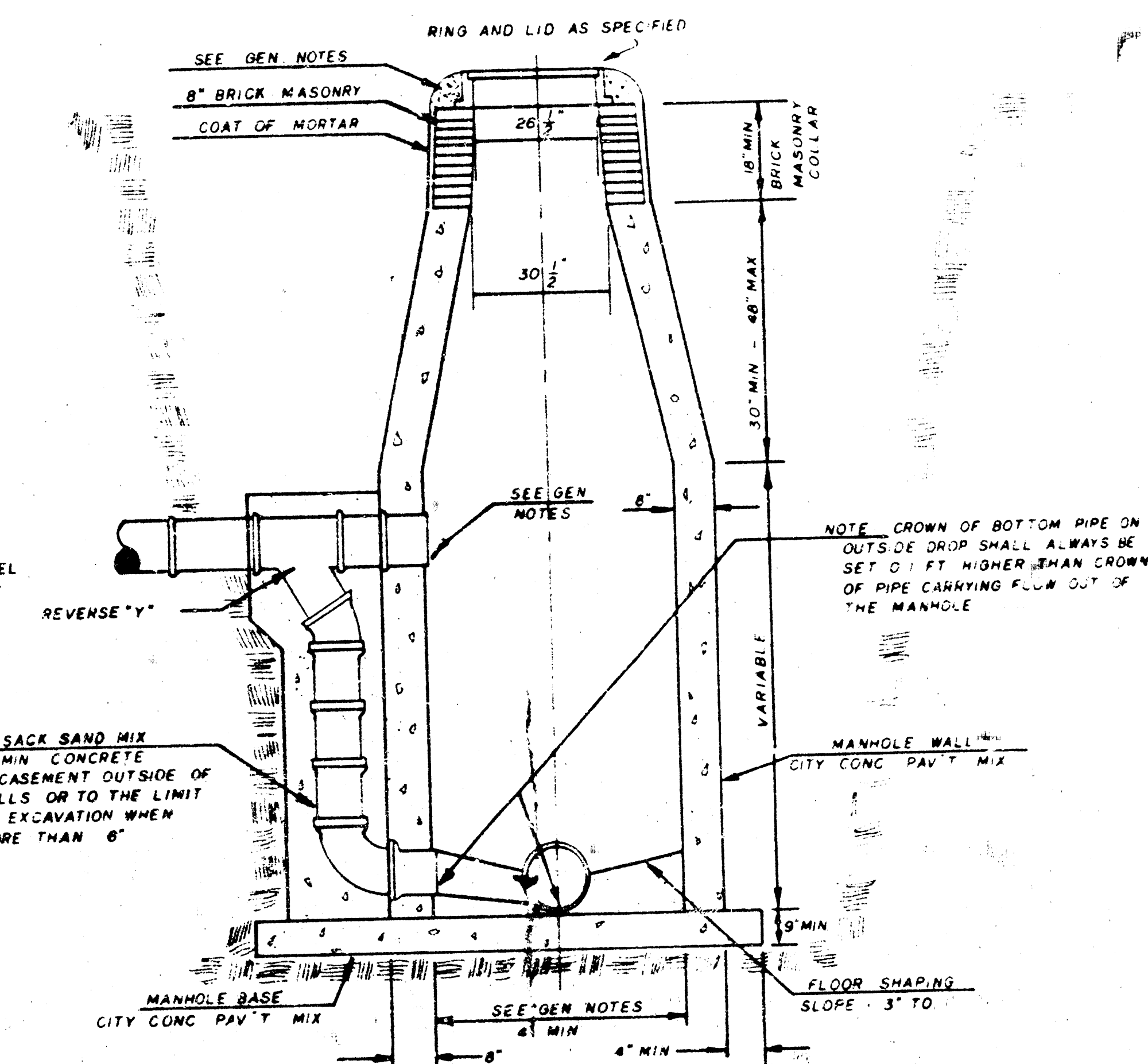
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

- 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.
- 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.
- 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 GRADUATED 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.
- 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 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 PIPE JOINTS ADJACENT TO 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 CROWN OF THE OUTFLOWING PIPE.
- 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.

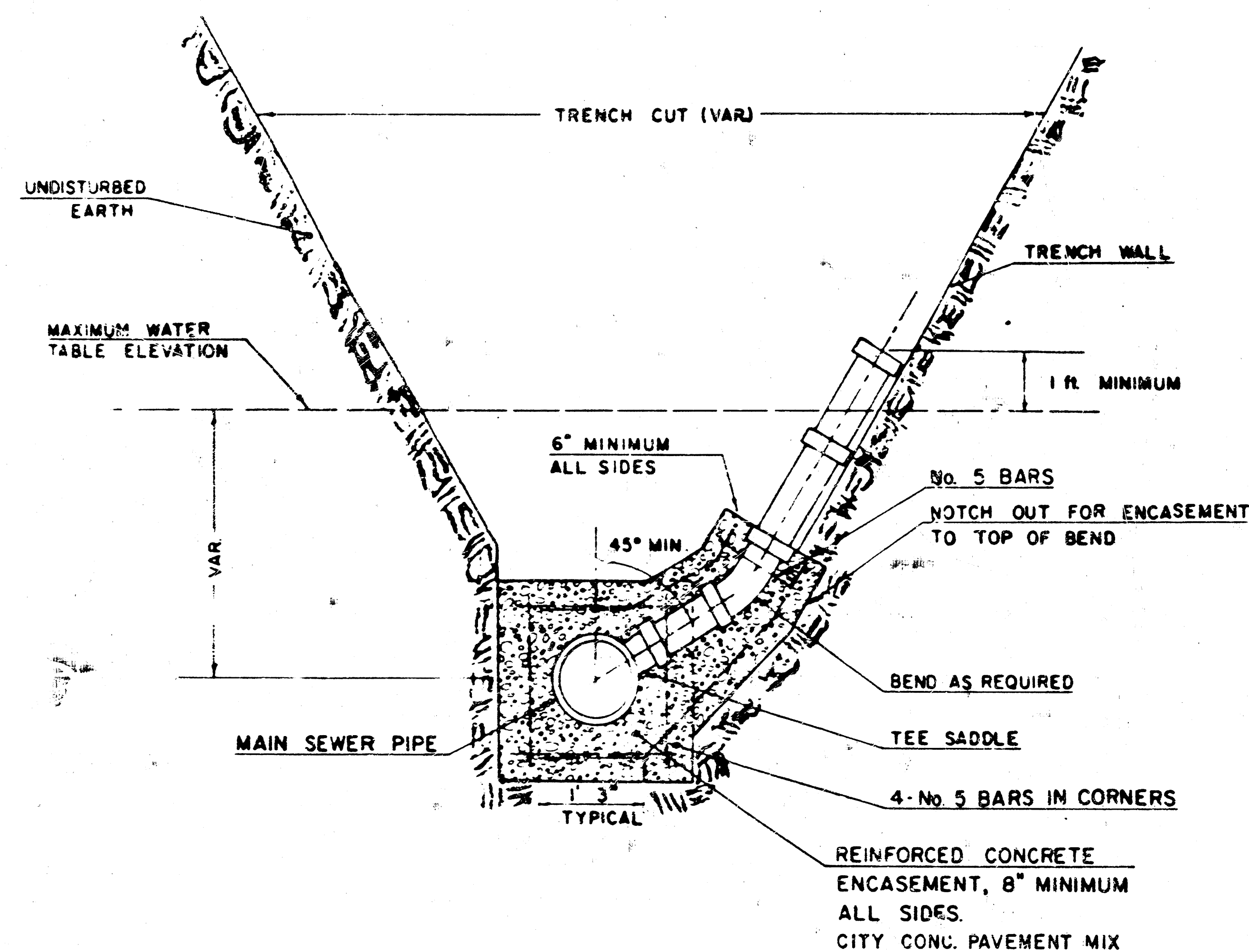
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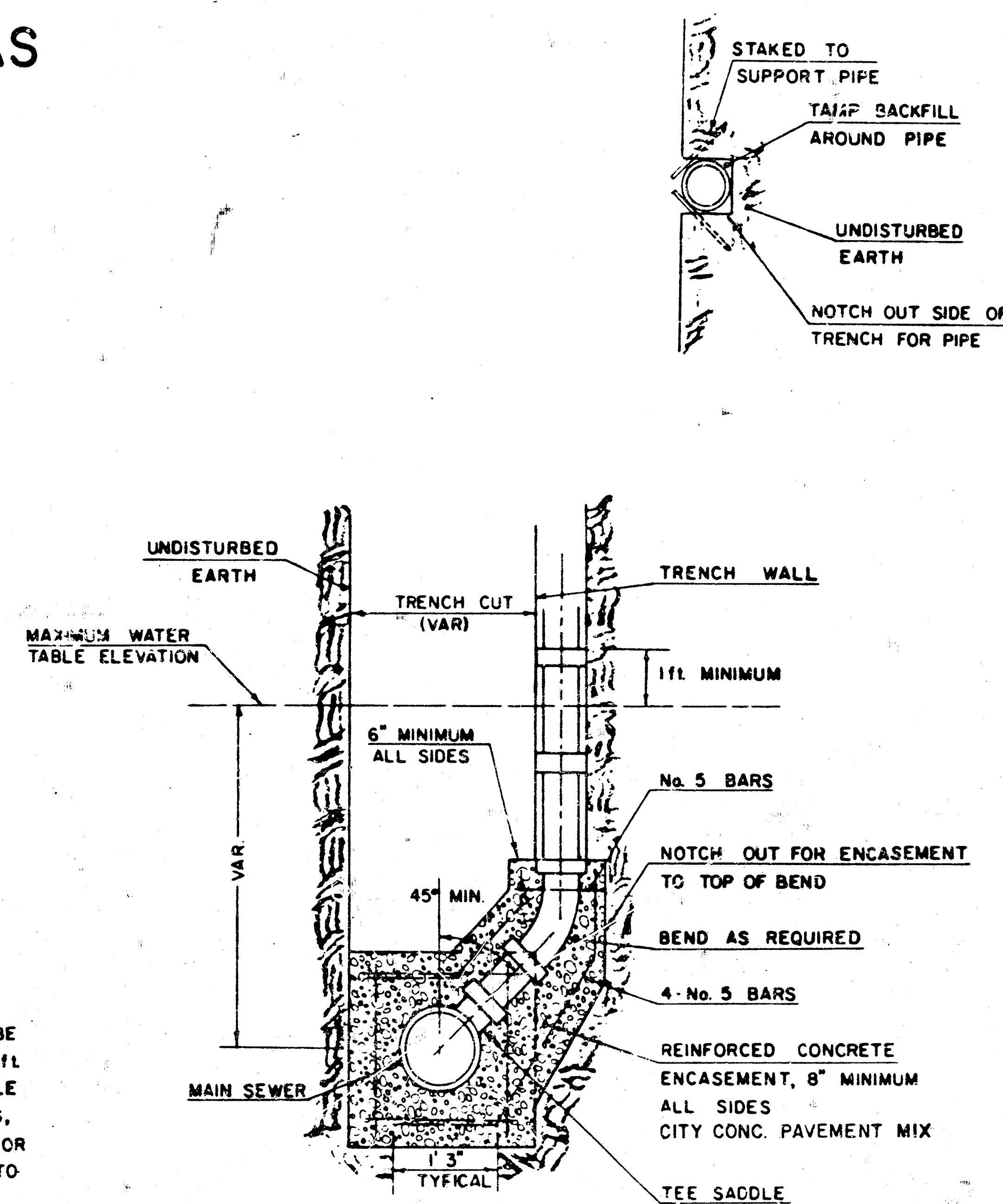
VERTICAL RISER DETAIL

ADOPTED AS STANDARD DESIGN
BY

CITY OF WICHITA, KANSAS



TYPICAL RISER FOR SLOPING TRENCH WALLS



TYPICAL RISER FOR VERTICAL TRENCH WALLS

GENERAL NOTE

RISEBARS SHALL BE INSTALLED TO SERVE ALL LOTS OR TRACTS WHEN THE MAIN SEWER LINE IS 36 INCH OR MORE. MAIN RISERS SHALL ALSO BE INSTALLED TO SERVE ALL LOTS AND TRACTS WHEN THE MAIN SEWER LINE DEPTH IS SUCH THAT WOULD MAKE THE BUILDING SEWER LINE CONNECTION DIFFICULT. INSTALLATION OF RISERS BECAUSE OF MAIN LINE SEWER DEPTH SHALL BE AS APPROVED BY THE ENGINEER. THE LOCATION OF RISERS TO SERVE DEVELOPED PROPERTY SHALL BE APPROVED BY THE ENGINEER. THE INSTALLATION SHALL BE INSTALLED IN MANHOLES WHERE LOCATIONS OF MANHOLES WILL PROVIDE SATISFACTORY SERVICE CONNECTIONS AS DETERMINED BY THE FIELD ENGINEER. THE VERTICAL DISTANCE BETWEEN THE FLOW LINE OF THE MANHOLE PIPE STUB AND THE FLOW LINE OF THE MAIN SEWER LINE SHALL NOT EXCEED 4 FEET. MAIN MANHOLE PIPE STUBS SHALL NOT BE SET AT AN ANGLE. THE INSTALLATION SHALL BE TO THE TOP OF THE INSIDE OF THE STUB TO MATCH THE TOP OF THE INSIDE OF THE MAIN SEWER PIPE. PIPE STUBS AND RISERS INSTALLED TO SERVE COMMERCIAL OR INDUSTRIAL PROPERTY SHALL BE 6 INCH. PIPE STUBS AND RISERS INSTALLED TO SERVE RESIDENTIAL PROPERTY MAY BE EITHER 6 INCH OR 4 INCH DEPENDING UPON AN AVAILABLE GRADE. THE INSTALLATION SHALL BE EITHER 4 INCH OR 6 INCH. THE MINIMUM ENCASEMENT OF VENTED CLAY MAIN SEWER PIPE SHALL EXTEND TO THE FIRST JOINT IN THE MAIN SEWER CLAY PIPE ON EACH SIDE OF THE RISEBARS INSTALLATION. ENCASEMENT OF A.B.S., COMPOSITE OR P.V.C. MAIN SEWER PIPE SHALL EXTEND A MINIMUM OF 3 FT. ON BOTH SIDES OF THE CENTERLINE OF THE RISEBAR. ON EACH SIDE RISEBARS PIPE SHALL EXTEND 4 INCHES CONCRETE TO THE TOP OF THE BEND AS INDICATED IN THE DRAWINGS. FOUR INCH AND SIX INCH CLAY PIPE USED FOR RISERS SHALL BE EXTRA STRENGTH PIPE CONFORMING TO THE REQUIREMENTS OF THE LATEST EDITION OF A.S.T.M. DESIGNATION C700 WITH CONCRESSION JOINTS AS SPECIFIED FOR CLAY PIPE. FOR THE STANDARD FOUR INCHS FOUR INCHS AND SIX INCHES A.B.S. OR P.V.C. PIPE SHALL BE PIPE APPROVED FOR USE IN THE CITY BY THE FIELD PLUMBING AND MECHANICAL INSPECTOR FOR THE CENTRAL INSPECTION DIVISION OF THE DEPARTMENT OF HOUSING AND ECONOMIC DEVELOPMENT. LOCATIONS OF THE ENDS OF THE RISERS SHALL BE MARKED BY FASTENED TO THE GROUND CLASSIC CONCRETE. THE ENDS OF THE RISERS SHALL BE EXTENDED TO THE GROUND SURFACE AS THE EXCAVATION IS BACKFILLED SUCH THAT THE COLORED CAP WILL BE VISIBLE WHEN THE PROJECT IS COMPLETED. THE ENDS OF THE RISER PIPE AND MANHOLE STUBS SHALL BE CAPPED OR PLUGGED USING FITTINGS PROVIDED BY THE MANUFACTURER OF THE PIPE. CONTRACTOR'S METHODOS FOR SUPPORTING AND BACKFILLING RISER PIPE SHALL BE APPROVED BY THE ENGINEER.

PURCHASING AND INSTALLING RISERS SHALL BE PAID FOR AT THE UNIT PRICES BID FOR THE FIRST 4" SIZE AND DIMENSIONED CONCRETE ENCASEMENT FOR THE VARIOUS MAIN SOWER PIPE SIZES INDICATED; WHICH PRICE SHALL INCLUDE ALL COSTS FOR COMPLETION OF THIS ITEM INCLUDING SADDLES, BENDS, CONCRETE, REINFORCING STEEL, CAPS OR PLUGS, AND ALL OTHER NECESSARY MATERIALS OR WORK. CONCRETE ENCASEMENT OF THE RISER PIPE TO THE TOP OF THE BEND AS SHOWN BY THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THE COST FOR THIS WORK SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER ITEMS OF WORK.

THE PROJECT INSPECTOR SHALL REPORT ON INSPECTOR CARDS THE LOCATION OF ALL RISERS CONSTRUCTED AS MEASURED FROM THE NEAREST MANHOLE, THE DIRECTION OF SERVICE, THE ELEVATION OF THE TOP OF THE RISER, AND THE PAY QUANTITIES INVOLVED. THE PROJECT INSPECTOR SHALL ALSO REPORT ON INSPECTOR CARDS THE LOCATION, DIRECTION OF SERVICE, AND SIZE OF ALL STUBS INSTALLED IN MANHOLES.

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