

LATERAL 238, SOUTHWEST INTERCEPTOR

SANITARY SEWER IMPROVEMENTS

FOR

WESTWOOD HEIGHTS SECOND ADDITION

Lots 8 through 15, inclusive, Block 11

Lots 6 through 25, inclusive, and Lots

28 through 30, inclusive, Block 13.

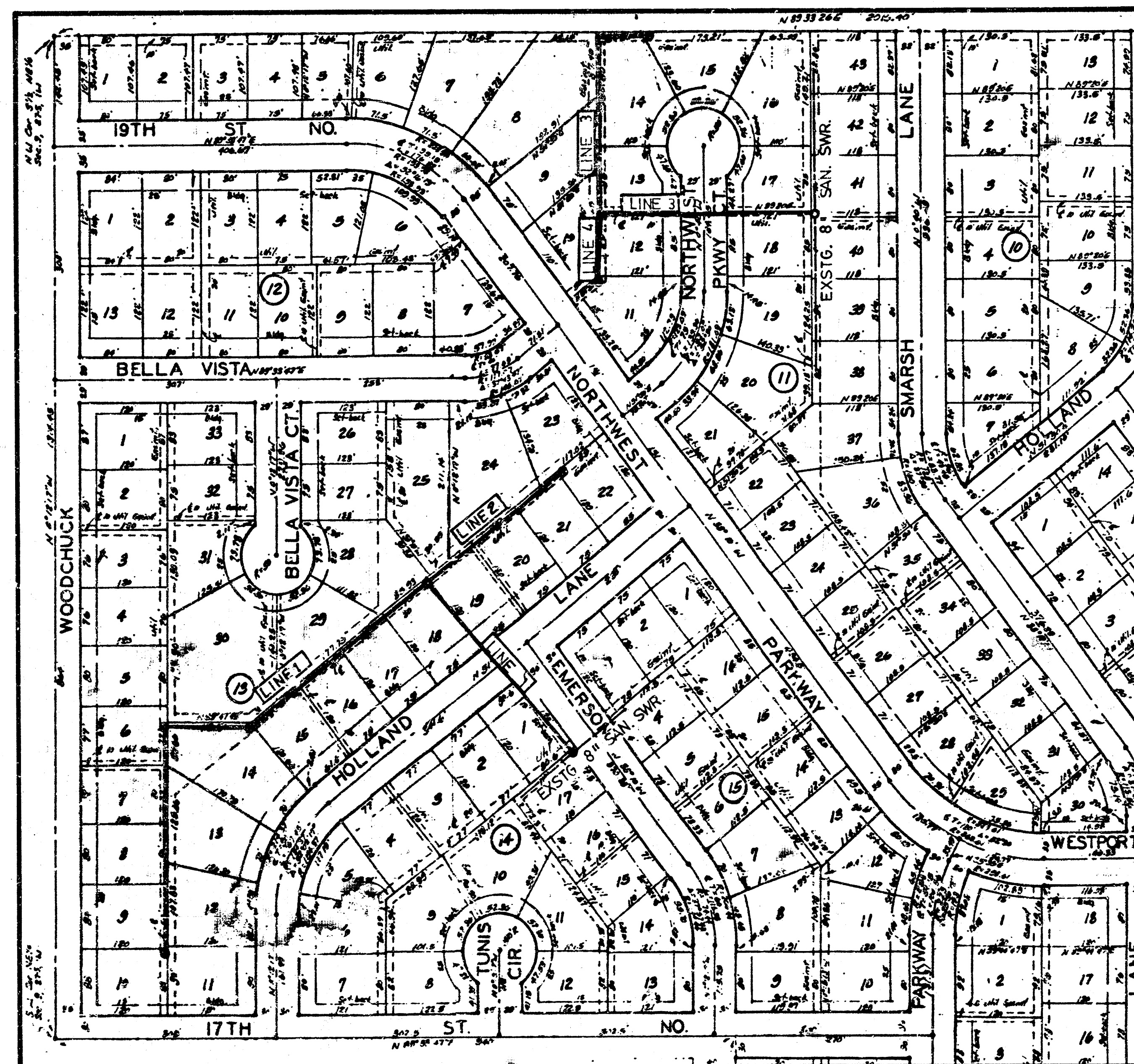
PROJECT NUMBER

468-76-245-81674-000-000-C01

GENERAL NOTES

1. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are disturbed by his construction operations. Such irons shall be re-established by a licensed land surveyor or professional engineer, in accordance with state laws.
2. The Contractor shall excavate and remove the existing pipe plug at Sta. 1+24, Line 3, in order to verify the pipe fio elevation prior to proceeding with construction.

North
No Scale



BENCH MARKS

1. City Disc. 42' no. and 36.5' east of 14.000 cor., intersection of Ridge Road at 17th Street No. Elev. = 142.51 city datum
2. 1' cut in top of curb, east side 22' north of intersection Holladay Ln. at Northwest Parkway, on Northwest Parkway. Elev. = 156.47 city datum
3. 1' cut, 2' east of exstg. end of return on the northerly side Northwest Parkway, located near west end of Lot 20, Blk. 11, Westwood Heights Second Addn. Elev. = 154.62 city datum
4. 1' cut 5.5' west of end of exstg. curb (east of exstg. ab. in side) South Side 17th Street No., located near the NE cor. of Westlink 16th Addn. Elev. = 157.25 city datum

CITY of WICHITA, KANSAS

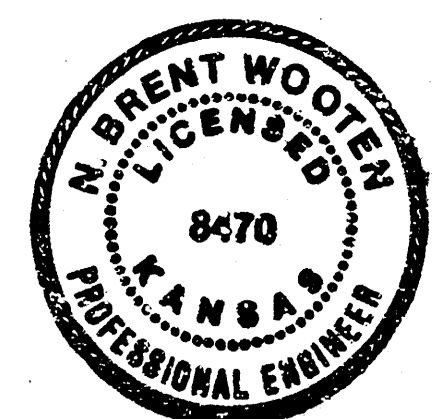
MICHAEL E. LINDEBAK
CITY ENGINEER

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AS BUILT
RPL
7-20-87

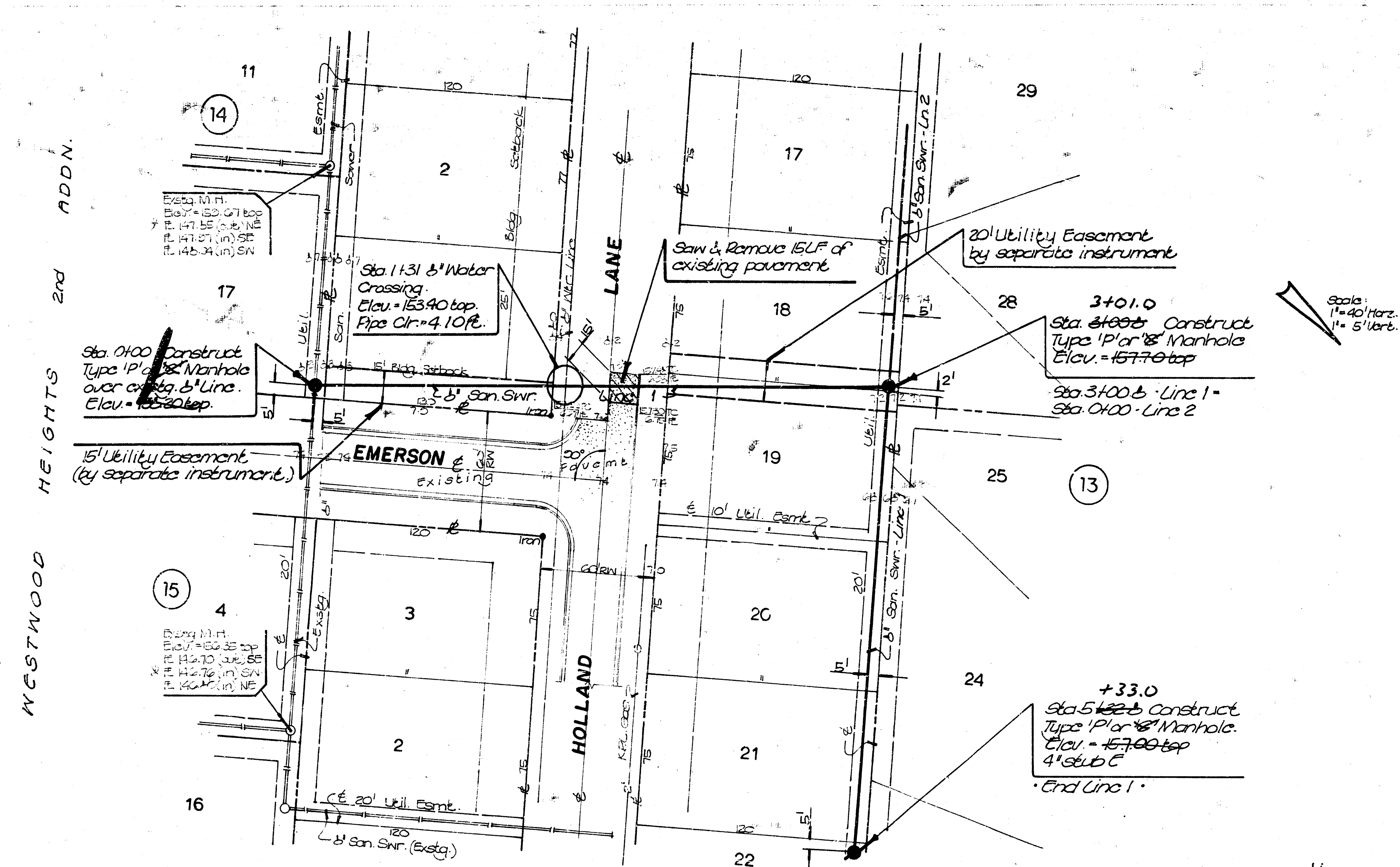
TITLE SHEET



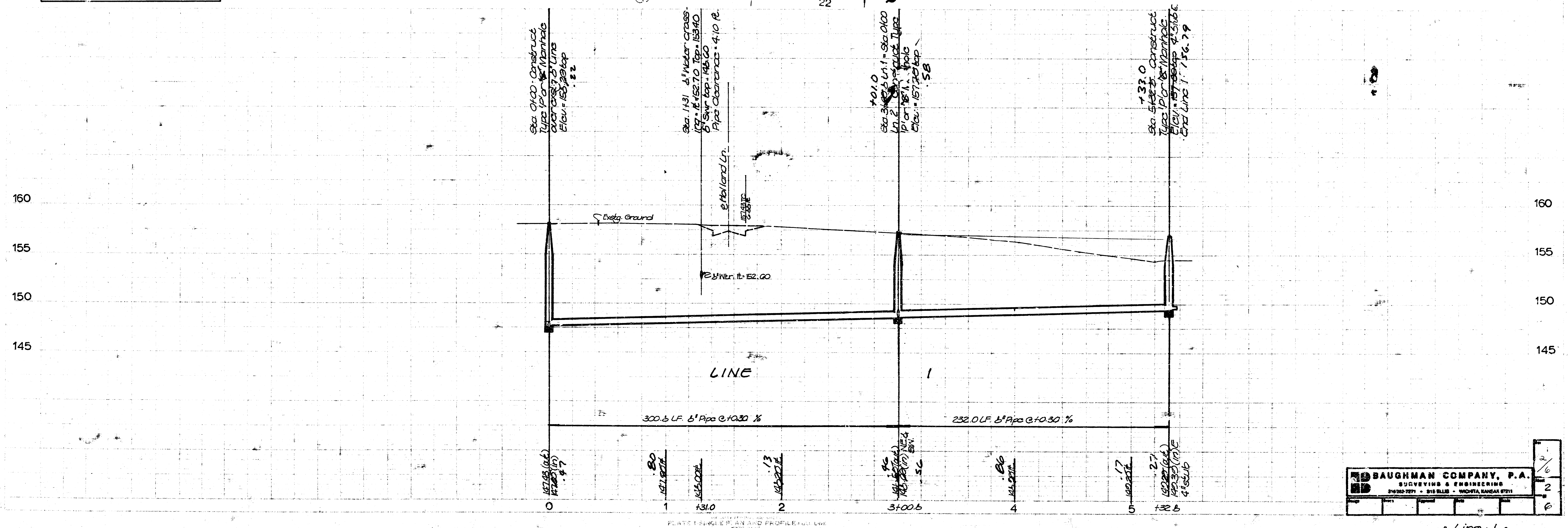
BAUGHMAN COMPANY, P.A.					
SURVEYING & ENGINEERING					
315262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
Design	Drawn	Approved	Date	Scale	Sheet
W.B. Nader	See Jr.		April, 87	1"=40'±	1 of 6

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- Benchmarks:**
1. City Disc 42" and 36" cast of 14300 cor., intersection of Ridge Road & 17th Street No. Elev. = 142.61 city datum
 2. 1' x 1' x 1' in top of curb east side 22' north of intersection Holland Ln & Northwest Parkway on Northwest Parkway. Elev. = 156.71 city datum
 3. 1' x 1' x 1' in top of curb and of return on the northern side Northwest Parkway, located north-west and lot 20, 21 & 11, Westwood Heights Second Addition. Elev. = 154.82 city datum
 4. 1' x 1' x 1' in top of curb and of curb curb (not of curb curb) south side 17th Street No. located near the N.E. cor. of Nashville Loan Bldg. Elev. = 157.23 city datum

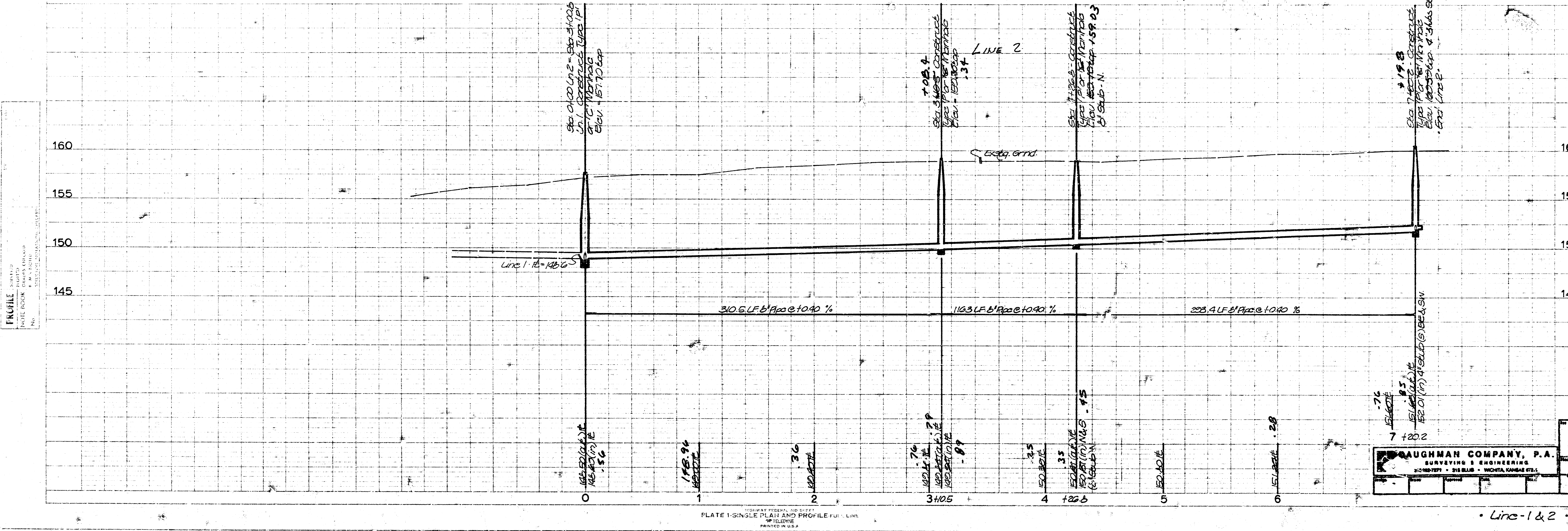
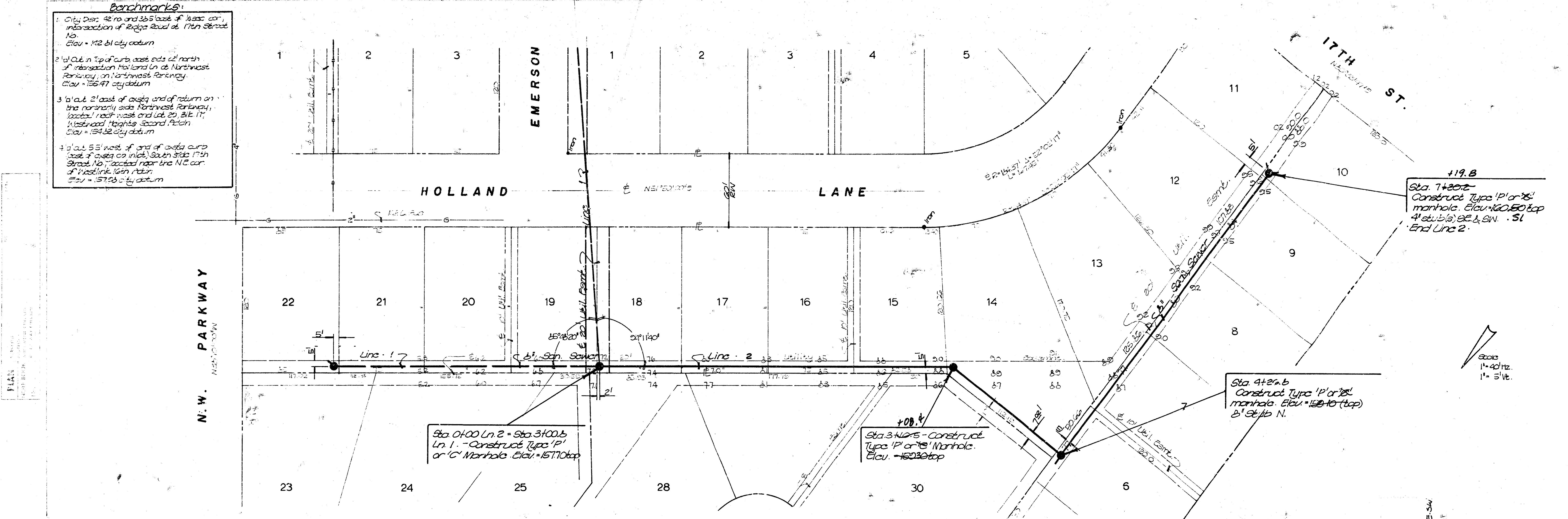


Note: Saw Joint shall be incidental to Pavement Removal Bid Item.

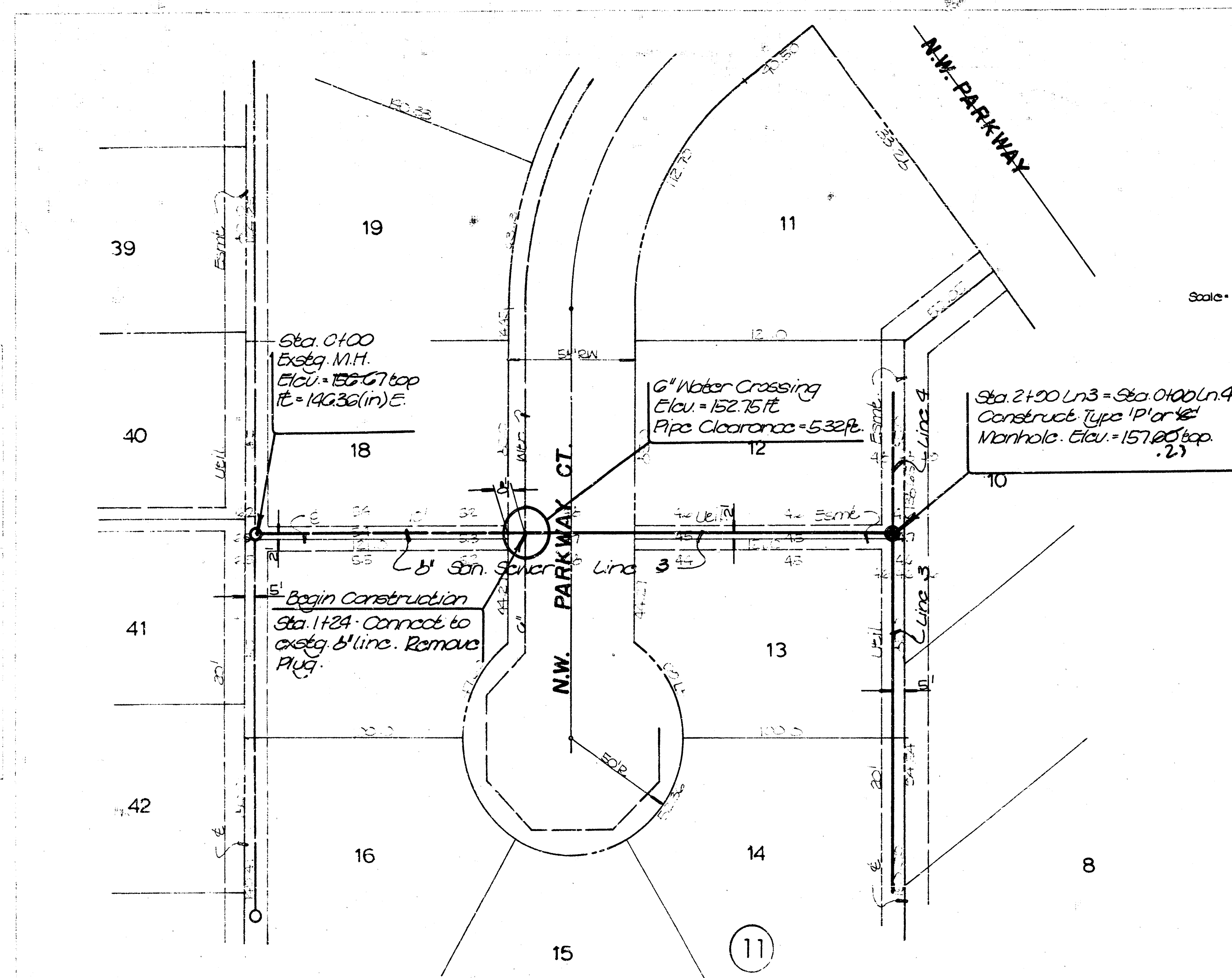


BAUGHMAN COMPANY, P.A.
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- Benchmarks**
- City Ditch #2 to and 3/4" east of 1/2" S.W. corner of intersection of 2nd St. and 17th St. Elev. = 152.41 city datum
 - 1' x 1' in top of curb east side 22' north of intersection of 2nd St. and 17th St. Parkway on Northwest Parkway Elev. = 156.41 city datum
 - 1' x 1' in top of curb east side of return on the northerly side Northwest Parkway located north west and lot 20, Blk. 11, Westwood Heights Second Addition Elev. = 154.32 city datum
 - 1' x 1' in top of curb east side of curb east side of 2nd St. South side 17th St. located near the N.E. cor. of 1st and 17th St. Elev. = 157.25 city datum

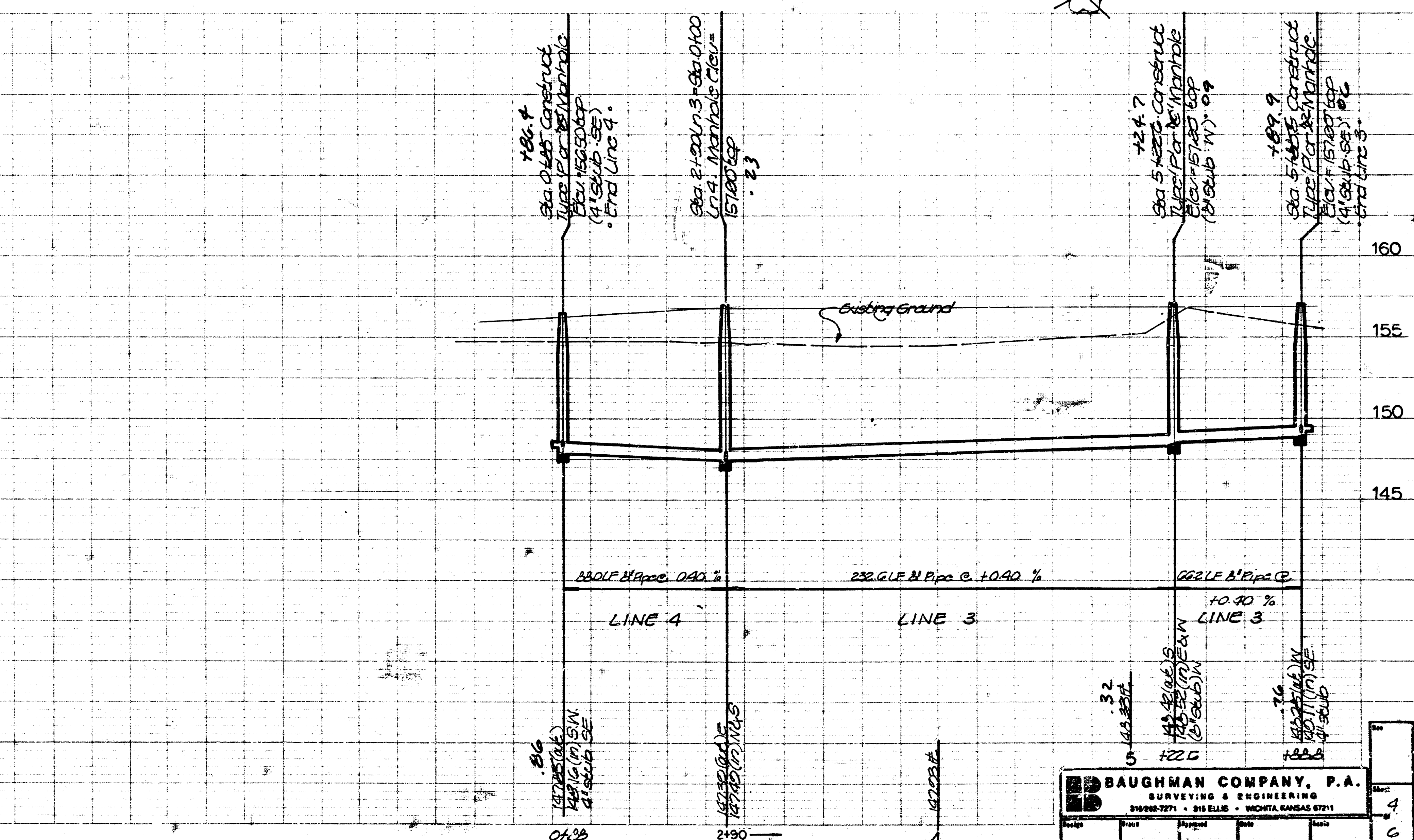
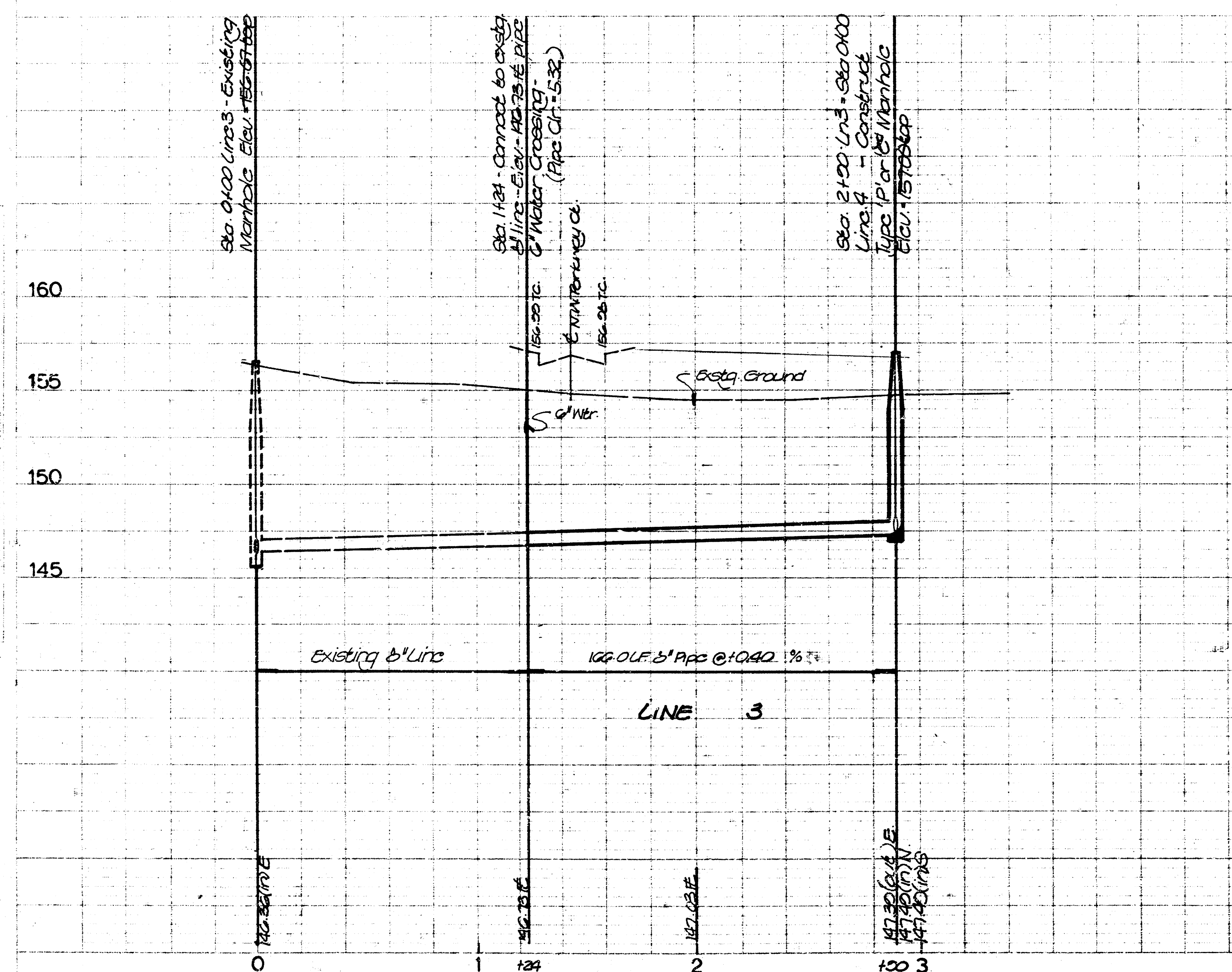
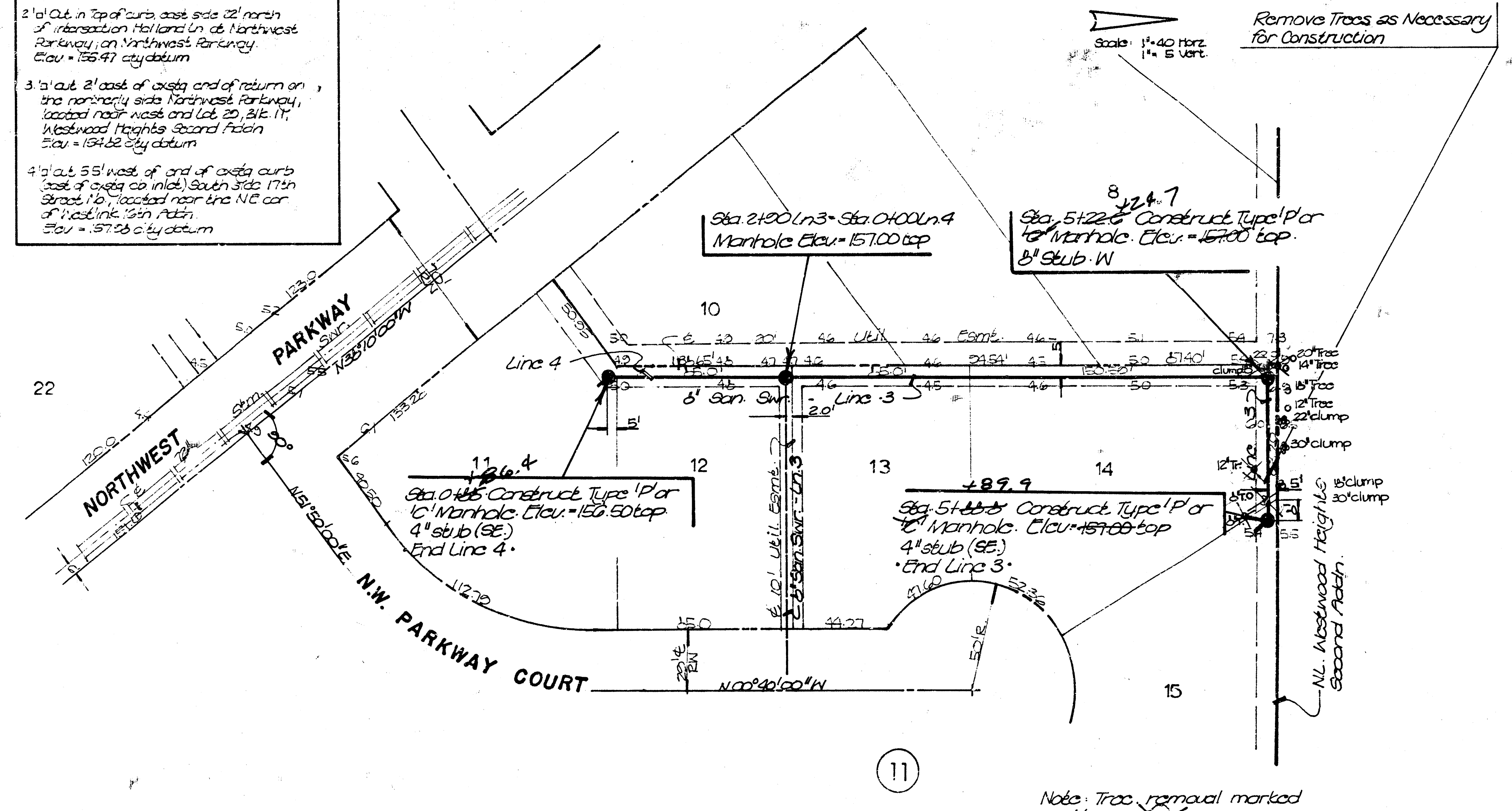


PLATE 1-SINGLE PLAN AND PROFILE-ULL LINE

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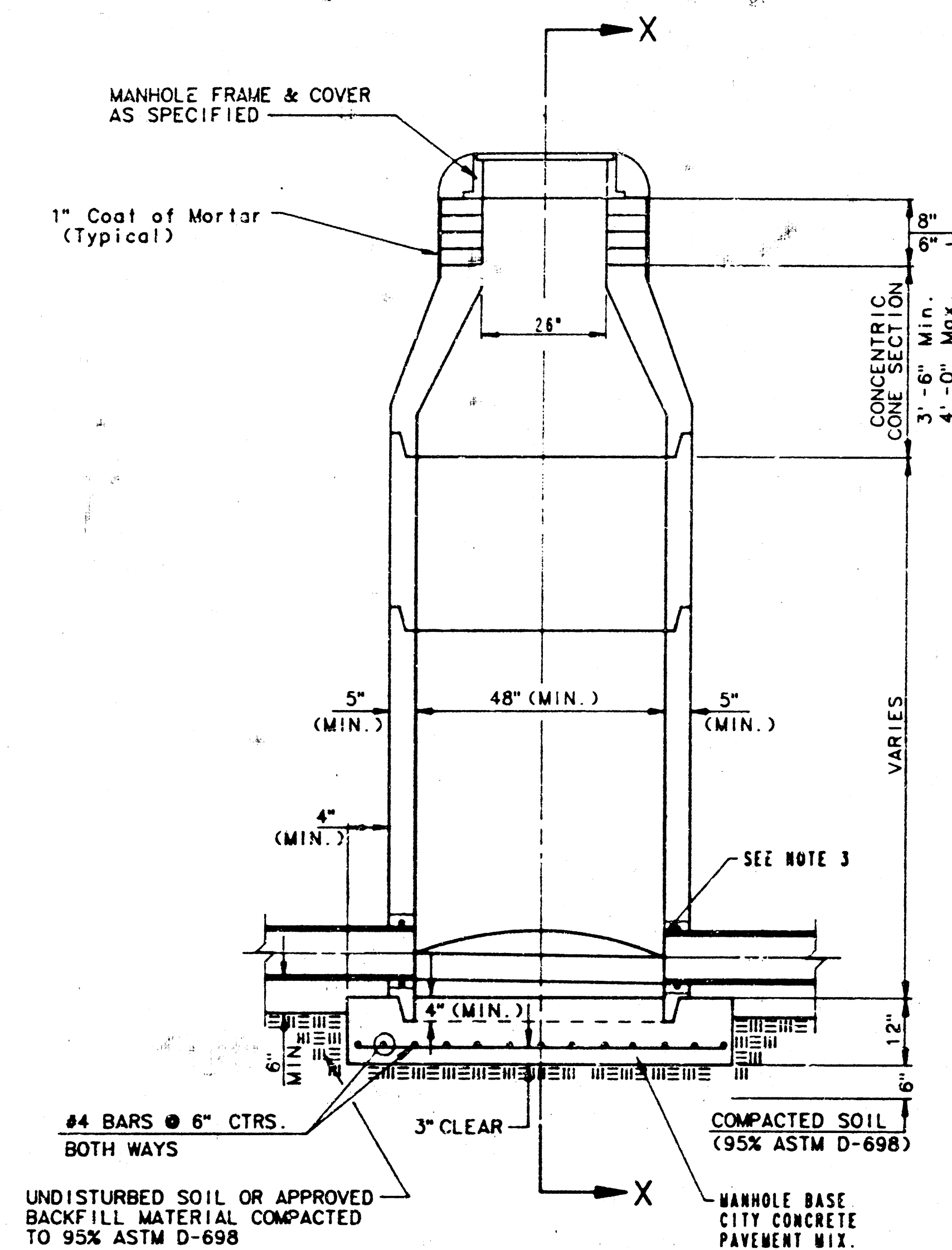
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SEWER APPURTENANCES DETAILS

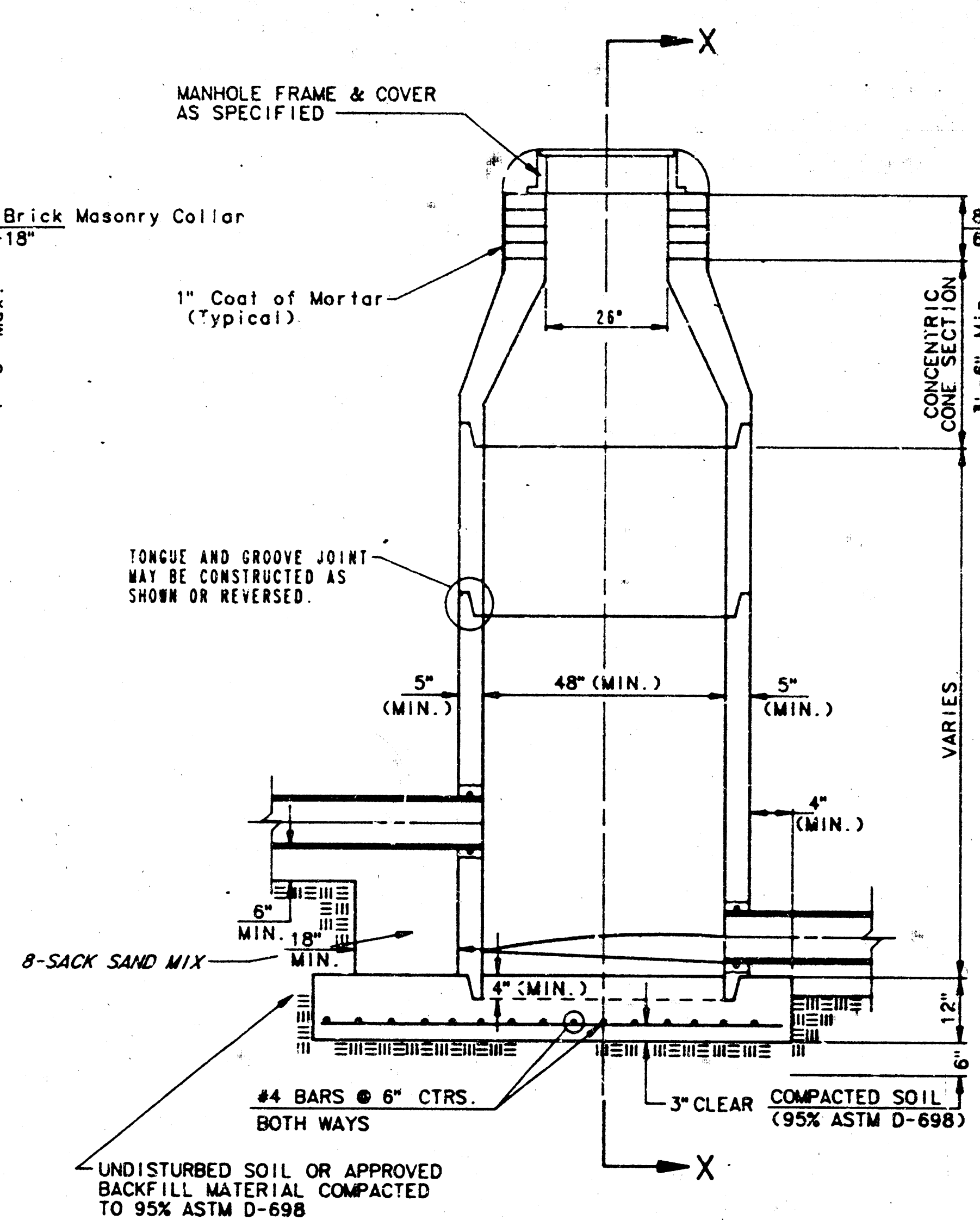
ADOPTED AS STANDARD DESIGN

BY

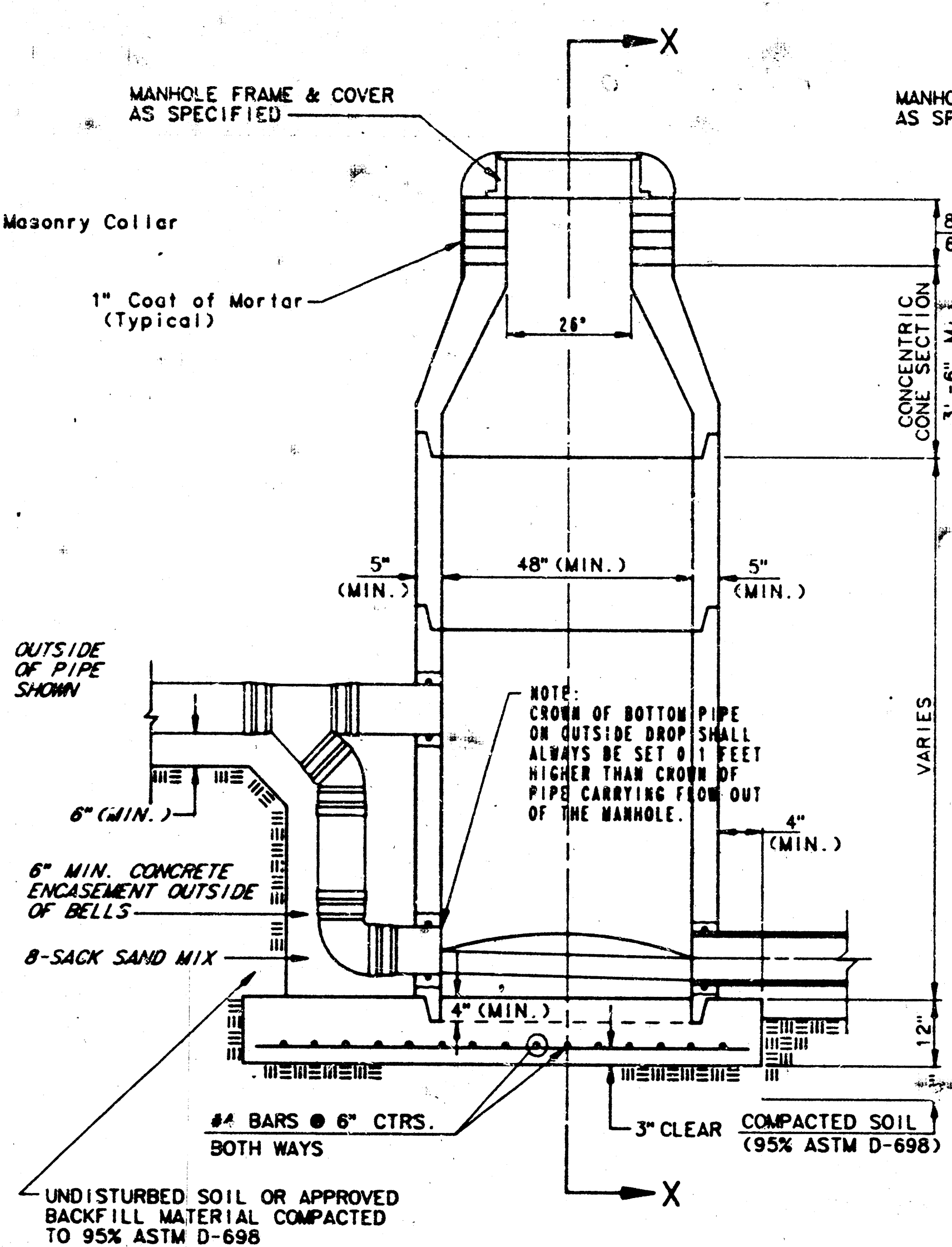
CITY OF WICHITA



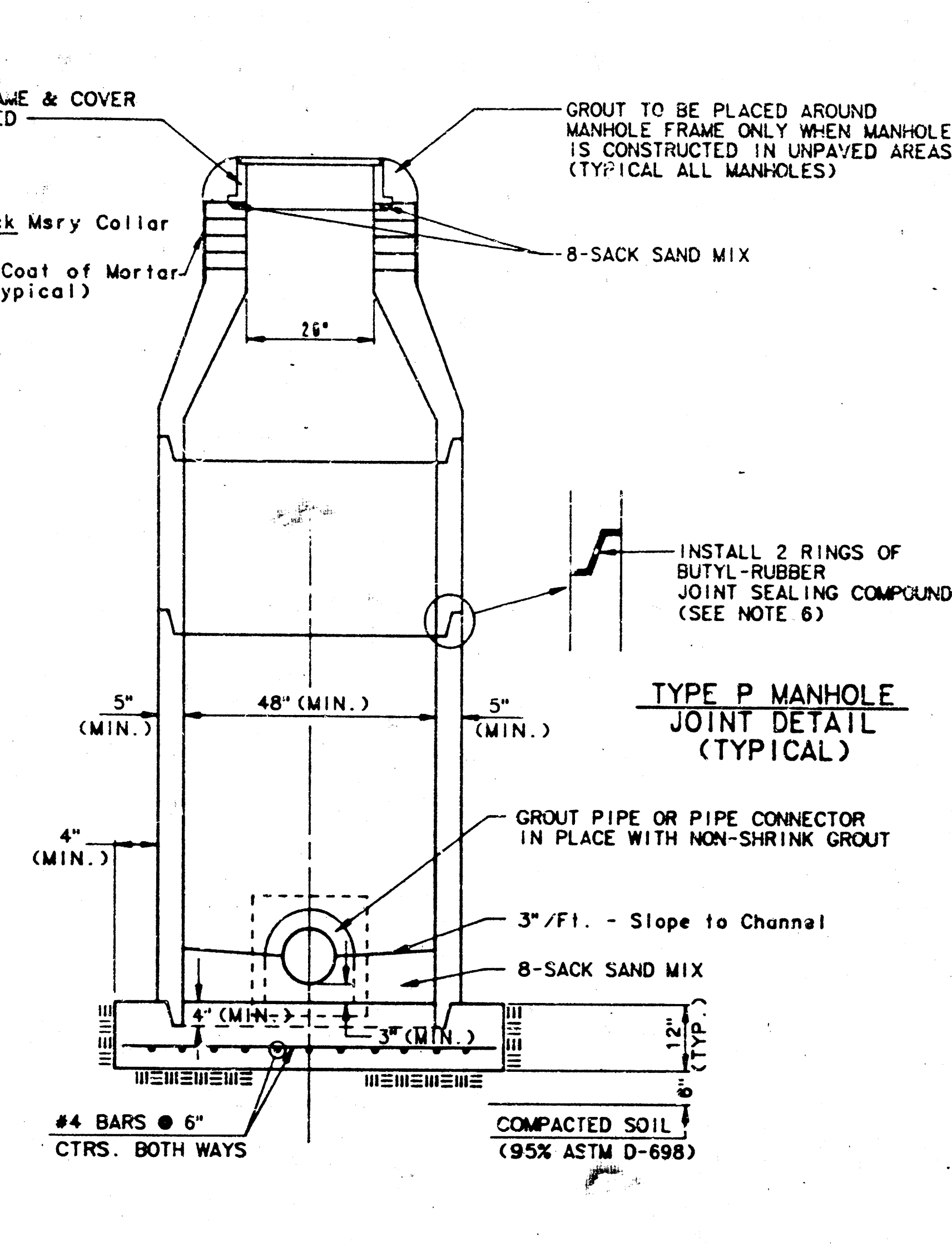
TYPE P
STANDARD MANHOLE



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. C-1278 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 OF NEMEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT OF NORTALUMA 633 BITUMINOUS 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 1 BAG OF CEMENT PER CUBIC YARD. COARSE SAND SHALL BE USED IN MORTAR. MORTAR SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS. CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADJUTIVE. 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 CONSTRUCTION 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 REVEAL 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 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.

City of Wichita, Kansas

STANDARD MANHOLE

RING AND LID AS SPECIFIED

SEE GEN NOTES

8" MIN - 18" MAX
BRICK MASONRY COLLARS

26"

8" BRICK MASONRY

1" COAT OF MORTAR

MANHOLE WALL

CITY CONC PAV'T MIX

30"

8"

NOTE CROWN OF PIPE FLOWING IN SHALL NOT BE LOWER THAN CROWN OF PIPE FLOWING OUT

FLOOR SHAPING SLOPE - 3" TO 1'

VARIABLE

9" MIN - 48" MAX

9" MIN

SEE GEN NOTES

4" MIN 4" MIN 8"

MANHOLE BASE

CITY CONC PAV'T MIX

Technical drawing of a manhole structure showing various components and dimensions. The drawing includes the following labels and dimensions:

- SEE GEN NOTES
- 8" BRICK MASONRY
- 1" COAT OF MORTAR
- 20"
- 30"
- 8" MIN
- 18" MAX
- BRICK MASONRY COLLAR
- 30" MIN - 48" MAX
- MANHOLE WALL (17% CONC PAV'T MIX)
- 8"
- NOTE: BOTTOM SHALL BE 0' OUTFLOWING
- SEE GEN NOTES
- 8" SACK SAND MIX FOR PIPE SUPPORT TO LIMIT OF EXCAV
- 9" MIN
- FLOOR SHAPING
- SEE GEN NOTES
- 8"
- 4" MIN
- 3" MIN
- MANHOLE BASE

SEE GEN. NOTES

8" BRICK MASONRY

1" COAT OF MORTAR

26 1/2

30 1/2

8" MIN. 18" MAX. BRICK MASONRY COLLAR

30' MIN. - 40' MAX.

8"

SEE GEN. NOTES

CHANNEL LOW OF ENTER

REVERSE "Y"

8-SACK SAND MIX
6 MIN. CONCRETE
ENCASEMENT OUTSIDE OF
BELLS OR TO THE LIMIT
OF EXCAVATION WHEN
MORE THAN 6'

NOTE: CROWN OF BOTTOM PIPE ON
OUTSIDE DROP SHALL ALWAYS BE
SET 0.1 FT. HIGHER THAN CROWN
OF PIPE CARRYING FLOW OUT OF
THE MANHOLE

VARIABLE

MANHOLE WALL
CITY CONC. PAV'T MIX

9" MIN.

MANHOLE BASE
CITY CONC. PAV'T MIX

SEE GEN. NOTES

4' MIN

8"

4' MIN

FLOOR SHAPING
SLOPE 3" TO 1"

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD OF CONCRETE USED IN MAHMOLE 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 MAHMOLE BASES AS SHOWN IN THE DRAWINGS WHEN THE MAHMOLES ARE CONSTRUCTED IN IMPAVED AREAS. TYPE "C" MAHMOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER, THE INSIDE DIAMETER OF TYPE "C" MAHMOLES SHALL BE 4". COMPLETED MAHMOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. REINFORCING STEEL SHALL BE INSTALLED IN THE MAHMOLE 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 MAHMOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MAHMOLE.
3. AN OPENING SHALL BE CUT IN THE MAHMOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MAHMOLES. THE UPPER INLET PIPE SHALL BE GROUDED INTO THE MAHMOLE WALL. THE LOW-SIDEING GROUT AT THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
4. THE FLOORS OF ALL MAHMOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MAHMOLES WILL BE SELF CLEANSING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MAHMOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE LOW-SIDEING GROUT. THE OUTLET FLOW CHANNELS SHALL BE SHOWN IN THE DRAWINGS. EXCEPT FOR INSIDE DROP MAHMOLES, FLOW CHANNELS FOR INSIDE DROP MAHMOLES 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 MANHOLE 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.

5. 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.
6. 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.
7. 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.
8. 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.

SHEET 6 OF 6

468-76-245-81674-000-000-001