

Lat. 34, C.I.S.
SANITARY SEWER IMPROVEMENTS
 to serve

SHADOW WOODS ADDITION - PHASE I

CITY OF WICHITA, KANSAS

Neil Cable, P.E. City Engineer

Project Number

468-83595

O.C.A. Number

743982

Benchmark

RR Spike in N. Face of PP in
 N. R/W of Maple N. of Nineiron.
 Elev. = 177.01 (City Datum)

"□" Cut center of north
 Headwall of RCBC in N. R/W of
 Maple 570' East of centerline
 of City View.
 Elev. = 187.91 (City Datum)

GENERAL NOTES:

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

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

- Cox Communications 262-4270
- Kansas Gas Service 1-888-482-4950
- Westar Energy 383-8650
- Aquila Energy 1-888-482-4950
- Southwestern Bell 268-2245
- City of Wichita Water Dept. 268-4563
- City of Wichita Sewer Maint. 268-4024
- City of Wichita Storm Sewer Maint. 268-4090
- City of Wichita Traffic Maint. 268-4034
- Conoco Pipeline Co. 1-800-231-2551
- Williams Pipeline Co. 529-6600
- Phillips Pipeline Co. 1-800-766-8230

2. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the 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.

3. 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 on site location. Locations, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

4. 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.

5. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.

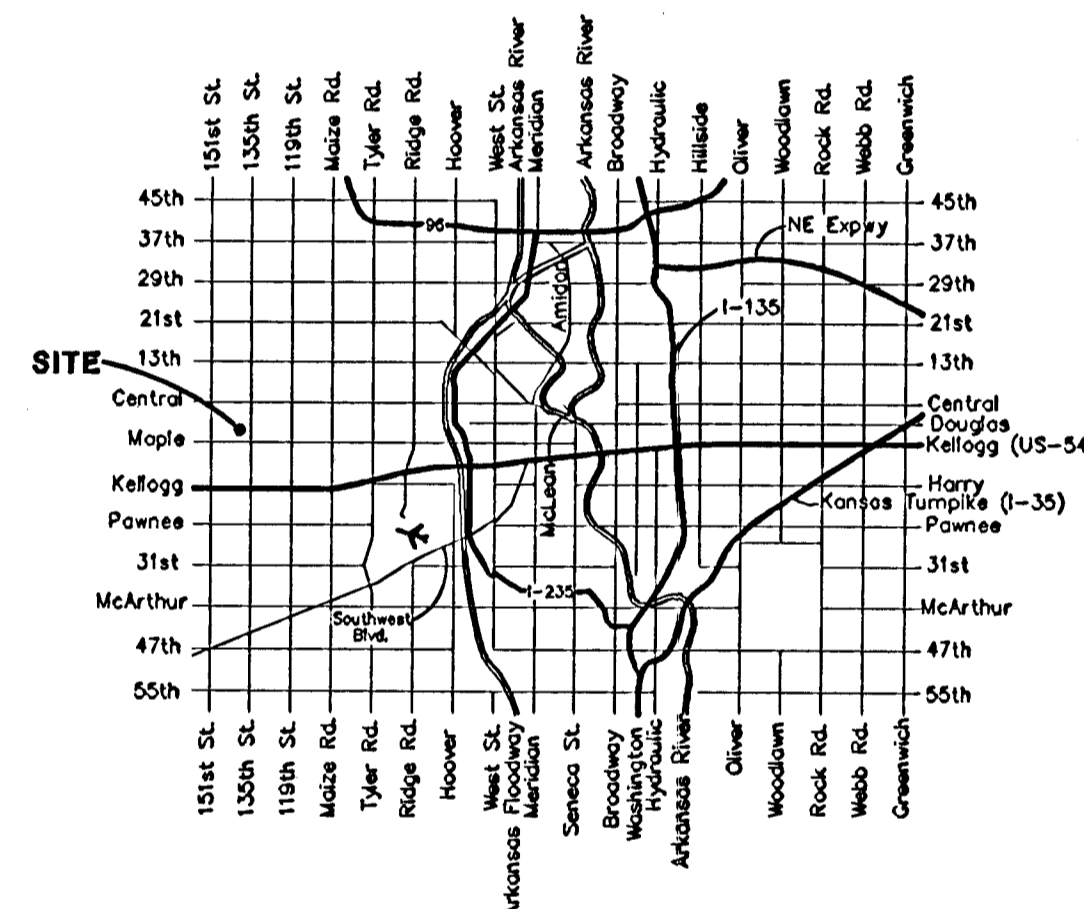
6. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws

7. 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.

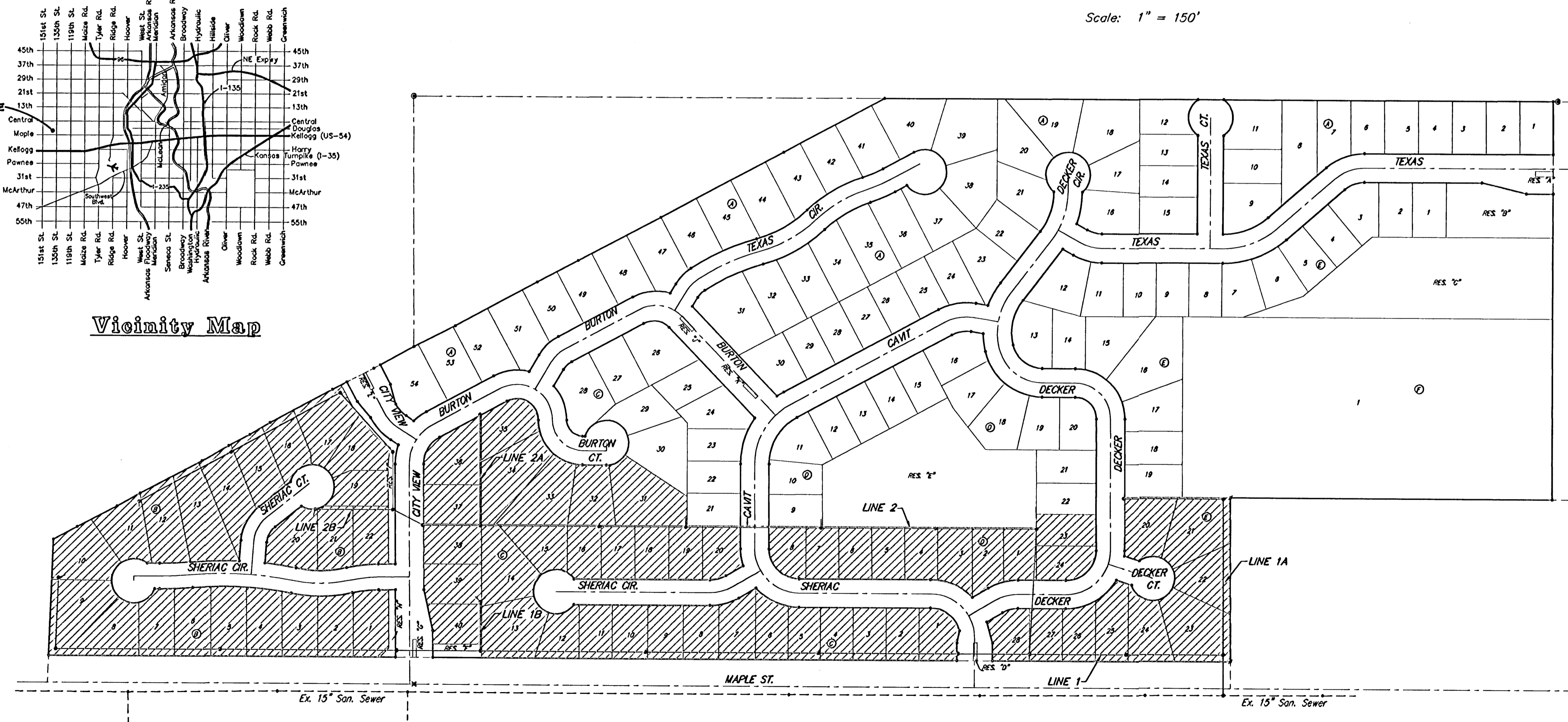
8. When connecting to existing manhole or stub, the contractor shall reshape manhole bottom or adjust the existing stub's alignment or elevation as necessary. Cost shall be subsidiary to project.

9. The Contractor shall grade around exposed manholes at a 1:1 slope. Manholes set lower than existing grade shall have 9" berm constructed around manhole to prevent infiltration into sanitary sewer system. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole. Easements shall be graded with the storm water drain improvement project as part of the mass grading plan.

10. This project does not include seeding. The site will be seeded with the storm water drain project as part of the mass-grading plan.



Vicinity Map



Scale: 1" = 150'

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AS BUILT
 RDC
 10/31/03
 .PDF



Benefit District

BENCHMARKS:
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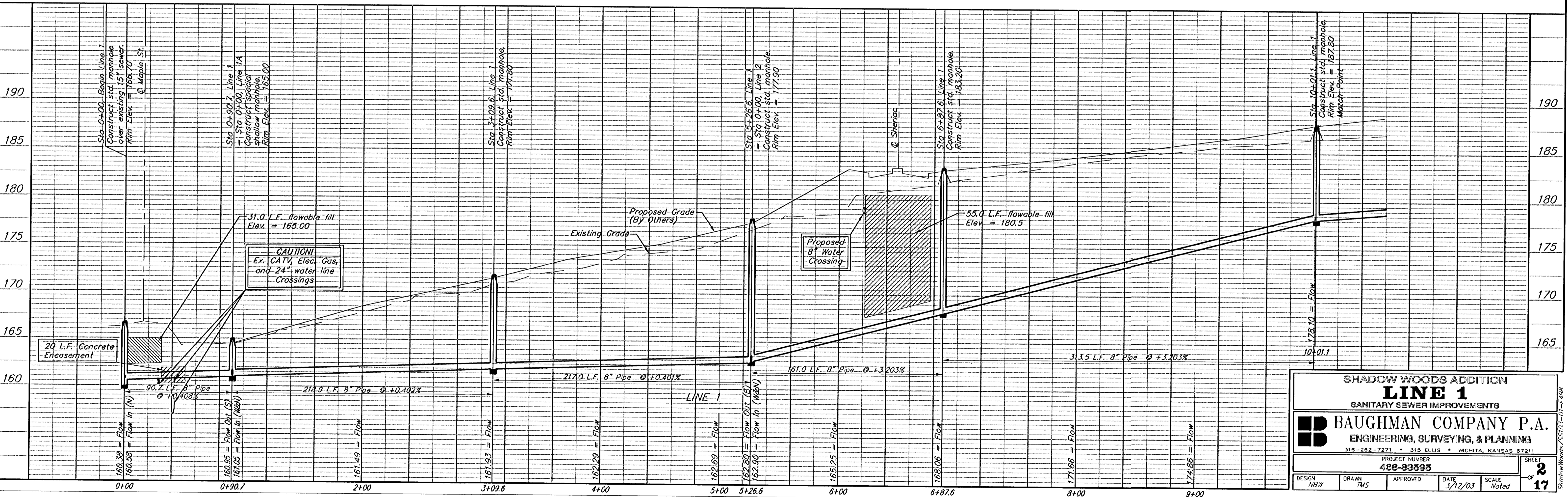
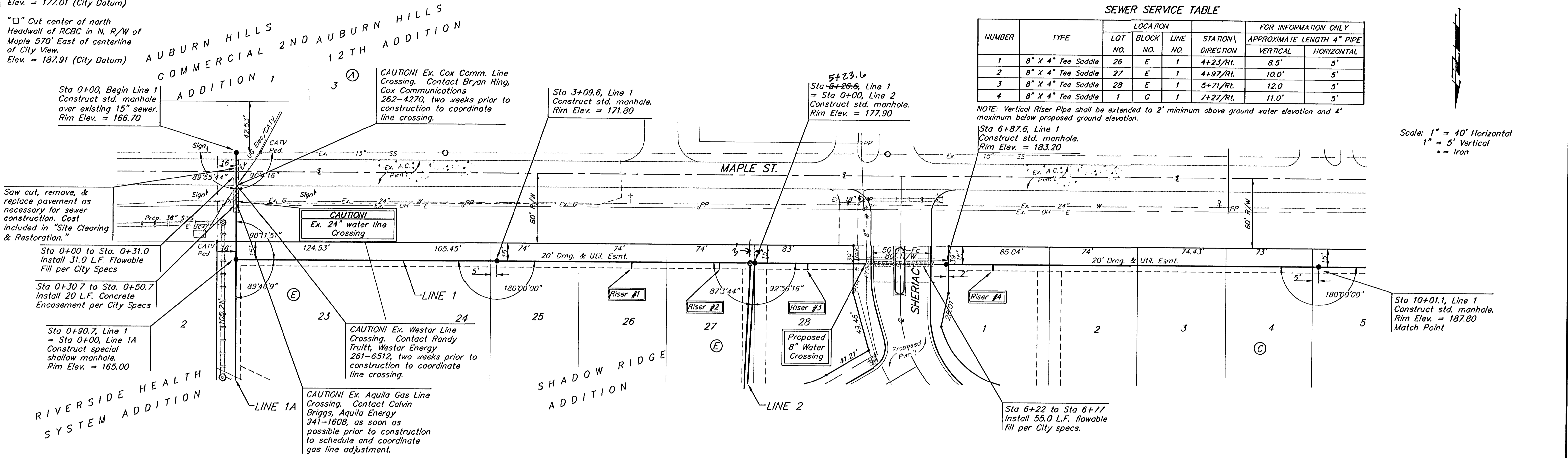
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY		
		LOT NO.	BLOCK NO.	LINE NO.	STATION\ DIRECTION	APPROXIMATE LENGTH 4" PIPE	VERTICAL
1	8" X 4" Tee Saddle	26	E	1	4+23/Rt.	8.5'	5'
2	8" X 4" Tee Saddle	27	E	1	4+97/Rt.	10.0'	5'
3	8" X 4" Tee Saddle	28	E	1	5+71/Rt.	12.0'	5'
4	8" X 4" Tee Saddle	1	C	1	7+27/Rt.	11.0'	5'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

Sta 6+87.6, Line 1
 Construct std. manhole.
 Rim Elev. = 183.20

Scale: 1" = 40' Horizontal
 1" = 5' Vertical
 • = Iron



SHADOW WOODS ADDITION
LINE 1
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-292-7271 • 315 ELLIS • WICHITA, KANSAS 67211

DESIGN NBW	DRAWN TMS	APPROVED	DATE 3/12/03	SCALE Noted	SHEET 2 OF 17
PROJECT NUMBER 480-83695					

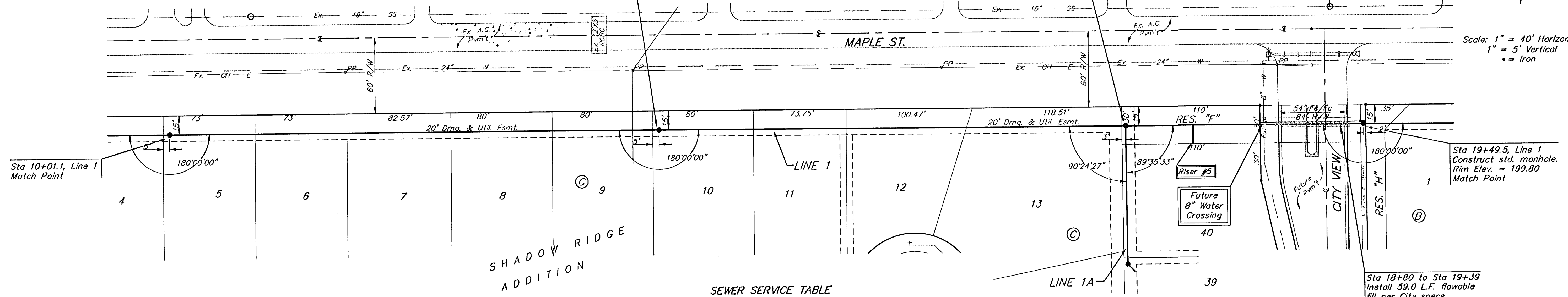
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Sta 13+89.7, Line 1
 Construct std. manhole.
 Rim Elev. = 190.00

Sta 17+60.5, Line 1
 = Sta 0+00, Line 1B
 Construct std. manhole.
 Rim Elev. = 196.40

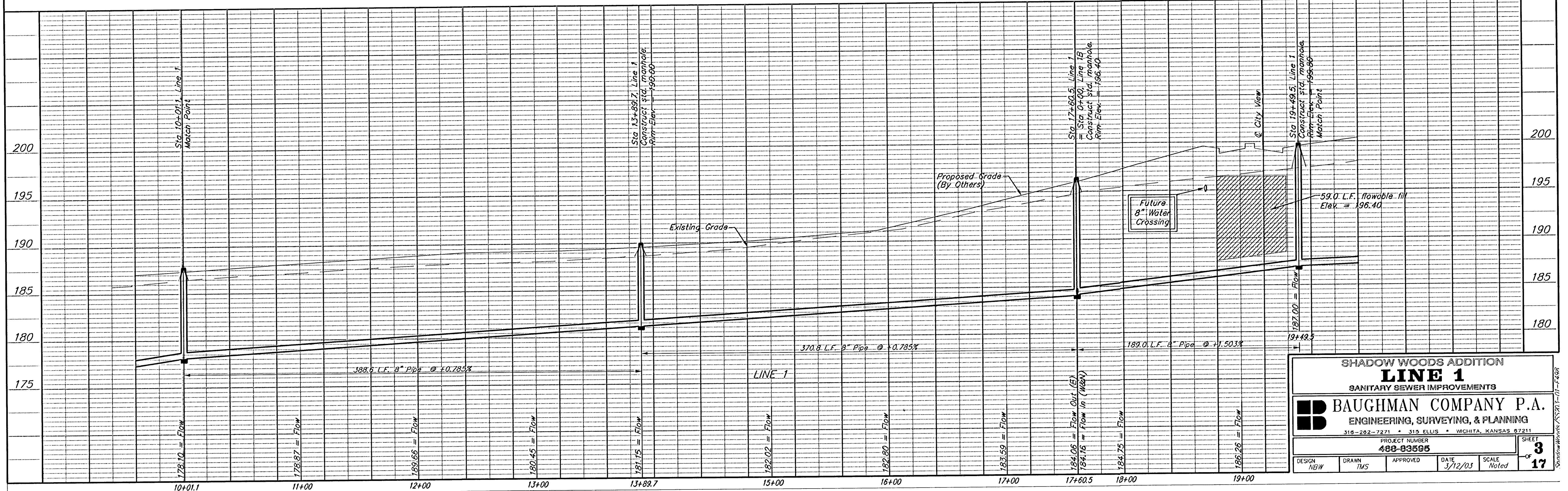
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 • = Iron



SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION\ DIRECTION	APPROXIMATE LENGTH 4\"/>	
5	8\"/>						

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



SHADOW WOODS ADDITION
LINE 1
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
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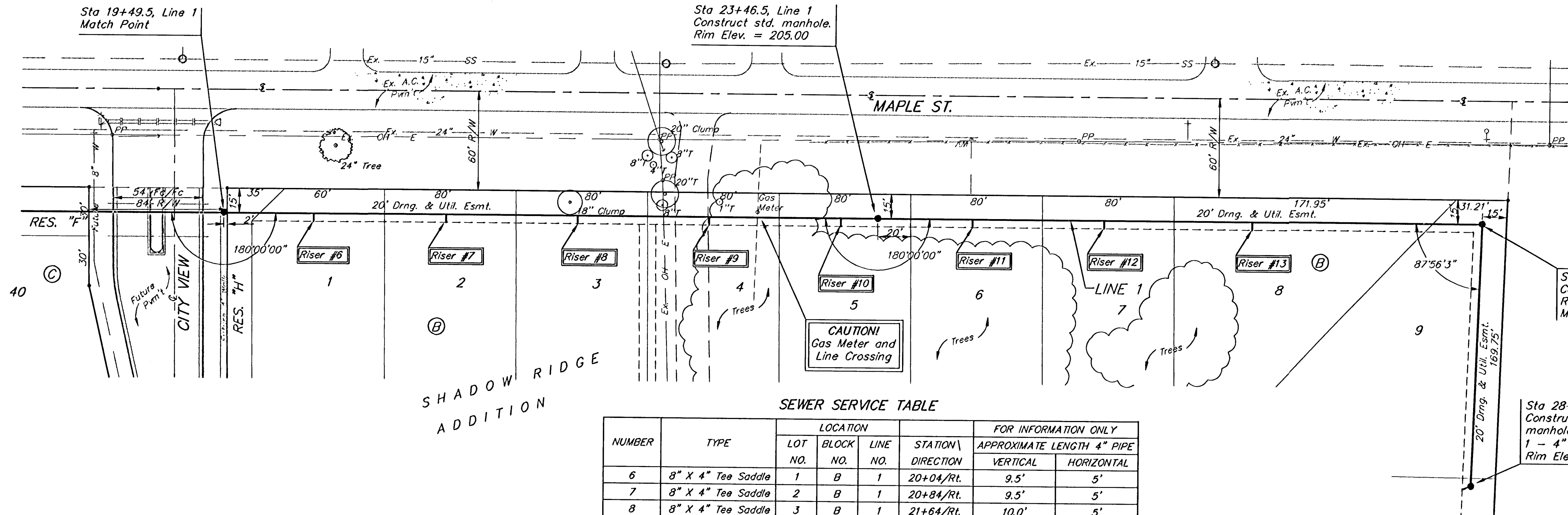
PROJECT NUMBER
488-03595

DESIGN: NBW DRAWN: TMS APPROVED: DATE: 3/12/03 SCALE: Noted

SHEET **3** OF **17**

BENCHMARKS:
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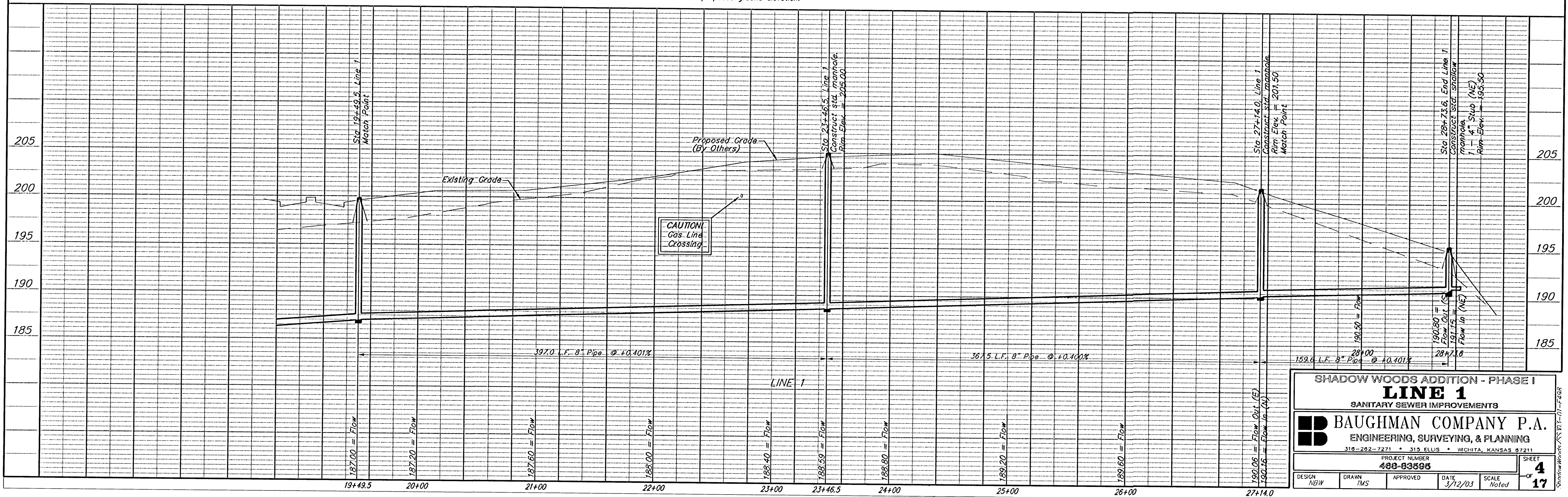
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 • = Iron

SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION DIRECTION	APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
6	8" X 4" Tee Saddle	1	B	1	20+04/Rt.	9.5'	5'
7	8" X 4" Tee Saddle	2	B	1	20+84/Rt.	9.5'	5'
8	8" X 4" Tee Saddle	3	B	1	21+64/Rt.	10.0'	5'
9	8" X 4" Tee Saddle	4	B	1	22+44/Rt.	11.0'	5'
10	8" X 4" Tee Saddle	5	B	1	23+24/Rt.	12.0'	5'
11	8" X 4" Tee Saddle	6	B	1	24+04/Rt.	12.0'	5'
12	8" X 4" Tee Saddle	7	B	1	24+84/Rt.	11.5'	5'
13	8" X 4" Tee Saddle	8	B	1	25+74/Rt.	10.0'	5'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".



SHADOW WOODS ADDITION - PHASE I
LINE 1
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
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PROJECT NUMBER
488-63595

DESIGN: NBW DRAWN: TMS APPROVED: [Signature] DATE: 3/12/03 SCALE: Noted

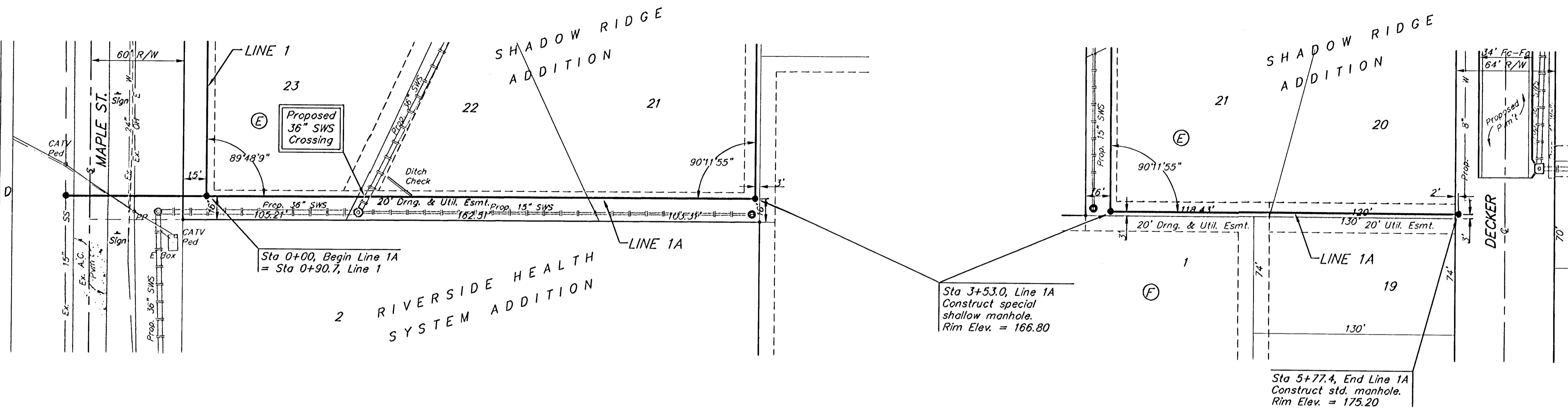
SHEET **4** OF **17**

BENCHMARKS:
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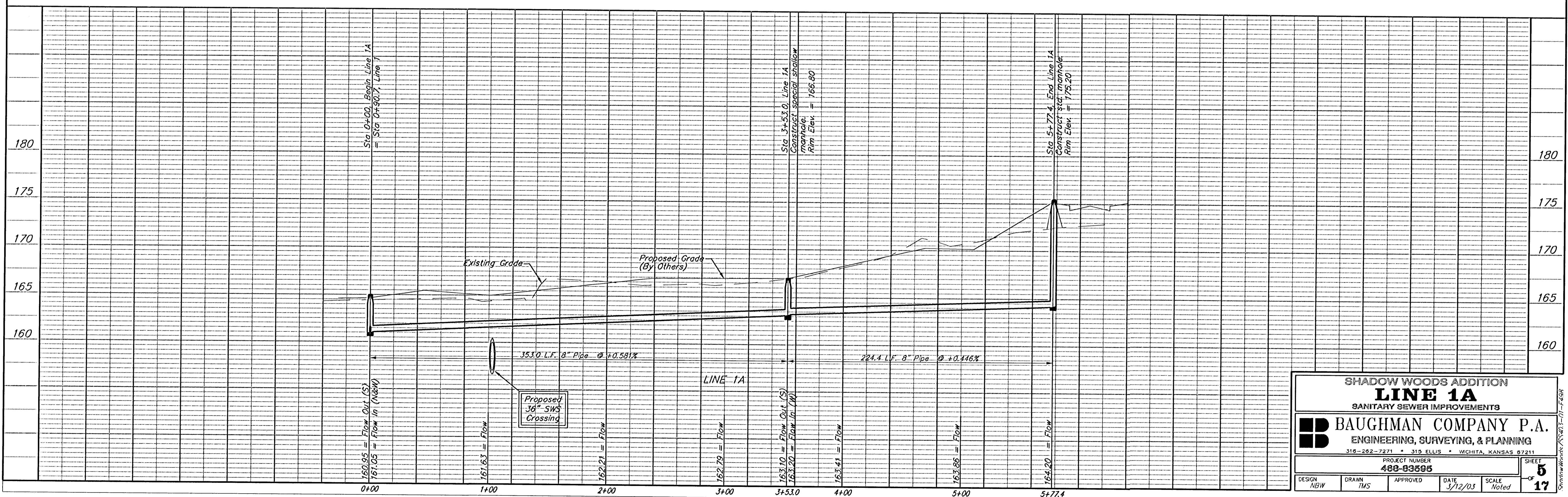
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AUBURN HILLS
 12TH ADDITION ③

AUBURN HILLS
 COMMERCIAL
 ADDITION ①



Scale: 1" = 40' Horizontal
 1" = 5' Vertical
 • = Iron



SHADOW WOODS ADDITION
LINE 1A
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
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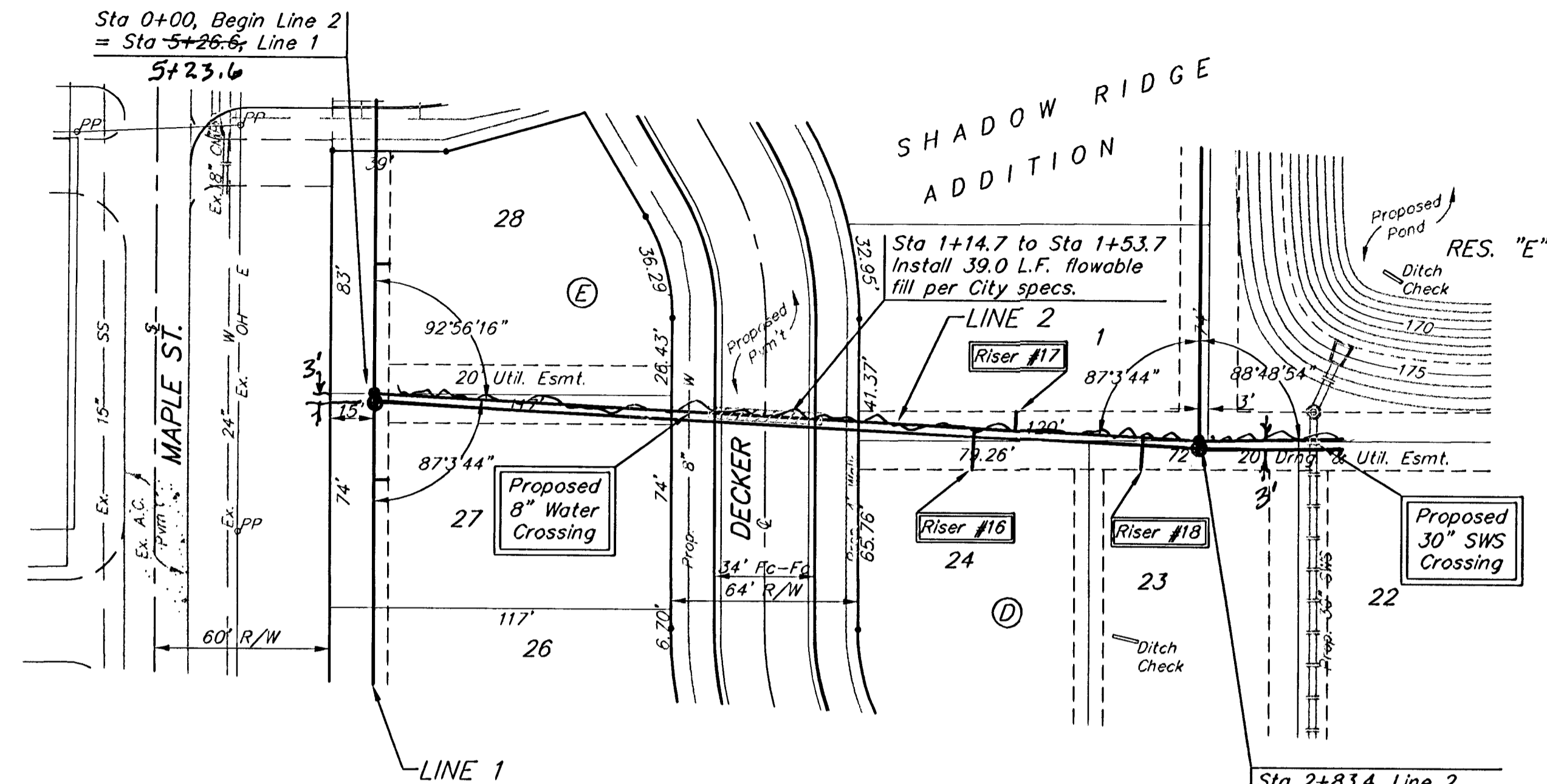
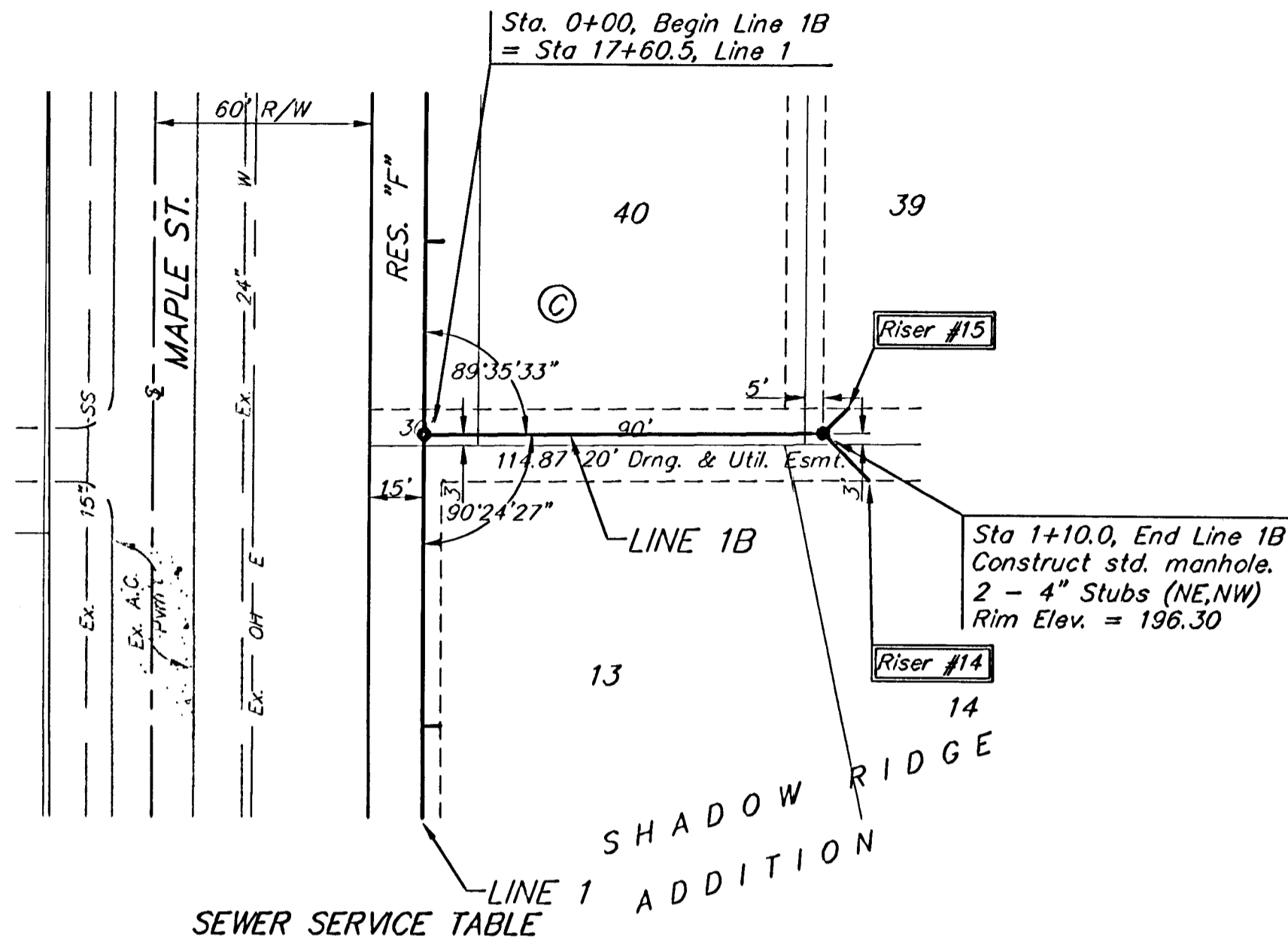
PROJECT NUMBER
488-83695

DESIGN NBW DRAWN TMS APPROVED DATE 3/12/03 SCALE Noted SHEET 5 OF 17

BENCHMARKS:
 RR Spike in N. Face of PP in
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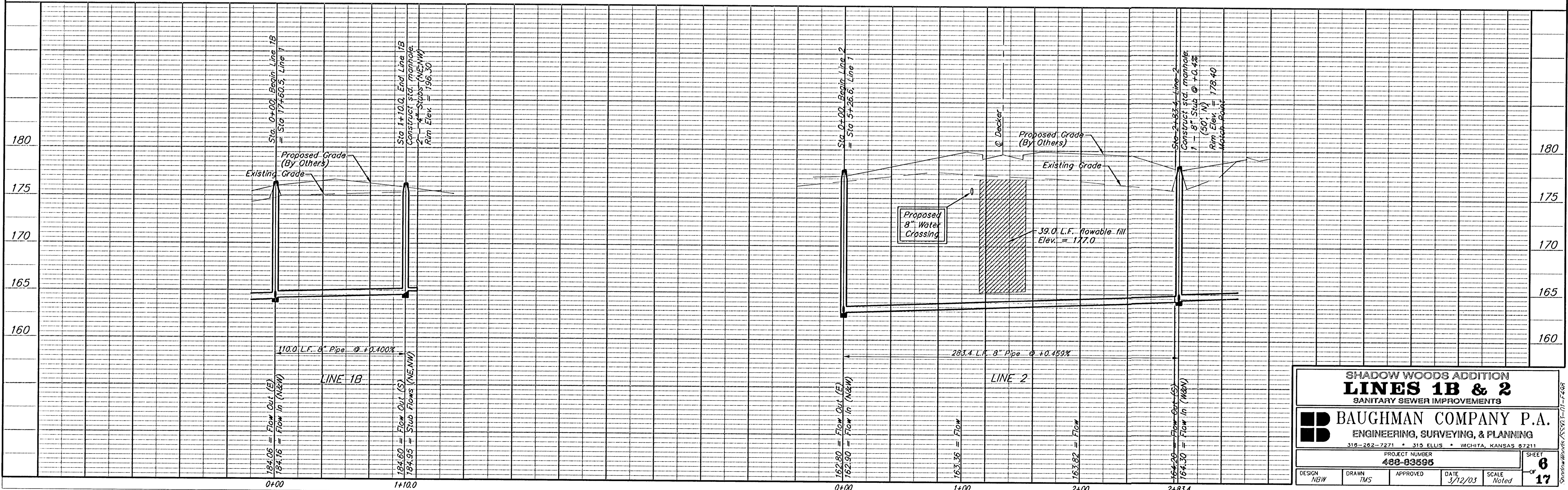
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NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE	
14	4" Stub w/ Riser	14	C	1B	1+05/RL	7.5'	13.0'
15	4" Stub w/ Riser	39	C	1B	1+05/Lt.	10.0'	18.5'
16	8" X 4" Tee Saddle	24	D	2	2+06/RL	12.0'	14.5'
17	8" X 4" Tee Saddle	1	D	2	2+20/Lt.	12.0'	6.5'
18	8" X 4" Tee Saddle	23	D	2	2+64/RL	10.5'	11.0'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

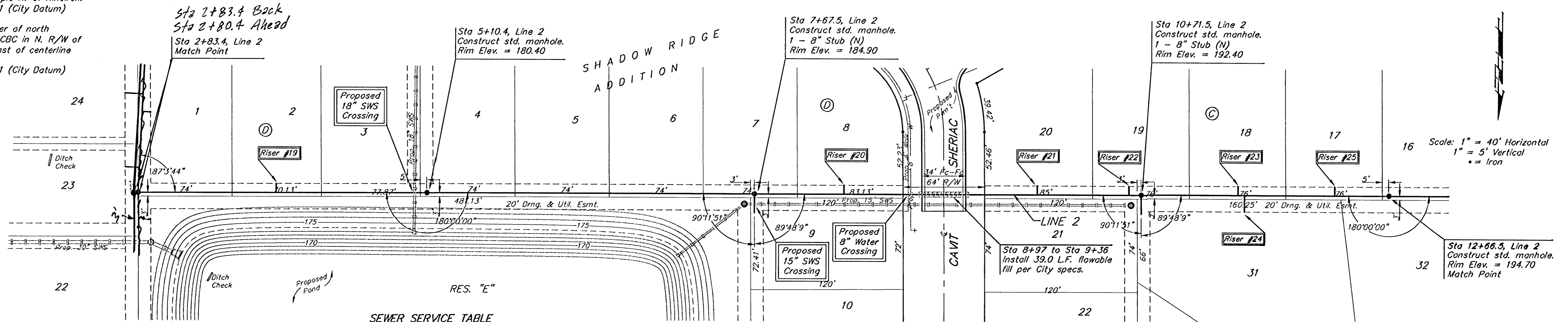


SHADOW WOODS ADDITION
LINES 1B & 2
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
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PROJECT NUMBER 480-83696		SHEET 6	
DESIGN NBW	DRAWN TMS	APPROVED DATE 3/12/03	SCALE Noted

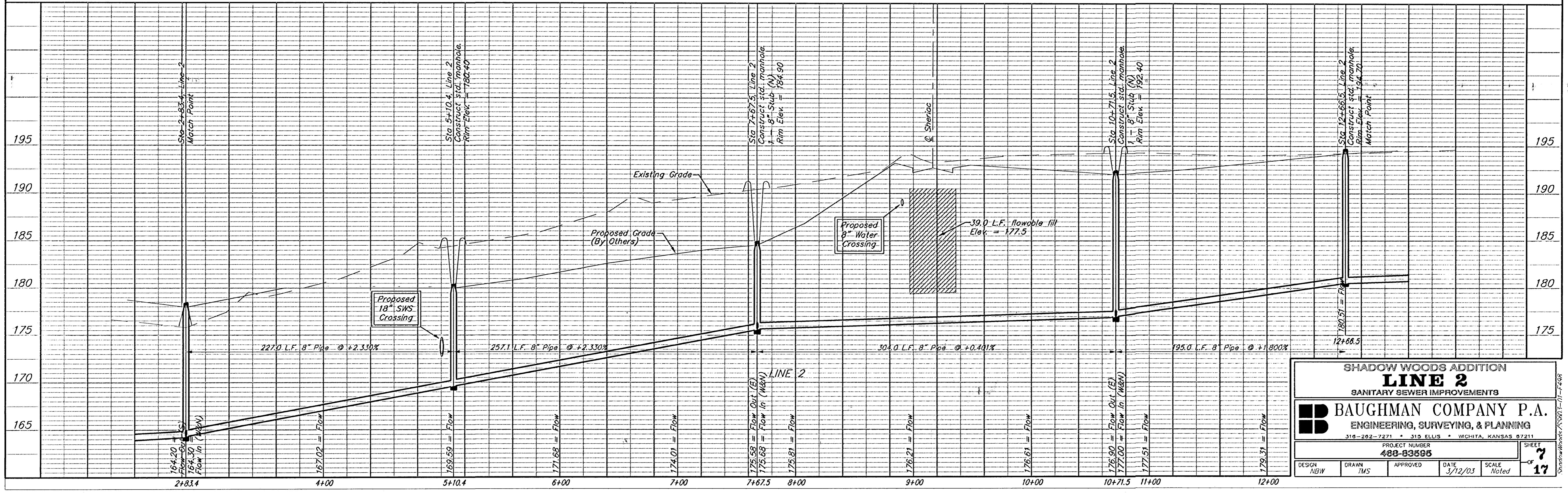
BENCHMARKS:
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 "□" Cut center of north Headwall of RCBC in N. R/W of Maple 570' East of centerline of City View. Elev. = 187.91 (City Datum)



SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE	VERTICAL
19	8" X 4" Tee Saddle	2	D	2	3+92/Lt.	9.0'	7'
20	8" X 4" Tee Saddle	8	D	2	8+38/Lt.	9.5'	7'
21	8" X 4" Tee Saddle	20	C	2	9+90/Lt.	12.0'	7'
22	8" X 4" Tee Saddle	19	C	2	10+62/Lt.	11.5'	7'
23	8" X 4" Tee Saddle	18	C	2	11+48/Lt.	10.5'	7'
24	8" X 4" Tee Saddle	31	C	2	11+53/Rt.	10.5'	13'
25	8" X 4" Tee Saddle	17	C	2	12+24/Lt.	10.0'	7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



SHADOW WOODS ADDITION
LINE 2
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
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DESIGN NBW	DRAWN TMS	APPROVED	DATE 3/12/03	SCALE Noted	SHEET 7 OF 17
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Sta 15+33.8, Line 2 = Sta 0+00, Line 2A Construct std. manhole. Rim Elev. = 194.60

Sta 16+62.8, Line 2 Construct std. manhole. Rim Elev. = 198.20

Sta 16+74 to Sta 17+20 Install 46.0 L.F. flowable fill per City specs.

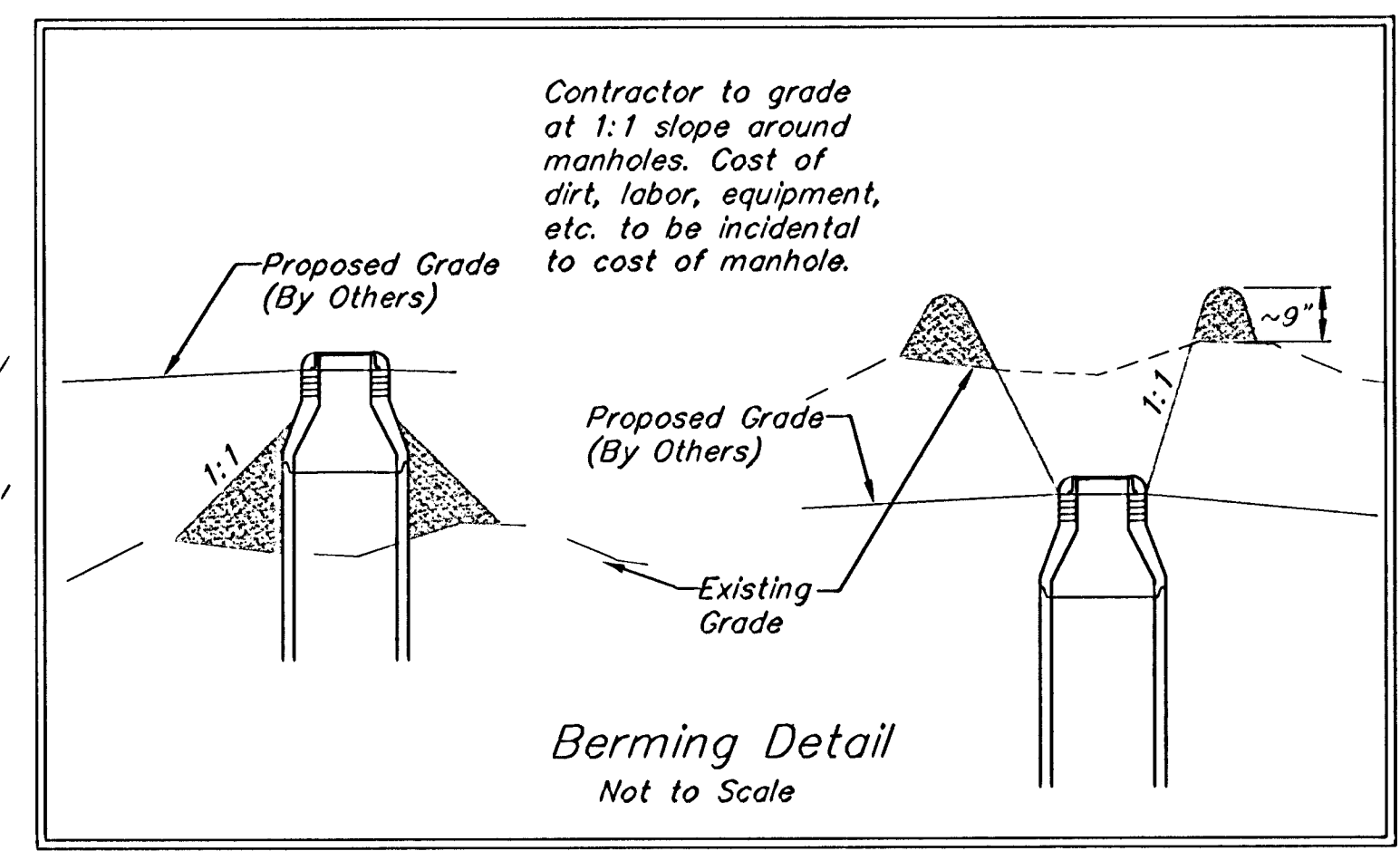
LINE 2B
 Sta 17+38.5, Line 2 = Sta 0+00, Line 2B Construct std. manhole. Rim Elev. = 198.30

Sta 18+67.3, Line 2 Construct std. manhole. Rim Elev. = 197.60

Scale: 1" = 40' Horizontal
 1" = 5' Vertical
 • = Iron

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE	
						VERTICAL	HORIZONTAL
26	8" X 4" Tee Saddle	32	C	2	12+83/Rt.	10.0'	13'
27	8" X 4" Tee Saddle	16	C	2	12+98/Lt.	10.0'	7'
28	8" X 4" Tee Saddle	15	C	2	13+99/Lt.	10.5'	7'
29	8" X 4" Tee Saddle	33	C	2	14+05/Rt.	10.5'	13'
30	8" X 4" Tee Saddle	38	C	2	16+04/Lt.	10.5'	7'
31	8" X 4" Tee Saddle	18	B	2	19+09/Lt.	10.0'	24'

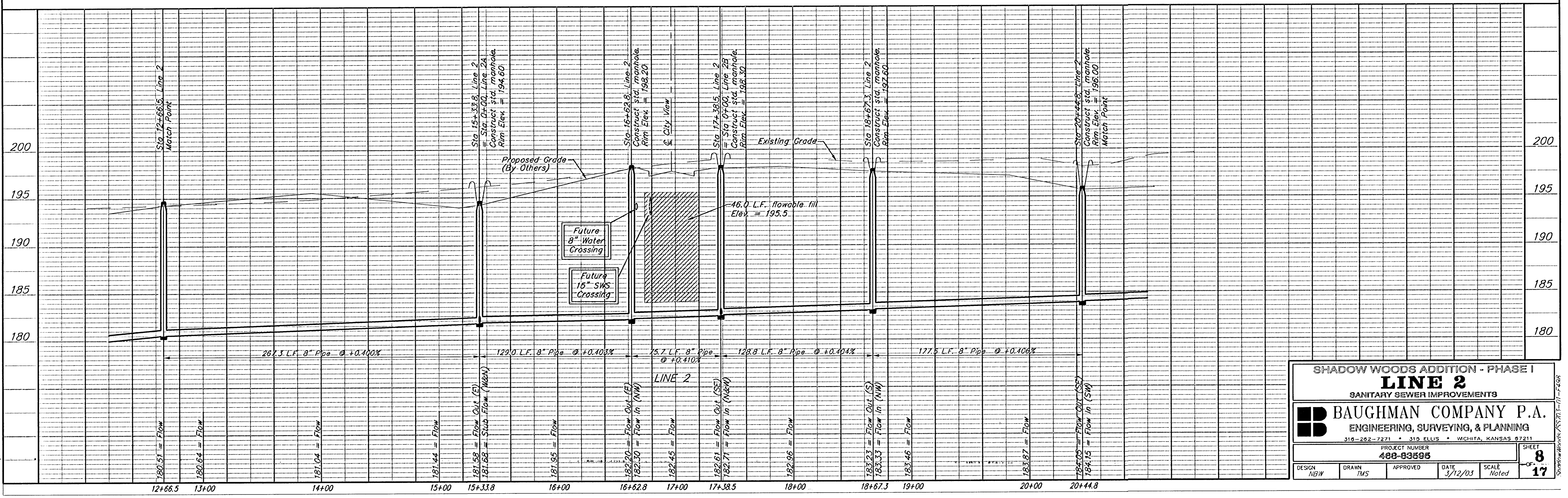
NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



Sta 12+66.5, Line 2 Match Point

Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".

Sta 20+44.8, Line 2 Construct std. manhole. Rim Elev. = 196.00 Match Point



SHADOW WOODS ADDITION - PHASE I
LINE 2
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
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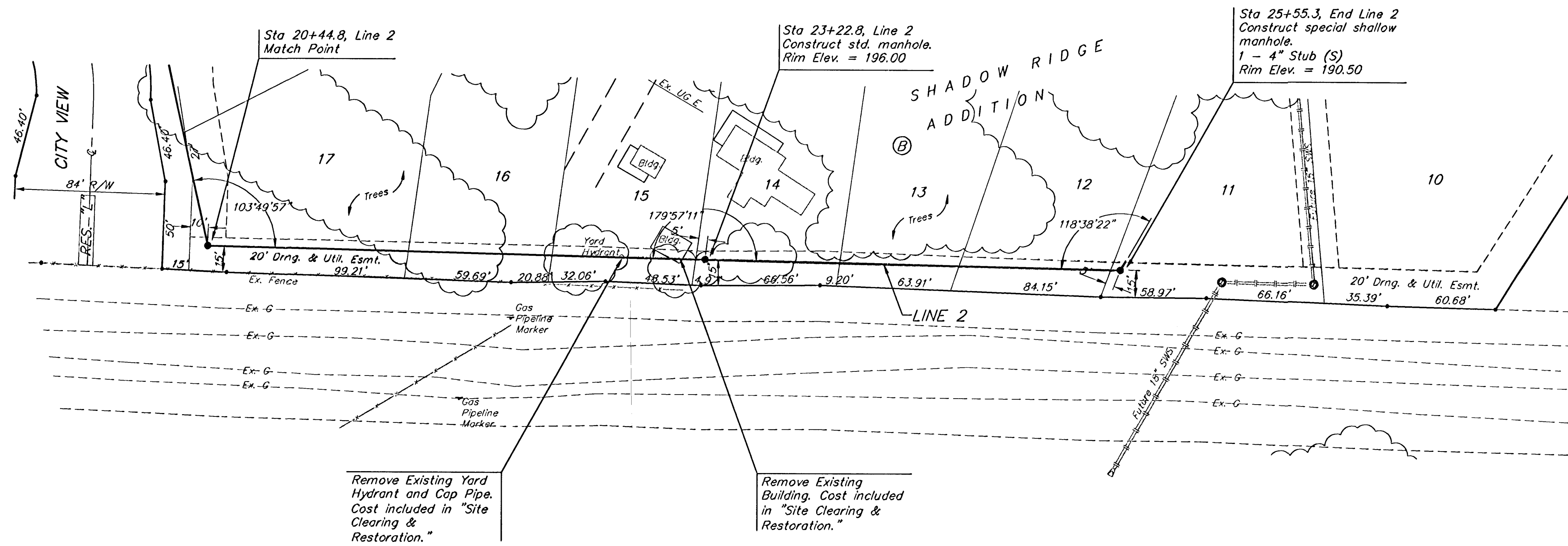
PROJECT NUMBER
488-83595

DESIGN NBW DRAWN TMS APPROVED DATE 3/12/03 SCALE Noted

SHEET **8** OF **17**

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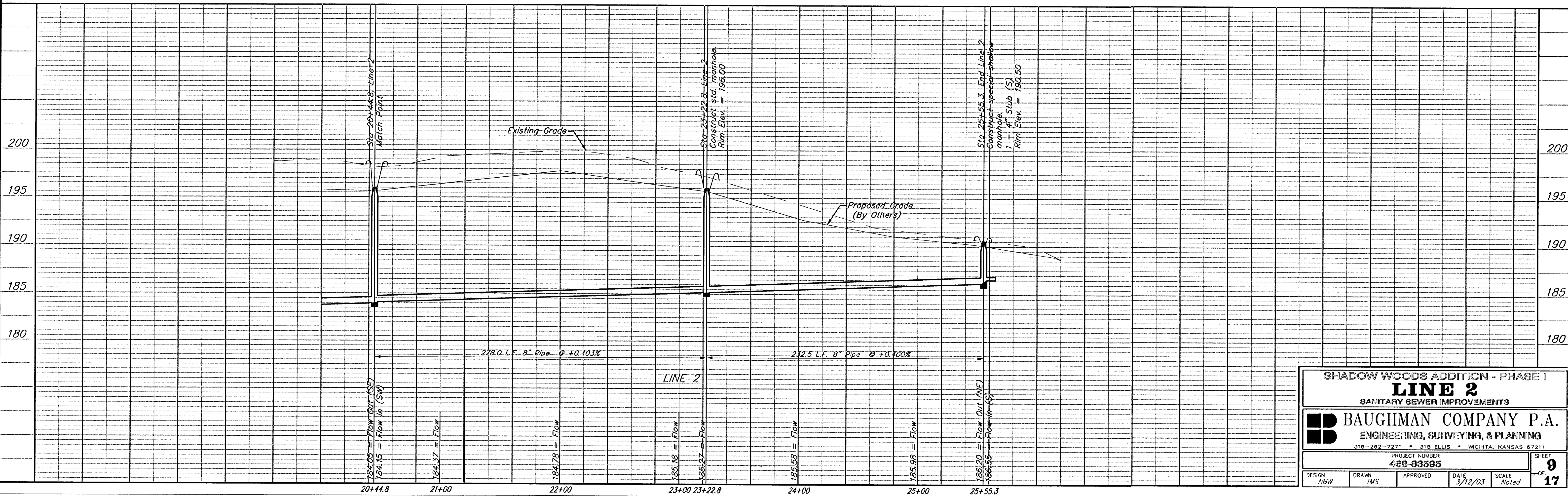
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Remove trees only as necessary
 for sanitary sewer construction.
 Cost of removal to be incidental
 to lump sum bid item "Site
 Clearing & Restoration".

Remove Existing Yard
 Hydrant and Cap Pipe.
 Cost included in "Site
 Clearing & Restoration."

Remove Existing
 Building. Cost included
 in "Site Clearing &
 Restoration."



SHADOW WOODS ADDITION - PHASE I
LINE 2
 SANITARY SEWER IMPROVEMENTS

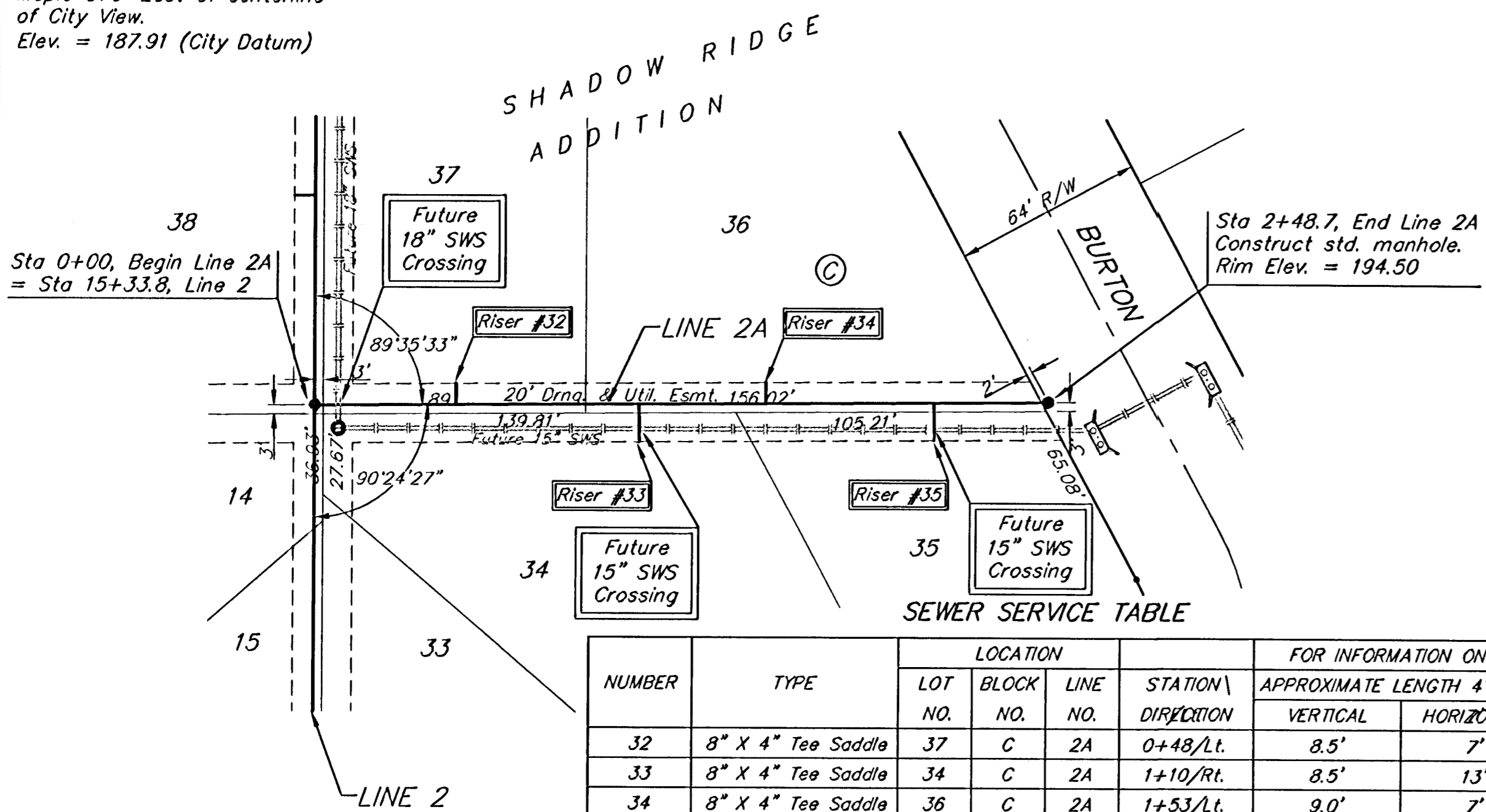
BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 318-252-7271 • 312 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
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DESIGN NBW	DRAWN TMS	APPROVED	DATE 3/12/03	SCALE Noted	SHEET OF 9 17
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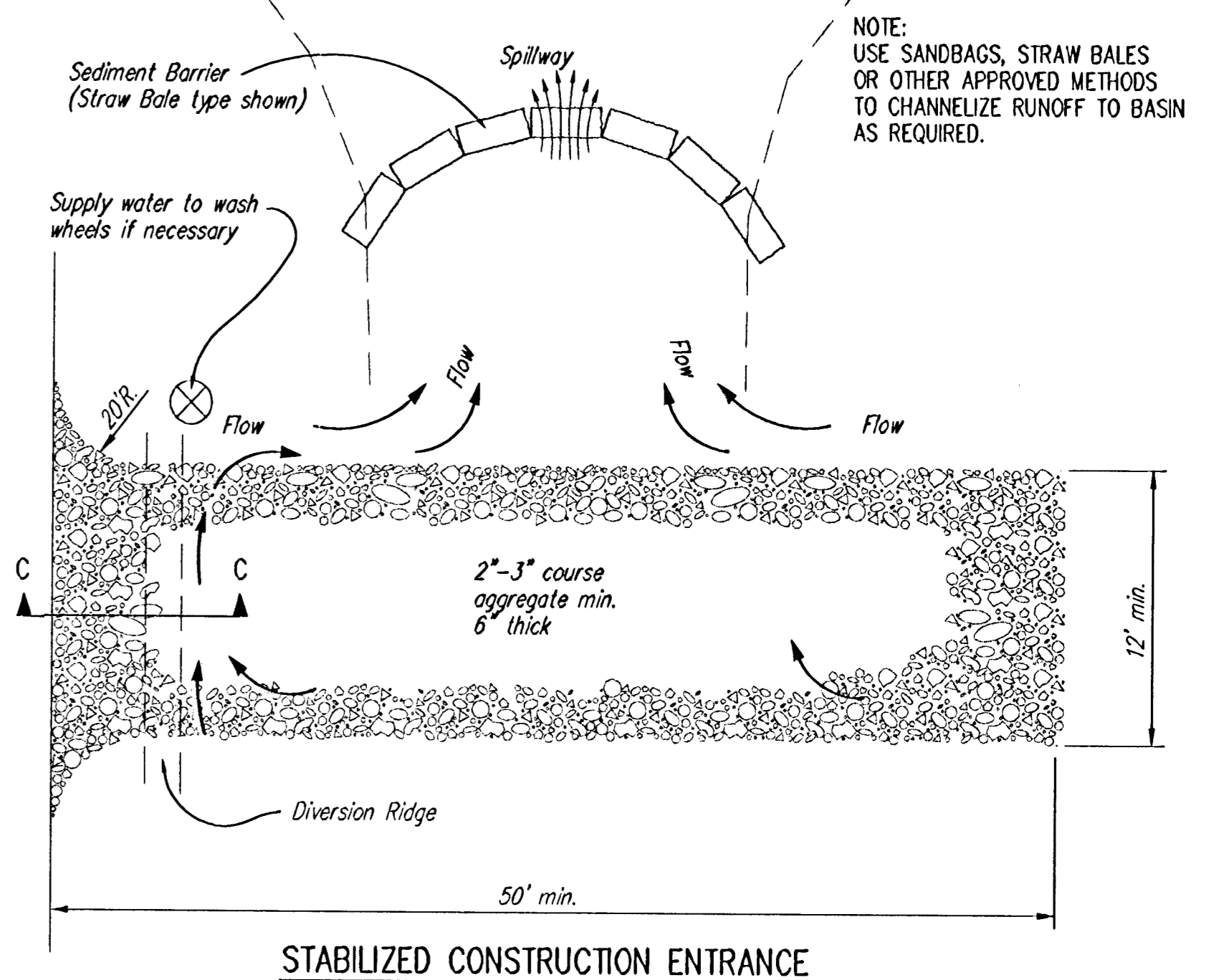
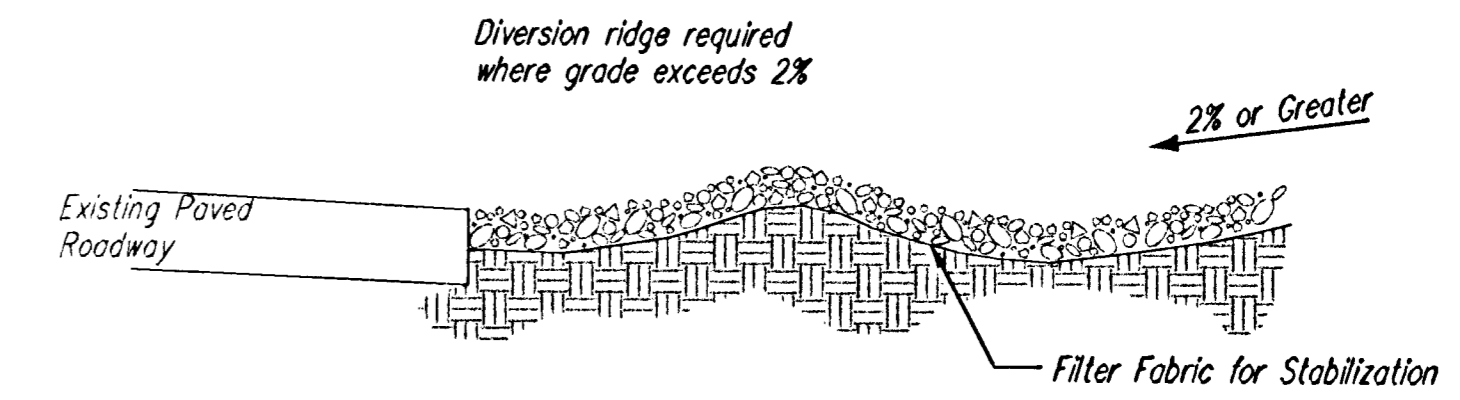
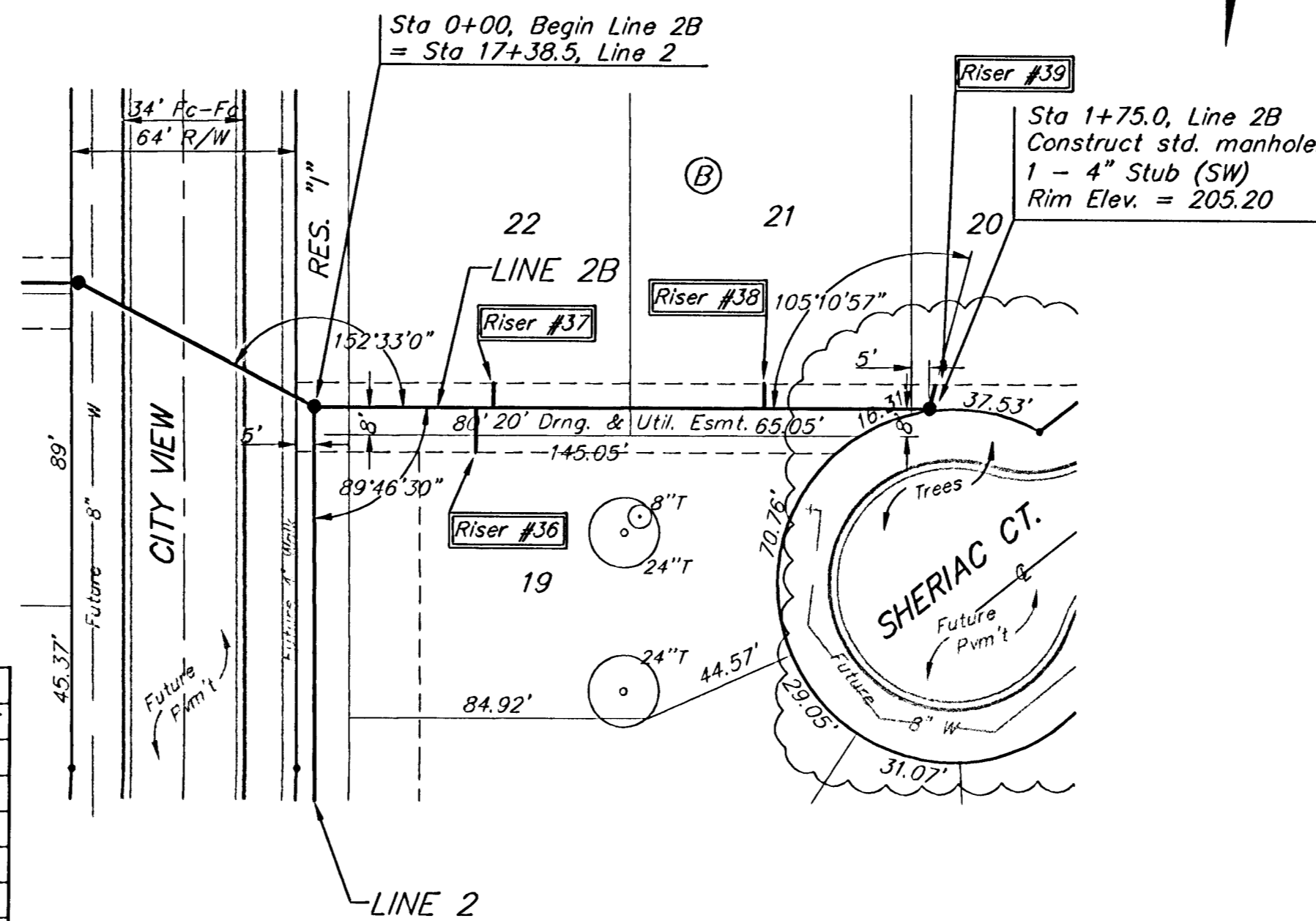
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO. STATION \ DIRECTION	APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
32	8" X 4" Tee Saddle	37	C	2A 0+48/Lt.	8.5'	7'
33	8" X 4" Tee Saddle	34	C	2A 1+10/Rt.	8.5'	13'
34	8" X 4" Tee Saddle	36	C	2A 1+53/Lt.	9.0'	7'
35	8" X 4" Tee Saddle	35	C	2A 2+10/Rt.	7.0'	13'
36	8" X 4" Tee Saddle	19	B	2B 0+46/Rt.	10.0'	13'
37	8" X 4" Tee Saddle	22	B	2B 0+51/Lt.	10.0'	7'
38	8" X 4" Tee Saddle	21	B	2B 1+28/Lt.	8.5'	7'
39	4" Stub	20	B	2B 1+75/Lt.	8.5'	7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

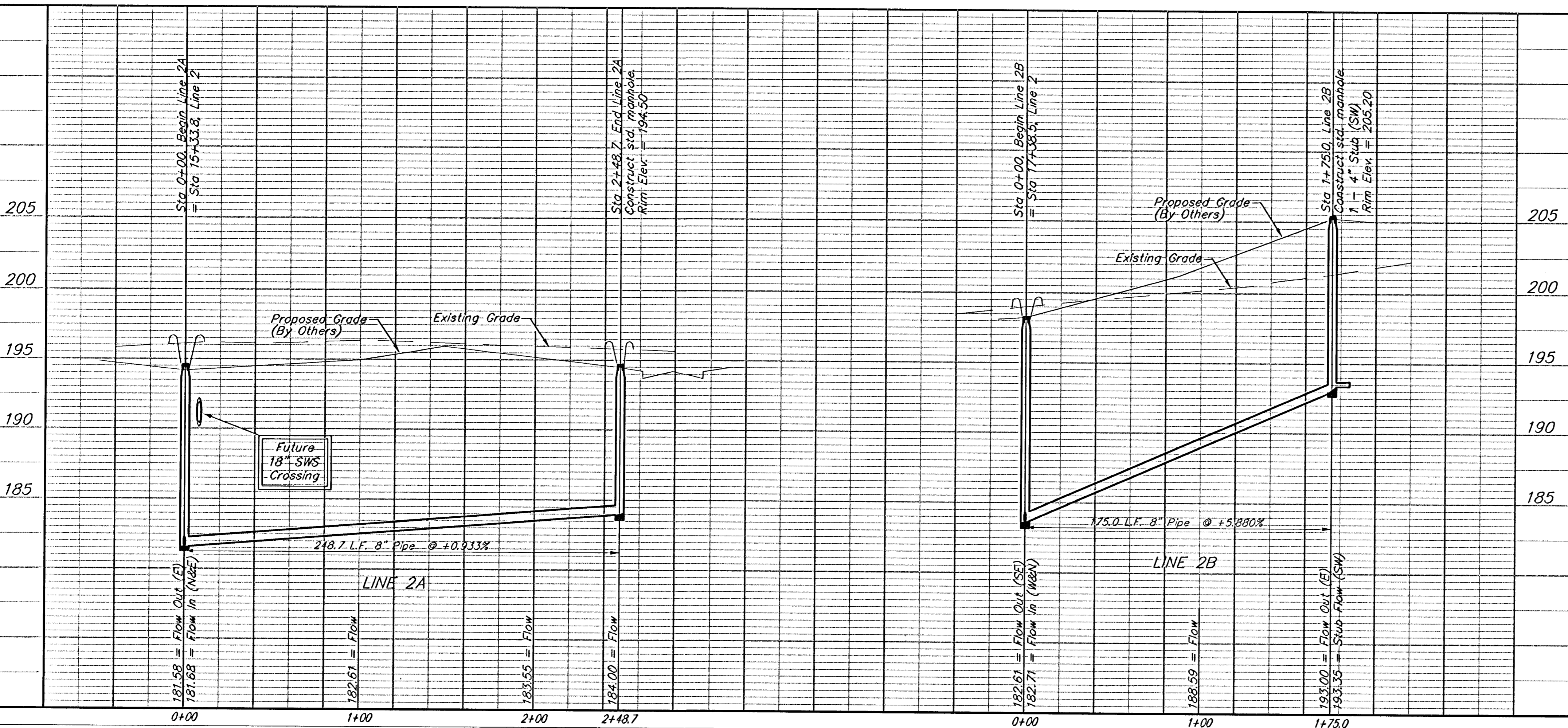
Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".

Scale: 1" = 40' Horizontal
 1" = 5' Vertical
 • = Iron



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

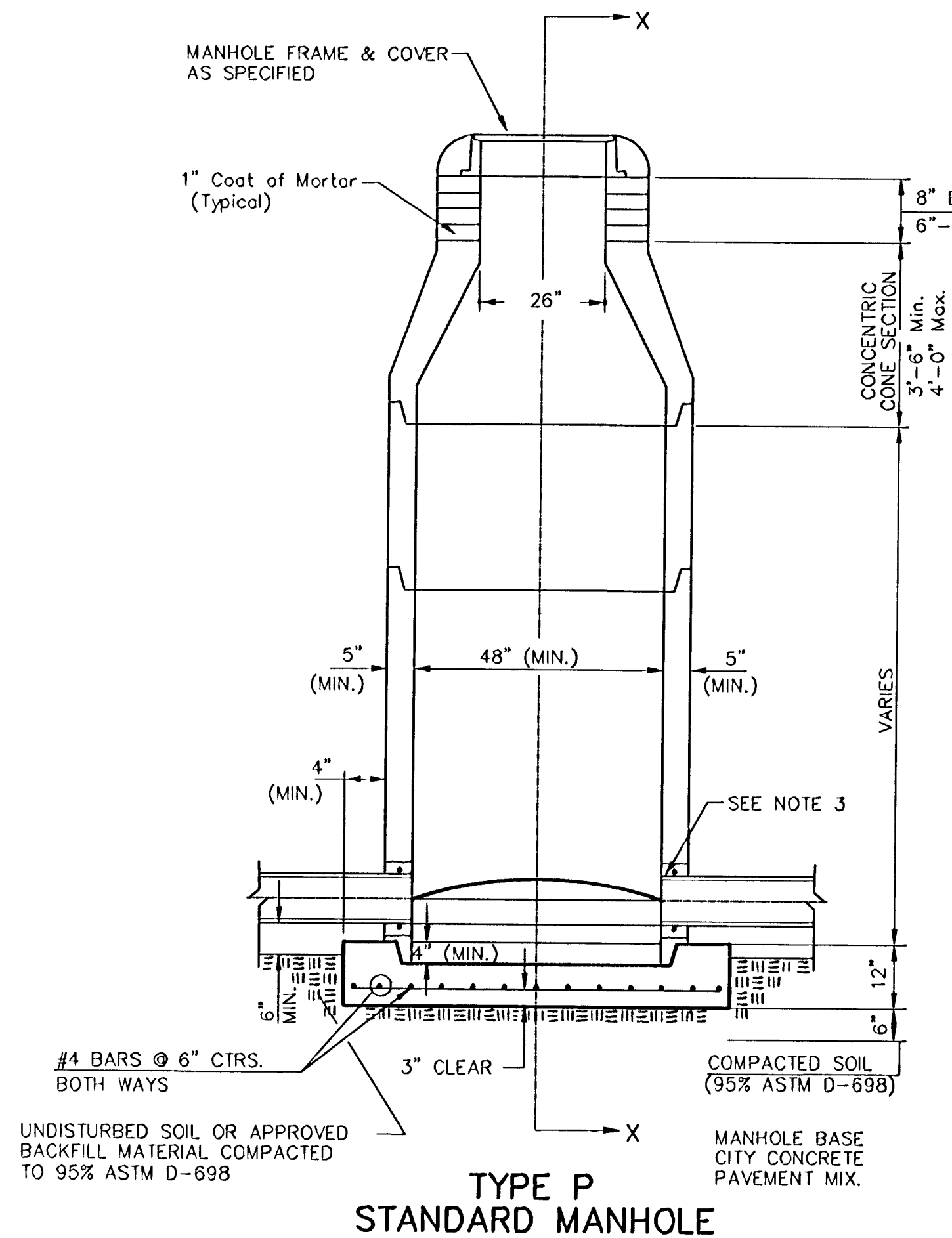


SHADOW WOODS ADDITION - PHASE I
LINES 2A & 2B
 SANITARY SEWER IMPROVEMENTS

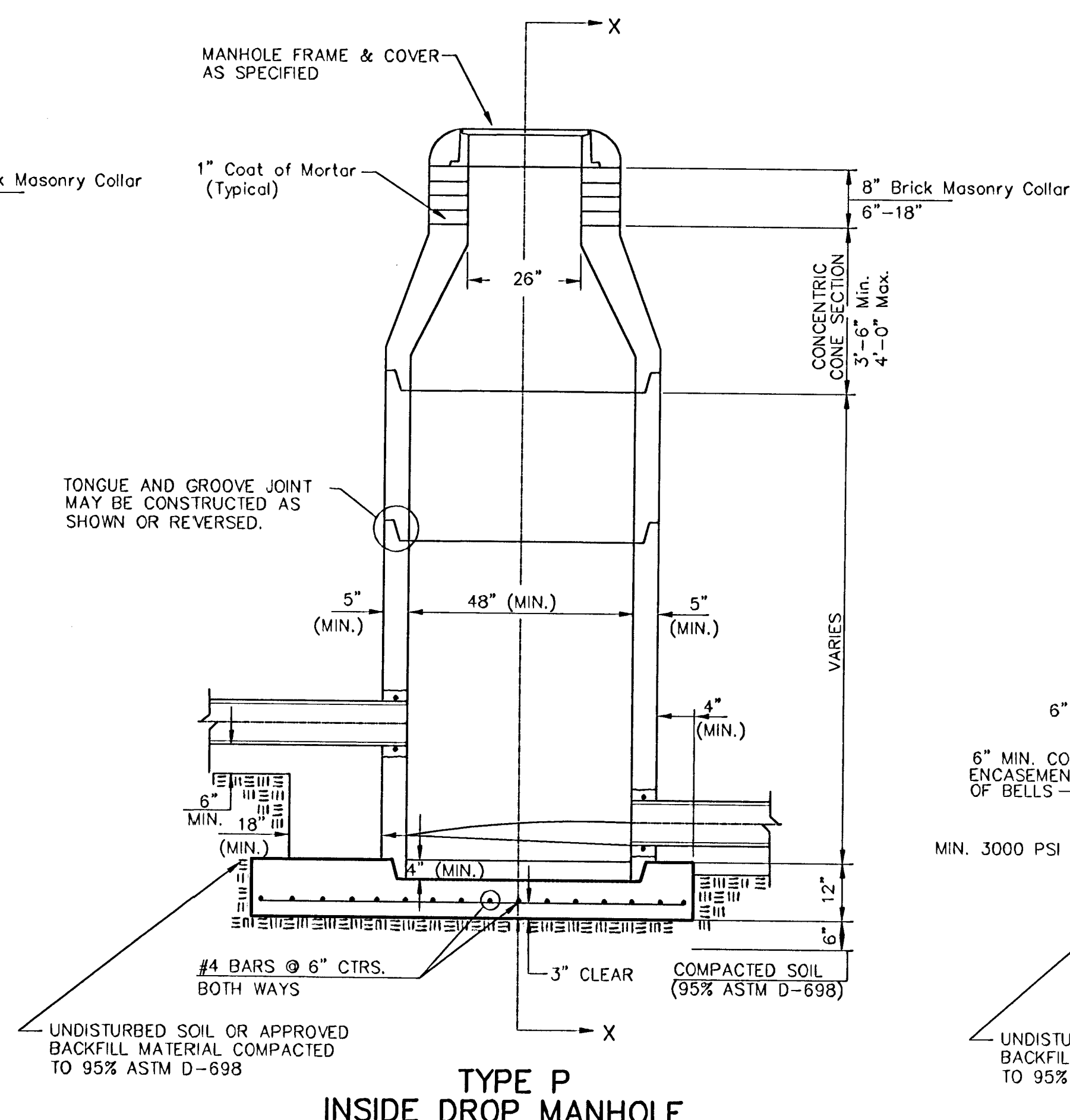
BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

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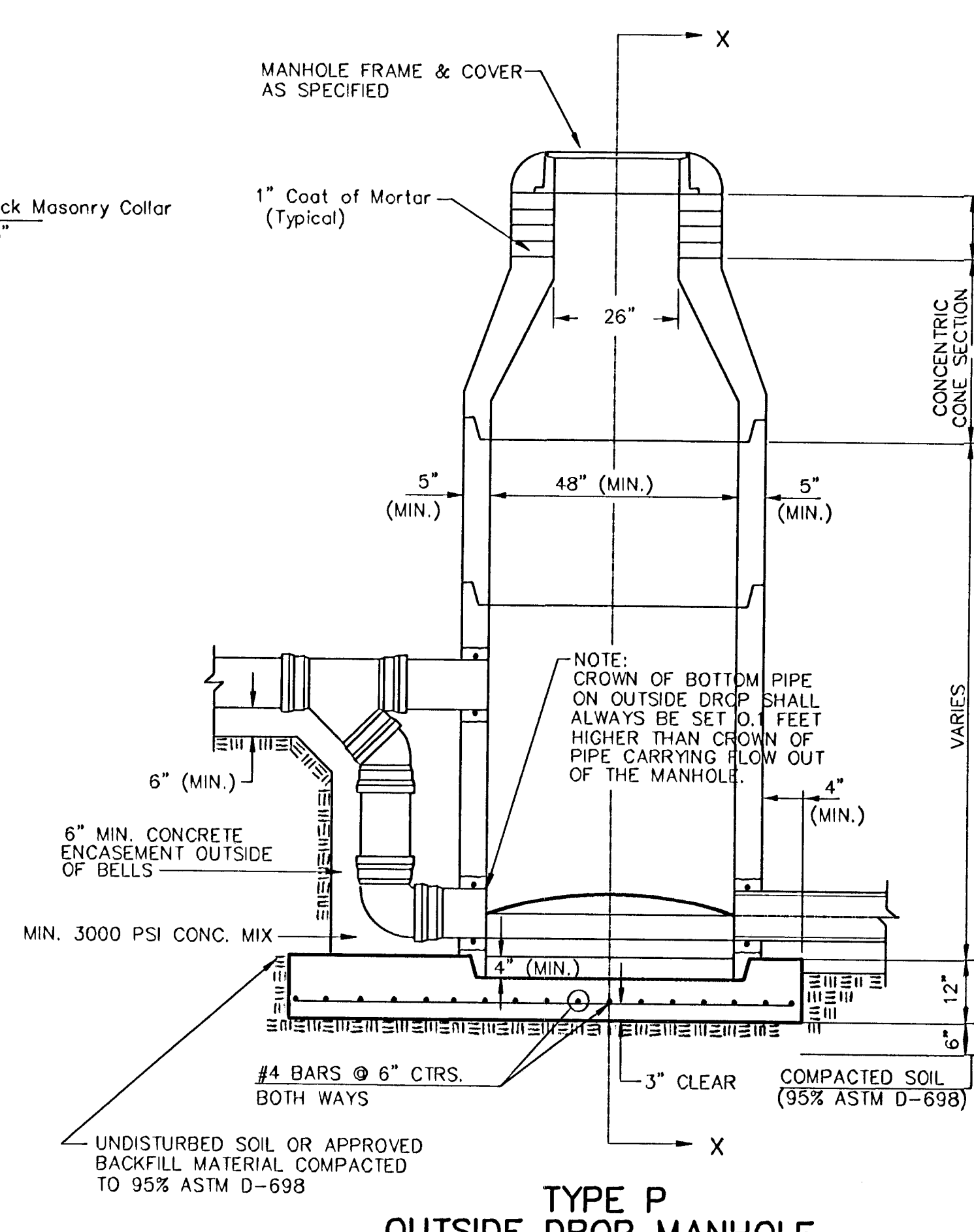
SEWER APPURTENANCES DETAILS



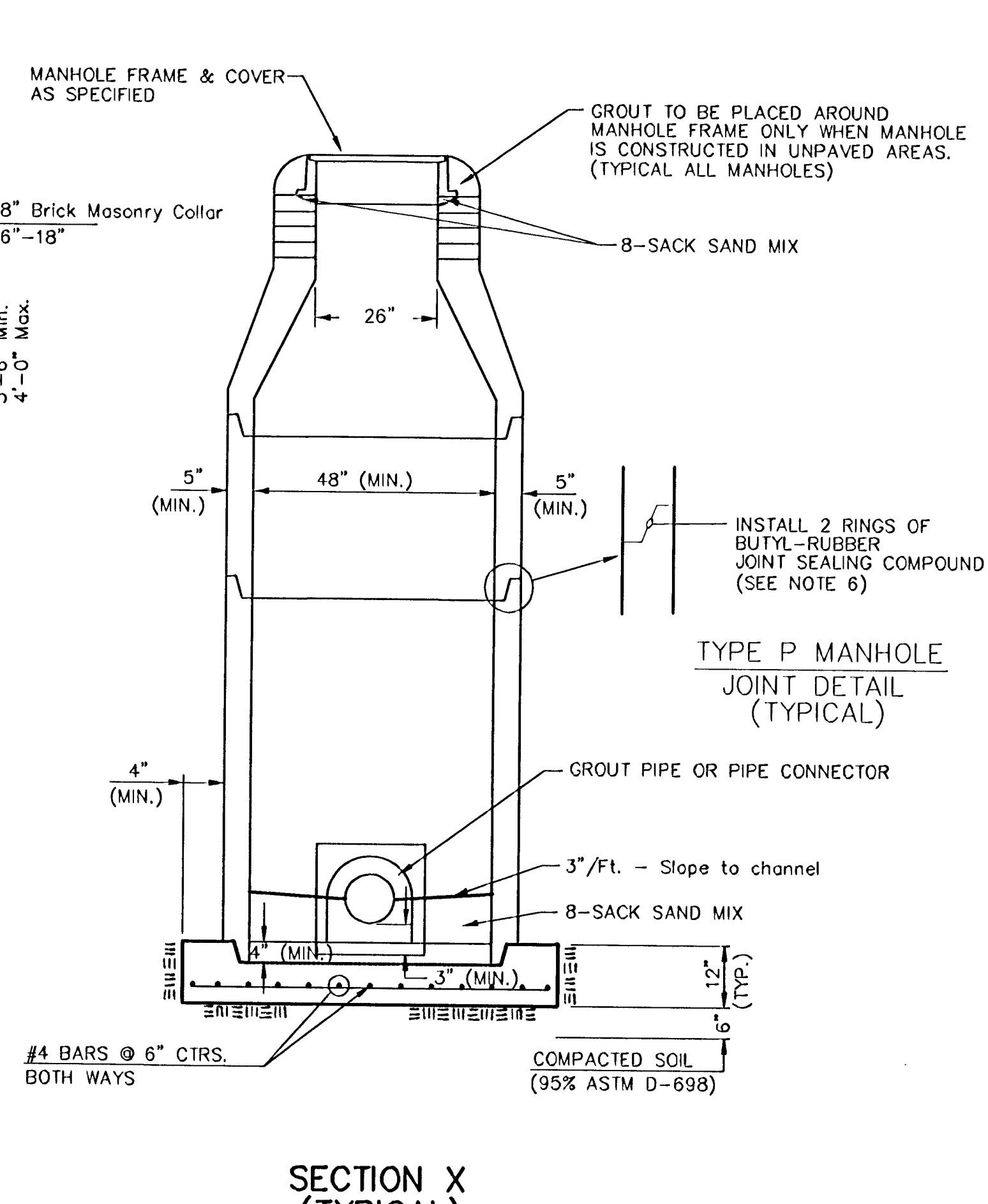
TYPE P STANDARD MANHOLE



TYPE P INSIDE DROP MANHOLE



TYPE P OUTSIDE DROP MANHOLE



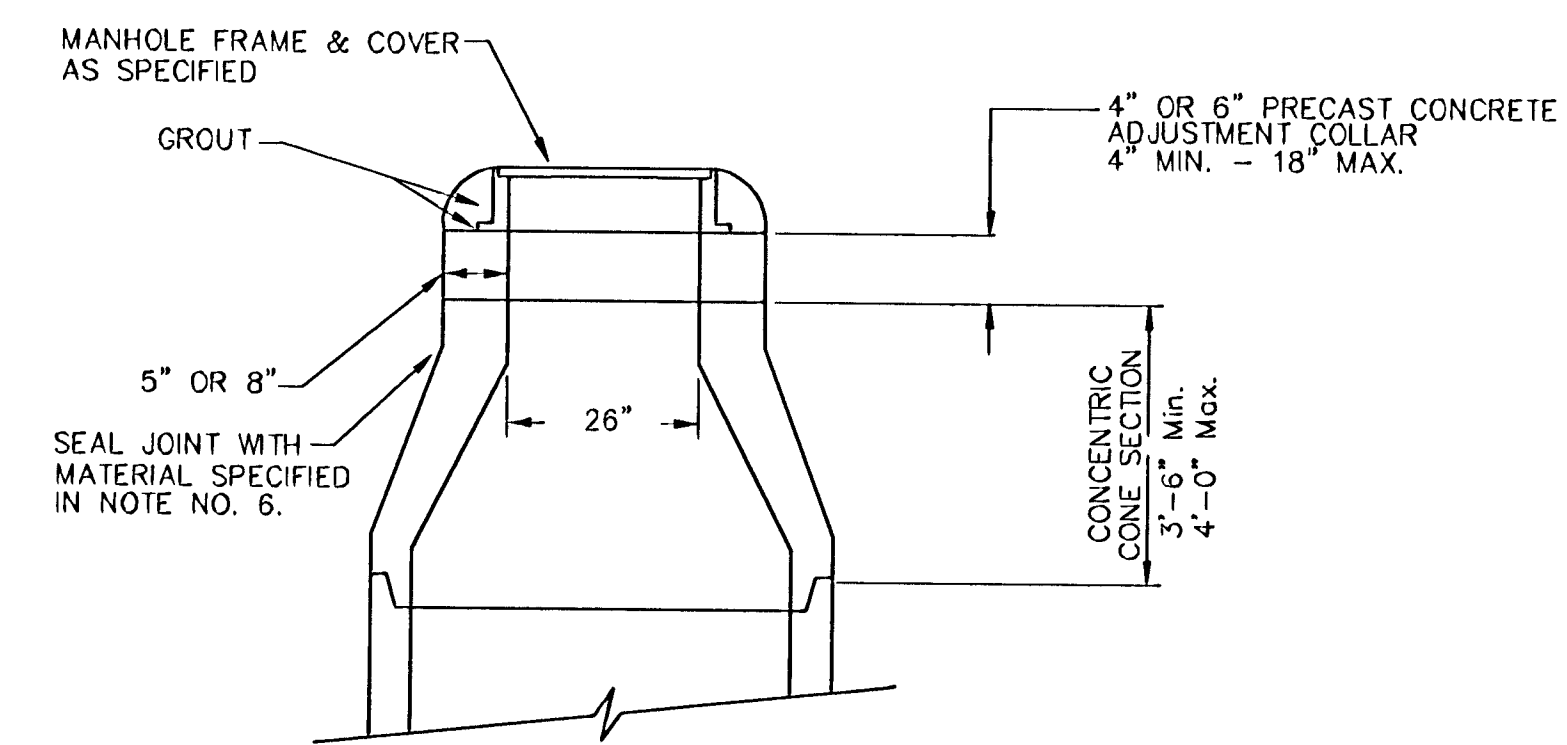
SECTION X (TYPICAL)

GENERAL NOTES
PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST 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 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 TRENEMC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 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 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 FOUR 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 NON-SHRINK 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 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. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.



ALTERNATE CONSTRUCTION IN UNPAVED AREAS

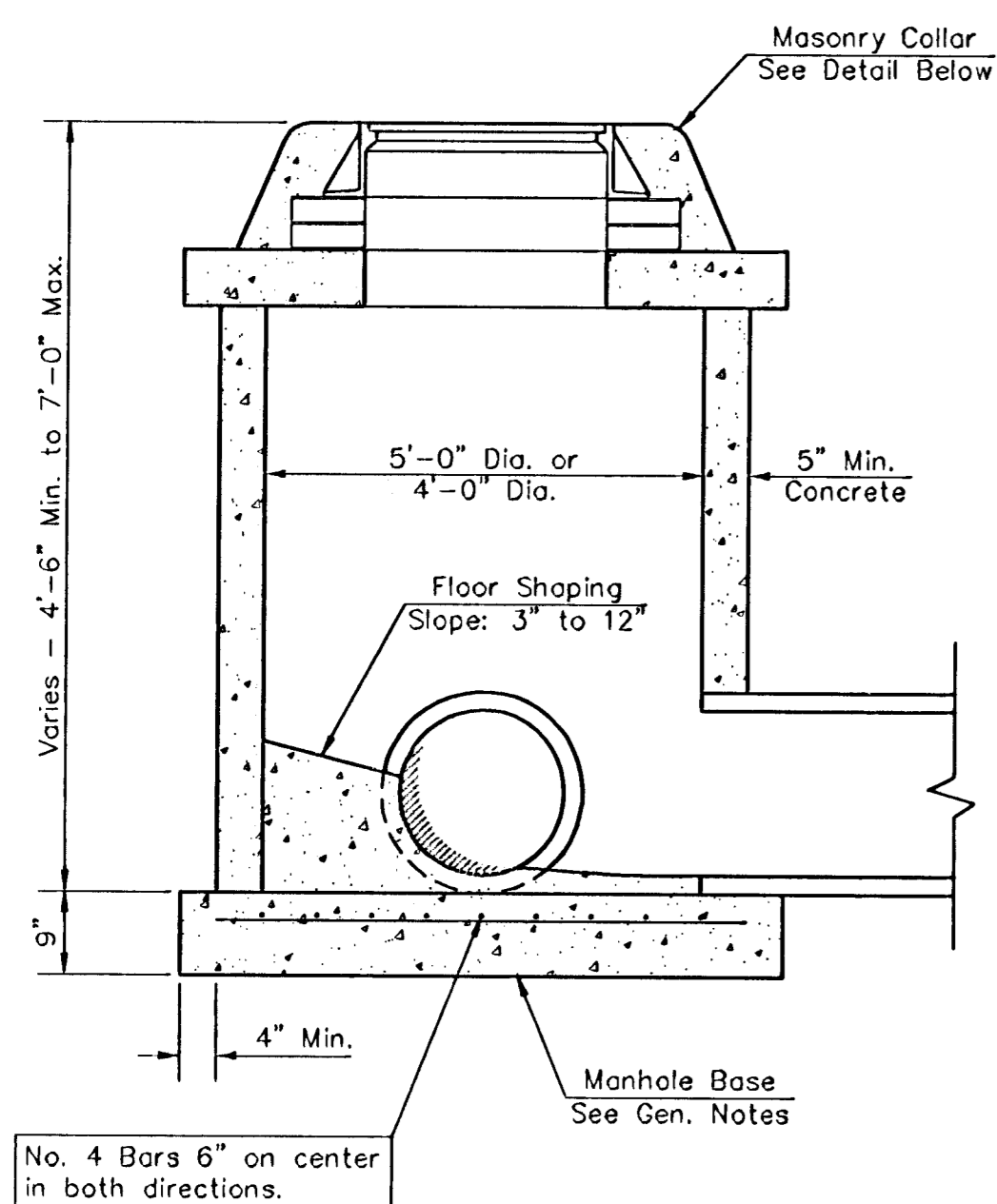
STD. MANHOLE DETAILS
SEWER APPURTENANCES

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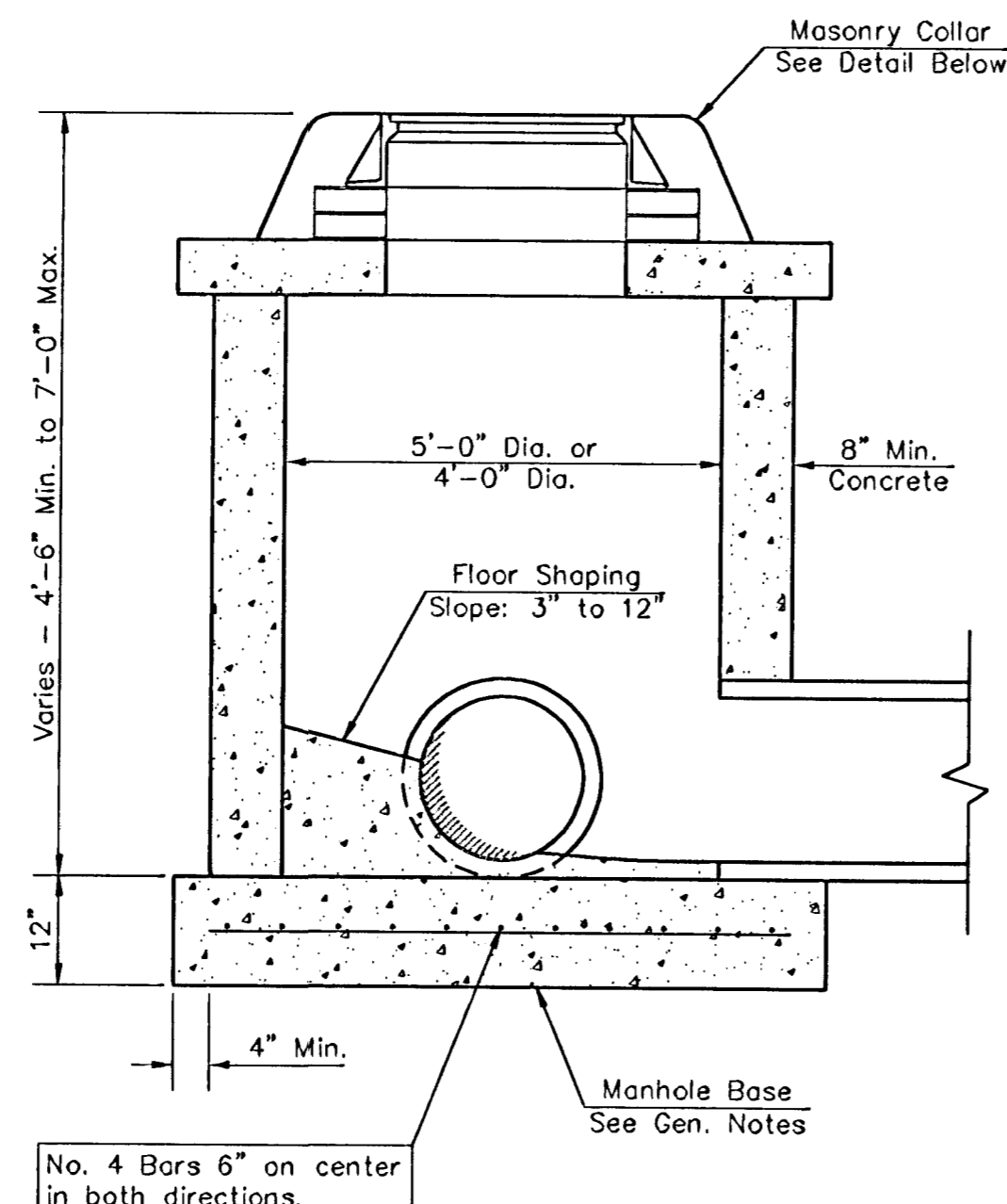
PROJECT NUMBER
488-83595

SHEET **11** OF **17**

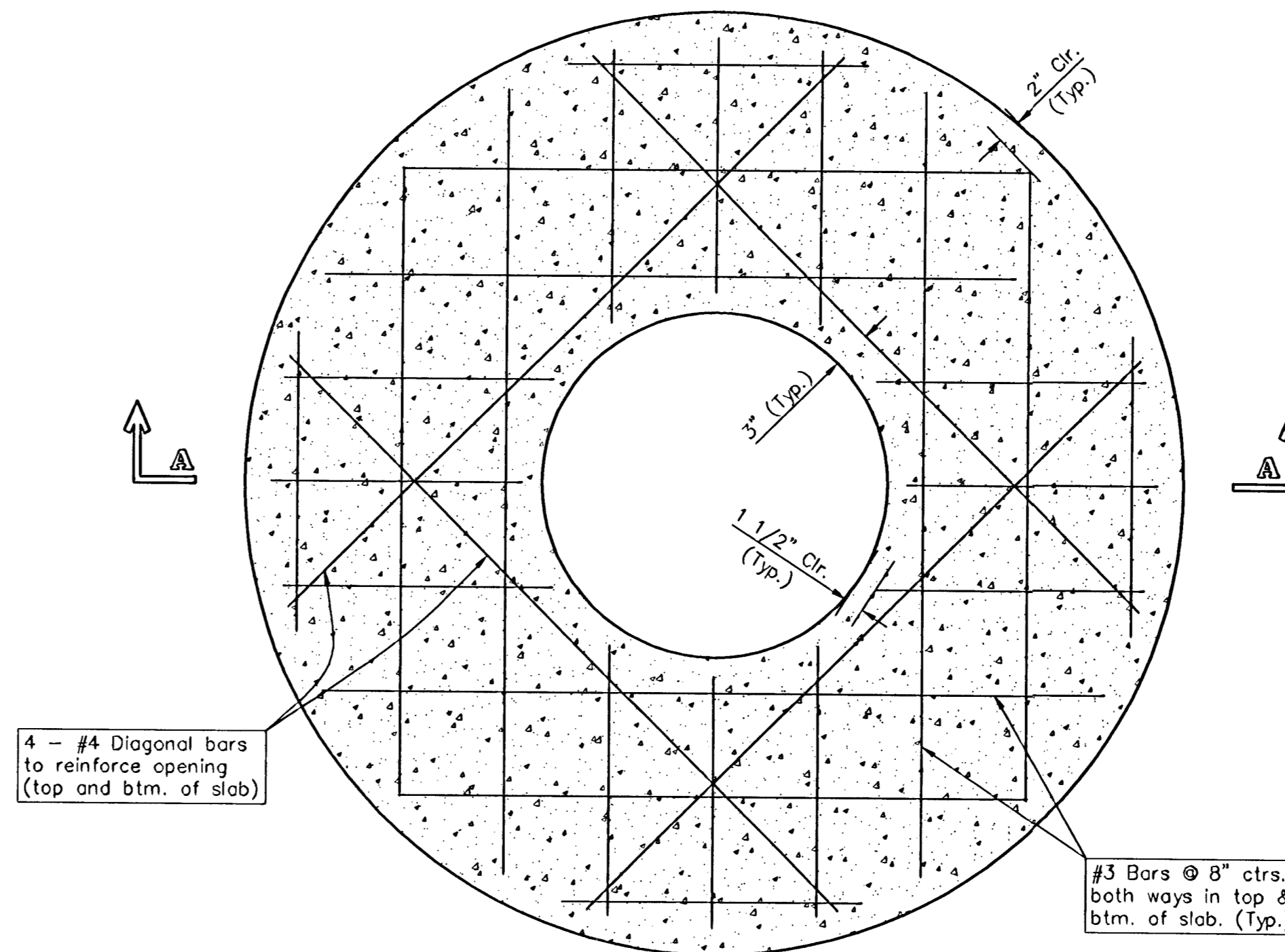
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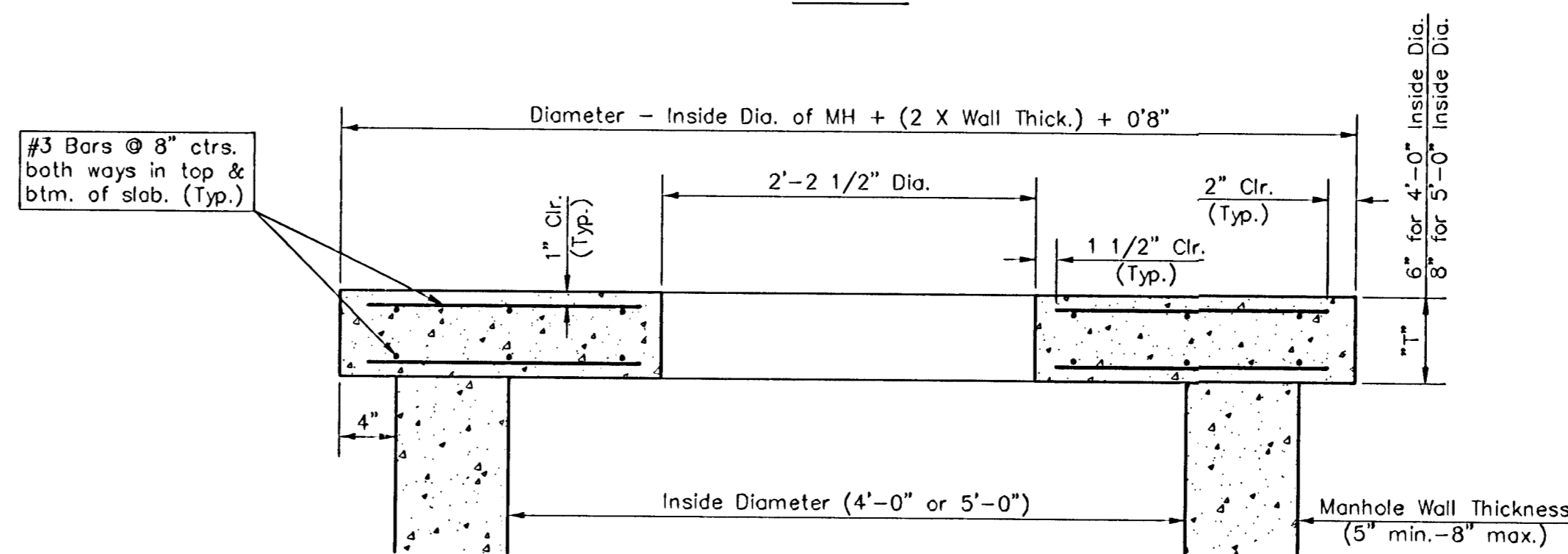
SHALLOW TYPE "P" MANHOLE



SHALLOW TYPE "C" MANHOLE

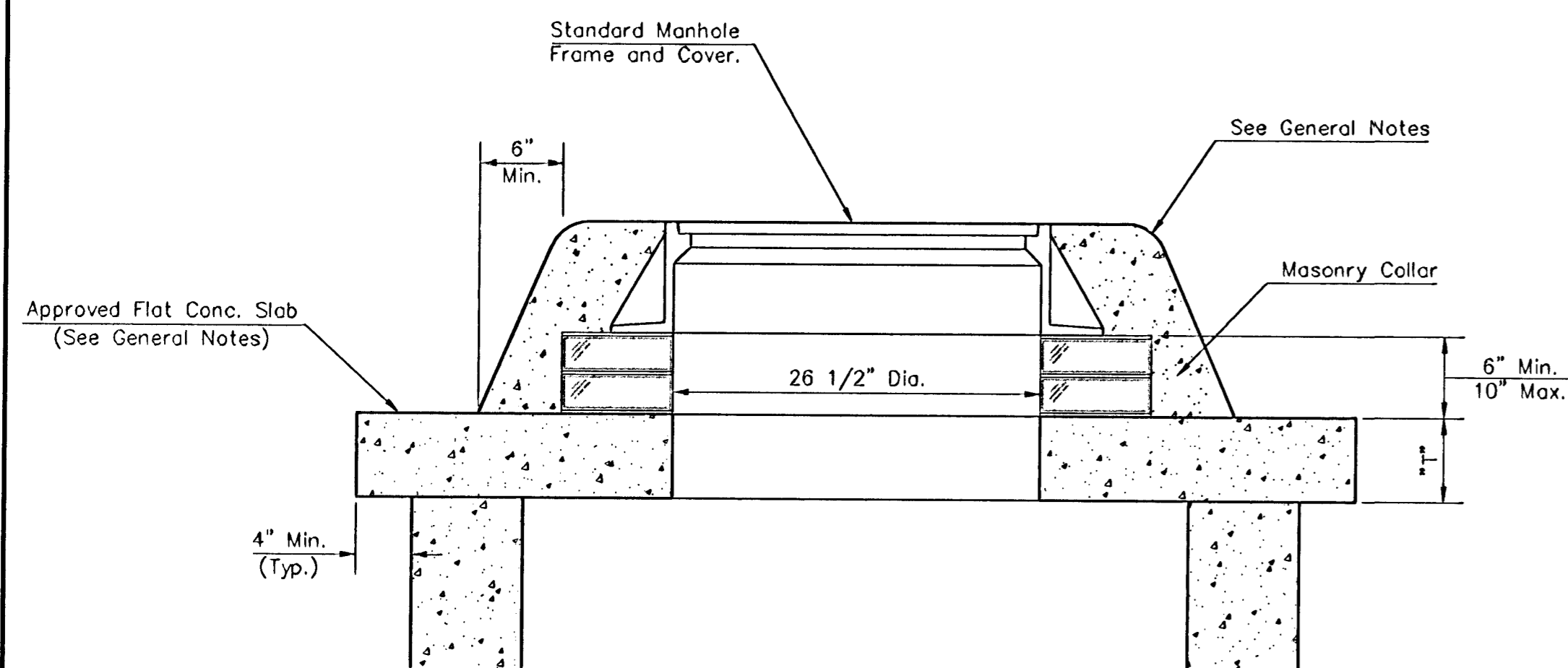


PLAN

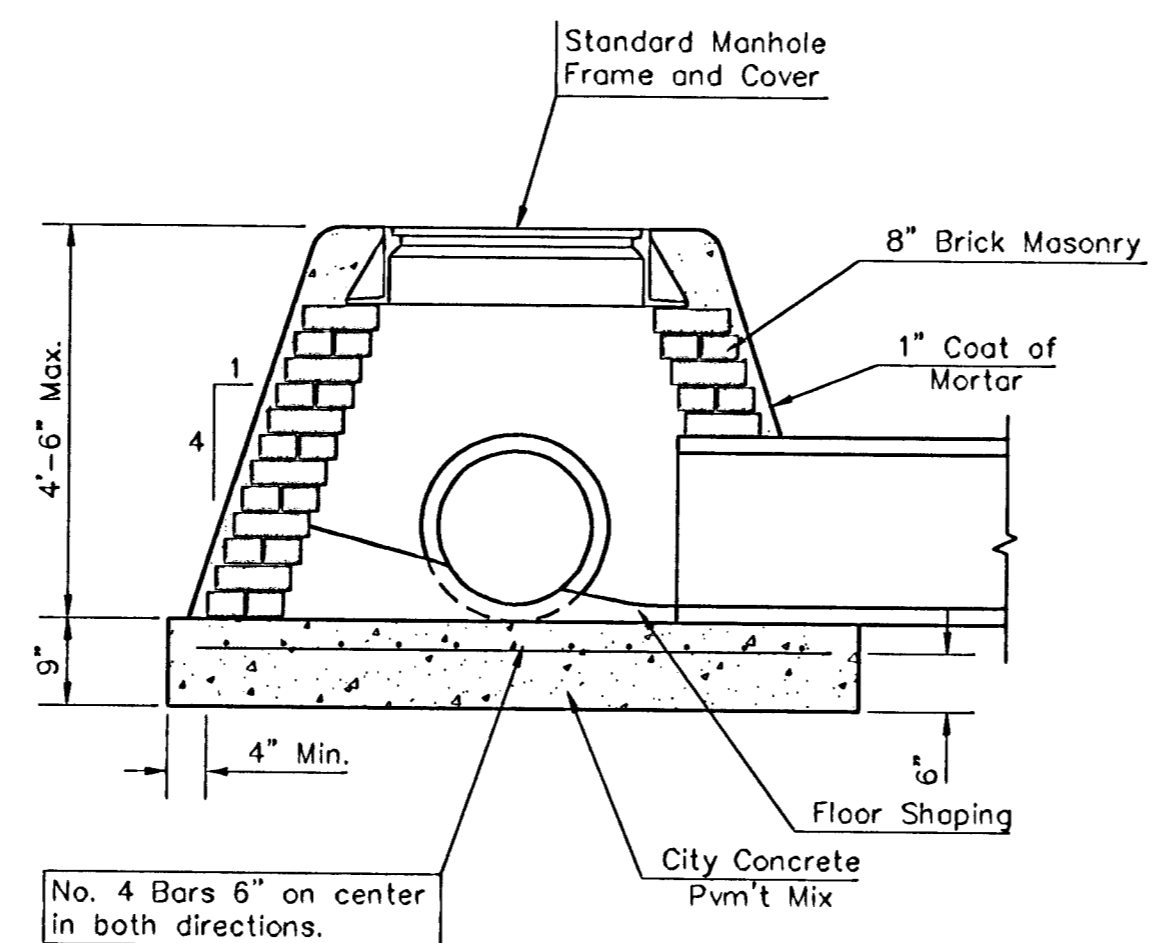


SECTION A-A

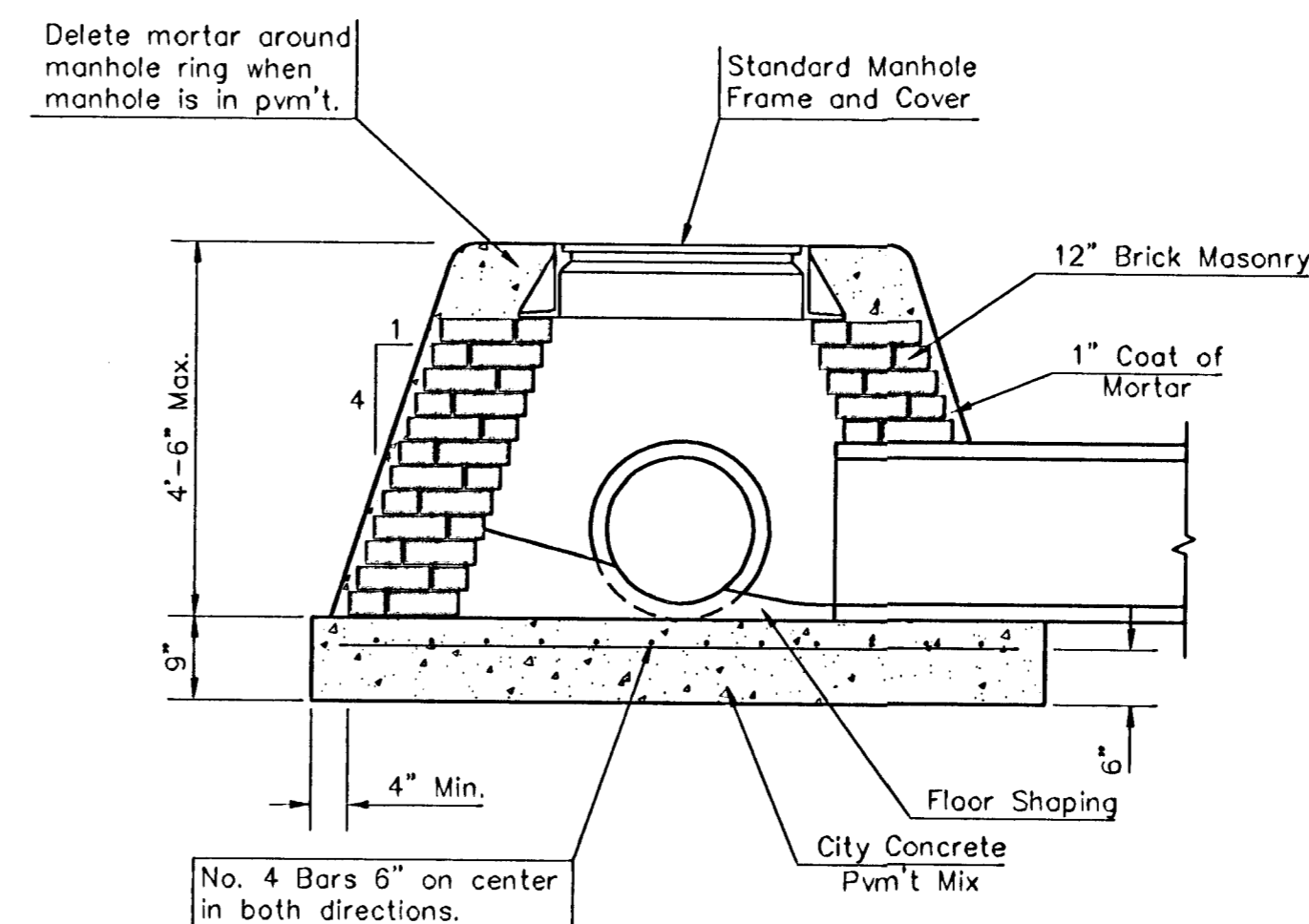
FLAT CONCRETE SLAB DETAILS



MASONRY COLLAR DETAIL



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

- 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 cement 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 6" 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.
- 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. 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 drawings.
- The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
- Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

CITY OF WICHITA, KANSAS
STD. SHALLOW MANHOLES
 TYPE "P" AND TYPE "C"

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
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PROJECT NUMBER
488-83895

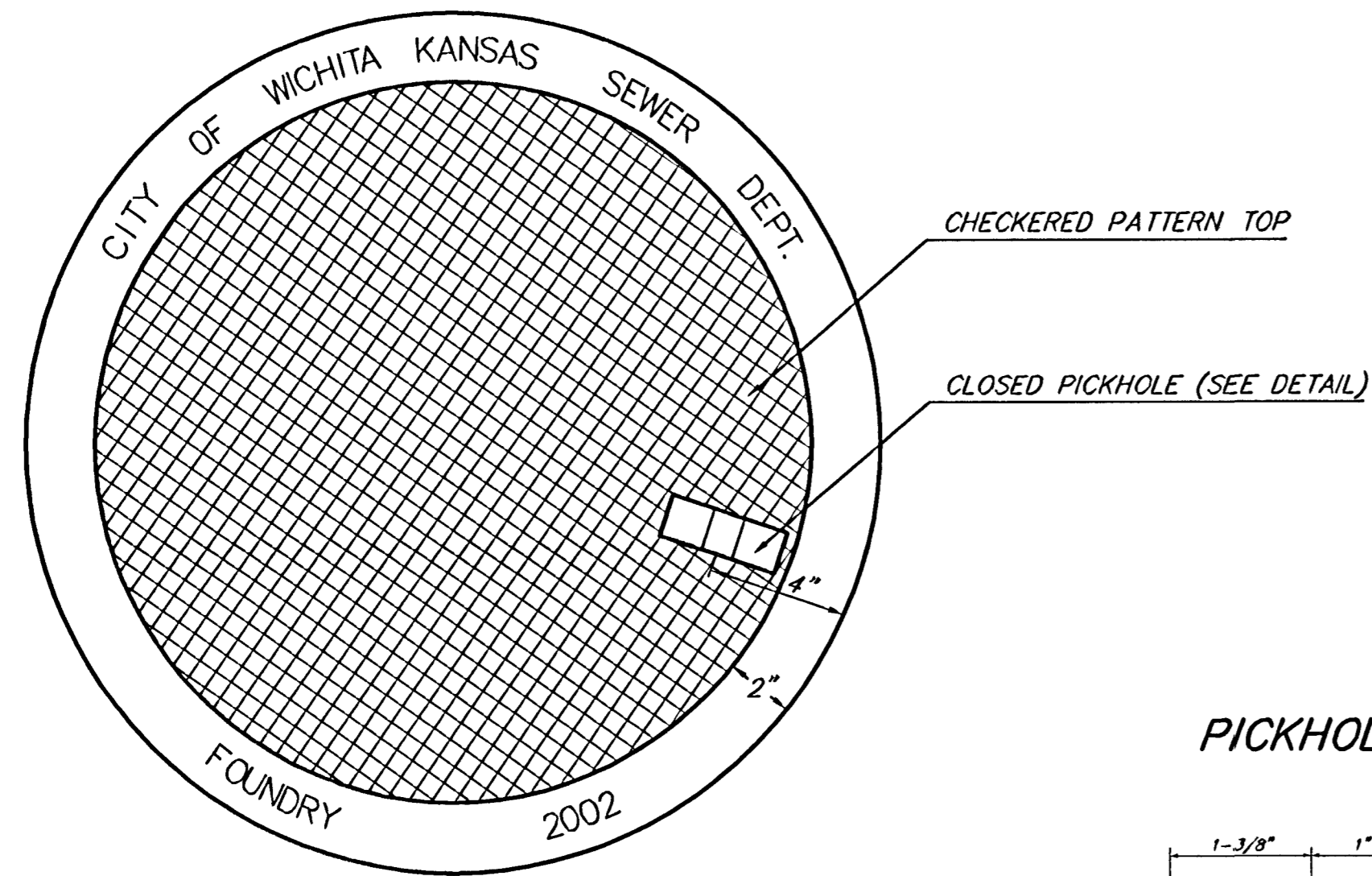
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SHEET **12** OF **17**

MANHOLE COVER
Weight = 180 Lbs.

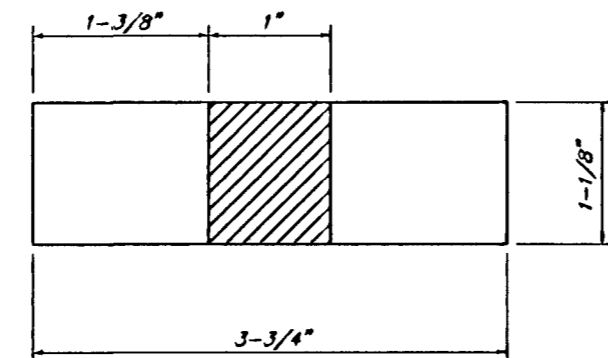
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

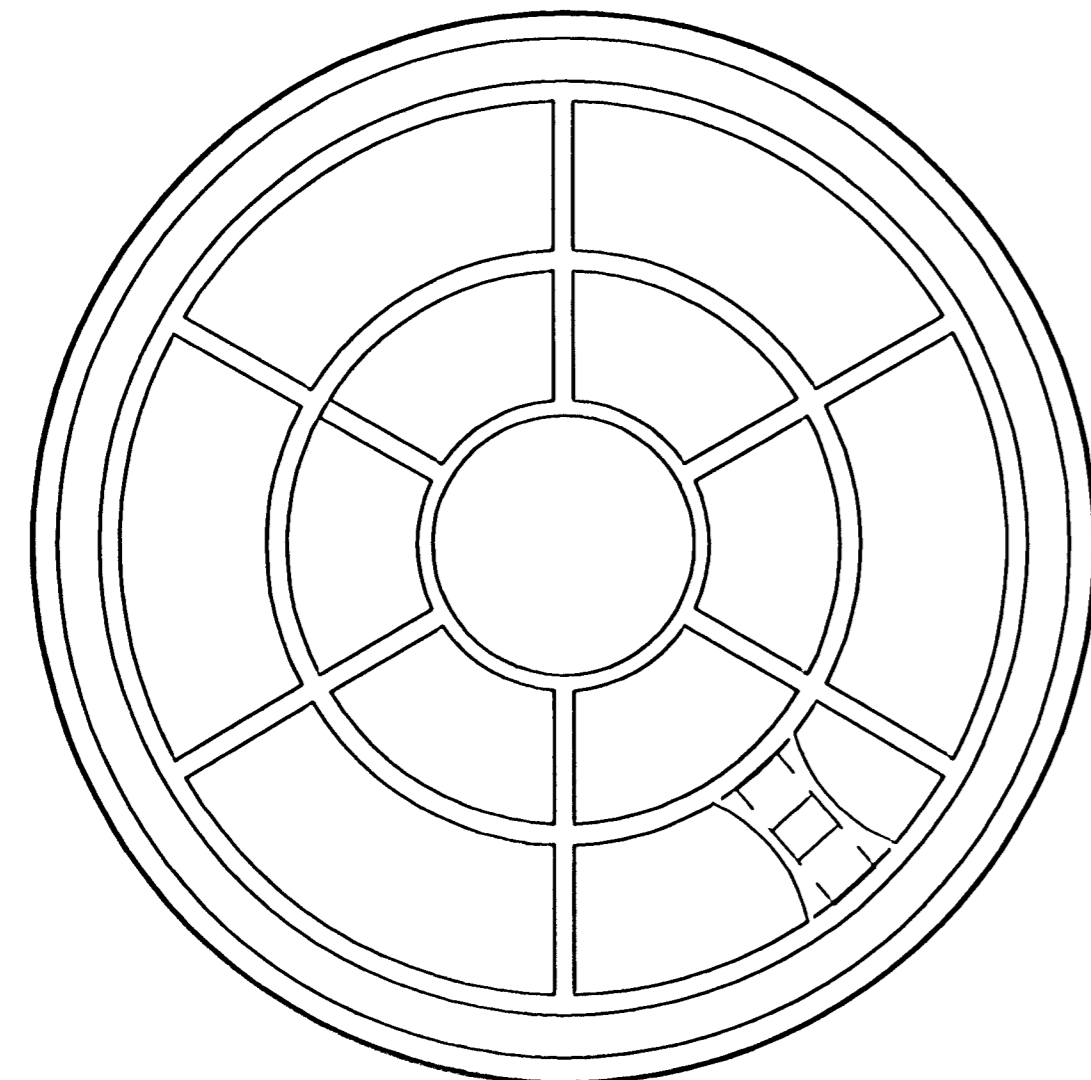


TOP VIEW

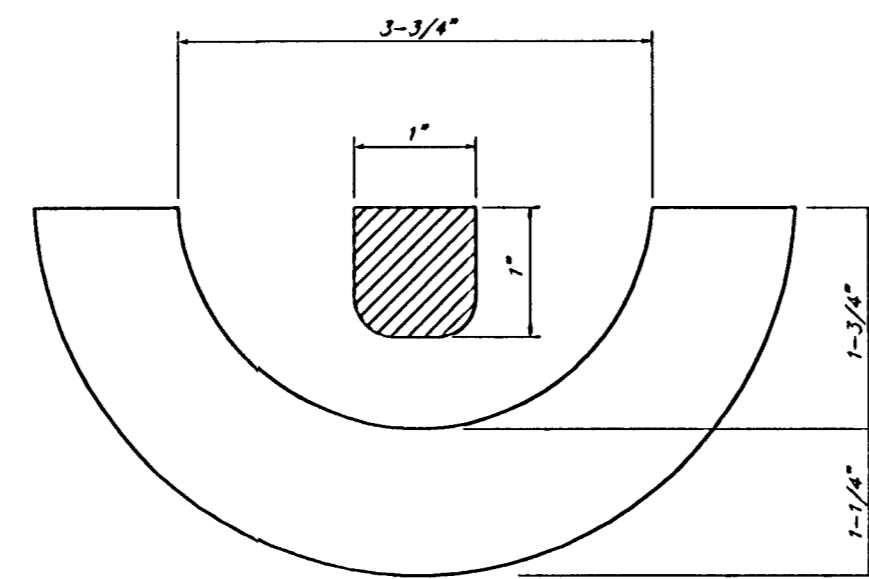
PICKHOLE DETAIL



TOP VIEW

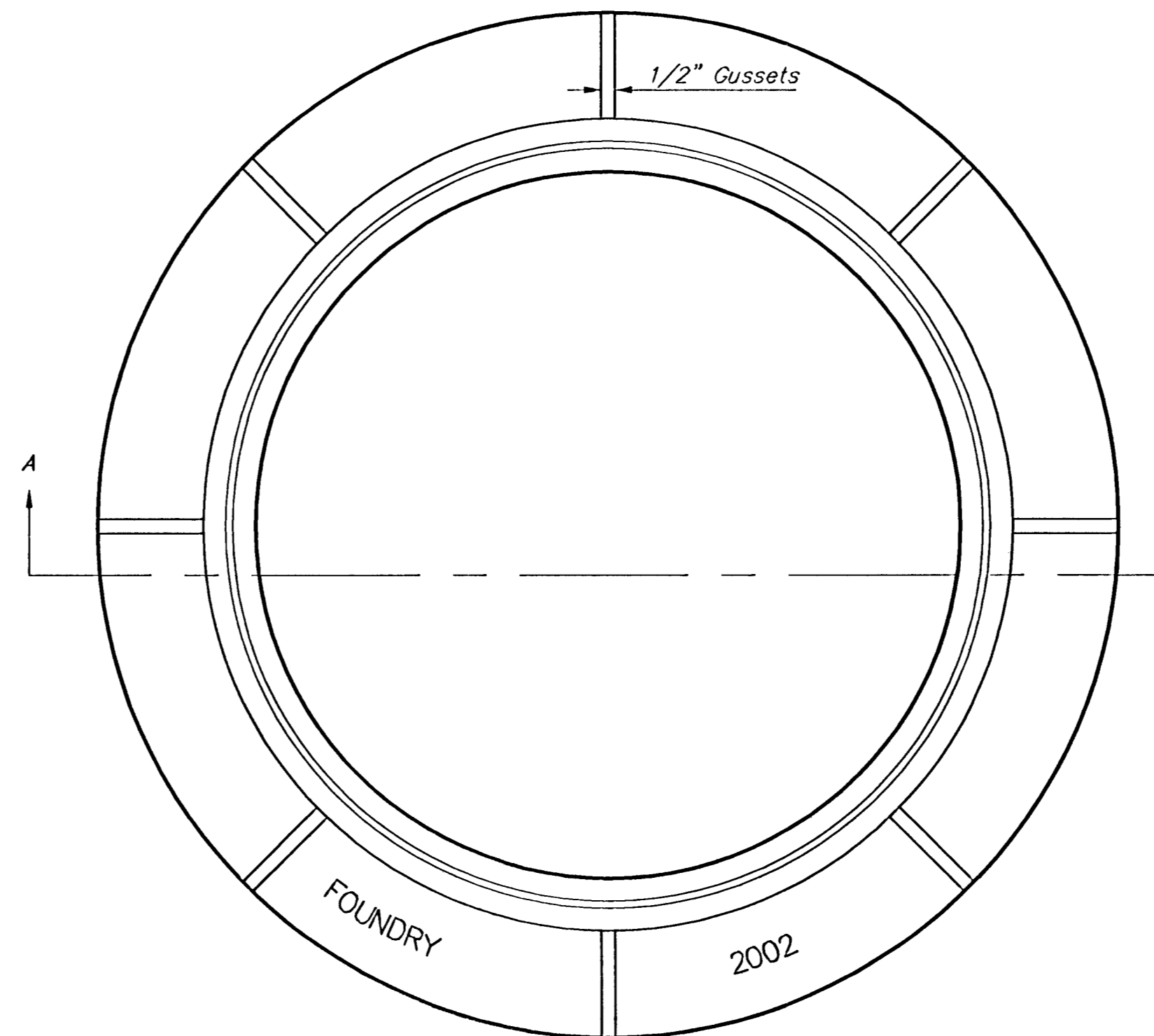


BOTTOM VIEW



SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW

GENERAL NOTES

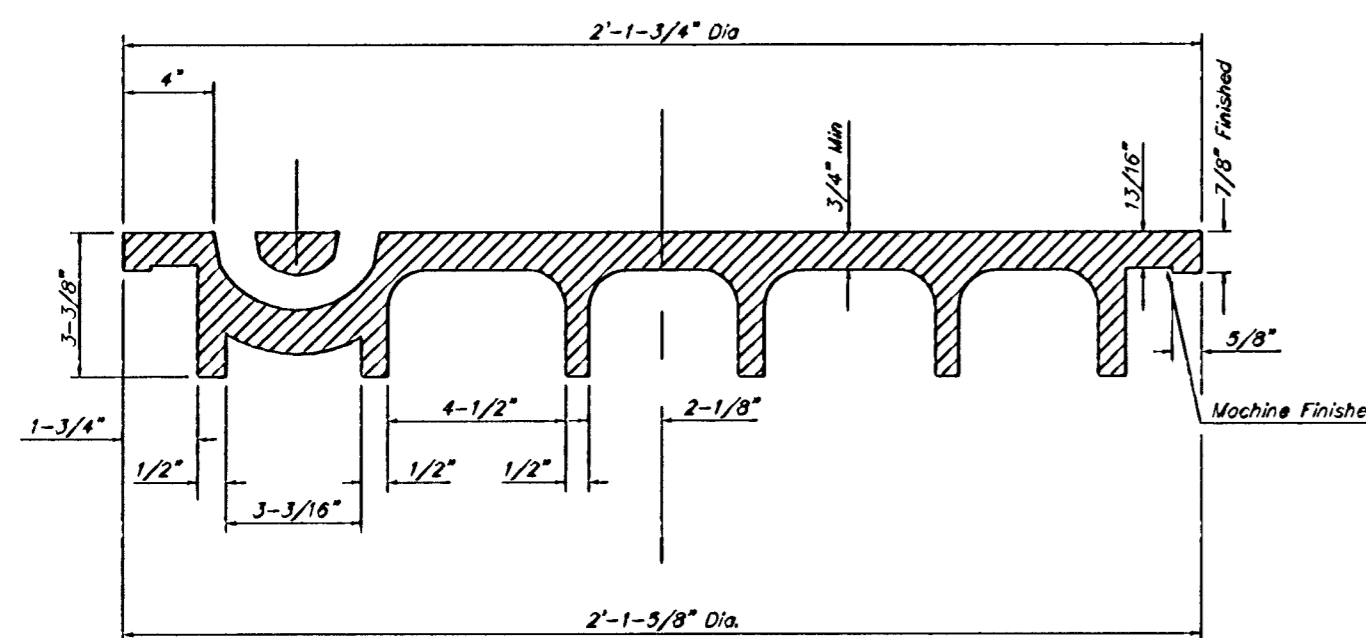
MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

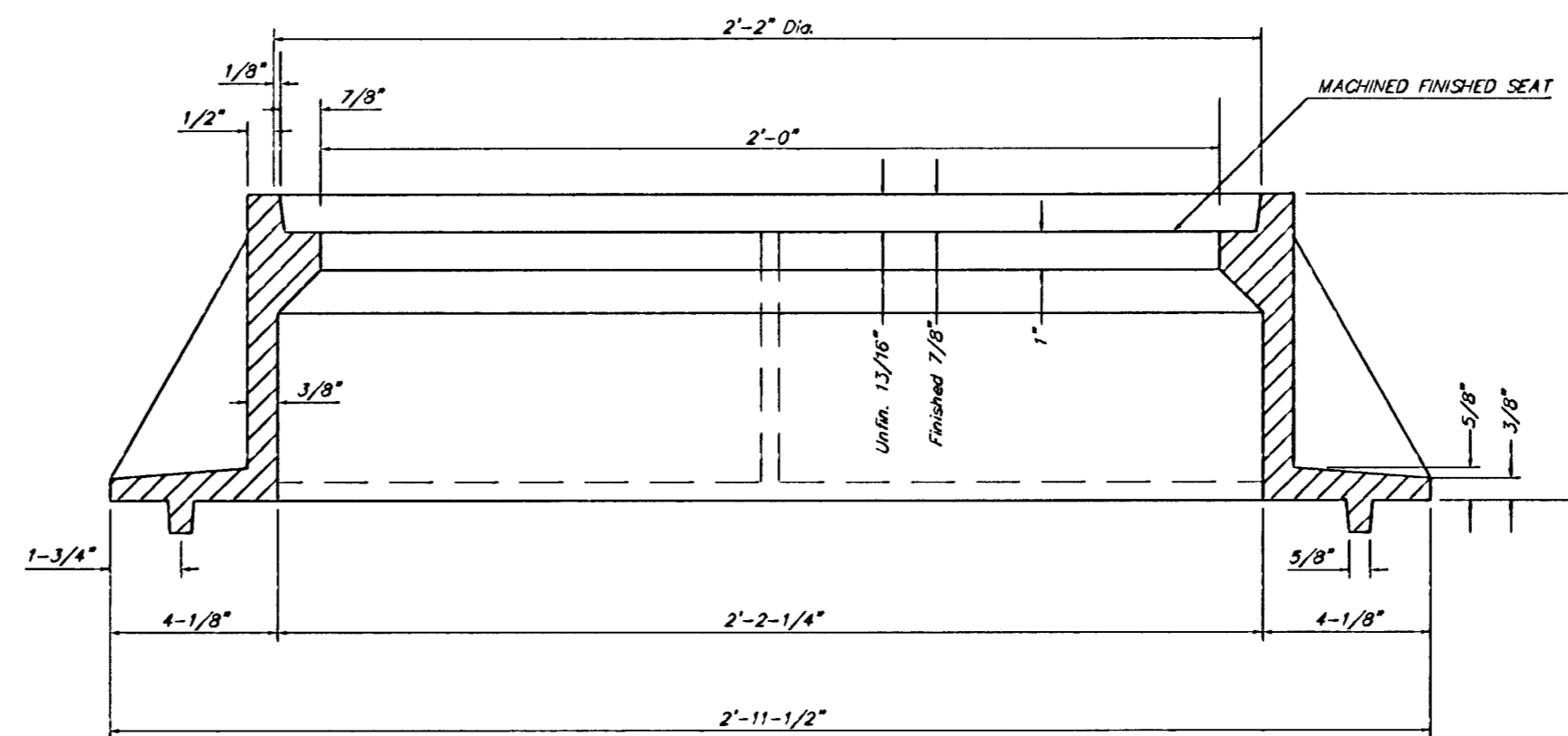
MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



SECTION VIEW



SECTION A-A

MANHOLE FRAME AND COVER DETAIL				
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KANSAS				
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING <small>316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211</small>				
PROJECT NUMBER 488-83695				SHEET 13
DESIGN STAFF	DRAWN STAFF	APPROVED	DATE	SCALE NONE
				OF 17

L. Detzels, M.P.E.

VERTICAL RISER DETAILS

ADOPTED AS STANDARD DESIGN

BY

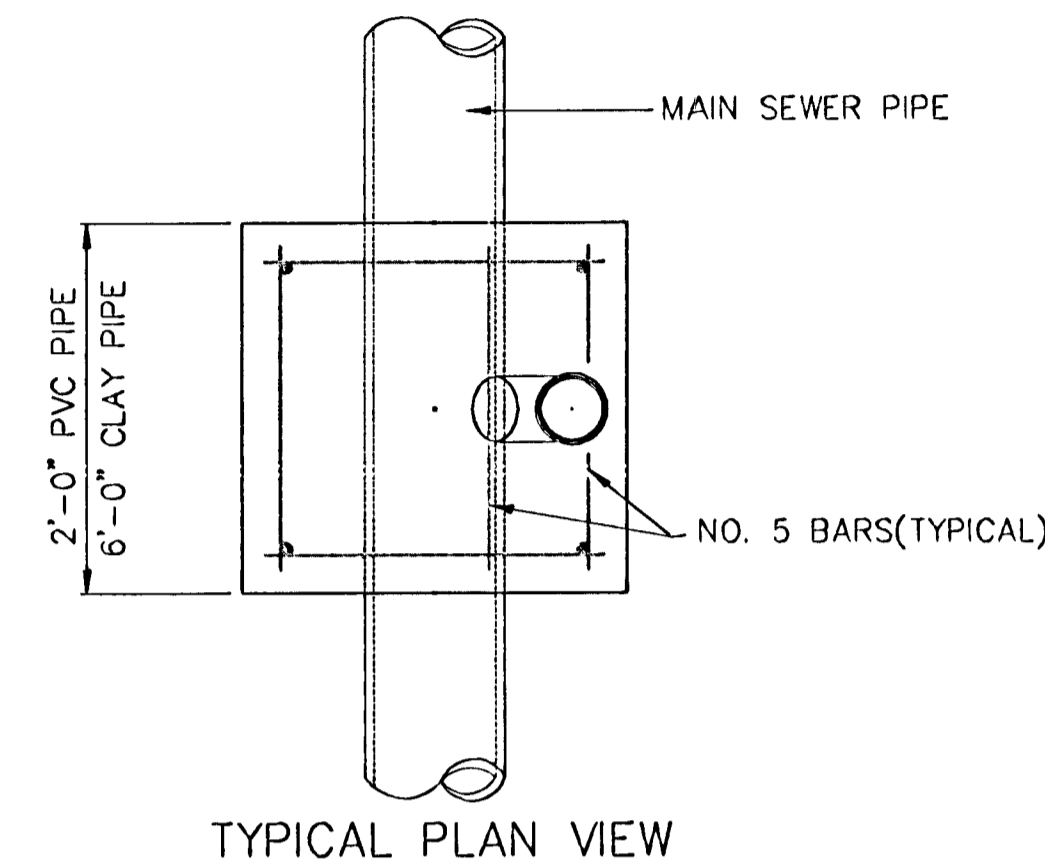
CITY OF ROSE HILL, KANSAS

OCTOBER 1992

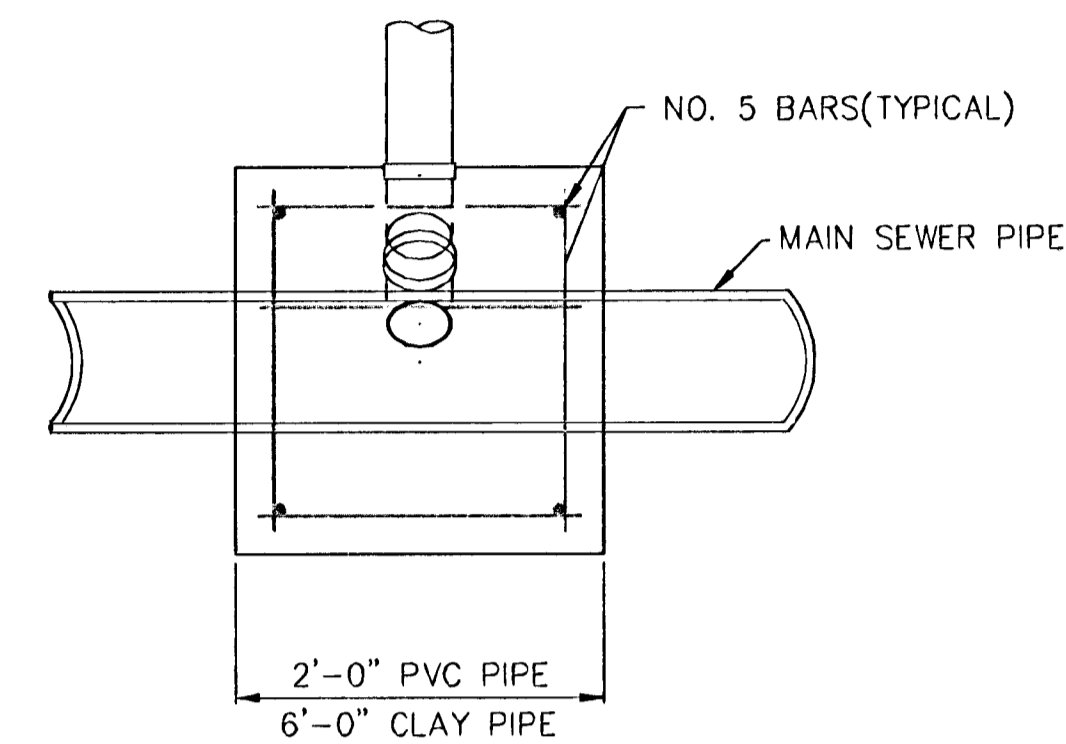
GENERAL NOTES

1. RISERS. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
2. PIPE STUBS. Pipe stubs shall be installed in manholes where connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole pipe stub and the flowline of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.
3. SIZING. Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
4. RISER OR STUB MATERIAL. Risers and stubs shall be constructed of Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. All pipe joints shall be solvent welded.
5. REINFORCED CONCRETE ENCASEMENT. Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains shall be reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
6. BEDDING. Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
7. SUPPORT OF RISERS. Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
8. PLUGGING. The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cop or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
9. TOP OF THE RISER PIPE. The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
11. LOCATION MEASURES. The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
12. RISER LOCATION. The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
13. PAYMENT. "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

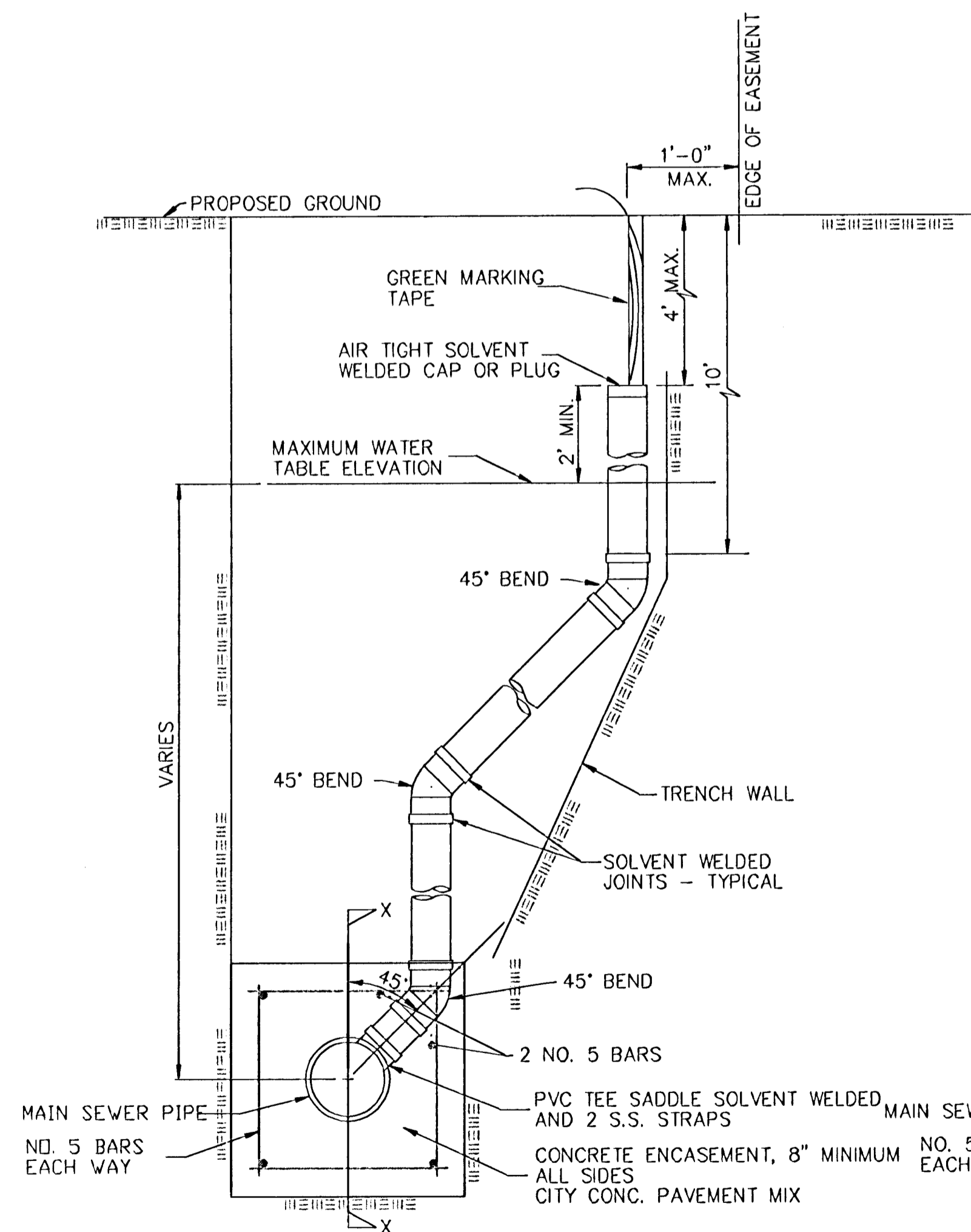
"Manhole stubs" shall be paid for at the contract unit price per each, which shall be full compensation for all labor, material, and incidentals necessary to complete the work including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".



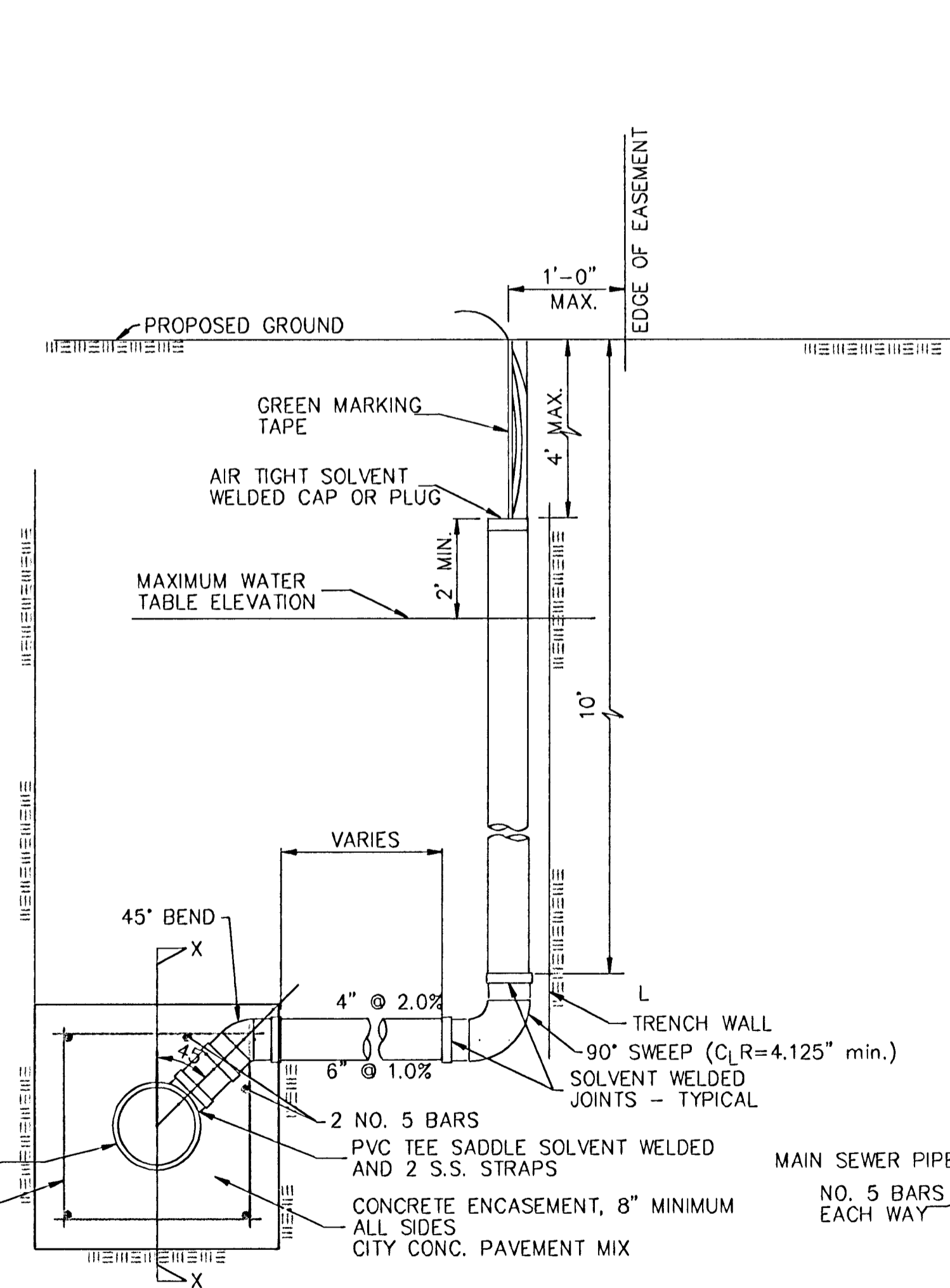
TYPICAL PLAN VIEW



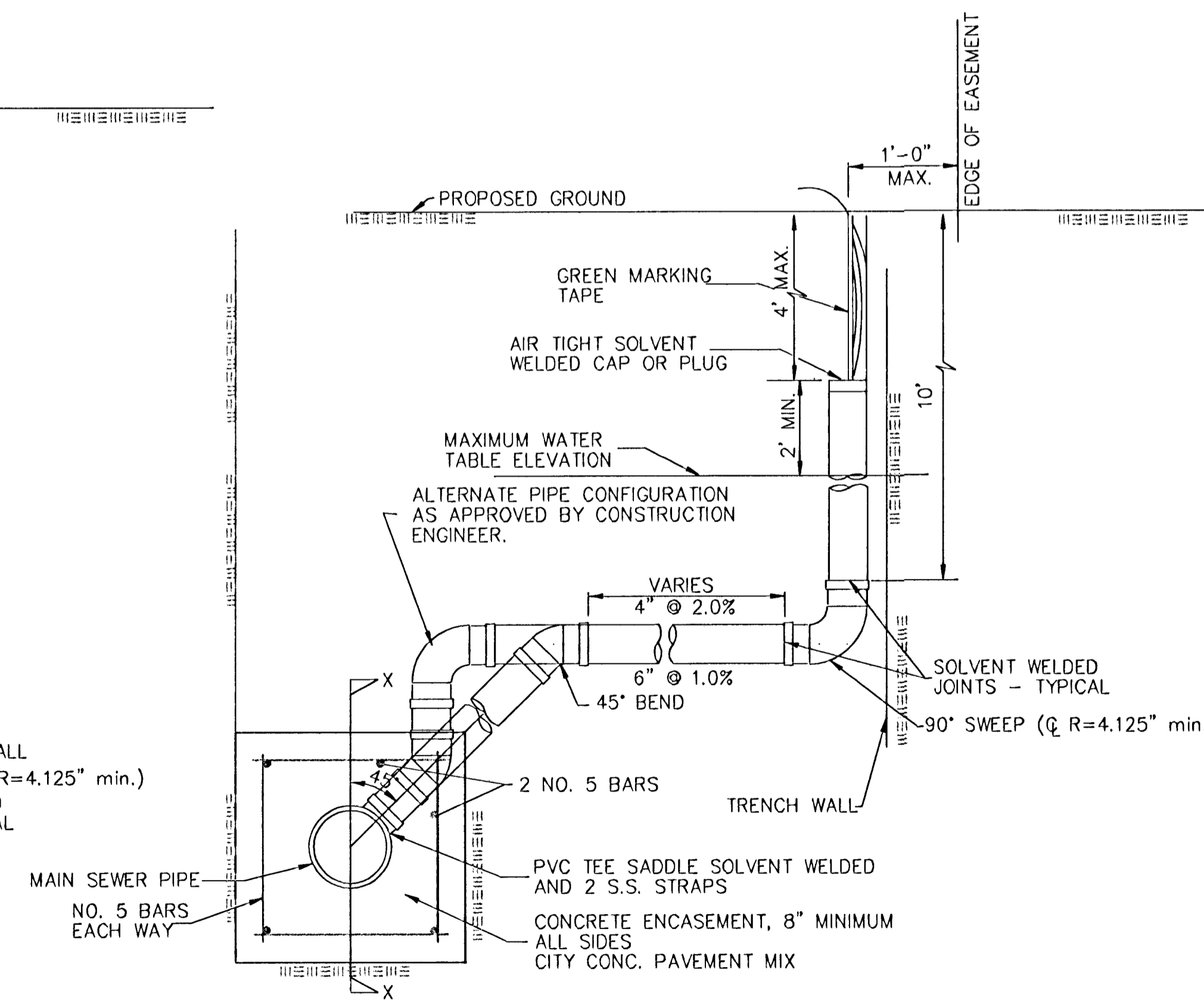
TYPICAL SECTION X-X



METHOD "A"



METHOD "B"



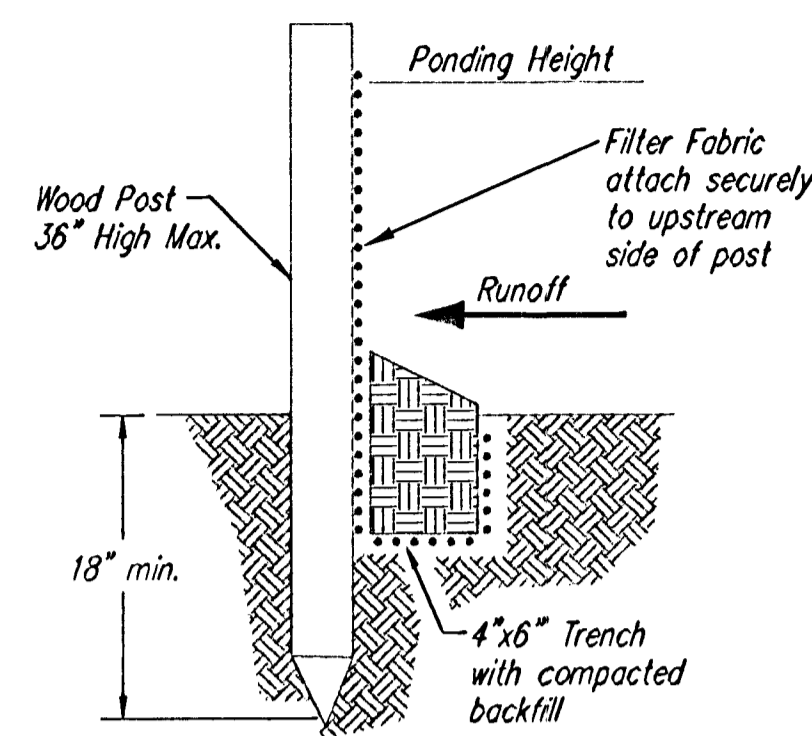
METHOD "C"

NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

City of Rose Hill Standard
Riser Details

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-282-7271 • 318 ELLIS • WICHITA, KANSAS 67211

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
			3/12/03	NONE	14
					OF 17



SILT FENCE BARRIERS

SILT FENCE BARRIERS

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.

When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow.

Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.

Roll out a continuous length of silt fence fabric on the downslope side of the trench. Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed.

Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts. Just downslope of the trench, drive posts into the ground to a depth of at least 18".

Place posts no more than 4' apart. Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates.

Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.

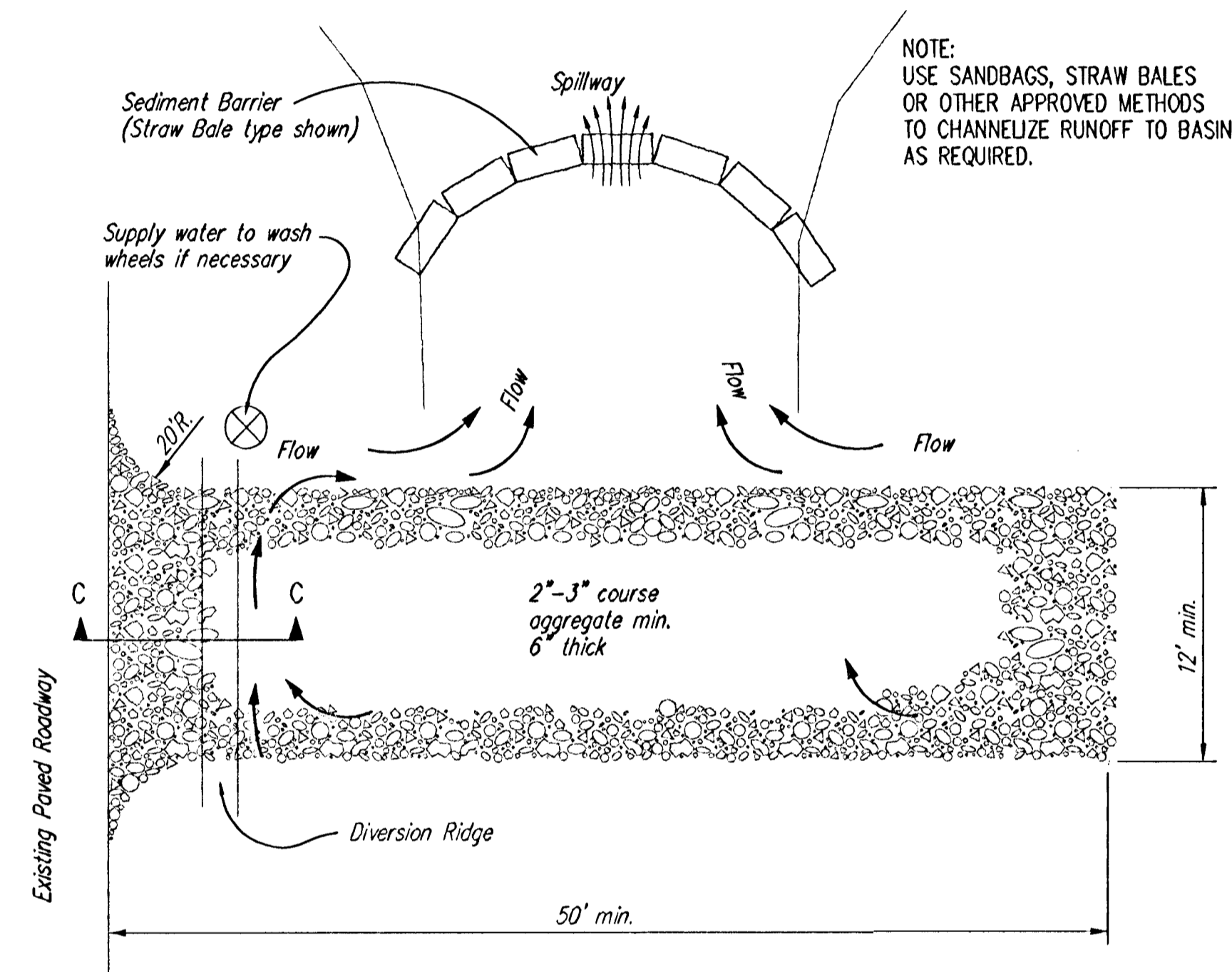
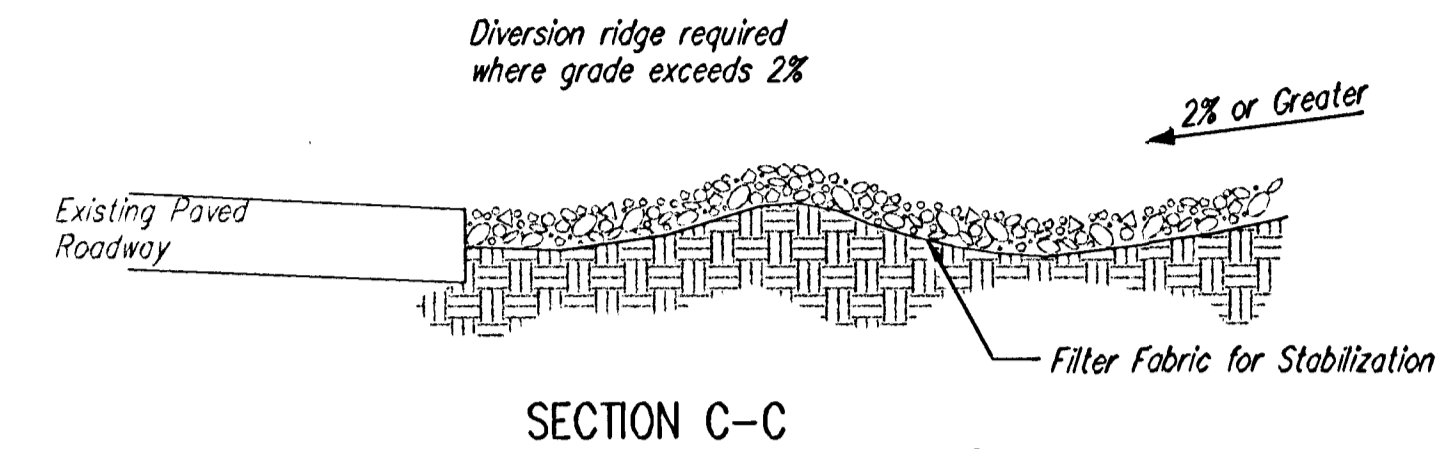
Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out.

Silt fence slope barriers must be dug into the ground—silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

Silt fence slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- Are there any points along the slope barrier where water is concentrating?
- Does water flow under the slope barrier?
- Do the silt fences sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the slope barrier?



STABILIZED CONSTRUCTION ENTRANCE


NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

	SOIL EROSION BMP DETAILS	
	CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER	
	PROJECT NUMBER 468-83595	OCA NO. 743982
	DATE AUG 2002	SHEET 15 OF 17

SHADOW WOODS ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS

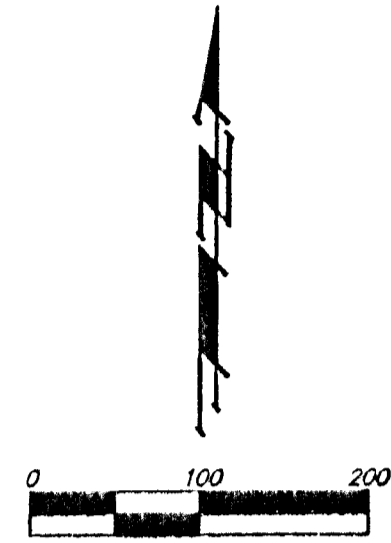
Maple Group, L.L.C.,

 Jay W. Russell, Member
 (See Page 1 for Owner's Acknowledgment)

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION
1-24	D	177.2
1-7	E	162.3

NOTE:
 A master grading plan for drainage has been developed for this subdivision and is on file with the City of Wichita, Kansas. All drainage easements, rights-of-way, or reserves shall remain as established grades or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage system shall be allowed.

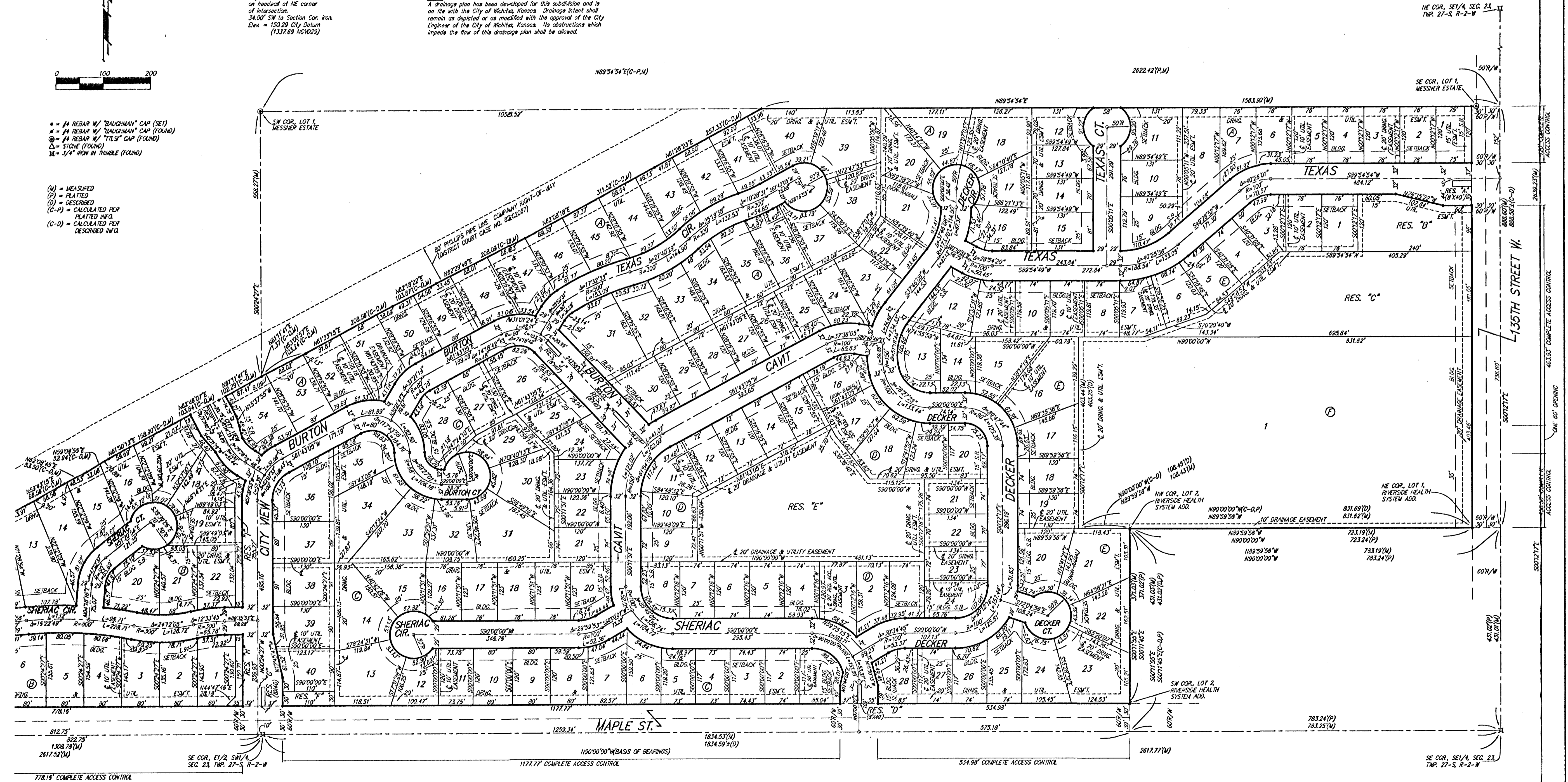
NOTE:
 A drainage plan has been developed for this subdivision and is on file with the City of Wichita, Kansas. Drainage intent shall remain as depicted or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage plan shall be allowed.

BENCHMARK:
 13559 St. W. & Maple -
 City of Wichita Benchmark Disc
 on hoodwall at NE corner
 of intersection.
 34.00' SW to Section Cor. Iron
 Elev. = 150.29 City Datum
 (1337.69 NGVD29)



- = #4 REBAR w/ "BAUGHMAN" CAP (SET)
- = #4 REBAR w/ "BAUGHMAN" CAP (FOUND)
- = #4 REBAR w/ "TILES" CAP (FOUND)
- Δ = STONE (FOUND)
- ⊞ = 3/4" IRON IN THIMBLE (FOUND)

- (M) = MEASURED
- (P) = PLATTED
- (D) = DESCRIBED
- (C-P) = CALCULATED PER PLATTED INFO
- (C-D) = CALCULATED PER DESCRIBED INFO



SHADOW WOODS ADDITION WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas) SS
Sedgwick County) We, Baughman Company, P.A., Surveyors in
aforesaid county and state do hereby certify that we have surveyed and
platted "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas and
that the accompanying plat is a true and correct exhibit of the property
surveyed, described as that part of the SE 1/4 of Sec. 23, Twp. 27-S,
R-2-W of the 6th P.M., Sedgwick County, Kansas described as follows:
Beginning at the NW corner of Riverside Health Systems Addition, Wichita,
Sedgwick County, Kansas; thence westerly along the extended north line
of said Riverside Health Systems Addition, 108.45 feet; thence northerly
parallel with the east line of said SE 1/4, 403.25 feet; thence easterly with
a deflection angle to the right of 90°07'06", 135.98 feet; thence
northeasterly with a deflection angle to the left of 19°34'09", 143.34 feet;
thence northeasterly with a deflection angle to the left of 20°51'47",
203.52 feet; thence easterly with a deflection angle to the right of
40°26'03", 465.29 feet to a point on the east line of said SE 1/4; thence
northerly along the east line of said SE 1/4, 304.00 feet, more or less, to
the SE corner of the NW 1/4 of said SE 1/4, said SE corner also being the
intersection of the east line of said SE 1/4 and the extended south line of
Messner Estate, Wichita, Sedgwick County, Kansas; thence westerly along
the south line of the NW 1/4 of said SE 1/4 and along the south line of said
Messner Estate, 1563.90 feet to the intersection with the southeast line
of Amendment of Right of Way Agreement (District Court Case No.
82C2067); thence southwesterly with a deflection angle to the left of
28°28'30" along the southeast line of said Agreement, 257.33 feet; thence
southwesterly with a deflection angle to the right of 00°41'55" along the
southeast line of said Agreement, 311.52 feet; thence southwesterly with a
deflection angle to the right of 00°21'28" along the southeast line of said
Agreement, 208.09 feet; thence southwesterly with a deflection angle to
the left of 00°11'24" along the southeast line of said Agreement, 103.87
feet; thence southwesterly with a deflection angle to the left of 00°45'07"
along the southeast line of said Agreement, 208.58 feet; thence
southwesterly with a deflection angle to the right of 01°27'43" along the
southeast line of said Agreement, 103.24 feet; thence southwesterly with
a deflection angle to the left of 01°49'16" along the southeast line of said
Agreement, 1.37 feet to a point on the west line of said SE 1/4; thence
southerly along the west line of said SE 1/4, 757.47 feet to the SW corner
of said SE 1/4; thence easterly along the south line of said SE 1/4, 1834.59
feet, more or less, to the intersection with the extended west line of said
Riverside Health Systems Addition; thence northerly along said extended
west line, 431.02 feet to the point of beginning, TOGETHER with that part
of the E 1/2 of the SW 1/4 of said Sec. 23 lying south of and adjacent to the
southeast line of Amendment of Right of Way Agreement (District Court
Case No. 82C2067), more particularly described as follows: Beginning at the
SE corner of said SW 1/4; thence northerly along the east line of said
E 1/2, 757.47 feet to the intersection with the southeast line of said
Agreement; thence southwesterly with a deflection angle to the left of
118°23'31" along the southeast line of said Agreement, 102.29 feet; thence
southwesterly with a deflection angle to the right of 01°34'26" along the
southeast line of said Agreement, 103.84 feet; thence southwesterly with
a deflection angle to the left of 00°55'55" along the southeast line of
said Agreement, 158.90 feet; thence southwesterly with a deflection angle
to the left of 02°41'18" along the southeast line of said Agreement, 52.94
feet; thence southwesterly with a deflection angle to the right of
02°59'30" along the southeast line of said Agreement, 53.50 feet; thence
southwesterly with a deflection angle to the left of 02°25'29" along the
southeast line of said Agreement, 66.58 feet; thence southwesterly with a
deflection angle to the right of 02°22'24" along the southeast line of said
Agreement, 157.26 feet; thence southwesterly with a deflection angle to
the left of 01°37'50" along the southeast line of said Agreement, 58.97
feet; thence southwesterly with a deflection angle to the right of
01°33'14" along the southeast line of said Agreement, 101.55 feet; thence
southwesterly with a deflection angle to the left of 00°58'26" along the
southeast line of said Agreement, 60.68 feet; thence southerly with a
deflection angle to the left of 59°18'40", 321.29 feet to a point on the
south line of said E 1/2, said point being 486.05 feet east of the SW
corner of said E 1/2; thence easterly along the south line of said E 1/2,
822.75 feet to the point of beginning, TOGETHER with that part of the
SE 1/4 of Sec. 23, Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County,
Kansas described as follows: Beginning at the NE corner of Lot 1,
Riverside Health System Addition, Wichita, Sedgwick County, Kansas; thence
westerly along the north line of said Riverside Health System Addition, and
as extended westerly, 831.69 feet; thence northerly parallel with the east
line of said SE 1/4, 403.25 feet; thence easterly with a deflection angle
to the right of 90°07'06", 135.98 feet; thence northeasterly with a deflection
angle to the left of 19°34'09", 143.34 feet; thence northeasterly with a
deflection angle to the left of 20°51'47", 203.52 feet; thence easterly with
a deflection angle to the right of 40°26'03", 465.29 feet to a point on
the east line of said SE 1/4; thence southerly along the east line of said
SE 1/4, 304.00 feet to the intersection with the north line of said Riverside
Health System Addition, as extended easterly; thence westerly along said
extended north line, 80.00 feet to the point of beginning, all being
subject to road rights-of-way of record.

Know all men by these presents that we,
the undersigned, have caused the land in the surveyors certificate to be
platted into Lots, Blocks, Streets, and Reserves to be known as "SHADOW
WOODS ADDITION", Wichita, Sedgwick County, Kansas. The utility
easements are hereby granted as indicated for the construction and
maintenance of all public utilities. The drainage and utility easements are
hereby granted as indicated for drainage purposes and for the
construction and maintenance of all public utilities. The drainage
easements are hereby granted as indicated for drainage purposes. The
pedestrian access and drainage easement is hereby granted as indicated
for pedestrian access purposes to or from Reserve "E", and for drainage
purposes, and no fences or other obstructions shall be constructed or
placed on or within this easement. The pedestrian access, drainage, and
utility easement is hereby granted as indicated for pedestrian access
purposes to or from Reserve "E", for drainage purposes, and for the
construction and maintenance of all public utilities, and no fences or
other obstructions shall be constructed or placed on or within this
easement. The streets are hereby dedicated to and for the use of the
public. Reserves "A", "D", "G", "J", "K", and "L" are hereby reserved for
open space, landscaping, utilities, drainage purposes, and streets. Reserve
"B" is hereby reserved for open space, landscaping, lakes, drainage
purposes, berms, entry monuments, and utilities as confined to easements.
Reserve "C" is hereby reserved for open space, landscaping, lakes, drainage
purposes, berms, and utilities as confined to easements. Reserve "E" is
hereby reserved for open space, landscaping, lakes, drainage purposes,
berms, sidewalks, gazebos, recreational areas, and utilities as confined to
easements. Reserves "F" and "H" are hereby reserved for open space,
landscaping, screening walls, entry monuments, utilities, and drainage
purposes. Reserve "I" is hereby reserved for open space, landscaping,
utilities, screening walls, berms, and drainage purposes. Reserves "A", "B",
"C", "D", "E", "F", "G", "H", "I", "J", "K", and "L" shall be owned and
maintained by the homeowners association for the addition. Access
controls shall be as depicted on the face of the plat and are hereby
granted to the City of Wichita, Kansas. The permitted opening locations
shall be as determined by the City Engineer of the City of Wichita, Kansas.
The Minimum Building Pad Elevations for the lowest opening to the
structures shall be as indicated on the face of the plat.

Maple Group, L.L.C.
[Signature], Member
Jay W. Russell
New Life Covenant Church, Inc.
[Signature], President
Joe A. Winger
[Signature], Vice-President
Robert J. Schmidt

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 21st day of January, 2003, by Jay W. Russell, Member of
Maple Group, L.L.C., on behalf of the company.

[Signature], Notary Public
SUSAN K. MONETTE
My App'l. Exp. 11-9-03

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 21st day of January, 2003, by Joe A. Winger, President of
New Life Covenant Church, Inc., on behalf of the corporation.

[Signature], Notary Public
SUSAN K. MONETTE
My App'l. Exp. 11-9-03

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 21st day of January, 2003, by Robert J. Schmidt,
Vice-President of New Life Covenant Church, Inc., on behalf of the
corporation.

[Signature], Notary Public
SUSAN K. MONETTE
My App'l. Exp. 11-9-03

- = #4 REBAR W/ "BAUGHMAN" CAP (SET)
- = #4 REBAR W/ "BAUGHMAN" CAP (FOUND)
- = #4 REBAR W/ "TILS" CAP (FOUND)
- △ = STONE (FOUND)
- △ = 3/4" IRON W/ HUBBLE (FOUND)

- (M) = MEASURED
- (P) = PLATTED
- (D) = DESCRIBED
- (C-P) = CALCULATED PER PLATTED INFO
- (C-D) = CALCULATED PER DESCRIBED INFO

NOTE:
A master grading plan for drainage has been developed for this
subdivision and is on file with the City of Wichita, Kansas. All
drainage easements, rights-of-way, or reserves shall remain at
established grades or as modified with the approval of the City
Engineer of the City of Wichita, Kansas. No obstructions which
impede the flow of this drainage system shall be allowed.

NOTE:
A drainage plan has been developed for this subdivision and is
on file with the City of Wichita, Kansas. Drainage intent shall
remain as depicted or as modified with the approval of the City
Engineer of the City of Wichita, Kansas. No obstructions which
impede the flow of this drainage plan shall be allowed.

We the undersigned holders of a mortgage on the
above described property, do hereby consent to this plat of "SHADOW
WOODS ADDITION", Wichita, Sedgwick County, Kansas.

Kanza Bank
[Signature], VP
MAX WHITTLE
State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged be-
fore me, this 21st day of January, 2003, by Max Whittle,
Vice-President of Kanza Bank, on behalf of the bank.
[Signature], Notary Public
SUSAN K. MONETTE
My App'l. Exp. 11-9-03

We the undersigned holders of a mortgage on the
above described property, do hereby consent to this plat of "SHADOW
WOODS ADDITION", Wichita, Sedgwick County, Kansas.

Prairie State Bank-West Wichita
[Signature], V.P.
LORI J. NEWELL
State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged be-
fore me, this 21st day of January, 2003, by Lori J. Newell,
Vice-President of Prairie State Bank-West Wichita, on behalf of the
bank.
[Signature], Notary Public
SUSAN K. MONETTE
My App'l. Exp. 11-9-03

This plat of "SHADOW WOODS ADDITION",
Wichita, Sedgwick County, Kansas has been submitted to and approved by
the Wichita-Sedgwick County Metropolitan Area Planning Commission,
Wichita, Kansas.

Dated this _____ day of _____,
Wichita-Sedgwick County Metropolitan Area Planning Commission

_____ , Chair
Bernard A. Hentzen
_____ , Secretary
Dale Miller
This plat approved and all dedications
shown hereon accepted by the City Council of the City of Wichita,
Kansas, this _____ day of _____, 2003.
At the direction of the City Council
_____ , City Manager
Chris Cherches
_____ , City Clerk
Pat Graves

LOT	BLOCK	ELEVATION
		CITY DATUM
1-24	D	177.2
1-7	E	160.3

BENCHMARK:
1351A SL. W. & Maple -
City of Wichita Benchmark Disc
on northeast of NE corner
of intersection.
34.00' SW to Section Cor. iron
Din. = 150.29 City Datum
(1337.69 NGVD29)

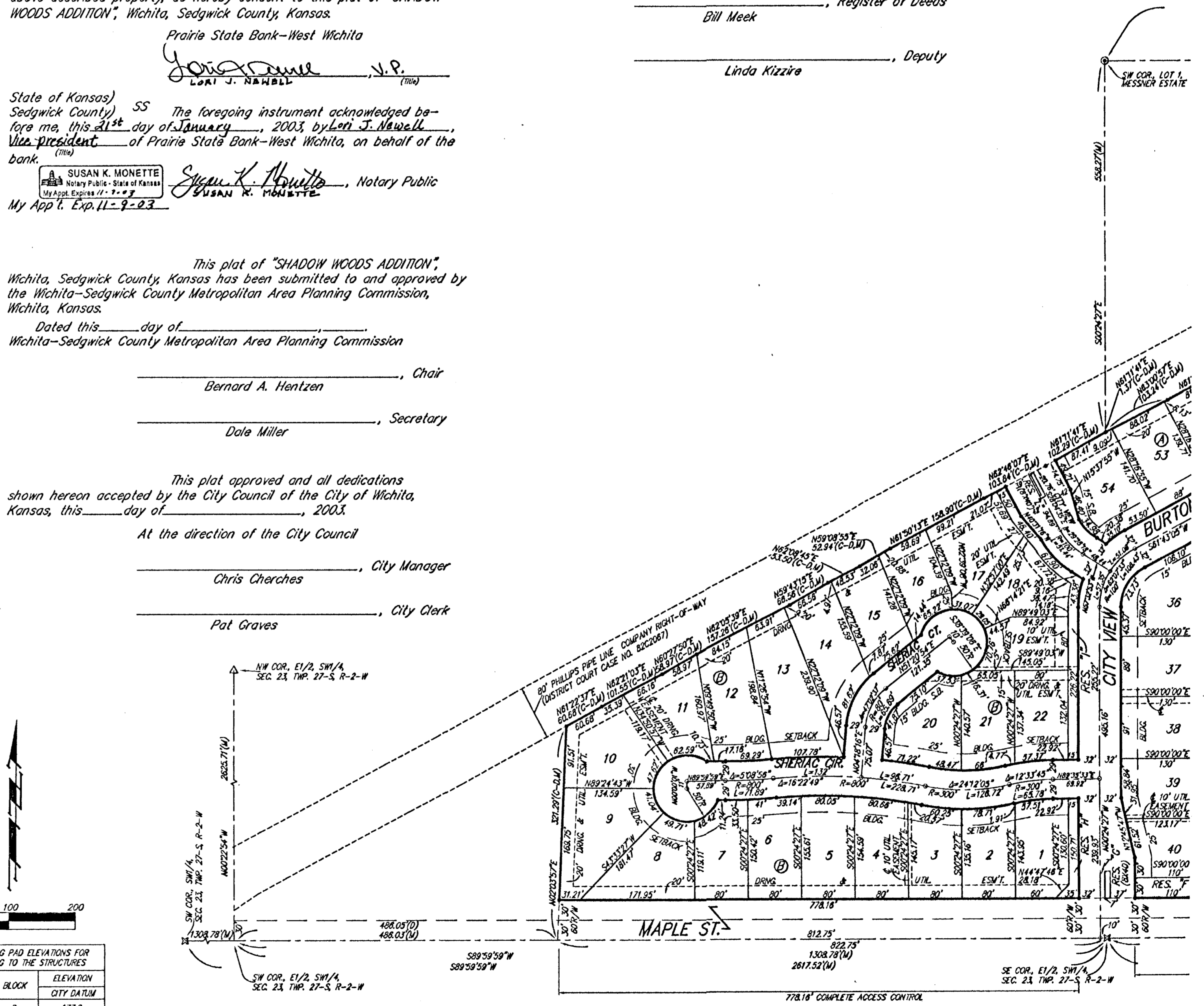
Reviewed in accordance with K.S.A. 58-2005
on this _____ day of _____, 2003.

[Signature], L.S. #1246
Tricia L. Robello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas
Entered on transfer record this _____ day
of _____, 2003.
_____, County Clerk
Don Brace

State of Kansas) SS
Sedgwick County) This is to certify that this plat has been
filed for record in the office of the Register of Deeds, this _____ day
of _____, 2003 at _____ o'clock _____ M; and is duly recorded.

_____, Register of Deeds
Bill Meek

_____, Deputy
Linda Kizzire



[Signature] 18-971-21-2003, Surveyor
Michael G. Conroy

