

Lat. 2, Main 2, Cowskin interseptor Sewer SANITARY SEWER IMPROVEMENTS to serve **AUBURN HILLS 8TH ADDITION**

Project Number

468-82954

Index Code

743788

CITY OF WICHITA, KANSAS
Michael E. Lindebak, P.E. City Engineer

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

Multimedia Cablevision	262-0661
K.P.L. Gas Service Company	383-8650
Kansas Gas & Electric Company	383-8600
Peoples Gas Company	942-8350
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Dept.	268-4908
City of Wichita Traffic Engineering	269-4446
2. Underground utility service lines and overhead utility lines 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. 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.
4. 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.
5. 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.
6. All areas disturbed by construction operations shall be seeded with rye grass at a rate of 300 lbs/acre immediately following construction in that area. Prior to seeding, area shall be prepared per City specs.
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 MH or stub, the contractor shall reshape MH bottom or adjust the existing stubs' alignment or elevation as necessary. Cost shall be subsidiary to other bid items.

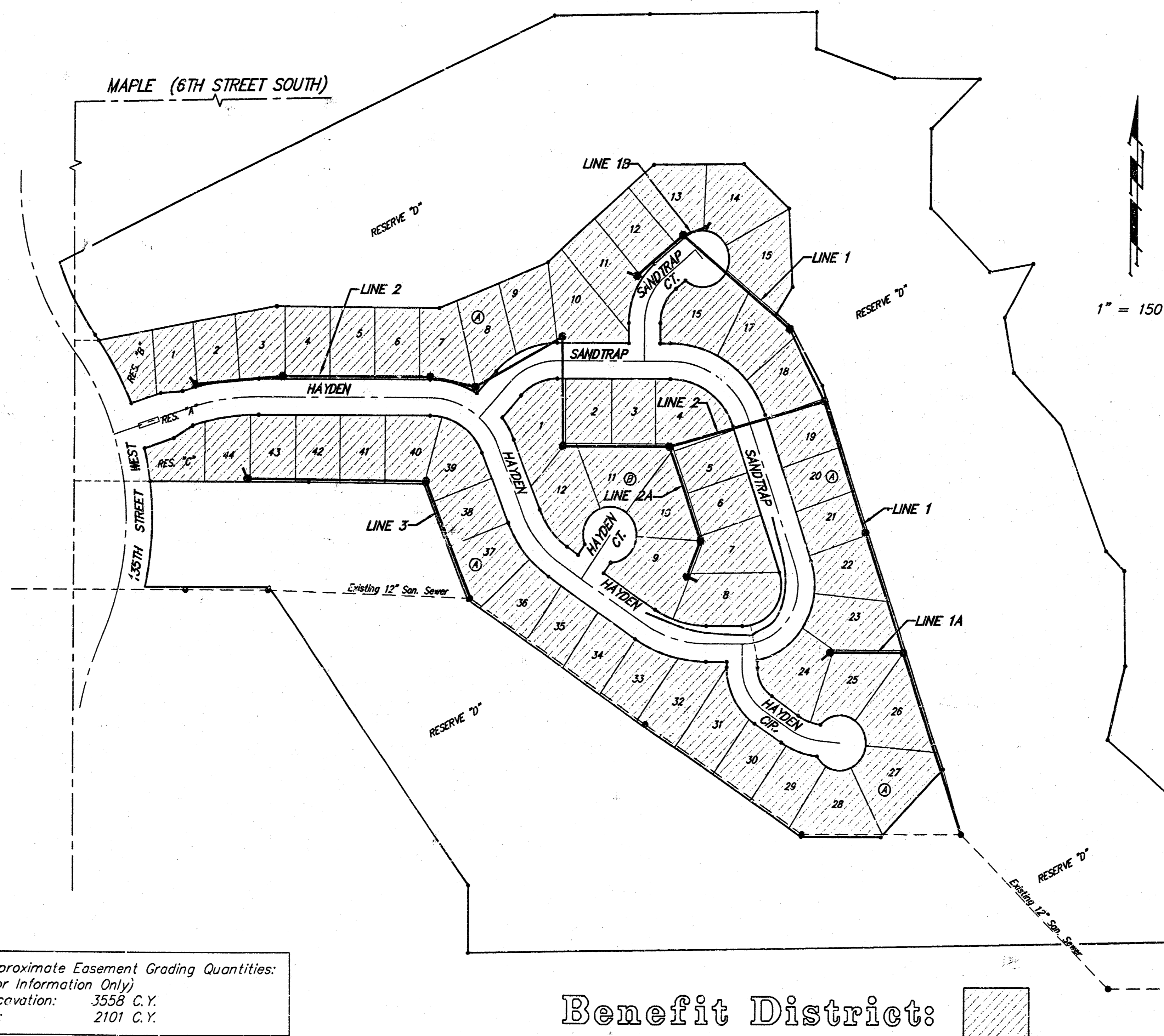
BENCHMARKS:

City Disc - 34.3' E. & 35' N. of
S.W. Corner of N.W. 1/4, Sec. 25,
T-27-S, R-2-W.
Elev. = 156.63 (City Datum)

City Disc - 135th St. W. & Maple,
30' N. & 15' E. CL Both.
Elev. = 150.20 (City Datum)

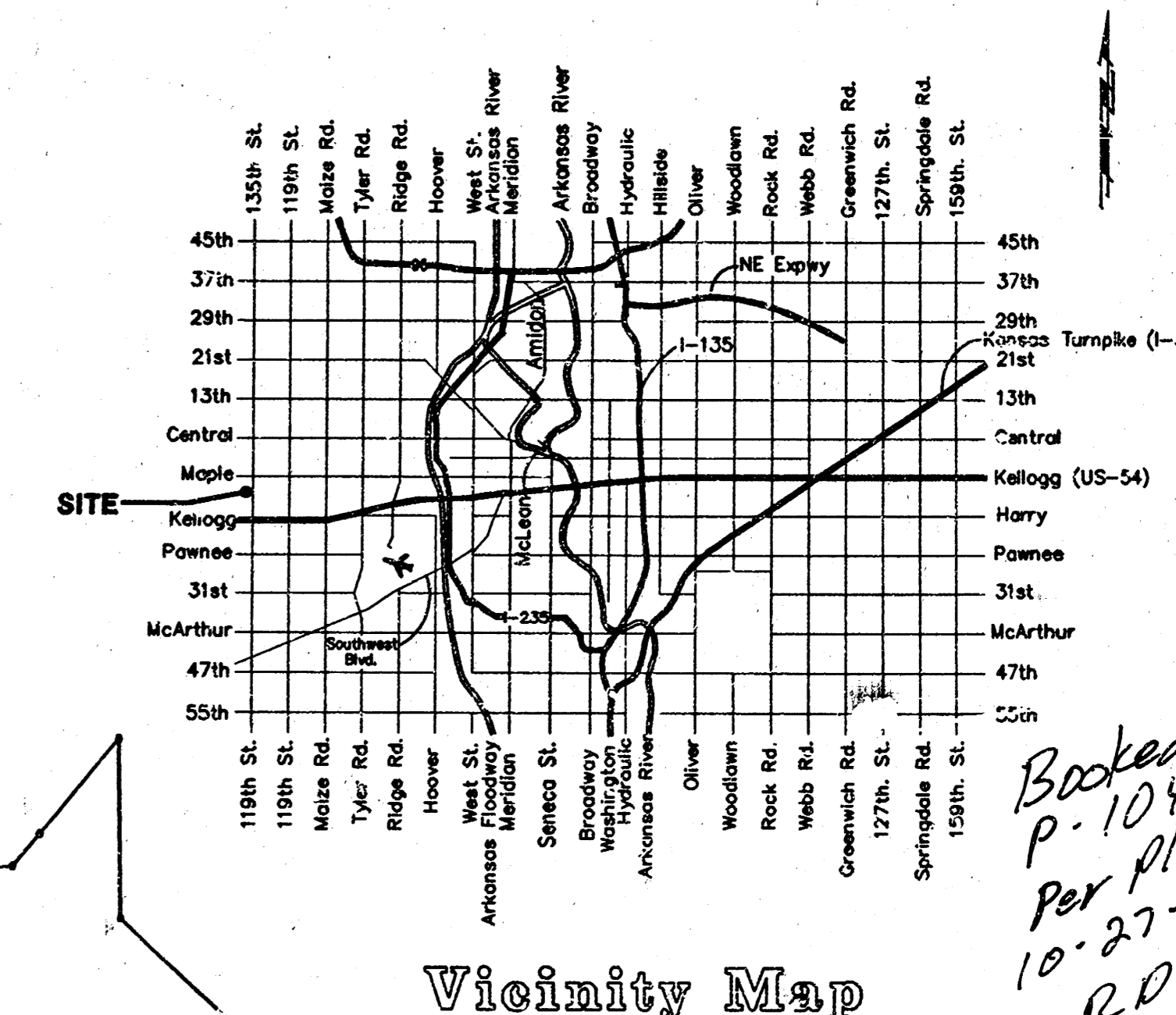
INDEX:

Title Sheet	1
Line 1	2-3
Line 2	4-5
Line 1A & Line 2A	6
Line 3	7
Easement Grading Plan	8-9
4" Vertical Riser Detail	10
8" Cleanout Riser Assy. Detail	11
Standard Manhole Detail	12
Shallow Manhole Detail	13
Ring & Cover Detail	14
Copy of Plat	15-16



Approximate Easement Grading Quantities:
(For Information Only)
Excavation: 3558 C.Y.
Fill: 2101 C.Y.

Benefit District:



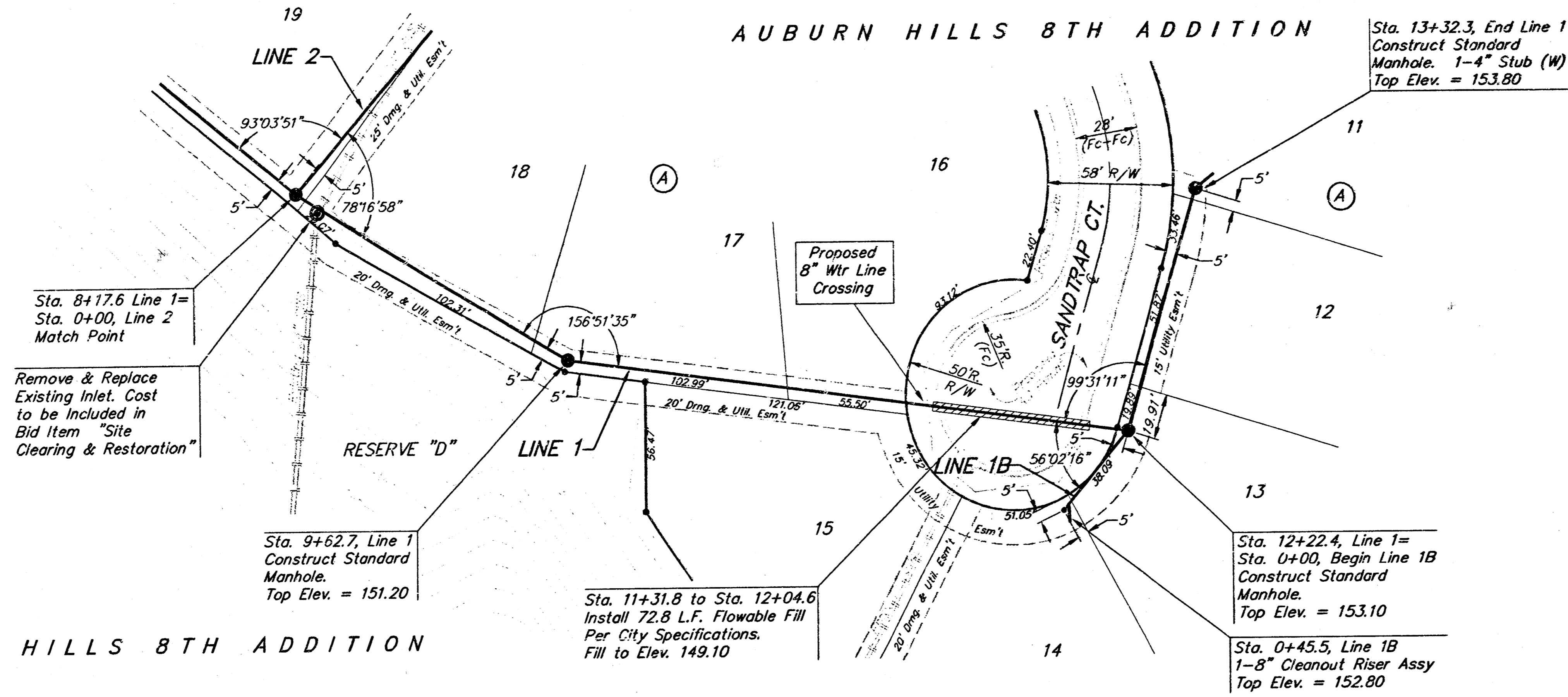
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 S.W. Corner of N.W. 1/4, Sec. 25,
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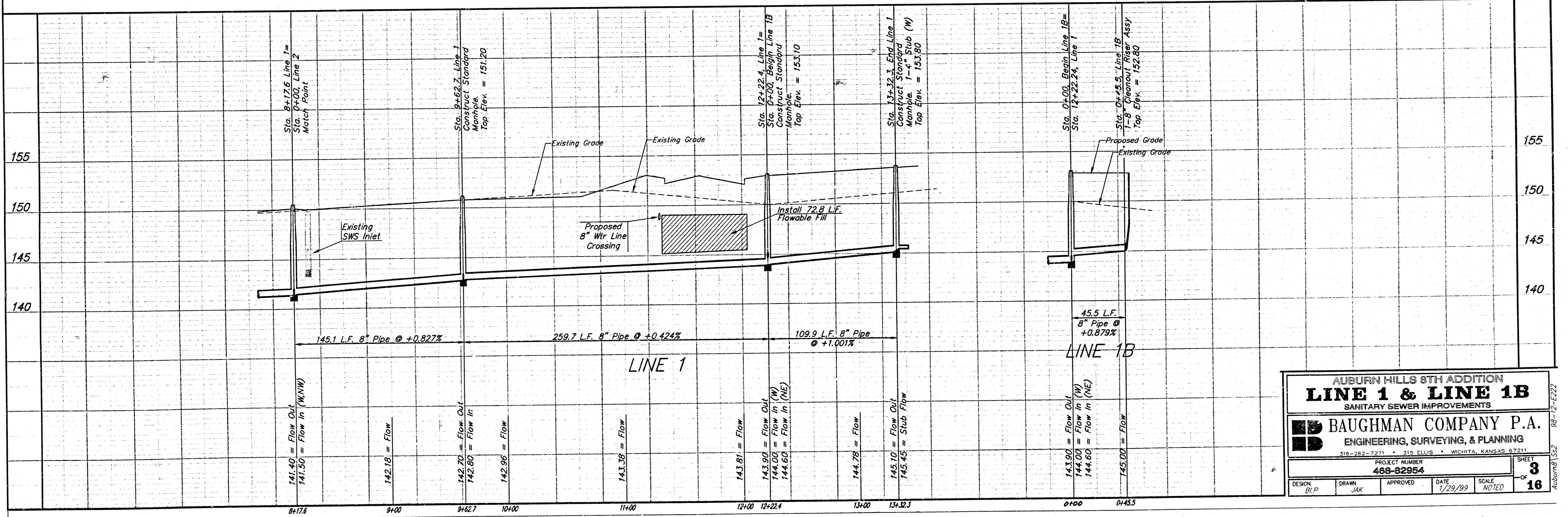
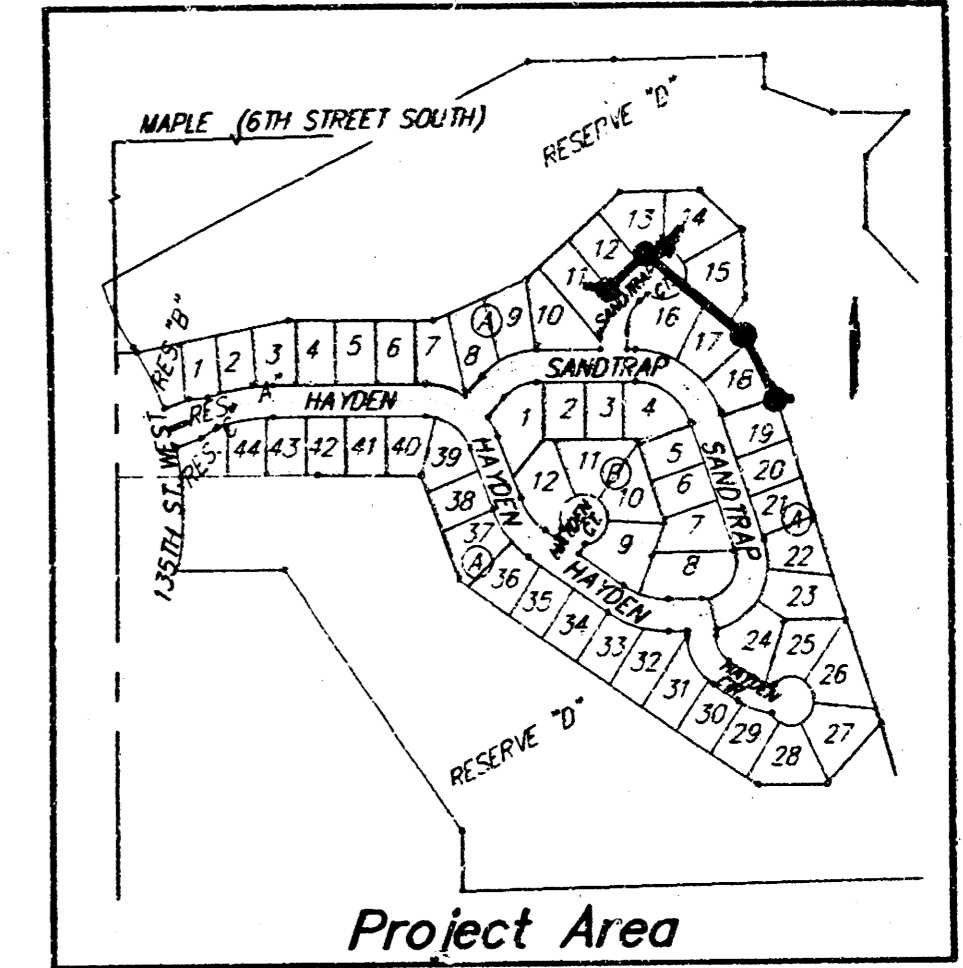
AUBURN HILLS 8TH ADDITION

Sta. 13+32.3, End Line 1
 Construct Standard
 Manhole, 1-4" Stub (W)
 Top Elev. = 153.80

SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL
 • = IRON



AUBURN HILLS 8TH ADDITION



AUBURN HILLS 8TH ADDITION
LINE 1 & LINE 1B
 SANITARY SEWER IMPROVEMENTS

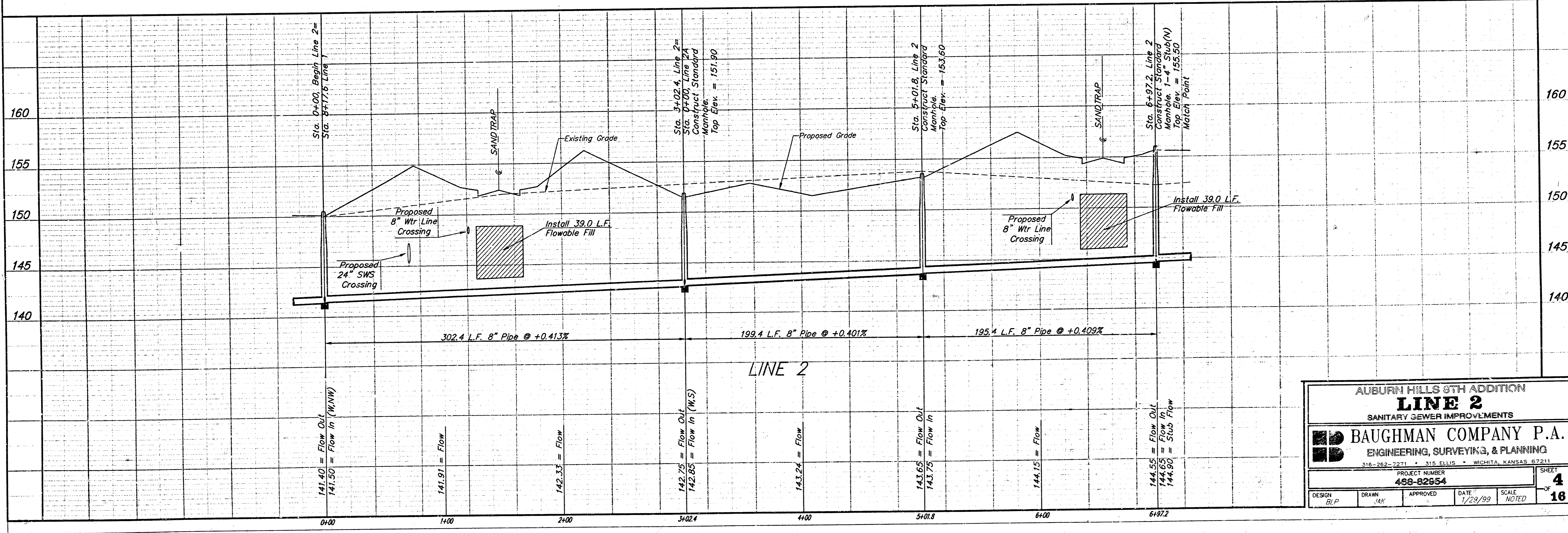
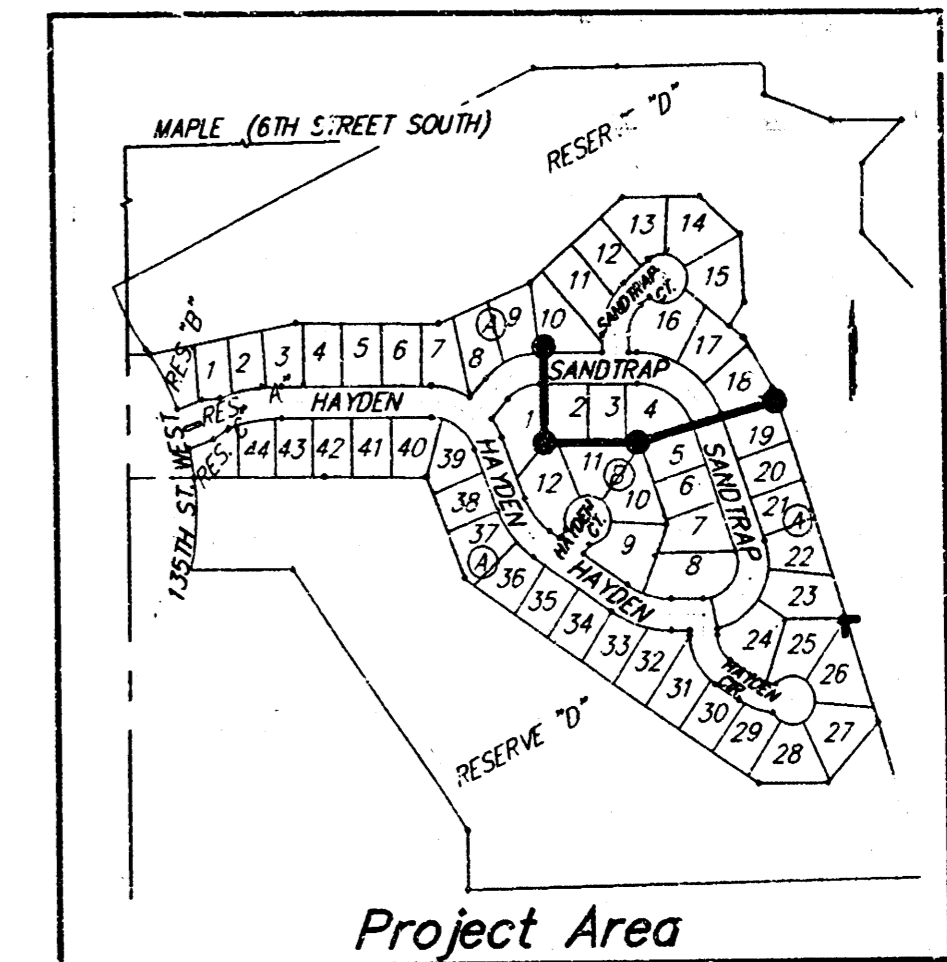
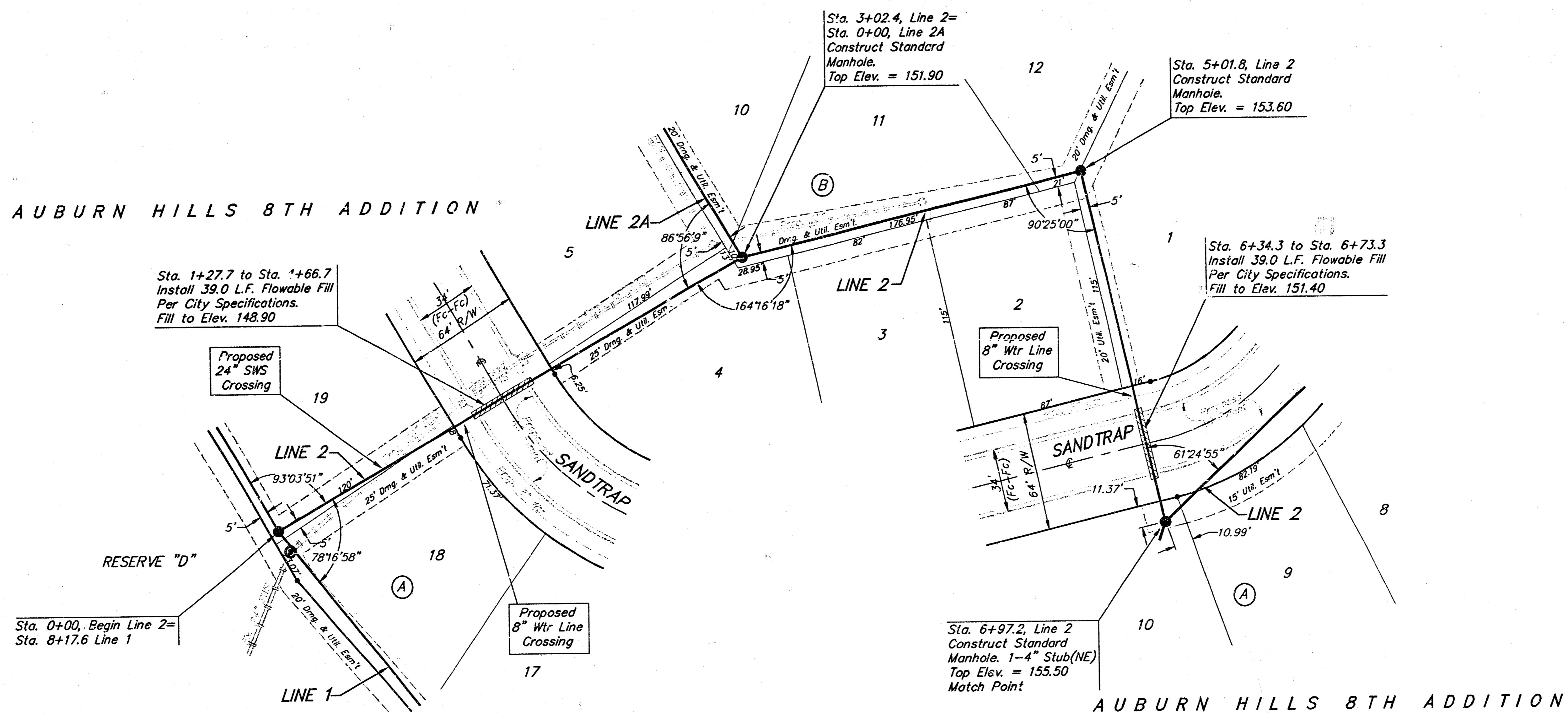
BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER: **488-82954** SHEET: **3**
 DESIGN: *BJP* DRAWN: *JAK* APPROVED: _____ DATE: 1/29/99 SCALE: NOTED
 CITY: **16**

98-2-222

BENCHMARKS:
 City Disc - 34.3' E. & 35' N. of
 S.W. Corner of N.W. 1/4, Sec. 25,
 T-27-S, R-2-W.
 Elev. = 156.63 (City Datum)
 City Disc - 135th St. W. & Maple,
 30' N. & 15' E. CL. Both.
 Elev. = 150.20 (City Datum)

AUBURN HILLS 8TH ADDITION



AUBURN HILLS 8TH ADDITION
LINE 2
 SANITARY SEWER IMPROVEMENTS

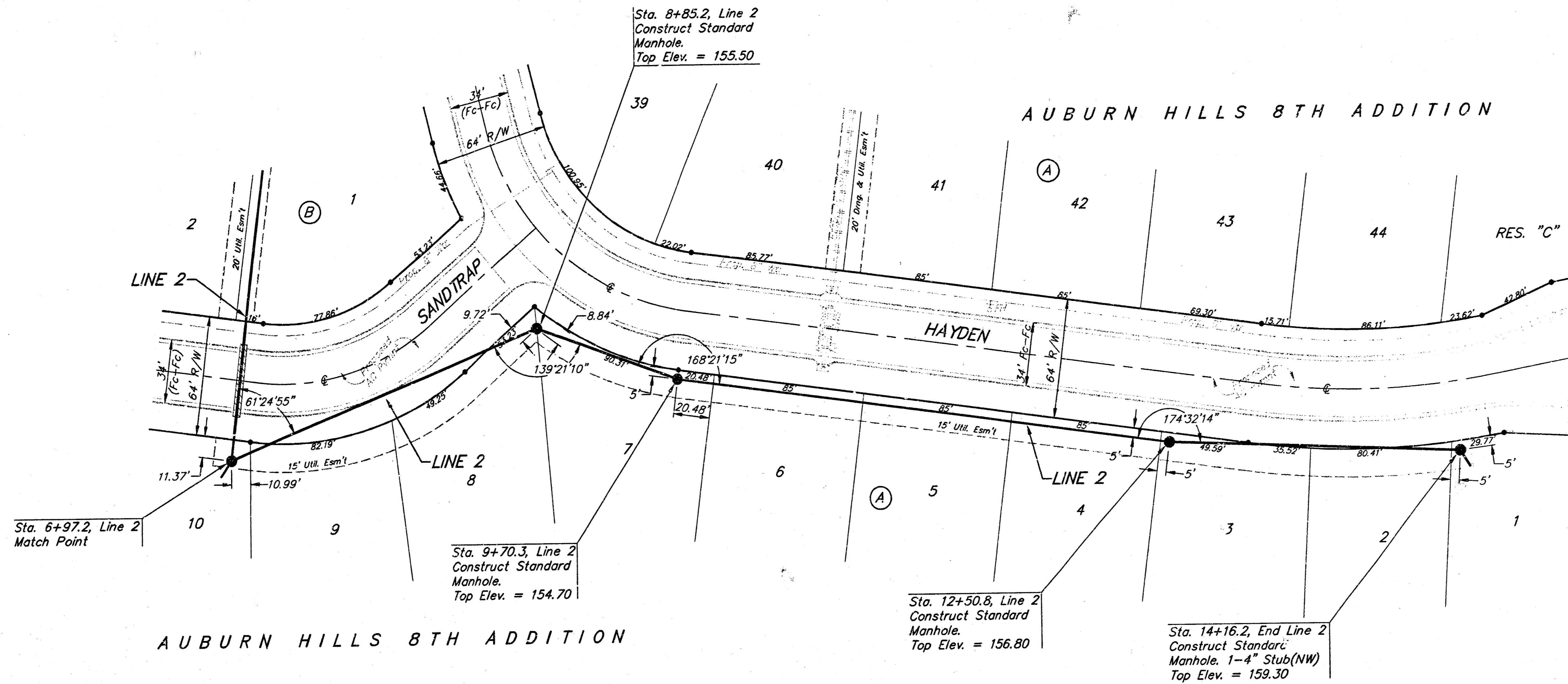
BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

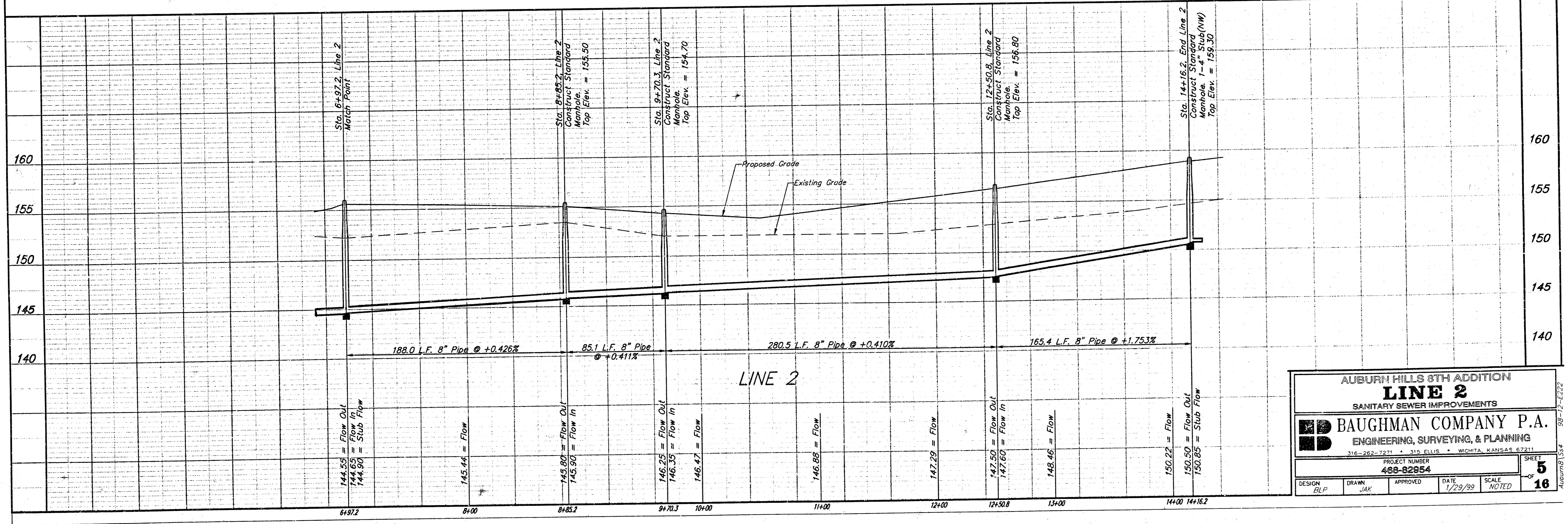
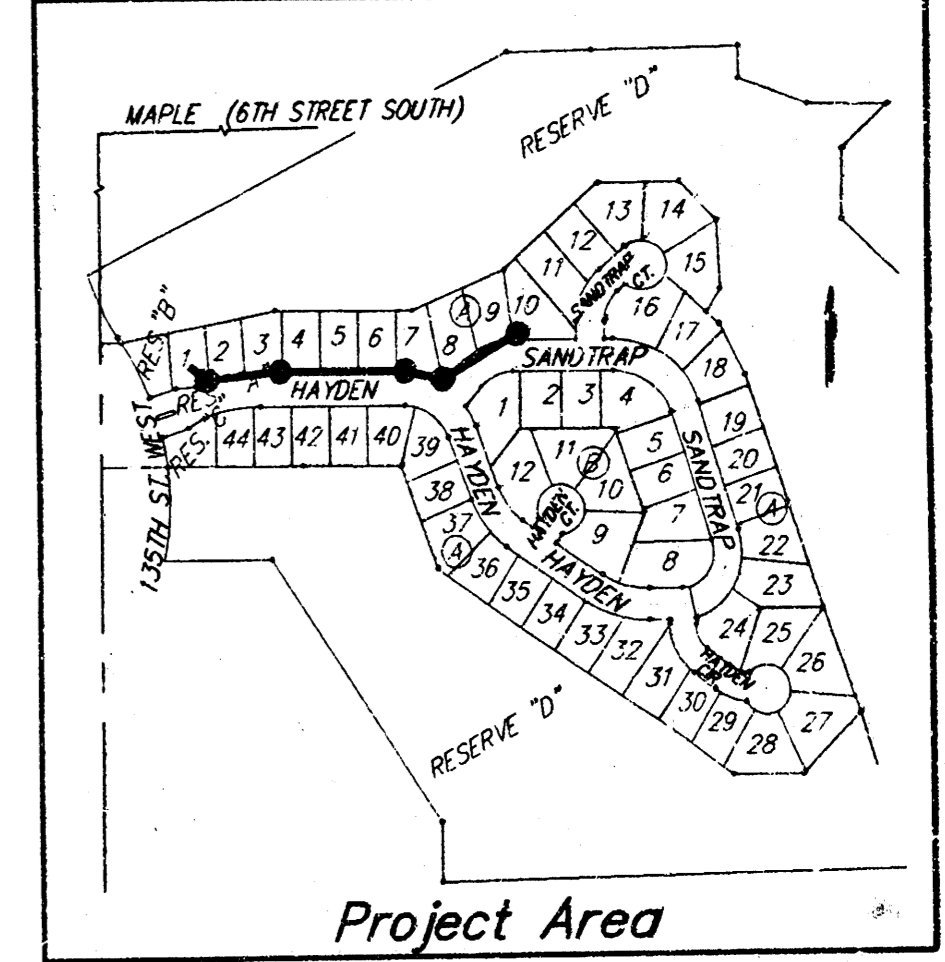
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PROJECT NUMBER 488-82554		SCALE NOTED	
SHEET 4			OF 18

Auburn 135J 98-12-2222

BENCHMARKS:
 City Disc - 34.3' E. & 35' N. of
 S.W. Corner of N.W. 1/4, Sec. 25,
 T-27-S, R-2-W.
 Elev. = 156.63 (City Datum)
 City Disc - 135th St. W. & Maple,
 30' N. & 15' E. CL Both.
 Elev. = 150.20 (City Datum)



SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL
 • = IRON



AUBURN HILLS 8TH ADDITION
LINE 2
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
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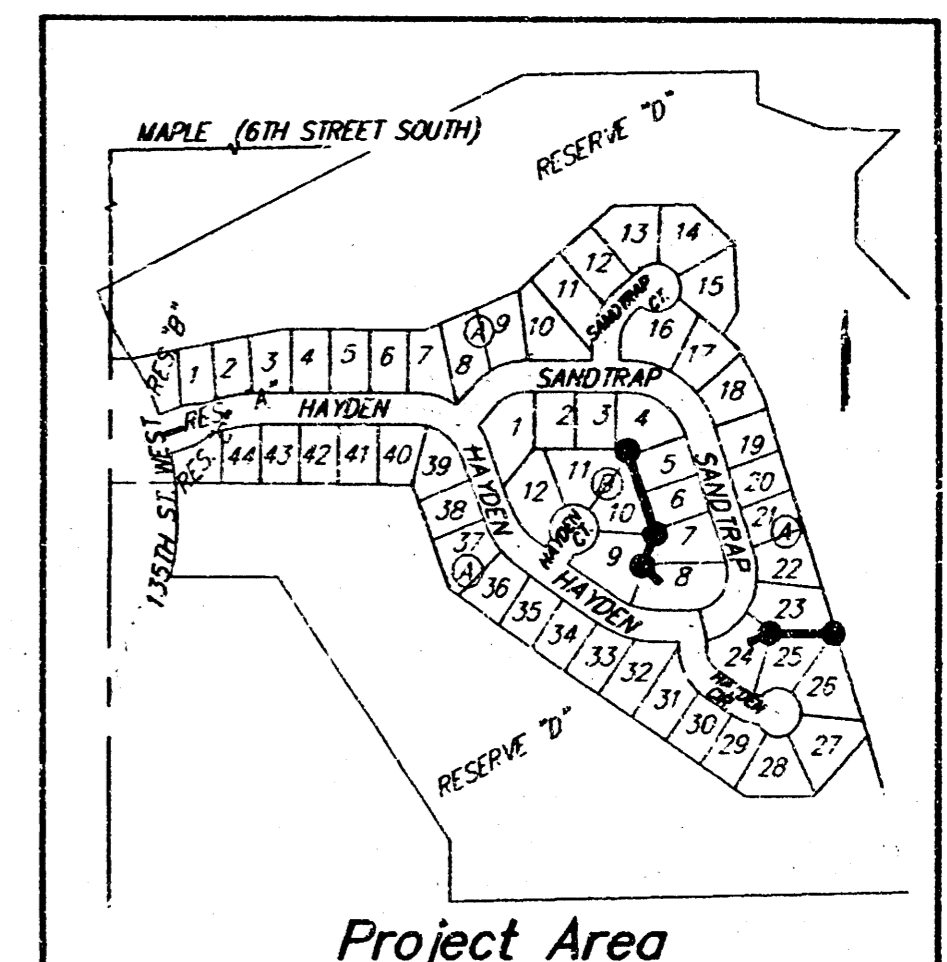
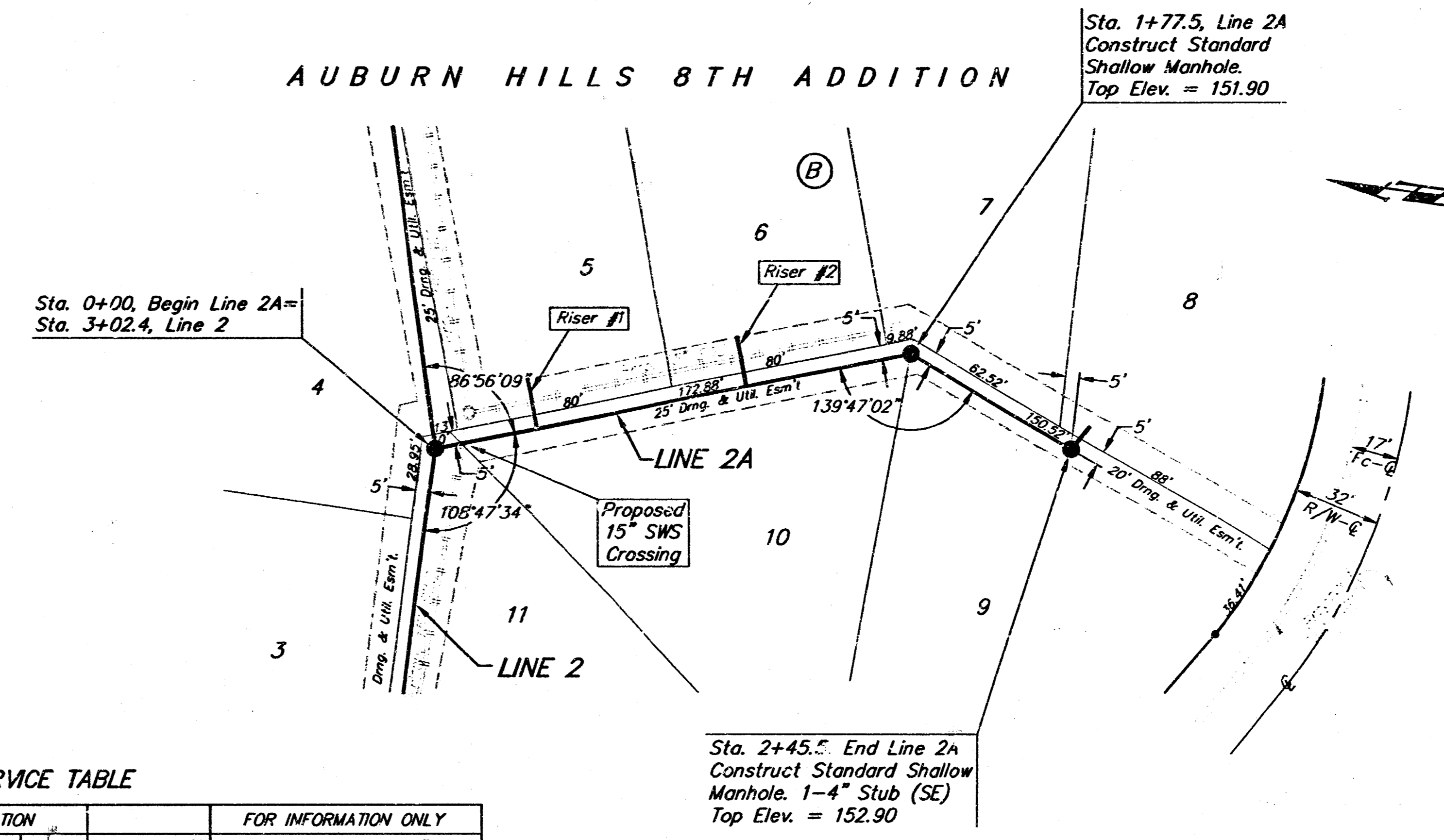
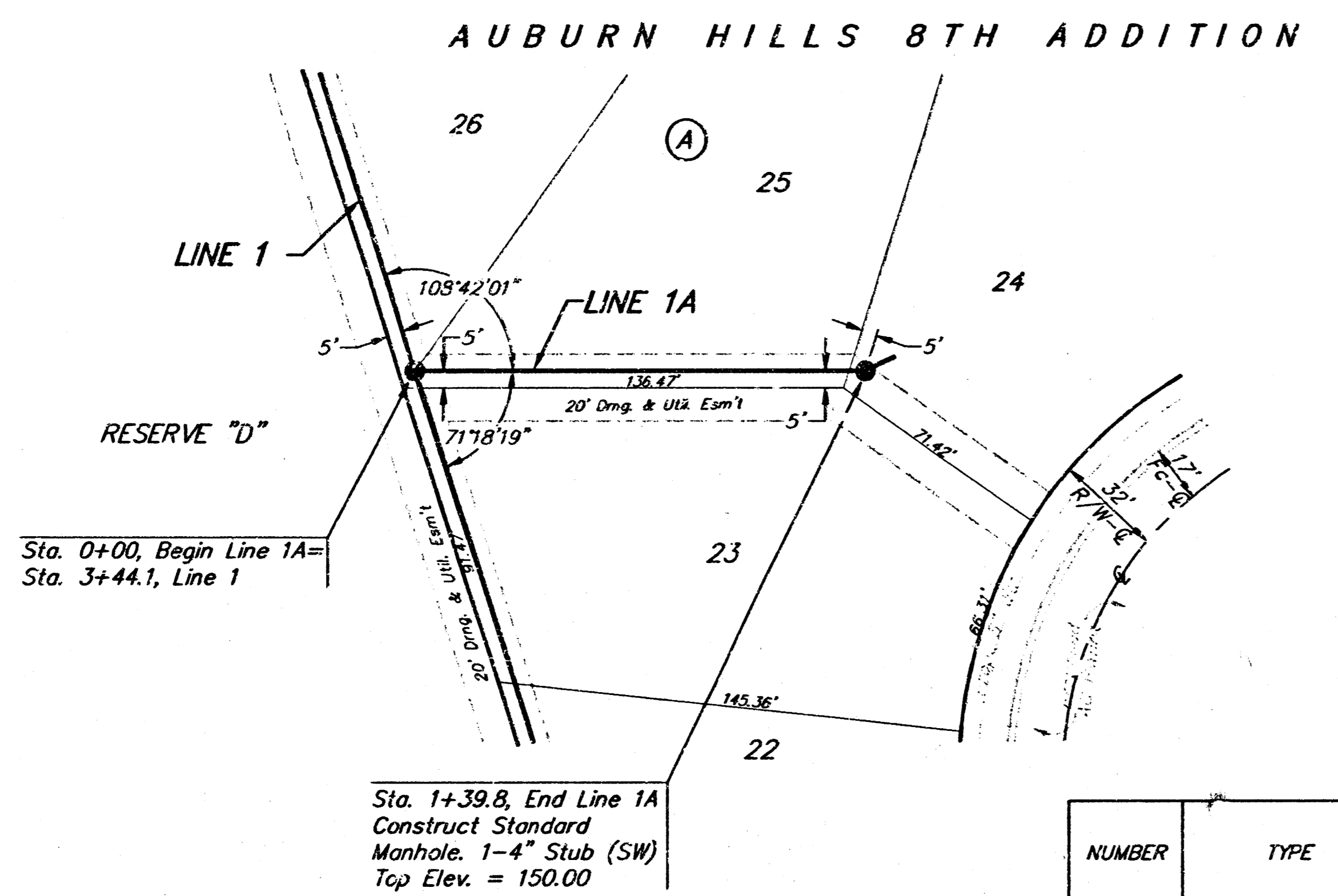
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DESIGN: ELP DRAWN: JAK APPROVED: [Signature] DATE: 7/29/99 SCALE: NOTED

SHEET **5** OF **18**

BENCHMARKS:
 City Disc - 34.3' E. & 35' N. of
 S.W. Corner of N.W. 1/4, Sec. 25,
 T-27-S, R-2-W.
 Elev. = 156.63 (City Datum)
 City Disc - 135th St. W. & Maple,
 30' N. & 15' E. Cl. Both.
 Elev. = 150.20 (City Datum)

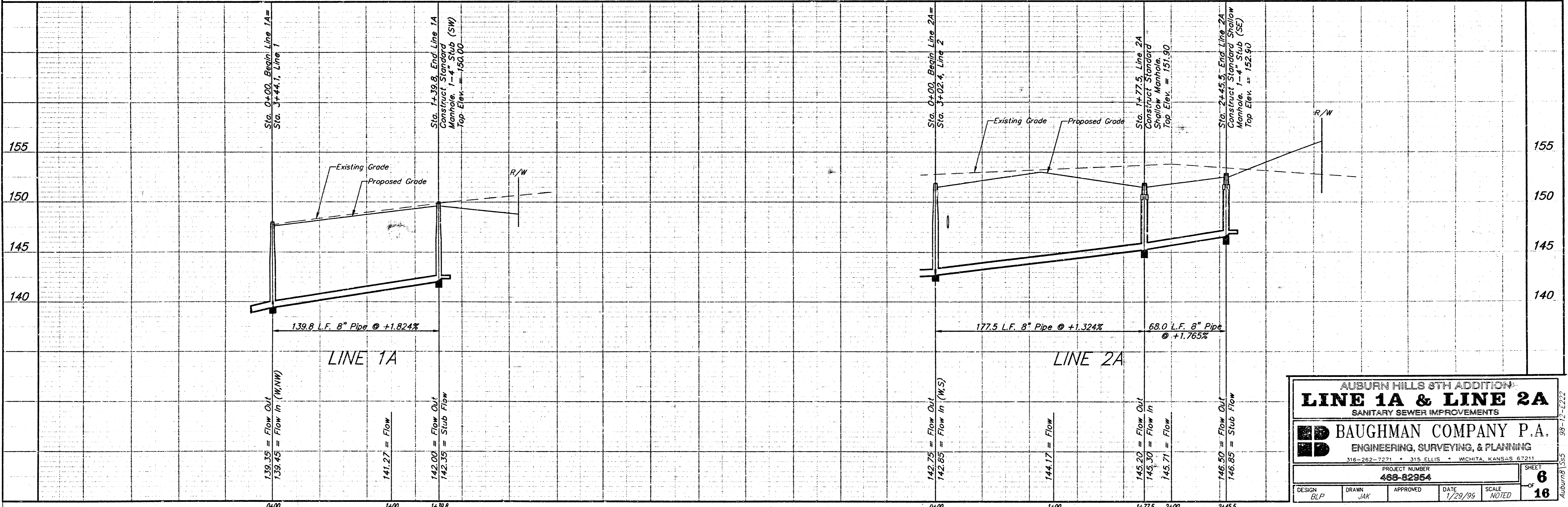
SCALE:
 1" = 40' HORIZONTAL
 1" = 5' VERTICAL
 • = IRON



SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION/ DIRECTION	FOR INFORMATION ONLY APPROXIMATE LENGTH 4" PIPE	
		LOT NO.	BLOCK NO.	LINE NO.		VERTICAL	HORIZONTAL
1	8" X 4" Tee Saddle	5	B	2A	0+37/LT	5'	17.5'
2	8" X 4" Tee Saddle	6	B	2A	1+16/LT	4'	17.5'

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



AUBURN HILLS 8TH ADDITION
LINE 1A & LINE 2A
 SANITARY SEWER IMPROVEMENTS

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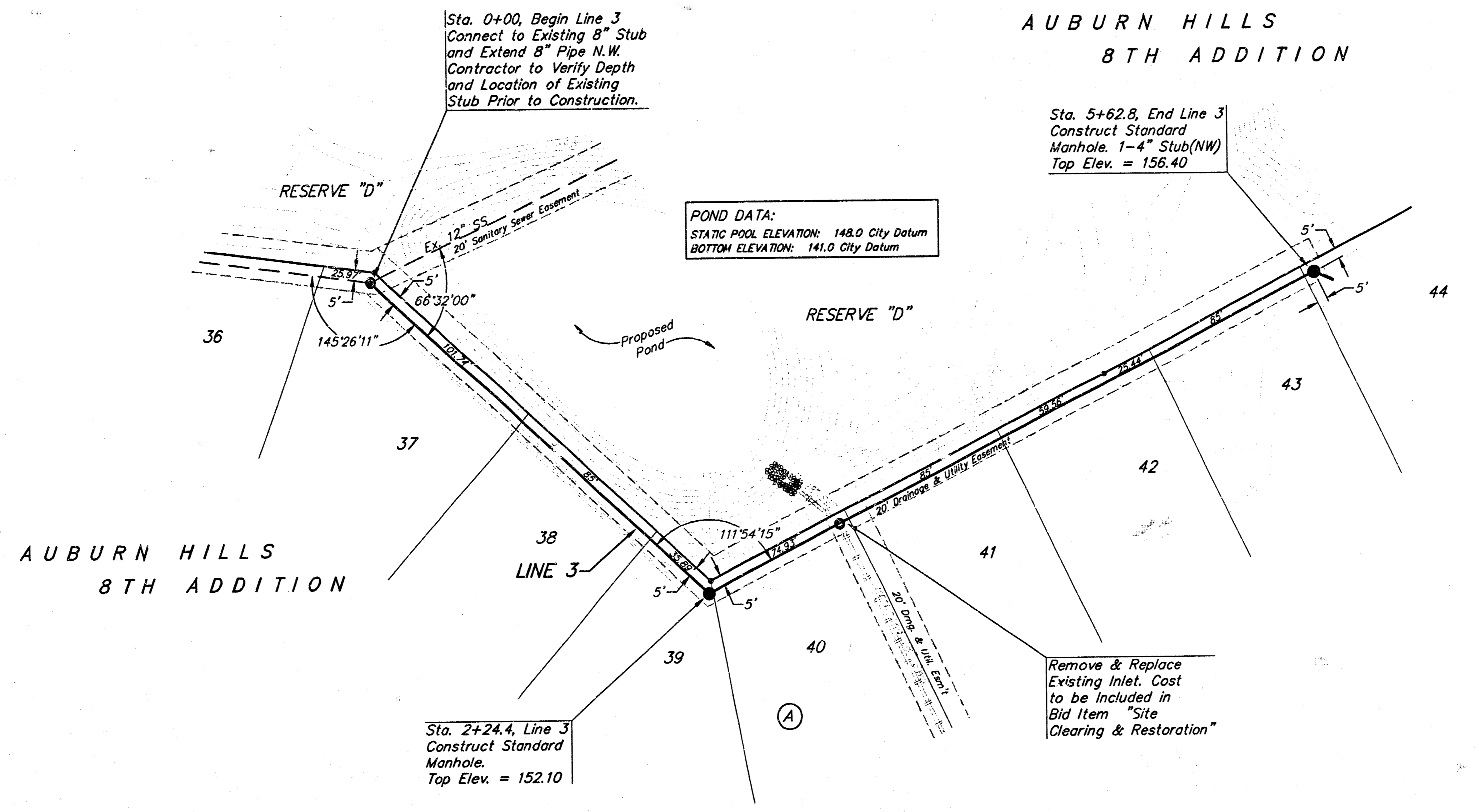
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 DATE: 1/29/95
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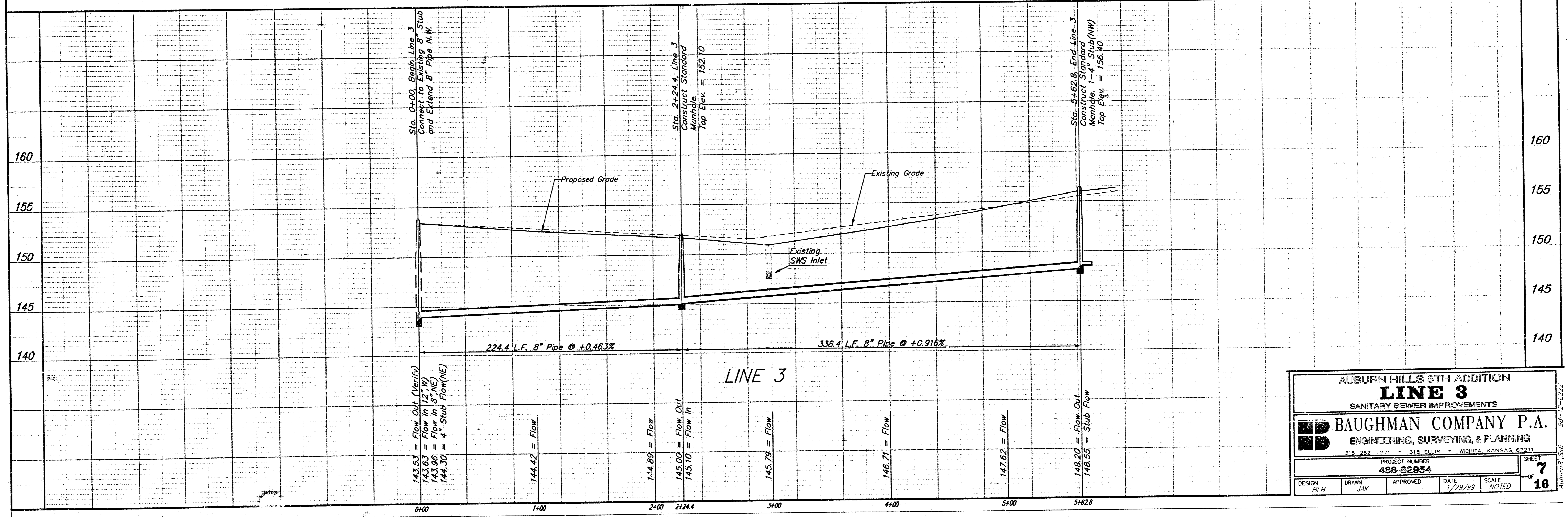
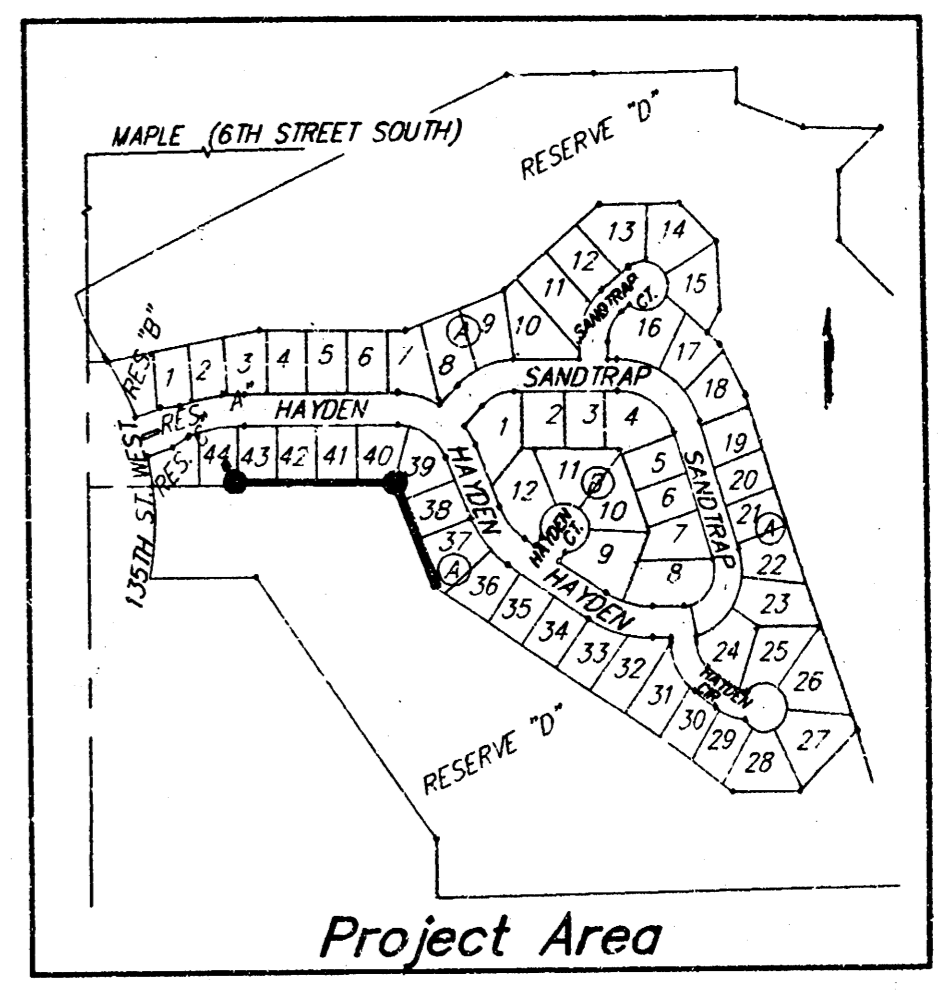
SHEET 6 OF 18

Auburn81303 95-2-222

BENCHMARKS:
 City Disc - 34.3' E. & 35' N. of
 S.W. Corner of N.W. 1/4, Sec. 25,
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 Elev. = 150.20 (City Datum)



SCALE:
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 1" = 5' VERTICAL
 • = IRON



AUBURN HILLS 8TH ADDITION
LINE 3
 SANITARY SEWER IMPROVEMENTS

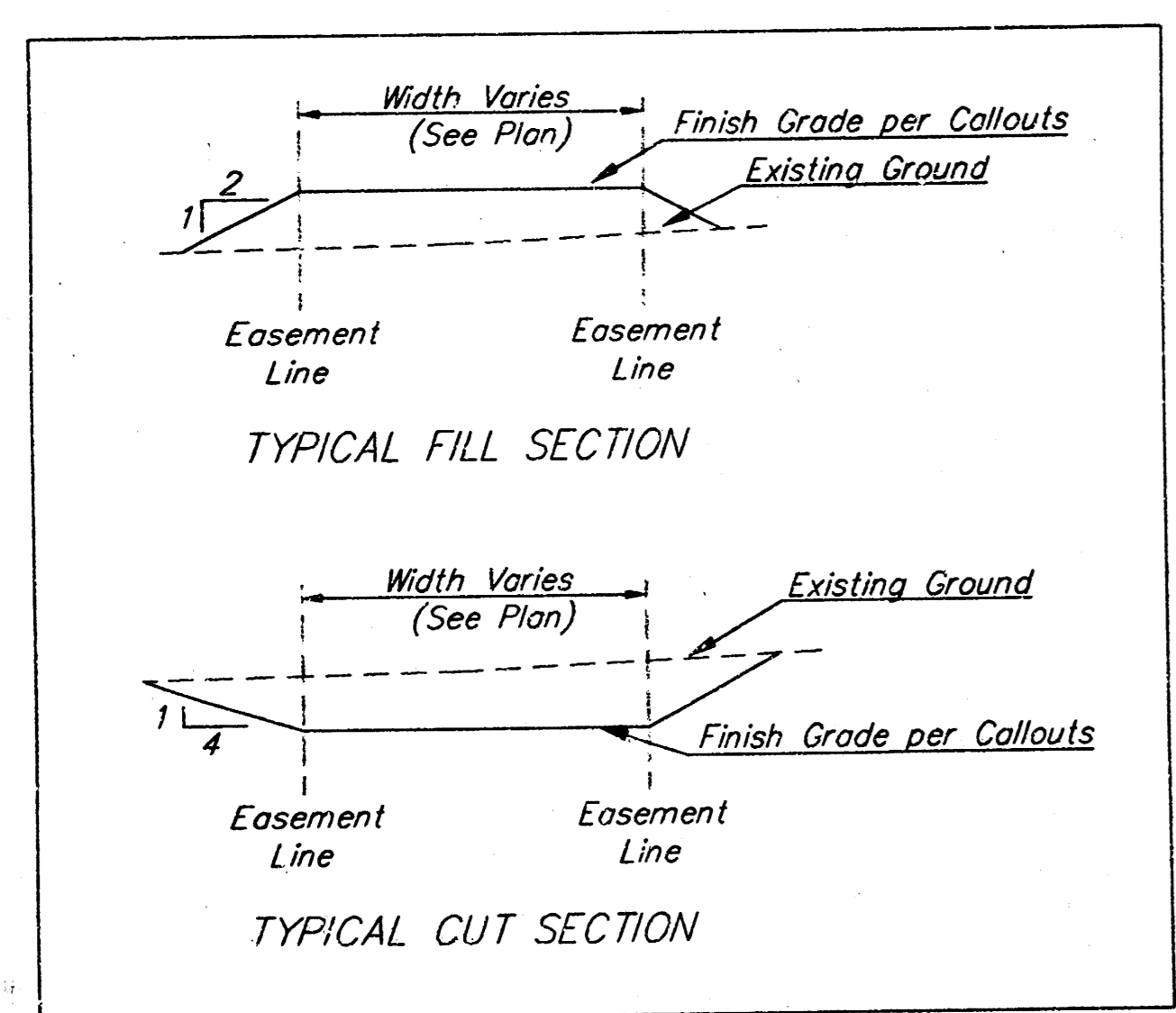
BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-7274 • 316 ELLIS • WICHITA, KANSAS 67221

PROJECT NUMBER
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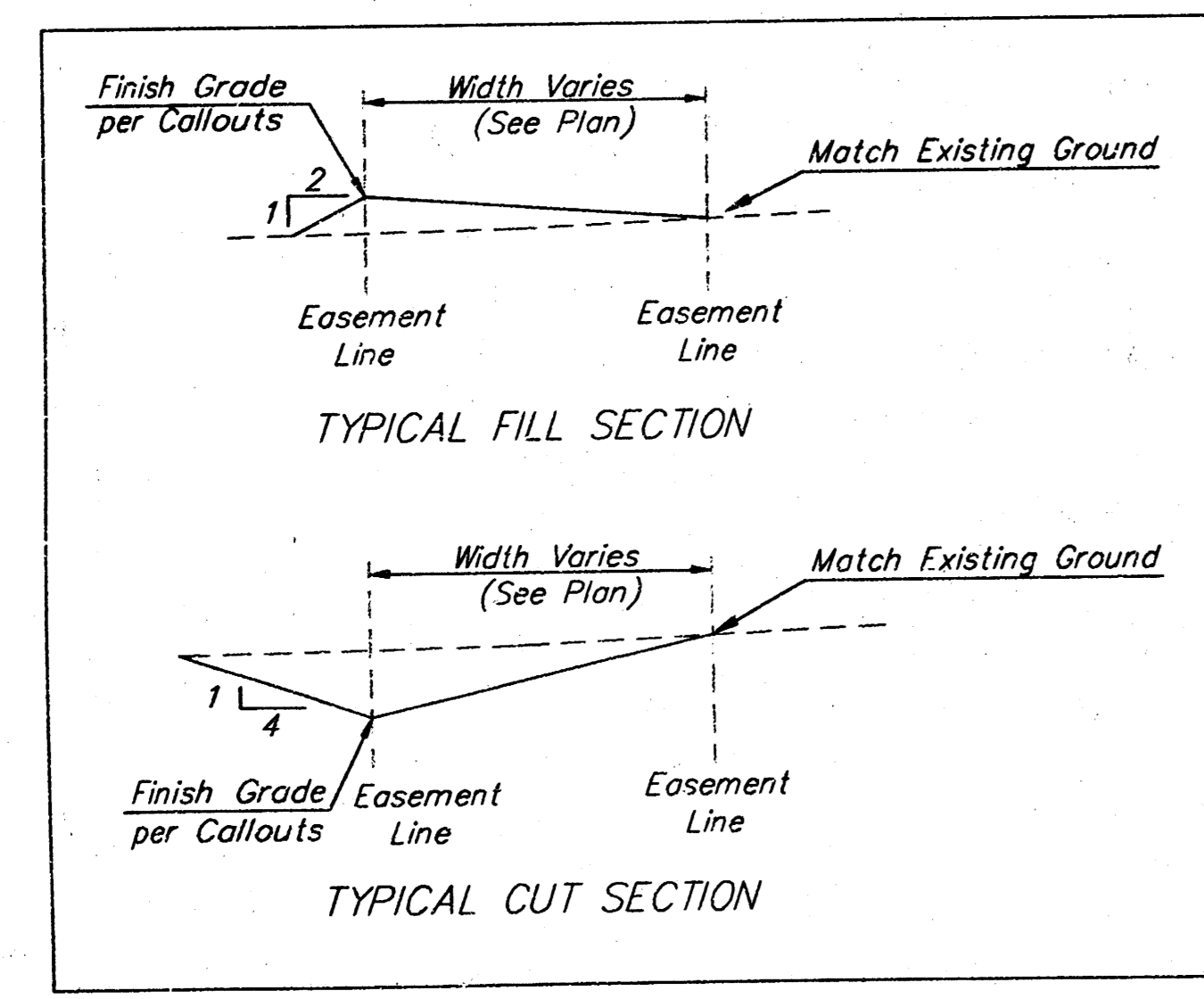
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 City Disc - 135th St. W. & Map--,
 30' N. & 15' E. Cl. Both.
 Elev. = 150.20 (C.D. Datum)

SCALE: 1" = 60'
 • = IRON



SECTION A-A



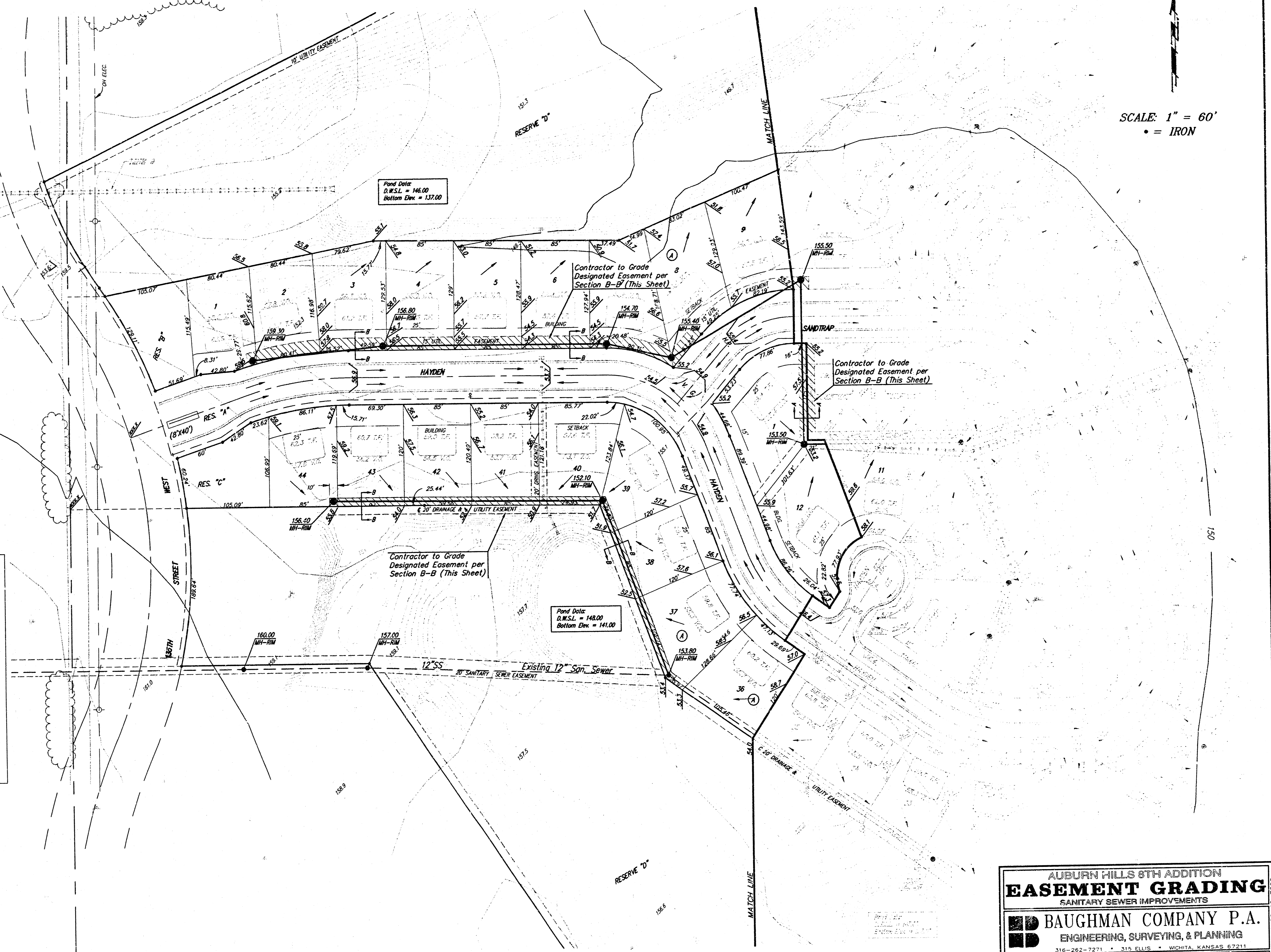
SECTION B-B

= Easements To Be Graded

Approximate Easement Grading Quantities:
 (For Information Only)
 Excavation: 3558 C.Y.
 Fill: 2101 C.Y.

The contractor shall grade the easements as shown to the elevations given on the easement grading plan. All costs for grading shall be incidental to the Easement Grading Bid item.

The contractor shall 'straight' grade the easements between the elevations given. Where a callout designates 'Match', the contractor will grade to the existing ground elevation.



AUBURN HILLS 8TH ADDITION
EASEMENT GRADING
 SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-7271 • 310 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
468-82954

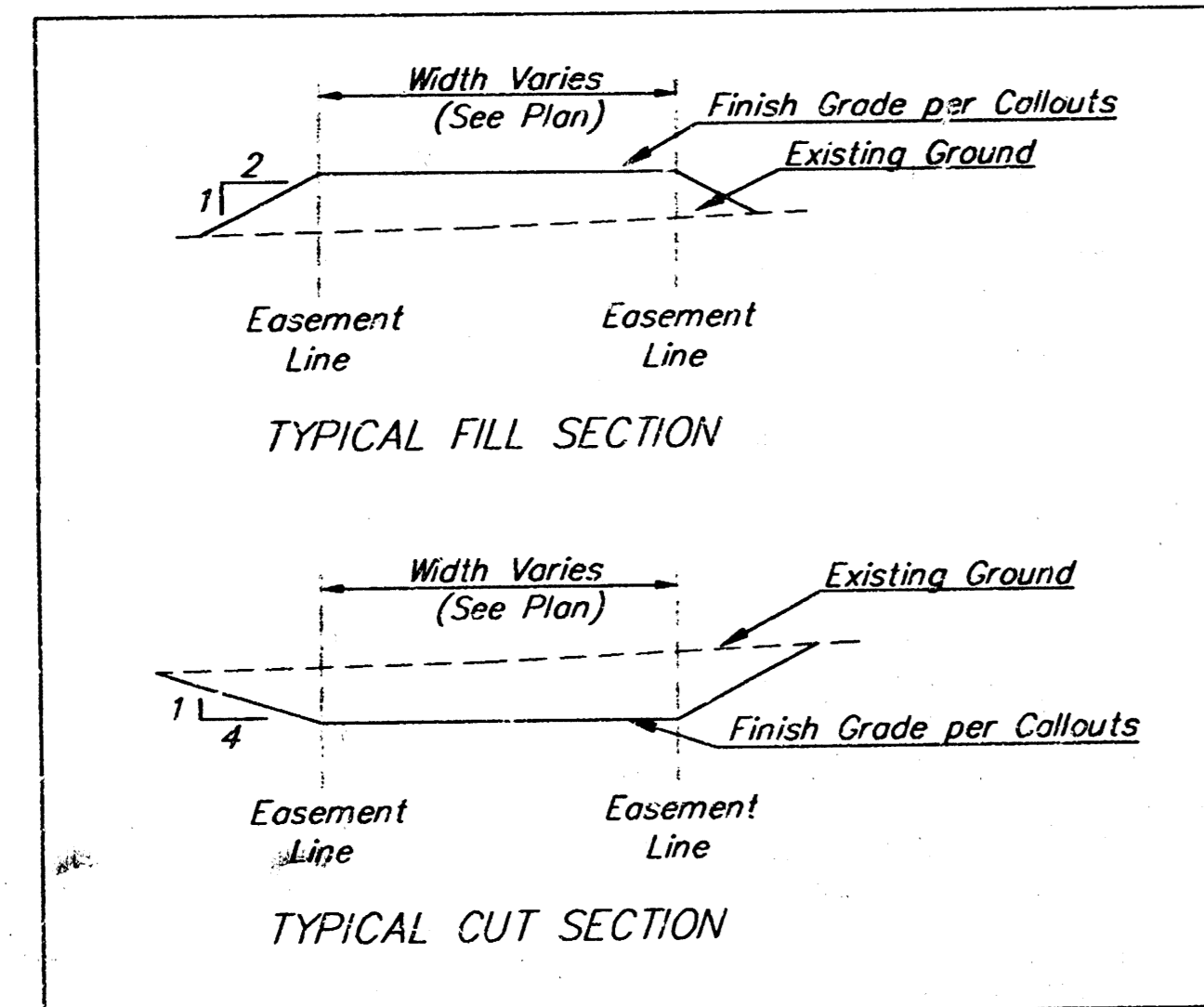
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SHEET **8** OF **16**

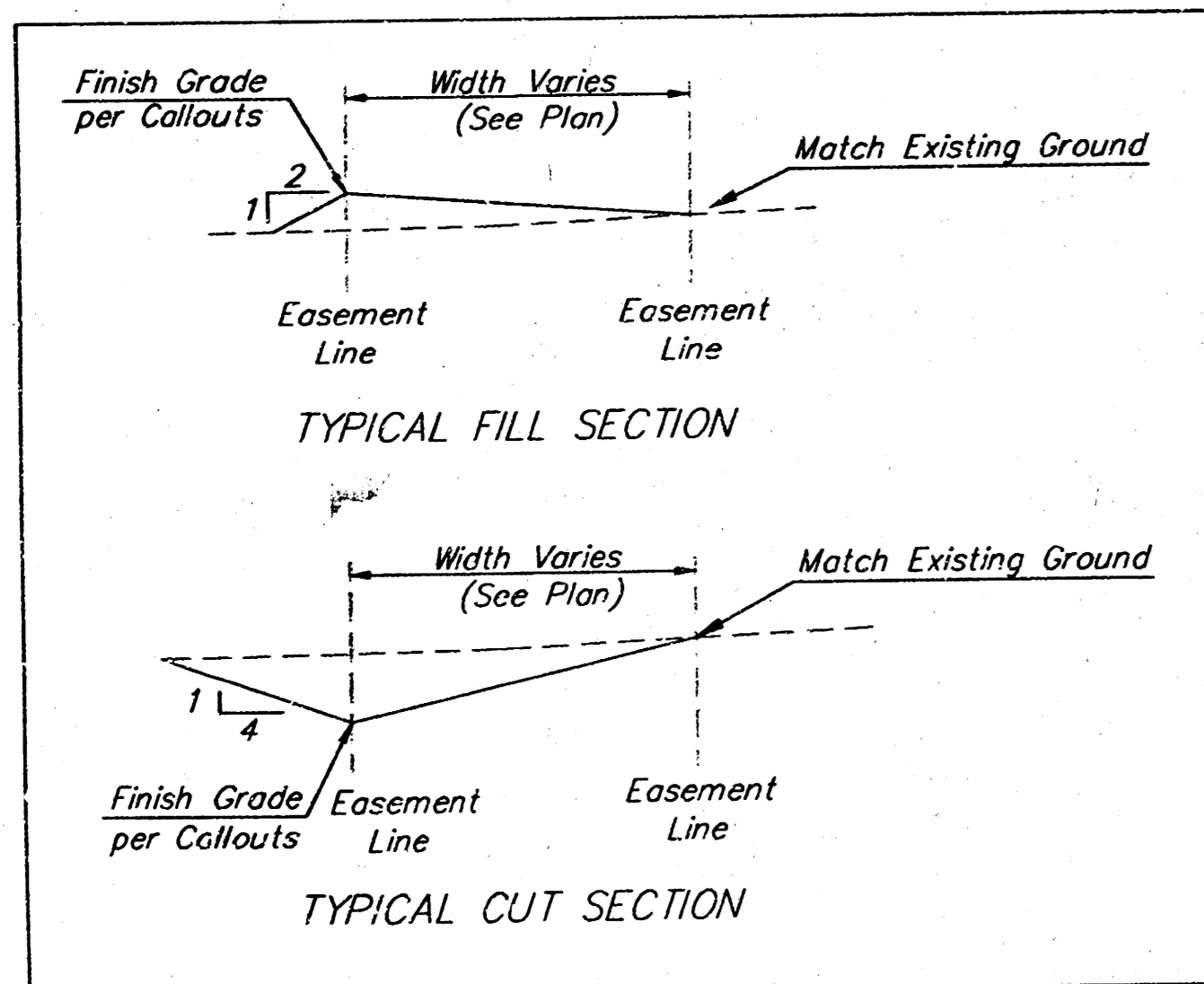
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S.W. Corner of N.W. 1/4, Sec. 25,
T-27-S, R-2-W.
Elev. = 156.63 (City Datum)

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30' N. & 15' E. Cl. Both.
Elev. = 150.20 (City Datum)

SCALE: 1" = 60'
• = IRON



SECTION A-A

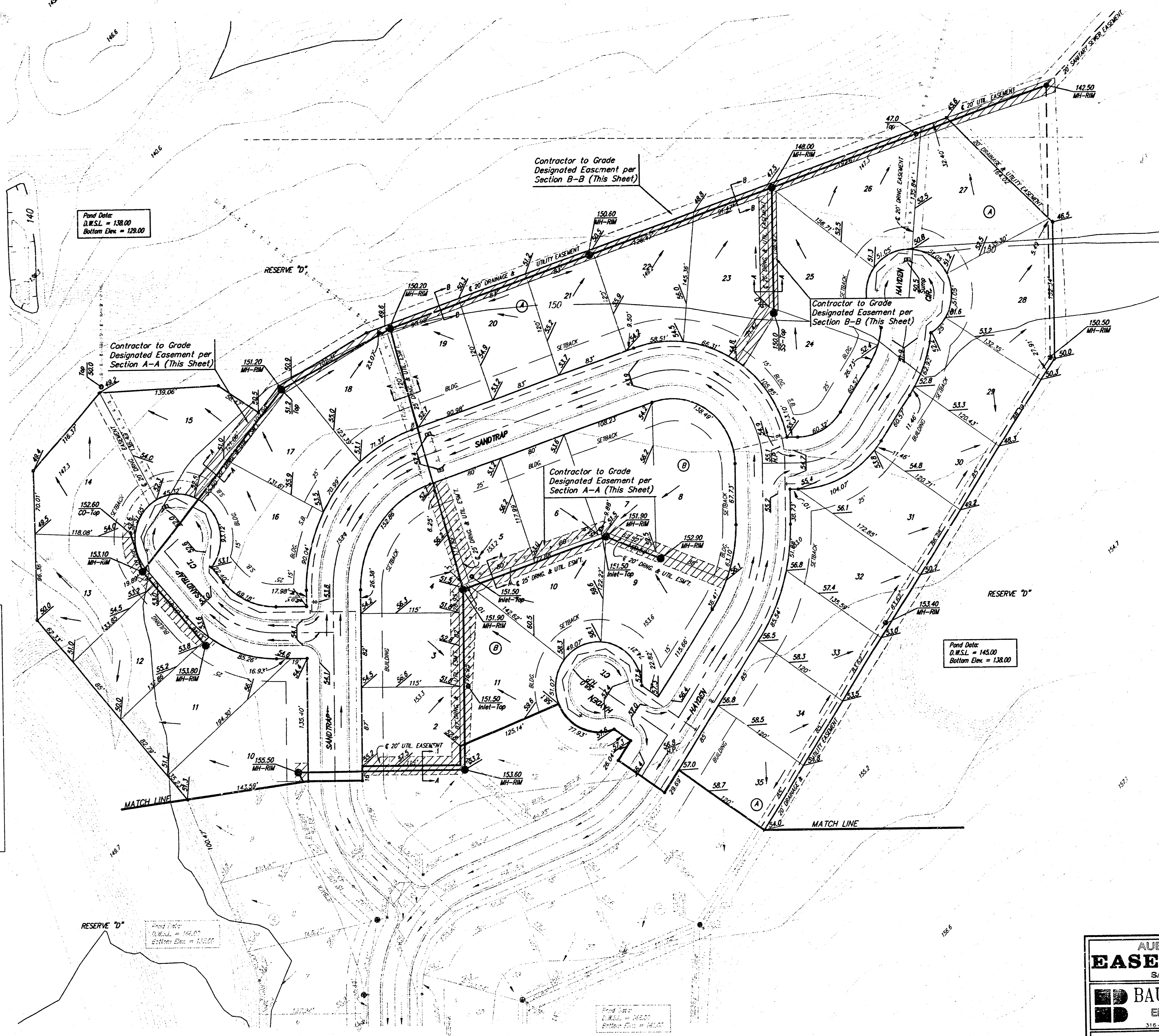


SECTION B-B

= Easements To Be Graded

The contractor shall grade the easements as shown to the elevations given on the easement grading plan. All costs for grading shall be incidental to the Easement Grading Bid Item.

The contractor shall 'straight' grade the easements between the elevations given. Where a callout designates 'Match', the contractor will grade to the existing ground elevation.



AUBURN HILLS 8TH ADDITION
EASEMENT GRADING
SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER: **469-92954**

DESIGN: <i>SLP</i>	DRAWN: <i>JAK</i>	APPROVED:	DATE: 1-27-99	SCALE: 1" = 60'	SHEET: 9
					OF: 16

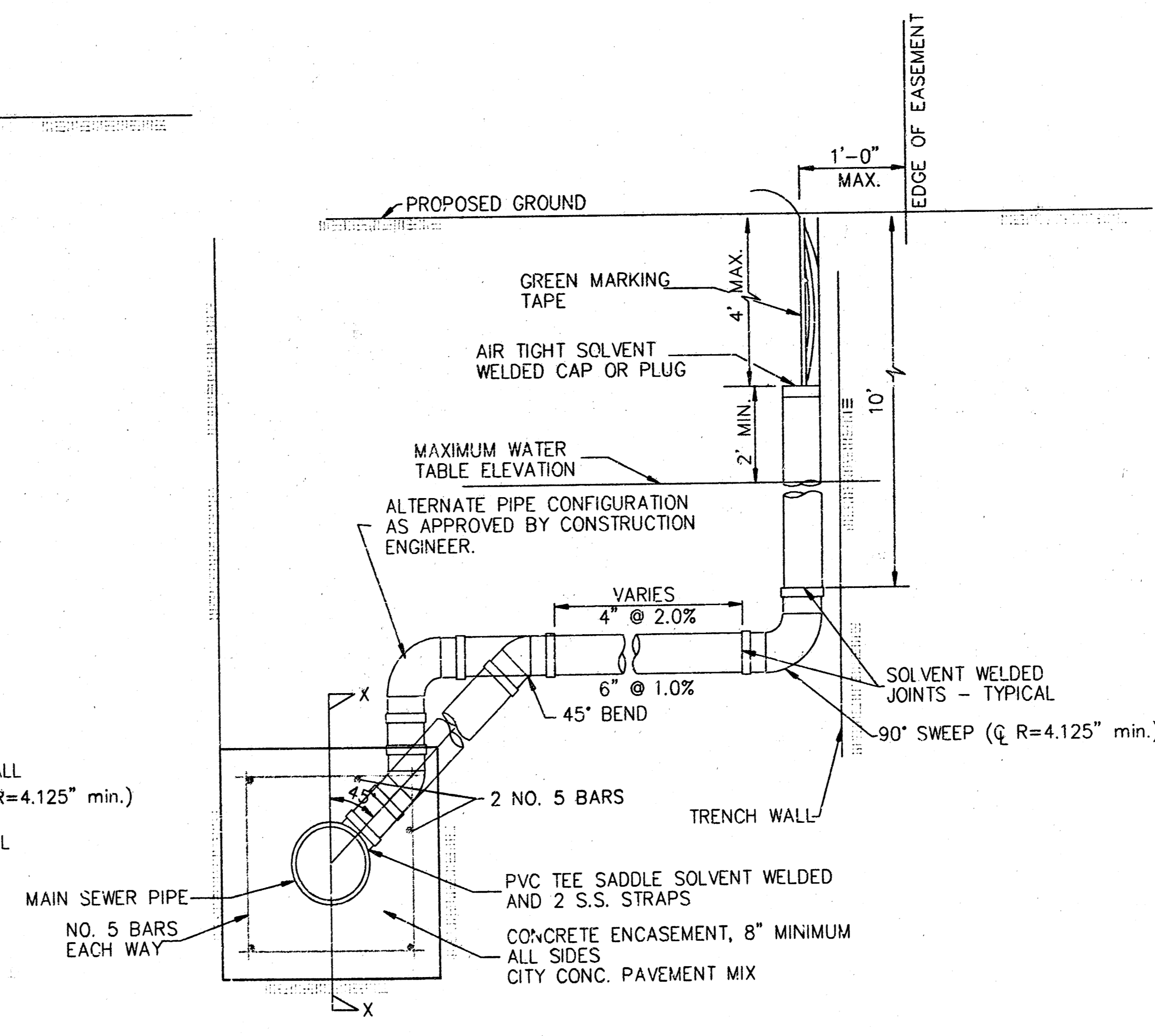
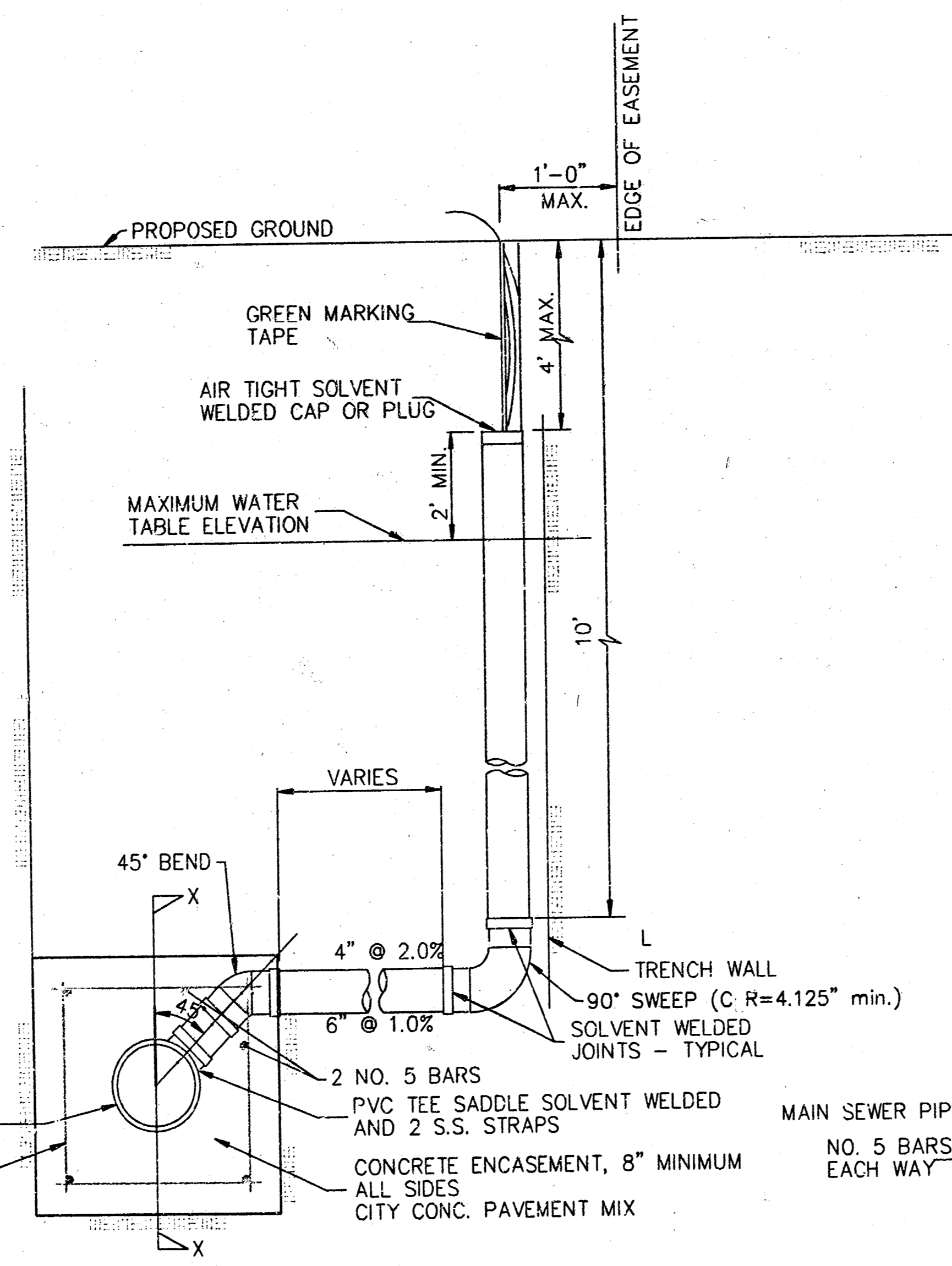
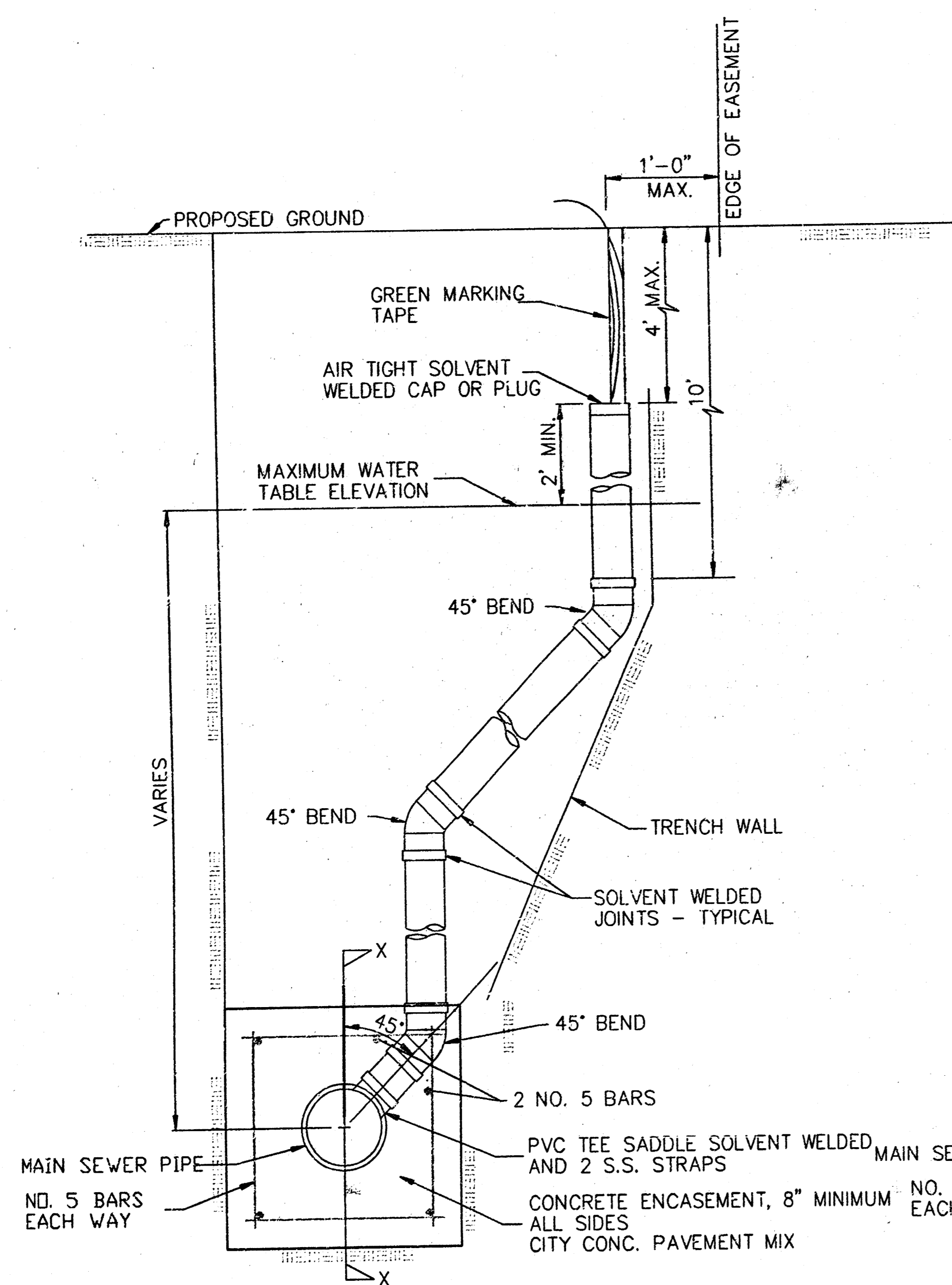
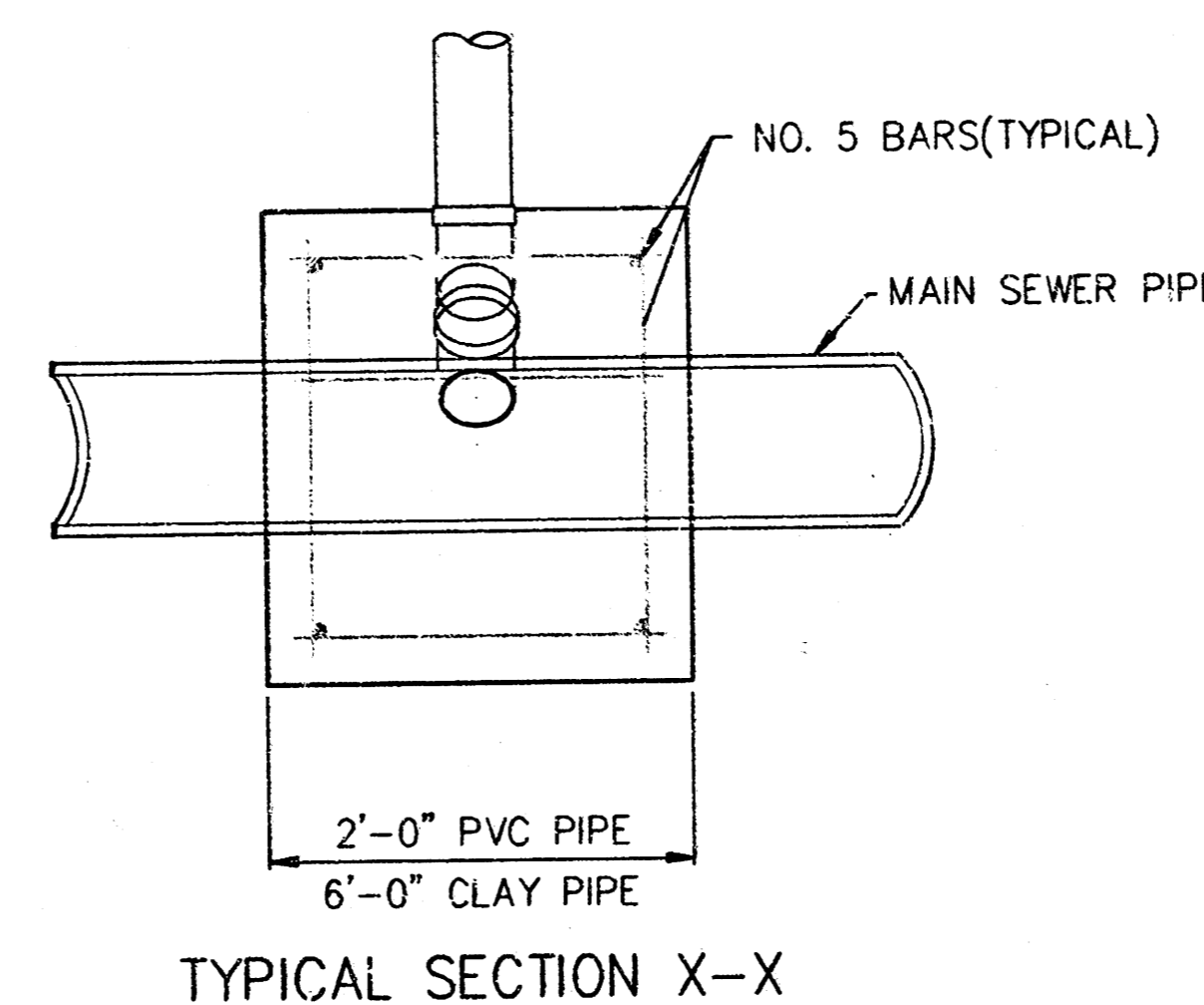
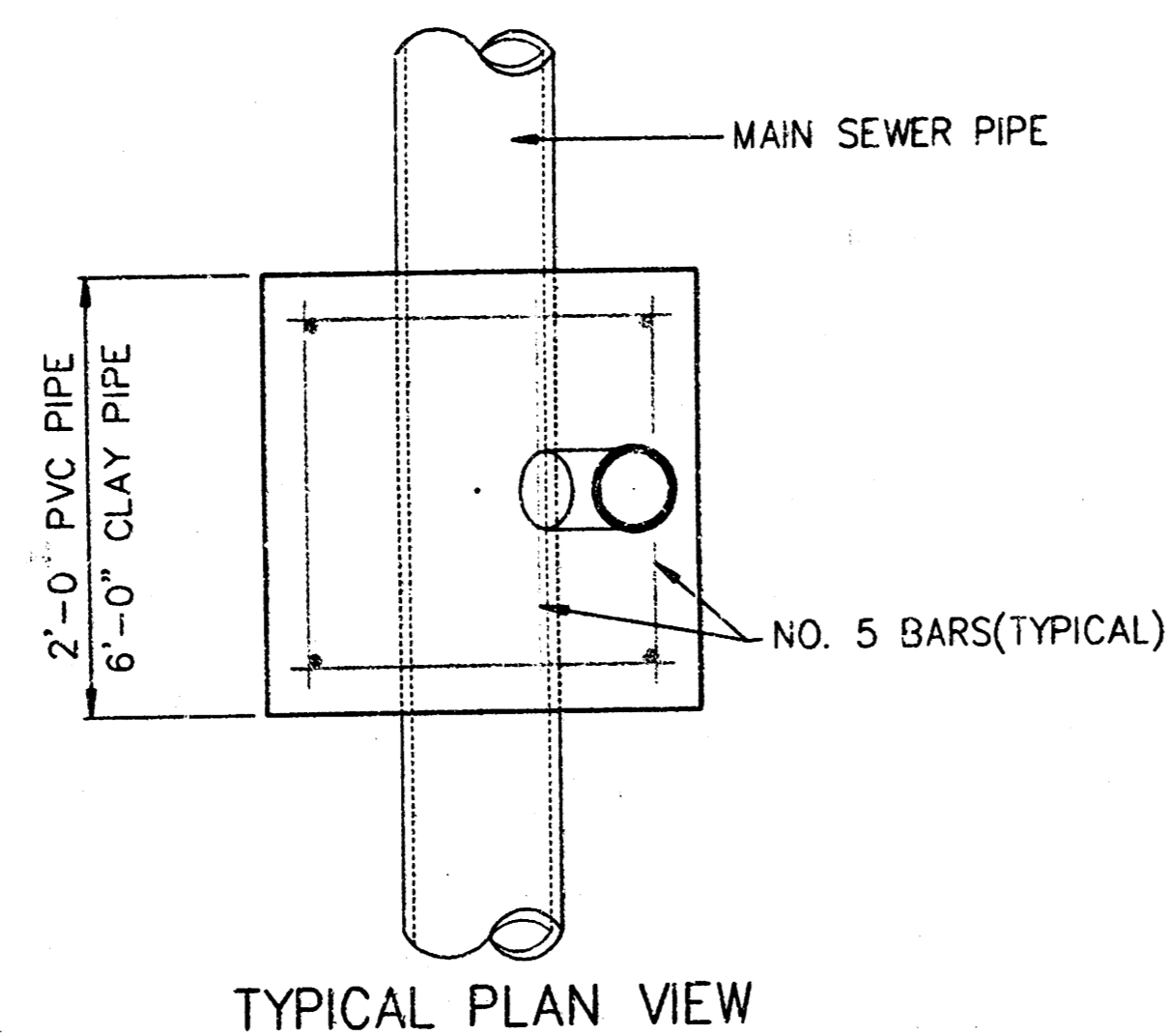
VERTICAL RISER DETAILS

ADOPTED AS STANDARD DESIGN

BY

CITY OF WICHITA, KANSAS

OCTOBER 1992

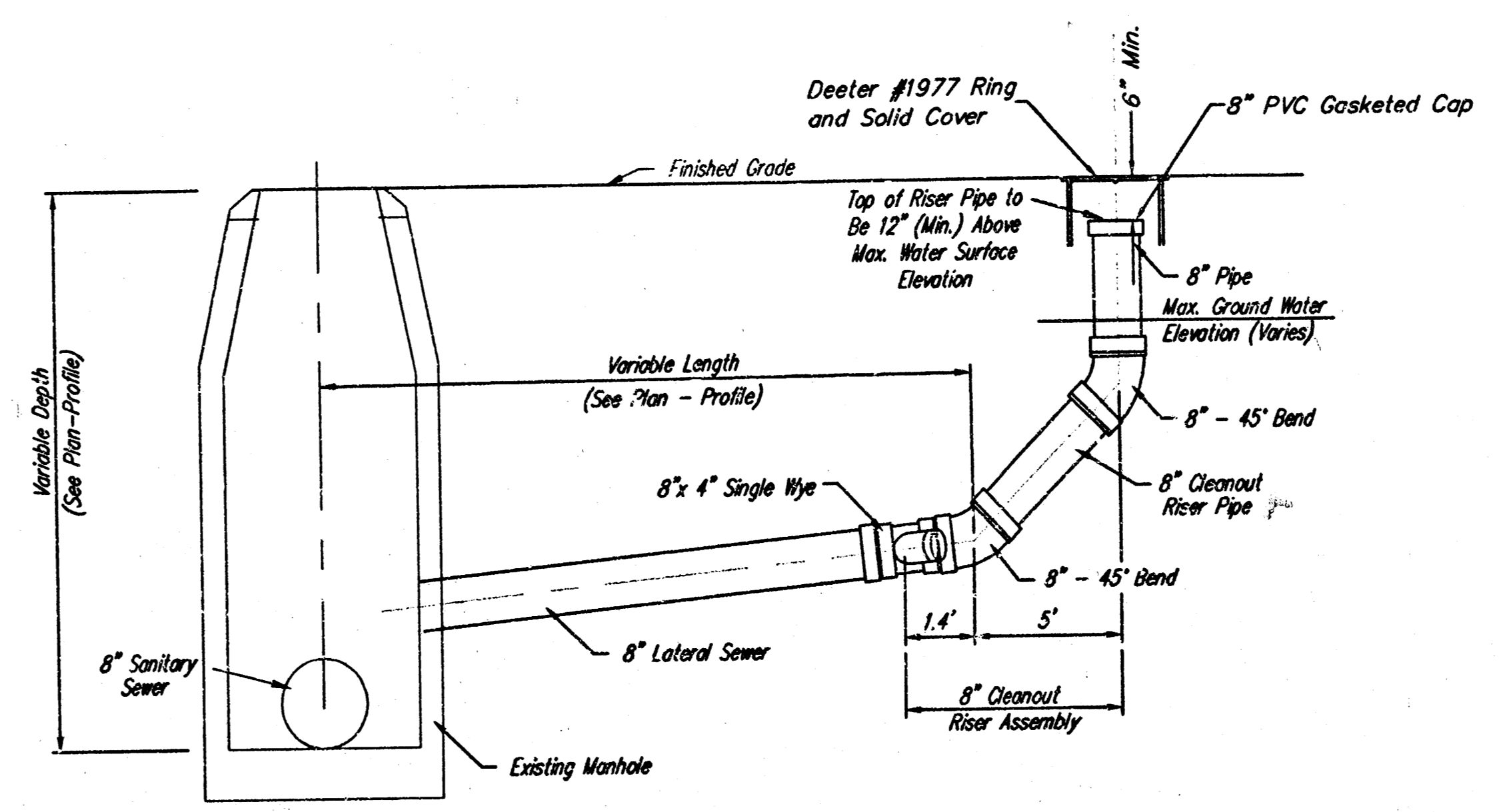


NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

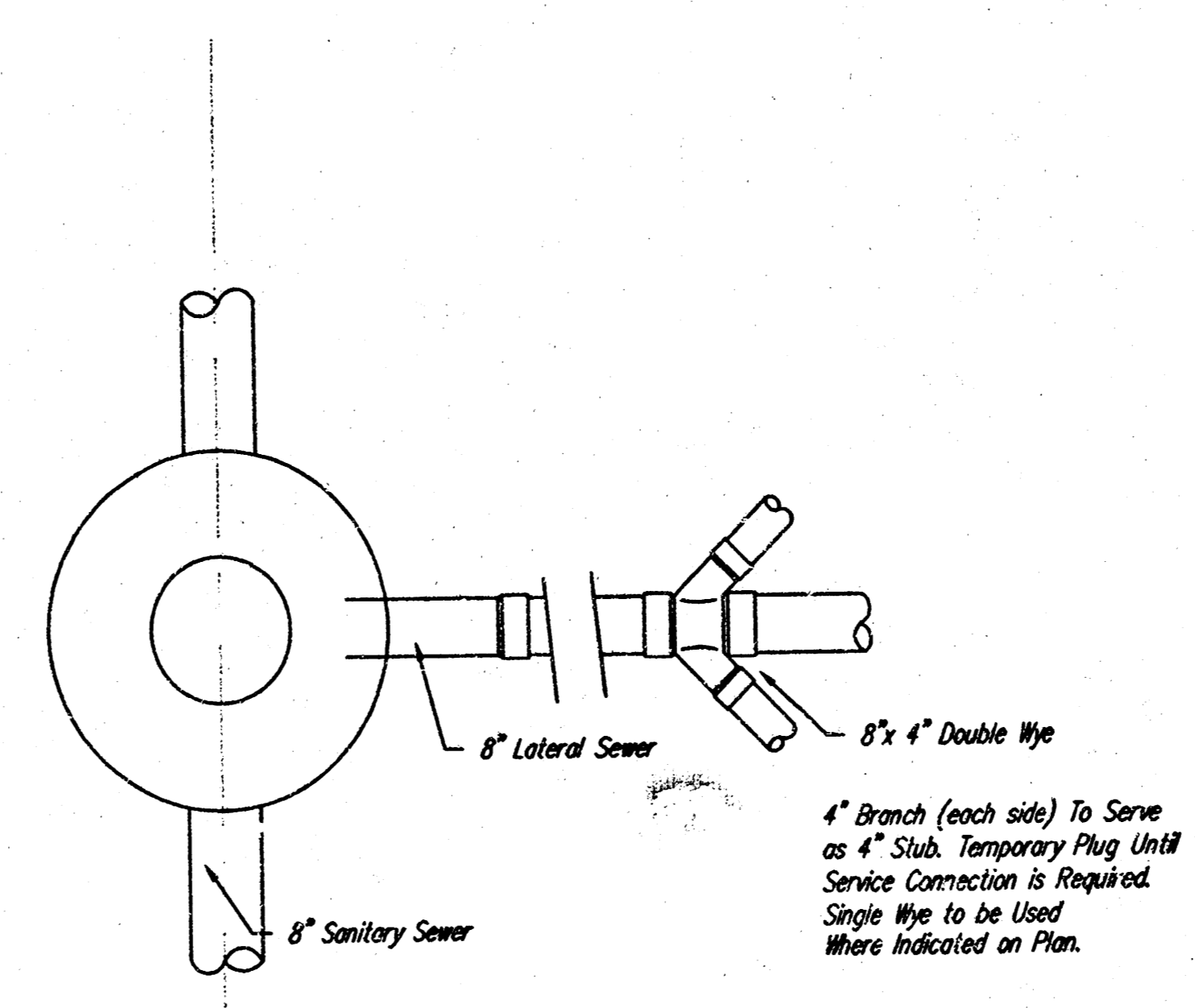
GENERAL NOTES

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 locations of manholes will provide satisfactory service 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 reinforced concrete 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. Cap 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 1" x 4" 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".


City of Wichita Standard			
Riser Details			
BAUGHMAN COMPANY P.A.			
ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 316 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER			
466-92654			
DESIGN	DRAWN	APPROVED	DATE
Staff	Staff	Staff	1/29/99
			SCALE
			NONE
			SHEET
			10
			OF
			16



- NOTES
1. 8" Lateral to be Air-Tested up to the Top of PVC Pipe, per Standard Specifications.
 2. All PVC pipe fittings in cleanout riser assembly shall be solvent-welded, except 8" pipe cap.

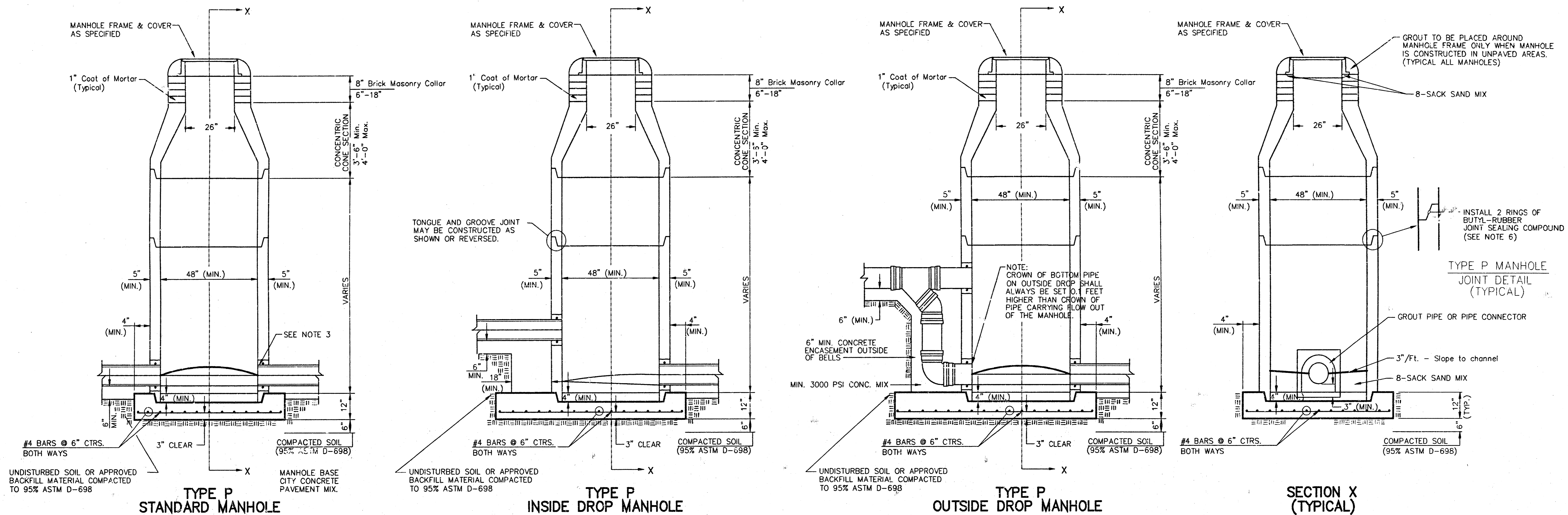


8" CLEANOUT RISER ASSEMBLY DETAIL

CLEANOUT RISER DETAILS				
 BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING <small>318 - 262 - 7271 • 318 ELLIS • WICHITA, KANSAS 67211</small>				
PROJECT NUMBER 489-82954				SHEET 11
DESIGN	DRAWN	APPROVED	DATE 1/29/99	SCALE NONE
				16

Auburn's Cobblecils

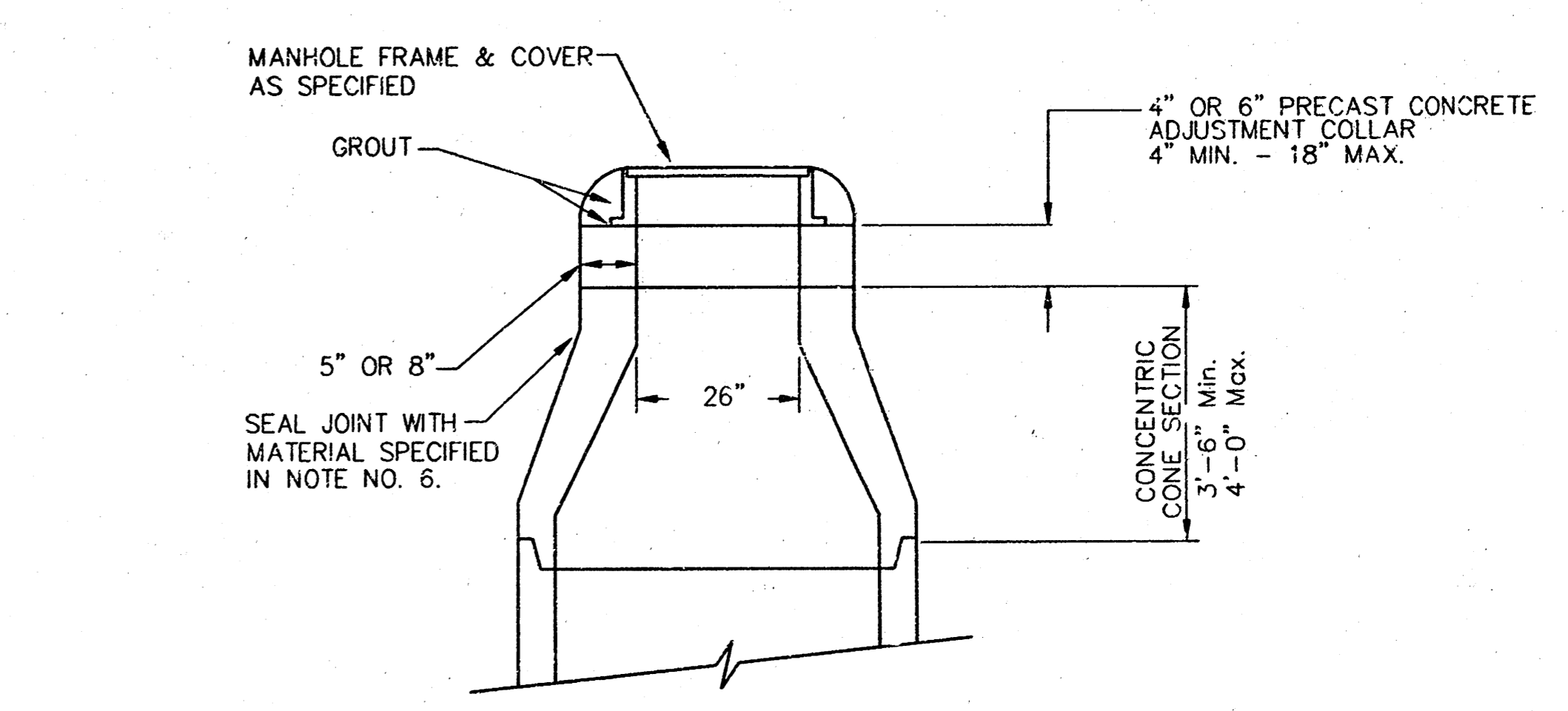
SEWER APPURTENANCES DETAILS



- 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 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 NEMEC 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 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 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.



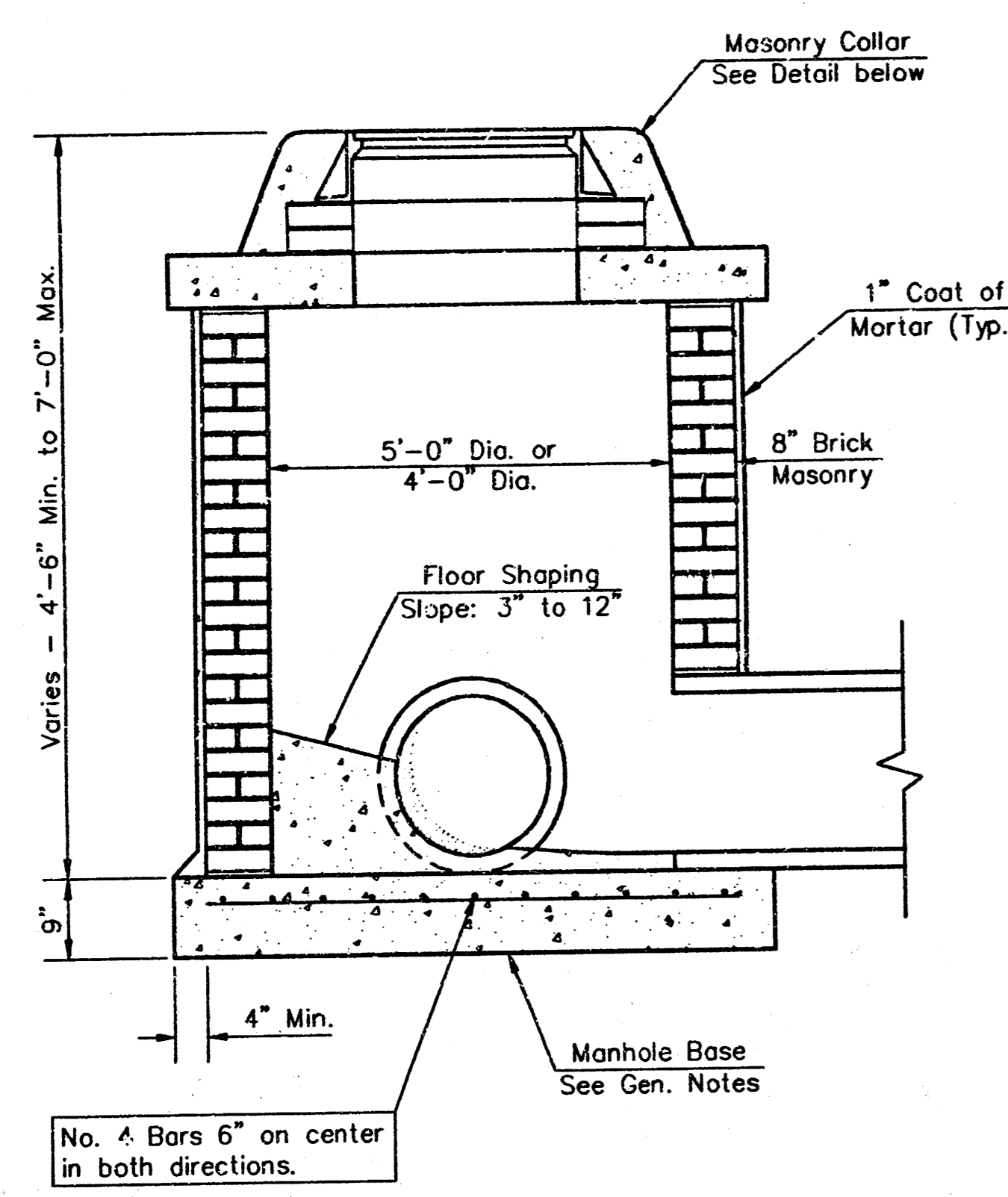
ALTERNATE CONSTRUCTION IN UNPAVED AREAS

CITY OF WICHITA
STD. MANHOLE DETAILS
SEWER APPURTENANCES

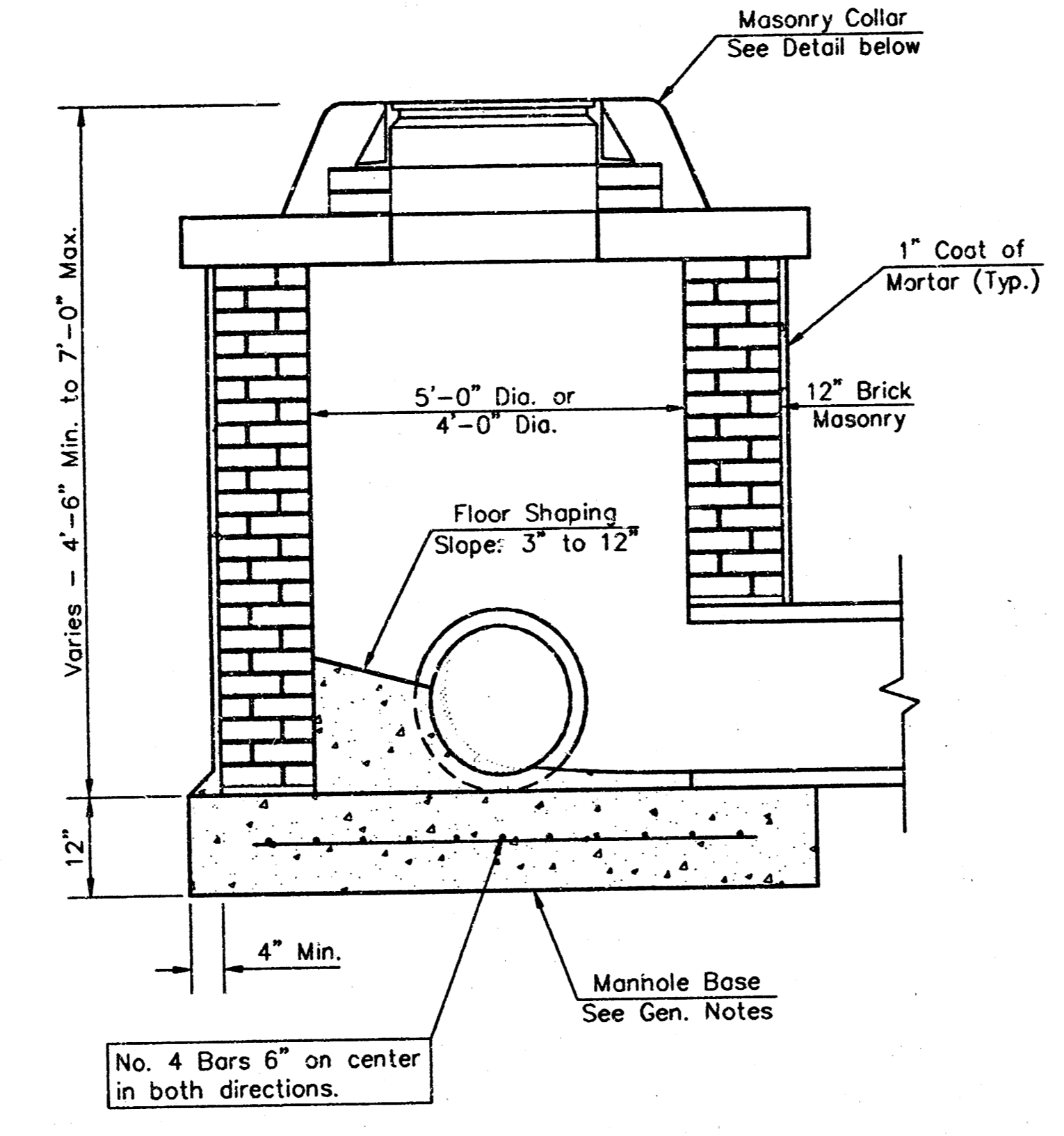
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

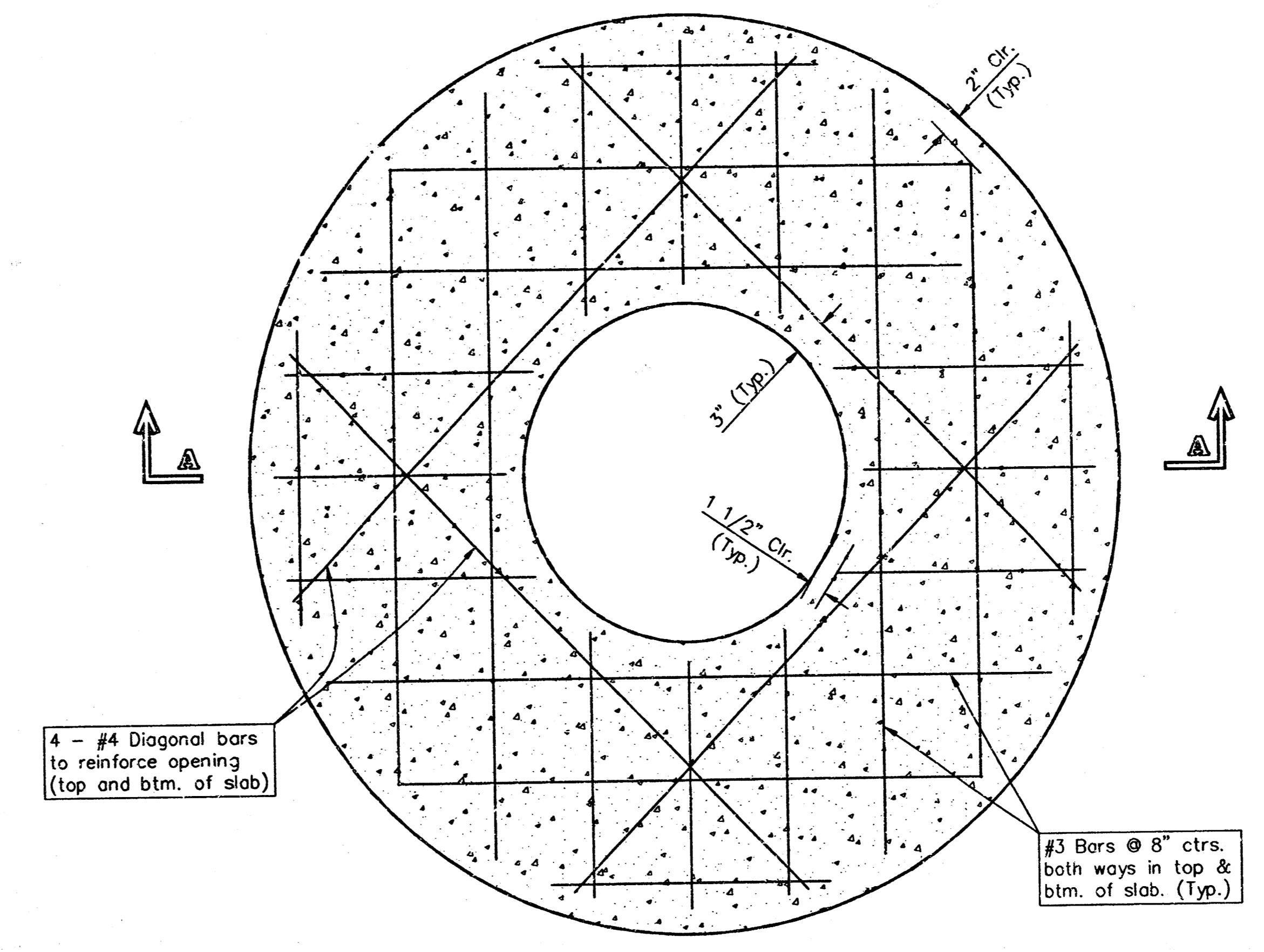
PROJECT NUMBER 488-82954		SHEET 12 OF 16
DESIGN C.O.W.	DRAWN STAFF	
APPROVED	DATE 1/29/99	SCALE NONE



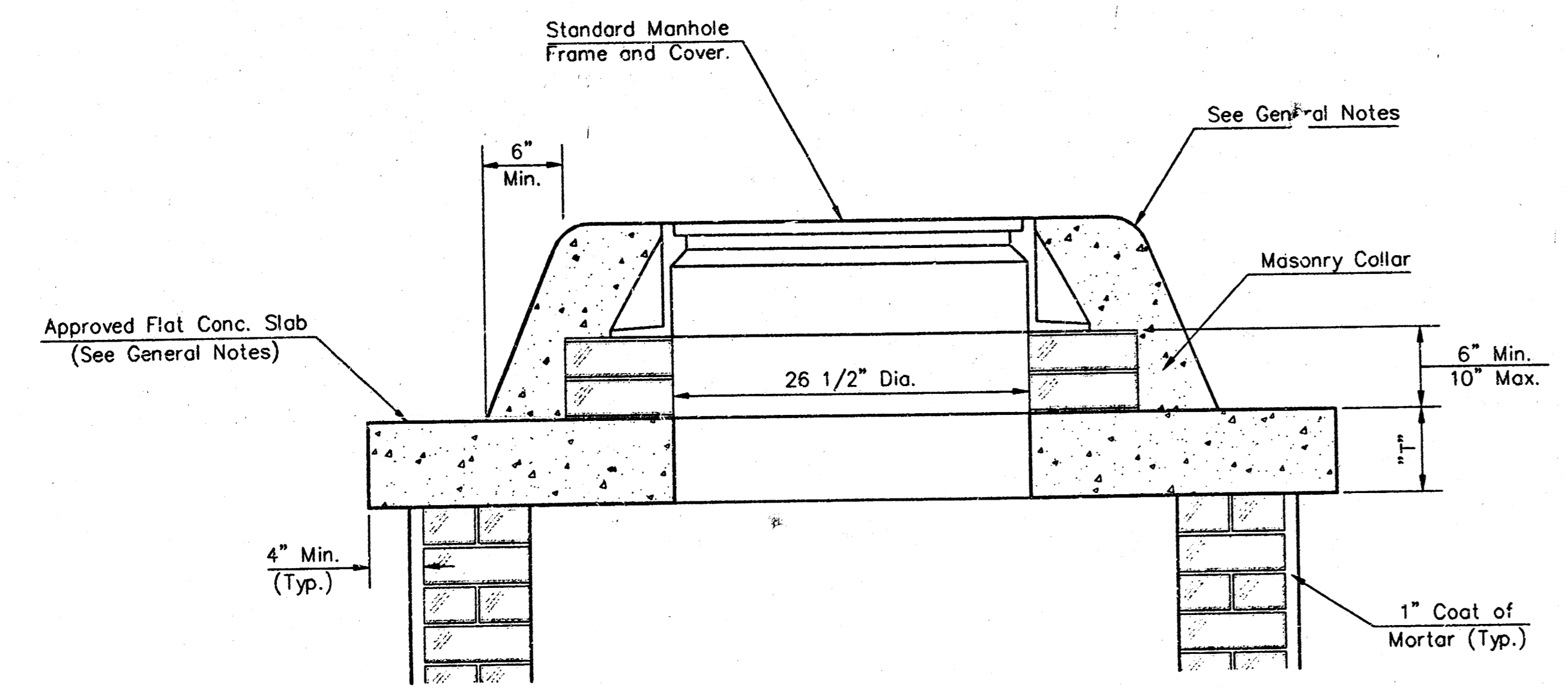
SHALLOW TYPE "A" MANHOLE



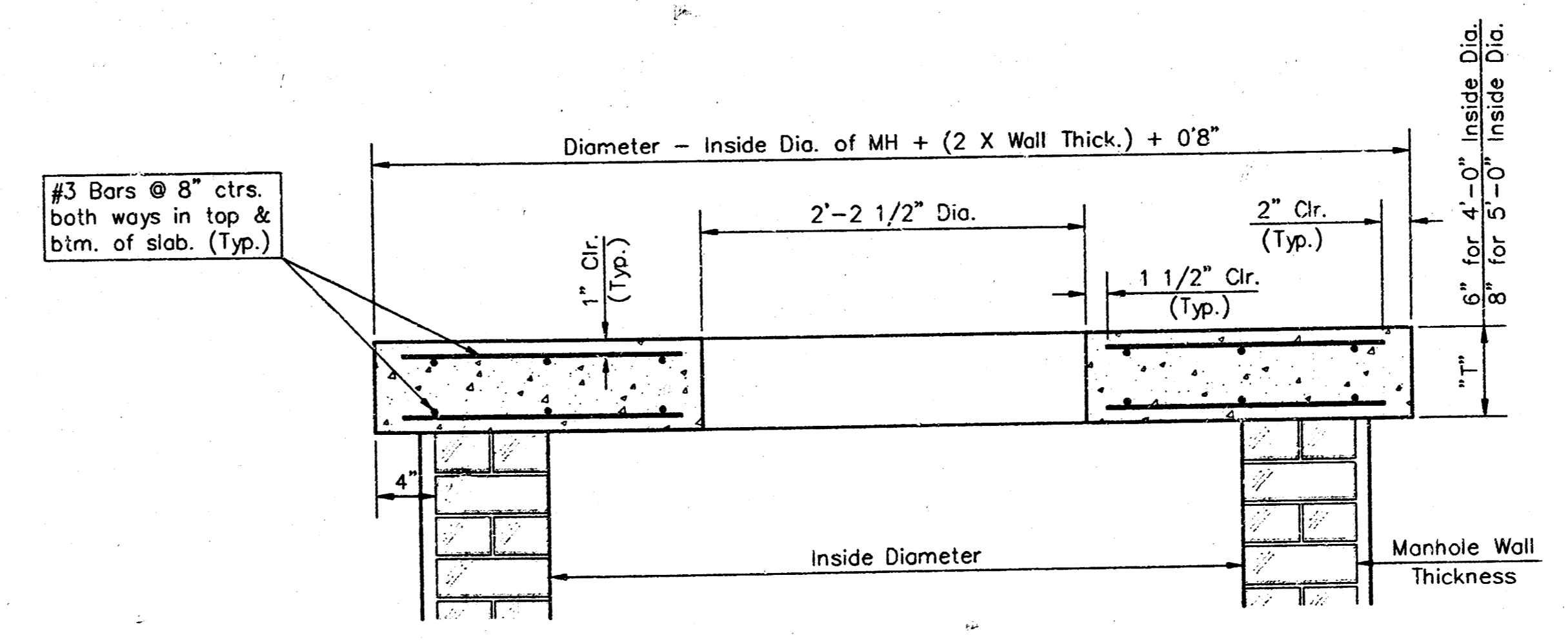
SHALLOW TYPE "B" MANHOLE



PLAN



MASONRY COLLAR DETAIL



**SECTION A-A
FLAT CONCRETE SLAB DETAILS**

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. Type "A" shallow manholes can be used on sewers when the manhole is not located within public street pavement. 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 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 "A" and "B" shall be paid for at the unit price bid per each for the type and diameter indicated. Standard special shallow manholes type "A" and "B" shall be paid for at the unit price bid per each for the type 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. Manhole Detail
 TYPE "A" AND TYPE "B"

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING
 316-262-2271 • 315 ELLIS • WICHITA, KANSAS 67211

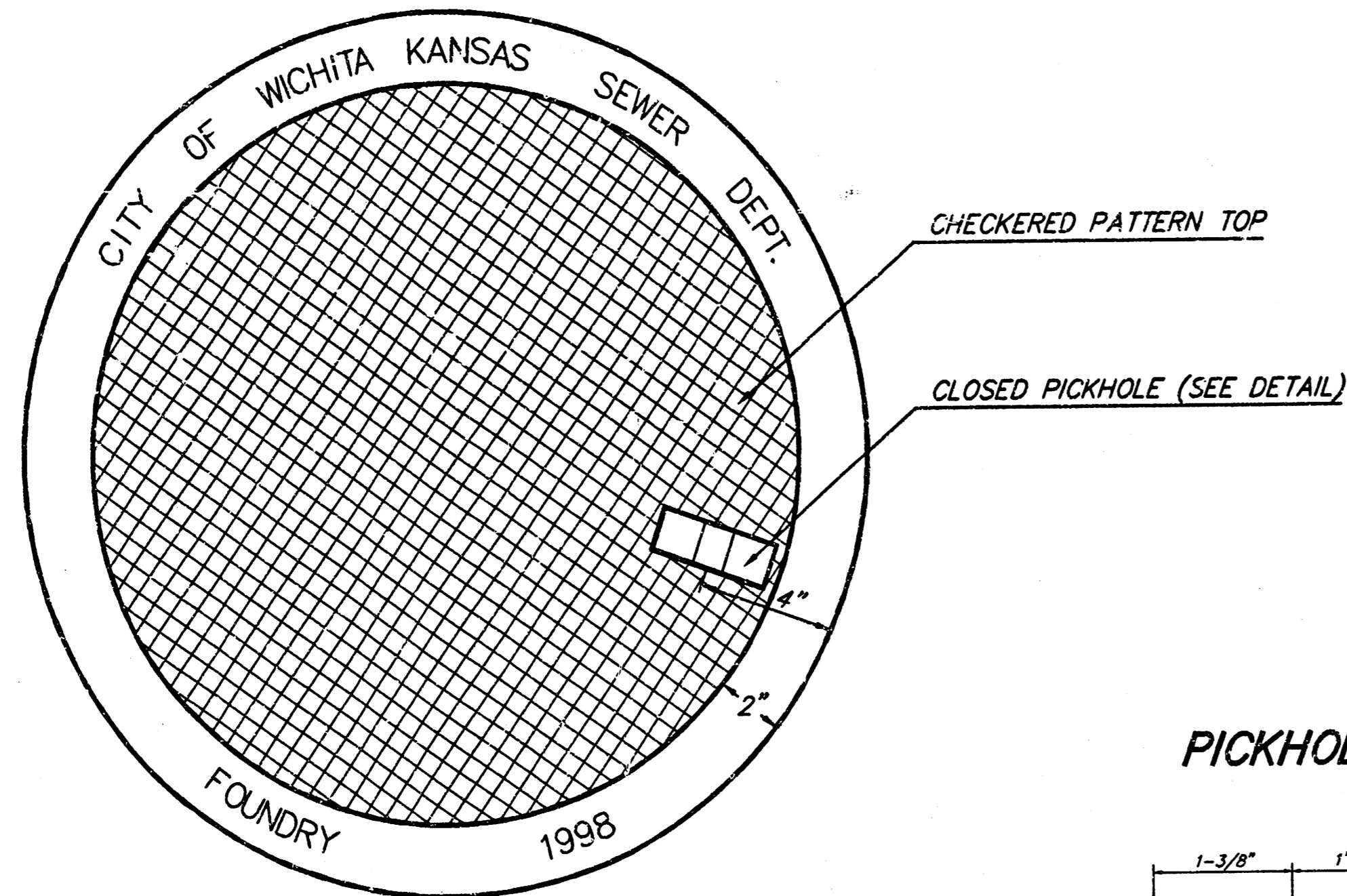
PROJECT NUMBER
488-82954

DESIGN C.O.W.	DRAWN Stiff	APPROVED	DATE 1/29/99	SCALE NONE	SHEET 13 OF 16
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MANHOLE FRAME AND COVER DETAIL

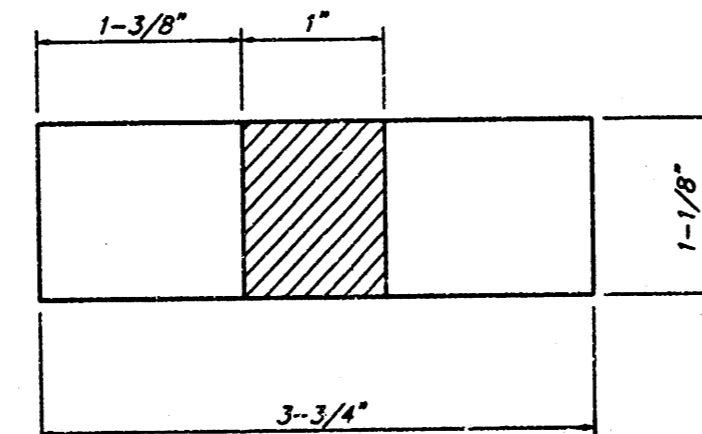
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

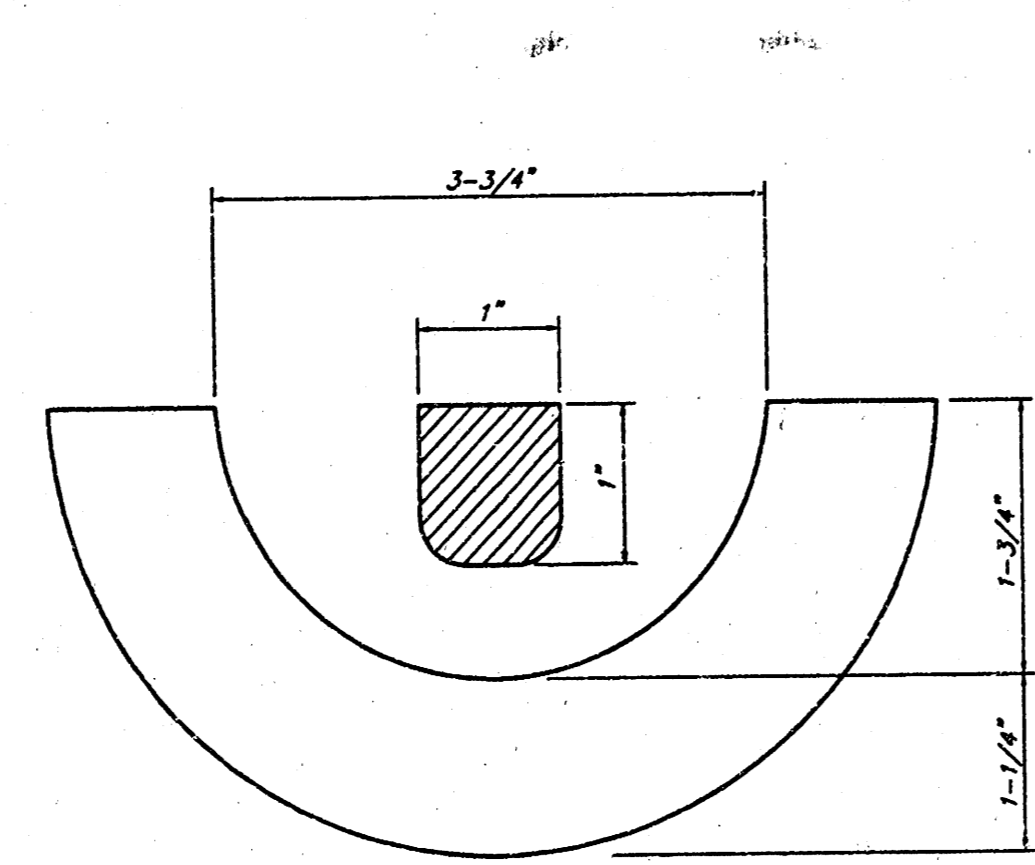


TOP VIEW

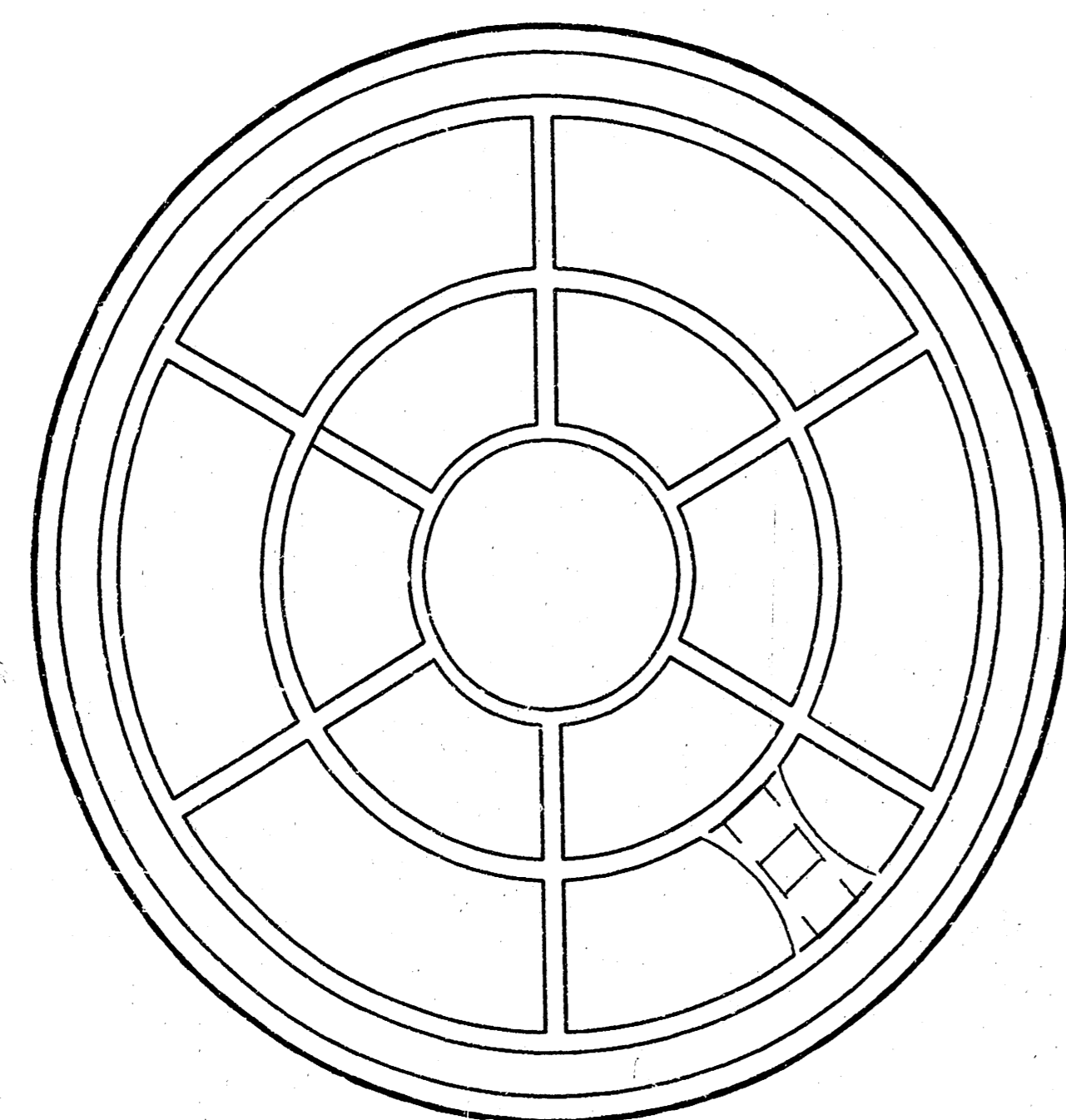
PICKHOLE DETAIL



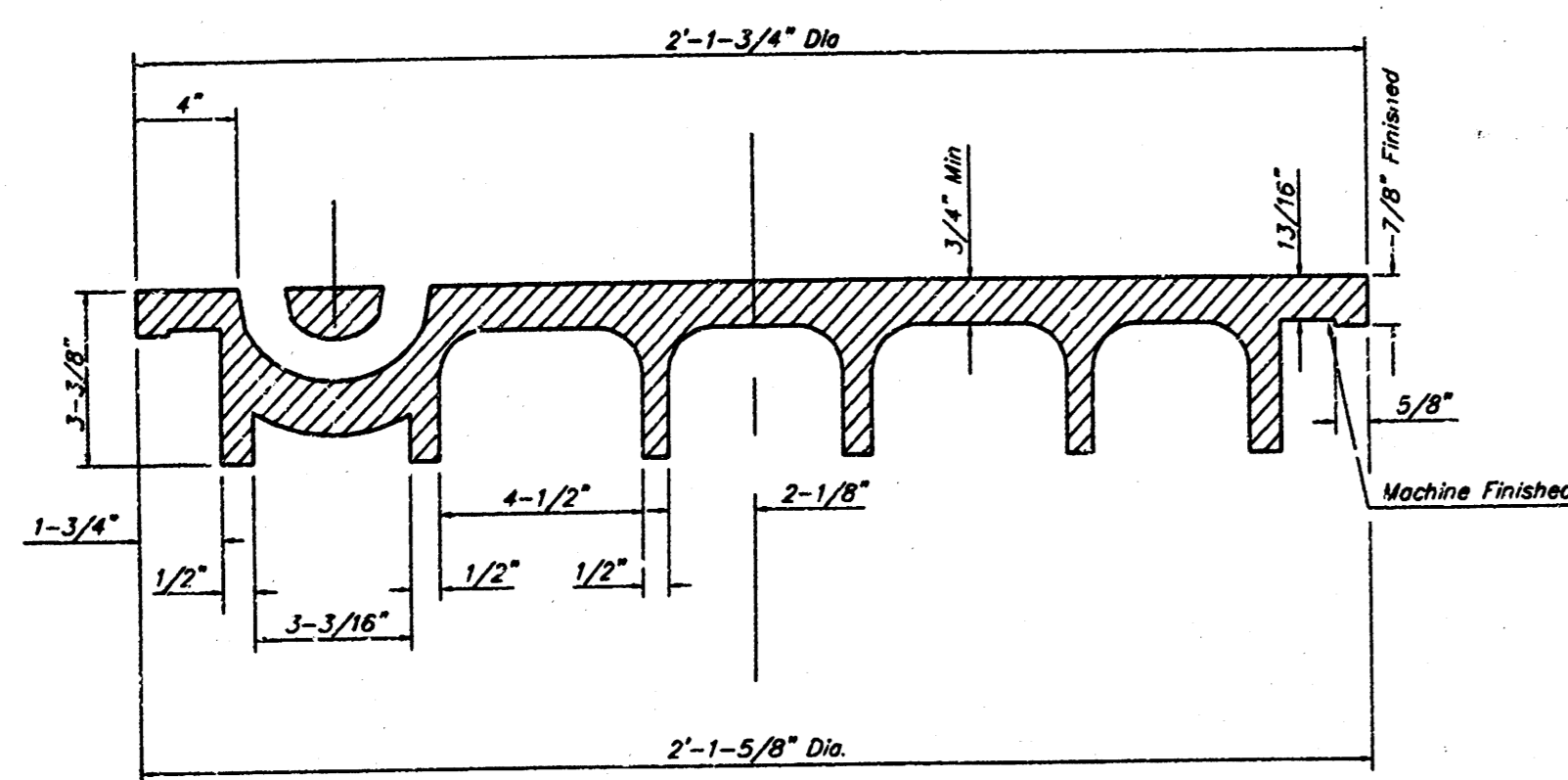
TOP VIEW



SECTION VIEW

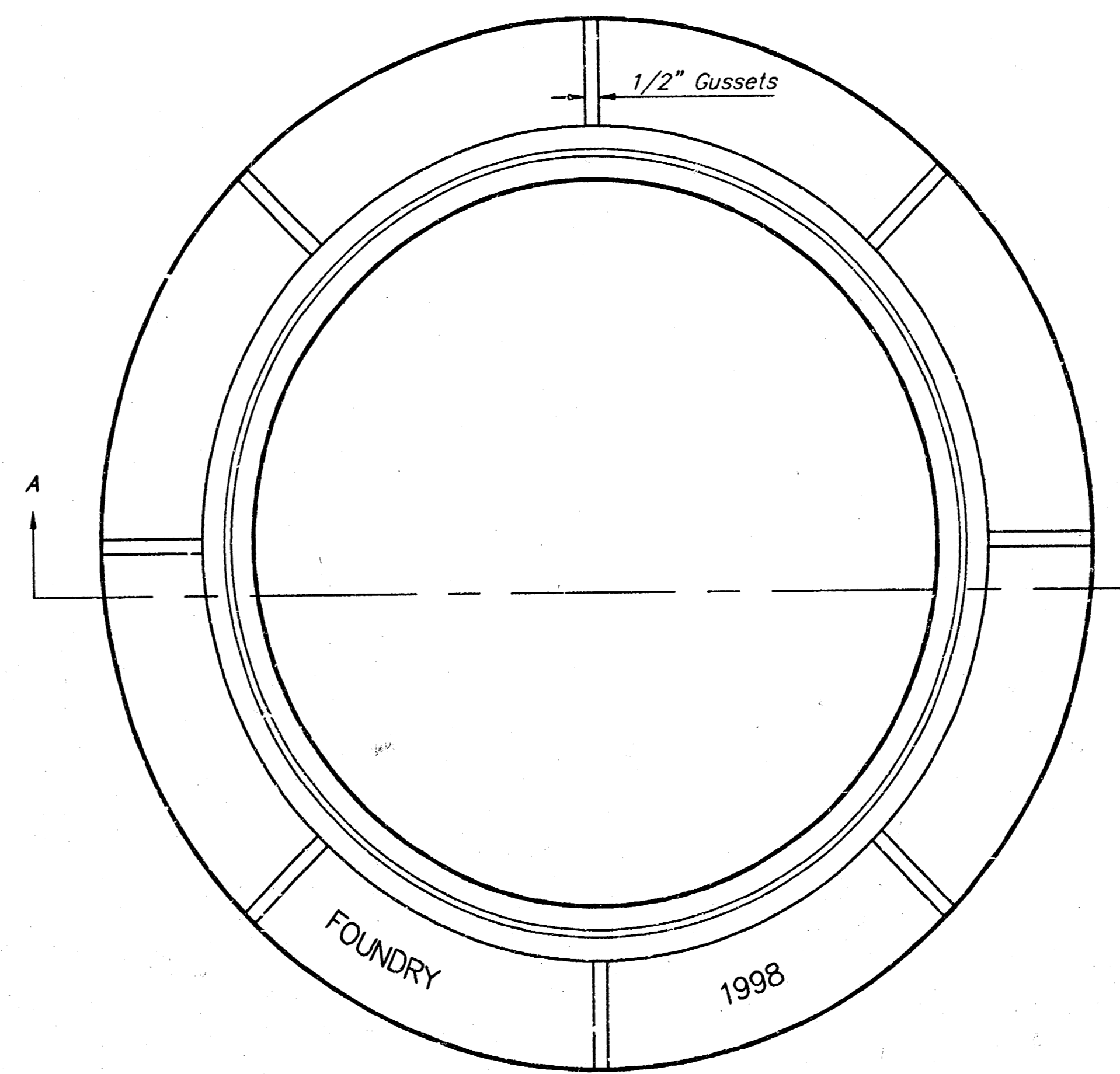


BOTTOM VIEW

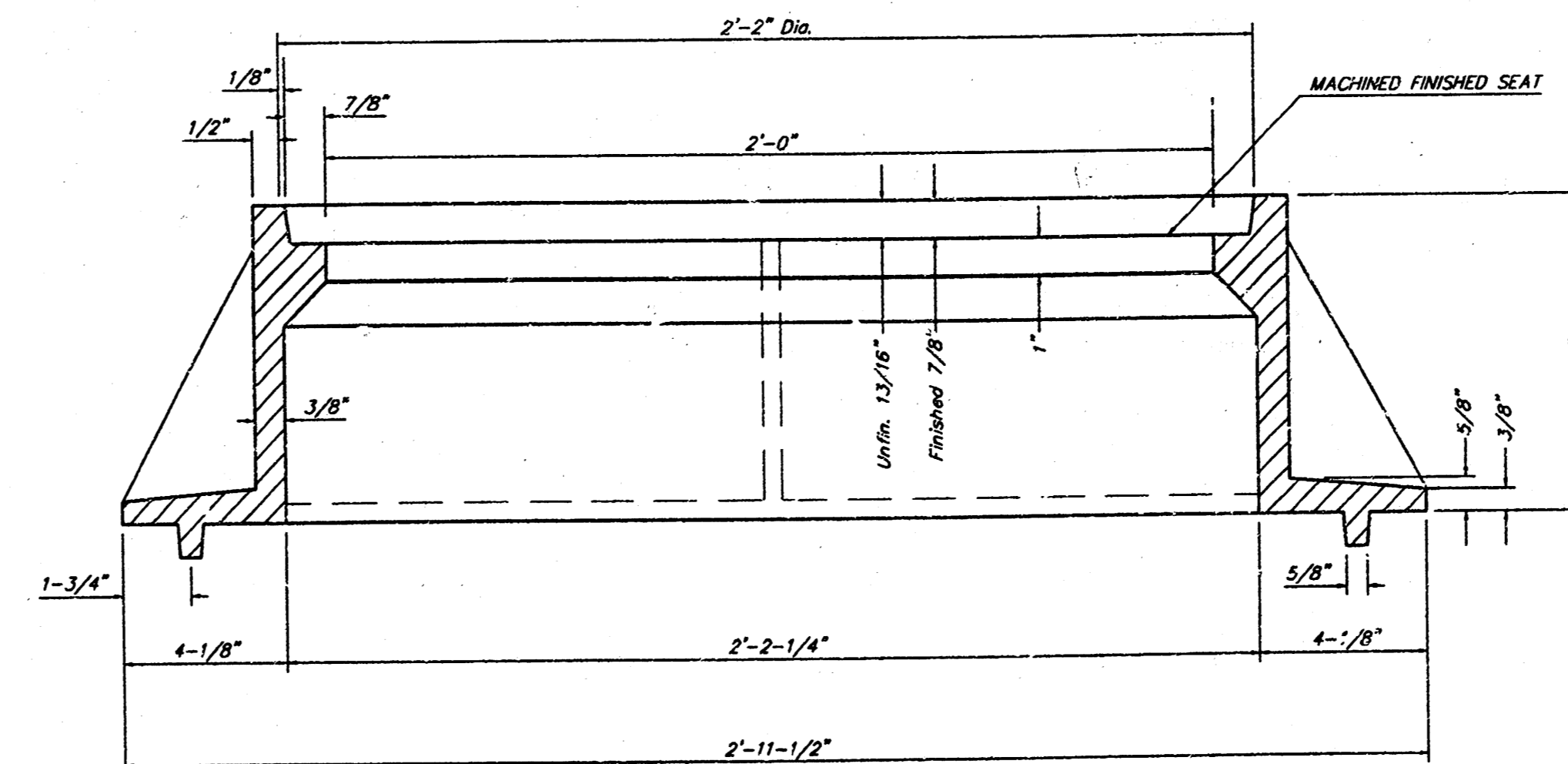


SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW



SECTION A-A

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.

MANHOLE FRAME AND COVER DETAIL			
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KANSAS			
BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING 316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67213			
PROJECT NUMBER 488-82854			SHEET 14
DESIGN STAFF	DRAWN STAFF	APPROVED	DATE 1/29/99
SCALE NONE			16

AUBURN HILLS 8TH ADDITION

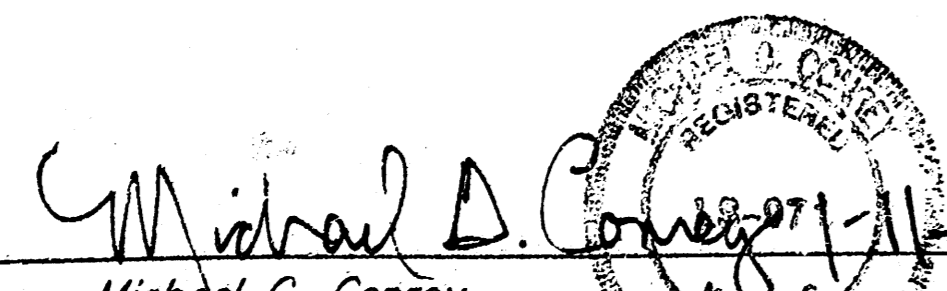
WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas) SS
Sedgwick County) Ws, Baughman Company, P.A. Surveyors in
aforesaid County and State do hereby certify that we have surveyed and
platted "AUBURN HILLS 8TH ADDITION", Wichita, Sedgwick County, Kansas
and that the accompanying plat is a true and correct exhibit of the
property surveyed, described as follows: Commencing at the intersection
of the south line of Auburn Hills Commercial 2nd Addition, Wichita,
Sedgwick County, Kansas, as extended east, with the west line of the
NW1/4 of Sec. 25, Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County,
Kansas; thence S00°05'53"W along the west line of said NW1/4, 971.63 feet
for a point of beginning; thence N64°46'21"E, 1005.46 feet; thence
N88°59'02"E, 180 feet to the SW corner of Auburn Hills 3rd Addition,
Wichita, Sedgwick County, Kansas; thence continuing N88°59'02"E along
the south line of said Auburn Hills 3rd Addition, 312.56 feet to the most
westerly NW corner of Auburn Hills Pool House Addition, Wichita, Sedgwick
County, Kansas; thence S00°00'00"W along the west line of said Auburn
Hills Pool House Addition, 65 feet to the SW corner of said Auburn Hills
Pool House Addition; thence S70°45'00"E along the south line of said
Auburn Hills Pool House Addition, 158 feet to the SW corner of Lot 1,
Block B, Auburn Hills Addition, Wichita, Sedgwick County, Kansas; thence
S89°33'35"E along the south line of said Lot 1 and Lot 2 in said Block B,
159.98 feet to the most northerly NW corner of Lot 9 in said Block B;
thence S45°26'25"W along the northwest line of said Lot 9 and Lot 10
in said Block B, 126.53 feet to a deflection corner in the rear line of
said Lot 10; thence S00°26'25"W along the west line of said Lot 10 and
Lot 11 in said Block B, 140.83 feet to a deflection corner in the rear line
of said Lot 11; thence S44°33'35"E along the southwest line of said Lot 11
and Lot 12 in said Block B, 159.01 feet to a deflection corner in the rear
line of said Lot 12; thence N80°00'00"E along the south line of said
Lot 12 and Lot 13 in said Block B, 85.01 feet to the most northerly
deflection corner in Lot 10, Block A, Auburn Hills 2nd Addition, Wichita,
Sedgwick County, Kansas; thence S30°00'00"W along the northwest line
of said Lot 10, 110 feet to the most southerly deflection corner in said
Lot 10; thence S10°00'00"E along the west line of said Lot 10 and
Lot 9 in said Block A, 100 feet to a deflection corner in the rear line
of said Lot 9; thence S44°00'00"E along the southwest line of said Lot 9
and Lot 8 in said Block A, 130 feet to a deflection corner in the rear
line of said Lot 8; thence S21°00'00"E along the southwest line of said
Lot 8 and as extended southeasterly, 240 feet to a deflection corner in
the rear line of Lot 5 in said Block A; thence S44°00'00"E along the
southwest line of said Lot 5 and Lot 4 in said Block A, 48.62 feet to the
NW corner of Lot 3 in said Block A; thence S01°00'00"E along the west
line of said Lot 3 and as extended south, 170.66 feet to a deflection
corner in the rear line of Lot 1 in said Block A; thence S13°18'38"W,
135.52 feet; thence S49°00'00"E, 174.52 feet; thence N86°00'00"E, 119.98 feet;
thence N41°00'00"E, 35.16 feet to the most southerly corner of Lot 6,
Block B, Auburn Hills 4th Addition, Wichita, Sedgwick County, Kansas; thence
continuing N41°00'00"E along the southeast line of said Lot 6, 103.84 feet
to a deflection corner in the rear line of said Lot 6; thence S01°00'00"E
along the rear line of Lot 9 and Lot 8, Block C, in said Auburn Hills 2nd
Addition, 147.54 feet to a deflection corner in the rear line of said Lot 8;
thence S48°00'00"E along the southwest line of said Lot 8 and Lot 7
in said Block C, 141.86 feet to a deflection corner in said Lot 7; thence
N89°00'32"E along the south line of said Lot 7, 47.39 feet to the SW corner
of Lot 6 in said Block C; thence S01°55'54"W along the west line of said
Lot 6 as extended south, 115.11 feet to a point on the south line of the
NW1/4 of said Sec. 25; thence S89°00'32"W along the south line of said
NW1/4, 1703.24 feet; thence N00°00'00"W, 120.76 feet; thence N35°09'00"W,
652.49 feet; thence N90°00'00"W, 237.07 feet to a point on a curve to
the left; thence northerly and northwesterly along said curve, having a
central angle of 50°00'52" and a radius of 544.67 feet, an arc distance
of 475.45 feet, (having a chord length of 460.50 feet bearing N12°20'06"W),
to the P.R.C. of a curve to the right; thence northwesterly along said
curve, having a central angle of 09°28'45" and a radius of 444.67 feet,
an arc distance of 73.57 feet, (having a chord length of 73.48 feet bearing
N32°36'09"W), to the point of beginning, TOGETHER with a tract of land in
the NE1/4 of Sec. 26, Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County,
Kansas, described as follows: Commencing at the intersection of the south
line of said Auburn Hills Commercial 2nd Addition, as extended east, with the
east line of said NE1/4; thence S00°05'53"W along the east line of said
NE1/4, 971.63 feet for a point of beginning; thence continuing S00°05'53"W
along the east line of said NE1/4, 79.30 feet to a point on a curve to the
right; thence northwesterly along said curve, having a central angle of
09°15'06" and a radius of 444.67 feet, an arc distance of 71.80 feet,
(having a chord length of 71.72 feet bearing N23°14'14"W); thence N64°46'21"E,
31.43 feet to the point of beginning.

All being situated in the NW1/4 of Sec. 25, Twp. 27-S, R-2-W of
the 6th P.M., Sedgwick County, Kansas, and in the NE1/4 of Sec. 26,
Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County, Kansas.

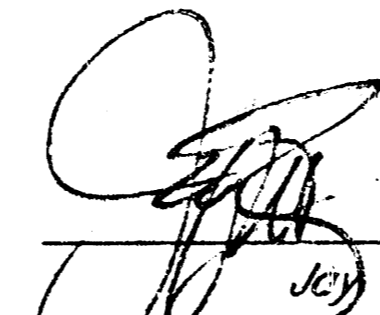
Existing public easements and dedications being vacated
by virtue of K.S.A. 12-512(b).

Baughman Company, P.A.


Michael G. Conroy, Surveyor

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 "AUBURN
HILLS 8TH ADDITION", Wichita, Sedgwick County, Kansas. The utility easements
are hereby granted as indicated for the construction and maintenance of all
public utilities. The drainage easements are hereby granted as indicated
for drainage purposes. The drainage and utility easements are hereby
granted as indicated for drainage purposes and for the construction and
maintenance of all public utilities. The streets are hereby dedicated to and
for the use of the public. Reserve "A" is hereby reserved for landscaping,
entry monuments, utilities, and streets. Reserves "B" and "C" are hereby
reserved for entry monuments, open space, landscaping, drainage, sidewalks,
screening walls, and utilities as confined to easements. Reserve "D" is hereby
reserved for all public uses related to a golf course and golf course facilities,
drainage purposes, and utilities as confined to easements. Reserves "A", "B",
and "C" shall be owned and maintained by the homeowners association for
the addition. Reserve "D" shall be owned and maintained by the City of
Wichita, Kansas. All abutters rights of access to or from 135th Street West
over and across the west line of Reserves "B", "C", and "D" are hereby granted
to 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.

West Wichita Development, Inc.

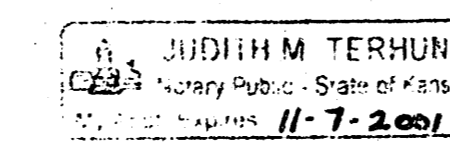

Jay W. Russell, President

City of Wichita, Kansas, a Municipal Corporation

Bob Knight, Mayor

Attest: Pat Burnett, City Clerk

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before me,
this 12th day of JANUARY, 1999, by Jay W. Russell, President of
West Wichita Development, Inc., on behalf of the corporation.

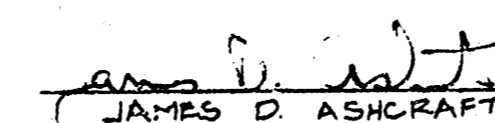

Judith M. Terhune, Notary Public
My App't. Exp. 11-7-2001

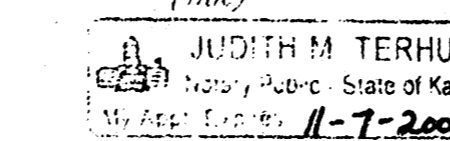
State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before
me, this 12th day of JANUARY, 1999, by Bob Knight, Mayor of
the City of Wichita, Kansas, a Municipal Corporation, on behalf of the
corporation.

My App't. Exp. _____, Notary Public

We the undersigned, holders of mortgages on
the above described property, do hereby consent to this plat of "AUBURN
HILLS 8TH ADDITION", Wichita, Sedgwick County, Kansas.

State Bank of Colwich


James D. Ashcraft, V.P.
State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged be-
fore me, this 12th day of JANUARY, 1999, by JAMES D. ASHCRAFT,
VICE-PRESIDENT of the State Bank of Colwich, on behalf of the bank.


Judith M. Terhune, Notary Public
My App't. Exp. 11-7-2001

This plat of "AUBURN HILLS 8TH 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 _____, 1999,
Wichita-Sedgwick County Metropolitan Area Planning Commission.

William M. Johnson, Chairman

Marvin S. Krout, Secretary

This plat approved and all dedications
shown hereon accepted by the City Council of the City of Wichita,
Kansas, this _____ day of _____, 1999.

Bob Knight, Mayor

Pat Burnett, City Clerk

Entered on transfer record this _____ day
of _____, 1999.

James Alford, County Clerk

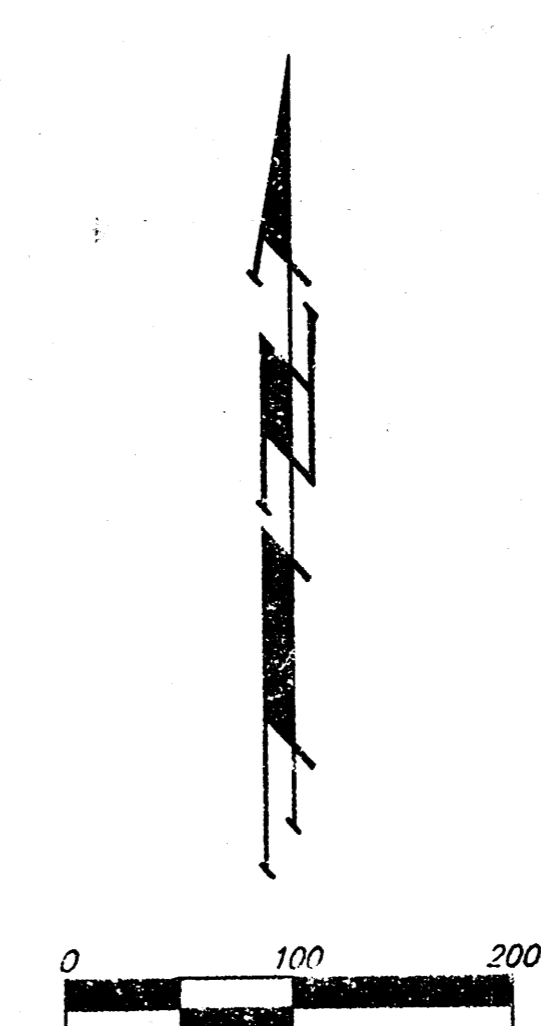
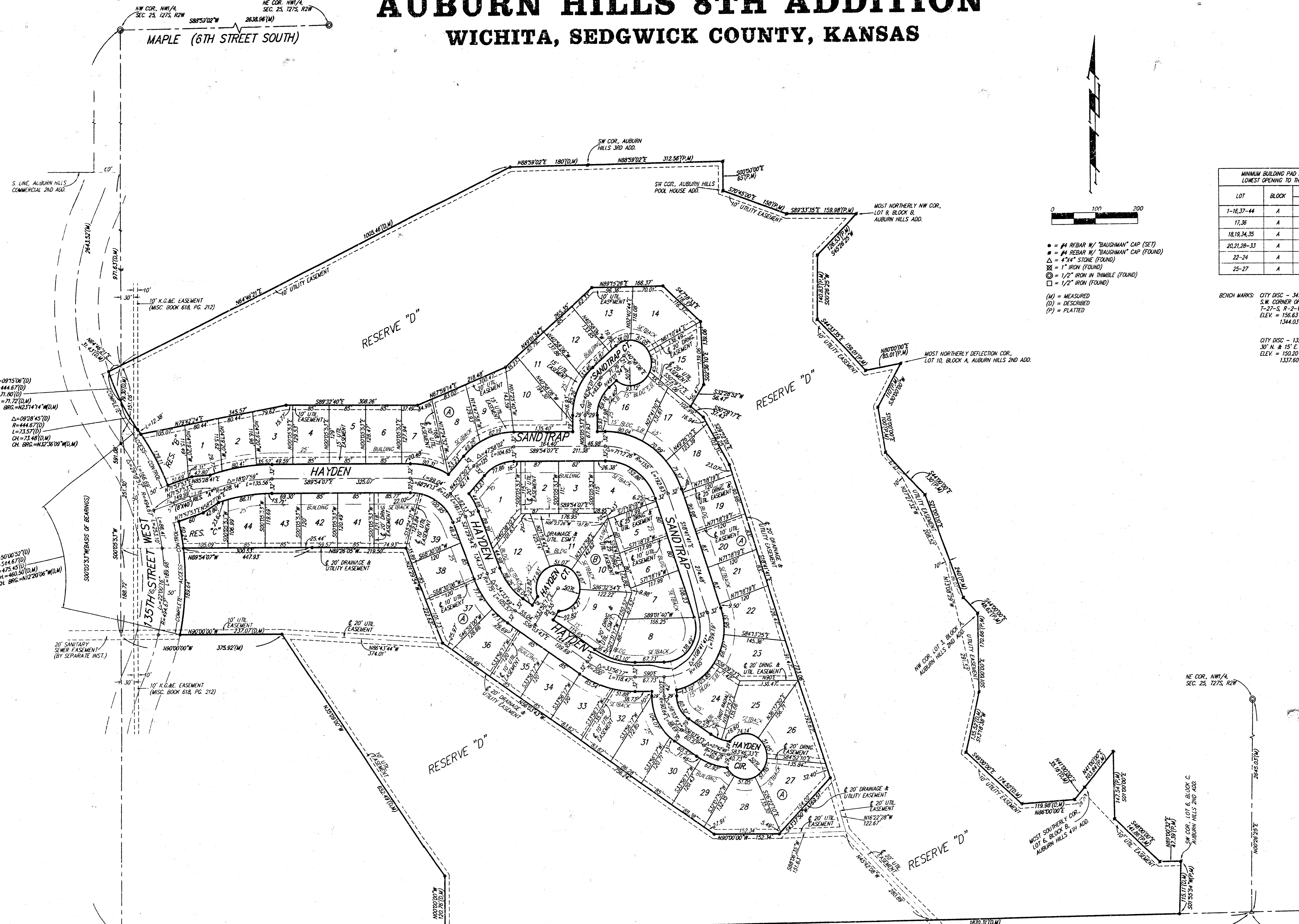
State of Kansas) SS
Sedgwick County) This is to certify that this plat has been
filed for record in the office of the Register of Deeds, this _____ day
of _____, 1999, at _____ o'clock _____ M.; and is duly
recorded.

Bill Meek, Register of Deeds

Linda Kizzire, Deputy

AUBURN HILLS 8TH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



- = #4 REBAR W/ "BAUGHMAN" CAP (SET)
 - = #4 REBAR W/ "BAUGHMAN" CAP (FOUND)
 - △ = 4" X 4" STONE (FOUND)
 - ⊠ = 1" IRON (FOUND)
 - ⊙ = 1/2" IRON IN THIMBLE (FOUND)
 - = 1/2" IRON (FOUND)
- (M) = MEASURED
 (D) = DESCRIBED
 (P) = PLATTED

MINIMUM BUILDING PAD ELEVATION FOR LOWEST OPENING TO THE STRUCTURES			
LOT	BLOCK	ELEVATION	
		CITY DATUM	M.S.L.
1-16, 37-44	A	151.0	1338.4
17, 36	A	150.0	1337.4
18, 19, 34, 35	A	149.0	1336.4
20, 21, 28-33	A	148.0	1335.4
22-24	A	147.0	1334.4
25-27	A	146.0	1333.4

BENCH MARKS: CITY DISC - 34.3' E. & 3.3' N. OF S.W. CORNER OF N.W. 1/4, SEC. 25, T.27-S. R-2-W. ELEV. = 155.63 CITY DATUM 1344.03 M.S.L.

CITY DISC - 135TH ST. W. & MAPLE 30' N. & 15' E. & BOTH. ELEV. = 150.20 CITY DATUM 1337.00 M.S.L.

Δ=0975267(D)
 R=444.67(D)
 L=71.80(D)
 CH=71.72(D,M)
 CH. BRG.=N231414°W(G,M)

Δ=0978457(D)
 R=444.67(D)
 L=73.57(D)
 CH=73.48(D,M)
 CH. BRG.=N222879°W(G,M)

Δ=50700527(D)
 R=544.67(D)
 L=475.45(D,M)
 CH=460.50(D,M)
 CH. BRG.=N122006°W(G,M)

T. JAMES WOODRUFF, PLATTING ENGINEER