

LATERAL 319, FOUR MILE CREEK SEWER SANITARY SEWER EXTENSION

LOTS 1-7, BLOCK 1; LOTS 1-20 BLOCK 2; LOTS 1-5, 49-61 BLOCK 3; LOT 1 BLOCK 4
BRENTWOOD SOUTH ADDITION
LOTS 25-30 BLOCK 4 BRENTWOOD VILLAGE ADDITION

LOT 2 MAPLE SHADE ADDITION
PROJECT NO. 468-83353
OCA # 743909

GENERAL NOTES

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

Kansas One-Call 687-2470

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

Cox Communications	262-0661
Kansas Gas Service	393-8600
K.G.E. Electric	393-8600
Peoples Natural Gas Company	1-800-303-0357
Southwestern Bell Telephone Company	1-800-286-8313
City of Wichita Water Department	262-6000
City of Wichita Sewer Maintenance	262-6000
Williams Pipeline - Terry Blanding	529-6622

Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor 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. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required, except when such saw cuts are within three (3) feet of an existing joint the limits of removal shall be extended to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.

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 and site location. Locations that, 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 permitting regulations. Any material buried or stockpiled beyond approved of Engineers construction limits would require additional archeological investigations unless buried in a previously approved borrow location.

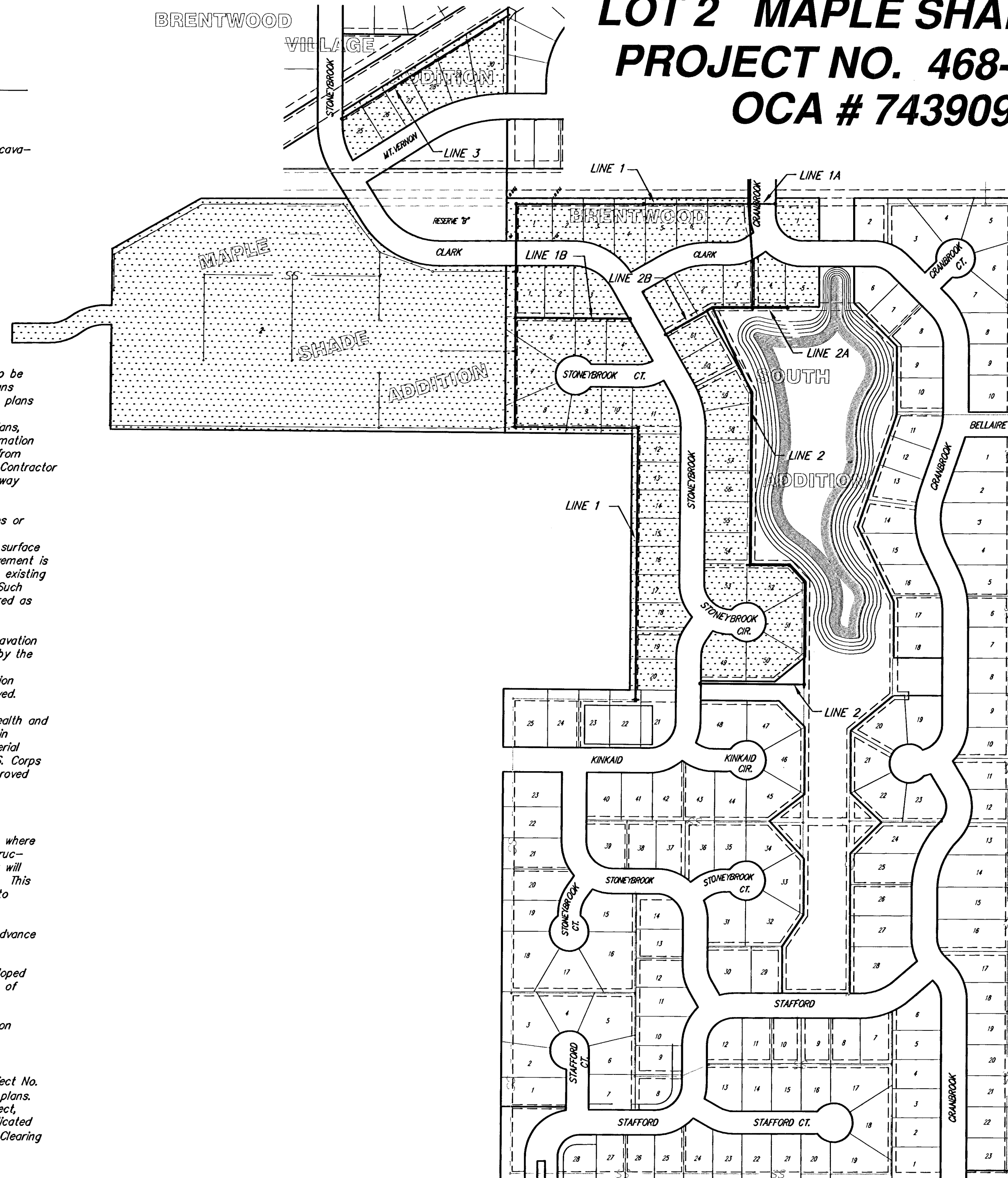
The Engineer shall take field ties to all quarter section corners. The Contractor shall set a City survey monument in the required location where such quarter section corners fall within the limits of pavement construction. Survey monuments will be furnished by the City. The Engineer will accurately locate and install the iron at the quarter section corner. This work will not be paid for directly, but shall be considered subsidiary to the other pay items of work in the contract.

The Contractor shall notify pipeline companies at least 24 hours in advance of any work being performed across and/or adjacent to pipelines.

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

The Contractor shall seed, fertilize and mulch all disturbed areas upon completion of construction. Incidental to the bid item for "Site Clearing and Restoration".

The Contractor shall coordinate construction of this project with Project No. 468-83355 (Site Grading) to insure Proposed Grade is as shown on plans. If Sewer Line is constructed prior to completion of Site Grading Project, Easements will be need to be filled or cut to Proposed Grade as indicated on plans. All dirt work shall be incidental to the bid item for "Site Clearing & Restoration".



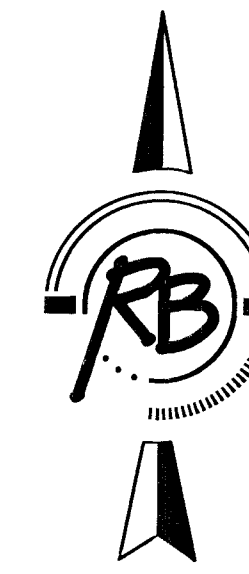
BENCH MARKS

BENCH MARK #1: USGS BRASS PLUG 28' S. & 530' W. OF CENTERLINE INTERSECTION OF CAPRI & PAWNEE
ELEV.=1386.25 NGVD

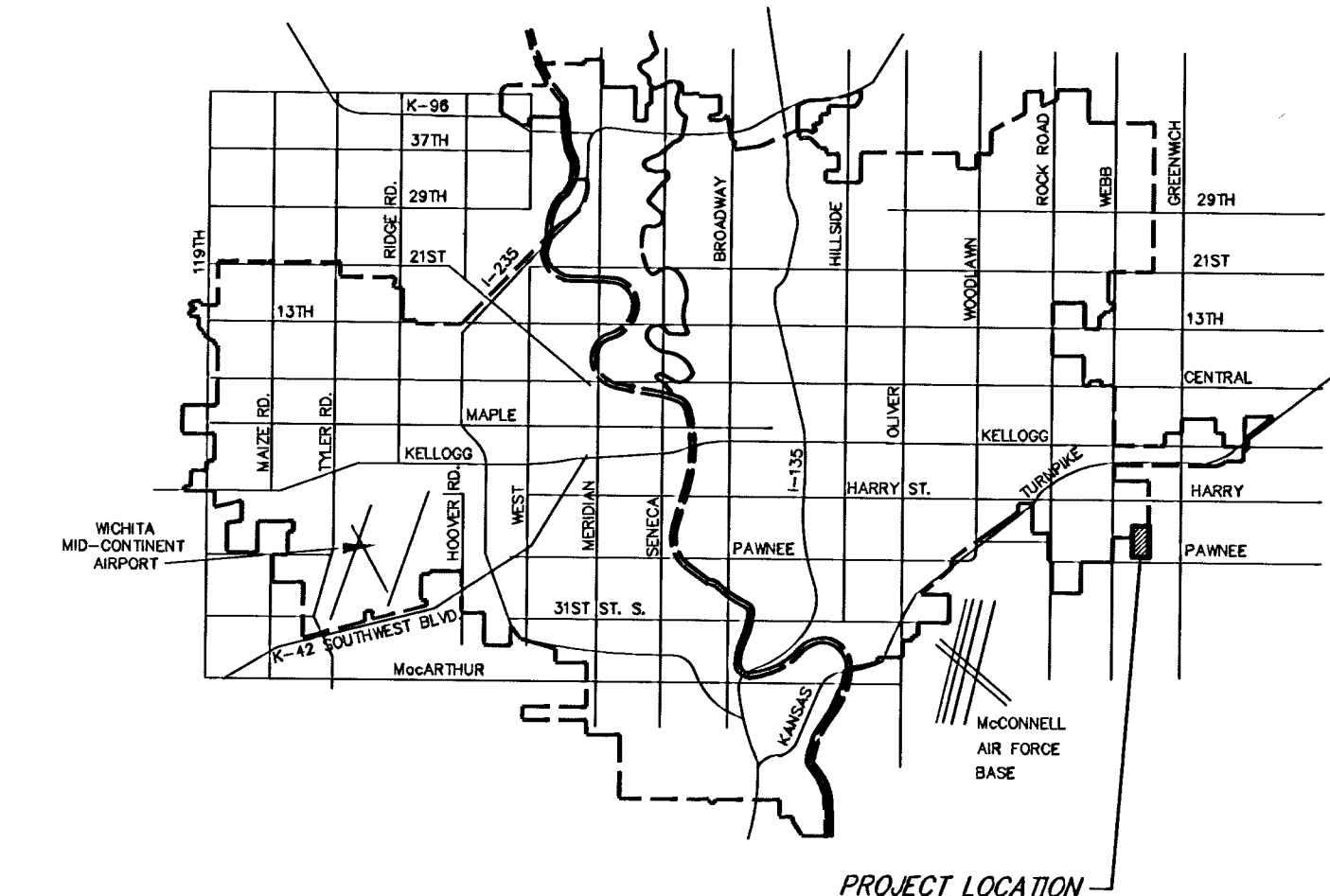
BENCH MARK #2: CITY OF WICHITA STD. DISC
20.8' W & 54.5' S. OF CENTERLINE INTERSECTION
DALTON & PAWNEE
ELEV.=1379.60

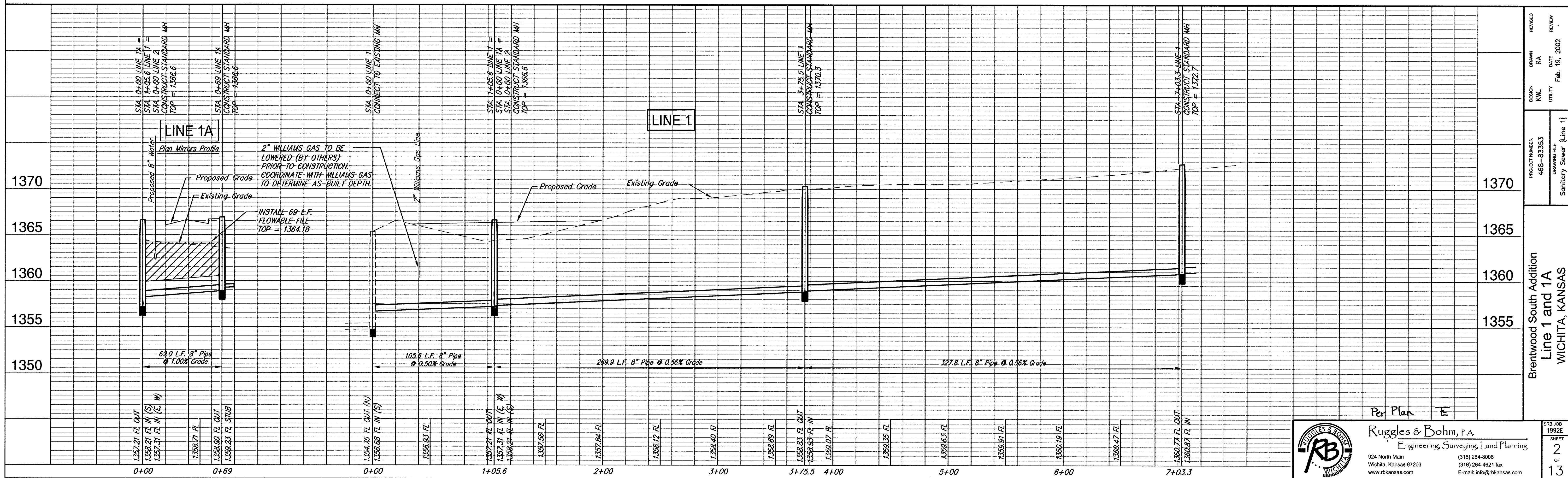
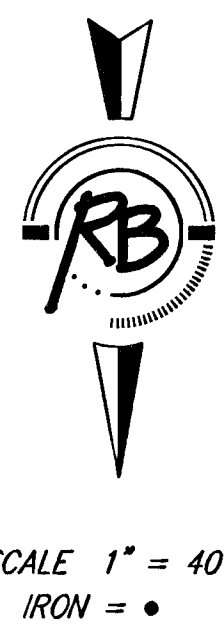
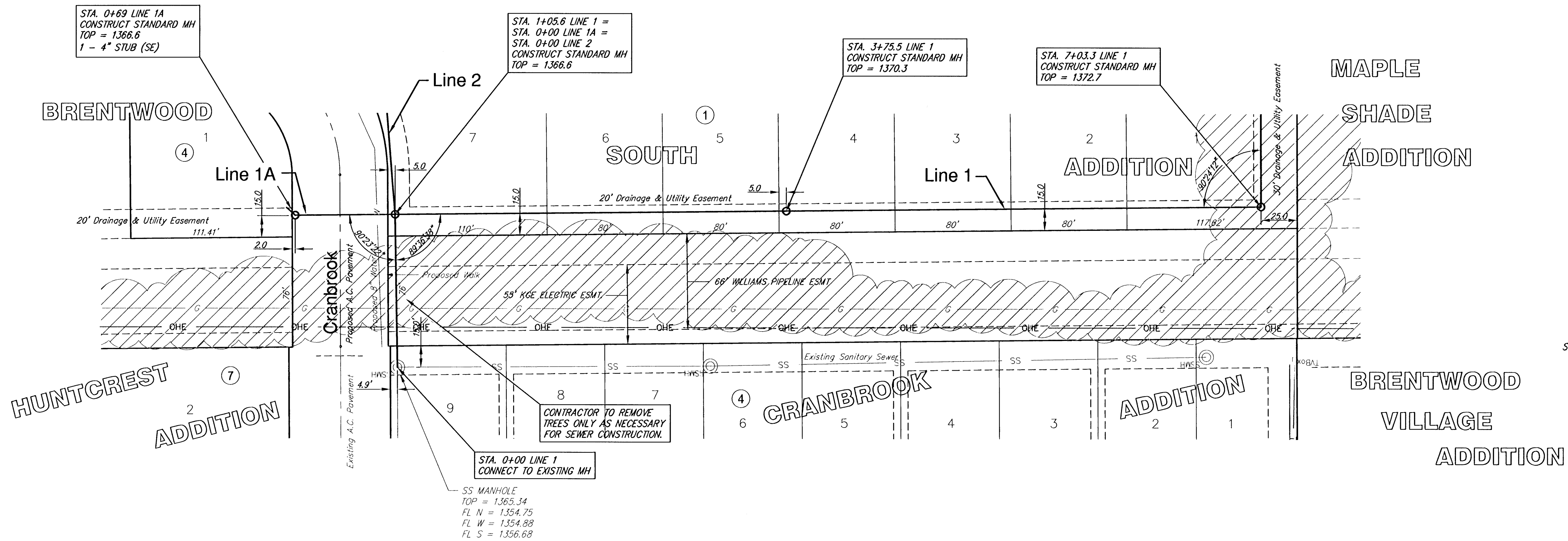
INDEX OF SHEETS

1. TITLE SHEET
- 2-4. LINE 1 PLAN/PROFILE
- 5-6. LINE 2 PLAN/PROFILE
7. LINE 3 PLAN/PROFILE
8. EASEMENT GRADING PLAN
9. MANHOLE RING AND COVER DETAILS
10. TYPE 'P' MANHOLE DETAIL
11. VERTICAL RISER DETAIL
12. KEYMAP
13. FINAL PLAT



Scale: 1" = 200'

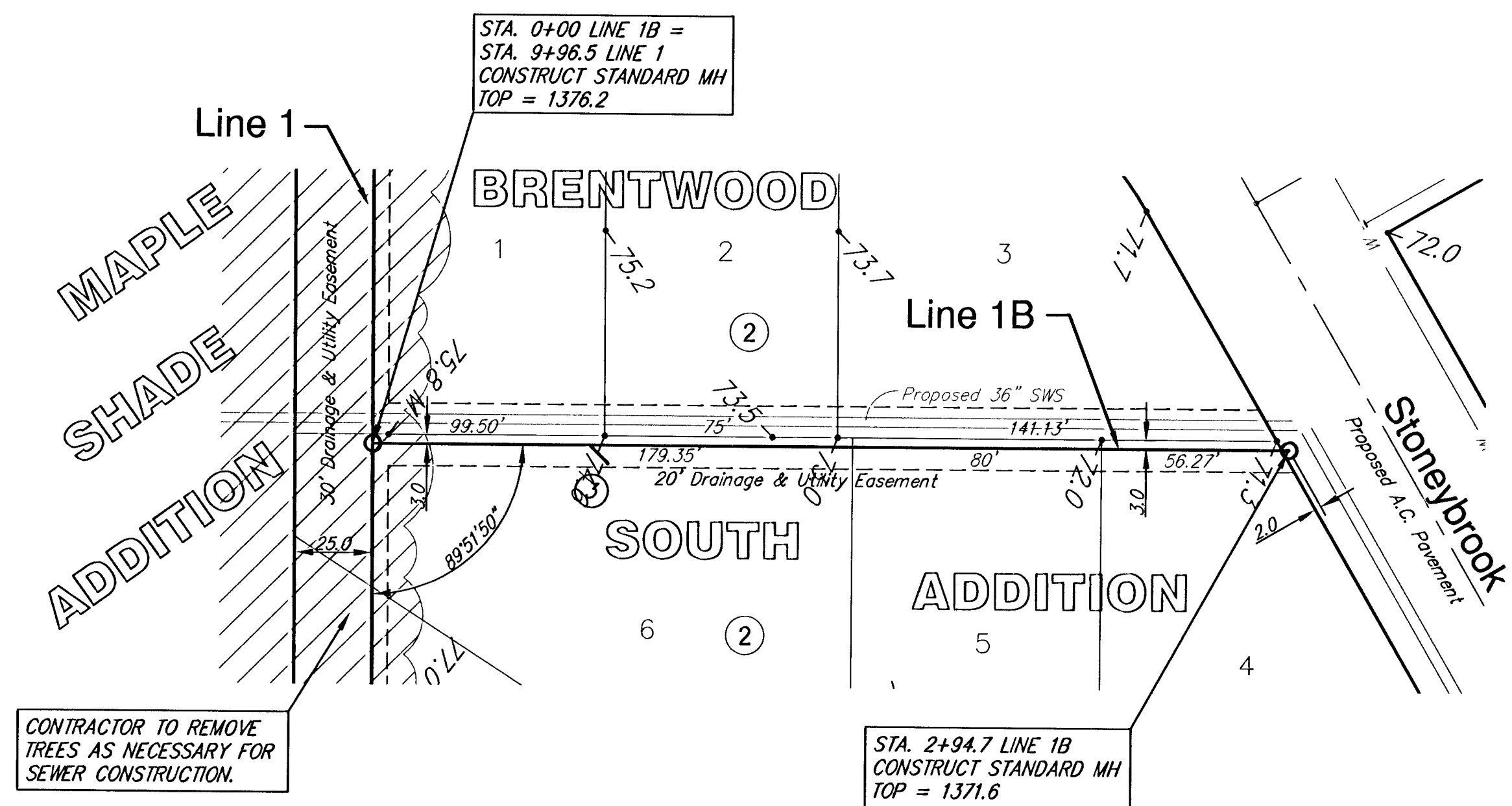
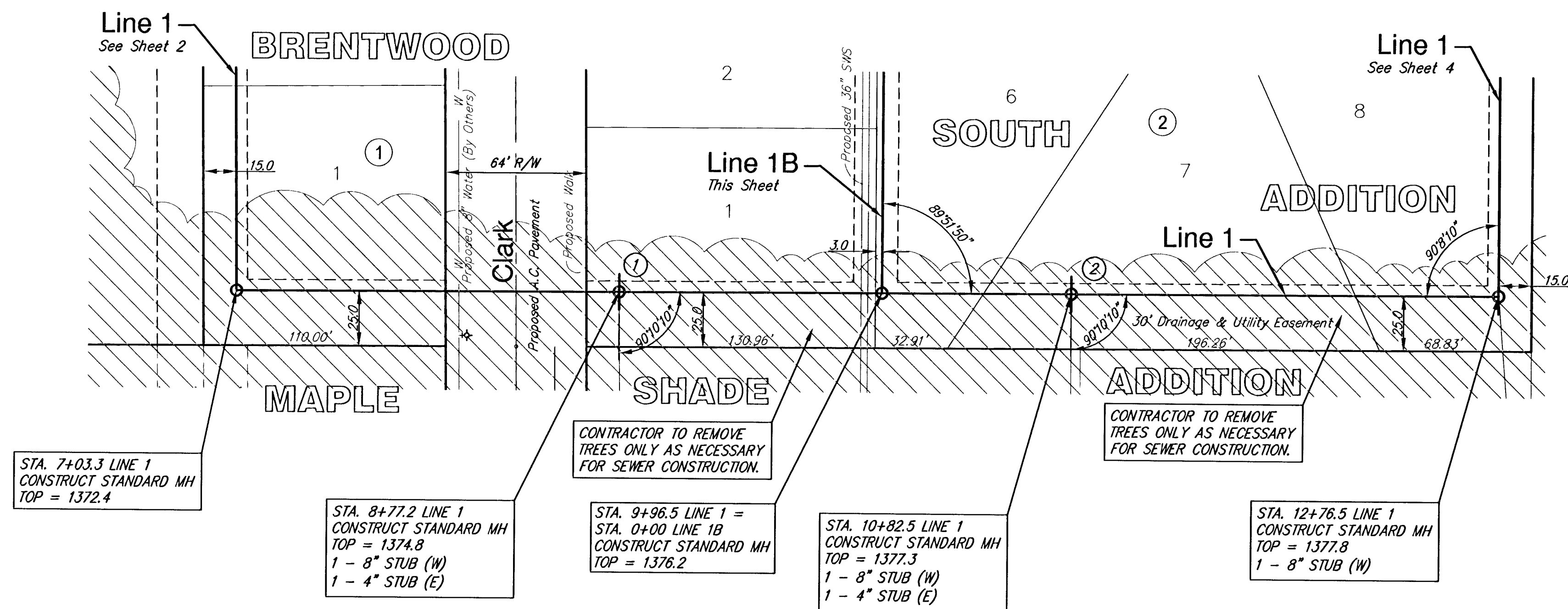




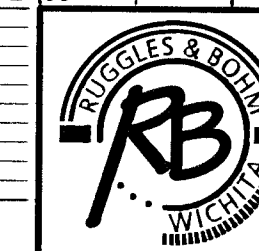
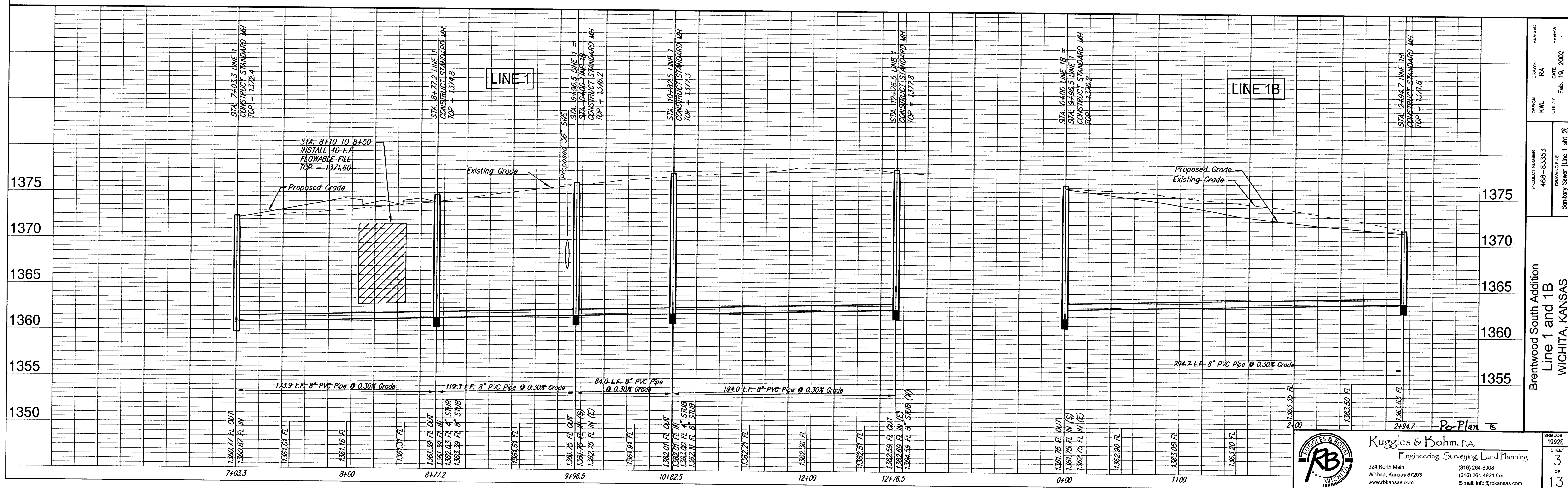
DESIGN KWL	DRAWN RA	REVIEW DATE Feb. 13, 2002
PROJECT NUMBER 468-83353	DRAWING FILE Sanitary Sewer {Line 1}	
Brentwood South Addition Line 1 and 1A WICHITA, KANSAS		
SRB JOB 1992E	SHEET 2 OF 13	



SCALE 1" = 40'
IRON = •

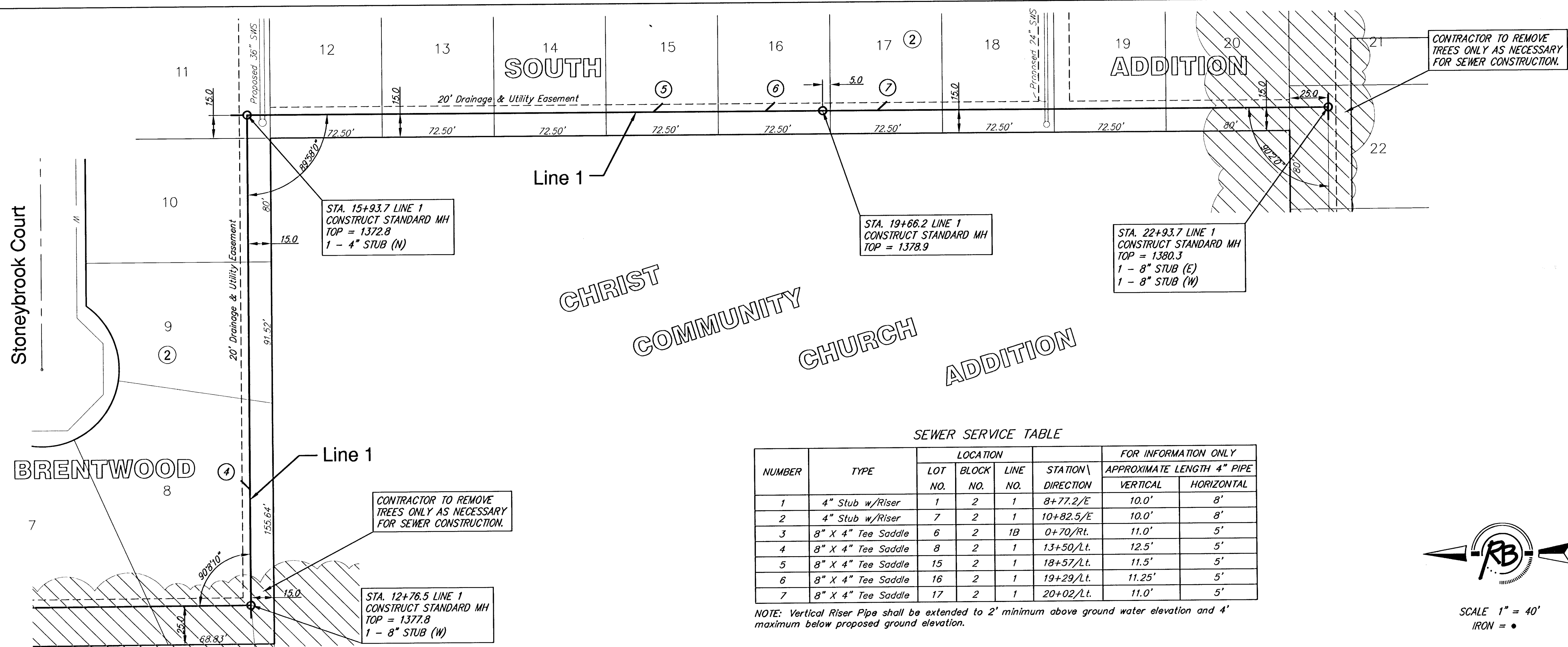


SCALE 1" = 40'
IRON = •



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4821 fax
E-mail: info@rbkansas.com

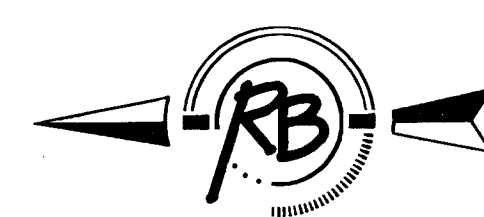
PROJECT NUMBER 468-83353	DESIGN KWL	DRAWN RA	REVIEW RA
DRAWING FILE Sanitary Sewer Line 1 sht 2j	UTILITY	DATE Feb. 19, 2002	REVIEW
Brentwood South Addition Line 1 and 1B WICHITA, KANSAS			
SRB JOB 1992E			
SHEET 3			
OF 13			



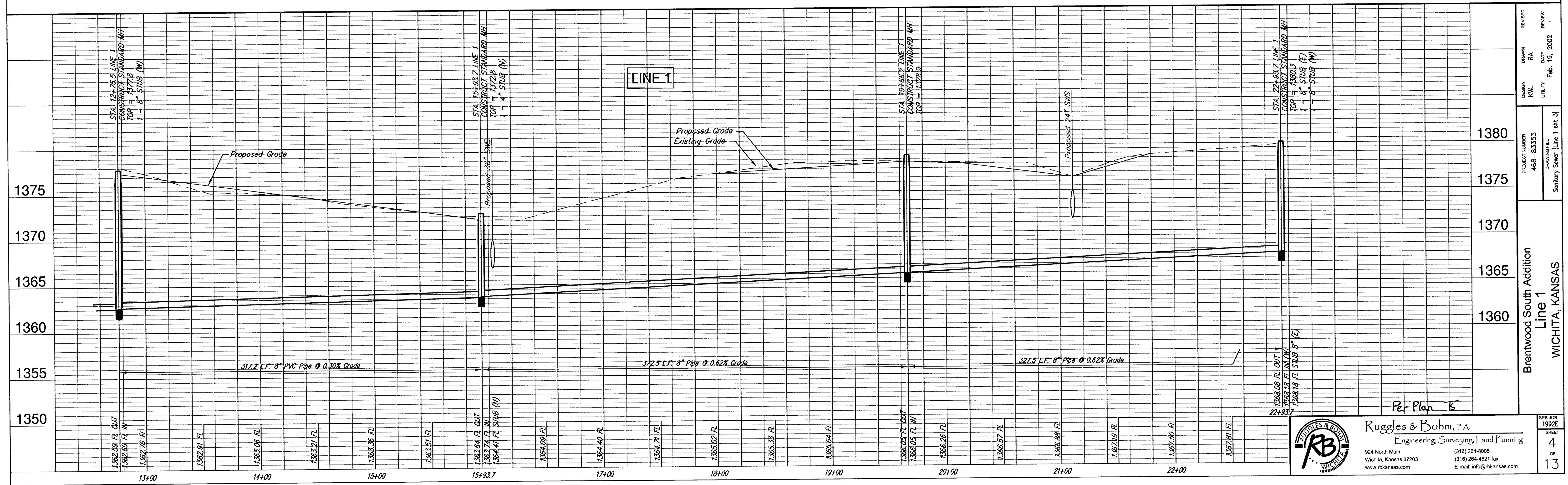
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION \ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE	
1	4" Stub w/Riser	1	2	1	8+77.2/E	10.0'	8'
2	4" Stub w/Riser	7	2	1	10+82.5/E	10.0'	8'
3	8" X 4" Tee Saddle	6	2	1B	0+70/Rt.	11.0'	5'
4	8" X 4" Tee Saddle	8	2	1	13+50/Lt.	12.5'	5'
5	8" X 4" Tee Saddle	15	2	1	18+57/Lt.	11.5'	5'
6	8" X 4" Tee Saddle	16	2	1	19+29/Lt.	11.25'	5'
7	8" X 4" Tee Saddle	17	2	1	20+02/Lt.	11.0'	5'

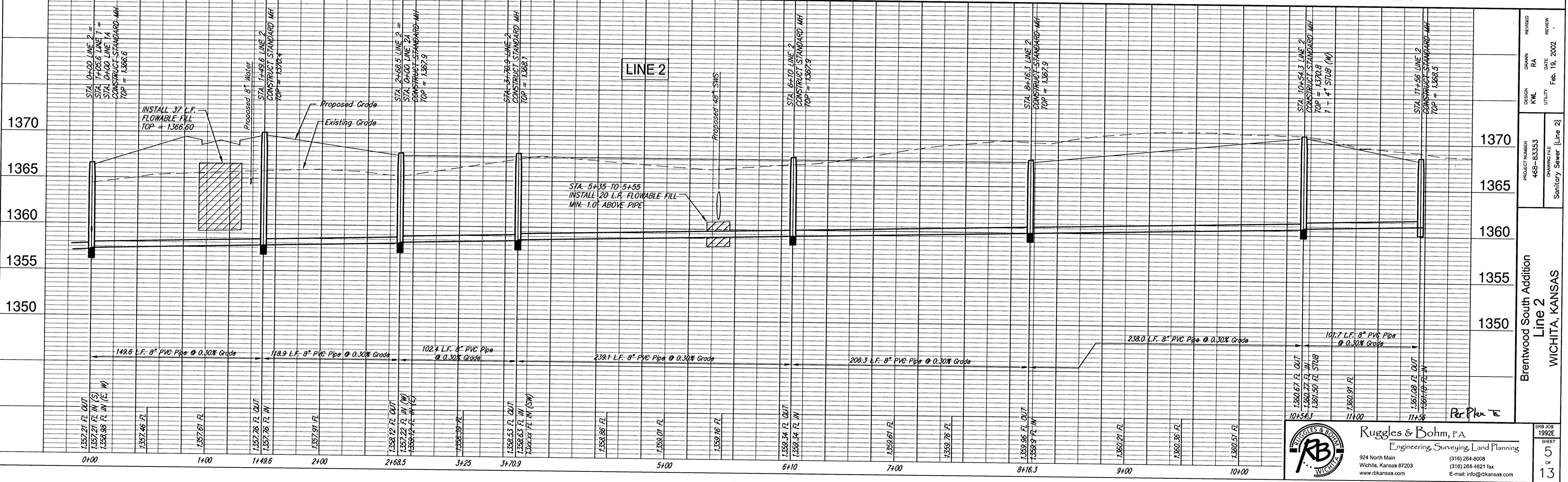
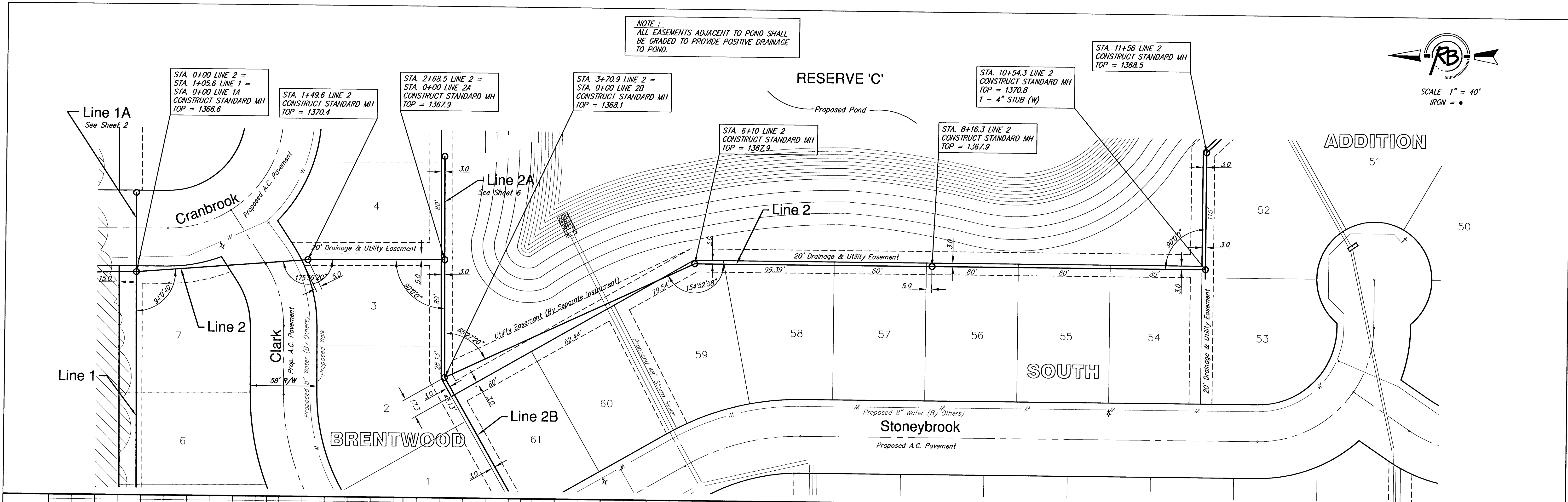
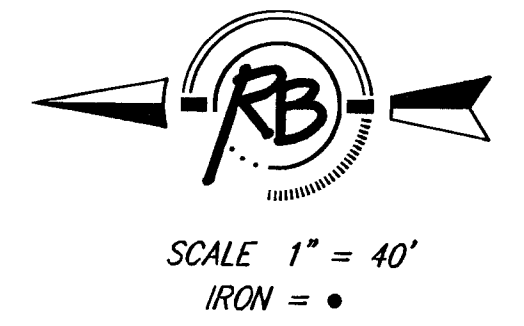
NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



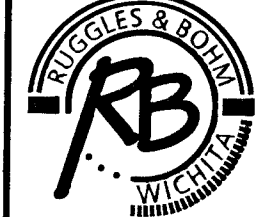
SCALE 1" = 40'
IRON = ●



NOTE:
ALL EASEMENTS ADJACENT TO POND SHALL
BE GRADED TO PROVIDE POSITIVE DRAINAGE
TO POND.

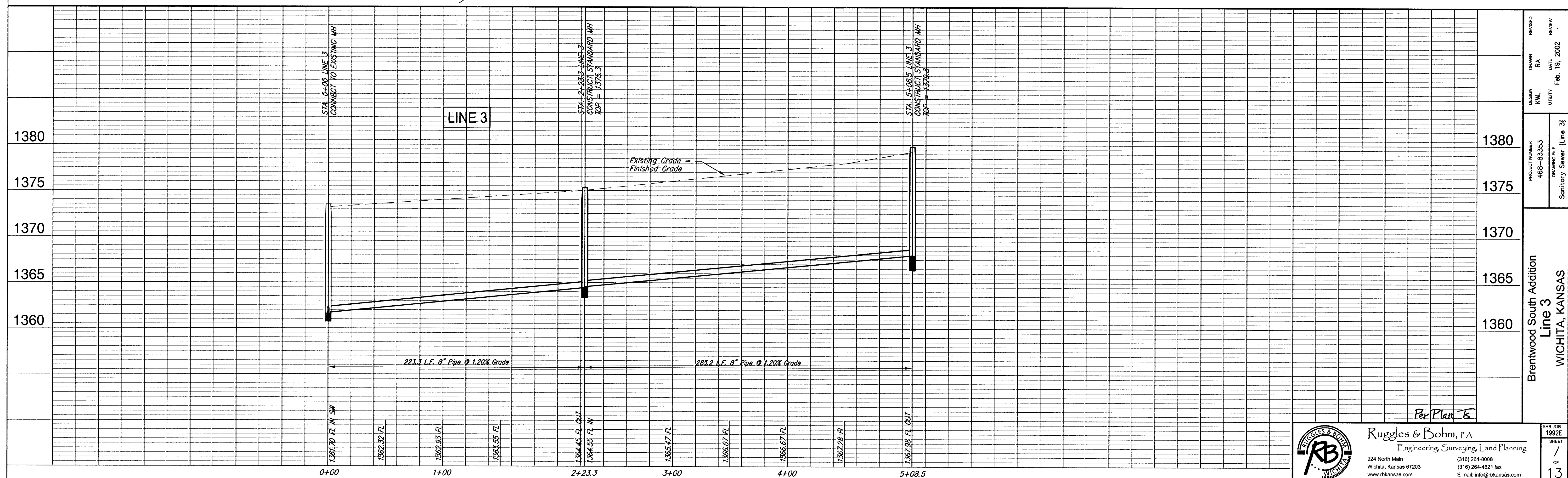
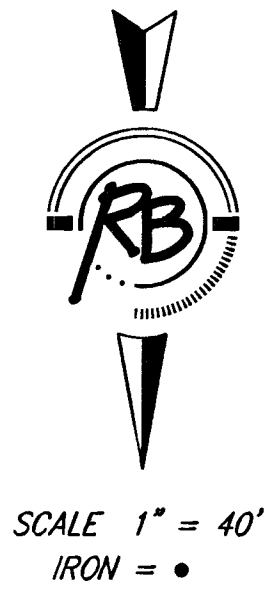


DESIGN	DRAWN	REVIEW
KWL	RA	DATE
PROJECT NUMBER	UTILITY	Feb. 19, 2002
468-83353		
DRAWING FILE		
Sanitary Sewer (Line 2)		
Brentwood South Addition		
Line 2		
WICHITA, KANSAS		



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
(316) 264-8008
(316) 264-4821 fax
E-mail: info@rbkansas.com

SRB 203
1992E
SHEET
5
OF
13



LINE 1

$$2300 \text{ L.F.} \times 22' \times 0.25' = \frac{12,650 \text{ C.F.}}{27} = 468.5 \text{ C.Y. CUT}$$
$$2300 \text{ L.F.} \times 22' \times 0.25' = \frac{12,650 \text{ C.F.}}{27} = 468.5 \text{ C.Y. FILL}$$

LINE 1A

$$76 \text{ L.F.} \times 22' \times 0.25' = \frac{418 \text{ C.F.}}{27} = 15.5 \text{ C.Y. CUT}$$
$$76 \text{ L.F.} \times 22' \times 0.25' = \frac{418 \text{ C.F.}}{27} = 15.5 \text{ C.Y. FILL}$$

LINE 1B

$$295 \text{ L.F.} \times 22' \times 0.25' = \frac{1,622.5 \text{ C.F.}}{27} = 60.0 \text{ C.Y. CUT}$$
$$295 \text{ L.F.} \times 22' \times 0.25' = \frac{1,622.5 \text{ C.F.}}{27} = 60.0 \text{ C.Y. FILL}$$

LINE 2

$$1450 \text{ L.F.} \times 22' \times 0.25' = \frac{7,975 \text{ C.F.}}{27} = 295.4 \text{ C.Y. CUT}$$
$$1450 \text{ L.F.} \times 22' \times 0.25' = \frac{7,975 \text{ C.F.}}{27} = 295.4 \text{ C.Y. FILL}$$

LINE 2A

$$90 \text{ L.F.} \times 22' \times 0.25' = \frac{495 \text{ C.F.}}{27} = 18.4 \text{ C.Y. CUT}$$
$$90 \text{ L.F.} \times 22' \times 0.25' = \frac{495 \text{ C.F.}}{27} = 18.4 \text{ C.Y. FILL}$$

LINE 2A

$$140 \text{ L.F.} \times 22' \times 0.25' = \frac{770 \text{ C.F.}}{27} = 28.5 \text{ C.Y. CUT}$$
$$140 \text{ L.F.} \times 22' \times 0.25' = \frac{770 \text{ C.F.}}{27} = 28.5 \text{ C.Y. FILL}$$

Additional Easements

$$300 \text{ L.F.} \times 22' \times 0.25' = \frac{1,650 \text{ C.F.}}{27} = 61.1 \text{ C.Y. CUT}$$
$$300 \text{ L.F.} \times 22' \times 0.25' = \frac{1,650 \text{ C.F.}}{27} = 61.1 \text{ C.Y. FILL}$$

NOTES :

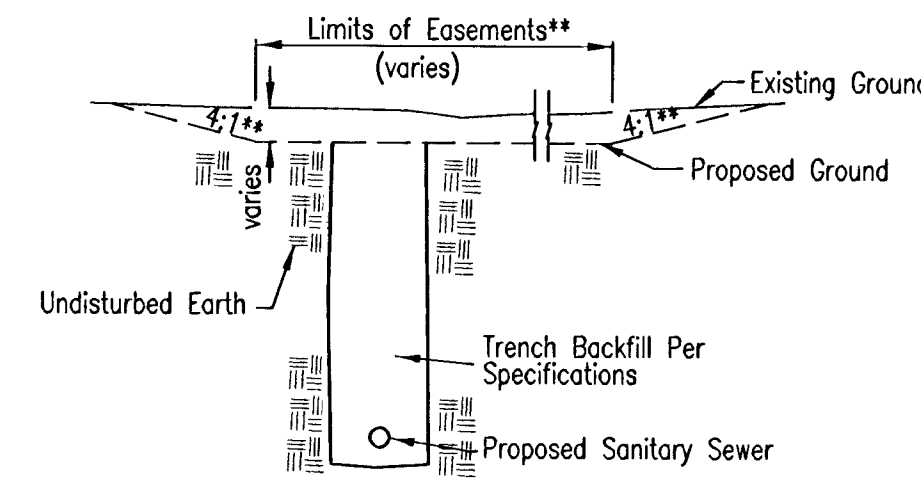
Proposed Grade as shown on profiles indicates grade as designated on Site Grading Plan and shall be completed (By Other Project) prior to time of Sanitary Sewer construction.

Sewer Contractor to grade easements to provide positive drainage as necessary.

Easement Grading will be bid on a lump sum basis for grading the easements to the profile and elevations shown on the Easement Grading Plan (this sheet). Approximate quantities of earthwork for easement grading are shown below. These approximate quantities are given for information only. The Contractor should verify the quantities when preparing the proposal.

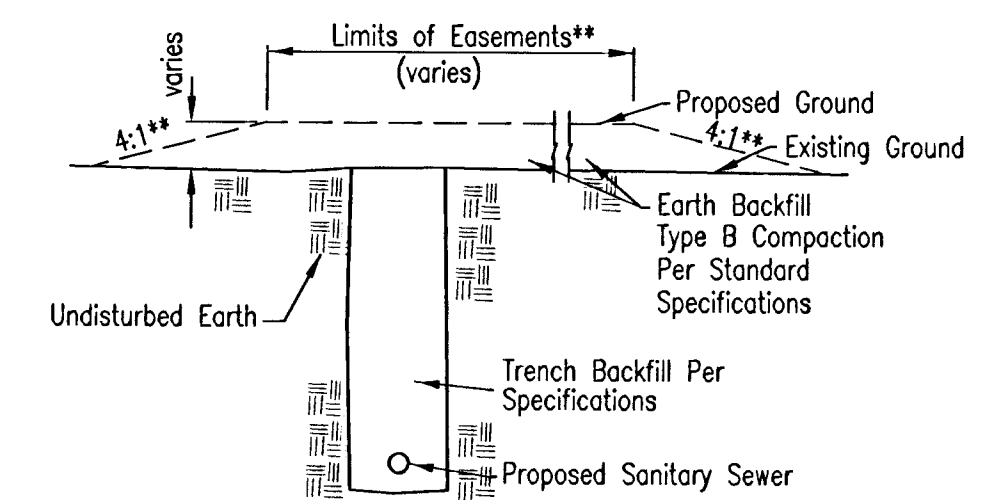
Cut 947.4 C.Y. (Approximate)

Fill 947.4 C.Y. (Approximate)



TYPICAL SECTION

"CUT" SITUATIONS



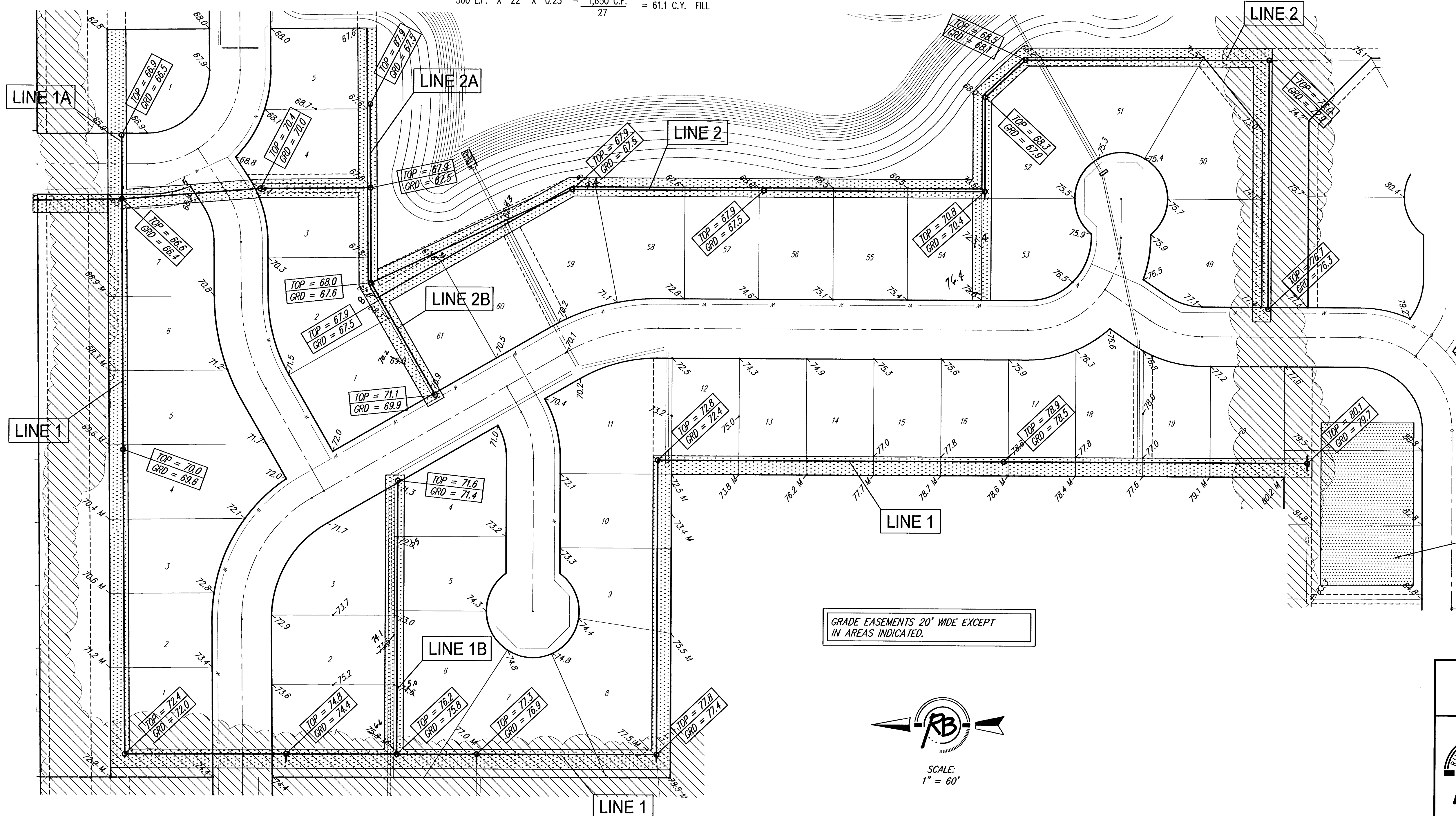
TYPICAL SECTION

"FILL" SITUATIONS

**Graded widths and slopes may vary as approved by the Engineer to minimize conflict with existing trees.

EASEMENT GRADING DETAILS

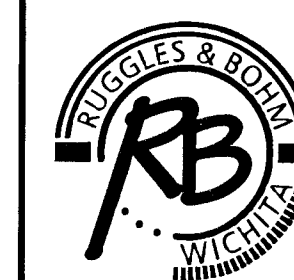
= AREAS TO BE GRADED



Excess soil may be borrowed or stockpiled in designated stockpile area as indicated.

"AS BUILT" 8-22-02 E Ruggles & Bohm

Brentwood South Addition, Sanitary Sewer Improvements
EASEMENT GRADING PLAN
WICHITA, KANSAS



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning

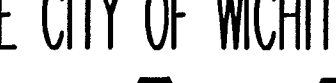
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

DRAWING FILE
Sanitary Sewer [Easmt Grading]

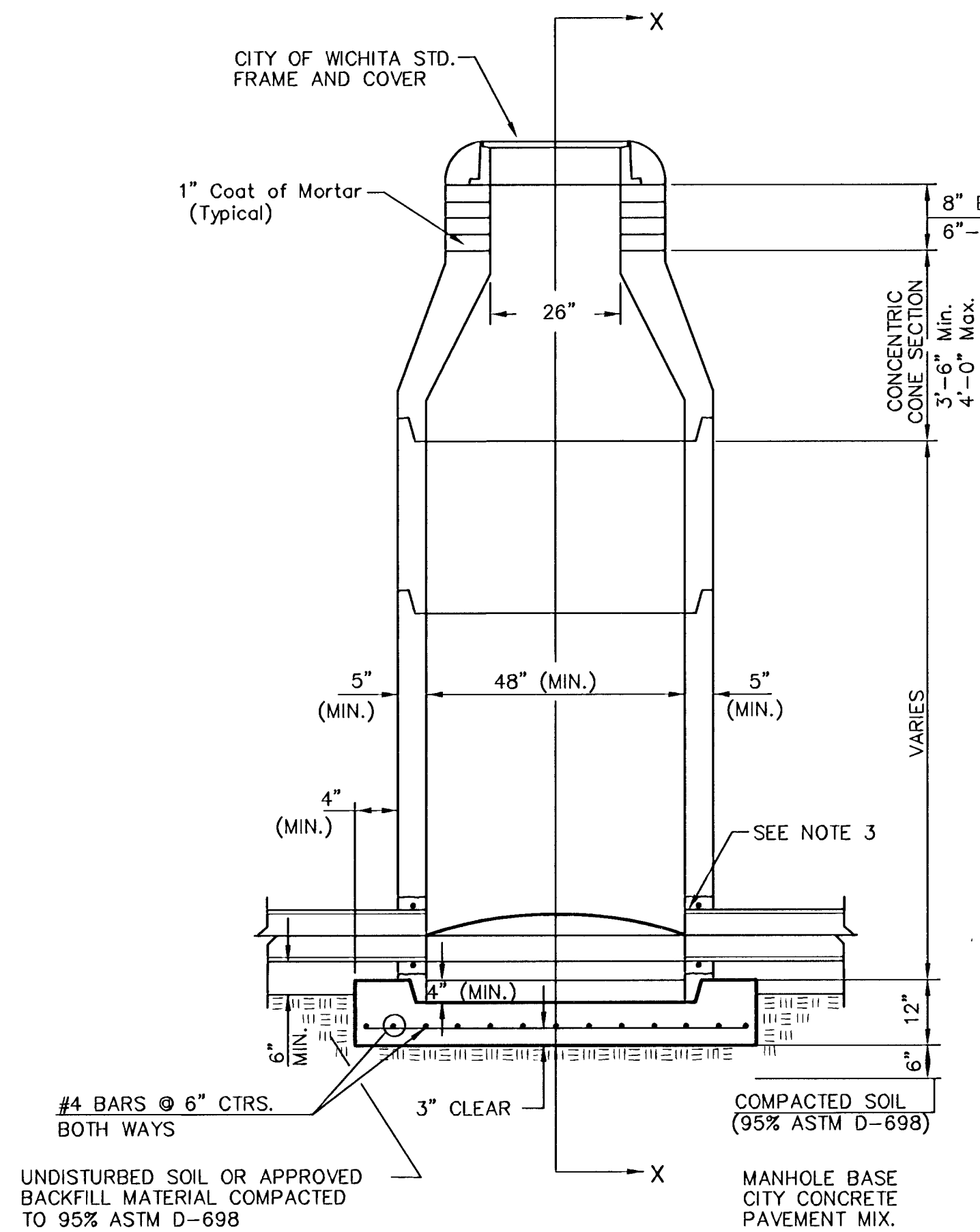
PROJECT NUMBER
468-83353

DATE
Feb. 19, 2002

DESIGN KWL
DRAWN RA
REVIEW
UTILITY
SHEET
8
OF
13

THE CITY OF WICHITA  CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX	MANHOLE FRAME AND COVER	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER <i>468-83353</i>	OCA #
	DATE MAR 96	SHEET <i>9</i> OF <i>13</i>

SEWER APPURTENANCES DETAILS

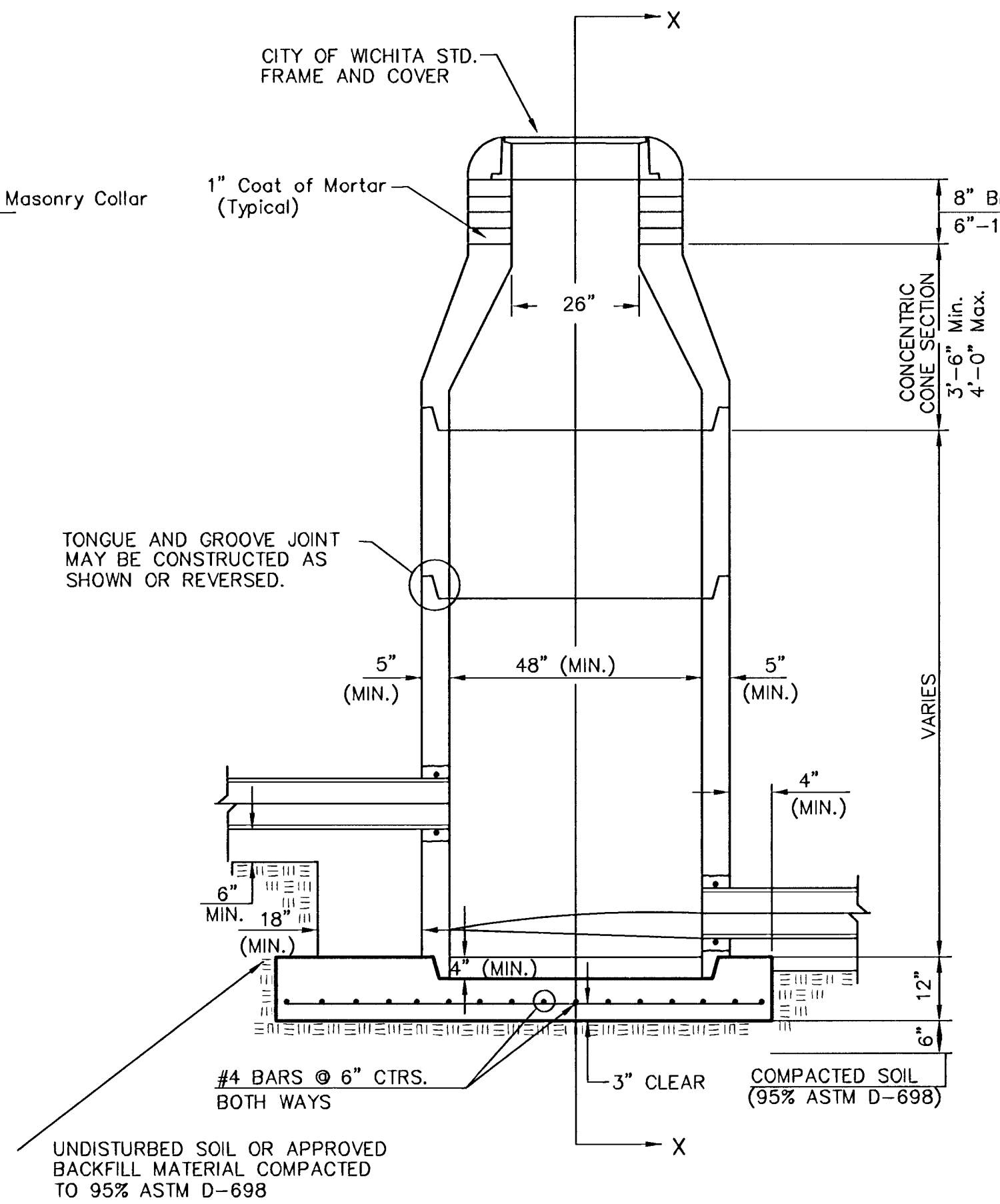


TYPE P
STANDARD MANHOLE

GENERAL NOTES

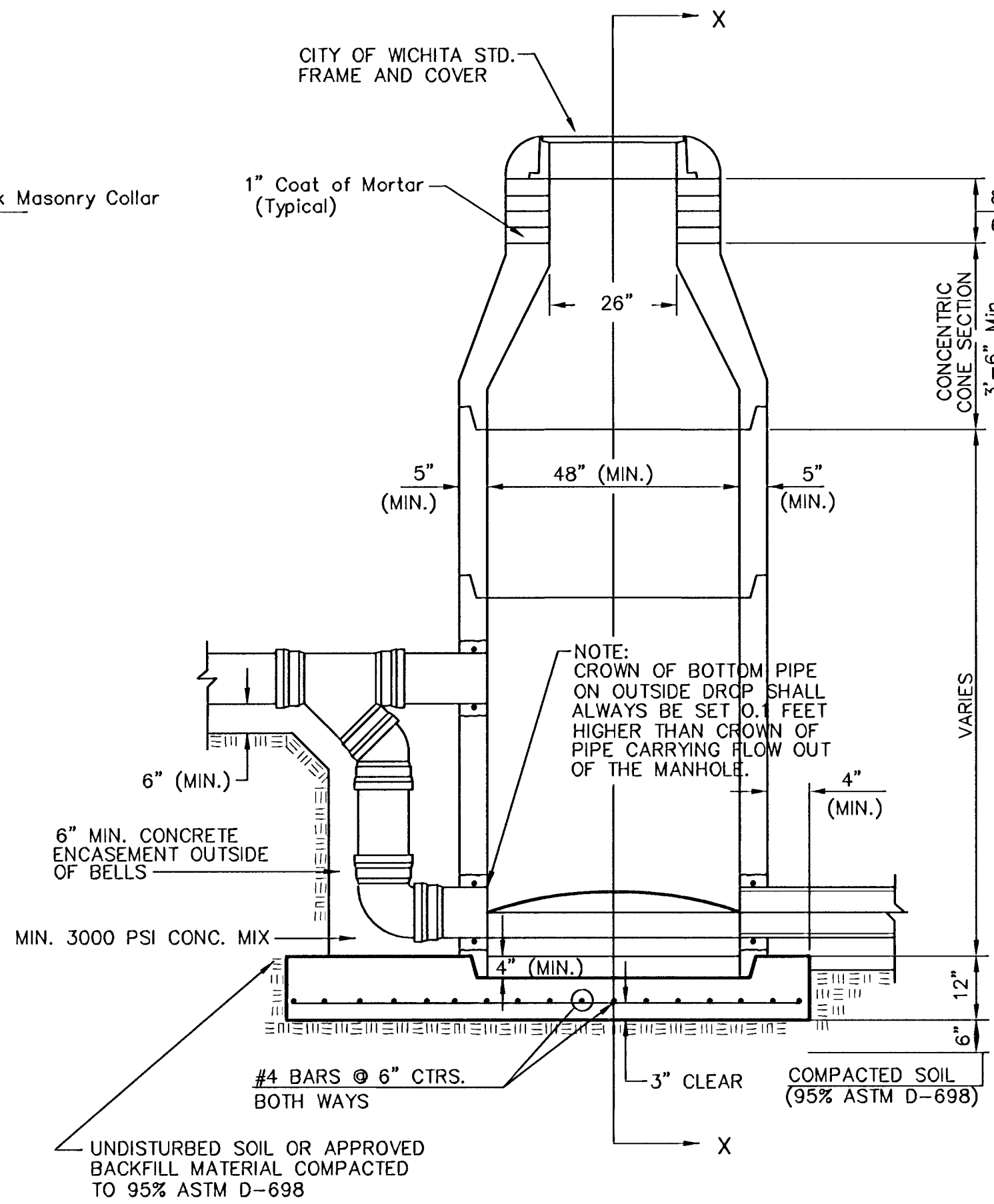
PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. 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.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEDEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.).
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. 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.



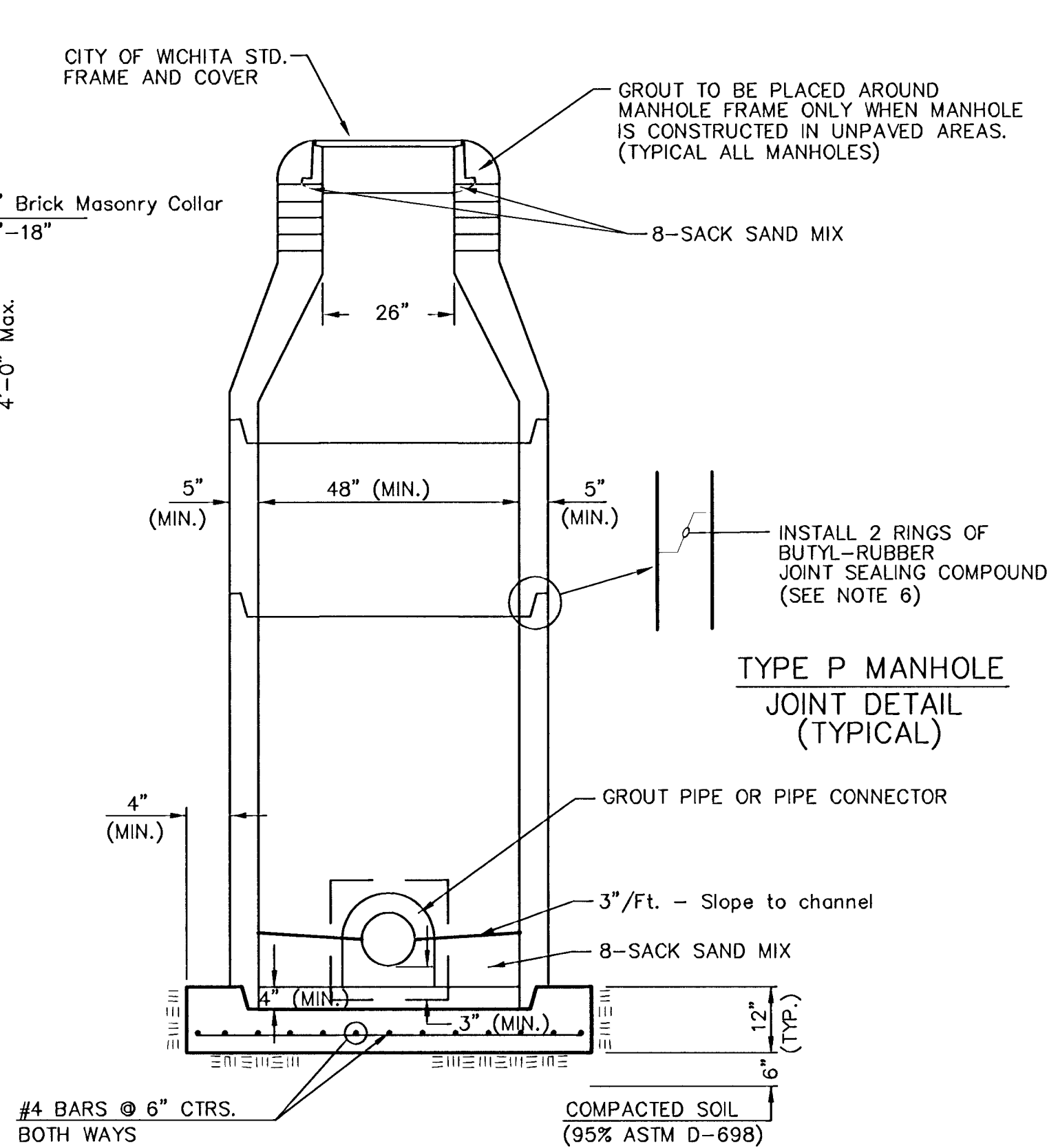
TYPE P
INSIDE DROP MANHOLE

11. 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 THE TOP OF 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.
12. 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 GROUTING MIXTURE. THE NEW PIPE SHALL BE SHOWN IN THE DRAWING. 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.
13. 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 TOP HALVES OF THE OUTFLOWING PIPES. 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. INSIDE PIPES THROUGH MANHOLES SHALL BE 1/2" HALF REMOVED TO NUT LINE 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.
14. 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 EXTENDED AT THE CLAY PIPE JOINTS TO 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.



TYPE P
OUTSIDE DROP MANHOLE

15. 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.
16. 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.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL INSIDE 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.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR SHALL 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.

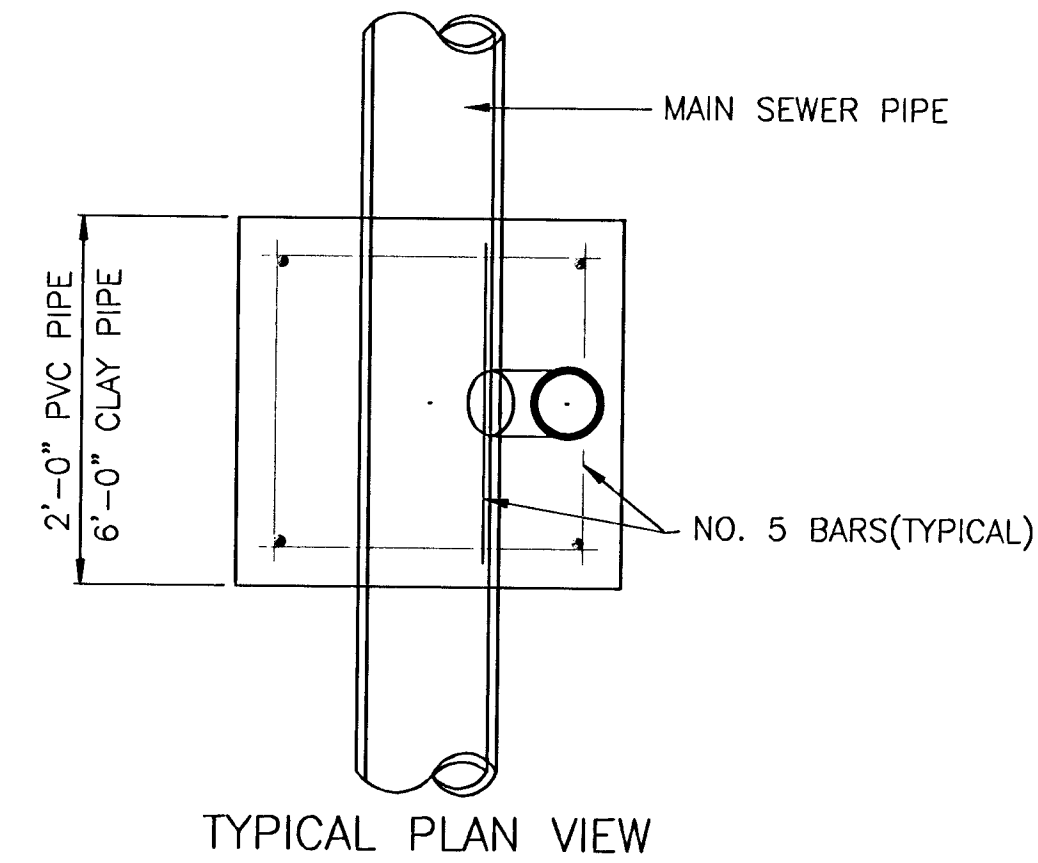


SECTION X
(TYPICAL)

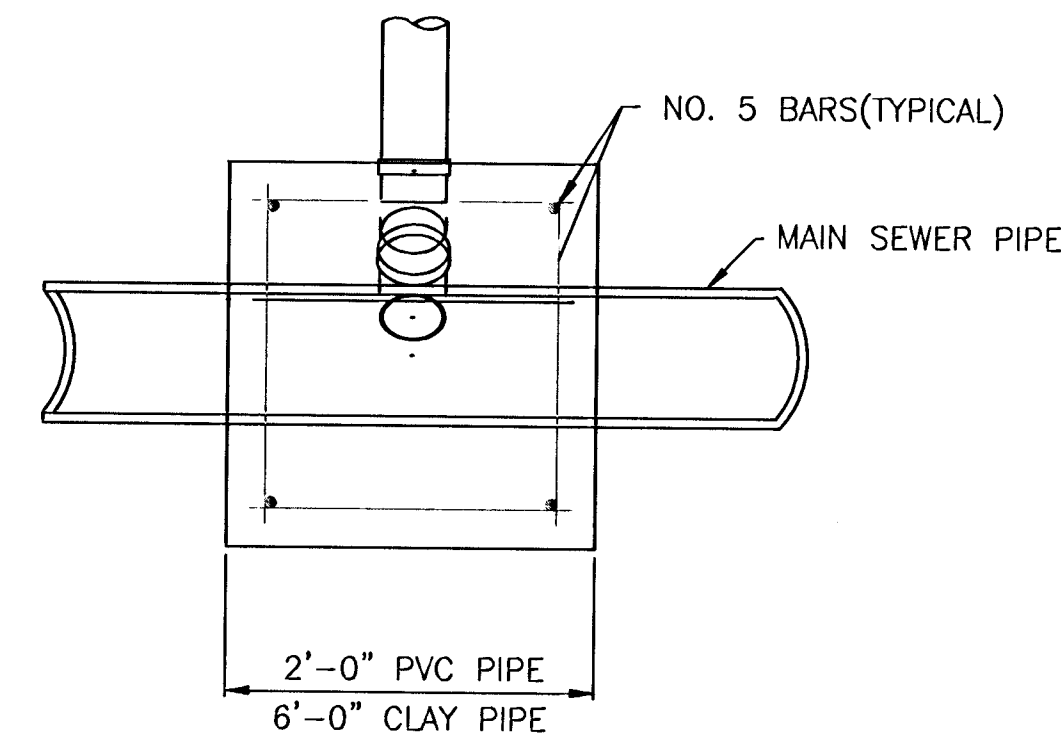
 CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 405 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-6501 (316) 268-4114 FAX	STANDARD TYPE 'P' MANHOLES
M. E. LINDEBAK P.E. — CITY ENGINEER	
PROJECT NUMBER 468-83353	OCA #
DATE MAR 96	SHEET 10 OF 13

VERTICAL RISER DETAILS

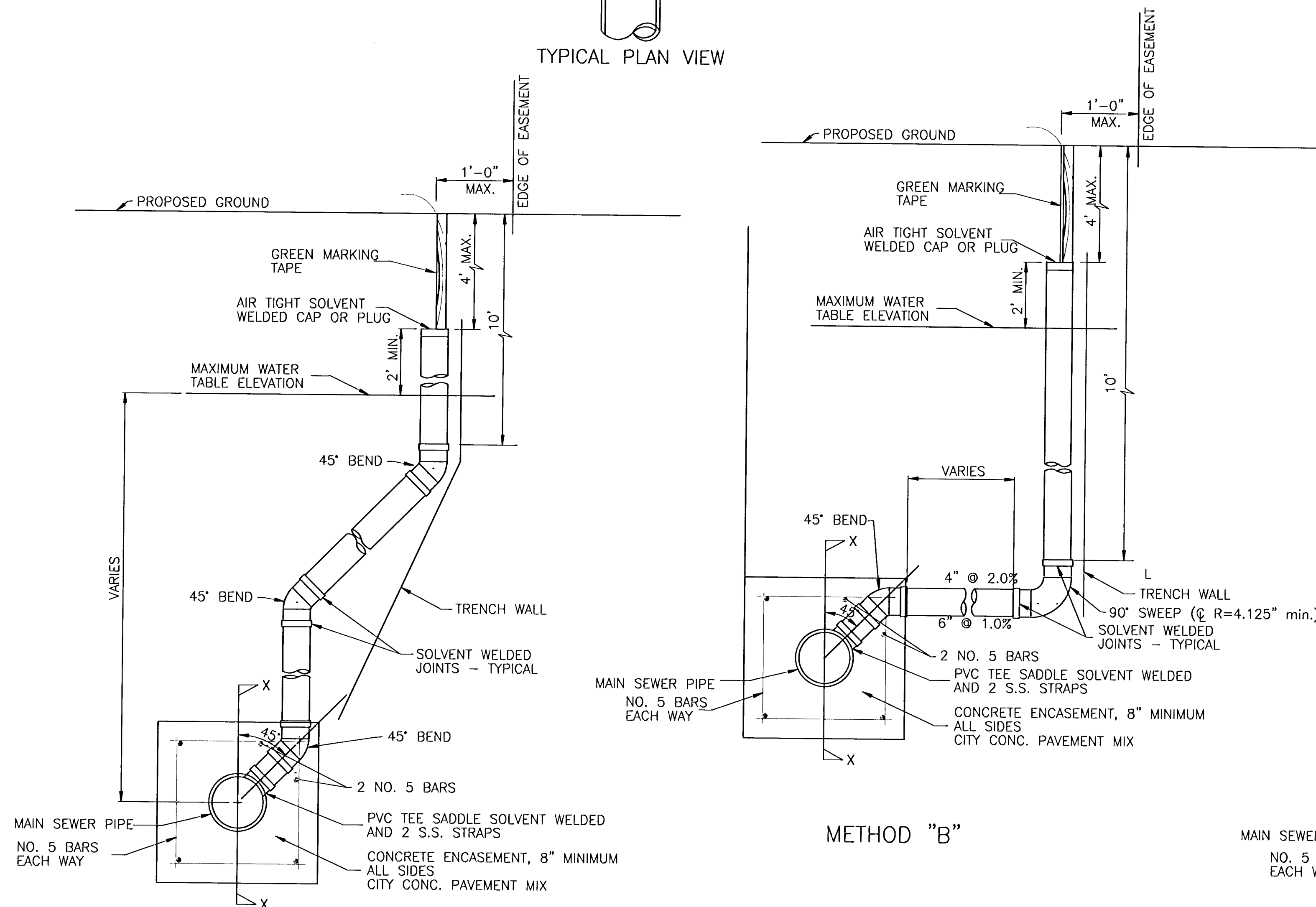
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS
OCTOBER 1992



TYPICAL PLAN VIEW

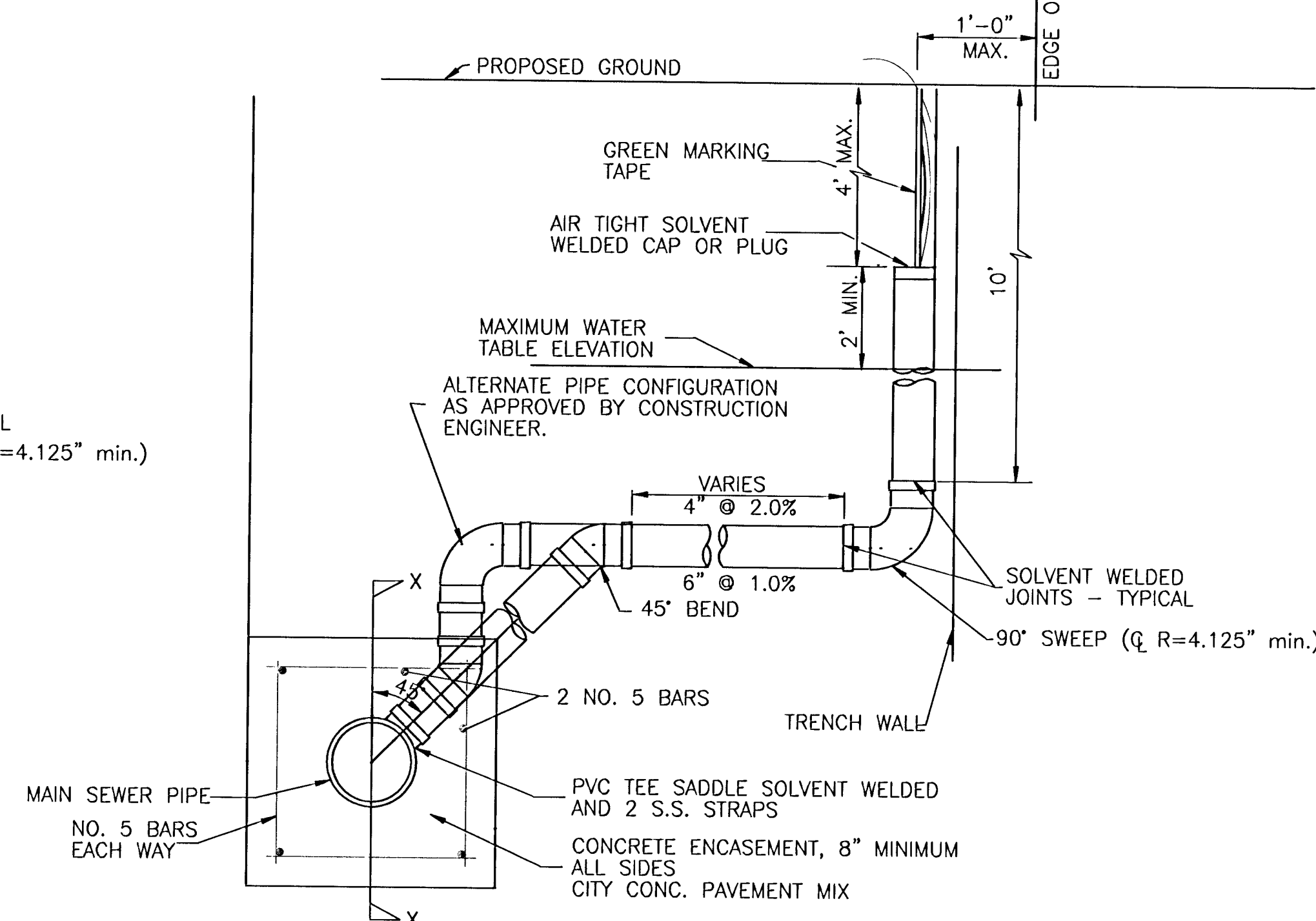


TYPICAL SECTION X-X



METHOD "A"

METHOD "B"



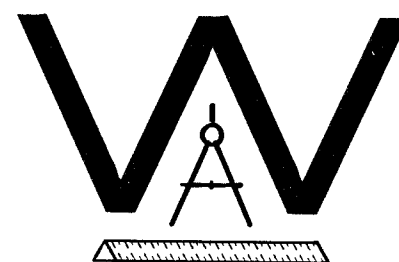
METHOD "C"

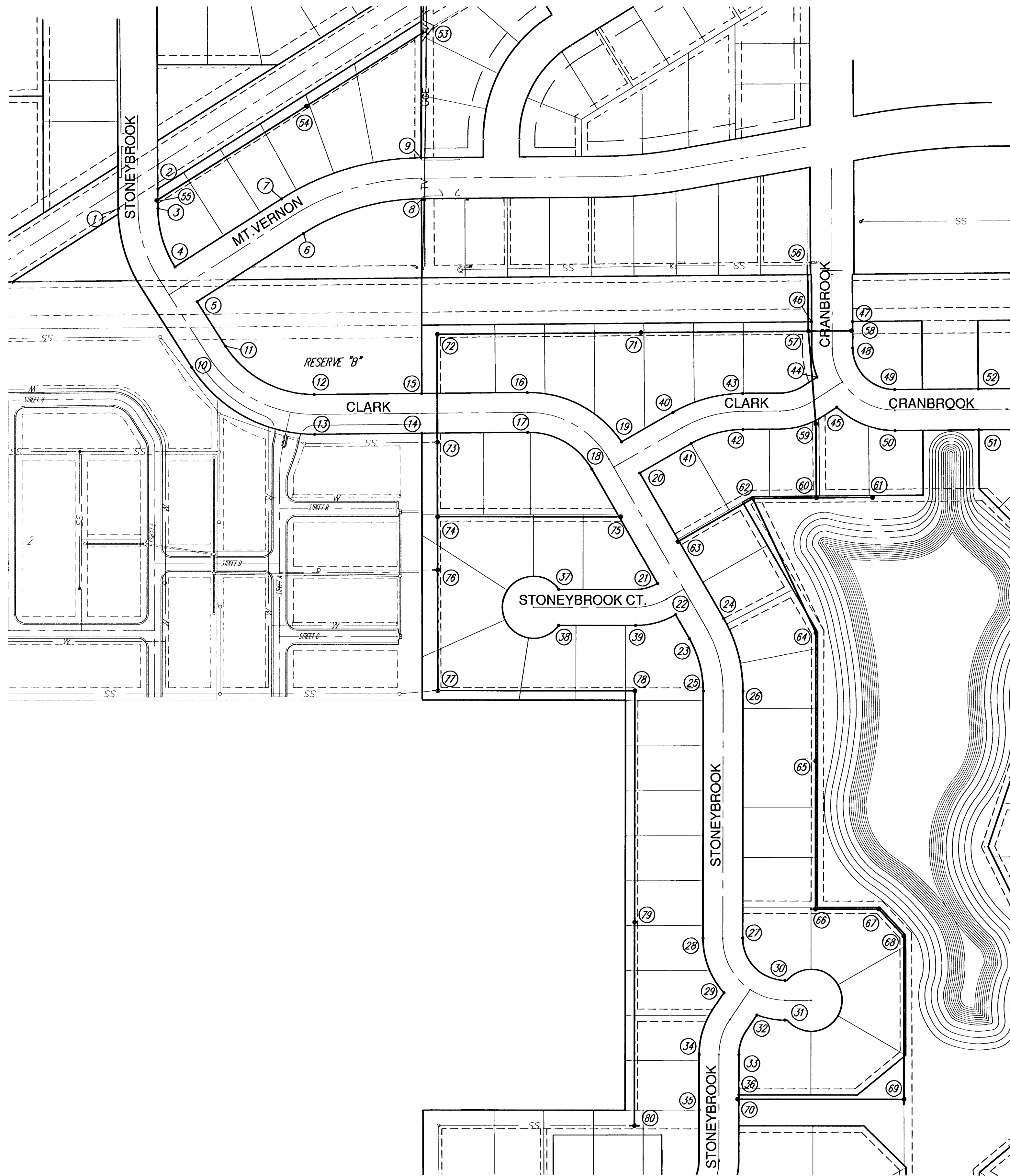
NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

GENERAL NOTES

- 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.
- 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.
- 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.
- RISER OR STUB MATERIAL.** Risers and stubs shall be constructed of SDR 35 PVC Pipe or Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. . All pipe joints shall be solvent welded.
- REINFORCED CONCRETE ENCASUREMENT.** 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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".

THE CITY OF WICHITA  CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 155 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4201 (316) 268-4114 FAX	VERTICAL RISER DETAIL	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 468-83353	OCA #
	DATE MAR 96	SHEET 11 OF 13

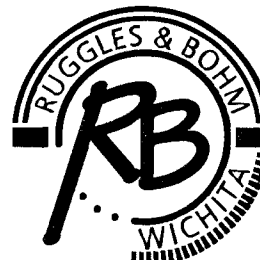


SCALE 1" = 100'

	North	East	Description
1	N 20340.8161	E 20177.2717	PC
2	N 20372.7674	E 20241.0867	Block Corner
3	N 20341.1888	E 20241.2706	PC
4	N 20247.7256	E 20268.8196	Block Corner
5	N 20191.8827	E 20304.4131	Block Corner
6	N 20301.2921	E 20475.6534	PC
7	N 20356.9479	E 20440.1791	PC
8	N 20356.9682	E 20666.4914	Block Corner
9	N 20423.1582	E 20665.0527	Block Corner
10	N 20085.7233	E 20296.1828	PC
11	N 20120.1227	E 20350.1521	PC
12	N 20042.4293	E 20493.5005	PT
13	N 19978.4325	E 20494.1401	PT
14	N 19980.1590	E 20666.8884	Block Corner
15	N 20044.1572	E 20666.4740	Block Corner
16	N 20045.8516	E 20836.2403	PC
17	N 19981.8548	E 20836.8799	PC
18	N 19922.8607	E 20940.2502	PT
19	N 19966.7154	E 20988.2088	Block Corner
20	N 19916.7555	E 21017.6758	Block Corner
21	N 19738.9065	E 21046.4562	Block Corner
22	N 19688.6771	E 21075.4562	Block Corner
23	N 19650.3541	E 21097.5819	PC
24	N 19682.3541	E 21153.0075	PC
25	N 19566.3541	E 21120.0897	PT
26	N 19566.3541	E 21184.0897	PT
27	N 19168.5590	E 21184.0897	PC
28	N 19168.5590	E 21120.0897	PC
29	N 19080.2741	E 21153.9582	Block Corner
30	N 19100.5590	E 21255.6709	Block Corner
31	N 19036.5590	E 21255.6709	Block Corner
32	N 19044.4915	E 21207.0205	Block Corner
33	N 18980.8101	E 21178.0897	PT
34	N 18980.8101	E 21114.0897	PT
35	N 18891.4543	E 21114.0897	Block Corner
36	N 18916.4915	E 21178.0897	Block Corner
37	N 19729.3223	E 20887.2049	Block Corner
38	N 19671.3223	E 20887.2387	Block Corner
39	N 19671.3944	E 21011.0312	PC
40	N 20014.4850	E 21070.9482	PC
41	N 19964.2555	E 21099.9482	PC
42	N 19987.1567	E 21183.7393	PT
43	N 20045.1538	E 21183.1596	PT
44	N 20071.5407	E 21302.5524	Block Corner
45	N 20023.0711	E 21334.4069	Block Corner
46	N 20160.4294	E 21293.7339	Block Corner
47	N 20161.0890	E 21359.7314	Block Corner
48	N 20118.2491	E 21359.9519	PC
49	N 20051.5972	E 21427.6206	PT
50	N 19985.6005	E 21428.2802	PT
51	N 19986.9458	E 21562.8919	Block Corner
52	N 20052.9426	E 21562.2323	Block Corner
53	N 20625.44	E 20669.25	Center of Manhole
54	N 20506.30	E 20480.44	Center of Manhole
55	N 20354.07	E 20239.20	Center of Manhole
56	N 20251.00	E 21287.04	Center of Manhole
57	N 20145.38	E 21288.81	Center of Manhole
58	N 20146.07	E 21357.81	Center of Manhole
59	N 19996.29	E 21300.76	Center of Manhole
60	N 19877.33	E 21301.95	Center of Manhole
61	N 19878.23	E 21391.95	Center of Manhole
62	N 19876.31	E 21199.62	Center of Manhole
63	N 19806.64	E 21078.94	Center of Manhole
64	N 19659.87	E 21301.09	Center of Manhole
65	N 19453.56	E 21301.09	Center of Manhole
66	N 19215.56	E 21301.09	Center of Manhole
67	N 19215.56	E 21402.79	Center of Manhole
68	N 19172.37	E 21443.05	Center of Manhole
69	N 18909.65	E 21443.83	Center of Manhole
70	N 18909.49	E 21176.09	Center of Manhole
71	N 20142.68	E 21018.90	Center of Manhole
72	N 20139.41	E 20691.19	Center of Manhole

	North	East	Description
73	N 19965.52	E 20691.71	Center of Manhole
74	N 19846.21	E 20692.06	Center of Manhole
75	N 19846.38	E 20986.72	Center of Manhole
76	N 19760.21	E 20692.31	Center of Manhole
77	N 19566.21	E 20692.89	Center of Manhole
78	N 19566.39	E 21010.09	Center of Manhole
79	N 19193.89	E 21010.09	Center of Manhole
80	N 18866.39	E 21010.09	Center of Manhole

Brentwood South Addition Street Improvements
KEY MAP
WICHITA, KANSAS



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

DRAWING FILE
paving {key map}

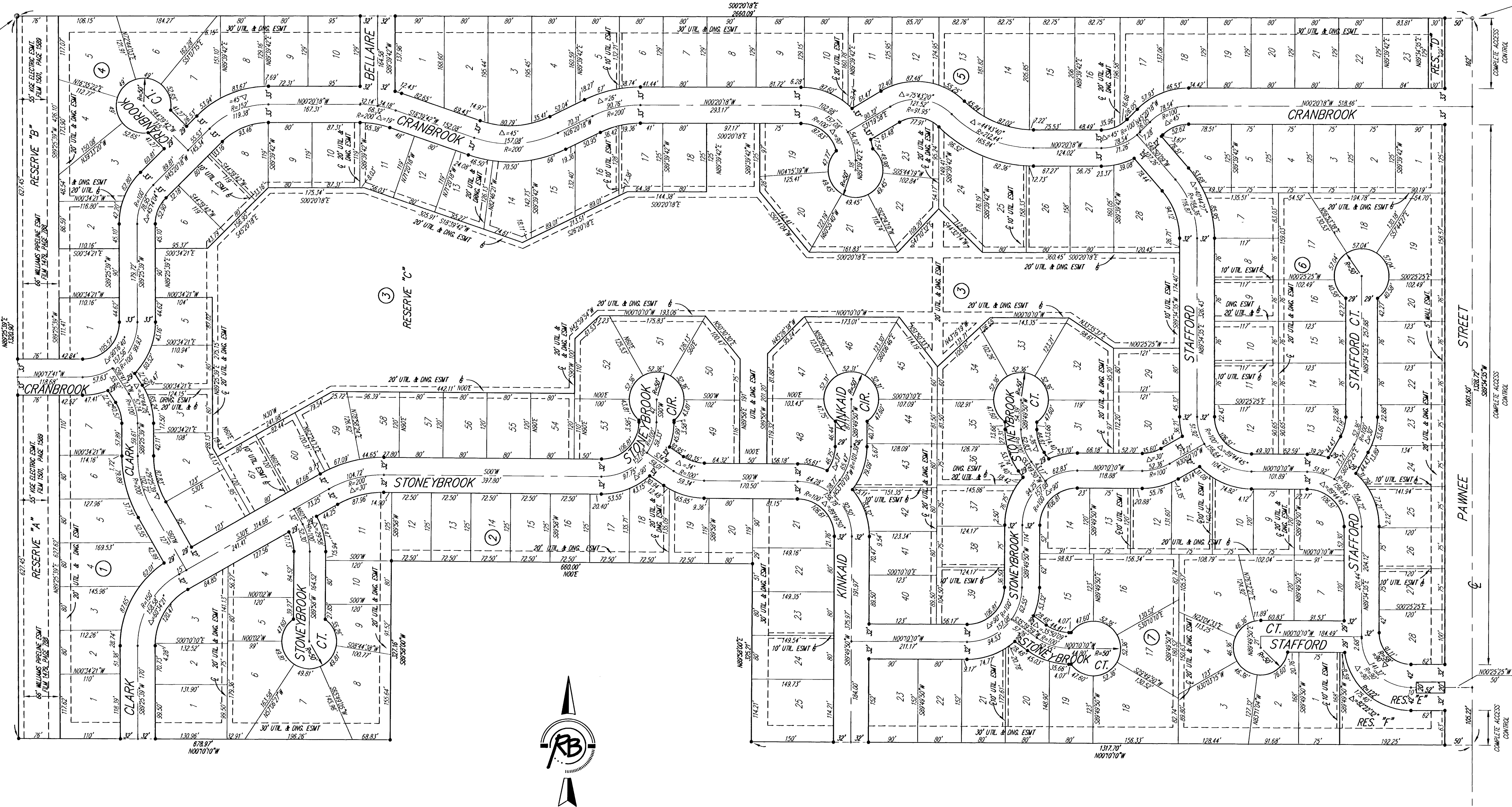
PROJECT NUMBER
468-83353

DATE
Feb. 19, 2002

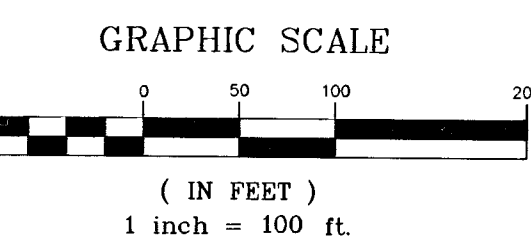
DESIGN KWL
DRAWN RA
REVIEW
UTILITY
SHEET 12 OF 13

BRENTWOOD SOUTH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



Please contact Western Resources (or its successor) Electric Transmission Engineering Department (currently 785-575-8219) before conducting any proposed construction activities that could place people, equipment, or facilities within Western Resources' easement, shown on this plat, designated as Film 1501, Page 1589, dated December 29, 1994.



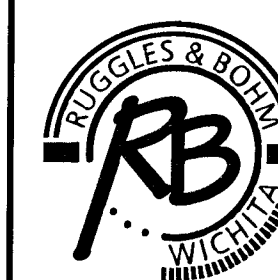
- Δ = CITY OF WICHITA CONTROL THIMBLE (FOUND)
- = 1/2" REBAR W/CARBON CAP (FOUND)
- = 5/8" REBAR (FOUND)
- = 1/2" REBAR W/SRB CAP (SET)

MINIMUM BUILDING PAD ELEVATION FOR LOWEST OPENING INTO STRUCTURES		
BLOCK	LOT NO.	ELEVATION (N.G.V.D.)
3	Lots 1-20, 47 Lots 50-61	1369

BENCH MARK #1: USGS BRASS PLUG 28" S. & 530' W. OF CENTERLINE INTERSECTION OF DAWPI & PAWNEE ELEV.=1368.25 NGVD

BENCH MARK #2: CITY OF WICHITA STD. DISC 20.8" W. & 543.5' S. OF CENTERLINE INTERSECTION DAWPI & PAWNEE ELEV.=1373.60

Brentwood South Addition
FINAL PLAT
WICHITA, KANSAS



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com

(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

DRAWING FILE
Sanitary Sewer {Plat}

PROJECT NUMBER
468-83353

DESIGN KWL
DRAWN RA
REVIEW
UTILITY
DATE Feb. 19, 2002

SHEET 13
OF 13

58-05-05-05