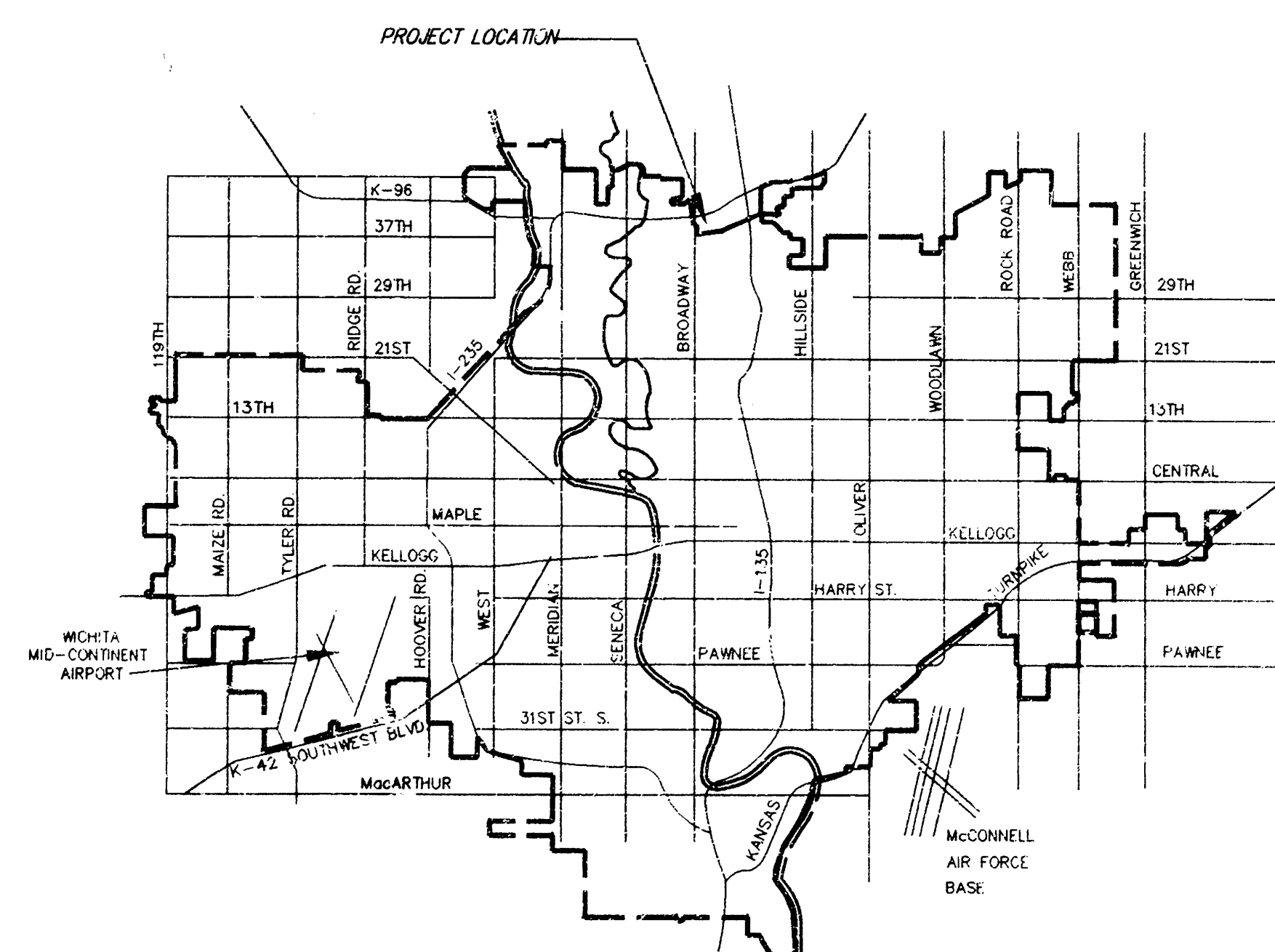


GENERAL NOTES

1. 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.
2. 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.
3. The Contractor shall notify pipeline companies at least 24 hours in advance of any work being performed across and/or adjacent to pipelines.
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 directly 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. 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
Cablevision	262-4270 or 263-2061
Kansas Gas Service	383-8650
K.G.&E.	383-8600
Peoples Natural Gas Company	942-8350 or 263-8161
Southwestern Bell Telephone Company	1-57-2811
City of Wichita Water Department	266-4908
City of Wichita Sewer Maintenance	268-4071
8. The Contractor must notify the following in case of an emergency:

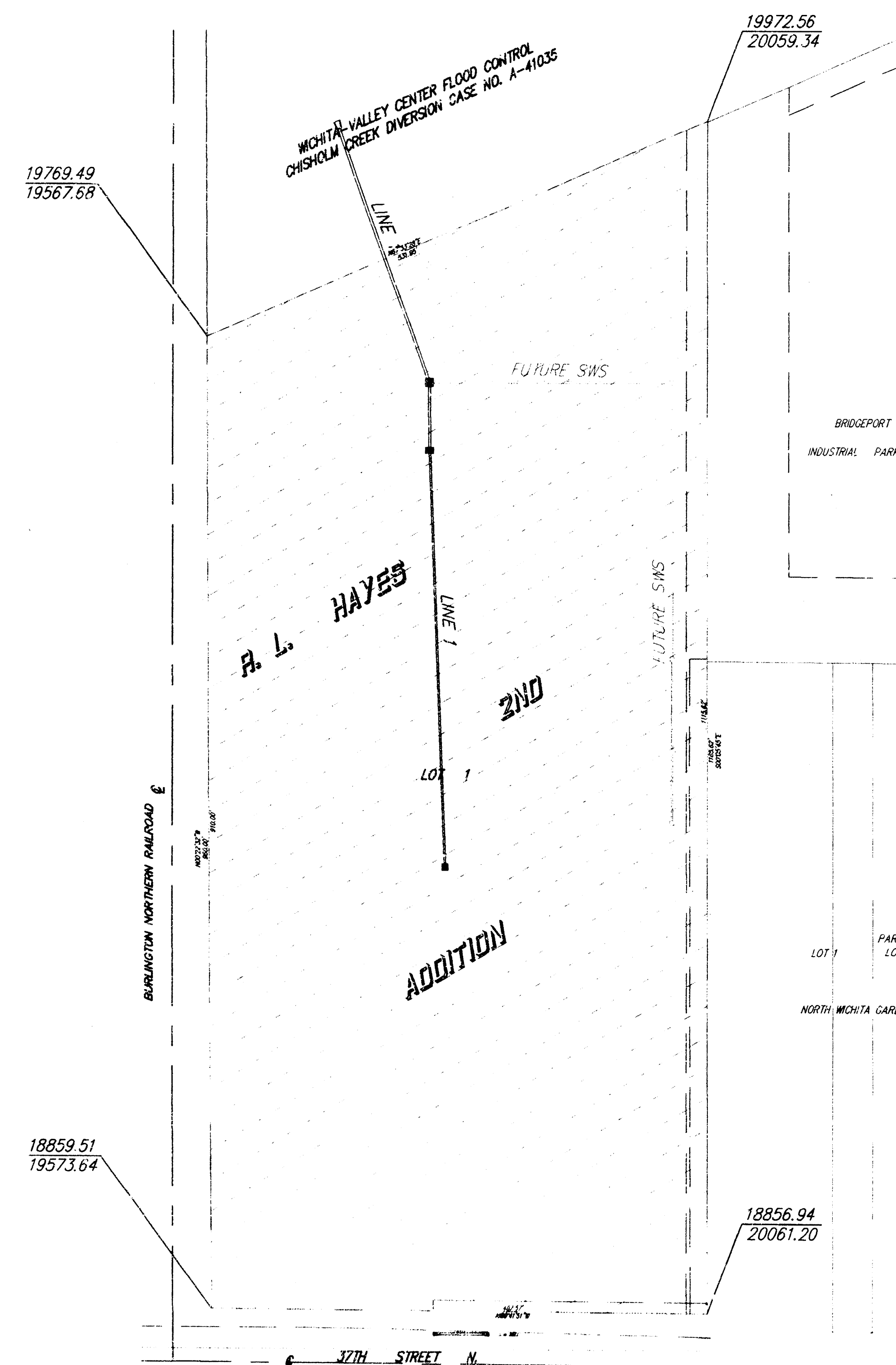
Cablevision	262-4270 or 263-2061
Kansas Gas Service	383-8650
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Peoples Natural Gas Company	942-8350 or 263-8161
Southwestern Bell Telephone Company	1-57-2811
City of Wichita Water Department	266-4908
City of Wichita Sewer Maintenance	268-4071
9. The excavated portion of the levee must be reconstructed using similar materials and compacted to at least 95 percent of Standard Proctor Density.
10. The portion of the trench for the storm water drainage pipe under the levee must be backfilled with impervious soil and compacted to at least 95 percent of Standard Proctor Density.
11. All disturbed areas must be graded, seeded with Fescue Blend Grass at a rate of 300 lbs/acre, and mulched to prevent erosion.



VICINITY MAP

STORM WATER SEWER TO SERVE

R.L. HAYES 2ND ADDITION
PROJECT NO. 821-PPS
INDEX CODE 607861



IMPROVEMENT DISTRICT

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER

BENCH MARKS

BENCHMARKS:
City of Wichita Bench Mark. Conc. base for
Railroad Signal, south side 37th St. N.
19.6' south of ctr line 37th St. and 13.6'
west of west rail of R.R.
ELEV. = 1324.16 (NGVD)
Top of iron in thimble at S.E. Corner SW1/4
ELEV. = 1323.90 (NGVD)

INDEX OF SHEETS

1. TITLE SHEET
- 2-3. LINE 1 - PLAN & PROFILE
4. HEADWALL DETAILS
5. RCMH DETAILS
6. DROP INLET DETAILS
7. PLAT COPY

BOOKED
3-19-99
MCE
D-417

APPROVED AS NOTED BY CITY ENGINEER OF WICHITA	
Storm Sewers	VRH 9/8/98
NOTE TO CONTRACTORS	
Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.	

Shawn Ruggles
9-8-98

AS-BUILT 10-27-98

SRB 974 NORTH MAIN 316-264-3008
WICHITA, KANSAS 67203 FAX 316-264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

BENCHMARKS:
City of Wichita Bench Mark. Conc. base for
Railroad Signal, south side 37th St. N.
19.6' south of city line 37th St. and 13.6'
west of west rail of R.R.
ELEV. = 1324.16 (NGVD)

Top of iron in thimble at S.E. Corner SW1/4
ELEV. = 1323.90 (NGVD)

STA. 0+00
CONST. STD. HEADWALL
W/ FLAPGATE (HYDRO-
SEAL H-30 OR APPROVED
EQUAL). 1315.16
FLOW = 1315.08 1315.59
FLOW OUT (30") = 1315.51

INSTALL 29 S.Y. HEAVY
STONE RIP-RAP PER CITY
OF WICHITA STANDARDS

REMOVE FENCE AS
NECESSARY TO
CONSTRUCT TEMPORARY
DIKE AND STORM SEWER

REMOVE TREES AS
NECESSARY TO
CONSTRUCT TEMPORARY
DIKE.

STA. 2+60.00 2+63.87
CONST. REINFORCE CONCRETE
MANHOLE W/BEEHIVE INLET
TOP = 1323.00 1323.41
FLOW (30") = 1316.64 1316.66
FLOW IN (24") = 1317.20 1317.51
24" STUB (E) = 1317.20 1317.30

NOTE: TEMPORARY DIKE SHOWN
ON THE EAST SIDE OF STORM
SEWER ONLY. DIKE SHALL BE
CONSTRUCTED ON THE WEST SIDE
IN THE SAME MANNER TO PROTECT
PROPERTY FROM FLOOD WATERS.

CONSTRUCT TEMPORARY DIKE
PRIOR TO ANY TRENCHING
FROM STA. 0+00 TO 1+20.
DIKE TO REMAIN UNTIL PIPE,
HEADWALL, FLAP GATE, AND
BACKFILL ARE COMPLETED.
(SEE DETAIL, SHEET 3 OF 7)
CONTRACTOR MAY USE INTER-
LOCKING STEEL SHEET PILING
IN PLACE OF TEMPORARY DIKE.

EXCAVATE EXISTING LEVEE WITH
3:1 CUT SLOPES. THE TOE OF
THE LEVEE CUT SHALL BE A MIN.
OF 20 FEET (MEASURED HORZ.)
FROM THE TOP EDGE OF THE
EXCAVATION.

STA. 3+23.60 3+27.55
CONST. STD. 2'x4'
DROP INLET 1322.32
TOP = 1322.50 1317.55
FLOW OUT (24") = 1317.33
FLOW IN (18") = 1317.63
1318.00

SRB
SCALE: 1"=20' HORZ. (PLAN & PROFILE)
1"= 5' VERT. (PROFILE)

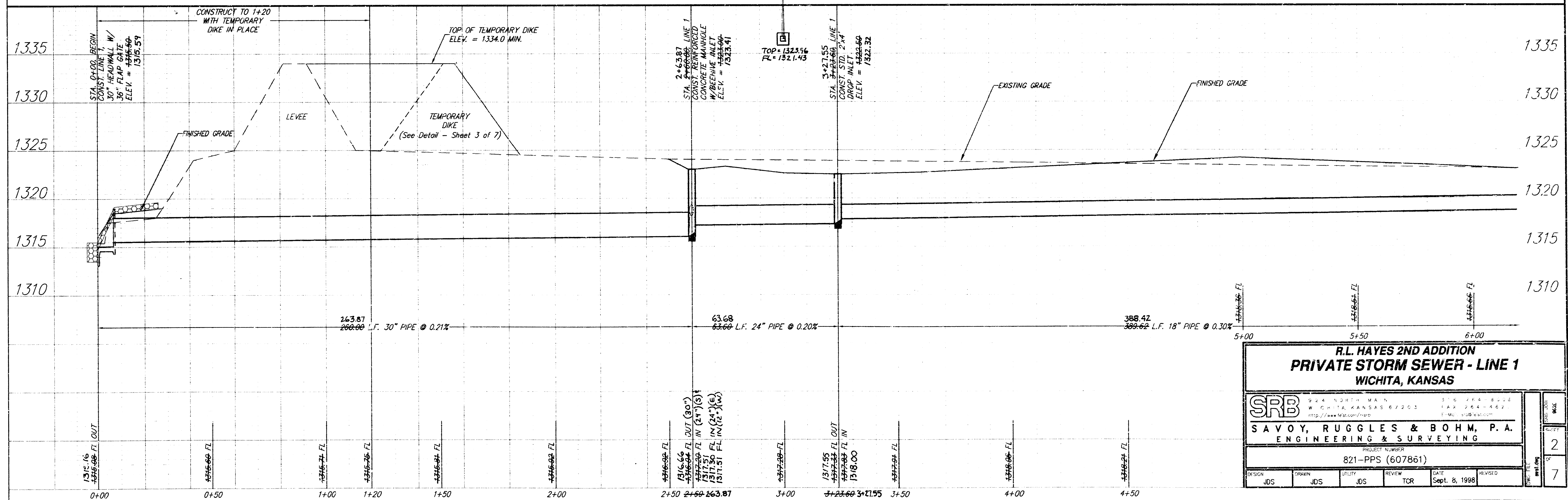
R.L. HAYES 2ND ADDITION

LINE 1

Proposed
Pavement

Proposed 8" Water Line

Proposed
Building



**R.L. HAYES 2ND ADDITION
PRIVATE STORM SEWER - LINE 1
WICHITA, KANSAS**

SRB
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER
821-PPS (607861)

DESIGN	DRAWN	CHECKED	REVIEW	DATE	REVISED
JDS	JDS	JDS	TCR	Sept. 8, 1998	

Sheet 2 of 7

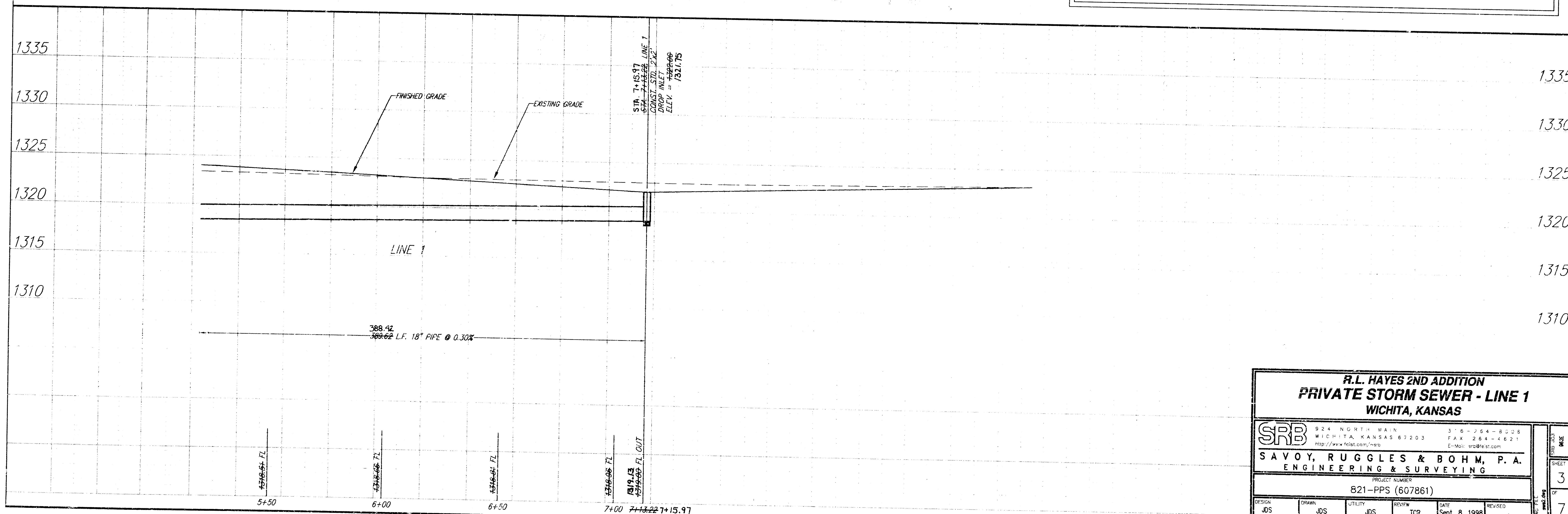
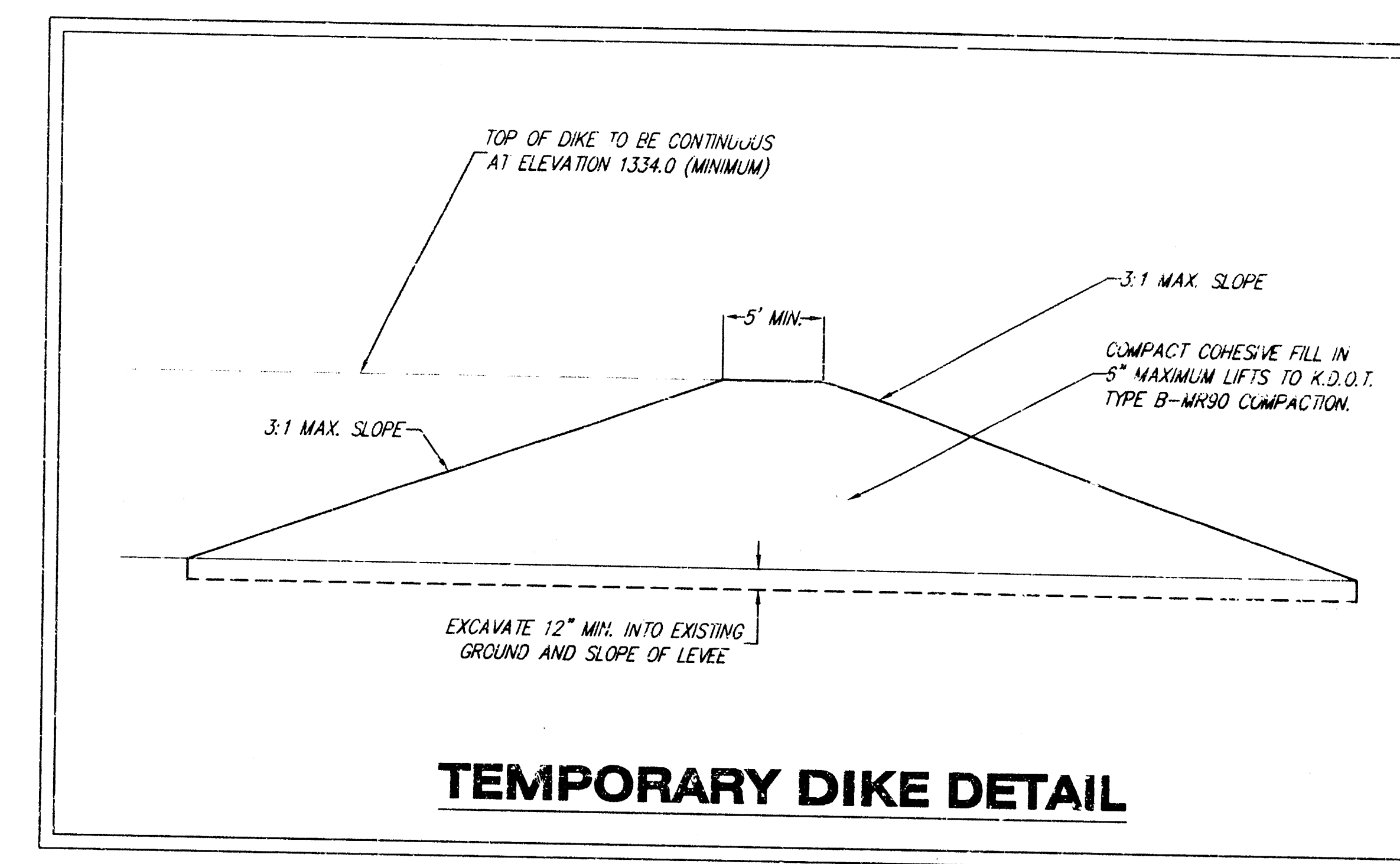
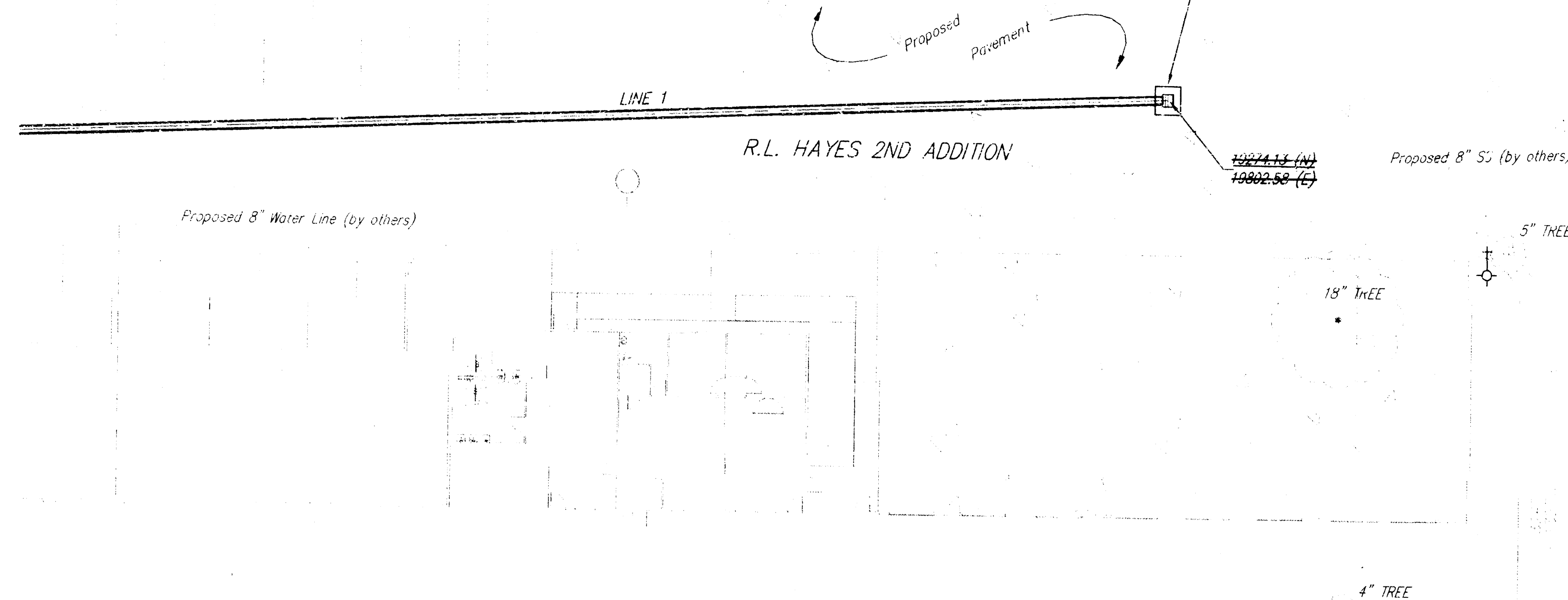
BENCHMARKS:
 City of Wichita Bench Mark. Conc. base for
 Railroad Signal, south side 37th St. N.
 19.6' south of ctr line 37th St. and 13.6'
 west of west rail of R.R.
 ELEV. = 1324.16 (NGVD)

Top of iron in thimble at S.E. Corner SW1/4
 ELEV. = 1323.90 (NGVD)

STA. 7+13.22 7+15.97
 CONST. STD. 2'x2'
 DROP INLET 1321.75
 TOP = 1322.00
 FLO OUT (18") = 1319.13

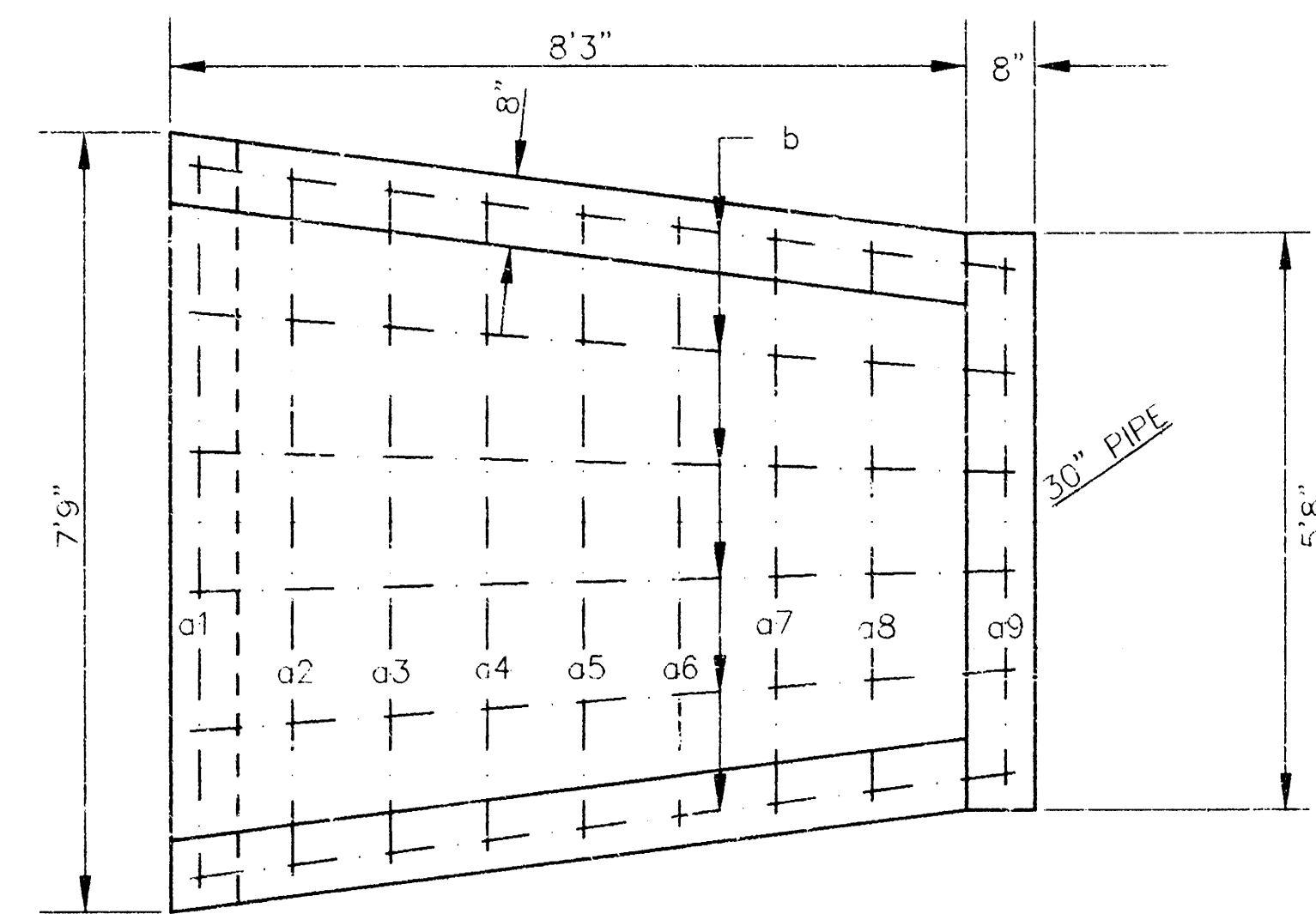


SCALE: 1"=20' HORZ. (PLAN & PROFILE)
 1"= 5' VERT. (PROFILE)



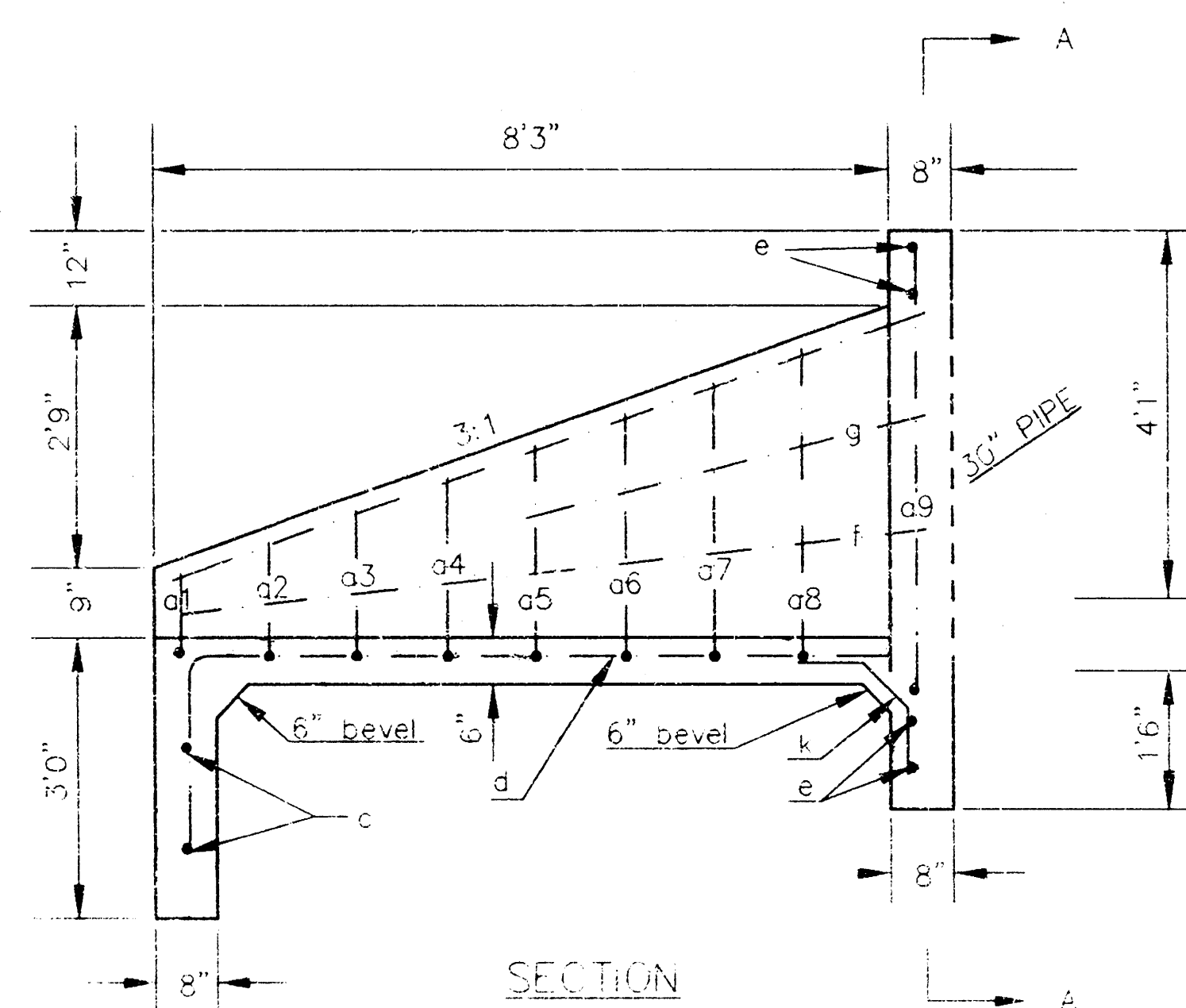
R.L. HAYES 2ND ADDITION PRIVATE STORM SEWER - LINE 1 WICHITA, KANSAS			
		924 NORTH MAIN WICHITA, KANSAS 67203 TEL: 316-264-8008 FAX: 316-264-4621 E-MAIL: srbs@earthlink.net	
SAVOY, RUGGLES & BOHM, P.A. ENGINEERING & SURVEYING			
PROJECT NUMBER 821-PPS (607861)			
DESIGN JDS	DRAWN JDS	UTILITY JDS	REVIEW TCR
DATE Sept. 8, 1998		REVISED	

SHEET
3
OF
7

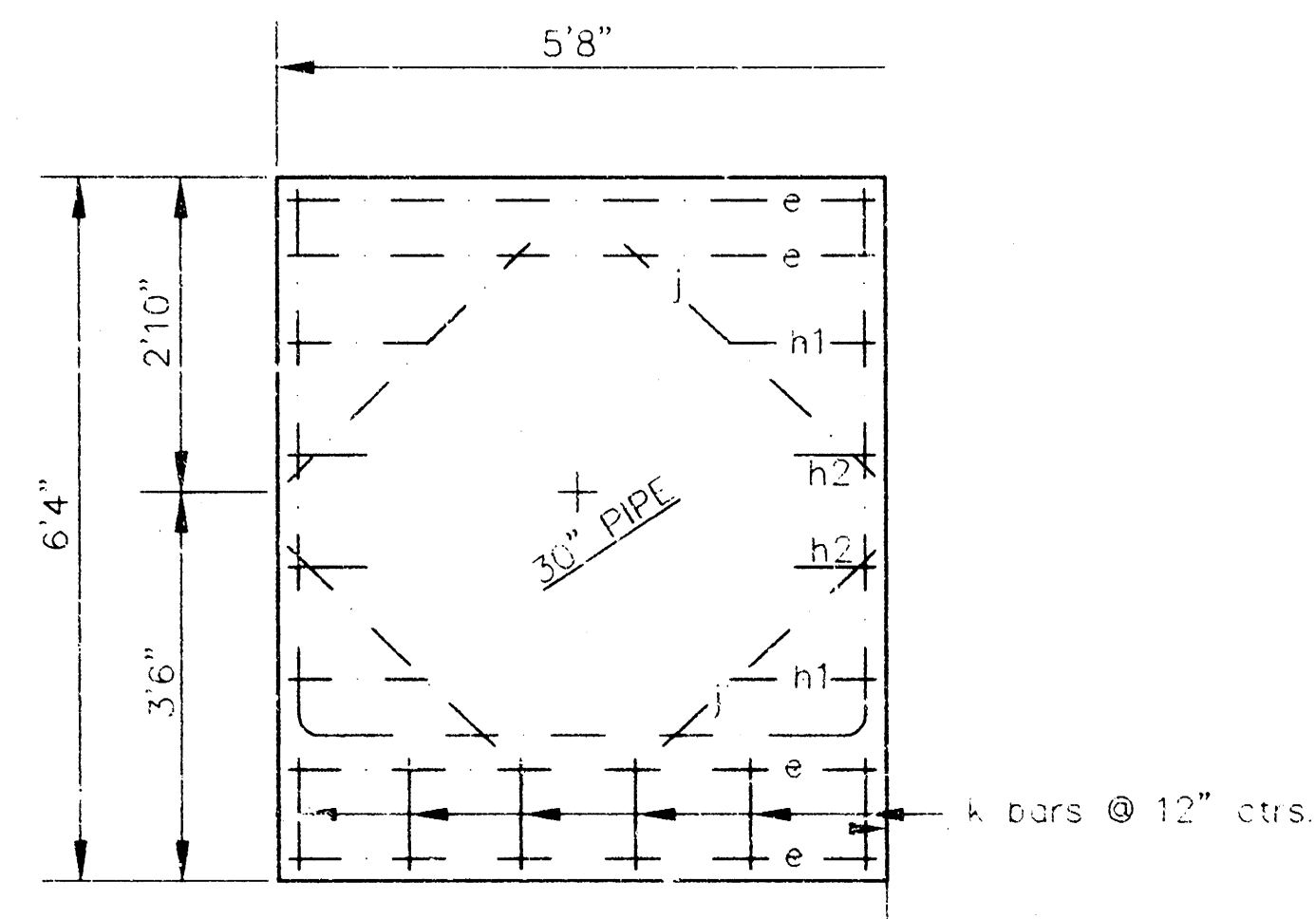


All exposed edges to have 1/2" bevel

PLAN



SECTION

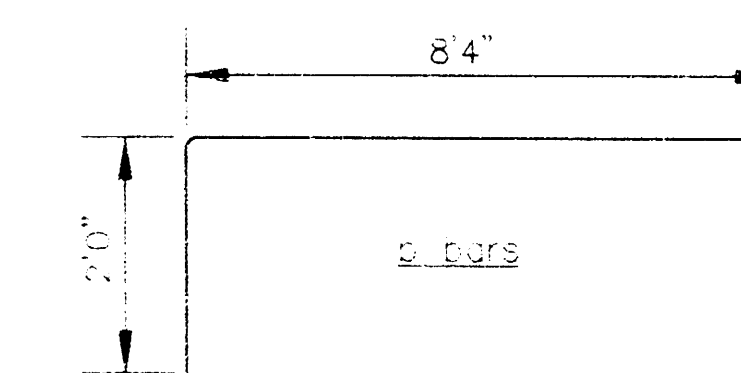
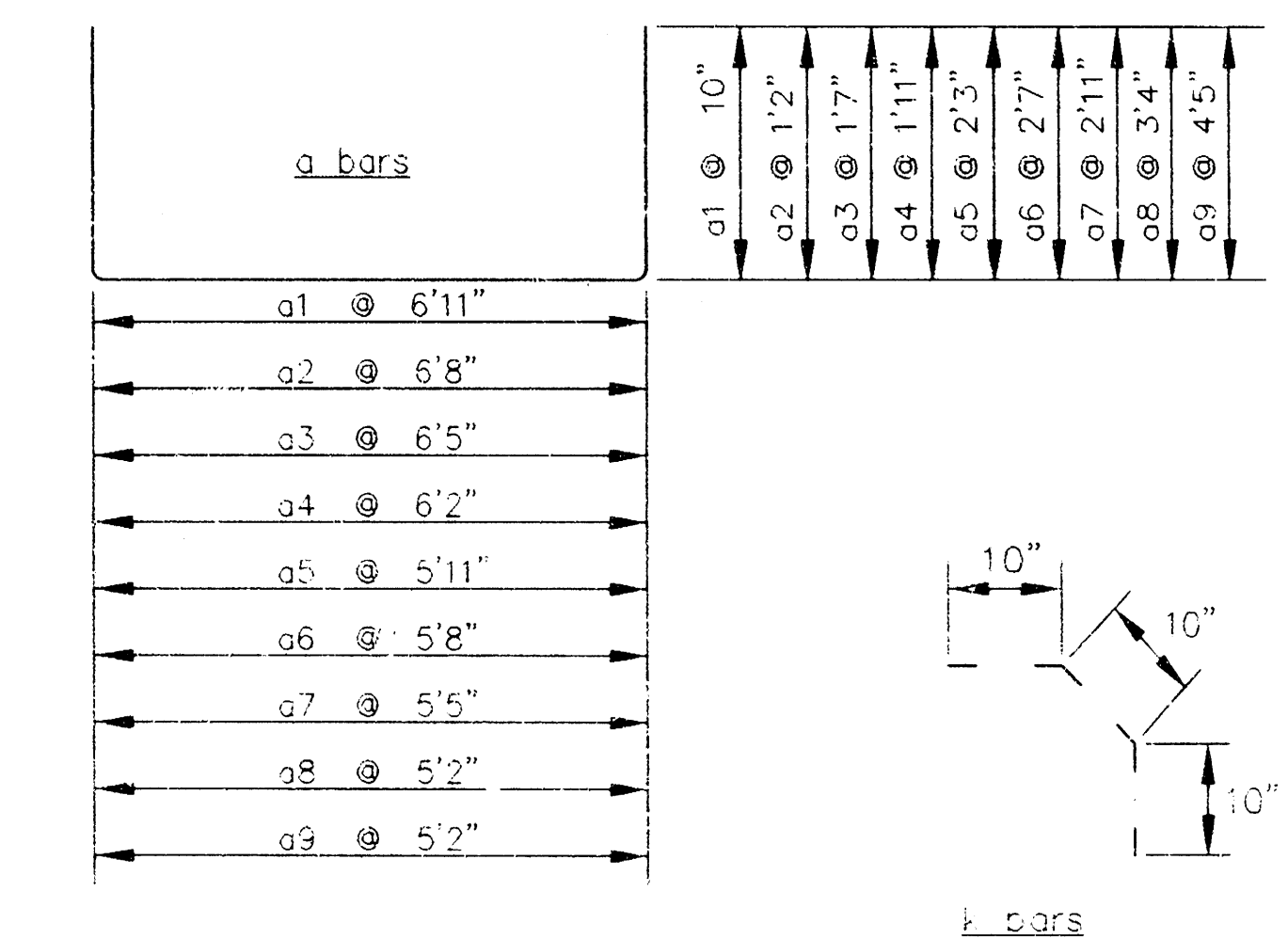


A-A SECTION

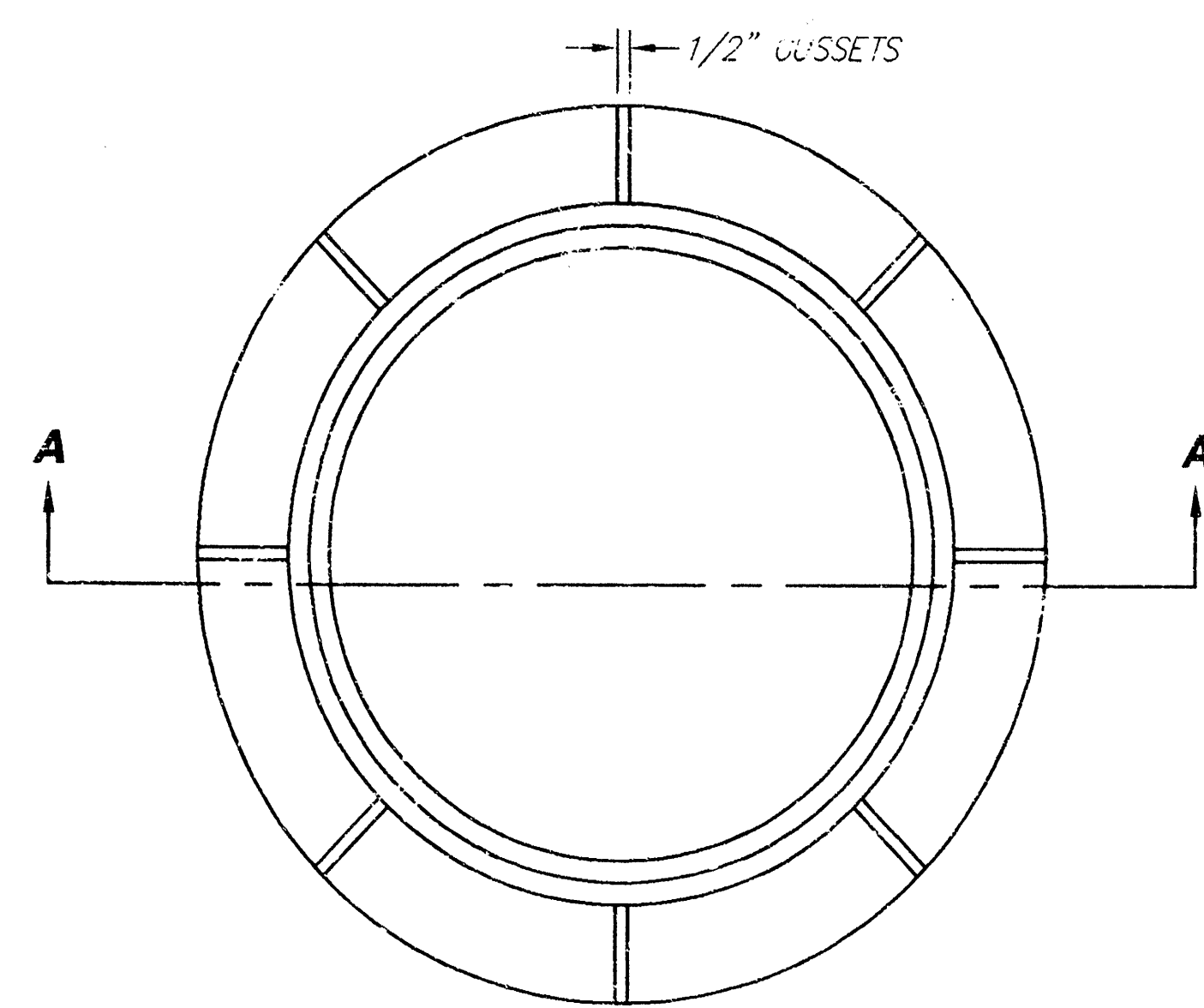
HEADWALL FOR 30" PIPE w/ FLAP GATE

TABLE OF QUANTITIES				
BAR	NUMBFR	LENGTH	SHAPE	WEIGHT
a1	1	8'7"	[]	5.73
a2	1	9'0"	[]	6.01
a3	1	9'7"	[]	6.40
a4	1	10'0"	[]	6.68
a5	1	10'5"	[]	6.96
a6	1	10'10"	[]	7.24
a7	1	11'3"	[]	7.52
a8	1	11'10"	[]	7.90
a9	1	15'0"	[]	10.02
b	6	10'4"	[]	41.42
c	2	7'0"	[]	9.35
d	2	9'0"	[]	12.02
e	4	5'4"	[]	14.25
f	2	8'5"	[]	11.24
g	2	4'7"	[]	6.12
h1	4	1'6"	[]	4.01
h2	4	1'0"	[]	2.23
j	4	3'0"	[]	8.02
k	6	2'6"	[]	10.02
Total Rebar, lbs				183.14
Concrete, C.Y.				3.3

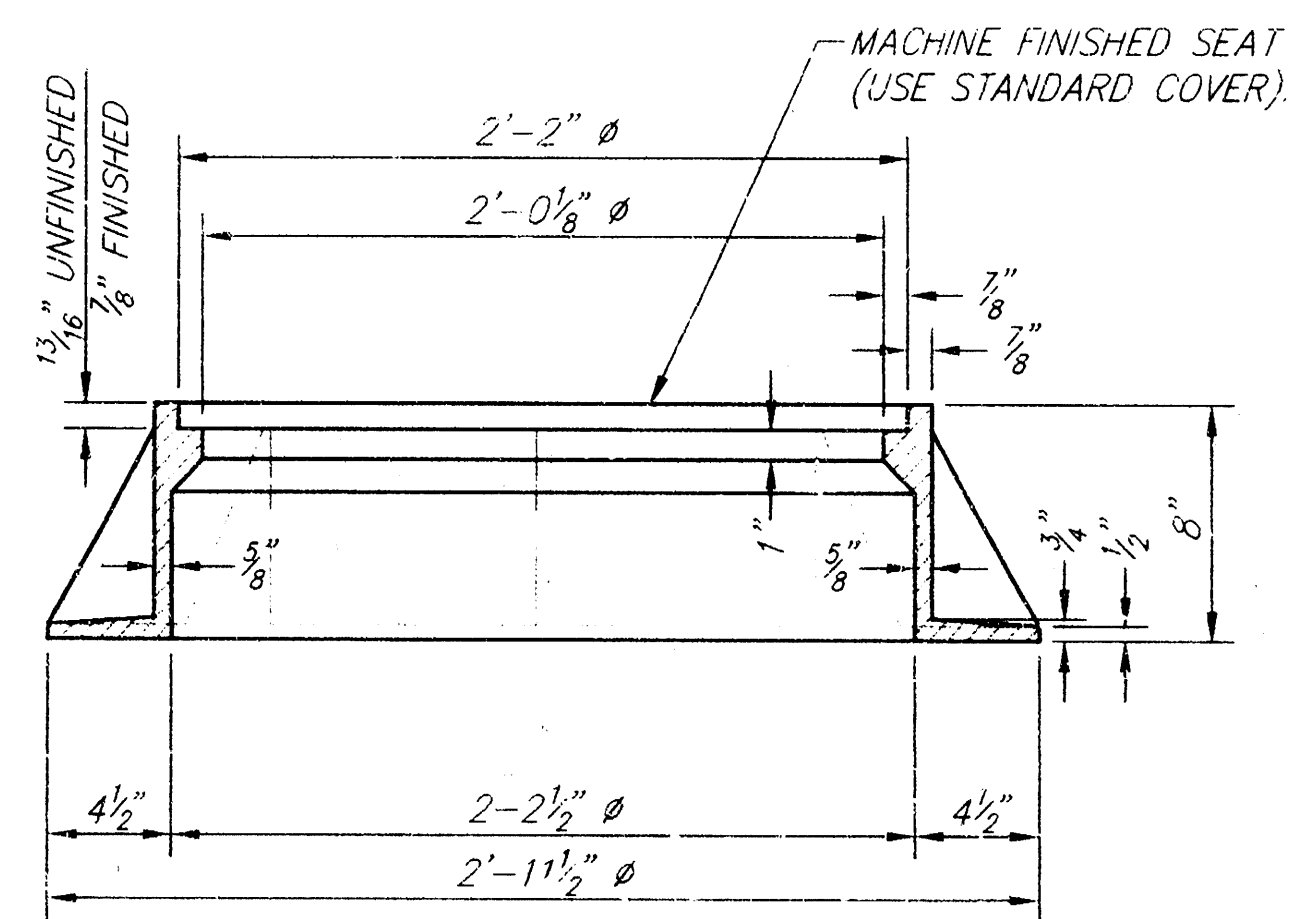
All rebars to be #4.



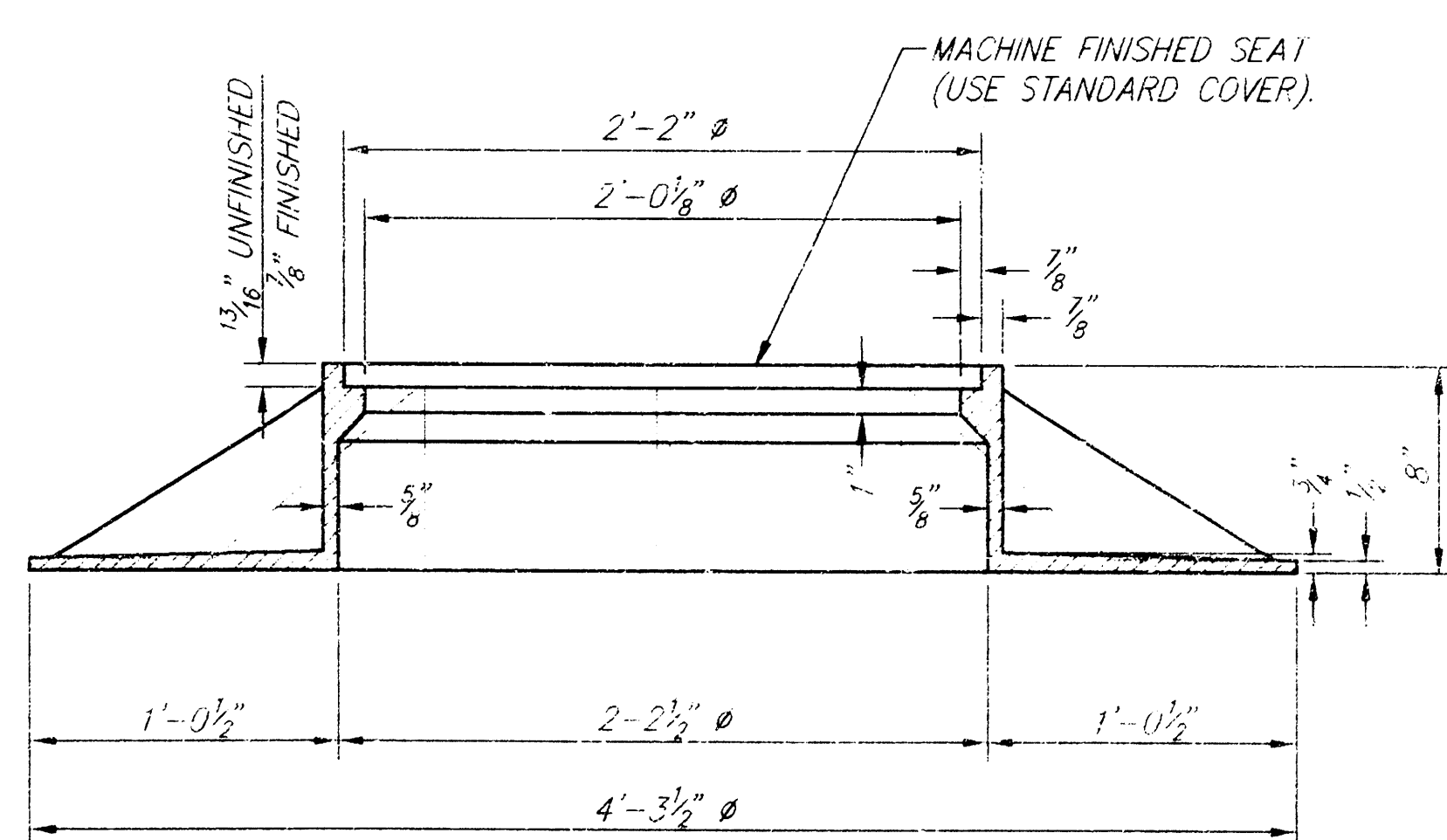
R.L. HAYES 2ND ADDITION			
Headwall Detail for 30" Pipe w/ Flap Gate			
WICHITA, KANSAS			
SRB	824 NORTH V.A. AVE. WICHITA, KANSAS 67202 http://www.srb.com/metro	PHONE: 767-8228 FAX: 767-8228 E-mail: srb@rel.com	DATE: 06/21/99
SAVOY, RUGGLES & BOHM, P. A. ENGINEERING & SURVEYING			
PROJECT NUMBER: 821-PPS (607861)			
DESIGN: JDS	DRAWN: JDS	CHECKED: TCR	DATE: Sept. 8, 1998
SHEET: 4			OF: 7



PLAN
*STANDARD MANHOLE FRAME SHOWN

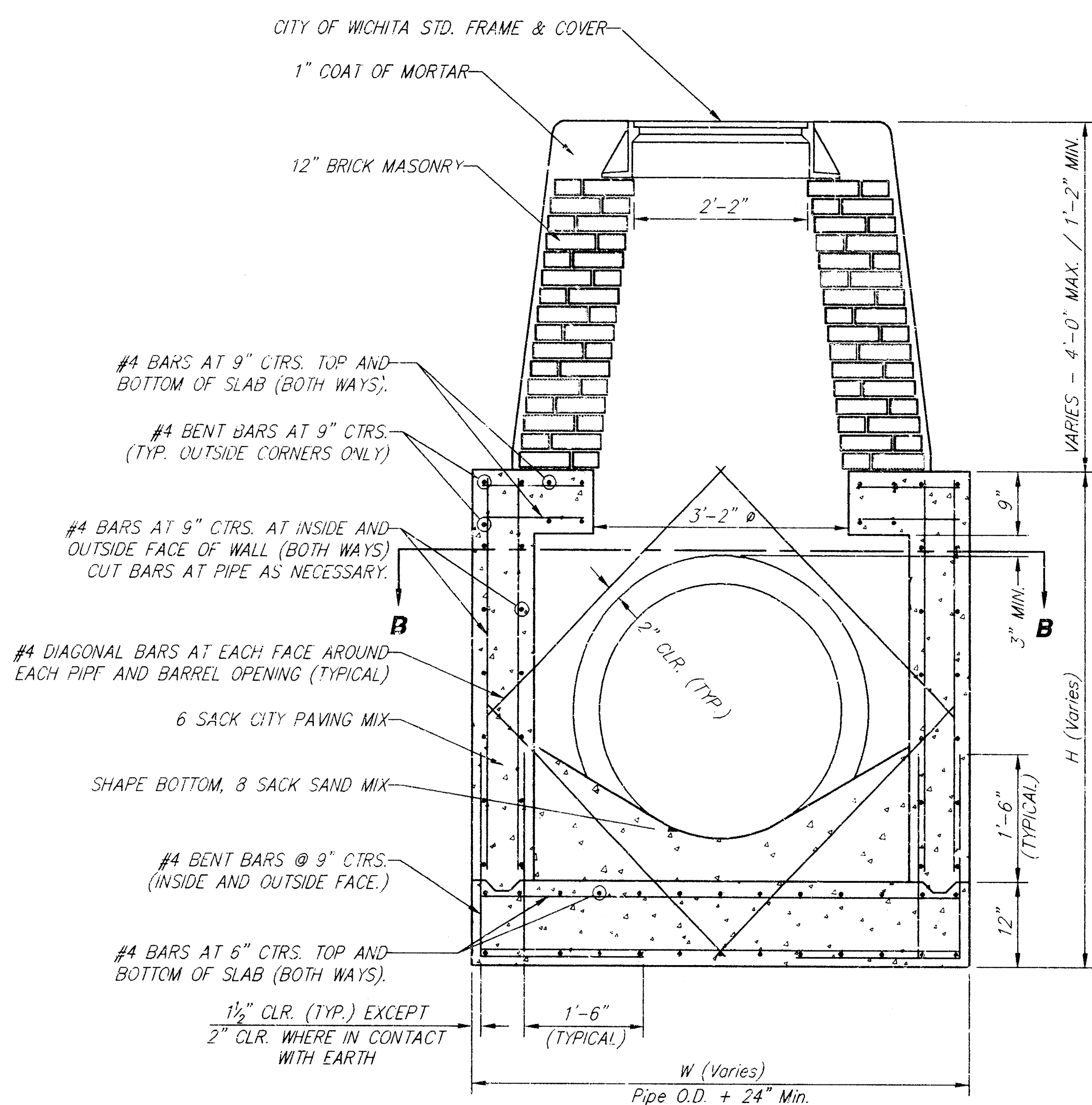


SECTION A-A
STANDARD MANHOLE FRAME
WEIGHT = 240 LBS.

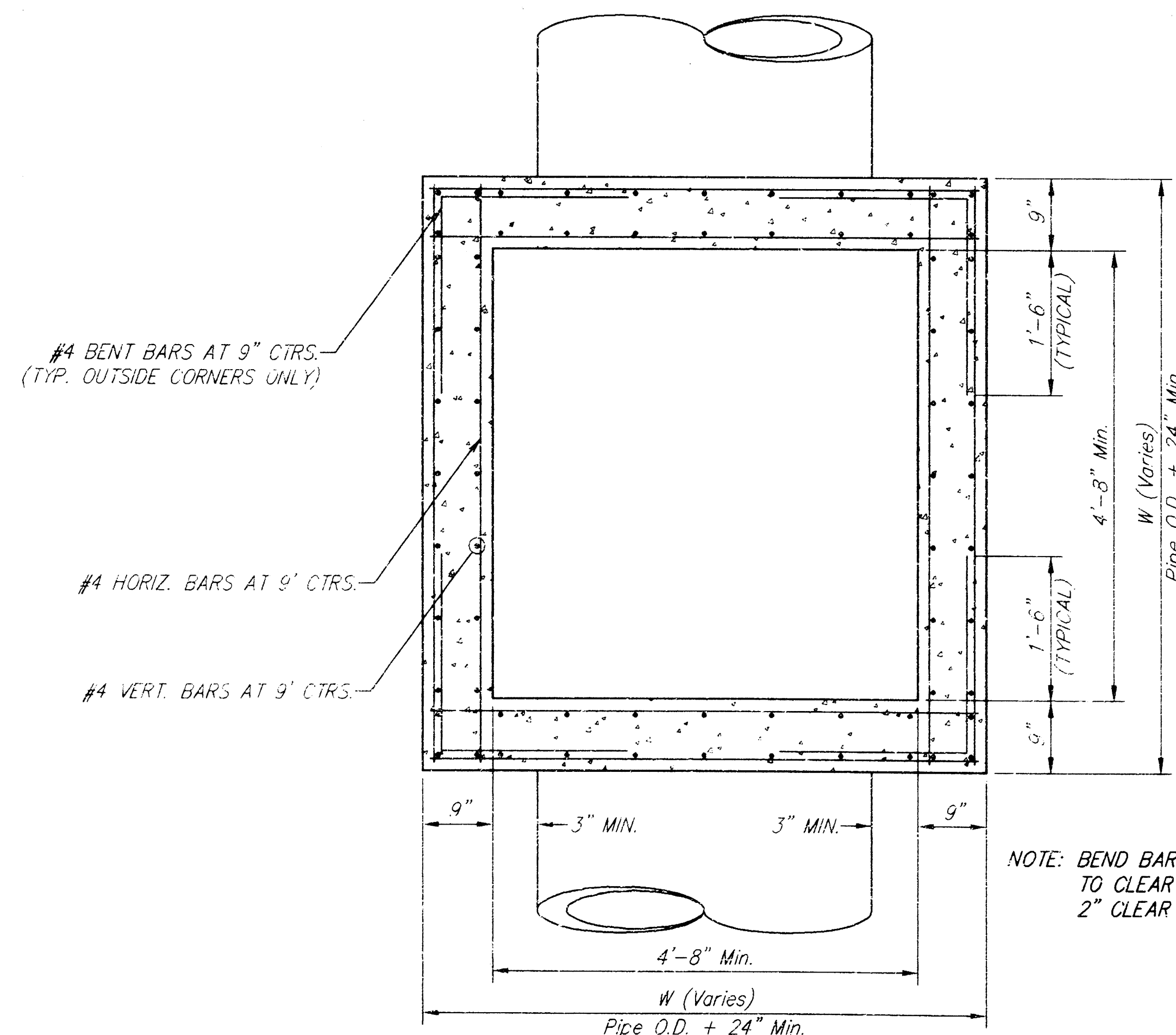


SECTION A-A
WIDE FLANGE MANHOLE FRAME
WEIGHT = 705 LBS.

CITY OF WICHITA STANDARD MANHOLE FRAME DETAILS

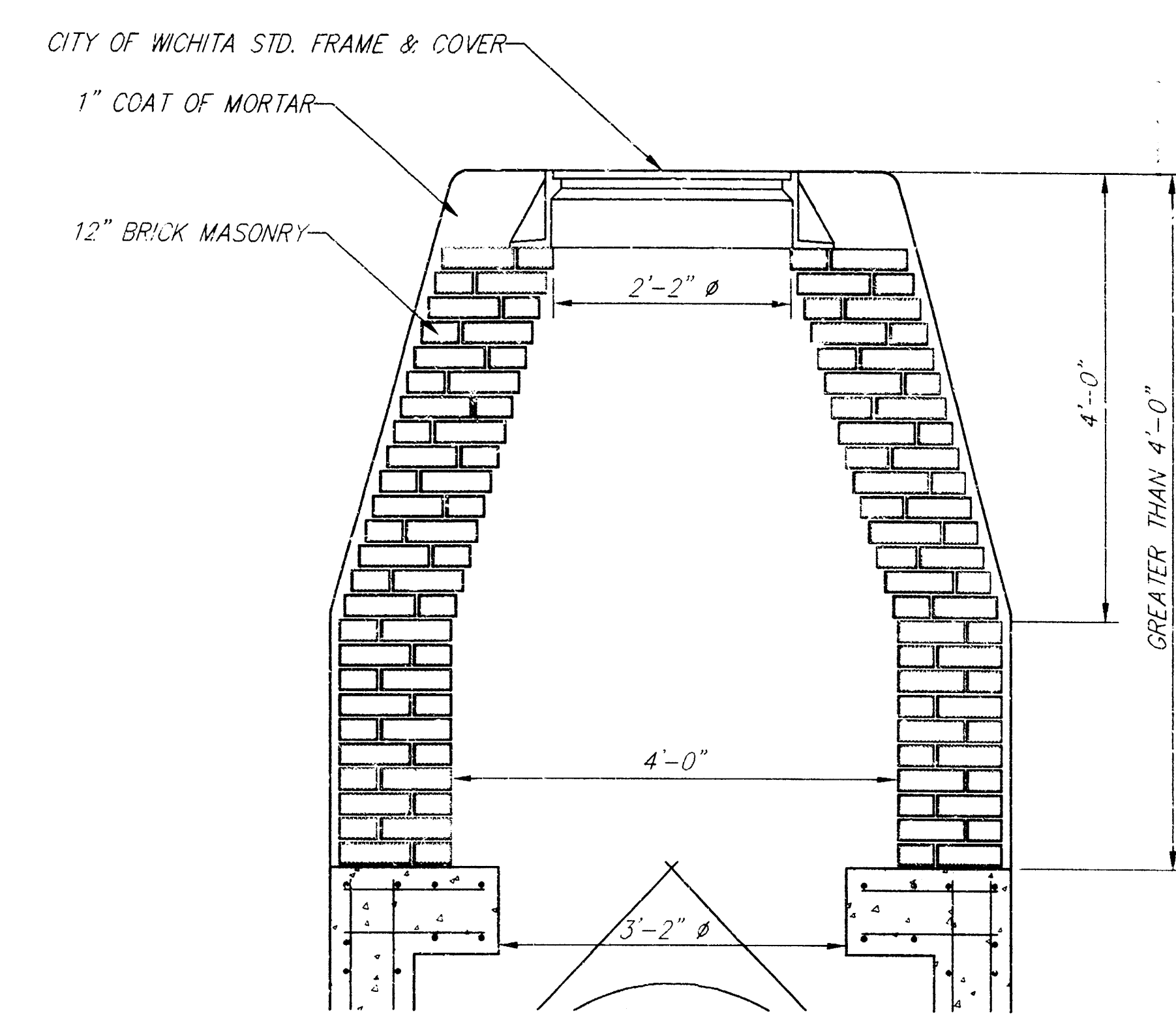


REINFORCED CONCRETE MANHOLE
STACK HEIGHT 2'-4" TO 4'-0"

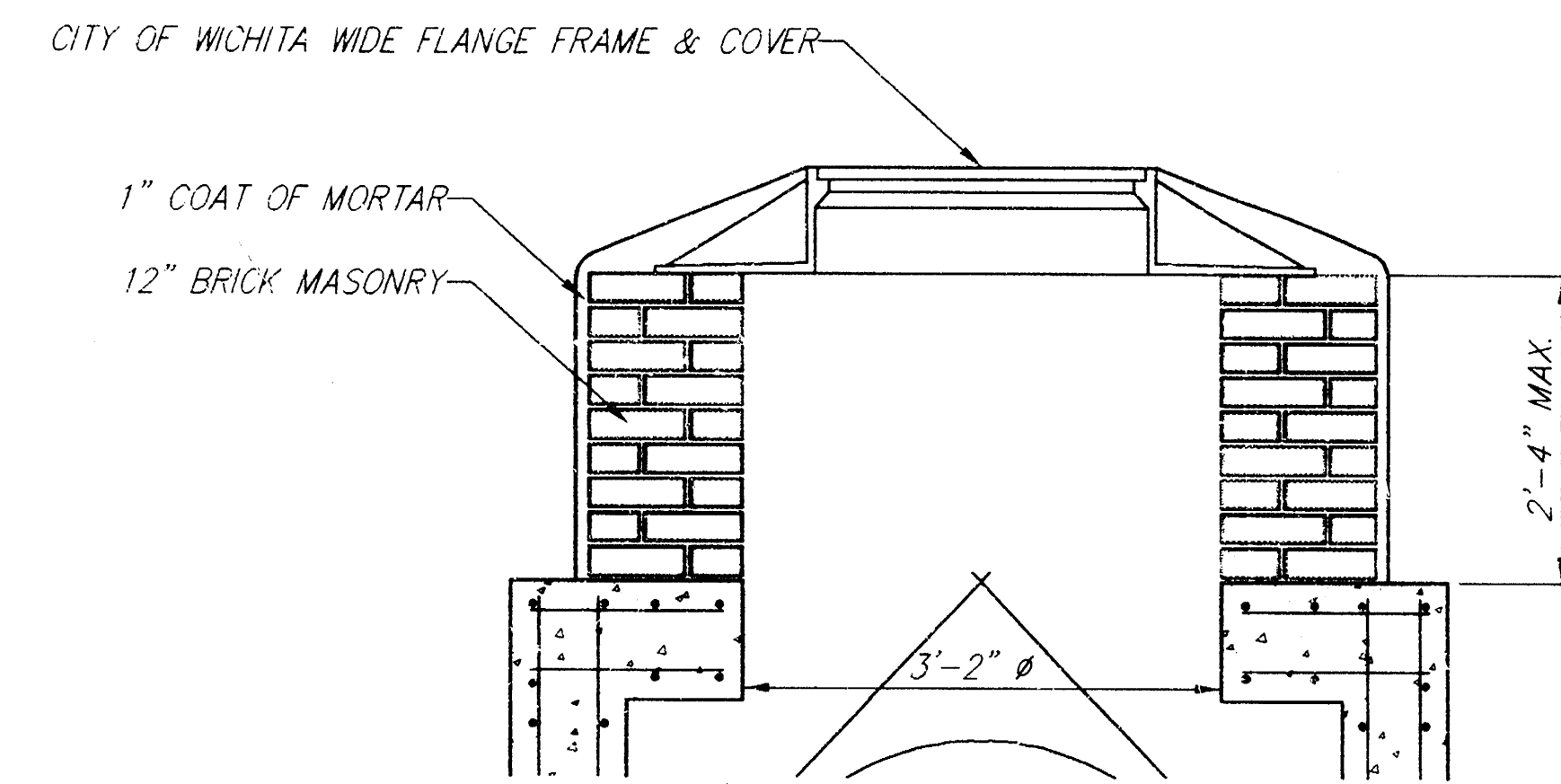


NOTE: BEND BARS NOT MORE THAN 8" TO CLEAR PIPES, OR CUT BARS 2" CLEAR OF PIPE, AS NECESSARY

SECTION B-B



STACK HEIGHT GREATER THAN 4'-0"



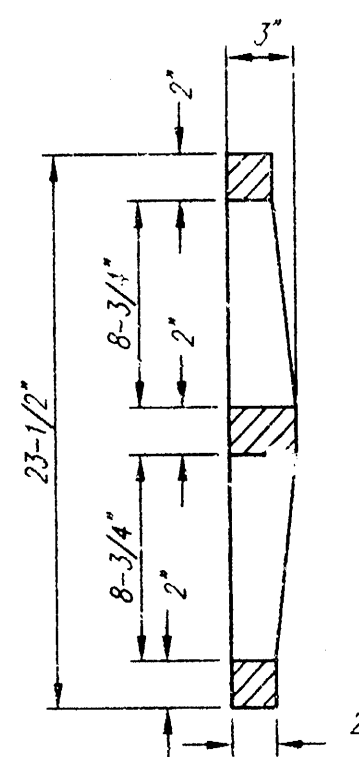
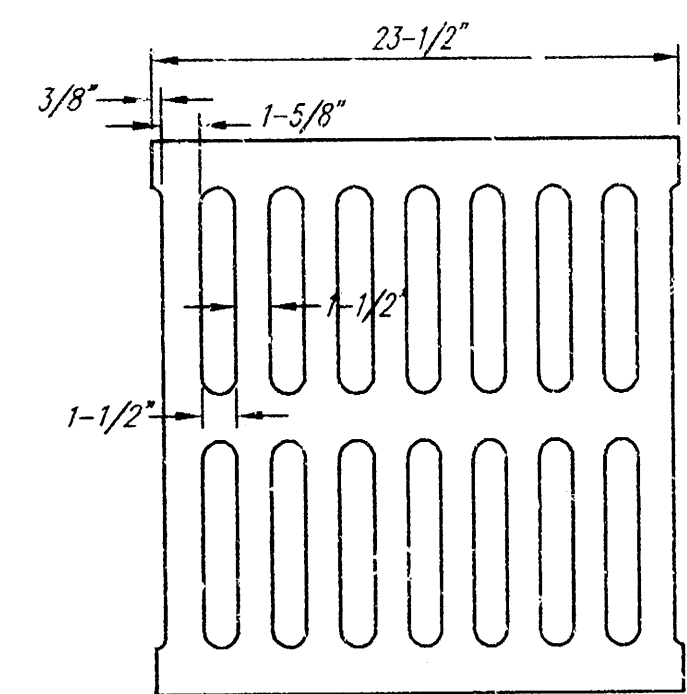
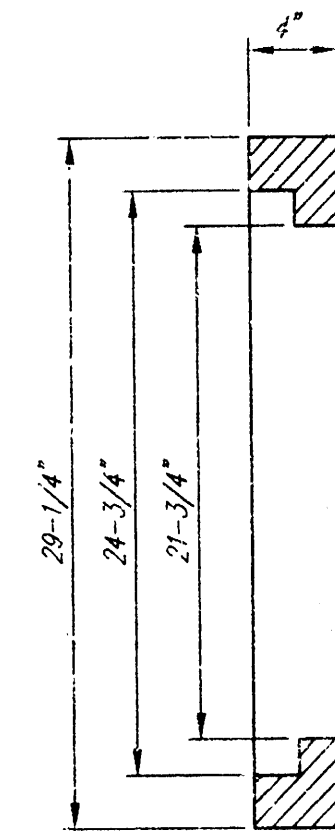
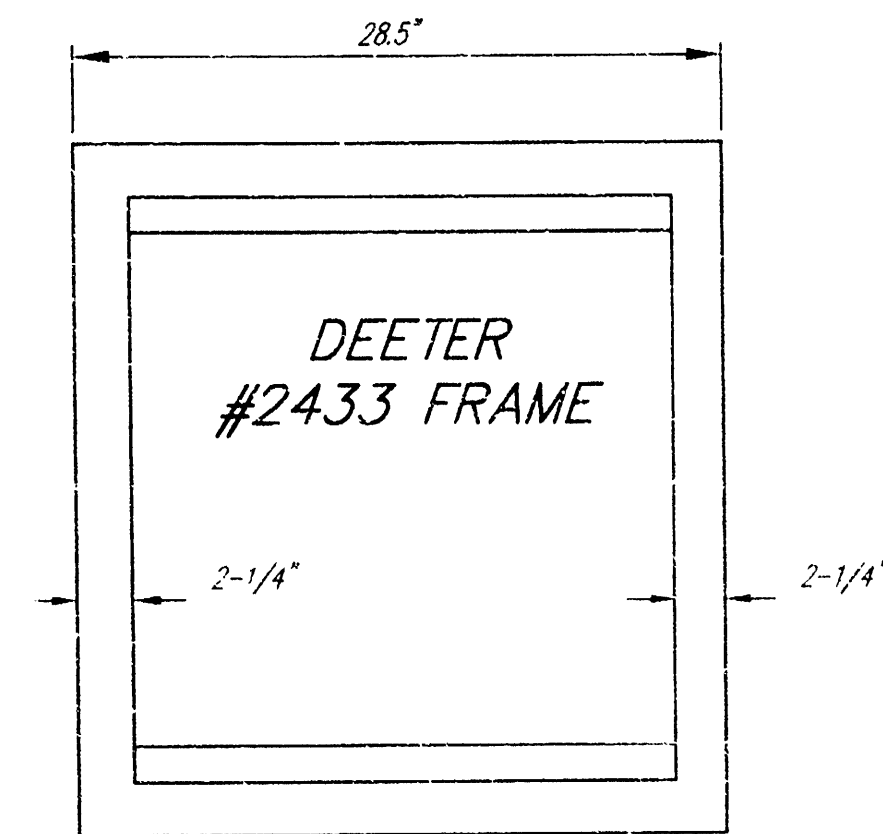
STACK HEIGHT LESS THAN 2'-4"

GENERAL NOTES:

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS 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. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING, USING 8 SACK SAND MIX CONCRETE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS, SLOPED TOWARD THE FLOW CHANNELS.
3. 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.
4. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF MANHOLE WALL.

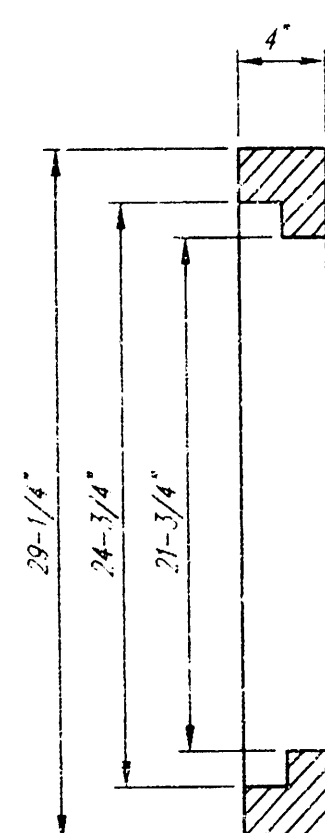
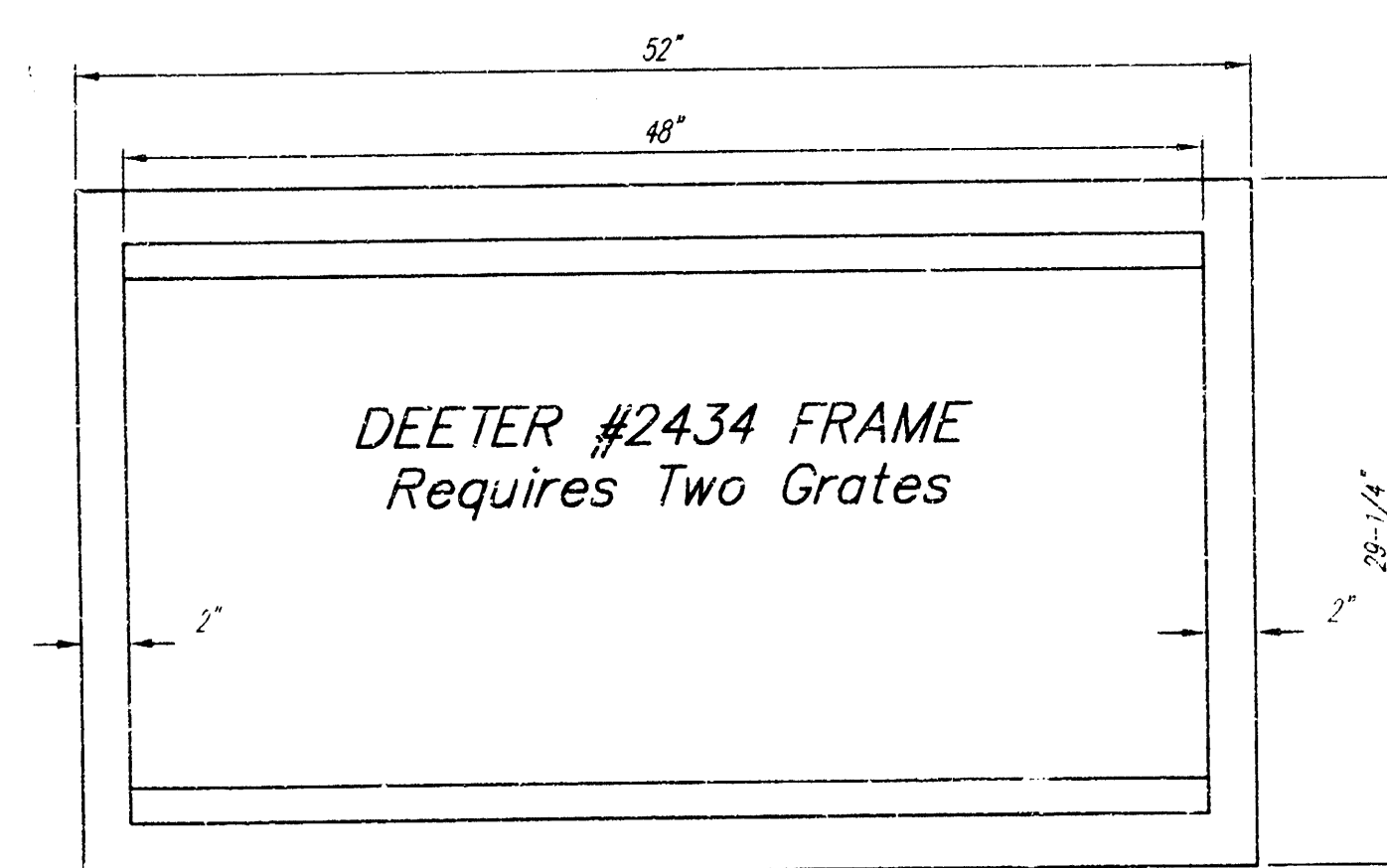
REINFORCED CONCRETE MANHOLE DETAILS
WICHITA, KANSAS

SRB		924 NORTH MAIN WICHITA, KANSAS 67203 http://www.srb.com/srb	316-264-8008 FAX 316-264-4621 E-mail: srb@srb.com
SAVOY, RUGGLES & BOHM, P.A. ENGINEERING & SURVEYING			
PROJECT NUMBER 821-PPS (607861)			
DESIGN C.O.W.	DRAWN J. Long	UTILITY	REVIEW DATE REVISED



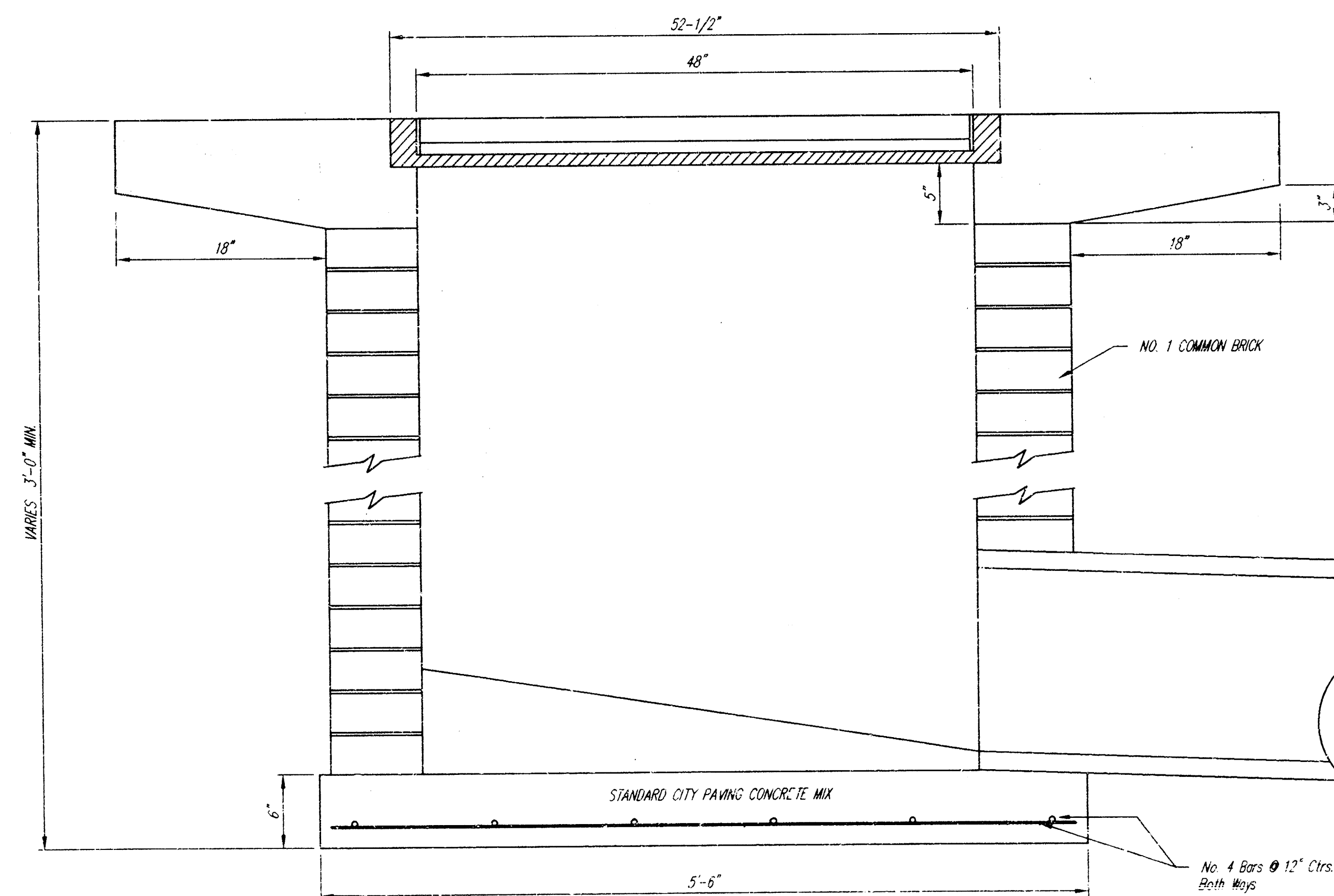
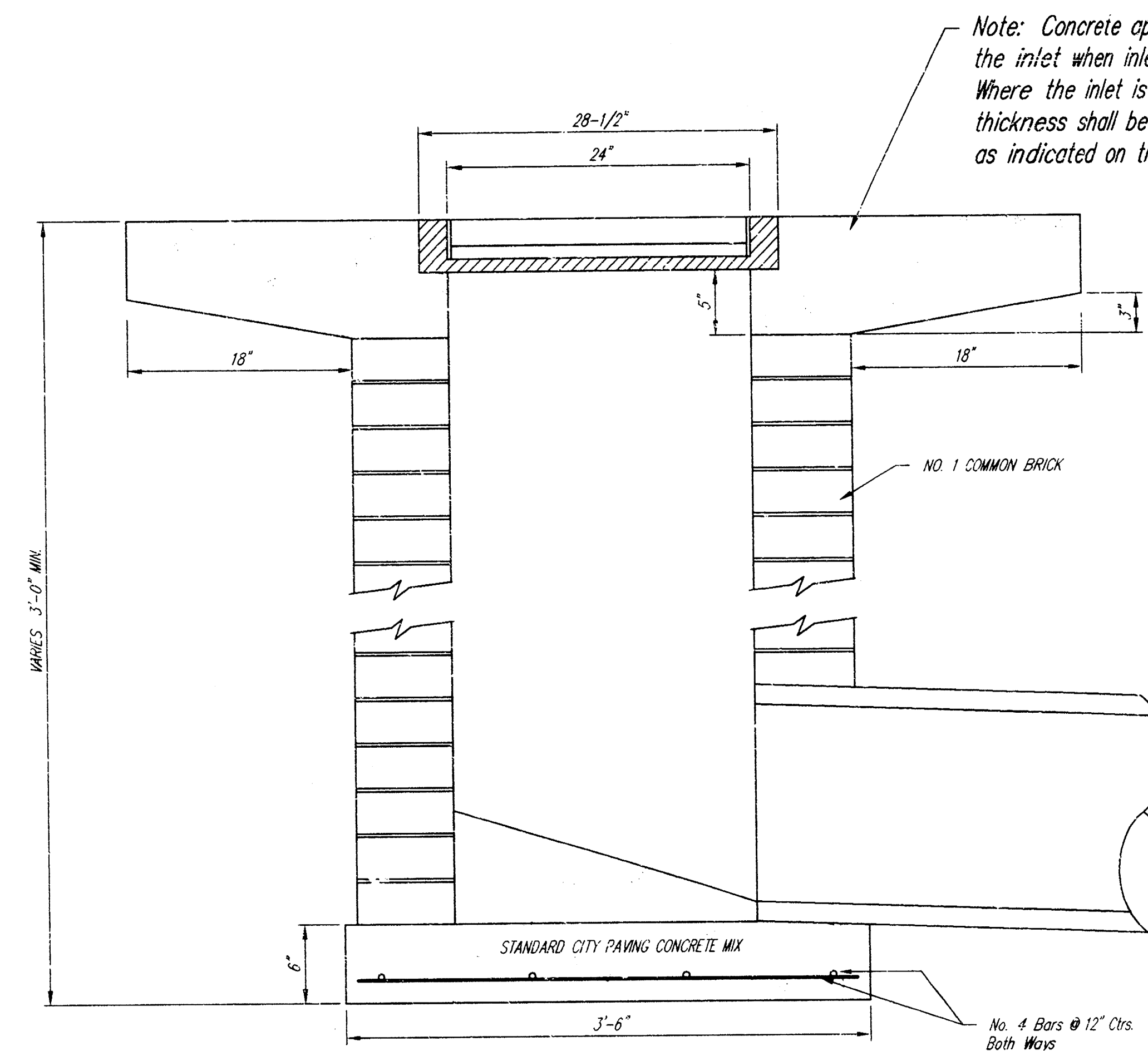
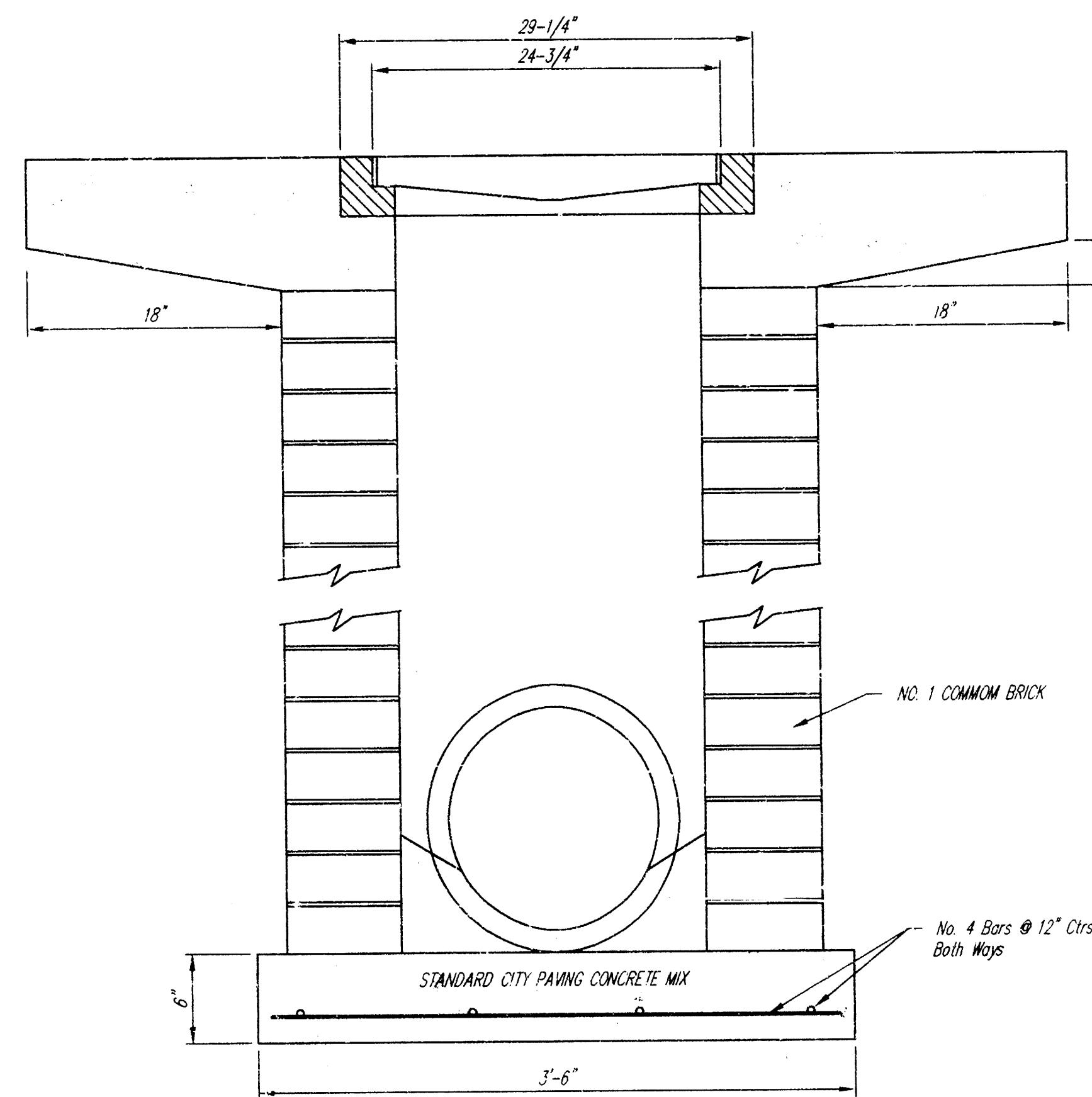
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail



DEETER #2434 FRAME
Requires Two Grates

Double 24" x 24" Frame Detail



THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4001 (316) 268-4112 FAX	DROP INLET 2'x2' / 2'x4'	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 821-PPS	INDEX CODE 607661
	DATE MAR 96	SHEET 6 OF 7

WICHITA, SEDGWICK COUNTY, KANSAS

SRB 924 NORTH MAIN 316-264-8008
WICHITA, KANSAS 67203 FAX 264-4621
<http://www.test-usa.com/srb> E-mail: test@srb.com

SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

