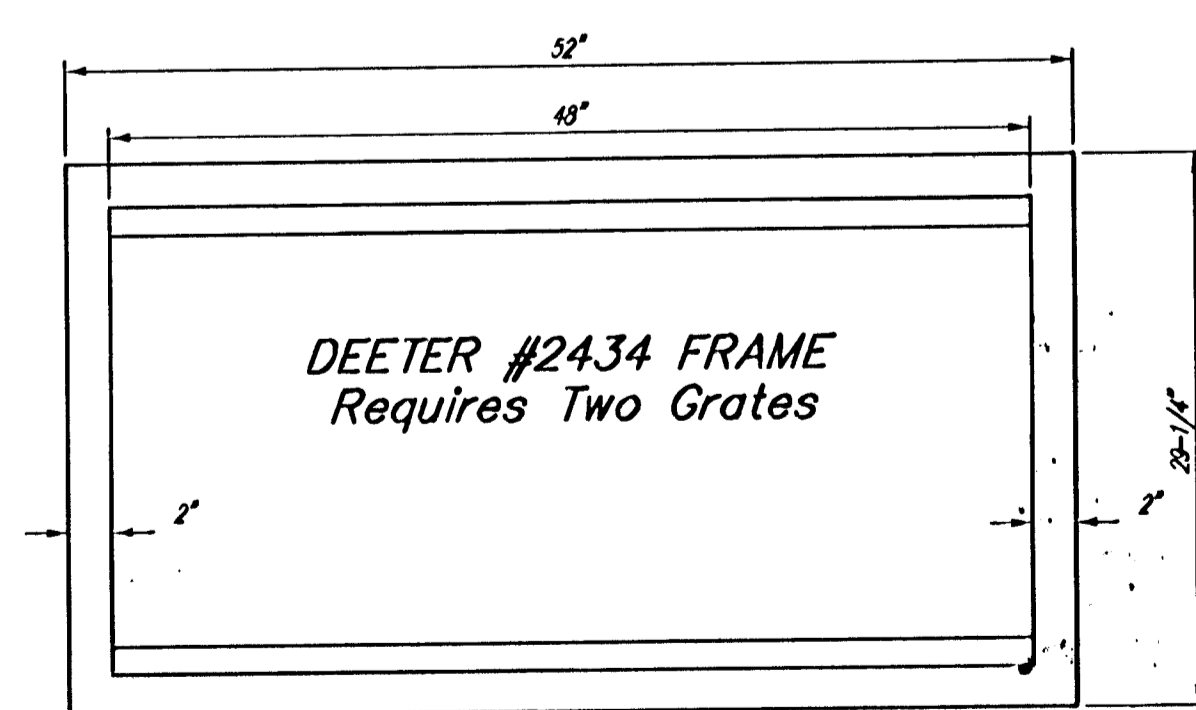


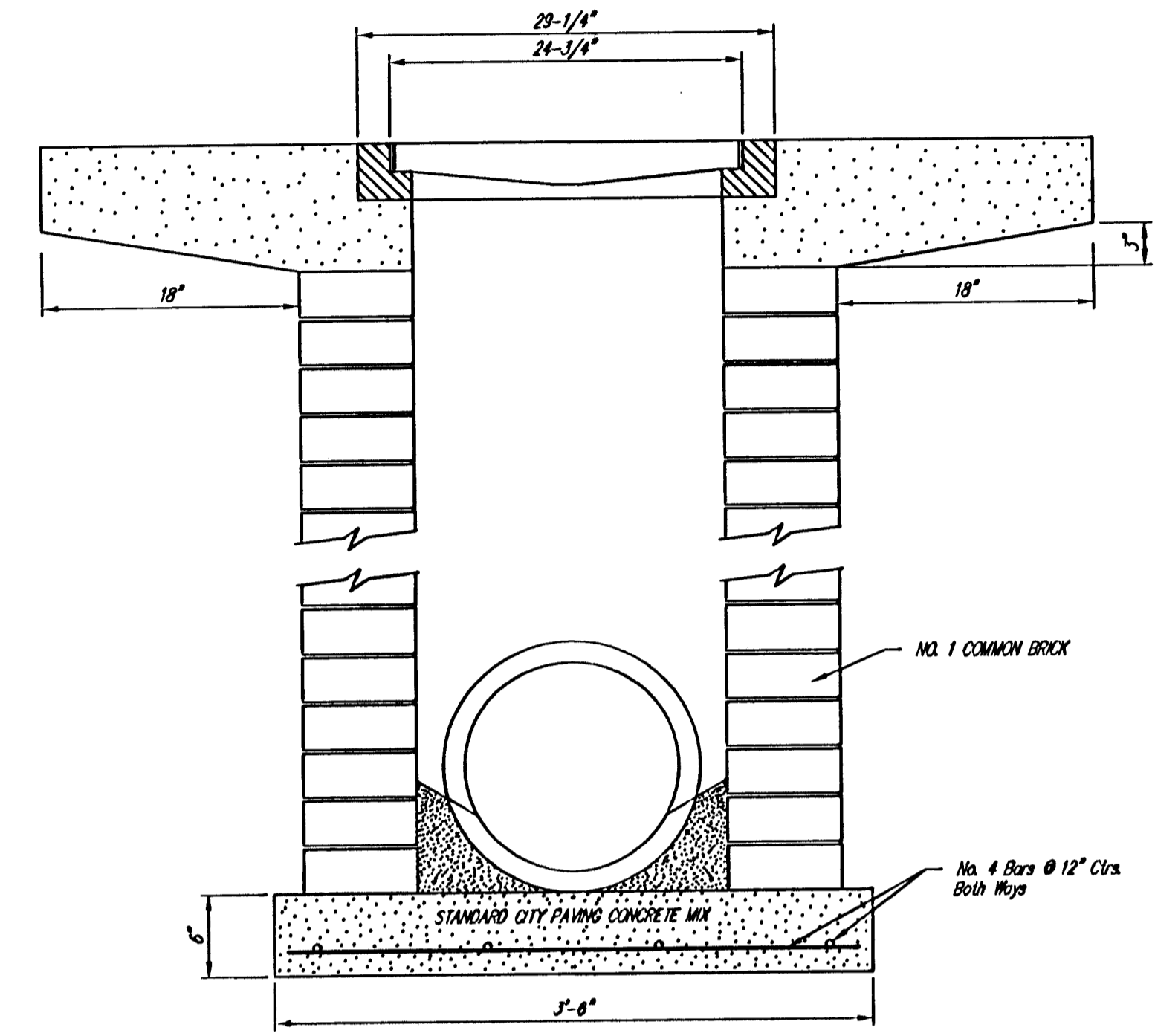
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

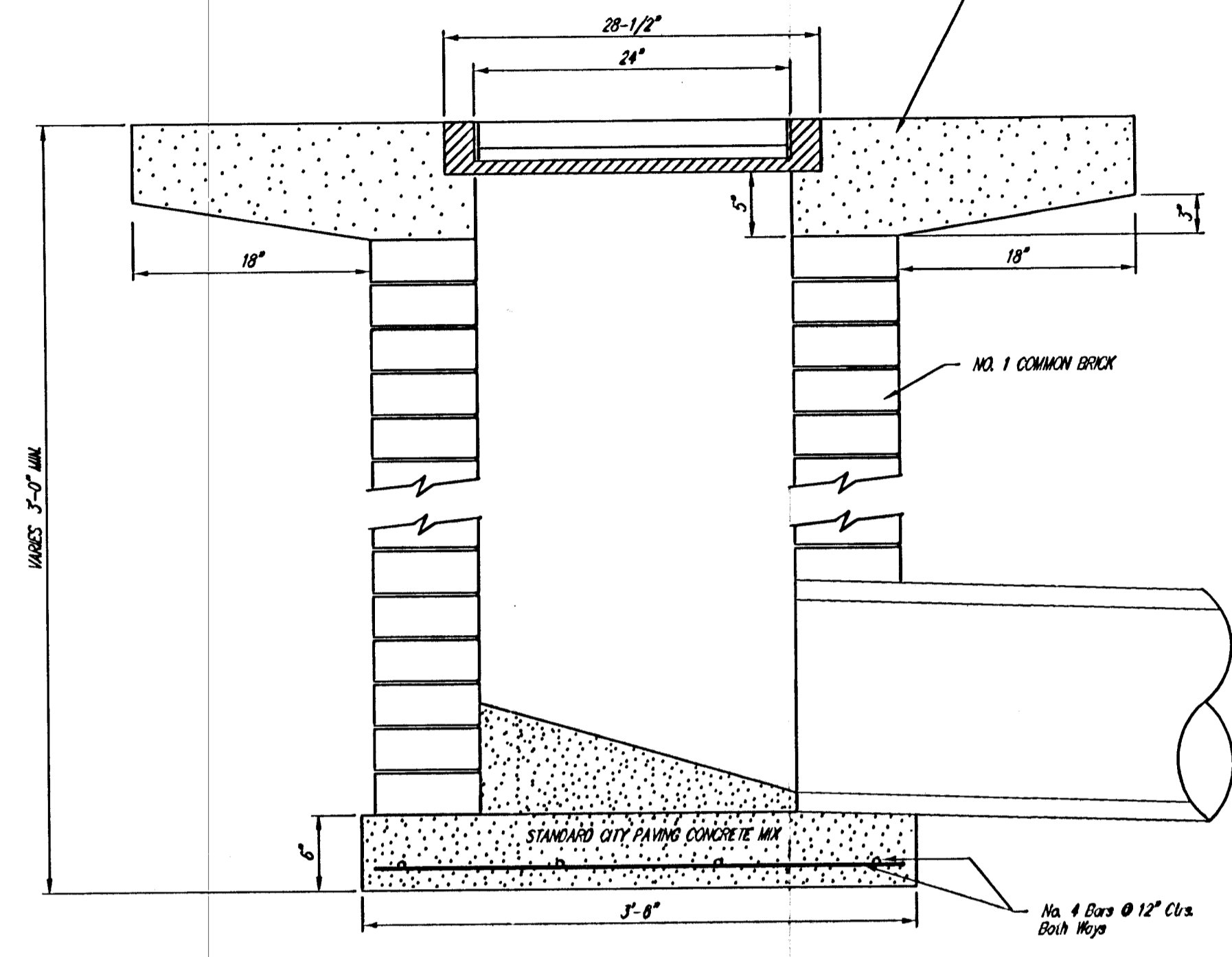


DEETER #2434 FRAME  
Requires Two Grates

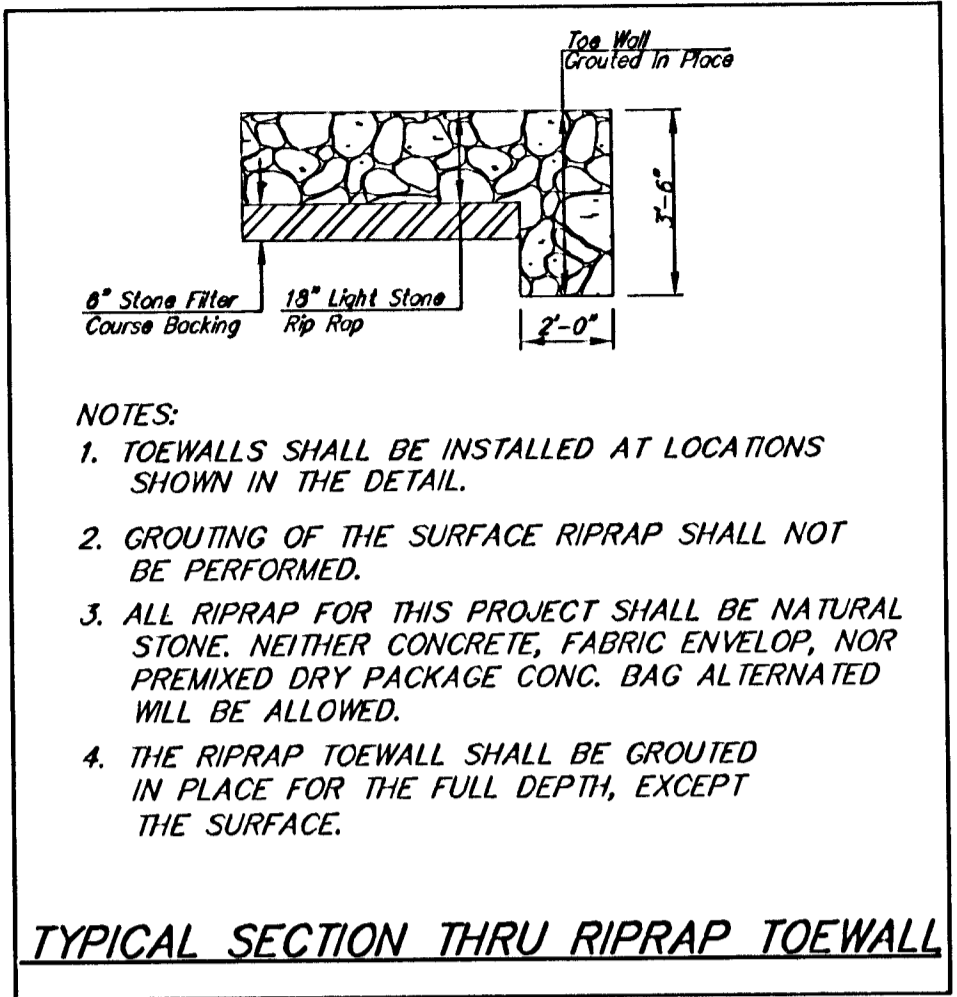
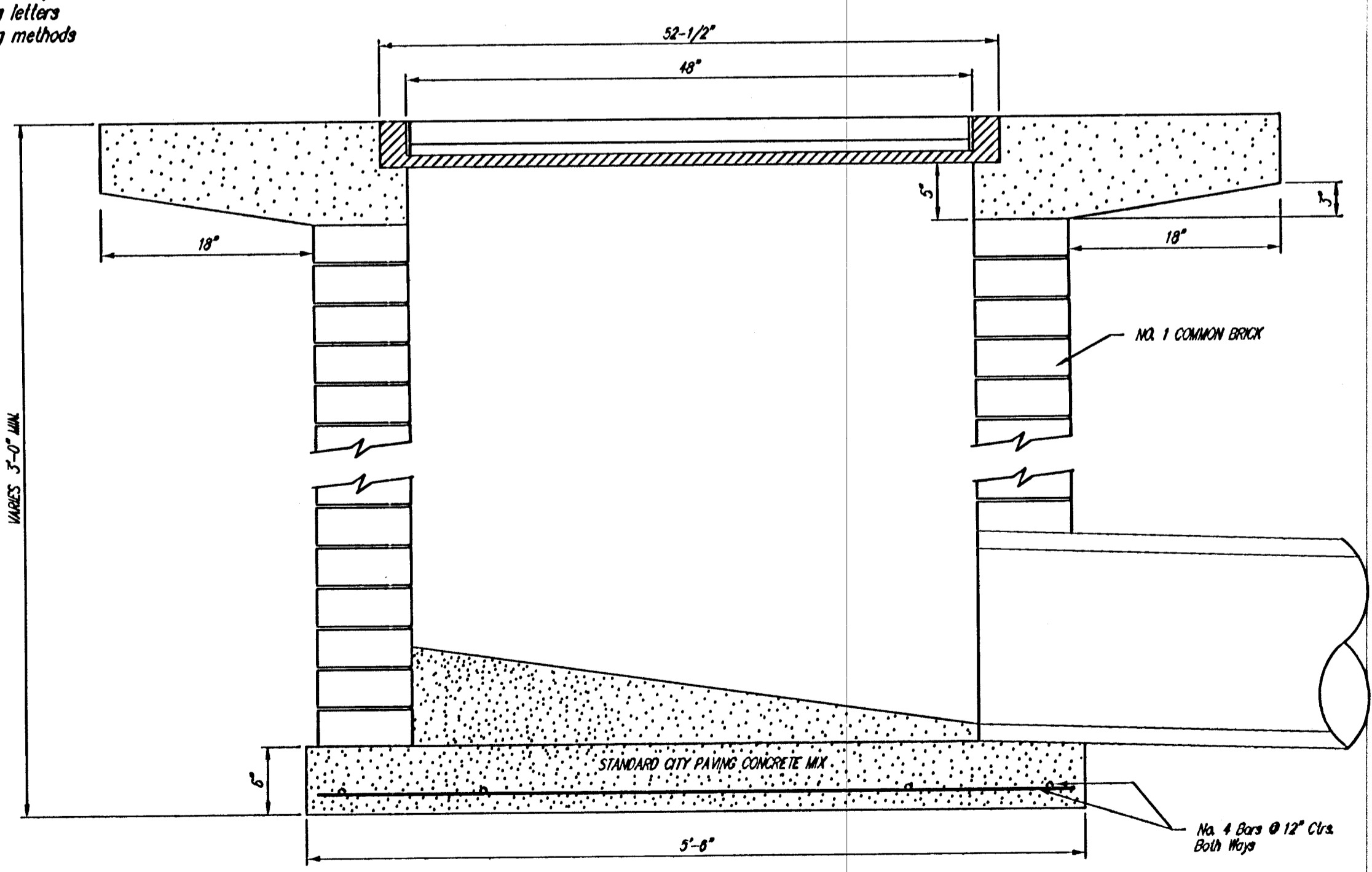
Double 24" x 24" Frame Detail



NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

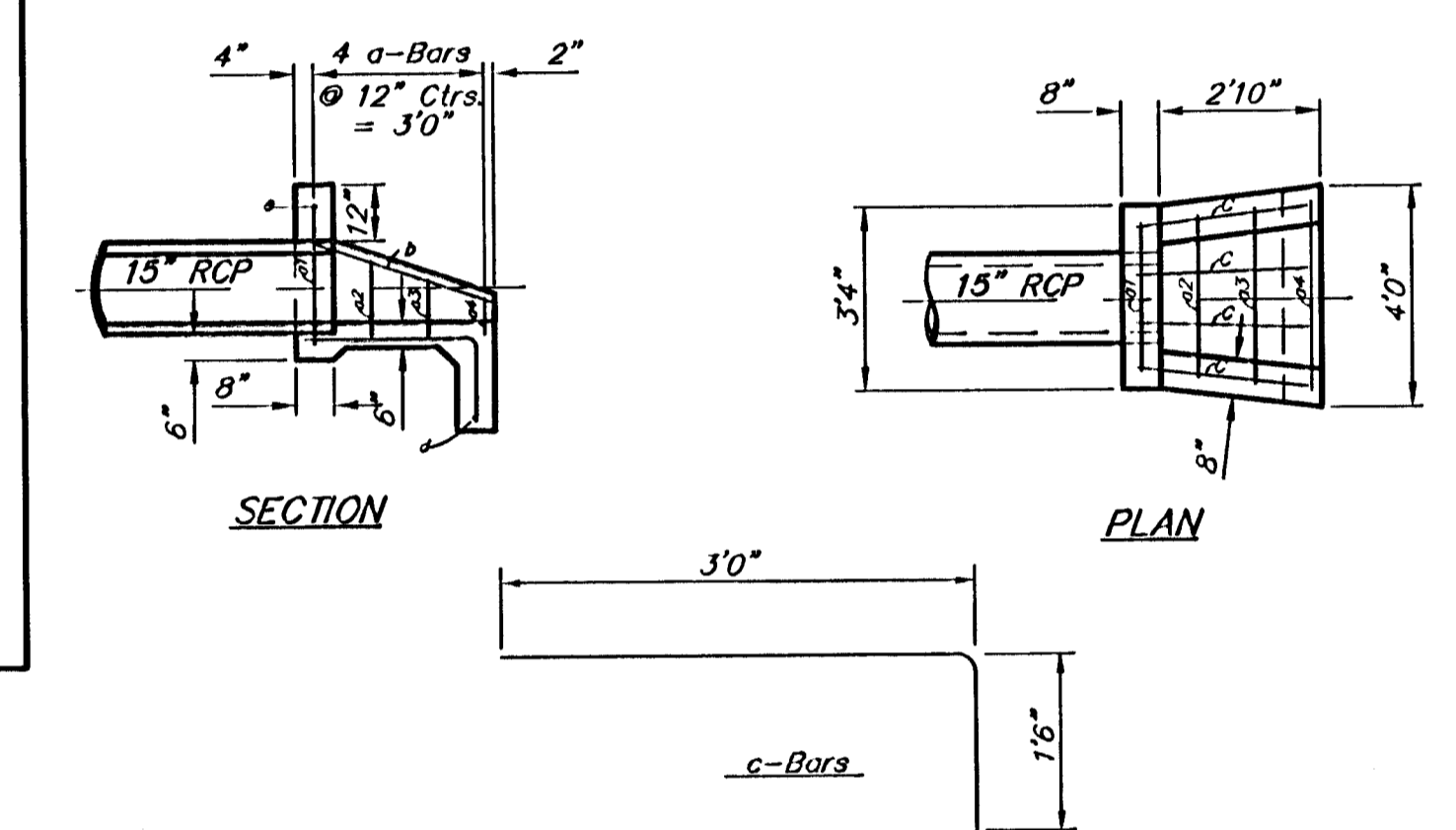


Note: Concrete apron shall be constructed around the inlet when inlet is located in an ungraded area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 18 inches as indicated on the detail.



- NOTES:
1. TOEWALLS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE DETAIL.
  2. GROUTING OF THE SURFACE RIPRAP SHALL NOT BE PERFORMED.
  3. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER CONCRETE, FABRIC ENVELOP, NOR PREMIXED DRY PACKAGE CONC. BAG ALTERNATED WILL BE ALLOWED.
  4. THE RIPRAP TOEWALL SHALL BE GROUTED IN PLACE FOR THE FULL DEPTH, EXCEPT THE SURFACE.

TYPICAL SECTION THRU RIPRAP TOEWALL



a-Bars

a1	2'8"
a2	2'11"
a3	3'2"
a4	3'5"

REBAR SCHEDULE

Bar	Shape	No.	Length	Weight
a1	U	1	7'6"	5.01
a2	U	1	5'7"	3.73
a3	U	1	3'2"	3.45
a4	U	1	4'9"	3.17
b	U	2	4'0"	5.34
c	U	4	5'8"	14.70
d	U	1	3'5"	2.28
e	U	1	2'9"	1.78
Total Rebar			39.48 Lbs.	
Concrete			0.67 C.Y.	

- GENERAL NOTES
1. ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO CONCRETE HEADWALL.
  2. CONCRETE USED IN HEADWALL CONSTRUCTION SHALL BE SAME AS PER CITY STANDARD PAVING MIX EXCEPT THAT 1" SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
  3. ALL EXPOSED EDGES SHALL BE BEVELED 1/2" .
  4. REINFORCING STEEL SHALL COMPLY TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
  5. THE "REIN. CONC. HEADWALL" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall  
 \* Field Bend or Cut Reinforcing as Required for Clearance.  
 All Concrete Reinforcement to be #4 Rebar  
 All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 15" RCP

City of Wichita Standard  
**Baughman** Drop Inlet Detail  
 Headwall & Toewall Detail

1696 FPS (G07861)  
 DESIGN: C.O.W.  
 APPROVED: DATE 5/06  
 SCALE: None  
 SHEET: 3 OF 4

Dustin Clinton SWS\JDecplink 06-08-E042