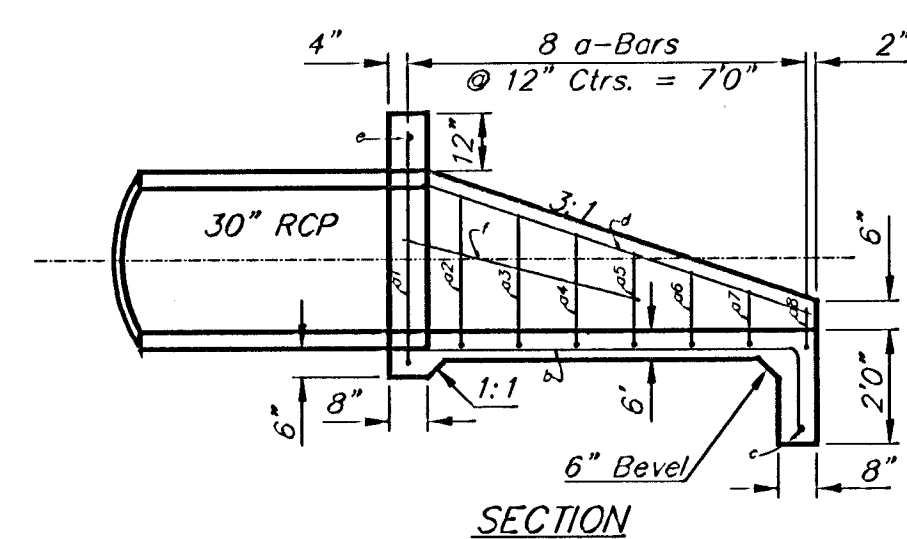


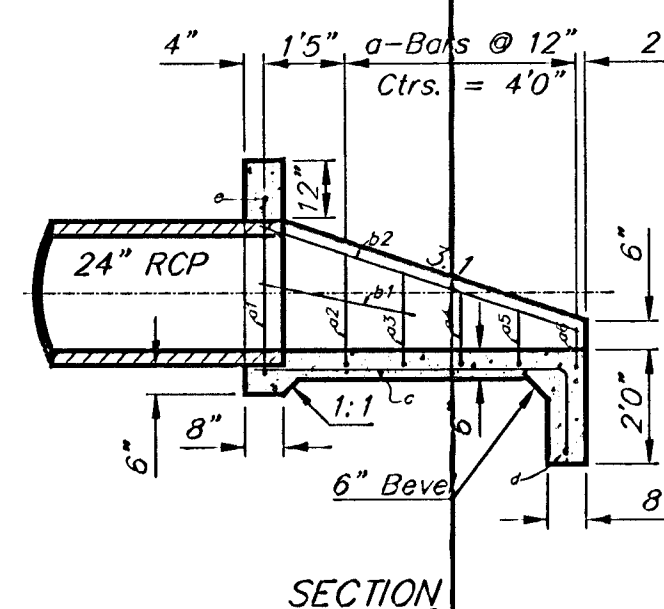
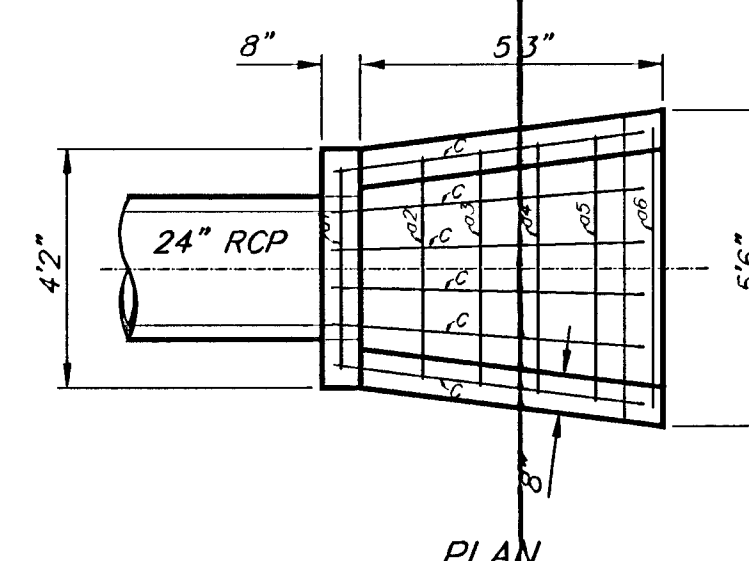


Technical drawing of a stepped shaft with dimensions in inches. The shaft has a total length of 7'0" and a diameter of 1'6" at the right end. The shaft is divided into eight steps with the following diameters from left to right: 01 4'1", 02 4'3", 03 4'6", 04 4'8", 05 5'0", 06 5'3", 07 5'6", and 08 5'8". The drawing is labeled "a-Bors" and "b-Bors".

Bar	Shape	No.	Length	Weight
a1		1	12'1"	8.07
a2		1	9'5"	6.29
a3		1	9'0"	6.01
a4		1	8'6"	5.68
a5		1	8'2"	5.46
a6		1	7'9"	5.18
a7		1	7'4"	4.90
a8		1	7'0"	4.68
b		7	8'6"	35.07
c		1	6'0"	4.01
d		2	7'6"	10.02
e		1	4'5"	2.95
f		2	4'3"	5.68
Total Rebar			104.00 Lbs.	
Concrete			219 C.Y.	

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 30" RCP



Technical drawing of a stepped shaft with dimensions in inches. The drawing shows a shaft with six steps of decreasing diameter from left to right. The diameters are labeled as follows:

- a1 3'5"
- a2 3'9"
- a3 4'0"
- a4 4'3"
- a5 4'6"
- a6 4'9"

The total length of the shaft is indicated as 5'5". The drawing is labeled "c-Bars" and "1/5\".

Bar	Shape	No.	Length	Weight
a1		1	9'5"	6.29
a2		1	7'7"	5.07
a3		1	7'2"	4.79
a4		1	6'9"	4.51
a5		1	6'4"	4.23
a6		1	6'1"	4.06
b1		2	2'9"	3.67
b2		2	5'10"	7.79
c		6	6'11"	27.72
d		1	5'0"	3.37
e		1	3'10"	2.56
Total Rebar			74.03 Lbs.	
Concrete			1.40 C.Y.	

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 24" RCP

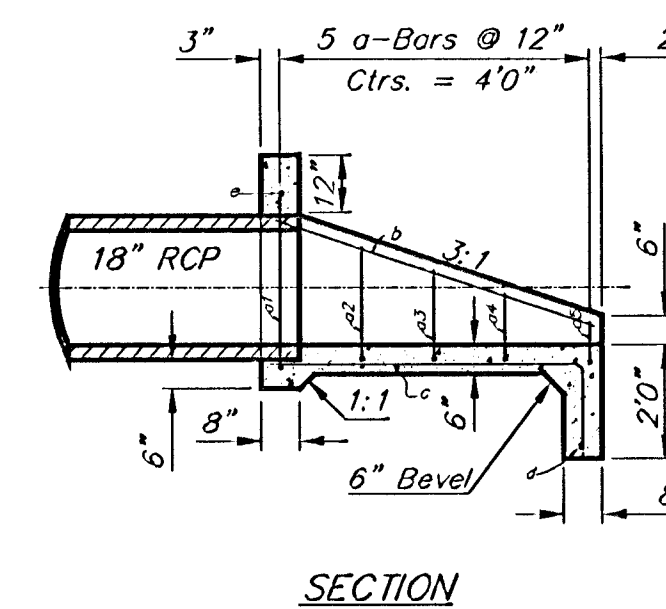
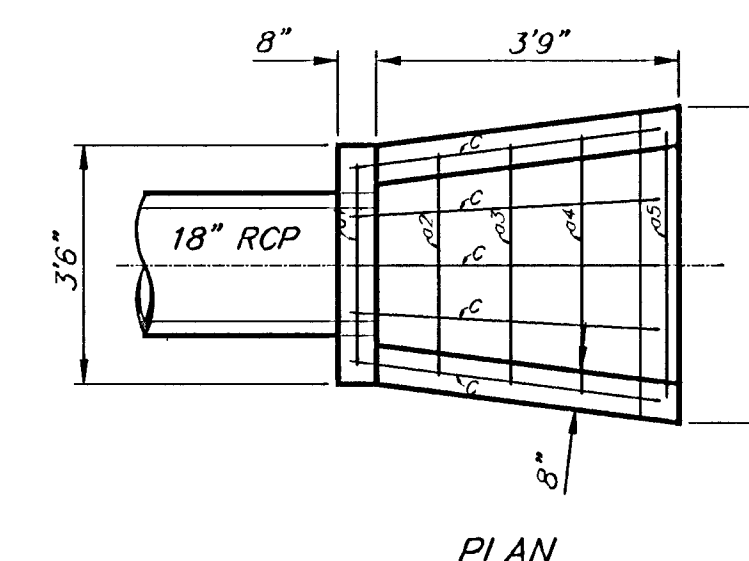


Diagram of a reinforced concrete slab showing dimensions and bar placement. The slab is 4'0" wide and 1'0" deep. It has 5 top bars (a-bars) and 5 bottom bars (c-bars). The top bars are labeled a1 2'3", a2 1'7", a3 1'3", a4 1'1", and a5 8". The bottom bars are labeled c1 2'8", c2 2'11", c3 3'2", c4 3'5", and c5 3'8".

Bar	Shape	No.	Length	Weight
a1		1	7'2"	4.79
a2		1	6'1"	4.06
a3		1	5'9"	3.79
a4		1	5'3"	3.51
a5		1	5'0"	3.34
b		2	4'0"	5.34
c		5	5'6"	18.37
d		1	4'0"	2.67
e		1	3'2"	2.12
Total Rebar			47.99 Lbs.	
Concrete			0.91 C.Y.	

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

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 IT 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, MATERIAL, EQUIPMENT, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.

HEADWALL DETAIL

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

318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67212				
PROJECT NUMBER 472-83383				SHEET 28
DESIGN <i>RIP/DMV</i>	DRAWN <i>JAK</i>	APPROVED	DATE <i>08-01</i>	SCALE <i>NONE</i>
				OF 39