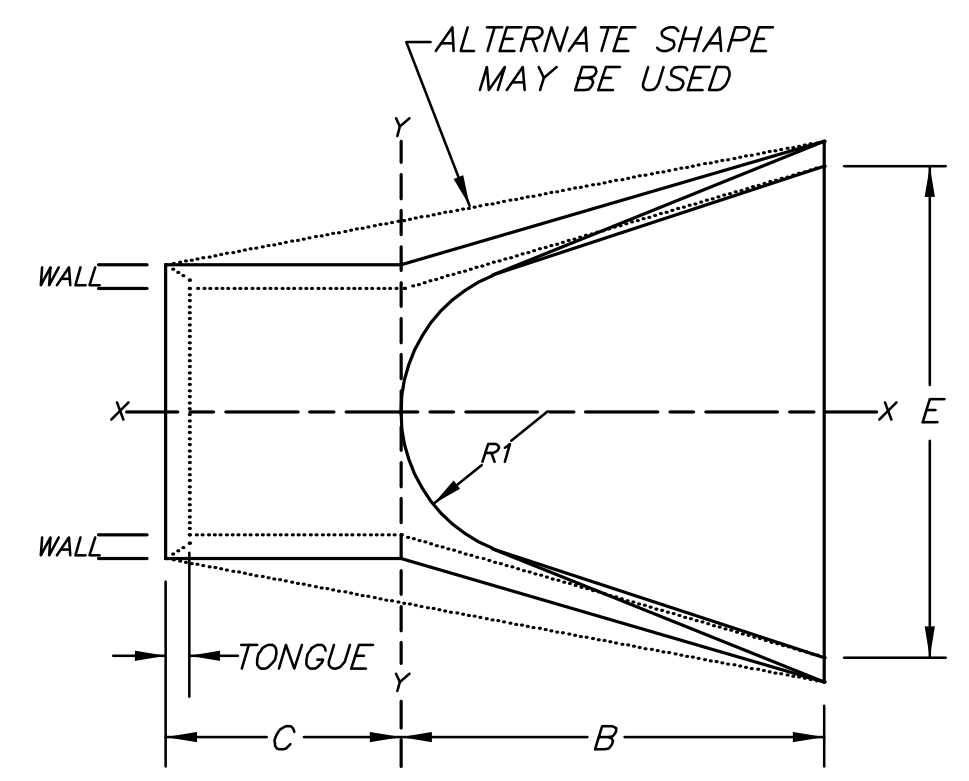


All exposed edges to have 1/2" bevel

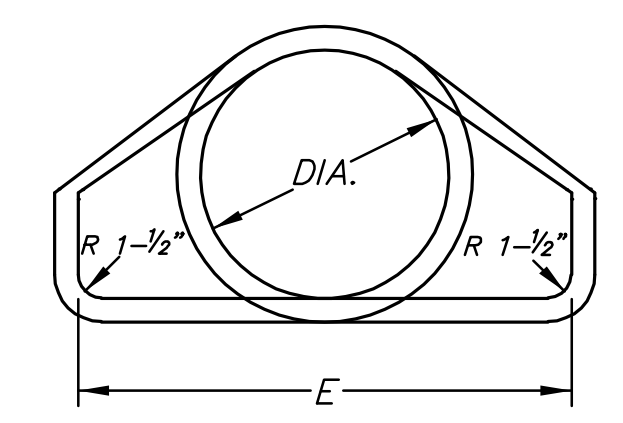
PLAN

BAR	NUMBER	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	14'0"	[]	9.35
b	6	10'4"	[]	41.42
c	2	7'0"	[]	9.35
d	2	9'0"	[]	12.02
e	3	5'4"	[]	10.69
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				178.91
Concrete, C.Y.				3.2

All rebars to be #4.



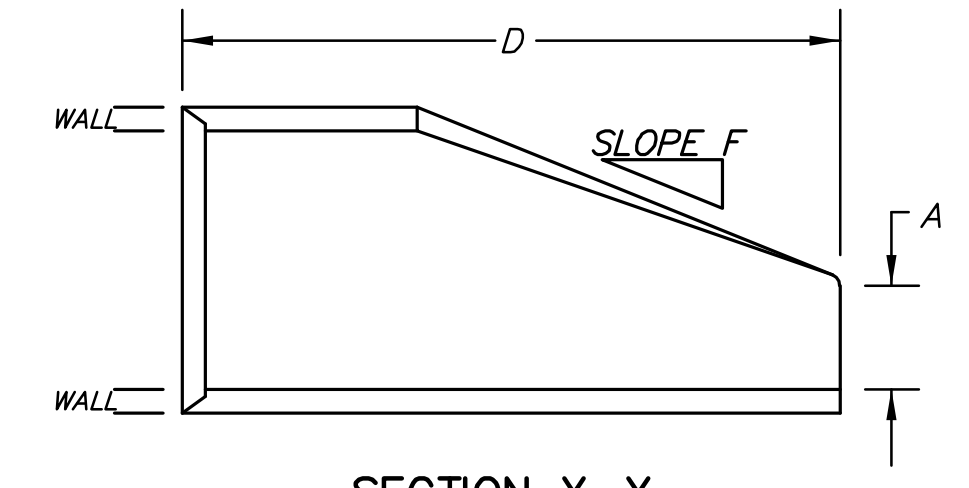
PIPE PLAN



SECTION Y-Y

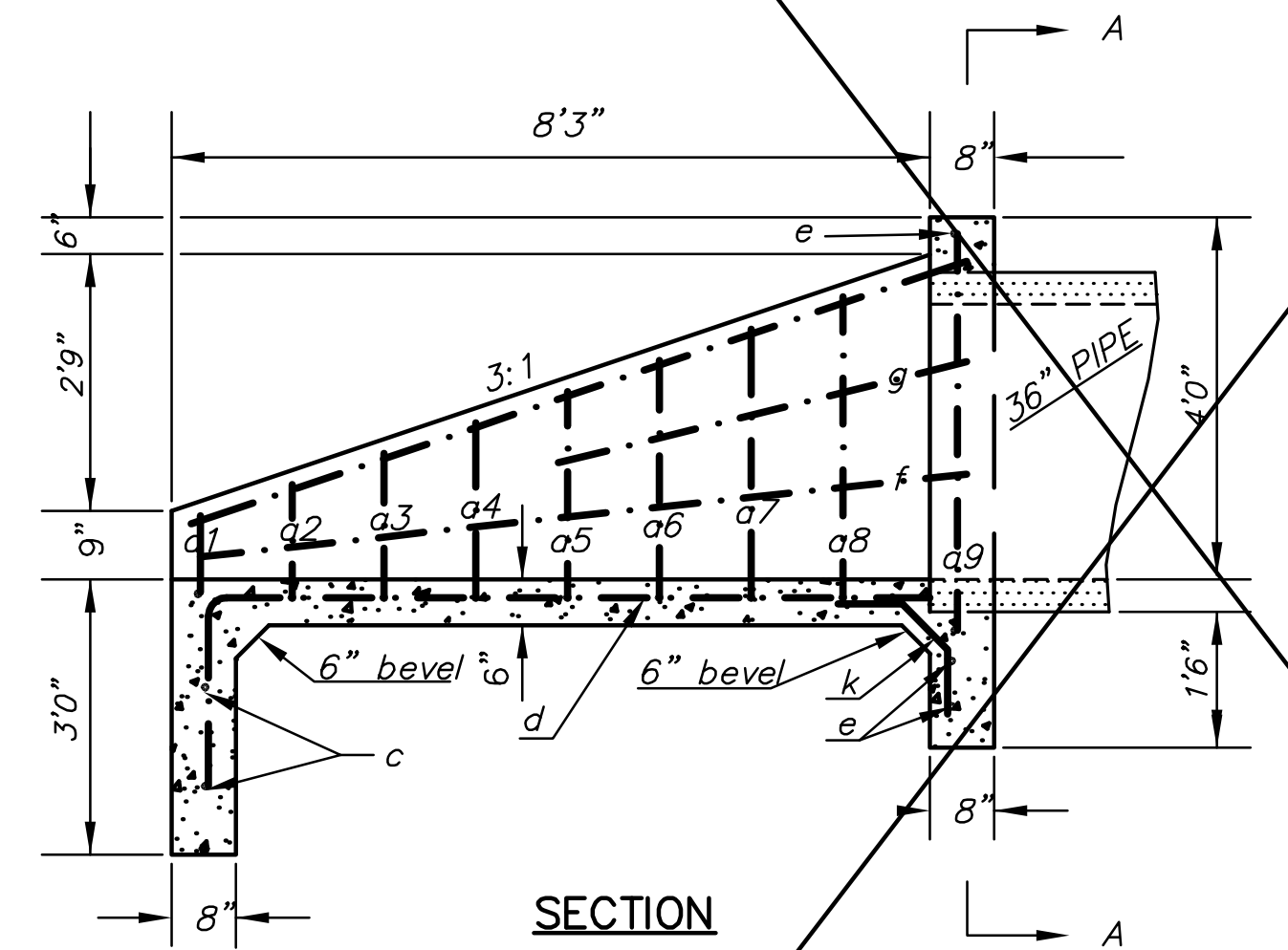
DIAM.	A	B	C	D	E	F	R1	TONGUE	WALL
12"	4"	2' 0"	4' 0-7/8"	6' 0-7/8"	2' 0"	3:1	9"	1-1/2"	2"
15"	6"	2' 3"	3' 10"	6' 1"	2' 6"	3:1	11"	2"	2 1/4"
18"	9"	2' 3"	3' 10"	6' 1"	3' 0"	3:1	12"	2-1/2"	2 1/2"
24"	9-1/2"	3' 7-1/2"	2' 6"	6' 1-1/2"	4' 0"	3:1	14"	2-1/2"	3"
30"	1' 0"	4' 6"	1' 7-3/4"	6' 1-3/4"	5' 0"	3:1	15"	3"	3-1/2"
36"	1' 3"	5' 3"	1' 10-3/4"	8' 1-3/4"	6' 0"	3:1	20"	3-1/2"	4"
42"	1' 9"	5' 3"	2'-11"	8' 2"	6' 6"	3:1	22"	3-3/4"	4-1/2"
48"	2' 0"	6' 0"	2' 2"	8' 2"	7' 0"	3:1	22"	4-1/4"	5"
54"	2' 3"	5' 5"	2' 11"	8' 4"	7' 6"	3:1	24"	4-3/4"	5-1/2"
60"	2' 6"	5' 0"	3' 3"	8' 3"	8' 0"	2.4:1	24"	5"	6"
66"	2' 0"	6' 6"	1' 9"	8' 3"	8' 6"	2:1	24"	5-1/2"	7"
72"	2' 0"	6' 6"	1' 9"	8' 3"	9' 0"	2:1	24"	6"	7-1/2"

TONGUE LENGTHS BASED ON QUINN STANDARD

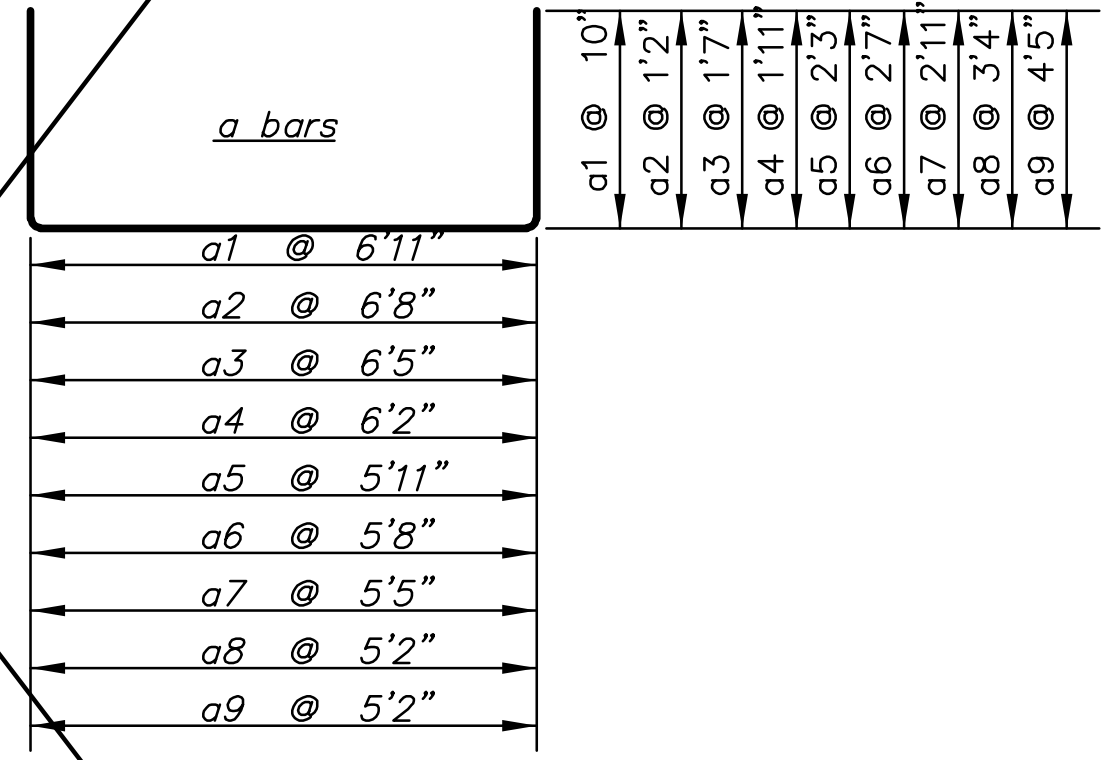


SECTION X-X

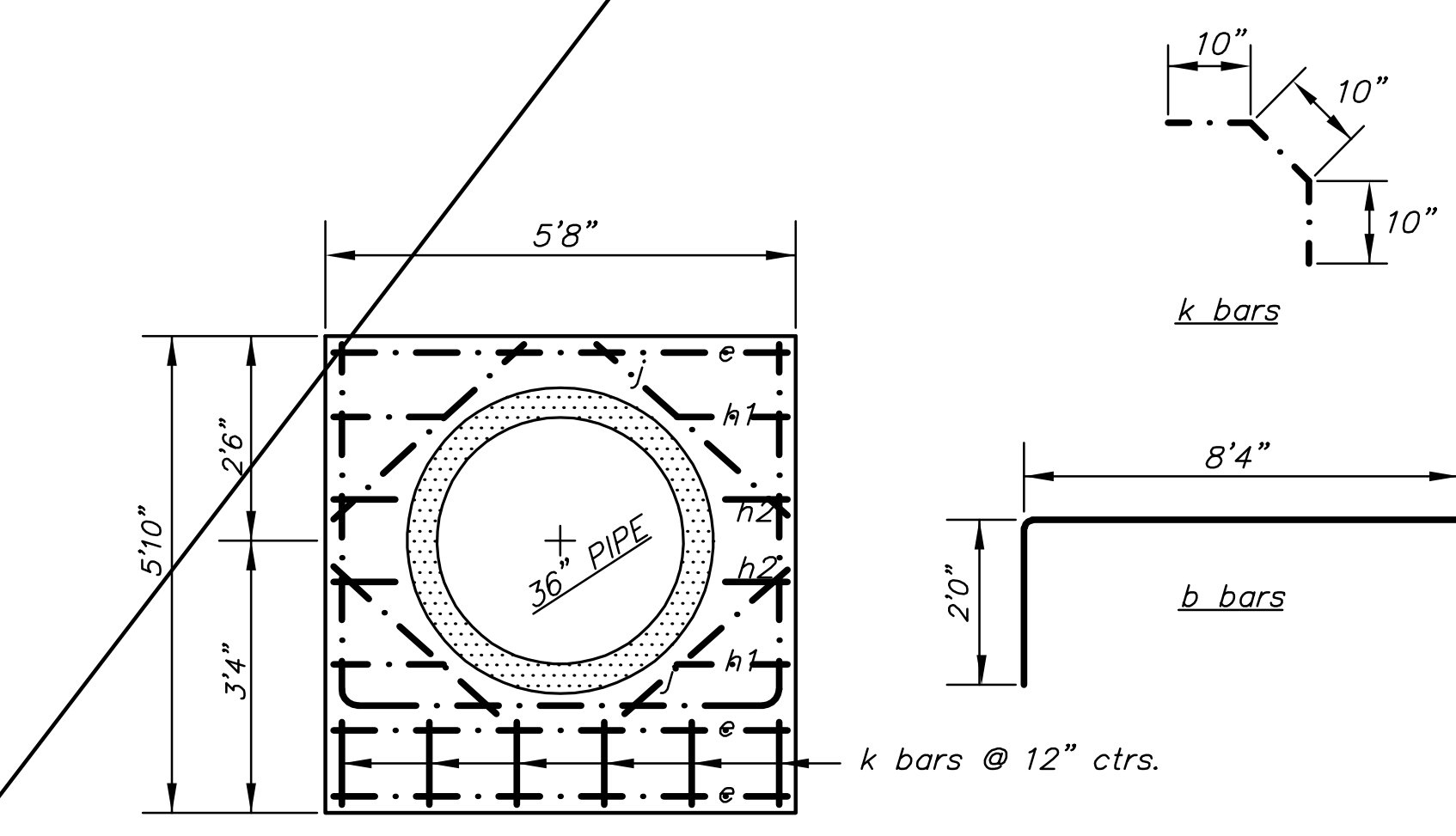
PIPE END SECTION



SECTION

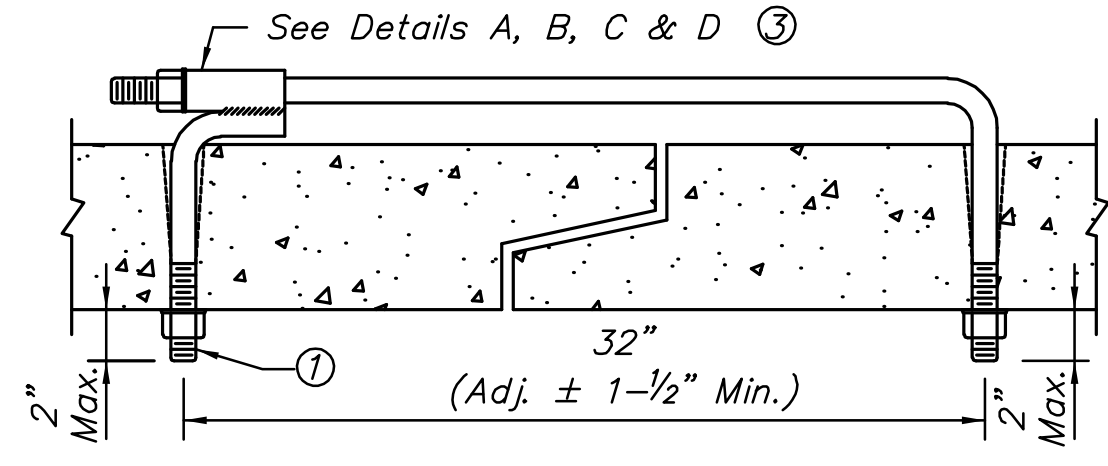


a bars

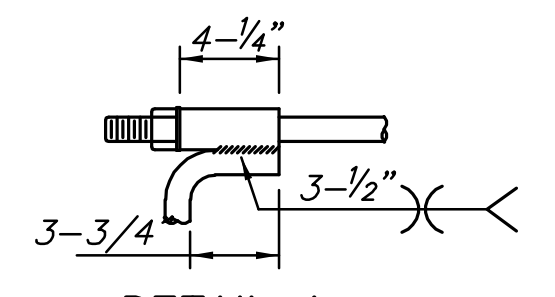


A-A SECTION

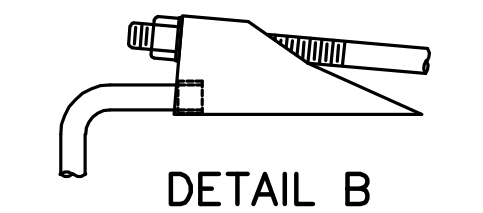
HEADWALL FOR 36" PIPE



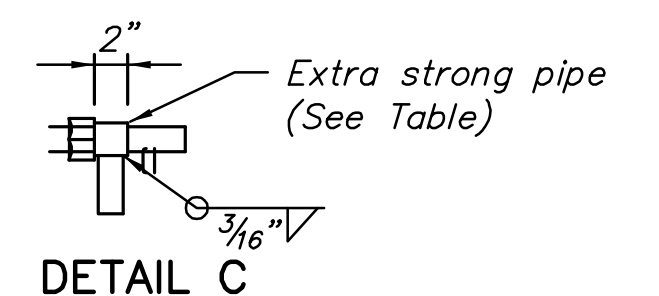
SINGLE CONNECTION TIE (3)



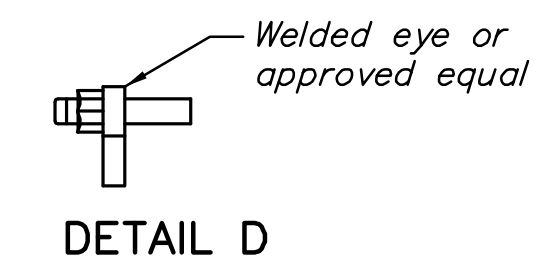
DETAIL A



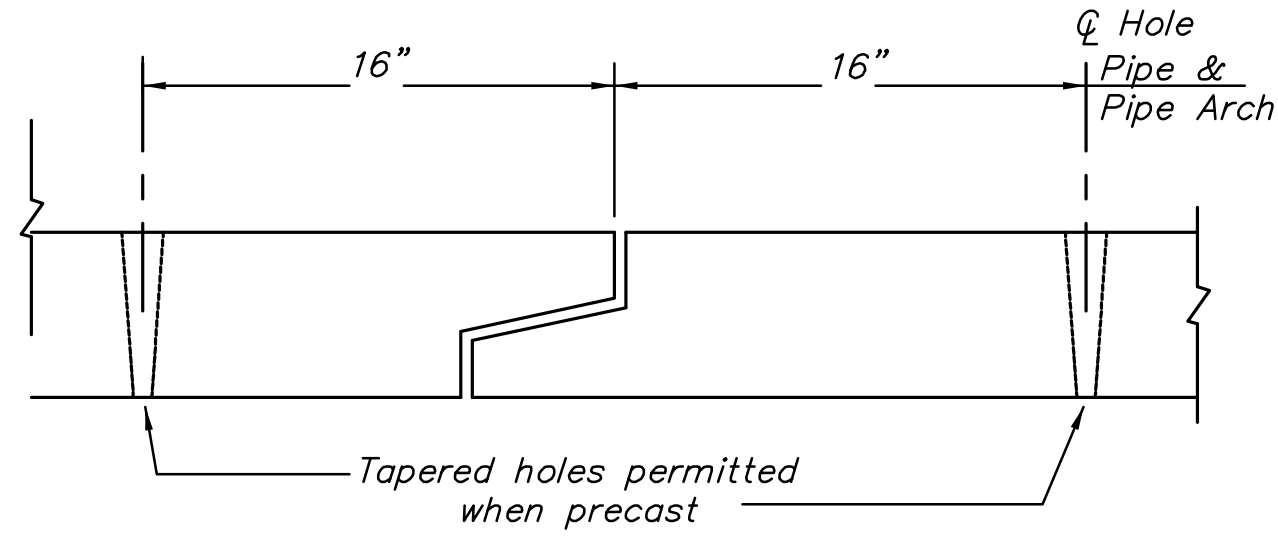
DETAIL B



DETAIL C



DETAIL D



Holes shall be cast or drilled 16" from centerline of joints for box culverts, as shown above, unless forms are set up for 16" spacing from outside of joint.

PIPE TIE DETAILS

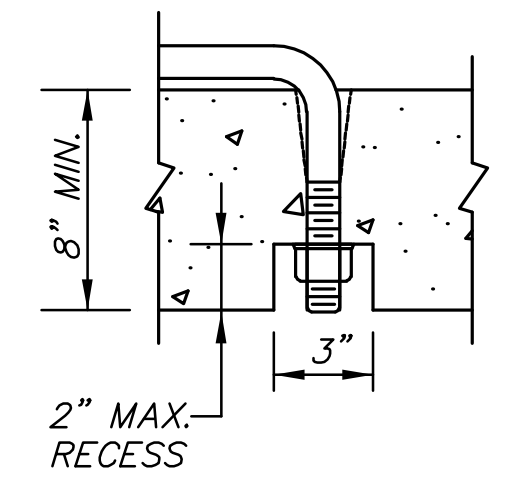
NOTES:

- TIES ARE SUBSIDIARY TO STORM SEWER PIPE. TIE RODS SHALL BE GALVANIZED OR POWER WASHED AND DIPPED IN AN APPROVED ZINC RICH EPOXY PRIME PAINT AFTER FABRICATION.
- TIES TO BE USED ONLY TO HOLD PIPE SECTIONS TOGETHER, NOT FOR PULLING SECTIONS TIGHT.
- TIE ROD THREADS SHALL PROJECT TO THE INSIDE OF PIPE EXCEPT AS NOTED IN PLANS.
- TIE ROD THREADS SHALL BE RECESSED WHEN PIPE IS USED AS CATTLE PASS OR PEDESTRIAN TRAIL.
- TIES MAY BE COMPLETED WITH U-BOLT TIES, SINGLE CONNECTION TIES (AS SHOWN) OR DOUBLE CONNECTION TIES.
- CONNECT END SECTION AND PIPE SECTIONS WITH PIPE TIES A MINIMUM DISTANCE OF 20' FROM THE END OF THE END SECTION.

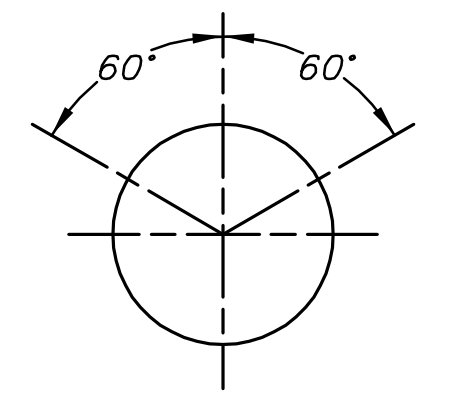
PIPE SIZE (INCHES)	ROD THREAD DIA.
12 - 27	5/8"
30 - 66	3/4"
72 - 108	1"

ROD THREAD DIA.	EXTRA STRONG PIPE INSIDE DIA.
5/8"	3/4"
3/4"	1"
1"	1-1/4"

PIPE SIZE LISTED IS INSIDE DIA. OF ROUND PIPE OR EQUIVALENT DIA. OF PIPE ARCH.



OPTIONAL RECESS DETAIL (2)



ROUND PIPE

LINCOLN STREET BRIDGE AND DAM IMPROVEMENTS OVER ARKANSAS RIVER

RCP
OUTFALL
DETAIL
SHEET TITLE
472-84883
PROJECT NUMBER

DESIGN BY
DRAWN BY
CHECKED BY

ISSUED
1/24/2011
REVISED

SHEET NO.
34 of 169