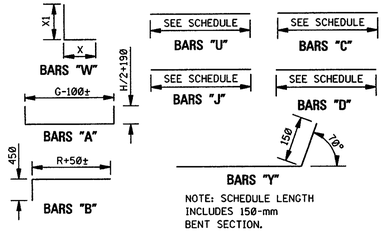
STATE	PROJECT NO.
MISS.	



NOTE: SCHEDULE LENGTH INCLUDES 150-mm BENT SECTION.

BAR BENDING DETAILS

NOTE: WHENEVER THE COMPUTED LENGTH OF BAR EXCEEDS 9000 mm, THE SCHEDULED LENGTH INCLUDES A 300-mm LAP. ALL BARS ARE #13 EXCEPT BARS "W". SEE SCHEDULE FOR SIZE OF BARS "W".

GENERAL NOTES:

1. SPECIFICATIONS: MISSISSIPPI DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
2. ALL CONCRETE SHALL BE CLASS "B".
3. ALL EXPOSED EDGES SHALL BE CHAMFERED 20 mm.
4. EXPOSED CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE MDOT SPECIFICATIONS.
5. ALL LENGTHS AND QUANTITIES IN THE TABLES HEREON ARE BASED ON CONCRETE PIPE.
6. QUANTITIES SHOWN SHALL BE THE BASIS FOR FINAL PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.

DIMENSIONS AND REINFORCING COMMON TO FLARED HEADWALLS FOR SINGLE, DOUBLE AND TRIPLE LINE PIPE CULVERTS

PIPE DIA	MIN THK "T"	DIMENSIONS C	H	R	S1	S2	U	W	REINFORCING STEEL U NO	LGTH	W1 NO	SIZE	X	X1	LGTH	W2 NO	SIZE	X	X1	LGTH	W3 NO	SIZE	X	X1	LGTH	W4 NO	SIZE	X	X1	LGTH	W5 NO	SIZE	X	X1	LGTH	W6 NO	SIZE	X	X1	LGTH	W7 NO	SIZE	X	X1	LGTH	W8 NO	SIZE	X	X1	LGTH	Y1 NO	LGTH	Y2 NO	LGTH	Y3 NO	LGTH	Y4 NO	LGTH	Y5 NO	LGTH	Y6 NO	LGTH	Y7 NO	LGTH	Y8 NO	LGTH
375	57	175	725	1165	1185	1240	150	200	4	1150	4	#13	325	500	825	6	#13	300	250	550																															2	800	2	1500												
450	63	175	840	1350	1385	1440	150	250	4	1325	4	#13	375	600	975	8	#13	300	300	600																															2	800	2	1700												
600	75	175	1015	1725	1780	1835	150	300	4	1725	4	#13	500	775	1275	6	#13	400	475	875	2	#13	300	350	650																									2	800	2	2100												
750	88	175	1190	2025	2105	2155	150	375	4	2025	4	#13	625	950	1575	6	#13	475	650	1125	6	#13	325	425	750																									2	800	2	1875	2	2425										
900	100	190	1365	2365	2465	2515	150	425	4	2425	4	#16	725	1125	1850	6	#13	600	825	1425	8	#13	425	525	950																									2	800	2	1725	2	2775										
1050	113	190	1540	2665	2780	2835	150	500	4	2750	4	#16	875	1300	2175	6	#13	675	1000	1675	8	#13	475	700	1175	4	#13	375	500	875																			2	800	2	1725	2	2925	2	3100									
1200	125	190	1715	3000	3140	3195	150	565	4	3125	4	#16	925	1450	2375	6	#16	800	1150	1950	8	#13	600	850	1450	4	#13	375	550	925																			2	800	2	1725	2	2925	4	3475									
1350	138	200	1890	3300	3460	3515	150	625	4	3425	4	#16	1050	1600	2650	6	#16	900	1300	2200	8	#13	675	1000	1675	8	#13	500	700	1200																			2	800	2	1725	2	2925	4	3775									
1500	150	200	2065	3675	3855	3910	150	675	4	3850	4	#16	1150	1775	2925	6	#16	975	1475	2450	8	#16	750	1175	1925	6	#13	550	875	1425	4	#13	400	575	975															2	800	2	1725	2	2925	2	3825	4	4225							
1650	163	200	2275	4125	4330	4390	165	765	4	4275	4	#19	1275	2000	3275	6	#16	1100	1700	2800	8	#16	950	1400	2350	6	#16	775	1100	1875	6	#13	550	800	1350															2	825	2	1725	2	2925	2	3825	6	4700							
1800	175	200	2450	4425	4645	4710	175	825	4	4600	4	#19	1425	2225	3650	6	#19	1250	1925	3175	8	#16	1050	1625	2675	6	#16	850	1325	2175	6	#13	600	1025	1625	2	#13	600	900	1500									2	825	2	1725	2	2925	2	3825	2	4725	4	5000					
2100	200	200	2800	5025	5275	5345	200	950	4	5275	2	#19	1625	2575	4200	6	#19	1550	2275	3825	8	#19	1350	1975	3325	6	#16	1125	1675	2800	6	#16	950	1375	2325	8	#16	750	1075	1825									2	825	2	1800	2	2725	2	3725	2	4675	6	5525					
2400	225	200	3125	5775	6075	6145	200	1050	4	6075	4	#22	1675	2850	4525	6	#22	1675	2550	4225	8	#19	1500	2250	3750	6	#19	1300	1950	3250	4	#16	1100	1650	2750	6	#16	900	1350	2250	4	#16	650	1150	1800					2	750	2	1650	2	2850	2	3750	2	4500	2	5625	6	6350		
2700	250	200	3475	6400	6730	6815	225	1200	4	6725	6	#22	1925	3225	5150	8	#22	1925	2925	4850	6	#22	1750	2625	4375	6	#22	1550	2325	3875	6	#19	1350	2025	3375	6	#16	1150	1725	2875	4	#16	950	1425	2375	2	#16	925	1350	2275	2	900	2	1800	2	2700	2	3600	2	4725	2	5850	2	6600	8	7000

DIMENSIONS AND REINFORCING FOR FLARED HEADWALL FOR SINGLE LINE PIPE CULVERT

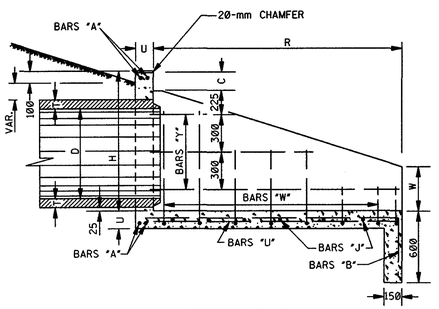
PIPE DIA	DIMENSIONS A	B	E	G	X	Y	Z	REINFORCING STEEL A NO	LGTH	B NO	LGTH	C NO	LGTH	D NO	LGTH	J1 NO	LGTH	J2 NO	LGTH	J3 NO	LGTH	J4 NO	LGTH	J5 NO	LGTH	J6 NO	LGTH	J7 NO	LGTH	J8 NO	LGTH	J9 NO	LGTH	J10 NO	LGTH	J11 NO	LGTH	J12 NO	LGTH	J13 NO	LGTH	J14 NO	LGTH	J15 NO	LGTH	J16 NO	LGTH	J17 NO	LGTH	J18 NO	LGTH	J19 NO	LGTH	J20 NO	LGTH	J21 NO	LGTH	J22 NO	LGTH	PAY QTY 1-HEADWALL CONC (m³)	STEEL (kg)
375	-	-	-	995	1520	675	-	4	2000	4	1665	2	800	2	550	1	950	1	1150	1	1375	1	1600	1	1625																																						0.61	39
450	-	-	-	1070	1730	750	-	4	2190	5	1850	2	900	2	600	1	1025	1	1250	1	1450	1	1675	1	1850																																						0.76	47
600	-	-	-	1245	2180	925	-	4	2540	5	2225	2	1075	2	675	1	1175	1	1400	1	1600	1	1825	1	2050	1	2275																																				1.11	59
750	-	-	-	1430	2590	1115	-	4	2900	6	2525	2	1250	2	750	1	1425	1	1625	1	1850	1	2050	1	2275	1	2475	1	2700																																		1.48	80
900	-	-	-	1595	2995	1275	-	4	3240	7	2865	2	1425	2	825	1	1550	1	1775	1	2000	1	2200	1	2425	1	2650	1	2850	1	3075	1	3100																														1.91	106
1050	-	-	-	1770	3390	1450	-	4	3590	7	3165	2	1600	2	900	1	1725	1	1950	1	2150	1	2375	1	2600	1	2800	1	3025	1	3250	1	3475	1	3500																												2.38	132
1200	-	-	-	1945	3805	1625	-	4	3940	8	3500	2	1775	2	975	1	1900	1	2100	1	2325	1	2550	1	2775	1	2975	1	3200	1	3425	1	3650	1	3850	1	3900																										2.93	167
1350	-	-	-	2145	4230	1825	-	4	4315	8	3800	2	1950	2	1050	1	2100	1	2300	1	2525	1	2750	1	2975	1	3175	1	3400	1	3625	1	3850	1	4050	1	4275	1	4325																								3.51	192
1500	-	-	-	2320	4675	2000	-	4	4665	9	4175	2	2125	2	1125	1	2250	1	2475	1	2700	1	2925	1	3150	1	3350	1	3575	1	3800	1	4025	1	4250	1	4450	1	4675	1	4800																						4.21	237
1650	-	-	-	2520	5180	2175	-	4	5075	9	4625	2	2350	2	1275	1	2475	1	2675	1	2900	1	3100	1	3325	1	3550	1	3775	1	4000	1	4225	1	4425	1	4650	1	4875	1	5075	1	5300																				5.56	296
1800	-	-	-	2720	5570	2350	-	4	5450	10	4925	2	2550	2	1375	1	2625	1	2850	1	3075	1	3300	1	3525	1	3750	1	3975	1	4175	1	4400	1	4625	1	4850	1	5075	1	5275	1	5500	1	5725																		6.86	348
2100	1050	4725	600	3125	6360	2700	-	4	6205	11	5525	2	2900	2	1575	1	3050	1	3250	1	3475	1	3700	1	3900	1	4125	1	4325	1	4550	1	4775	1	4975	1	5200	1	5425	1	5650	1	5875	1	6100	1	6300	1	6525												9.52	456
2400	1200	5400	600	3475	7255	3050	-	4	6880	12	6275	2	3225	2	1725	1	3475	1	3700	1	3925	1	4125	1	4350	1	4575	1	4800	1	5000	1	5225	1	5450	1	5650	1	5875	1	6100	1	6325	1	6550	1	6750	1	6975	1	7200	1	7400	1	7550						12.15	615
2700	1350	6075	600	3880	8060	3400	-	4	7635	14	6900	2	3600	2	1900	1	3875	1	4100	1	4300	1	4525	1	4750	1	4975	1	5175	1	5400	1	5625	1	5825	1	6050	1	6275	1	6500	1	6700	1	6925	1	7150	1	7375	1	7575	1	7800	1	8025	1	8225	1	8400	16.58	863

DIMENSIONS AND REINFORCING FOR FLARED HEADWALL FOR DOUBLE LINE PIPE CULVERT

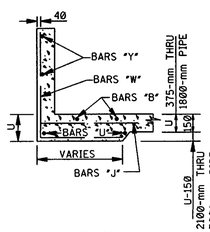
PIPE DIA	DIMENSIONS A	B	E	G	X	Y	Z	REINFORCING STEEL A NO	LGTH	B NO	LGTH	C NO	LGTH	D NO	LGTH	J1 NO	LGTH	J2 NO	LGTH	J3 NO	LGTH	J4 NO	LGTH	J5 NO	LGTH	J6 NO	LGTH	J7 NO	LGTH	J8 NO	LGTH	J9 NO	LGTH	J10 NO	LGTH	J11 NO	LGTH	J12 NO	LGTH	J13 NO	LGTH	J14 NO	LGTH	J15 NO	LGTH	J16 NO	LGTH	J17 NO	LGTH	J18 NO	LGTH	J19 NO	LGTH	J20 NO	LGTH	J21 NO	LGTH	J22 NO	LGTH	PAY QTY 1-HEADWALL CONC (m³)	STEEL (kg)
375	-	-	-	1770	2295	1450	300	4	2775	7	1665	3	800	4	550	1	1725	1	1925	1	2150	1	2375	1	2400																																						0.84	53
450	-	-	-	1920	2580	1600	300	4	3040	8	1850	3	900	4	600	1	1875	1	2100	1	2300	1	2525	1	2700																																						1.04	62
600	-	-	-	2270	3205	1950	300	4	3565	9	2225	3	1075	4	675	1	2200	1	2425	1	2625	1	2850	1	3075	1	3300																																						1.49	80
750	-	-	-	2720	3875	2400	375	4	4190	10	2525	4	1250	4	750	1	2700	1	2900	1	3125	1	3325	1	3550	1	3750	1	3975																																				2.02	108
900	-	-	-	3120	4520	2800	450	4	4765	12	2865	4	1425	4	825	1	3075	1	3300	1	3525	1	3725	1	3950	1	4175	1	4375	1	4600	1	4625																																2.62	145
1050	-	-	-	3545	5165	3225	525	4	5365	13	3165	4	1600	4	900	1	3500	1	3725	1	3925	1	4150	1	4375	1	4575	1	4800	1	5025	1	5250	1	5275																														3.29	181
1200	-	-	-	3970	5830	3650	600	4	5965	15	3500	4	1775	4	975	1	3925	1	4125	1	4350	1	4575	1	4800	1	5000	1	5225	1	5450	1	5675	1	5875	1	5925																												4.07	227
1350	-	-	-	4445	6530	4125	675	4	6615	16	3800	5	1950	4	1050	1	4400	1	4600	1	4825	1	5050	1	5275	1	5475	1	5700	1	5925	1	6150	1	6350	1	6575	1	6625																										4.88	267
1500	-	-	-	4870	7225	4550	750	4	7215	17	4175	5	2125	4	1125	1	4800	1	5025	1	5250	1	5475	1	5700	1	5900	1	6125	1	6350	1	6575	1	6800	1	7000	1	7225	1	7350																								5.88	321
1650	-	-	-	5320	7980	4975	825	4	7875	18	4625	5	2350	4	1275	1	5275	1	5475	1	5700	1	5900	1	6125	1	6350	1	6575	1	6800	1	7025	1	7250	1	7450	1	7675	1	7875	1	8100																				7.81	397
1800	-	-	-	5770	8620	5400	900	4	8500	20	4925	5	2550	4	1375	1	5675	1	5900	1	6125	1	6350	1	6575	1	6800	1	7025	1	7225	1	7450	1	7675	1	7900	1	8125	1	8325	1	8550	1	8775																		9.72	465
2100	900	8275	4150	6675	9910	6250	1050	4	10055	23	5525	6	2900	4	1575	1	6600	1	6800	1	7025	1	7250	1	7450	1	7675	1	7875	1	8100	1	8325	1	8525	1	8750	1	8975	1	9500	1	9725	1	9950	1	10150	1	10375												13.26	613
2400	900	9450	4650	7525	11305	7100	1200	4	11230	26	6275	7	3225	4	1725	1	7525	1	7750	1	7950	1	8175	1	8400	1	8625	1	8825	1	9350	1	9575	1	9775	1	10000	1	10225	1	10450	1	10650	1	10875	1	11100	1	11325	1	11525	1	11750	1	11950						17.50	823
2700	900	10625	5150	8430	12610	7950	1350	4	12485	29	6900	7	3600	4	1900	1	8425	1	8650	1	8850	1	9375	1	9600	1	9825	1	10025	1	10250	1	10475	1	10675	1	10900	1	11125	1	11350	1	11550	1	11775	1	12000	1	12225	1	12425	1	12650	1	12850	1	13100	1	13250	23.65	1112

DIMENSIONS AND REINFORCING FOR FLARED HEADWALL FOR TRIPLE LINE PIPE CULVERT

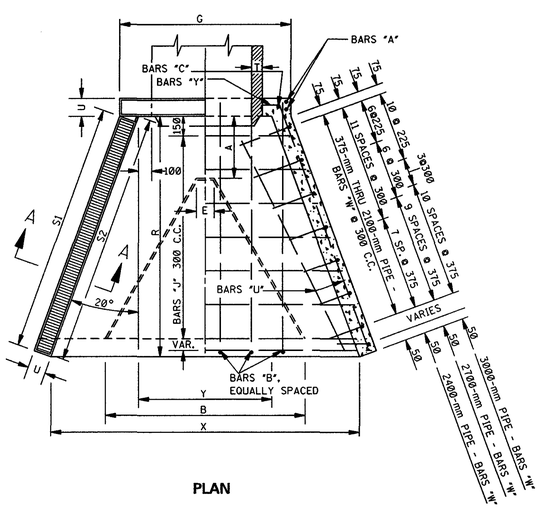
PIPE DIA	DIMENSIONS A	B	E	G	X	Y	Z	REINFORCING STEEL A NO	LGTH	B NO	LGTH	C NO	LGTH	D NO	LGTH	J1 NO	LGTH	J2 NO	LGTH	J3 NO	LGTH	J4 NO	LGTH	J5 NO	LGTH	J6 NO	LGTH	J7 NO	LGTH	J8 NO	LGTH	J9 NO	LGTH	J10 NO	LGTH	J11 NO	LGTH	J12 NO	LGTH	J13 NO	LGTH	J14 NO	LGTH	J15 NO	LGTH	J16 NO	LGTH	J17 NO	LGTH	J18 NO	LGTH	J19 NO	LGTH	J20 NO	LGTH	J21 NO	LGTH	J22 NO	LGTH	PAY QTY 1-HEADWALL CONC (m³)	STEEL (kg)
375	-	-	-	2545	3070	2225	300	4	3550	10	1665	4	800	6	550	1	2500	1	2700	1	2925	1	3150	1	3175																																						1.07	67
450	-	-	-	2770	3430	2450	300	4	3890	11	1850	4	900	6	600	1	2725	1	2950	1	3150	1	3375	1	3550																																						1.33	77
600	-	-	-	3295	4230	2975	300	4	4590	13	2225	4	1075	6	675	1	3225	1	3450	1	3650	1	3875	1	4100	1	4325																																						1.88	102
750	-	-	-	4005	5165	3690	375	4	5475	14	2525	6	1250	6	750	1	3975	1	4175	1	4400	1	4600	1	4825	1	5025	1	5250																																				2.56	136
900	-	-	-	4645	6045	4325	450	4	6290	17	2865	6	1425	6	825	1	4600	1	4825	1	5050	1	5250	1	5475	1	5700	1	5900	1	6125	1	6150																																3.34	183
1050	-	-	-	5320	6940	5000	525	4	7140	19	3165	6	1600	6	900	1	5275	1	5500	1	5700	1	5925	1	6150	1	6350	1	6575	1	6800	1	7025	1	7050																														4.20	229
1200	-	-	-	5995	7855	5675	600	4	7990	22	3500	6	1775	6	975	1	5950	1	6150	1	6375	1	6600	1	6825	1	7025	1	7250	1	7475	1	7700	1	7900	1	7950																												5.21	287
1350	-	-	-	6745	8830	6425	675	4	8915	24	3800	8	1950	6	1050	1	6700	1	6900	1	7125	1	7350	1	7575	1	7775	1	8000	1	8225	1	8450	1	8650	1	8875	1	8925																										6.26	341
1500	-	-	-	7420	9775	7100	750	4	10065	25	4175	8	2125	6	1125	1	7350	1	7575	1	7800	1	8025	1	8250	1	8450	1	8675	1	8900	1	9425	1	9650	1	9850	1	10075	1	10200																								7.54	409
1650	-	-	-	8120	10780	7775	825	4	10975	27	4625	8	2350	6	1275	1	8075	1	8275	1	8500	1	8700	1	8925	1	9450	1	9675	1	9900	1	10125	1	10350	1	10550	1	10775	1	10975	1	11200																						10.07	502
1800	-	-	-	8820	11670	8450	900	4	11850	30	4925	8	2550	6	1375	1	8725	1	8950	1	9475	1	9700	1	9925	1	10150	1	10375	1	10575	1	10800	1	11025	1	11250	1	11475	1	11675	1	11900	1	12125																				12.59	587
2100	900	11825	7700	10225	13460	9800	1050	4	13605	35	5525	10	2900	6	1575	1	10450	1	10650	1	10875	1	11100	1	11300	1	11525	1	11725	1	11950	1	12175	1	12375	1	12600	1	12825	1	13050	1	13275	1	13500	1	13700	1	13925														17.00	771
2400	900	13500	8700	11575	15355	11150	1200	4	15280	39	6275	12	3225	6	1725	1	11875	1	12100	1	12300	1	12525	1	12750	1	12975	1	13175	1	13400	1	13625	1	13850	1	14050	1	14275	1	14500	1	14700	1	14925	1	15150	1	15375	1	15575	1	15800	1	15925						22.88	1022
2700	900	15175	9700	12980	17160	12500	1350	4	17035	44	6900	12	3600	6	1900	1	13275	1	13500	1	13700	1	13925	1	14150	1	14350	1	14575	1	14800	1	15025	1	15250	1	15450	1	15675	1	15900	1	16125	1	16325	1	16550	1	16750	1	16975	1	17200	1	17425	1	17650	1	17800	30.77	1355



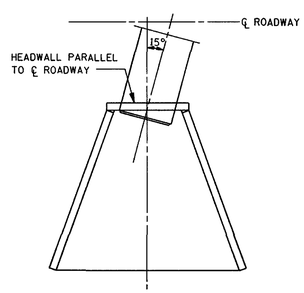
SECTION B–B



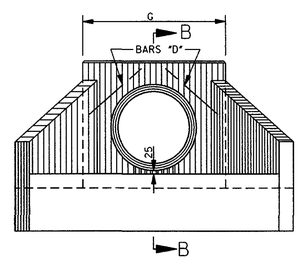
SECTION A–A



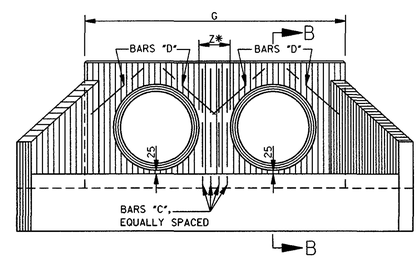
PLAN



15° SKEW INSTALLATION PLAN



FRONT ELEVATION



FRONT ELEVATION

*NOTE: MEASURE NORMAL (PERPENDICULAR) TO PIPE.

ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

HEADWALLS FOR CONCRETE PIPE 1:3 SLOPE – 0° – 15° SKEW

DEPARTMENT OF TRANSPORTATION METRIC MISSISSIPPI

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