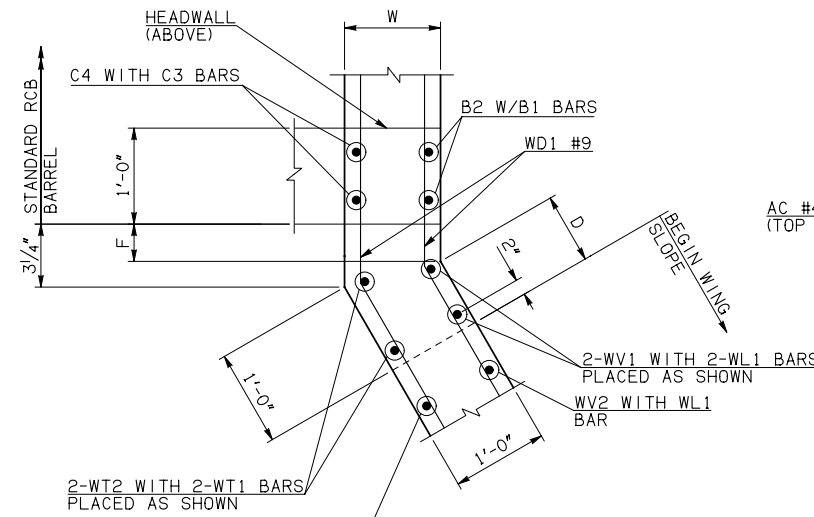


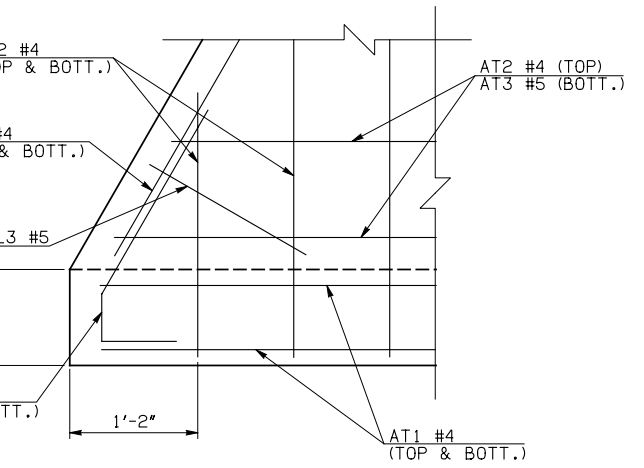
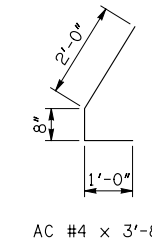
DESCRIPTION	REVISIONS	DATE

WINGWALL DIMENSIONS				
SPAN	W	D	F	
10'	12"	8 3/4"	0	
12'	12"	8 3/4"	0	
14'	12"	8 3/4"	0	
16'	13"	6 3/4"	1 3/4"	
18'	14"	4 3/4"	3 1/2"	



PLAN OF WING AT BARREL

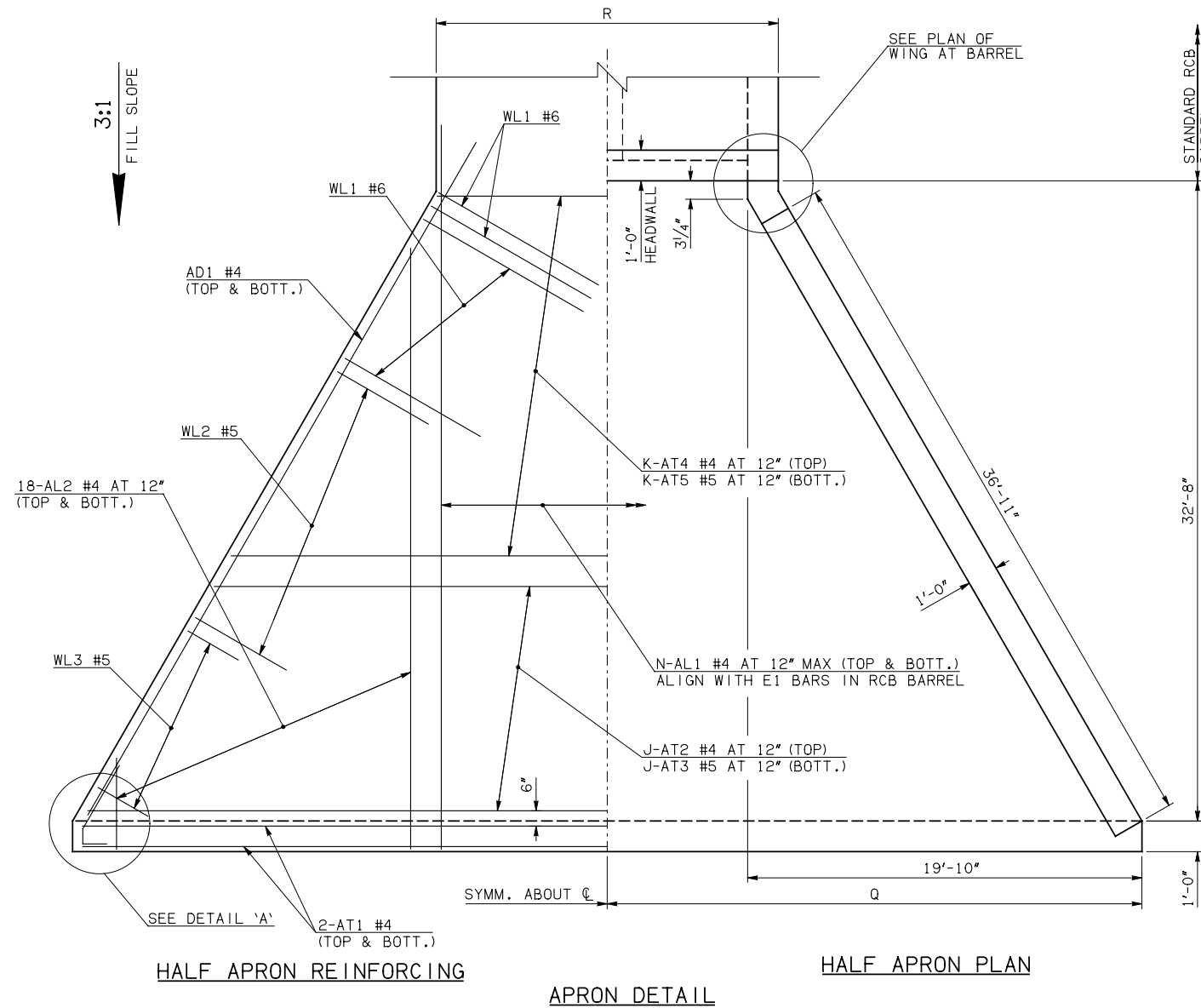
APRON VARIABLES						
SPAN	DIM. R	DIM. Q	QTY. J	QTY. K	QTY. N	
10'	23'-0"	30'-4"	33	0	26	
12'	27'-0"	32'-4"	4	29	30	
14'	31'-0"	34'-4"	7	26	34	
16'	35'-2"	36'-4"	11	22	38	
18'	39'-4"	38'-4"	14	19	42	



DETAIL 'A'

WINGWALL BAR LIST					
ONE WINGWALL SHOWN; TWO REQUIRED					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
WD1	#9	20	BNT	8'-4"	
WH1	#4	2	STR	37'-9"	
WH2	#4	20	STR	19'-5" AVG.	3'-10" TO 35'-0"
WH3	#5	2	STR	38'-3"	
WL1	#6	13	BNT	13'-10"	
WL2	#5	31	BNT	10'-3"	
WL3	#5	11	BNT	4'-8 1/2" AVG.	3'-3" TO 6'-2"
WT1	#4	28	STR	2'-10"	
WT2	#4	2	STR	11'-0"	
WT3	#4	6	STR	10'-1 1/2" AVG.	9'-5" TO 10'-10"
WT4	#4	20	STR	6'-5" AVG.	3'-8" TO 9'-2"
WT5	#4	11	STR	2'-8 1/2" AVG.	1'-3" TO 4'-2"
WV1	#5	2	STR	11'-0"	
WV2	#5	11	STR	10'-1 1/2" AVG.	9'-5" TO 10'-10"
WV3	#5	20	STR	6'-5" AVG.	3'-8" TO 9'-2"
U1	#4	1	BNT	3'-0"	

- ① 4-SETS OF 18-AL2 BARS REQUIRED
- ② 2-SETS OF 10-WH2 BARS REQUIRED
- ③ INCLUDES 2'-6" LAP



APRON AND HEADWALL BAR LIST

APRON AND HEADWALL BAR LIST																	
ONE APRON AND ONE HEADWALL SHOWN																	
MARK	SIZE	FORM	10' SPAN			12' SPAN			14' SPAN			16' SPAN			18' SPAN		
			QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS
AC	#4	BNT	4	3'-8"		4	3'-8"		4	3'-8"		4	3'-8"		4	3'-8"	
AD1	#4	STR	4	39'-9"		4	39'-9"		4	39'-9"		4	39'-9"		4	39'-9"	
AL1	#4	STR	52	35'-5"		60	35'-5"		68	35'-5"		76	35'-5"		84	35'-5"	
① AL2	#4	STR	72	17'-2 1/2" AVG.	2'-6" TO 31'-11"	72	17'-2 1/2" AVG.	2'-6" TO 31'-11"	72	17'-2 1/2" AVG.	2'-6" TO 31'-11"	72	17'-2 1/2" AVG.	2'-6" TO 31'-11"	72	17'-2 1/2" AVG.	2'-6" TO 31'-11"
AT1	#4	STR	4	62'-10" ③		4	66'-10" ③		4	70'-10" ③		4	74'-10" ③		4	78'-10" ③	
AT2	#4	STR	33	41'-4" AVG.	22'-10" TO 59'-10"	4	64'-7" AVG.	62'-10" TO 66'-4" ③	7	66'-10" AVG.	63'-4" TO 70'-4" ③	11	68'-6 1/2" AVG.	62'-9" TO 74'-4" ③	14	70'-9 1/2" AVG.	63'-3" TO 78'-4" ③
AT3	#5	STR	33	41'-4" AVG.	22'-10" TO 59'-10"	4	64'-7" AVG.	62'-10" TO 66'-4" ③	7	66'-10" AVG.	63'-4" TO 70'-4" ③	11	68'-6 1/2" AVG.	62'-9" TO 74'-4" ③	14	70'-9 1/2" AVG.	63'-3" TO 78'-4" ③
AT4	#4	STR	0			29	43'-0" AVG.	26'-10" TO 59'-2"	26	45'-3 1/2" AVG.	30'-10" TO 59'-9"	22	46'-11 1/2" AVG.	34'-10" TO 59'-1"	19	49'-3" AVG.	38'-10" TO 59'-8"
AT5	#5	STR	0			29	43'-0" AVG.	26'-10" TO 59'-2"	26	45'-3 1/2" AVG.	30'-10" TO 59'-9"	22	46'-11 1/2" AVG.	34'-10" TO 59'-1"	19	49'-3" AVG.	38'-10" TO 59'-8"
CH	#4	STR	4	22'-8"		4	26'-8"		4	30'-8"		4	34'-10"		4	39'-0"	
CL1	#4	BNT	26	4'-4"		30	4'-4"		34	4'-4"		38	4'-4"		42	4'-4"	
CL2	#4	BNT	26	4'-3"		30	4'-3"		34	4'-3"		38	4'-3"		42	4'-3"	

QUANTITIES

ITEM	UNIT	QUANTITIES				
		10' SPAN	12' SPAN	14' SPAN	16' SPAN	18' SPAN
CLASS AA CONCRETE	CY	74.90	80.40	85.80	91.30	96.80
REINFORCING STEEL	LB	9140.00	9610.00	10080.00	10560.00	11030.00

NOTE: QUANTITIES ABOVE ARE FOR ONE END SECTION, WHICH IS COMPRISED OF ONE HEADWALL, ONE APRON, AND TWO WINGWALLS. INCLUDED IN REINFORCING STEEL PAY ITEM QUANTITY IS THE WEIGHT OF ADDITIONAL RCB BARREL REINFORCING STEEL REQUIRED AS SHOWN.

APPROVED BY BRIDGE ENGINEER *Robert J. Muech* DATE 4/09/09

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - END SECTION DETAILS
DOUBLE CELL - 9'-0" HEIGHT - 0°
SHEET NO. 1 OF 2