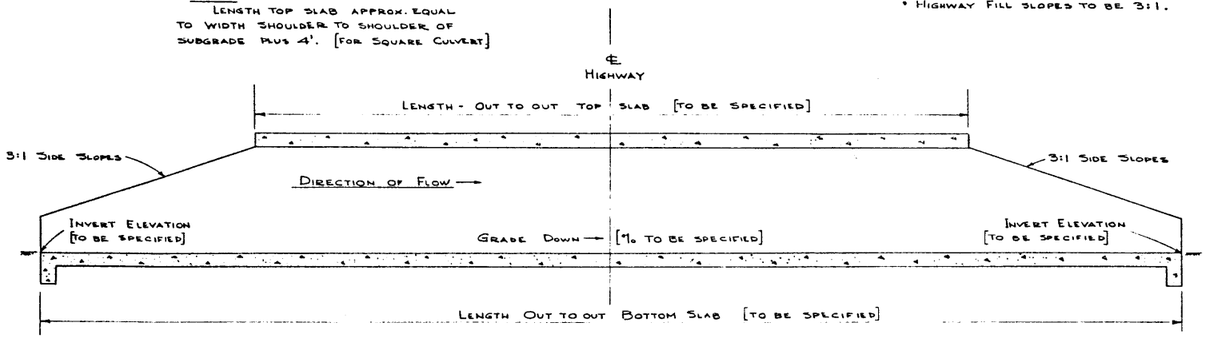
General Notes:

- All Concrete to be Class "A" 3000 PSI @ 28 Days.
- Min. Steel Cover to be 2".
- Max. Size coarse aggregate to be 1½".
- All corners and edges to be filleted or chamfered 1".
- Highway Fill slopes to be 3:1.

Note:
Length top slab approx. equal to width shoulder to shoulder of subgrade plus 4'. [for square culvert]

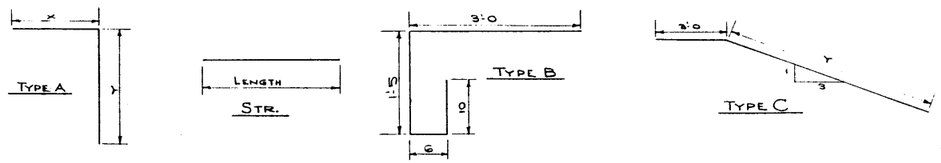


Elevation

Bar Schedule

Barrel Steel

Mark	Type	5'-0 × 5'-0					6'-0 × 6'-0					6'-6 × 6'-6					7'-0 × 7'-0					8'-0 × 8'-0					9'-0 × 9'-0					10'-0 × 10'-0				
		Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length	Size	Spc's	x	Y	Length
B_1	Str.	⅜♦	6			6'-2	¼♦	7			7'-2	¼♦	6½			7'-8	¼♦	6			8'-2	⅜♦	7½			9'-2	⅜♦	6½			10'-2	⅛♦	6			11'-2
B_2	A	⅜	12	2'-3	2'-3	4'-6	¼	14	2'-7	2'-7	5'-2	¼	13	2'-9	2'-9	5'-6	¼	12	2'-11	2'-11	5'-10	⅜	15	3'-3	3'-3	6'-6	⅜	13	3'-7	3'-7	7'-2	⅛	12	3'-11	3'-11	7'-10
B_3	A	⅜	12	2'-3	4'-7	6'-10	¼	14	2'-7	5'-1	7'-8	¼	13	2'-9	5'-4	8'-1	¼	12	2'-11	5'-7	8'-6	⅜	15	3'-3	6'-1	9'-4	⅜	13	3'-7	6'-7	10'-2	⅛	12	3'-11	7'-1	11'-0
B_4	Str.	½	12			6'-2	⅜	14			7'-2	⅜	13			7'-8	¼	12			8'-2	⅜	15			9'-2	⅜	13			10'-2	⅛	12			11'-2
B_5	Str.	⅜	12				¼	14				¼	13				¼	12				⅜	15				⅜	13				⅛	12			

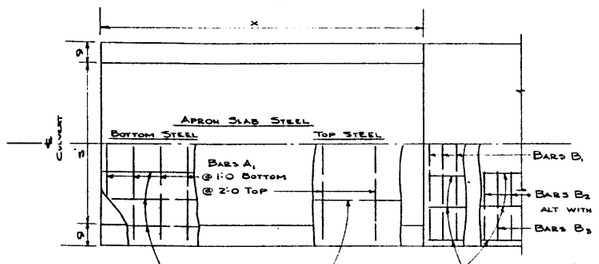


Bar Types

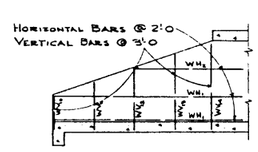
All dimensions shown are out to out of steel.

Apron Slab, Cut-off Wall, and Wingwall Steel

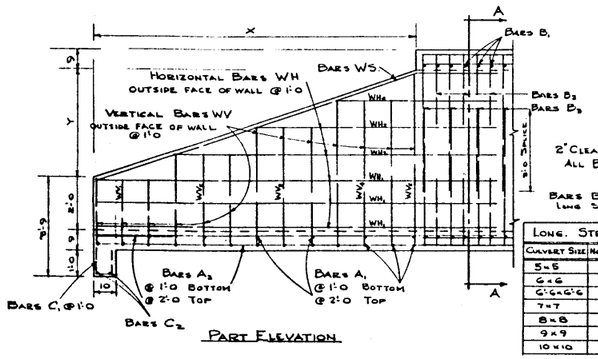
Mark	Type	5'-0 × 5'-0						6'-0 × 6'-0						6'-6 × 6'-6						7'-0 × 7'-0						8'-0 × 8'-0						9'-0 × 9'-0						10'-0 × 10'-0					
		No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight	No.	Size	x	Y	Length	Weight
A_1	Str.	30	½♦			6'-2	123·6	40	½♦			7'-2	191·5	42	½♦			7'-8	221·8	48	½♦			8'-2	261·9	58	⅜♦			9'-2	334·5	66	¾♦			10'-2	1007·8	76	⅞♦			11'-2	1734·7
A_2	Str.	12	½			12'-0	96·2	14	½			15'-0	140·3	15	½			16'-6	165·3	16	½			18'-0	192·4	18	⅜			21'-0	394·3	20	¾			24'-0	721·0	22	⅞			27'-0	1214·1
C_1	B	12	½			5'-9	46·1	14	½			5'-9	53·8	15	½			5'-9	57·6	16	½			5'-9	61·5	18	⅜			5'-9	108·0	20	½			5'-9	172·3	22	⅜			5'-9	258·6
C_2	Str.	4	½			6'-2	16·5	4	½			7'-2	19·2	4	½			7'-8	20·5	4	½			8'-2	21·8	4	⅜			9'-2	36·2	4	½			10'-2	61·1	4	⅜			11'-2	91·3
WV_1	A	12	½	3'-0	2'-6	5'-6	44·1	12	½	3'-0	2'-6	5'-6	44·1	12	½	3'-0	2'-6	5'-6	44·1	12	½	3'-0	2'-6	5'-6	44·1	12	⅜	3'-0	2'-6	5'-6	68·8	12	½	3'-0	2'-6	5'-6	99·1	12	⅜	3'-0	2'-6	5'-6	134·9
WV_2	A	12	½	3'-0	3'-6	6'-6	52·1	12	½	3'-0	3'-6	6'-6	52·1	12	½	3'-0	3'-6	6'-6	52·1	12	½	3'-0	3'-6	6'-6	52·1	12	⅜	3'-0	3'-6	6'-6	81·4	12	½	3'-0	3'-6	6'-6	117·2	12	⅜	3'-0	3'-6	6'-6	159·4
WV_3	A	12	½	3'-0	4'-6	7'-6	60·1	12	½	3'-0	4'-6	7'-6	60·1	12	½	3'-0	4'-6	7'-6	60·1	12	½	3'-0	4'-6	7'-6	60·1	12	⅜	3'-0	4'-6	7'-6	93·9	12	½	3'-0	4'-6	7'-6	135·2	12	⅜	3'-0	4'-6	7'-6	184·0
WV_4	A	4	½	3'-0	5'-6	8'-6	22·7	12	½	3'-0	5'-6	8'-6	68·1	12	½	3'-0	5'-6	8'-6	68·1	12	½	3'-0	5'-6	8'-6	68·1	12	⅜	3'-0	5'-6	8'-6	106·4	12	½	3'-0	5'-6	8'-6	153·2	12	⅜	3'-0	5'-6	8'-6	208·5
WV_5	A							4	½	3'-0	6'-6	9'-6	25·4	8	½	3'-0	6'-6	9'-6	50·8	12	½	3'-0	6'-6	9'-6	76·2	12	⅜	3'-0	6'-6	9'-6	118·9	12	½	3'-0	6'-6	9'-6	171·2	12	⅜	3'-0	6'-6	9'-6	233·0
WV_6	A																			4	½	3'-0	7'-6	10'-6	28·1	12	⅜	3'-0	7'-6	10'-6	131·4	12	½	3'-0	7'-6	10'-6	189·3	12	⅜	3'-0	7'-6	10'-6	257·5
WV_7	A																									4	⅜	3'-0	8'-6	11'-6	48·0	12	½	3'-0	8'-6	11'-6	207·3	12	⅜	3'-0	8'-6	11'-6	282·1
WV_8	A																															4	½	3'-0	9'-6	12'-6	75·1	12	⅜	3'-0	9'-6	12'-6	306·6
WV_9	A																																					4	⅜	3'-0	10'-6	13'-6	110·4
WH_1	Str.	20	½			12'-0	160·3	20	½			15'-0	200·4	20	½			16'-6	220·4	20	½			18'-0	240·5	20	⅜			21'-0	438·1	20	¾			24'-0	721·0	20	⅞			27'-0	1103·8
WH_2	Str.	4	½			9'-0	24·0	4	½			12'-0	32·1	4	½			13'-6	36·1	4	½			15'-0	40·1	4	⅜			18'-0	75·1	4	¾			21'-0	126·2	4	⅞			24'-0	196·2
WH_3	Str.	8	½			6'-0	32·1	8	½			9'-0	48·1	8	½			10'-6	56·1	8	½			12'-0	64·1	8	⅜			15'-0	129·2	8	¾			18'-0	216·3	8	⅞			21'-0	343·4
WH_4	Str.							4	½			6'-0	16·0	4	½			7'-6	20·0	4	½			9'-0	24·0	4	⅜			12'-0	50·1	4	¾			15'-0	90·1	4	⅞			18'-0	141·2
WH_5	Str.																			8	½			6'-0	32·1	8	⅜			9'-0	75·1	8	¾			12'-0	144·2	8	⅞			15'-0	245·5
WH_6	Str.																									4	⅜			6'-0	25·0	4	¾			9'-0	54·1	4	⅞			12'-0	98·1
WH_7	Str.																															8	¾			6'-0	72·1	8	⅞			9'-0	147·2
WH_8	Str.																																					4	⅞			6'-0	49·1
WV_{10}	Str.	4	½			2'-6	6·7	4	½			2'-6	6·7	4	½			2'-6	6·7	4	½			2'-6	6·7	4	⅜			2'-6	10·4	4	¾			2'-6	15·0	4	⅞			2'-6	20·4
WV_{11}	Str.	4	½			3'-6	9·4	4	½			3'-6	9·4	4	½			3'-6	9·4	4	½			3'-6	9·4	4	⅜			3'-6	14·6	4	¾			3'-6	21·0	4	⅞			3'-6	28·6
WV_{12}	Str.	4	½			4'-6	12·0	4	½			4'-6	12·0	4	½			4'-6	12·0	4	½			4'-6	12·0	4	⅜			4'-6	18·8	4	¾			4'-6	27·0	4	⅞			4'-6	36·8
WV_{13}	Str.	4	½			5'-6	14·7	4	½			5'-6	14·7	4	½			5'-6	14·7	4	½			5'-6	14·7	4	⅜			5'-6	22·9	4	¾			5'-6	33·0	4	⅞			5'-6	45·0
WV_{14}	Str.							4	½			6'-6	17·4	4	½			6'-6	17·4	4	½			6'-6	17·4	4	⅜			6'-6	27·1	4	¾			6'-6	39·1	4	⅞			6'-6	53·1
WV_{15}	Str.																			4	½			7'-6	20·0	4	⅜			7'-6	31·3	4	¾			7'-6	45·1	4	⅞			7'-6	61·3
WV_{16}	Str.																															4	¾			8'-6	51·1	4	⅞			8'-6	69·5
WV_{17}	Str.																															4	¾			9'-6	57·1	4	⅞			9'-6	77·7
WV_{18}	Str.																																					4	⅞			10'-6	85·8
WS	C	8	⅝		9'-0	12'-0	100·1	8	¾		12'-0	15'-0	180·2	8	¾		18'-9	16'-9	201·3	8	¾		15'-4	18'-4	220·3	8	¾		18'-6	21'-6	258·3	8	⅞		21'-8	24'-8	403·3	8	⅞		25'-10	26'-10	458·8
							820·7						1191·6						1334·5						1567·6						2951·3						5225·5						8422·4



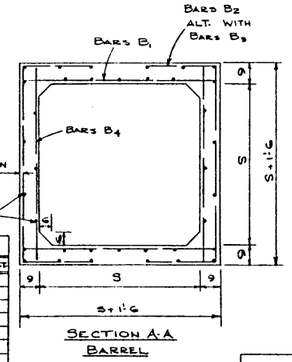
Part Plan



Reinforcing Steel
Inside Face of Wingwall



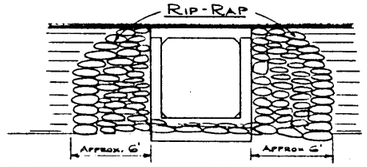
Part Elevation



Section A-A
Barrel

Long. Steel	
Culvert Size	No./X-Sect.
5×5	32
6×6	32
6'-6×6'-6	36
7×7	44
8×8	38
9×9	50
10×10	62

Wingwall Dimensions.		
Culvert Size	x'	Y'
5×5	9'-0	3'-0
6×6	12'-0	4'-0
6'-6×6'-6	13'-6	4'-6
7×7	15'-0	5'-0
8×8	18'-0	6'-0
9×9	21'-0	7'-0
10×10	24'-0	8'-0



Estimated Quantities

Culvert Size (5×5)	Barrel Quantities: Concrete Cu.Yds. per Ft.	Barrel Quantities: Steel Lbs. per Ft.	Wings, Apron Quant.: Concrete Cu.Yds.	Wings, Apron Quant.: Steel Lbs.
5×5	0·658	114·63	7·15	820·7
6×6	0·769	164·35	10·79	1191·6
6'-6×6'-6	0·824	187·47	12·88	1334·5
7×7	0·880	225·79	15·10	1567·6
8×8	0·991	270·00	20·08	2951·3
9×9	1·102	348·94	25·72	5225·5
10×10	1·213	417·64	32·04	8422·4

Design Specifications.
- A.A.S.H.O Specs. 1950
- H20-S16-44
- Impact - 30%

APPROVED.....
CHIEF BRIDGE ENGINEER

NO.	DATE	DESCRIPTION	BY

REVISIONS

DESIGNED BY W.J.G DATE Aug 11 1952
DETAILED BY W.J.G DATE Aug 13 1952
CHECKED BY DATE 19

Standard Plan
—Reinforced Concrete Box Culverts—
[Cover over Culvert - 0 ft.]

Government of the Province of Alberta
Department of Highways
Bridge Branch, Edmonton

FILE NO. ..... HWY. NO. .....
LOCATION ..... SCALE .....
STREAM ..... SHEET 1 OF 1

DWG. NO. S-533.

AT A.V. RECORDS CENTRE P18648

W. P. & L. CO. LTD., CALGARY NO. 1855