

Note to Designer:
 The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

NO.	DESCRIPTION OF REVISIONS	DATE	MADE BY
1	Original Issue	2-12	S.J.H.
2	Added 3'-4.5' height for existing box extensions only	5-15	D.B.B.
3			
4			

Span * S'	Height * H'	Top Slab * T'	Walls * W'	aa			bb		cc	ee		ff		gg	hh			F				
				Bar Size	Spacing	Length	Bar Size	Length		Bar Size	Spacing	Length	Bar Size		Spacing	Length	Bar Size		Spacing	Length		
6'	3'	9 1/2"	8"	5	12"	4'-4	5	12"	8'-9	68	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	5'-1	2'-5
	4'	9 1/2"	8"	5	12"	5'-4	5	12"	10'-9	76	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	5'-7	2'-5
	5'	9 1/2"	8"	5	12"	6'-4	5	12"	12'-9	76	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	6'-1	2'-5
	6'	9 1/2"	8"	5	12"	7'-4	5	12"	14'-9	84	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	6'-7	2'-5
	7'	9 1/2"	8"	5	10"	8'-4	5	12"	16'-9	92	5	7"	20'-3	5	6"	20'-3	24	3'-0	4	6"	7'-1	2'-5
8'	3'	12"	9"	5	12"	4'-9	5	12"	9'-7	68	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	5'-5	2'-6
	4'	12"	9"	5	12"	5'-9	5	12"	11'-7	76	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	5'-11	2'-6
	5'	12"	9"	5	12"	6'-9	5	12"	13'-7	76	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	6'-5	2'-6
	6'	12"	9"	5	12"	7'-9	5	12"	15'-7	84	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	6'-11	2'-6
	7'	12"	9"	5	12"	8'-9	5	12"	17'-7	92	5	7"	26'-5	6	7"	26'-5	30	4'-0	5	7"	7'-5	2'-6
10'	3'	15"	11"	5	12"	5'-3	5	12"	10'-5	68	6	8"	32'-9	7	7"	32'-9	36	5'-0	5	7"	6'-0	2'-8
	4'	15"	11"	5	12"	6'-3	5	12"	12'-5	76	6	8"	32'-9	7	7"	32'-9	36	5'-0	5	7"	6'-6	2'-8
	5'	15"	11"	5	12"	7'-3	5	12"	14'-5	76	6	8"	32'-9	7	7"	32'-9	36	5'-0	5	7"	7'-0	2'-8
	6'	15"	11"	5	12"	8'-3	5	12"	16'-5	84	6	8"	32'-9	7	7"	32'-9	36	5'-0	5	7"	7'-6	2'-8
	7'	15"	11"	5	12"	9'-3	5	12"	18'-5	92	6	8"	32'-9	7	7"	32'-9	36	5'-0	5	7"	8'-0	2'-8
12'	8'	18"	13"	5	12"	10'-9	5	12"	21'-1	92	6	6"	39'-1	7	6"	39'-1	42	6'-0	5	6"	9'-6	3'-5
	9'	18"	13"	5	12"	11'-9	5	12"	23'-1	100	6	6"	39'-1	7	6"	39'-1	42	6'-0	5	6"	10'-0	3'-5
	10'	18"	13"	5	10"	12'-9	5	12"	25'-1	108	6	6"	39'-1	7	6"	39'-1	42	6'-0	5	6"	10'-7	3'-5
	11'	18"	13"	5	10"	13'-9	5	12"	27'-1	108	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-1	3'-5
	12'	18"	13"	5	10"	14'-9	5	12"	29'-1	116	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-7	3'-5

⊕ Total number of bars in the cross-section.

Span * S'	Height * H'	Top Slab * T'	Walls * W'	aa			bb		cc	ee		ff		gg	hh			F				
				Bar Size	Spacing	Length	Bar Size	Length		Bar Size	Spacing	Length	Bar Size		Spacing	Length	Bar Size		Spacing	Length		
6'	3'	12 1/2"	8"	5	12"	4'-10	5	12"	9'-10	68	5	7"	20'-3	5	6"	20'-3	24	3'-0	4	6"	5'-4	2'-5
	4'	12 1/2"	8"	5	12"	5'-10	5	12"	11'-10	76	5	7"	20'-3	5	6"	20'-3	24	3'-0	4	6"	5'-10	2'-5
	5'	12 1/2"	8"	5	12"	6'-10	5	12"	13'-10	76	5	7"	20'-3	5	6"	20'-3	24	3'-0	4	6"	6'-4	2'-5
	6'	12 1/2"	8"	5	12"	7'-10	5	12"	15'-10	84	5	7"	20'-3	5	6"	20'-3	24	3'-0	4	6"	6'-10	2'-5
	7'	12 1/2"	8"	5	10"	8'-10	5	12"	17'-10	92	5	7"	20'-3	5	6"	20'-3	24	3'-0	5	6"	7'-4	2'-5
8'	3'	16"	9"	5	12"	5'-5	5	12"	10'-11	68	5	6"	26'-5	6	6"	26'-5	30	4'-0	4	6"	6'-0	2'-6
	4'	16"	9"	5	12"	6'-5	5	12"	12'-11	76	5	6"	26'-5	6	6"	26'-5	30	4'-0	4	6"	6'-6	2'-6
	5'	16"	9"	5	12"	7'-5	5	12"	14'-11	76	5	6"	26'-5	6	6"	26'-5	30	4'-0	4	6"	6'-9	2'-6
	6'	16"	9"	5	12"	8'-5	5	12"	16'-11	84	5	6"	26'-5	6	6"	26'-5	30	4'-0	4	6"	7'-3	2'-6
	7'	16"	9"	5	10"	9'-5	5	12"	18'-11	92	5	6"	26'-5	6	6"	26'-5	30	4'-0	5	6"	7'-9	2'-6
10'	3'	19"	11"	5	12"	5'-11	5	12"	11'-6	68	6	6"	32'-9	7	6"	32'-9	36	5'-0	5	6"	6'-6	2'-9
	4'	19"	11"	5	12"	6'-11	5	12"	13'-6	76	6	6"	32'-9	7	6"	32'-9	36	5'-0	5	6"	7'-0	2'-9
	5'	19"	11"	5	12"	7'-11	5	12"	15'-6	76	6	6"	32'-9	7	6"	32'-9	36	5'-0	5	6"	7'-6	2'-9
	6'	19"	11"	5	12"	8'-11	5	12"	17'-6	84	6	6"	32'-9	7	6"	32'-9	36	5'-0	5	6"	8'-0	2'-9
	7'	19"	11"	5	12"	9'-11	5	12"	19'-6	92	6	6"	32'-9	7	6"	32'-9	36	5'-0	5	6"	8'-6	2'-9
12'	8'	23"	13"	5	12"	11'-7	5	12"	22'-7	92	7	7"	39'-1	7	6"	39'-1	42	6'-0	6	6"	10'-0	3'-5
	9'	23"	13"	5	10"	12'-7	5	12"	24'-7	100	7	7"	39'-1	7	6"	39'-1	42	6'-0	6	6"	10'-6	3'-5
	10'	23"	13"	5	10"	13'-7	5	12"	26'-7	108	7	7"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-0	3'-5
	11'	23"	13"	5	10"	14'-7	5	12"	28'-7	108	7	7"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-6	3'-5
	12'	23"	13"	5	7"	15'-7	5	12"	30'-7	116	7	7"	39'-1	7	6"	39'-1	42	6'-0	6	6"	12'-0	3'-5

New box culverts shall not be constructed using 3' or 4' heights without special approval from ADOT Bridge Group. Tables referencing these sizes are provided for extension of existing box culverts only.

Span * S'	Height * H'	Top Slab * T'	Walls * W'	aa			bb		cc	ee		ff		gg	hh			F				
				Bar Size	Spacing	Length	Bar Size	Spacing		Length	Bar Size	Spacing	Length		Bar Size	Spacing	Length					
6'	3'	11"	8"	5	12"	4'-7	5	12"	9'-2	68	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	5'-3	2'-5
	4'	11"	8"	5	12"	5'-7	5	12"	11'-2	76	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	5'-9	2'-5
	5'	11"	8"	5	12"	6'-7	5	12"	13'-2	76	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	6'-3	2'-5
	6'	11"	8"	5	12"	7'-7	5	12"	15'-2	84	5	7"	20'-3	5	7"	20'-3	24	3'-0	4	6"	6'-9	2'-5
	7'	11"	8"	5	10"	8'-7	5	12"	17'-2	92	5	7"	20'-3	5	7"	20'-3	24	3'-0	5	7"	7'-3	2'-5
8'	3'	14"	9"	5	12"	5'-1	5	12"	10'-1	68	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	5'-7	2'-6
	4'	14"	9"	5	12"	6'-1	5	12"	12'-1	76	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	6'-1	2'-6
	5'	14"	9"	5	12"	7'-1	5	12"	14'-1	76	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	6'-7	2'-6
	6'	14"	9"	5	12"	8'-1	5	12"	16'-1	84	5	7"	26'-5	6	7"	26'-5	30	4'-0	4	6"	7'-1	2'-6
	7'	14"	9"	5	10"	9'-1	5	12"	18'-1	92	5	7"	26'-5	6	7"	26'-5	30	4'-0	5	7"	7'-7	2'-6
10'	3'	17"	11"	5	12"	5'-7	5	12"	10'-11	68	6	7"	32'-9	7	7"	32'-9	36	5'-0	5	7"	6'-3	2'-9
	4'	17"	11"	5	12"	6'-7	5	12"	12'-11	76	6	7"	32'-9	7	7"	32'-9	36	5'-0	5	7"	6'-9	2'-9
	5'	17"	11"	5	12"	7'-7	5	12"	14'-11	76	6	7"	32'-9	7	7"	32'-9	36	5'-0	5	7"	7'-3	2'-9
	6'	17"	11"	5	12"	8'-7	5	12"	16'-11	84	6	7"	32'-9	7	7"	32'-9	36	5'-0	5	7"	7'-9	2'-9
	7'	17"	11"	5	12"	9'-7	5	12"	18'-11	92	6	7"	32'-9	7	7"	32'-9	36	5'-0	5	7"	8'-3	2'-9
12'	8'	20 1/2"	13"	5	12"	11'-2	5	12"	22'-1	92	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	9'-3	2'-11
	9'	20 1/2"	13"	5	12"	12'-2	5	12"	24'-1	100	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	9'-9	2'-11
	10'	20 1/2"	13"	5	10"	13'-2	5	12"	26'-1	108	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	10'-3	2'-11
	11'	20 1/2"	13"	5	10"	14'-2	5	12"	28'-1	108	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-3	2'-11
	12'	20 1/2"	13"	5	9"	15'-2	5	12"	30'-1	116	6	6"	39'-1	7	6"	39'-1	42	6'-0	6	6"	11'-9	2'-11

QUANTITIES PER LINEAR FOOT OF BARREL (TRIPLE BARREL)

Span * S'	Height * H'	Table I		Table II		Table III		Table IV		Table V	
		Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.	Concrete C. Y.	Reinf. Steel Lbs.
6'	3'	1.664	239.9	1.472	245.8	1.664	260.7	1.855	263.0	2.046	277.4
	4'	1.762	253.5	1.571	259.7	1.762	275.0	1.954	277.3	2.145	291.7
	5'	1.861	261.7	1.670	268.3	1.861	283.9	2.052	286.2	2.244	300.6
	6'	1.960	275.3	1.769	282.2	1.960	293.2	2.151	300.5	2.343	314.9
	7'	2.059	288.9	1.867	296.1	2.059	328.0	2.250	331.4	2.441	354.9
8'	3'	2.082	344.5	2.247	348.3	2.496	354.8	2.827	357.4	3.158	400.5
	4'	2.179	359.2	2.352	362.2	2.601	369.1	2.932	371.7	3.263	414.8
	5'	2.292	368.6								