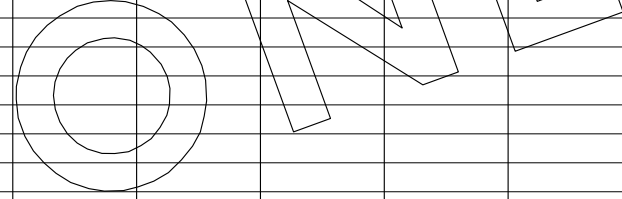


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

Culvert Station and/or Creek Name followed by applicable end (Lt, Rt or Both)	Description of Box Culvert No. Spans ~ Span X Height	Max Fill Height (Ft)	Applicable Box Culvert Standard (4)	Applicable Wingwall or End Treatment	Skew Angle	Side Slope or Channel Slope Ratio (Sl:1)	T Culvert Top Slab Thickness (In)	U Culvert Wall Thickness (In)	C Estimated Curb Height (Ft)	Hw (1) Height of Wingwall (Ft)	A Curb to End of Wingwall (Ft)	B Offset of End of Wingwall (Ft)	Lw Length of Longest Wingwall (Ft)	Ltw Culvert Toewall Length (Ft)	Atw Anchor Toewall Length (Ft)	Riprap Apron (CY)	Class "C" Conc (Curb) (CY) (2)	Class "C" Conc (Wingwall) (CY) (3)	Total Wingwall Area (SF)
Sta 4+22, Mayberry Creek (Both)	2 ~ 7' x 3'	8	MC-7-10	PW-1	15°	2:1	8	7	0.917	4.583	N/A	N/A	9.490	16.306	N/A	0.0	1.2	14.4	174
Thelma Lou Slough (Both)	2 ~ 7' x 3'	8	MC-7-10	PW-2	15°	2:1	8	7	0.917	4.583	N/A	N/A	7.419	16.306	N/A	0.0	1.2	11.4	124
Andy's Gulch (Lt)	2 ~ 7' x 3'	8	MC-7-10	FW-0	0°	4:1	8	7	1.000	4.417	16.333	9.430	18.860	15.750	N/A	0.0	0.6	6.8	90
Andy's Gulch (Rt)	2 ~ 7' x 3'	8	MC-7-10	FW-S	45°	4:1	8	7	1.000	4.417	16.333	28.290	32.667	22.274	N/A	0.0	0.8	8.9	116
Sta 105+10, Opie's Bend Creek (Both)	2 ~ 7' x 3'	8	MC-7-10	SW-0	0°	4:1	8	7	1.000	4.417	N/A	N/A	16.333	N/A	N/A	6.8	1.2	10.8	156
Barney Bayou (Both)	2 ~ 7' x 3'	8	MC-7-10	SETB-FW-0	0°	4:1	8	7	1.000	4.417	16.333	9.430	18.860	15.750	33.443	0.0	1.2	18.2	N/A
Old Man Kelsey's Creek (Both)	2 ~ 7' x 3'	8	MC-7-10	SETB-FW-S	15°	4:1	8	7	1.000	4.417	16.333	9.430	18.860	16.306	24.528	0.0	1.2	16.2	N/A
Otis Creek (Both)	2 ~ 7' x 3'	8	MC-7-10	SETB-SW-0	0°	4:1	8	7	1.000	4.417	N/A	N/A	16.333	N/A	14.583	6.0	1.2	12.6	N/A
Floyd's Draw (Both)	2 ~ 7' x 3'	8	MC-7-10	SETB-PD	0°	6:1	8	7	0.500	3.917	N/A	N/A	22.000	N/A	15.750	0.0	0.6	21.6	N/A
Sta 321+78 (Lt)	2 ~ 7' x 3'	8	SCP-7	SETB-CD	0°	4:1	8	8	0.250	3.667	N/A	N/A	13.333	N/A	17.167	0.0	0.2	7.1	N/A
Sta 321+78 (Rt)	2 ~ 7' x 3'	8	SCP-7	SETB-FW-S	30°	3:1	8	8	0.750	4.167	11.500	11.500	16.263	N/A	29.783	3.4	0.6	6.6	N/A

EXAMPLE



NOTES:
 Skew = 0° on SW-0, FW-0, SETB-CD, SETB-SW-0, and SETB-FW-0 standard sheets;
 30° maximum for safety end treatment

- SL:1 = Horizontal : 1 Vertical
- Side slope at culvert for flared or straight wingwalls.
 - Channel slope for parallel wingwalls.
 - Slope must be 3:1 or flatter for safety end treatments.

T = Box culvert top slab thickness. Dimension can be found on the applicable box culvert standard sheet.

U = Box culvert wall thickness. Dimension can be found on the applicable box culvert standard sheet.

C = Curb height

See applicable wing or end treatment standard sheets for calculations of Hw, A, B, Lw, Ltw, Atw, and Total Wingwall Area.

Hw = Height of wingwall

A = Distance from face of curb to end of wingwall (not applicable to parallel or straight wingwalls)

B = Offset of end of wingwall (not applicable to parallel or straight wingwalls)

Lw = Length of longest wingwall.

Ltw = Length of culvert toewall (not applicable when using riprap apron)

Atw = Length of anchor toewall (applicable to safety end treatment only)

Total Wingwall Area = Wingwall area in sq. ft. for two wingwalls (one structure end) if Lt or Rt.

Area for four wingwalls (two structure ends) if Both.

- Round the wall heights shown to the nearest foot for bidding purposes.
- Concrete volume shown is for box culvert curb only. For curbs using the Box Culvert Rail Mounting Details (RAC) standard sheet, quantities shown must be increased by a factor of 2.25. If Class 5 concrete is required for the top slab of the culvert, also provide Class 5 concrete for the curb. Curb concrete is considered part of the Box Culvert for payment.
- Concrete volume shown is total of wings, footings, culvert toewall (if any), anchor toewalls (if any) and wingwall toewalls. Riprap aprons, culverts, and curb quantities are not included.
- Regardless of the type of culvert shown on this sheet, the Contractor has the option of furnishing cast-in-place or precast culverts unless otherwise shown elsewhere on the plans. If the Contractor elects to provide culverts of a different type than those shown on this sheet, it is the Contractor's responsibility to make the necessary adjustments to the dimensions and quantities shown.

SPECIAL NOTE:

This sheet is a supplement to the box culvert standards. It is to be filled out by the culvert specifier and provides dimensions for the construction of the box culvert wingwalls and safety end treatments.

An Excel 2010 spreadsheet to assist in completing this table can be downloaded from the Bridge Standards (English) web page on the TxDOT web site. The completed sheet must be signed, sealed, and dated by a licensed Professional Engineer.



EXAMPLE OF COMPLETED BCS STANDARD

NOT A STANDARD
 NOT FOR INCLUSION
 IN THE PLANS

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REVISIONS				
06/23 - Updated Designs	DIST	COUNTY	SHEET NO.	

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