

REVISIONS		
#	REVISION	DATE
DEVELOPER/OWNER: ROBERT TATE 2824 W. 7TH STREET/SUITE 100 FORT WORTH, TX 76107		
TXDOT DETAILS BCS & TCP(1-1)-18		
1.535 ACRES COMMERCIAL DEVELOPMENT OUT OF THE DAVIS ADDITION LOT 32R1, BLOCK 5 802 E. CRINER STREET CITY OF GRANDVIEW JOHNSON COUNTY, TEXAS		
<div> <div> <div>HSE</div> <div> <b>HANNA SURVEYING &amp; ENGINEERING LLC.</b> </div> </div> <div>           HANNA SURVEYING AND ENGINEERING, LLC.            11729 E FM 917            ALVARADO, TX 76009            (682) 553-9474         </div> </div> <div>           ENGINEERING FIRM NUMBER 7-22119            SURVEYING FIRM NUMBER 10194633            SAM@HANNA-SE.COM         </div>		
<div> </div> <div> </div> <div> <b>AUGUST 14, 2024</b> </div>		
ISSUE DATE: <b>JUNE 14, 2024</b>		
PROJECT NO.: <b>23-788</b>		
SHEET NUMBER <b>C-8.0</b>		
<b>18 OF 21</b>		

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**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.

**Notes:**

- ① on SW-0, FW-0, SETB-CD, SETB-SW-0, and SETB-FW-0 standard sheets;
- ② 30° maximum for safety and treatment.

**SL1 =** Horizontal : 1 Vertical

- Side slope of culvert for flared or straight wingwalls.
- Chained slope for parallel wingwalls.
- Slope must be 3:1 or flatter for safety and 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, Atw, Ltw**, 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 and treatment only)

**Total Wingwall Area =** Wingwall area in sq. ft. for two wingwalls (see structure end) if L or RL.

**Area for four wingwalls** (two structure ends) if both.

- ① Round the tail height shown to the nearest foot for bidding purposes.
- ② Concrete volume shown is for box culvert curb only. For curbs using the Box Culvert Rail Mounting Details (found under "Details") shown on this sheet, concrete must be increased by a factor of 1.225. If Class A concrete is required for the top slab of the culvert, also provide Class A concrete for the bottom slab. This quantity is considered part of the Box Culvert for payment.
- ③ Concrete volume shown is total of wings, footings, culvert tunnel (if any), anchor tunnels (if any) and wingwall footings, riprap aprons, culverts, and structures as indicated on this sheet.
- ④ 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 specified elsewhere on this sheet. The Engineer reserves the right to require the Contractor to furnish different types of culverts to provide culverts of a different type than those shown on this sheet. It is the Contractor's responsibility to make all 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.

