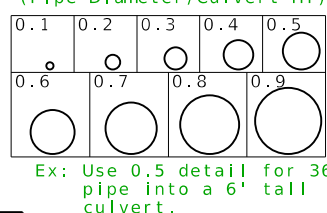




**Pipes With Same Diameter**

XX" Pipe Inlet Data		
Station	Offset	F.L. Elev.
xx+xx.xx	xx.xx' XX	xxx.xx
xx+xx.xx	xx.xx' XX	xxx.xx
xx+xx.xx	xx.xx' XX	xxx.xx

**Inlets Sized for Elevation A-A (Pipe Diameter/Culvert HT)**



Supplemental Pipe Inlet Details ④

**Pipes With Different Diameters**

Pipe Inlet Data			
Station	Offset	Dia.	F.L. Elev.
xx+xx.xx	xx.xx' XX	xx"	xxx.xx
xx+xx.xx	xx.xx' XX	xx"	xxx.xx
xx+xx.xx	xx.xx' XX	xx"	xxx.xx

Supplemental Reinforcement Table (Nonstandard culverts with only one design fill height) ⑤

Top Slab Reinforcement										Bottom Slab Reinforcement										Wall Reinforcement								
A1 Bars		J3 Bars				H1 Bars				H2 Bars				A2 Bars		J4 Bars				H3 Bars				B1 Bars		B2 Bars		
Sz.	Spa.	Sz.	Spa.	C1	K2	Sz.	Spa.	C5	Q8	Sz.	Spa.	C6	Q9	Sz.	Spa.	Sz.	Spa.	C4	K3	Sz.	Spa.	C7	Q10	Sz.	Spa.	Sz.	Spa.	G1
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

Substitute table for tables shown on Standard Plan 703.87

**Standard Drawing Guidance**

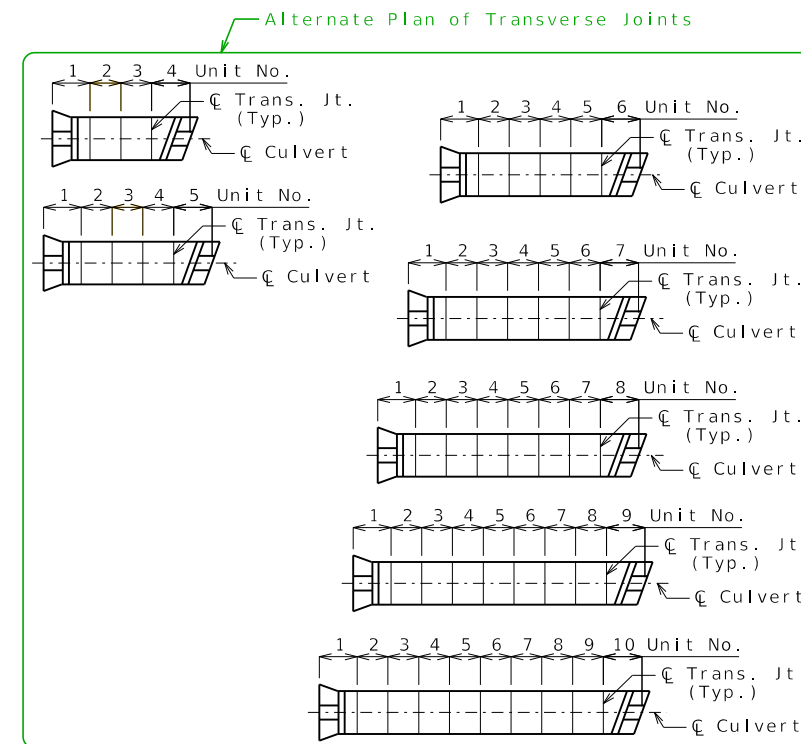
(Do not show on plans. Turn off the Bridge Construction level to hide)

Some details have been grouped together to allow easy substitution with alternate details. To edit grouped details, select them and press <Ctrl> U.

- ① Ahead station is shown for streams flowing left to right. Arrow must be flipped for streams that flow right to left.
- ② Modify Estimated Quantities as required. Don't leave blank rows but leave space between Estimated Quantities and General Notes for at least one pay item to be added during construction. See Alternate Details for culvert extensions, or if five items are required.
- ③ Add any required transverse joints proportionally spaced along the barrel. Label units and add actual lengths of units along the barrel.
- ④ Insert STD 703.60 when pipe inlets are required. Add pipe inlets to Plan of Layout Dimensions at appropriate locations and to Elevation A-A if visible from elevation. Add inlet data using notes where space allows, or use tables.
- ⑤ For nonstandard culverts with only one design fill height, add supplemental reinforcement table.
- ⑥ No need to revise General Elevation A-A for dual roadways. In Fill Heights table add a lane designation after  $\text{C Rdwy}$  and insert another row for the other lane.
- ⑦ For skews 20 degrees or more, remove Detail C, remove TT from equation for D and place "N/A" in the Dim. column of Dimension TT. Will first need to separate Detail C from Plan by selecting and pressing <Ctrl> U.

**\*\*\* VARIABLE DESIGN FILL HEIGHTS \*\*\***

- a) Select and delete the details grouped with the Fill Heights table. Select and move the alternate grouped details to drawing.
- b) Place "See Member Thickness table" in the Equation column and place "Varies" in the Dim. column. If Dimension F varies, place "Varies" in the Dim. column.
- c) Remove blank rows. End units may have different design fill heights but both units need to have the same member thicknesses.
- d) This portion of table required when design fill height exceeds limits of the standard plans or when culvert cell height or span is not standard. If only a portion of the units are nonstandard, fill out entire table using the values from the standard table where applicable. Omit if not required.



If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

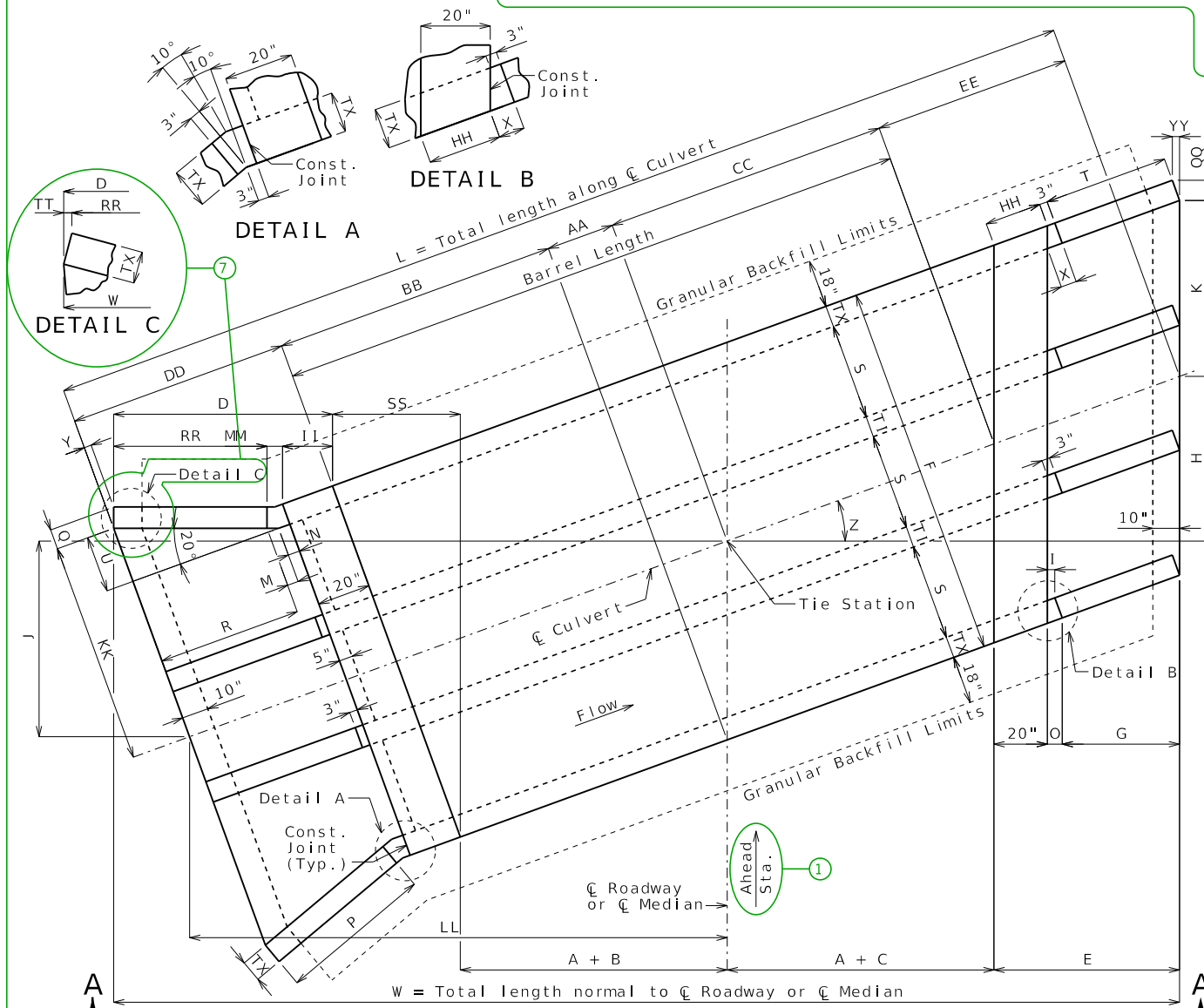
Construction joint key not shown for clarity, see standard plans for details.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

BXC12\_tri\_ra\_fla

Guidance & Alternate Details (2 of 2)

Corresponds to the border of the standard drawing for ease in moving alternate details (Snap to corner)

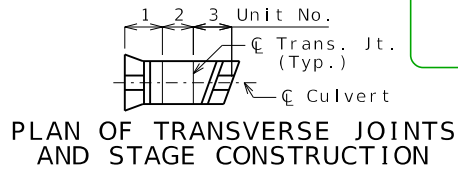


Alternate Details for Multiple Design Fill Heights (a)

Fill Heights	
C Rdwy at C Culvert =	ft
Design (Units 1 & ) =	ft
Design (Units & ) =	ft
Design (Units & ) =	ft

Dimensions are based on end units, except AA is based on Unit . Fill heights are measured from the top of top slab to the top of earth fill or roadway.

Estimated Quantities			Final
Class 4 Excavation	cu. yard	x	
Temporary Shoring	lump sum	1	
Partial Removal of Culvert-Bridge Concrete	lump sum	1	
Class B-1 Concrete (Culverts-Bridge)	cu. yard	x	
Reinforcing Steel (Culverts-Bridge)	pound	x	



Remove if not applicable.

Alternate Estimated Quantities for Culvert Extensions or Required

Unit No.	Unit Length	Member Thickness					Top Slab Reinforcement										Bottom Slab Reinforcement										Wall Reinforcement				
		TS	BS	TX	TI	F	A1 Bars		J3 Bars		H1 Bars		H2 Bars		A2 Bars		J4 Bars		H3 Bars		B1 Bars	B2 Bars									
		Sz.	Spa.	Sz.	Spa.		C1	K2	Sz.	Spa.	C5	Q8	Sz.	Spa.	C6	Q9	Sz.	Spa.	Sz.	Spa.	C4	K3	Sz.	Spa.	C7	Q10	Sz.	Spa.	Sz.	Spa.	G1
x	x	x	x	x	x	'-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
x	x	x	x	x	x	'-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
x	x	x	x	x	x	'-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

Substitute table for tables shown on Standard Plan 703.87