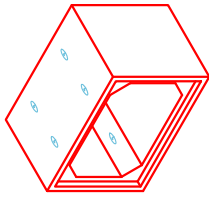




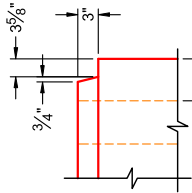
Structure ID: BC 6 x 4 (Sec A)

P1 BC048072-08WLF-9H

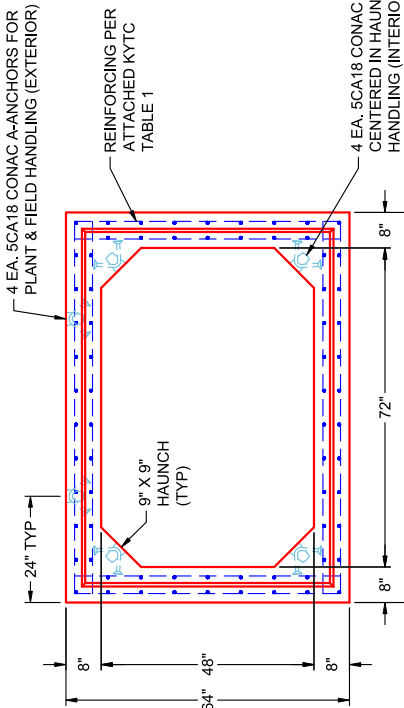
BOX CULVERT (08W/08F/08T) No Tongue G/F



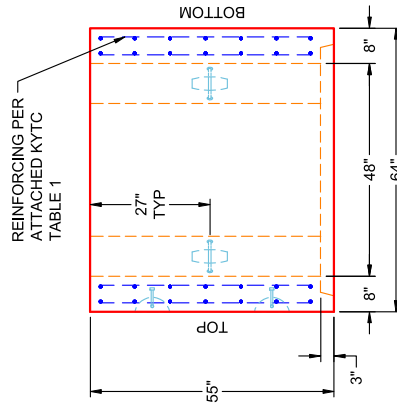
COMPONENT ISOMETRIC VIEW



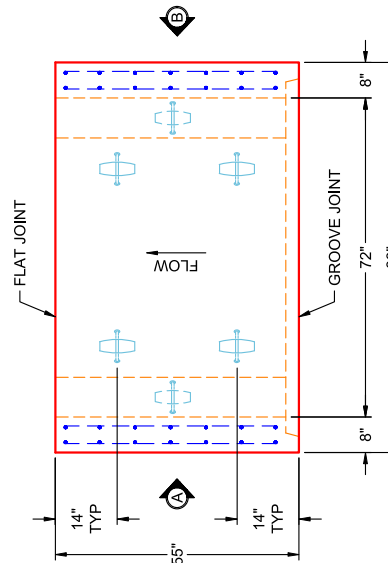
JOINT DETAIL (TYP) NTS



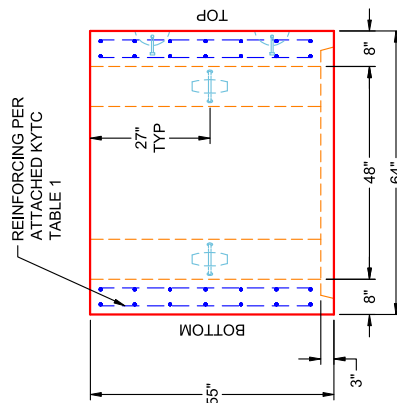
END VIEW TYPICAL



VIEW B SEC A (UPRIGHT IN MOLD)



PLAN VIEW SEC A (UPRIGHT IN MOLD)



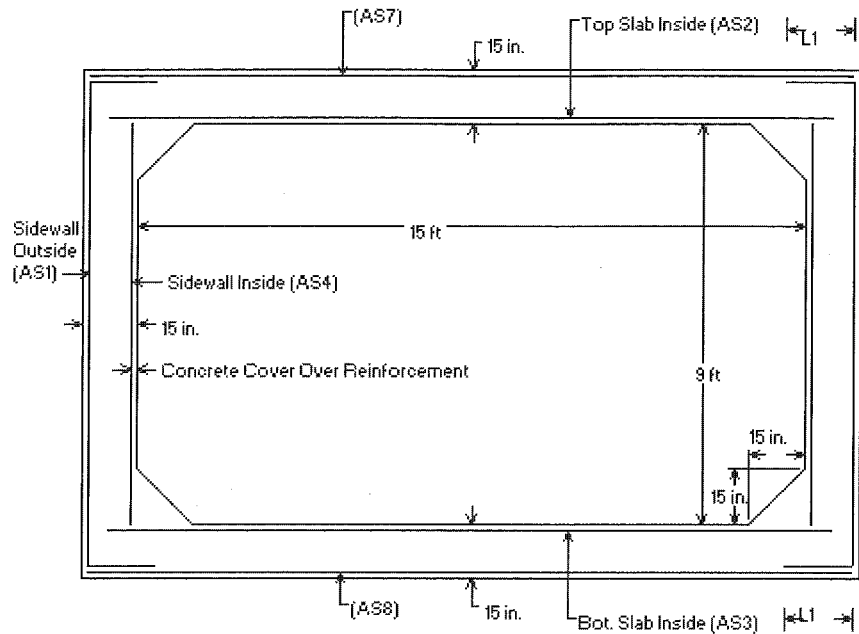
VIEW A SEC A (UPRIGHT IN MOLD)

- GENERAL NOTES:**
- PER SECTION 605 OF KYTC STANDARD SPECS FOR ROAD & BRIDGE CONSTRUCTION
 - LOAD REQUIREMENTS: KY-HL93 (KY TABLE 1)
 - REINFORCEMENT PER ATTACHED KYTC TABLE 1
 - COVER DEPTH: 0' - 4"
 - CONCRETE: 5,000 PSI AT 28 DAYS
 - JOINT SEALANT: 1" BUTYL MASTIC (CS-102) EXTERIOR JOINT WRAP: 12" WIDE (CS-212)
 - WEIGHT: 6' X 4' RCBC = 2,354 LBS / LF (4'-7" LONG SECTION = 10,790 LBS)

PRODUCTION WORK ORDER		DESCRIPTION: 72" X 48" X 55" BOX CULVERT (8" WALLS & 9" HAUNCH)	
PRODUCT I.D.:	BC048072-08WLF-9H	CUSTOMER:	ERNIE DAVIS & SONS MECHANICAL, INC.
PRODUCT VIEW:	RIGHT SIDE UP	PROJECT:	HUNTER'S RIDGE PH 1
PLANT:	BEAVER DAM, KY	STRUCTURE:	BC 6 X 4 (SEC A)
WEIGHT:	10,790 LBS	ORDER NO.:	25-2898
TOP SECTION JOINT:	FLAT	PE:	J.H. ROSS
BASE SECTION JOINT:	GROOVE	DRAWING:	K. CARDWELL
QC CHECK INITIALS:		DATE:	05/29/26
		SCALE:	NTS
		PG.	1 OF 1



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- * <L1> is Splice Length
- * (AS7) is Top Slab Outside
- * (AS8) is Bottom Slab Outside
- * See Box Culvert Design Summary Sheet for transverse and distribution reinforcement, as required.
- * For sidewall thicknesses of 6 in. and above, extend AS2 and AS3 a min. of 4 in. beyond the inside face of the sidewall. For thicknesses less than 6 in., extend AS2 and AS3 at least to within 1-1/2 in. of the outside face of the sidewall.

Notes:

- 1) Other reinforcement schemes that provide the required reinforcement areas at all locations identified in the program output are acceptable.
- 2) Longitudinal reinforcement is not shown for clarity, see AASHTO M259 for longitudinal reinforcement and for additional requirements.

KY Table 1

Precast Culvert KYHL-93 Design Table

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
6x4x7	0<2*	0.202	0.421	0.266	0.168	0.192	0.168	0.192	0.192
	2<3	0.251	0.368	0.288	0.168	0.168	0.168		
	3-5	0.19	0.271	0.24	0.168	0.168	0.168		
	10	0.168	0.228	0.234	0.168	0.168	0.168		
	15	0.216	0.306	0.313	0.168	0.168	0.168		
	20	0.275	0.391	0.398	0.168	0.168	0.168		
	25	0.338	0.479	0.487	0.168	0.168	0.168		
	30	0.404	0.571	0.579	0.168	0.168	0.168		
	35	0.473	0.667	0.675	0.168	0.168	0.168		

*top slab 8"

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
6x5x7	0<2*	0.192	0.449	0.291	0.168	0.192	0.168	0.192	0.192
	2<3	0.22	0.398	0.316	0.168	0.168	0.168		
	3-5	0.168	0.294	0.262	0.168	0.168	0.168		
	10	0.168	0.243	0.252	0.168	0.168	0.168		
	15	0.188	0.326	0.336	0.168	0.168	0.168		
	20	0.238	0.417	0.427	0.168	0.168	0.168		
	25	0.291	0.512	0.522	0.168	0.168	0.168		
	30	0.347	0.611	0.622	0.168	0.168	0.168		
	35	0.406	0.714	0.725	0.168	0.168	0.168		

*top slab 8"

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
6x6x7	0<2*	0.192	0.47	0.311	0.168	0.192	0.168	0.192	0.192
	2<3	0.195	0.421	0.337	0.168	0.168	0.168		
	3-5	0.168	0.311	0.277	0.168	0.168	0.168		
	10	0.168	0.252	0.263	0.168	0.168	0.168		
	15	0.168	0.338	0.349	0.168	0.168	0.168		
	20	0.212	0.432	0.444	0.168	0.168	0.168		
	25	0.259	0.531	0.543	0.168	0.168	0.168		
	30	0.308	0.634	0.647	0.168	0.168	0.168		
	35	0.359	0.741	0.755	0.168	0.168	0.168		

*top slab 8"

Default Parameters

SI Unit File Customary US Unit File

Design Code: **CASHIO_LLFD** Design Code: **AS11**

Axial Thrust Load Factor: **1** Flexure: **1** Shear: **0.9**

Reinforcement Diameter: **1** Crack Width (CHBDC Only): **0.25** mm

Reinforcement Diameter	AS11	AS21	AS31	AS41	AS51	AS81
* Sidewall Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Top Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Bottom Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Sidewall Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Top Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Bottom Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05

Soil Load Data: Soil Unit Weight: **120** pcf
 Minimum Lateral Pressure Coefficient: **0.25**
 Maximum Lateral Pressure Coefficient: **0.5**

Vertical Arching Factor: **Embankment/Compacted**

Return to Main Menu

Strength Reduction Factors

Design Code: **CASHIO_LLFD** Design Code: **AS11**

Axial Thrust Load Factor: **1** Flexure: **1** Shear: **0.9**

Reinforcement Diameter: **1** Crack Width (CHBDC Only): **0.25** mm

Reinforcement Diameter	AS11	AS21	AS31	AS41	AS51	AS81
* Sidewall Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Top Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Bottom Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Sidewall Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Top Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05
* Bottom Slab Thickness	0.05	0.05	0.05	0.05	0.05	0.05

Soil Load Data: Soil Unit Weight: **120** pcf
 Minimum Lateral Pressure Coefficient: **0.25**
 Maximum Lateral Pressure Coefficient: **0.5**

Vertical Arching Factor: **Embankment/Compacted**

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Live Load Data

Live Load Type (Max Z): **HS-Series** Magnitude (k): **25**

HS-Series Interstate/Tandem Cooper Series CHBDC Truck Tandem/Tandem Other None

Direction of Traffic: **Parallel** To Span

Impact Factor Options: **Design Code** Design Code: **1**

Lane Load: **0** lb/ft

Live Load Distribution Factor (LLDF): **Design Code** Design Code: **1.15**

Fluid Levels: Depth of Fluid: **1** * Hise Fluid Unit Weight: **62.5** pcf

Surcharge Loads: Uniform Vertical: **0** lb/ft
 Lateral - Top of Culvert (LLTC): **90** lb/ft
 Lateral - Bottom of Culvert (LLBC): **90** lb/ft

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Material Properties

Main Reinforcement Yield Strength: **65000** psi
 Design Concrete Strength: **5000** psi
 Concrete Unit Weight: **150** pcf
 Stirrup Reinforcement Developable Yield Stress: **60000** psi
 Total Service Stress Limit: **100** %

Reinforcement Type: **Welded Wire**

Restore Default Settings Return to Main Menu

