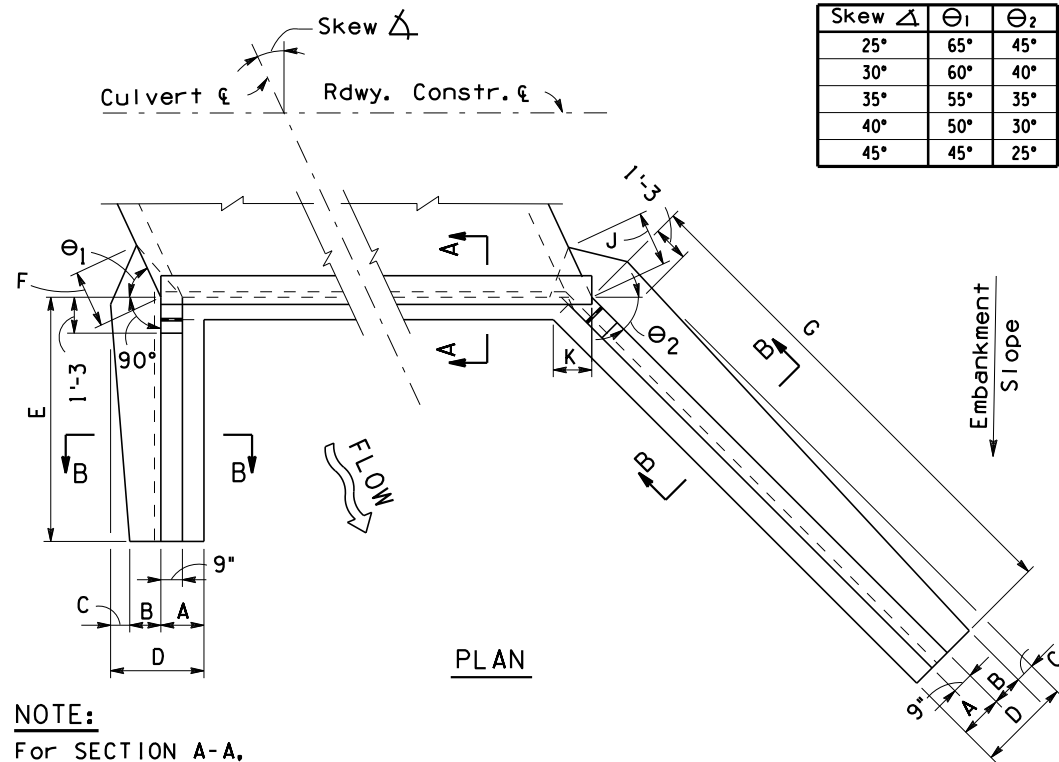


Note to Designer:  
 The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability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

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

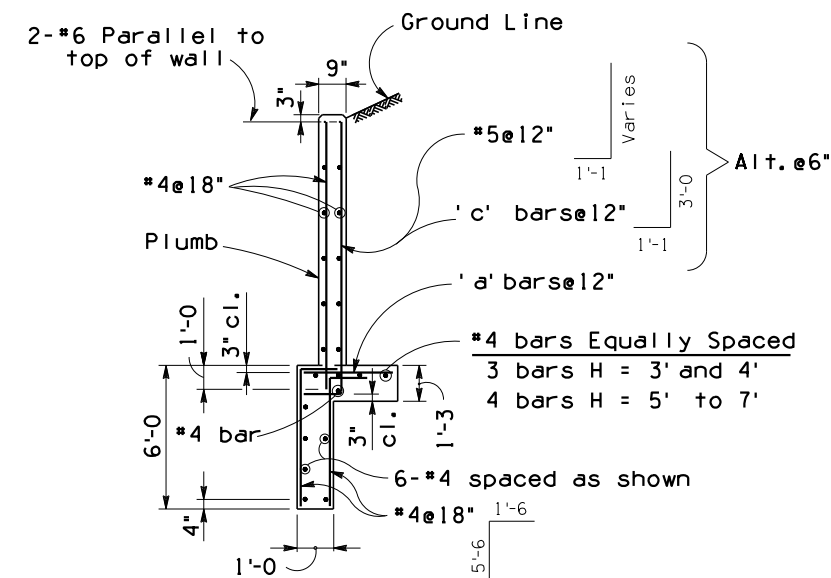


Skew Δ	Θ <sub>1</sub>	Θ <sub>2</sub>
25°	65°	45°
30°	60°	40°
35°	55°	35°
40°	50°	30°
45°	45°	25°

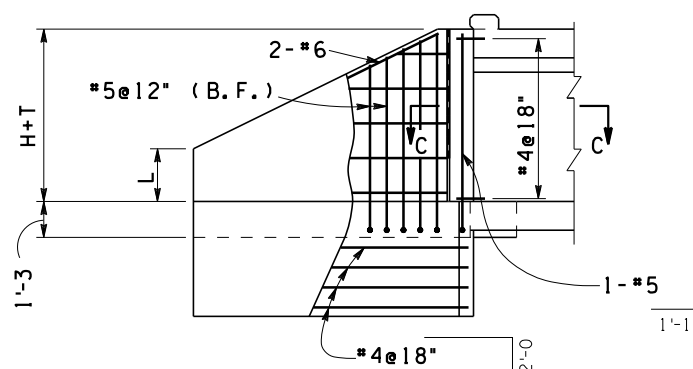
Skew Δ	25°					30°					35°					40°					45°								
	Height H	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'			
2 : 1 Slope	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"		
	B	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"		
	C	6"	9"	1'-3"	1'-8"	2'-1"	7"	10"	1'-3"	1'-9"	2'-2"	7"	11"	1'-4"	1'-10"	2'-3"	8"	11"	1'-5"	1'-10"	2'-4"	8"	11"	1'-5"	1'-10"	2'-4"	8"	11"	
	D	2'-9"	3'-3"	3'-10"	4'-4"	4'-10"	2'-10"	3'-4"	3'-10"	4'-5"	4'-11"	2'-10"	3'-5"	3'-11"	4'-6"	5'-0"	2'-11"	3'-5"	4'-0"	4'-6"	5'-1"	2'-11"	3'-6"	4'-1"	4'-7"	5'-2"	2'-11"	3'-6"	
	E	6'-0"	7'-6"	8'-6"	10'-0"	11'-6"	5'-6"	7'-0"	8'-0"	9'-6"	11'-0"	5'-6"	6'-6"	8'-0"	9'-0"	10'-6"	5'-0"	6'-6"	7'-6"	8'-6"	10'-0"	5'-0"	6'-0"	7'-0"	8'-6"	9'-6"	5'-0"	6'-0"	
	F	1'-4"	2'-0"	2'-9"	3'-5"	4'-1"	1'-6"	2'-2"	2'-11"	3'-8"	4'-4"	1'-7"	2'-4"	3'-1"	3'-10"	4'-7"	1'-8"	2'-5"	3'-3"	3'-11"	4'-9"	1'-8"	2'-6"	3'-4"	4'-1"	4'-10"	1'-8"	2'-6"	3'-4"
	G	8'-0"	10'-0"	11'-6"	13'-6"	15'-6"	8'-6"	10'-6"	12'-6"	14'-6"	16'-6"	9'-0"	11'-0"	13'-6"	15'-6"	17'-6"	10'-0"	12'-0"	14'-6"	17'-0"	19'-6"	10'-6"	13'-6"	16'-0"	18'-6"	21'-0"	10'-6"	13'-6"	
	J	1'-3"	1'-11"	2'-8"	3'-4"	4'-0"	1'-5"	2'-0"	2'-8"	3'-5"	4'-1"	1'-5"	2'-2"	2'-9"	3'-6"	4'-2"	1'-6"	2'-2"	2'-11"	3'-6"	4'-3"	1'-6"	2'-3"	3'-0"	3'-8"	4'-5"	1'-6"	2'-3"	3'-0"
	K	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"
	L	1'-1"	1'-4"	1'-10"	2'-1"	2'-4"	1'-4"	1'-7"	2'-1"	2'-4"	2'-7"	1'-4"	1'-10"	2'-1"	2'-7"	2'-10"	1'-7"	1'-10"	2'-4"	2'-10"	3'-1"	1'-7"	2'-1"	2'-7"	2'-10"	3'-1"	1'-7"	2'-1"	2'-7"
	M	1'-3"	1'-6"	2'-0"	2'-3"	2'-7"	1'-4"	1'-8"	2'-1"	2'-5"	2'-9"	1'-6"	1'-11"	2'-2"	2'-7"	3'-1"	1'-7"	2'-1"	2'-5"	2'-10"	3'-2"	1'-7"	2'-3"	2'-8"	3'-2"	1'-7"	2'-3"	2'-8"	3'-2"

Skew Δ	25°					30°					35°					40°					45°								
	Height H	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'			
4 : 1 Slope	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"		
	B	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"	1'-0"	1'-1"	1'-2"	1'-3"	9"		
	C	4"	7"	1'-0"	1'-5"	1'-10"	4"	7"	1'-0"	1'-5"	1'-10"	4"	7"	1'-0"	1'-5"	1'-10"	4"	7"	1'-0"	1'-5"	1'-9"	4"	7"	1'-0"	1'-5"	1'-7"	4"	7"	
	D	2'-7"	3'-1"	3'-7"	4'-1"	4'-7"	2'-7"	3'-1"	3'-7"	4'-1"	4'-7"	2'-7"	3'-1"	3'-7"	4'-1"	4'-7"	2'-7"	3'-1"	3'-7"	4'-1"	4'-7"	2'-7"	3'-1"	3'-7"	4'-1"	4'-7"	2'-7"	3'-1"	
	E	9'-0"	11'-0"	13'-6"	15'-6"	17'-6"	8'-6"	10'-6"	12'-6"	14'-6"	16'-6"	7'-6"	9'-6"	11'-6"	13'-6"	15'-0"	7'-0"	9'-0"	10'-6"	12'-6"	14'-0"	7'-0"	8'-6"	10'-0"	12'-0"	13'-6"	7'-0"	8'-6"	
	F	1'-2"	1'-10"	2'-5"	3'-1"	3'-9"	1'-2"	1'-10"	2'-6"	3'-3"	3'-11"	1'-2"	1'-11"	2'-7"	3'-3"	4'-0"	1'-3"	1'-11"	2'-7"	3'-4"	4'-0"	1'-3"	1'-11"	2'-8"	3'-6"	4'-2"	1'-3"	1'-11"	
	G	12'-0"	14'-6"	17'-6"	20'-6"	23'-6"	12'-6"	15'-6"	18'-6"	21'-6"	24'-6"	13'-0"	16'-0"	19'-6"	22'-6"	25'-6"	14'-0"	17'-0"	20'-6"	24'-0"	27'-6"	15'-0"	18'-6"	22'-0"	25'-6"	29'-0"	15'-0"	18'-6"	
	J	1'-1"	1'-9"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	
	K	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"
	L	1'-10"	2'-4"	2'-8"	3'-2"	3'-8"	1'-11"	2'-5"	2'-11"	3'-5"	3'-11"	2'-2"	2'-8"	3'-2"	3'-8"	4'-4"	2'-4"	2'-10"	3'-5"	3'-11"	4'-7"	2'-4"	2'-11"	3'-7"	4'-1"	4'-8"	2'-4"	2'-11"	
	M	1'-11"	2'-6"	3'-0"	3'-5"	3'-11"	2'-1"	2'-7"	3'-1"	3'-7"	4'-2"	2'-2"	2'-9"	3'-3"	3'-10"	4'-5"	2'-4"	2'-11"	3'-6"	4'-1"	4'-8"	2'-6"	3'-1"	3'-9"	4'-4"	5'-0"	2'-6"	3'-1"	

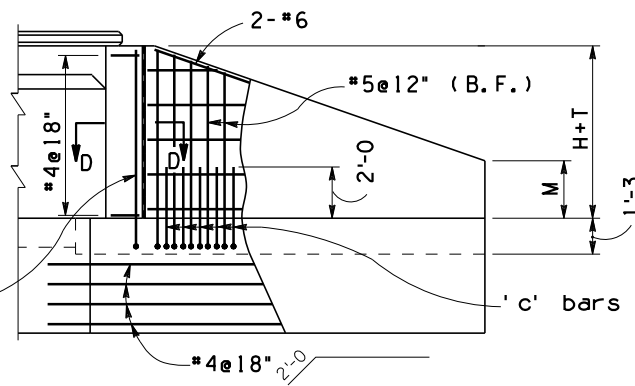
Skew Δ	25°					30°					35°					40°					45°								
	Height H	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'	3'	4'	5'	6'	7'			
6 : 1 Slope	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"		
	B	9"	1'-0"	1'-1"	1'-2"	1'-4"	9"	1'-0"	1'-1"	1'-2"	1'-6"	9"	1'-0"	1'-1"	1'-3"	1'-7"	9"	1'-0"	1'-1"	1'-4"	1'-8"	9"	1'-0"	1'-2"	1'-6"	1'-10"	9"		
	C	3"	7"	1'-1"	1'-4"	1'-8"	3"	6"	1'-1"	1'-4"	1'-6"	3"	6"	1'-1"	1'-3"	1'-5"	3"	6"	1'-1"	1'-2"	1'-4"	3"	6"	1'-0"	1'-2"	1'-4"	3"		
	D	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	2'-6"	3'-0"	
	E	11'-0"	13'-6"	16'-0"	19'-0"	21'-6"	10'-0"	12'-6"	14'-6"	17'-0"	19'-6"	9'-0"	11'-6"	13'-6"	15'-6"	18'-0"	8'-6"	10'-6"	12'-6"	14'-6"	16'-6"	8'-0"	10'-0"	12'-0"	13'-6"	15'-6"	8'-0"	10'-0"	
	F	1'-0"	1'-8"	2'-4"	3'-0"	3'-8"	1'-1"	1'-9"	2'-5"	3'-1"	3'-9"	1'-1"	1'-9"	2'-6"	3'-2"	3'-10"	1'-1"	1'-10"	2'-6"	3'-3"	3'-11"	1'-1"	1'-10"	2'-6"	3'-3"	3'-11"	1'-1"	1'-10"	
	G	14'-0"	17'-6"	21'-0"	24'-6"	28'-0"	14'-6"	18'-6"	22'-0"	25'-6"	29'-0"	15'-6"	19'-0"	23'-0"	26'-6"	30'-6"	16'-0"	20'-0"	24'-0"	28'-0"	32'-0"	17'-0"	21'-0"	25'-0"	29'-6"	33'-6"	17'-0"	21'-0"	
	J	1'-0"	1'-7"	2'-3"	2'-11"	3'-6"	1'-0"	1'-7"	2'-3"	2'-11"	3'-6"	1'-0"	1'-7"	2'-3"	2'-11"	3'-6"	1'-0"	1'-7"	2'-3"	2'-11"	3'-6"	1'-0"	1'-7"	2'-3"	2'-11"	3'-6"	1'-0"	1'-7"	
	K	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-4 1/2"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-5 1/4"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-8 3/8"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"	1'-11 1/4"
	L	2'-3"	2'-10"	3'-5"	3'-11"	4'-6"	2'-5"	3'-0"	3'-8"	4'-3"	4'-10"	2'-7"	3'-2"	3'-10"	4'-6"	5'-1"	2'-8"	3'-4"	4'-0"	4'-8"	5'-4"	2'-9"	3'-5"	4'-1"	4'-10"	5'-6"	2'-9"	3'-5"	
	M	2'-5"	3'-0"	3'-7"	4'-2"	4'-9"	2'-6"	3'-1"	3'-8"	4'-4"	4'-11"	2'-7"	3'-3"	3'-10"	4'-6"	5'-2"	2'-9"	3'-5"	4'-1"	4'-9"	5'-5"	2'-10"	3'-7"	4'-4"	5'-0"	5'-8"	2'-10"	3'-7"	



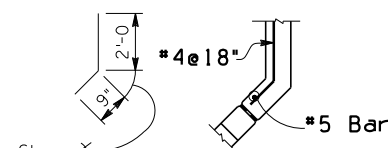
SECTION B-B



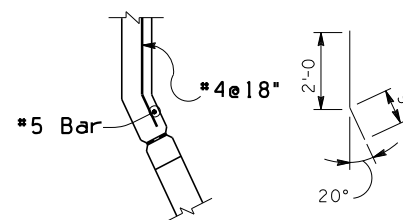
SHORT WING ELEVATION



LONG WING ELEVATION



SECTION C-C



SECTION D-D

H = T	'c' Bars Long Wingwall	
	Skew Δ	2:1 Slope 4:1 Slope
25°	3 - #5	3 - #5
30°	3 - #5	3 - #5
35°	4 - #5	4 - #5
40°	4 - #5	4 - #5
45°	5 - #5	4 - #5

Height H	'a' Bars	
	Short Wing	Long Wing
3'	#4	#4
4'	#4	#4
5'	#4	#4
6'	#4	#5
7'	#4	#6

**NOTE:**

For General Notes, Dimensions, and additional Details, see SD 6.01 (1 of 5). For Headwall Quantities see SD 6.09 (1 to 3).

DESIGN APPROVED <i>Celina Aman</i>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION <i>[Signature]</i>	REINFORCED CONCRETE BOX CULVERTS OUTLET WINGS - SKEW 25° to 45° CULVERT HEIGHT 3' to