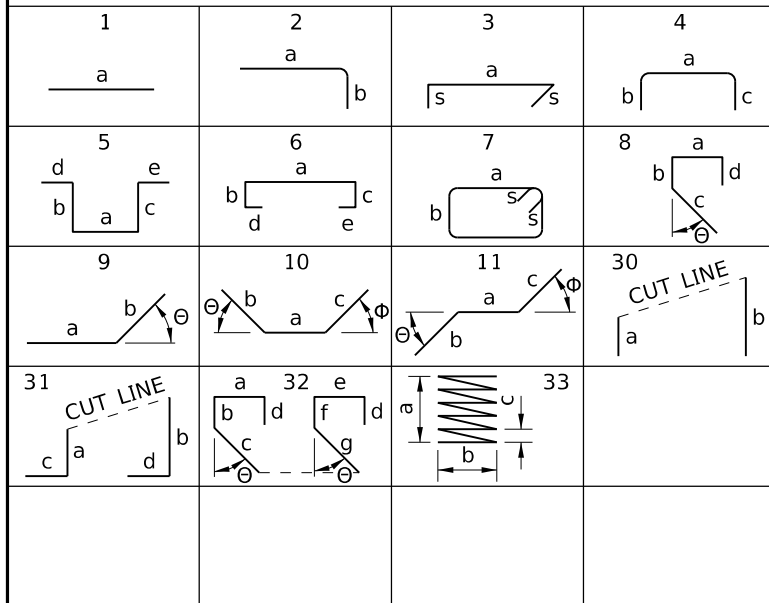


### SUBSTRUCTURE

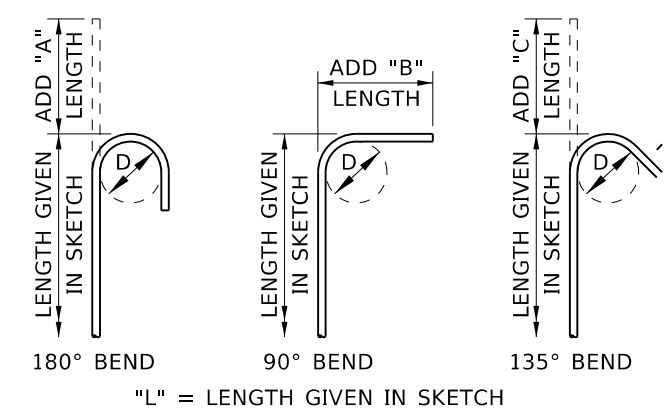
MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BEND TYPE	BAR SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE φ	TOTAL LENGTH

### BAR BEND DIAGRAMS



s = STANDARD END HOOK, STIRRUP HOOK, OR TIE HOOK DIMENSION

### BEND DETAILS



### SUBSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#3		0.376	
#4		0.668	
#5		1.043	
#6		1.502	
#7		2.044	
#8		2.670	
#9		3.400	
#10		4.303	
#11		5.313	
#14		7.650	
#18		13.600	
TOTAL WEIGHT			

### STANDARD END HOOK DIMENSIONS

BAR SIZE	ALL GRADES		
	D	A	B
#3	2 1/4"	5"	6"
#4	3"	6"	8"
#5	3 3/4"	7"	10"
#6	4 1/2"	8"	1'-0"
#7	5 1/4"	10"	1'-2"
#8	6"	11"	1'-4"
#9	9 1/2"	1'-3"	1'-7"
#10	10 3/4"	1'-5"	1'-10"
#11	1'-0"	1'-7"	2'-0"
#14	1'-6 1/4"	2'-3"	2'-7"
#18	2'-0"	3'-0"	3'-5"

### STIRRUP AND TIE HOOK DIMENSIONS

BAR SIZE	ALL GRADES		
	D	B	C
#3	1 1/2"	4"	4"
#4	2"	4 1/2"	4 1/2"
#5	2 1/2"	6"	5 1/2"
#6	4 1/2"	1'-0"	8"
#7	5 1/4"	1'-2"	9"
#8	6"	1'-4"	10 1/2"
#9			
#10			
#11			
#14			
#18			

NO. DATE BY	REVISIONS	DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY CADD FILE NAME Standards/Bridge Standard Drawings B05.1A.DGN DRAWING DATE: DEC 2024	IDAHO TRANSPORTATION DEPARTMENT YOUR Safety → YOUR Mobility → YOUR Economic Opportunity	ENGLISH PROJECT NO.
	DESCRIPTION	DESIGN CHECKED			
		DETAILED			
		DWG. CHECKED			
		CORRECTIONS			
		APPROVED BY: BRIDGE ENGINEER MICHAEL T. JOHNSON DATE:			

METAL REINFORCEMENT - SHEET 1	BRIDGE PLANS
	BRIDGE KEY NO.
	COUNTY      KEY NO.
BRIDGE LRFD DESIGN MANUAL B5.1A	BRIDGE DWG. NO.      SHEET OF