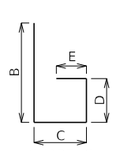

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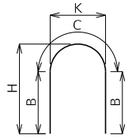

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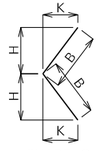

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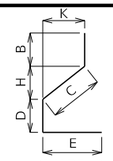

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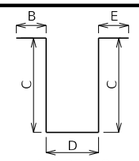

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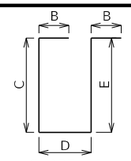

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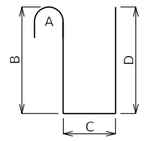

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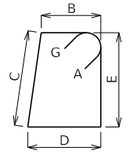

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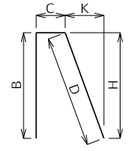

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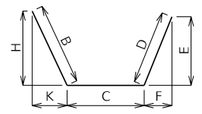

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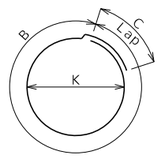

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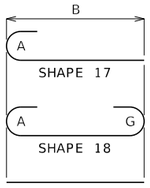

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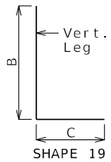
SHAPE 18
SHAPE 20



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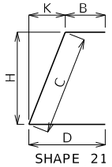

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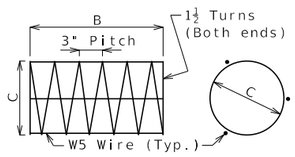

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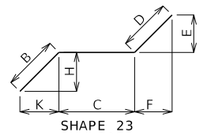

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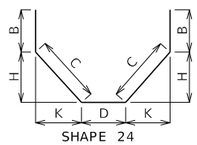

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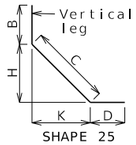

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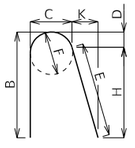

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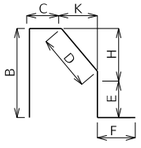

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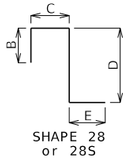

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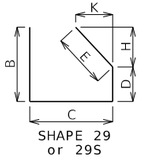

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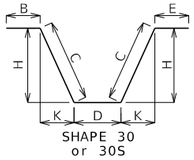

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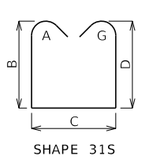

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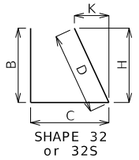

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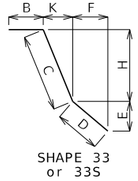

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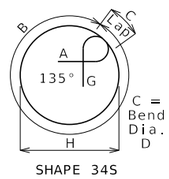

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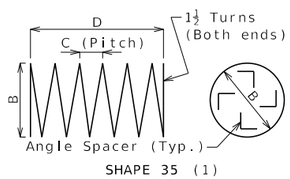
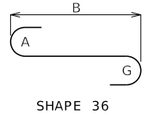


SHAPE 35 (1)



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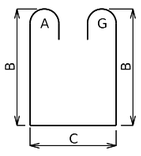

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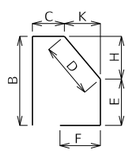
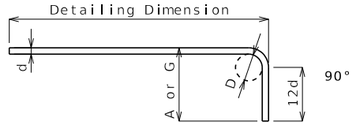


SHAPE 38S

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9¾"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅝"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¼"	28½"

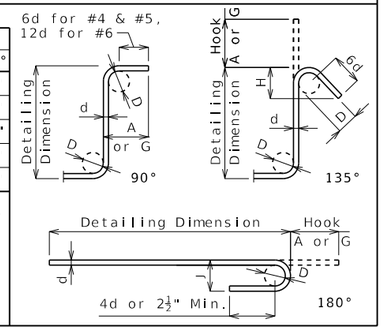


Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅞"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅜"	6"

Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.



BENDING DIAGRAMS

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

Reinforcing steel (ASTM A615 ① A706 Grade 60) fy = 60,000 psi

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Modify as needed. Sizes with 0 could be removed.

Reinforcing Steel Totals (Pounds)

	Size	Substructure		Superstructure			Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0
By Type		0	0	0	0	0	0	0

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes			Dimensions							Nom. Length	Actual Length	Weight
			C	SH	V	B	C	D	E	F	H	K			
						ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	lb

BILL OF REINFORCING STEEL

Guidance (Do not show on plans):

Paste the Barbill program outputs out to the side, drop them, and copy and paste and/or modify as needed.

① Use ASTM A706 for *new* bridges in seismic design categories B, C and D. Use ASTM A615 for all other structures, and for new bridges in seismic design category A.

Detailed
Checked

Note: This drawing is not to scale. Follow dimensions. Sheet No. of

DATE PREPARED 12/1/2025
ROUTE | STATE MO
DISTRICT | SHEET NO. 000
COUNTY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)