

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	DATE
1	Original Issue	7-12
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**STEEL LIST**

Mark	Type	90° Dia.			96° Dia.			102° Dia.			108° Dia.			114° Dia.			120° Dia.			126° Dia.			132° Dia.			138° Dia.			144° Dia.		
		No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth	No	Size	Lgth			
a1	A	5	*5	8'-6"	5	*5	9'-0"	6	*5	9'-3"	6	*5	9'-6"	6	*5	10'-3"	6	*5	10'-6"	6	*5	10'-9"	7	*6	11'-3"	7	*6	11'-9"	7	*6	12'-0"
a2	A	5	*5	9'-0"	5	*5	9'-6"	5	*5	9'-9"	6	*5	10'-3"	6	*5	10'-9"	6	*6	11'-6"	6	*6	12'-0"	7	*6	12'-6"	7	*7	12'-9"	7	*7	12'-9"
a3	A	5	*5	9'-9"	5	*5	10'-3"	5	*5	10'-6"	5	*5	11'-0"	6	*6	11'-6"	6	*6	11'-6"	6	*6	12'-3"	6	*7	12'-6"	7	*7	13'-3"	7	*7	13'-6"
a4	A	5	*5	10'-3"	5	*5	10'-9"	5	*5	11'-0"	5	*6	11'-6"	5	*6	11'-6"	6	*7	12'-0"	6	*7	12'-6"	6	*7	13'-3"	6	*7	14'-0"	7	*7	14'-3"
a5	A	5	*5	10'-9"	5	*6	11'-3"	5	*6	11'-6"	5	*6	11'-6"	5	*7	12'-9"	6	*7	13'-3"	6	*7	13'-6"	6	*7	14'-0"	6	*8	14'-9"	6	*8	15'-0"
a6	A	4	*6	11'-6"	5	*6	12'-0"	5	*6	12'-3"	5	*7	12'-9"	5	*7	13'-6"	5	*7	14'-0"	6	*7	14'-3"	6	*8	14'-9"	6	*8	15'-6"	6	*8	15'-9"
a7	A	4	*6	12'-0"	4	*6	12'-6"	5	*7	12'-9"	5	*7	13'-6"	5	*7	14'-0"	5	*7	14'-9"	6	*8	15'-0"	6	*8	15'-6"	6	*8	16'-3"	6	*8	16'-6"
a8	A	5	*5	8'-6"	5	*5	9'-0"	5	*5	9'-3"	5	*5	9'-6"	5	*5	10'-3"	6	*5	10'-6"	6	*5	10'-9"	6	*6	11'-3"	6	*6	11'-9"	6	*6	12'-0"
a9	A	4	*5	9'-3"	5	*5	9'-9"	5	*5	10'-3"	5	*5	10'-6"	5	*5	11'-0"	5	*6	11'-6"	6	*6	11'-9"	6	*6	12'-3"	6	*7	12'-9"	6	*7	13'-0"
a10	A	4	*5	10'-3"	4	*5	10'-9"	5	*6	11'-3"	5	*6	11'-6"	5	*6	12'-0"	5	*6	12'-6"	5	*7	13'-0"	6	*7	13'-3"	6	*7	14'-0"	6	*7	14'-3"
a11	A	4	*5	11'-3"	4	*6	11'-6"	4	*6	12'-0"	5	*7	12'-3"	5	*7	13'-0"	5	*7	13'-9"	5	*7	14'-0"	5	*8	14'-3"	6	*8	15'-0"	6	*8	15'-3"
a12	A	4	*6	12'-0"	4	*6	12'-6"	4	*7	13'-0"	4	*7	13'-3"	5	*7	14'-0"	5	*7	14'-9"	5	*8	15'-0"	5	*8	15'-6"	5	*8	16'-3"	6	*8	16'-6"
b1	str	2	*4	32'-3"	2	*4	33'-9"	2	*4	35'-3"	2	*4	36'-9"	2	*4	38'-3"	2	*4	39'-9"	2	*4	41'-3"	2	*4	42'-9"	2	*4	44'-3"	2	*4	45'-9"
b2	str	8	*4	32'-0"	8	*4	33'-6"	8	*4	35'-0"	8	*4	36'-6"	10	*4	38'-0"	10	*4	39'-6"	10	*4	41'-0"	10	*4	42'-6"	10	*4	44'-0"	12	*4	45'-6"
b3	str	2	*4	22'-0"	2	*4	26'-0"	2	*4	30'-0"	2	*4	35'-0"	2	*4	26'-0"	2	*4	28'-6"	2	*4	32'-6"	2	*4	38'-6"	2	*4	43'-0"	2	*4	35'-0"
b4	str	2	*4	8'-0"	2	*4	12'-6"	2	*4	17'-0"	2	*4	22'-6"	2	*4	11'-6"	2	*4	16'-0"	2	*4	19'-9"	2	*4	25'-3"	2	*4	30'-0"	2	*4	22'-0"
b5	str							2	*4	4'-0"	2	*4	10'-0"				2	*4	3'-6"	2	*4	7'-0"	2	*4	12'-0"	2	*4	17'-0"	2	*4	9'-0"
b6	str																								2	*4	4'-0"				
b7	str	2	*4	20'-3"	2	*4	21'-3"	2	*4	22'-3"	2	*4	23'-3"	2	*4	24'-3"	2	*4	25'-3"	2	*4	26'-3"	2	*4	27'-3"	2	*4	28'-3"	2	*4	29'-3"
b8	str	8	*4	20'-0"	8	*4	21'-0"	8	*4	22'-0"	8	*4	23'-0"	10	*4	24'-0"	10	*4	25'-0"	10	*4	26'-0"	10	*4	27'-0"	10	*4	28'-0"	12	*4	29'-0"
b9	str	2	*4	13'-6"	2	*4	16'-0"	2	*4	19'-3"	2	*4	21'-0"	2	*4	15'-6"	2	*4	19'-3"	2	*4	22'-0"	2	*4	25'-0"	2	*4	27'-6"	2	*4	22'-0"
b10	str	2	*4	6'-0"	2	*4	8'-6"	2	*4	11'-0"	2	*4	13'-3"	2	*4	8'-0"	2	*4	10'-9"	2	*4	13'-6"	2	*4	16'-6"	2	*4	19'-3"	2	*4	14'-0"
b11	str							2	*4	2'-9"	2	*4	5'-6"				2	*4	2'-6"	2	*4	5'-0"	2	*4	8'-0"	2	*4	10'-9"	2	*4	6'-0"
b12	str																								2	*4	2'-6"				
c	str	5	*4	10'-6"	5	*4	11'-0"	5	*4	11'-6"	5	*4	12'-0"	5	*4	12'-6"	5	*4	13'-0"	5	*4	13'-6"	5	*4	14'-0"	5	*4	14'-6"	5	*4	15'-0"
d	A	6	*6	12'-3"	6	*6	12'-9"	6	*7	13'-3"	6	*7	13'-9"	6	*7	14'-6"	6	*7	15'-0"	6	*8	15'-6"	6	*8	16'-0"	6	*8	16'-6"	6	*8	17'-0"
e1	C	7	*5	4'-3"	6	*5	4'-3"	6	*5	4'-6"	7	*5	4'-9"	6	*5	4'-9"	6	*5	5'-0"	6	*5	5'-3"	7	*5	5'-6"	7	*5	5'-6"	7	*5	5'-9"
e2	C	7	*5	4'-6"	6	*5	4'-6"	6	*5	4'-9"	6	*5	5'-0"	6	*5	5'-0"	6	*5	5'-3"	6	*5	5'-6"	6	*6	5'-9"	7	*6	6'-0"	7	*6	6'-0"
e3	C	7	*5	4'-9"	6	*5	4'-9"	6	*5	5'-0"	6	*5	5'-3"	6	*5	5'-3"	6	*5	5'-6"	6	*6	5'-9"	6	*6	6'-0"	7	*6	6'-3"	7	*6	6'-3"
e4	C	6	*5	5'-0"	6	*5	5'-0"	6	*5	5'-3"	6	*5	5'-6"	6	*6	5'-6"	6	*6	5'-9"	6	*6	6'-0"	6	*7	7'-3"	6	*7	7'-6"	7	*7	7'-9"
e5	C	6	*5	5'-3"	5	*5	5'-3"	6	*5	5'-6"	6	*6	5'-9"	5	*6	5'-9"	6	*6	6'-0"	6	*7	7'-3"	6	*7	7'-6"	6	*7	7'-9"	6	*7	8'-3"
e6	C				5	*5	5'-6"	6	*6	5'-9"	6	*6	6'-0"	5	*7	7'-3"	5	*7	7'-6"	6	*7	7'-6"	6	*7	7'-9"	6	*7	8'-0"	6	*7	8'-6"
e7	C												5	*7	7'-6"	5	*7	7'-9"	6	*7	8'-0"	6	*7	8'-3"	6	*7	8'-6"	6	*7	8'-9"	
e8	C	3	*5	5'-6"	3	*5	5'-9"	3	*6	6'-0"	3	*6	6'-3"	3	*7	7'-9"	3	*7	8'-0"	3	*7	8'-3"	3	*7	8'-6"	3	*7	8'-9"	3	*8	9'-0"
e9	C	9	*5	5'-6"	10	*5	5'-9"	10	*6	6'-0"	11	*6	6'-3"	11	*7	7'-9"	12	*7	8'-0"	12	*7	8'-3"	13	*7	8'-6"	13	*7	8'-9"	14	*8	9'-0"
e10	C	5	*5	5'-6"	5	*5	5'-9"	5	*6	6'-0"	6	*6	6'-3"	6	*7	7'-9"	6	*7	8'-0"	6	*7	8'-3"	7	*7	8'-6"	7	*7	8'-9"	7	*8	9'-0"
e11	C	4	*5	5'-3"	4	*5	5'-6"	4	*6	5'-9"	4	*6	6'-0"	4	*7	7'-3"	5	*7	7'-6"	5	*7	7'-9"	5	*7	8'-0"	5	*7	8'-3"	5	*7	8'-6"
e12	C	4	*5	5'-0"	4	*5	5'-3"	4	*5	5'-6"	4	*5	5'-9"	5	*6	5'-9"	5	*6	6'-0"	5	*7	7'-6"	5	*7	7'-9"	5	*7	8'-0"	6	*7	8'-0"
e13	C	4	*5	4'-9"	4	*5	4'-9"	4	*5	5'-0"	5	*5	5'-3"	5	*5	5'-6"	5	*5	5'-9"	5	*6	6'-0"	5	*6	6'-3"	6	*6	6'-6"	6	*6	6'-6"
e14	C	4	*5	4'-6"	4	*5	4'-6"	5	*5	4'-9"	5	*5	5'-0"	5	*5	5'-3"	5	*5	5'-6"	6	*6	5'-9"	6	*6	6'-0"	6	*6	6'-3"	6	*6	6'-3"
e15	C	4	*5	4'-3"	5	*5	4'-3"	5	*5	4'-6"	5	*5	4'-9"	5	*5	5'-0"	6	*5	5'-3"	6	*5	5'-6"	6	*5	5'-6"	6	*5	5'-6"	6	*5	5'-9"
f1	str	6	*4	7'-0"	6	*4	7'-3"	6	*4	7'-9"	7	*4	8'-0"	7	*4	8'-3"	7	*4	8'-9"	7	*4	9'-0"	8	*4	9'-3"	8	*4	9'-9"	8	*4	10'-0"
f2	str	6	*4	8'-0"	6	*4	8'-3"	6	*4	8'-9"	6	*4	9'-3"	7	*4	9'-6"	7	*4	10'-0"	7	*4	10'-3"	7	*4	10'-6"	8	*4	11'-0"	8	*4	11'-3"
f3	str	5	*4	8'-9"	6	*4	9'-3"	6	*4	9'-9"	6	*4	10'-3"	6	*4	10'-6"	7	*4	11'-0"	7	*4	11'-3"	7	*4	11'-9"	7	*4	12'-3"	8	*4	12'-9"
f4	str	5	*4	9'-9"	5	*4	10'-3"	6	*4	10'-9"	6	*4	11'-3"	6	*4	11'-6"	6	*4	12'-0"	7	*4	12'-6"	7	*4	13'-0"	7	*4	13'-6"	7	*4	14'-0"
f5	str	4	*4	7'-0"	4	*4	7'-3"	4	*4	7'-9"	4	*4	8'-0"	4	*4	8'-3"	5	*4	8'-9"	5	*4	9'-0"	5	*4	9'-3"	5	*4	9'-9"	5	*4	10'-0"
f6	str	4	*4	8'-0"	4	*4	8'-3"	4	*4	8'-9"	4	*4	9'-0"	4	*4	9'-6"	4	*4	10'-0"	5	*4	10'-3"	5	*4	10'-6"	5	*4	11'-0"	5	*4	11'-3"
f7	str	3	*4	9'-0"	3	*4	9'-6"	4	*4	10'-0"	4	*4	10'-3"	4	*4	10'-6"	4	*4	11'-0"	4	*4	11'-6"	4	*4	12'-0"	5	*4	12'-6"	5	*4	12'-9"
f8	str	3	*4	10'-0"	3	*4	10'-6"	3	*4	11'-0"	4	*4	11'-3"	4	*4	11'-9"	4	*4	12'-3"	4	*4	12'-9"	4	*4	13'-3"	4	*4	13'-9"	5	*4	14'-0"
g	str	2	*4	10'-0"	2	*4	10'-6"	2	*4	11'-0"	2	*4	11'-6"	2	*4	12'-0"	2	*4	12'-6"	2	*4	13'-3"	2	*4	13'-9"	2	*4	14'-3"	2	*4	14'-9"
m1	str	4	*4	34'-6"	4	*4	36'-0"	4	*4	37'-6"	4	*4	39'-3"	4	*4	40'-9"	5	*4	42'-3"	5	*4	44'-0"	5	*4	45'-6"	5	*4	47'-0"	5	*4	48'-9"
m2	str	1	*4	34'-6"	1	*4	36'-0"	1	*4	37'-6"	1	*4	39'-3"	1	*4	40'-9"	1	*4	42'-3"	1	*4	44'-0"	1	*4	45'-6"	1	*4	47'-0"	1	*4	48'-9"
m3	str	4	*4	25'-6"	4	*4	26'-9"	4	*4	28'-0"	4	*4	29'-3"	4	*4	30'-6"	5	*4	31'-9"	5	*4	33'-0"	5	*4	34'-3"	5	*4	35'-6"	5	*4	36'-9"
m4	str	1	*4	25'-6"	1	*4	26'-9"	1	*4	28'-0"	1																				