

APPENDIX A-1

4/99

SIZING THE SIGN

General.

After the message length has been calculated and the desired layout determined, the designer must calculate the sign background size required for that display.

The following SPACING RULES for horizontal and vertical inter-line spacing conform to accepted practices, although some adjustment may be permitted in order to round off to the nearest whole foot. As stated before, legibility is dependent on letter size and optimum spacing so the sign size should be based on the optimum spacing.

Grade separation mounted signs should not project above the bridge rail. In order to reduce the vertical dimension of the sign it may be necessary to use a modified layout such as mounting the shield beside the destination name. From the aesthetic standpoint, the Department's policy is to make adjacent overhead signs facing the same direction all the same height.

While not a critical factor in determining sign size, the designer should take into consideration the commercial availability of background materials. Plywood and aluminum sheeting is available in sizes up to 5'0" x 12'0". Where the sign height exceeds 12'0" it will be necessary for the sign fabricator to utilize a horizontal splice.

By modifying the layout it may be possible to reduce the sign height to 12'0" and thereby avoid the horizontal splice.

If it is not possible to reduce the sign height, the designer must illustrate on the plan sheet where the splice is to be located. The desirable location is at the upper edge of a horizontal border strip separating two messages of the sign. Unless noted otherwise on the plans, the fabricator will use the longest panels in stock and shear additional panels to provide the necessary sign height.

Spacing Rules.

Five general categories of spacing formulae have been developed to ensure adequate legibility.

1. Between letters in a word.
2. Between words in a line.
3. Between lines of copy.
4. Edge spacing.
5. Fractions.

Letters in a word.

The amount of space that should be provided between two letters in a word is not constant, but varies with the shapes, sizes and series of the letters that are

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involved. Tables F, G, and H provide letter spacing data as well as letter widths for highway signs. The space between the preceding letter and a period in an abbreviated word should be equal to the stroke width of that letter size and series, except that in the case of letters F, P, T, V, W and Y the left edge of the period shall be tangent to the widest part of the letter.

Words in a line.

Optimum spacing between words in a line should be equal to the height of the upper-case or capital letter in that line. The spacing between symbols such as arrows, shields, etc. and adjacent words should be equal to the capital letter height or $3/4$ of the upper-case letter height in that line. The minimum shall not be less than $2/3$ of the optimum.

The space between two letters used as initials, such as N.W., should be equal to that letter height. The period is then mounted within that space in accordance with the formula for abbreviated words.

The space between two hyphenated words should be $1\frac{1}{2}$ times the maximum letter height of the two words. The hyphen, which is 0.4 times the upper-case letter height, is centered between the words.

The space between letters of a destination such as "Coeur d'Alene" should be equal to the lower-case letter height with the apostrophe installed within that space.

Lines of copy.

The optimum spacing between two lines of copy, whether destination names, shields or arrows should be equal to the upper-case or capital letter height of the sign message.

The minimum shall not be less than $2/3$ of the optimum.

Edge spacing.

The optimum edge spacing shall be equal to the upper-case or capital letter height, whichever is greater, in that line.

The minimum shall not be less than $2/3$ of the optimum.

Fractions.

Fractions should be treated as a unit and not as separate characters. This unit is called the "fraction rectangle" which consists of the numerals and diagonal.

The diagonal length is 1.7 times the fraction numeral height; its width is equal to the stroke width of the numeral and is mounted at an angle of 60° from the horizontal.

The width of the fraction rectangle is $2\frac{1}{2}$ times the fraction numeral height except when the upper numeral is "1", in which case its width is 2 times the numeral height.

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The spacing between a preceding or following letter and the fraction rectangle or a whole number should be equal to the fraction numeral height.

For guide sign action messages, the fraction numeral size is equal to the capital letter size in the adjacent action message while the "rectangle" height is $1\frac{1}{2}$ times the fraction numeral size. The whole number height is 15" for a 16"u.c./12"l.c. destination; 12" for a 13- $\frac{1}{3}$ "/10" legend; 10" for a 10- $\frac{2}{3}$ "/8" legend and 8" for a 8"/6" legend. For mileage signs the numeral series and size shall be upper-case numerals of the same size used in the destination name. For interchange sequence signs the whole number size shall be the same as the upper-case letter size in the destination while the fraction numeral size shall be equal to the lower-case letter height. Numeral series on mileage and sequence signs shall be series-E modified.

Border Widths

Borders are required on all signs for aesthetic considerations. The border width is dependent on the general sign type; whether control or guide. Sign borders have been more or less standardized and are approximately equal to the letter stroke width.

Margin Widths

The use of margins between the border and the sign edge is also generally dependent on sign type. Specifically, margins are not used where the border is lighter in color than the sign background. Signs with darker borders are normally made by silk screen painting and the margin acts as a buffer to prevent overspill of the paint. Margin widths, when required, are about $\frac{3}{4}$ of the border width.

Corner Radii

Since control signs are quite often located in areas accessible to pedestrians it is mandatory to round all corners (except STOP signs) in order to prevent injury. Control sign corner radii has been standardized according to sign size. Guide signs are normally above pedestrian traffic and rounded corners are not necessary. However, the border at each corner is rounded for aesthetics and the border radius is approximately equal to $\frac{1}{8}$ of the sign height. The radius is then established to the nearest 3" with a maximum of 12"

Border, Margin and Corner Radius Dimensions

Sign Size	Border	Margin	Cor. Rad.	Sign Letter Size	Border
12"x18"	3/8"	3/8"		6" caps	3/4"
18"x18"	3/8"	3/8"	1 1/2"	6"u.c./4 1/2"l.c.	1"
18"x24"	5/8"	3/8"	1 1/2"	8"u.c./6"l.c.	1 1/2"
24"x24"	5/8"	3/8"	1 1/2"	10 2/3"u.c./8"l.c.	1 1/2"
24"x30"	5/8"	3/8"	1 1/2"	13 1/3"u.c./10"l.c.	2"
30"x30"	3/4"	1/2"	1 1/2"	16"u.c./12"l.c.	2"
30"x36"	3/4"	1/2"	1 7/8"		
36"x36"	7/8"	5/8"	1 7/8"	Sign Height	Cor. Rad.
36"x48"	7/8"	5/8"	2 1/4"	2'	3"
48"x48"	1 1/4"	3/4"	2 1/4"	4'	6"
48"x60"	1 1/4"	3/4"	3"	6'	9"
				8'	

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SIGN LEGEND LAYOUT

Word Placement.

Messages should generally be centered about the vertical axis of the sign background. Exceptions include mileage and interchange sequence signs which have equal margins left and right for all lines of copy regardless of message length.

Insofar as practical, the layout and placement of messages on advance and exit direction signs shall be similar.

The arrangement of messages depends on the type of sign. For mileage signs the correct order places the nearest destination at the top and the furthestmost destination at the bottom of the sign. Directional sign message placement depends on destination direction. Through destination at the top, left destinations next and right destinations at the bottom.

Route shields may be located either above or beside the destination. Words such as TO, JCT and cardinal directions may be placed either above or beside the route shields. When placed above the shield the word shall be centered about the vertical axis of the shield. When placed beside the shield the top of the word shall be on the same horizontal line as the top of the shield. The words TO and JCT shall be located to the left of the shield while cardinal directions and BUSINESS shall be located to the right of the shield to which it applies.

Arrow Placement.

Arrow placement is critical since it implies the direction and, as a consequence, the navigational maneuver to be taken by the driver. Arrow placement angle should point approximately at the same angle as the ramp or turn departure, i.e. horizontal arrows for right angle connections.

To indicate a direction straight ahead, the arrow should be mounted vertically and to the left of the copy on a ground mounted sign.

To indicate a left turn, the arrow should be mounted horizontally and to the left of or below the destination.

To indicate a right turn, the arrow should be mounted horizontally and to the right of or below the destination.

For overhead signs straight ahead directions may be indicated by either an up arrow or a down arrow. Down arrows should be used only where specific lane assignment is necessary or where horizontal or vertical alignment or interchange complexity prevents the motorist from readily distinguishing the through direction.

The desired location of arrows on exit direction signs is beside the destination, whether ground mounted or overhead, although it is permissible to mount the arrow below the destination.

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Separation of Messages.

In a multi-direction sign, the distinction between the directions must be defined sharply. A common source of confusion can arise when a two direction guide sign lacks proper separation, since a surprisingly large number of people read the sign vertically, i.e. they read the upper line arrow with the bottom line of copy.

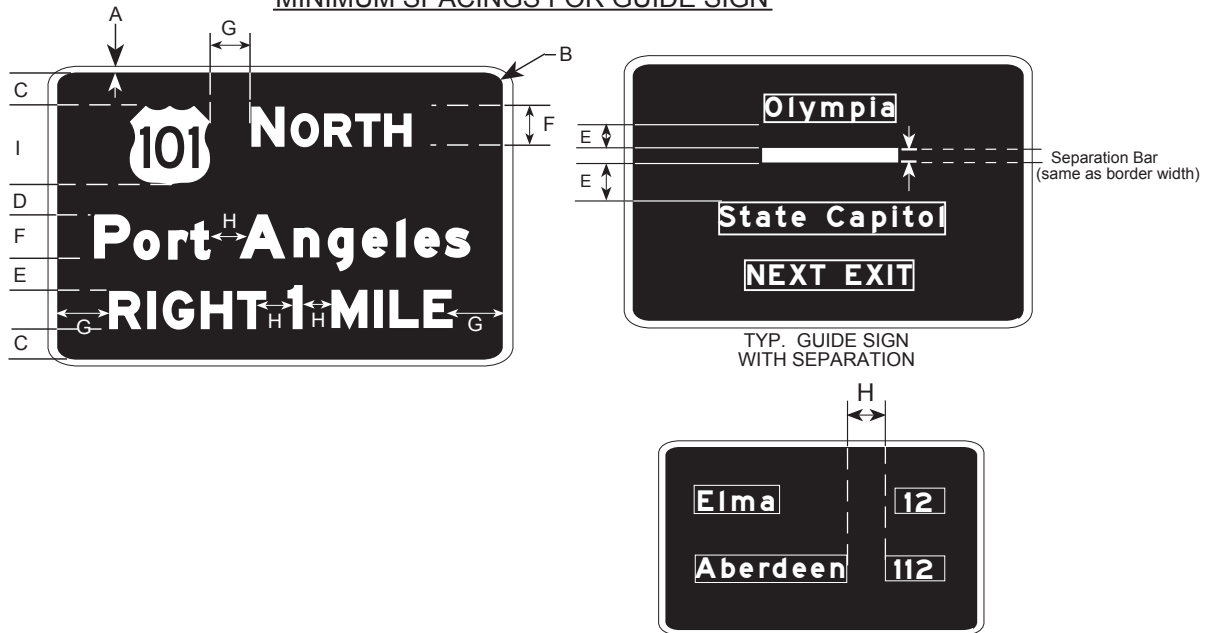
Separation of directions should be accomplished by the use of horizontal border strips. Certain destination names when located without proper consideration may be interpreted incorrectly by the unfamiliar motorist. For example "Vancouver Mall Drive" when installed on two lines, "Vancouver" on the first and "Mall Drive" on the second, could be read as two destinations "Vancouver" and "Mall Drive" when it was intended to be one destination. In this example, the proper arrangement would be to install "Vancouver Mall" on the first line and "Drive" on the second line.

Conversely, the motorist may read a sign message as a single destination when it was intended to be two destinations, for example, "Chehalis Fairgrounds". In this example, the proper layout would include a border strip between the two destinations. The length of this border strip should be approximately equal to the length of the shorter destination message.

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MINIMUM SPACINGS FOR GUIDE SIGN



TYP. GUIDE SIGN WITH SEPARATION

SEE E 7-1 FOR VERTICAL SPACING

GENERAL

A. The border gives the sign a finished appearance and makes it more conspicuous. If the background is a darker color than the copy and border, the border should be positioned on the edge of the sign. The width of the border should be approximately 1/3 to 3/4 the width of the stroke of the largest letter.

B. Corner radii of the sign borders should be approximately 1/8 of the lesser side dimension but should not exceed 12". When prefabricated reflective border and corner sections are employed, sizes should be selected that reasonably conform to the sign size requirements. The sign area outside the corner radius need not be trimmed.

HEIGHT OF SIGN FACE:

C. Spacing to the top and bottom borders should be approximately equal to the average letter height of the adjacent line of copy.

D. The spacing between route markers or arrows and tops of capital or upper case letters in the adjacent line of copy, should be approximately equal to 1/2 the height of the largest capital or upper case letters on the sign.

E. The interline spacing between tops and bottoms of capital or upper case letters should be approximately 3/4 of the average of the heights of the capital or upper case letters in adjacent lines of copy.

F. Letter Height of capital letters as prescribed in the MUTCD or the state sign fabrication manual.

LENGTH OF SIGN:

To obtain length of sign, first determine letter size to be used in the longest line of copy, then figure length of that line by referring to appropriate tables.

G. Each line of copy should be "Visually Centered" within the sign borders. The spacing between the left border and the left letter, numeral or arrow of the longest line of copy and right border and right letter, numeral or arrow of the same line of copy is to be approximately equal to the height of the upper case letter in that line of copy. Shorter lines of copy should be "Visually Centered" on the sign. "Visual Spacing" the letter shapes at each end of a line of copy determine the position that gives visual balance. A line of copy with open, curved or slanted letter side at each end should be centered in the sign face (Ex; JACKS) . If the line has straight side letters at each end, it is also centered (Ex; BARTON) . A line of copy with open, curved or slanted letters at one end and straight side letters at the other end should be shifted toward the open, curved or slanted letter side until the line of copy appears "Visually Balanced" in the sign face (Ex; ISLE) .

H. Spacing between words and arrow, or a word and a numeral, in a line of copy should be approximately equal to the capital or upper case letter height used in that line of copy.

I. Shield size as per the Sign Fabrication Manual.

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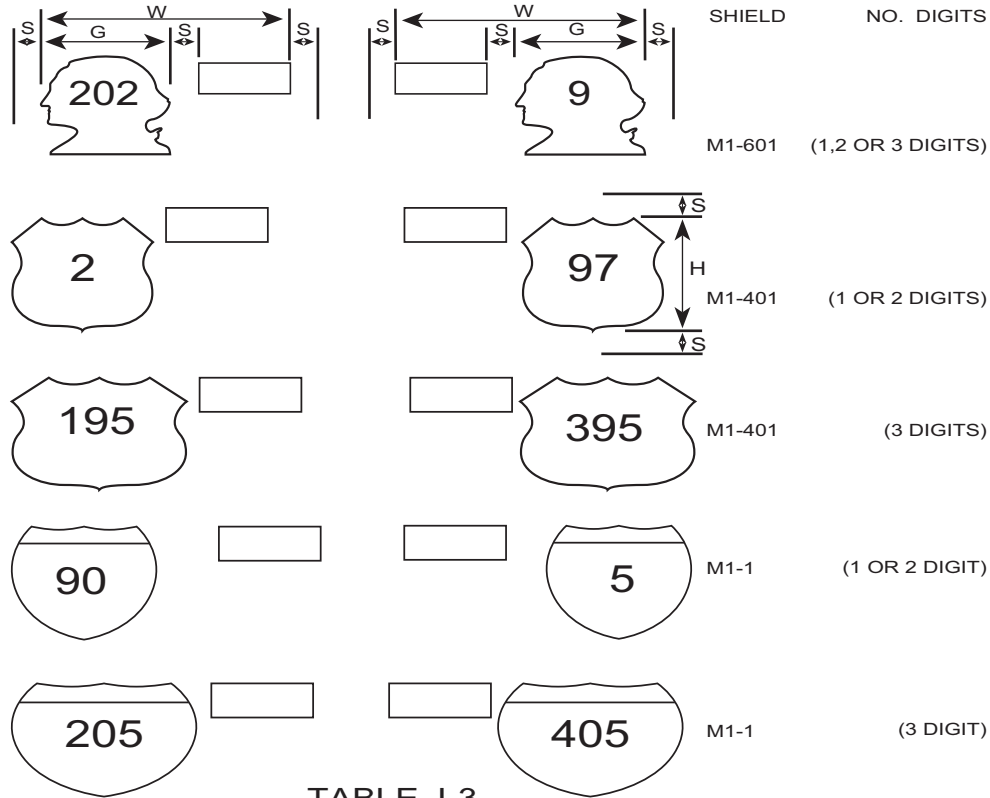


TABLE J-3

SHIELD CODE	SIZE CODE	SHIELD SIZE G X H	DIMENSIONS (MILLIMETERS) "W"							" S "
			NORTH	SOUTH	EAST	WEST	JCT	T		
M1-602	A	408 X 450	1300	1300	1150	1200	975	800	150	
	B	544 X 600	1775	1775	1575	1600	1300	1050	200	
	C	830 X 900	2325	2325	2100	2125	1725	1425	250	
	D OR E	830 X 900	2650	2650	2375	2400	1925	1575	300	
M1-1 M1-401	A	450 X 450	1375	1375	1225	1250	1050	875	150	
	A	563 X 450	1500	1500	1350	1375	117	1000	150	
	B	600 X 600	1825	1825	1625	1650	1400	115	200	
	B	750 X 600	1975	1975	1775	1800	1550	1300	200	
	C	900 X 900	2425	2425	2175	2200	1900	1600	250	
	C	1125 X 900	2650	2650	2400	2425	2125	1825	250	
	D OR E	900 X 900	2750	2750	2425	2475	2100	1750	300	
	D OR E	1125 X 900	2975	2975	2650	2700	2325	1975	300	

SHIELD CODE	SIZE CODE	SHIELD SIZE G X H	DIMENSIONS (INCHES) "W"							" S "
			NORTH	SOUTH	EAST	WEST	JCT	TO		
M1-602	A	16 5/16 X 18	52	52	46	48	39	32	6	
	B	21 3/4 X 24	71	71	63	64	52	42	8	
	C	33 3/16 X 36	93	93	84	85	69	57	10	
	D OR E	33 3/16 X 36	106	106	95	96	77	63	12	
M1-1 M1-401	A	18 X 18	55	55	49	50	42	35	6	
	A	22 1/2 X 18	60	60	54	55	47	40	6	
	B	24 X 24	73	73	65	66	56	46	8	
	B	30 X 24	79	79	71	72	62	52	8	
	C	36 X 36	97	97	87	88	76	64	10	
	C	45 X 36	106	106	96	97	85	73	10	
	D OR E	36 X 36	110	110	97	99	84	70	12	
	D OR E	45 X 36	119	119	106	108	93	79	12	

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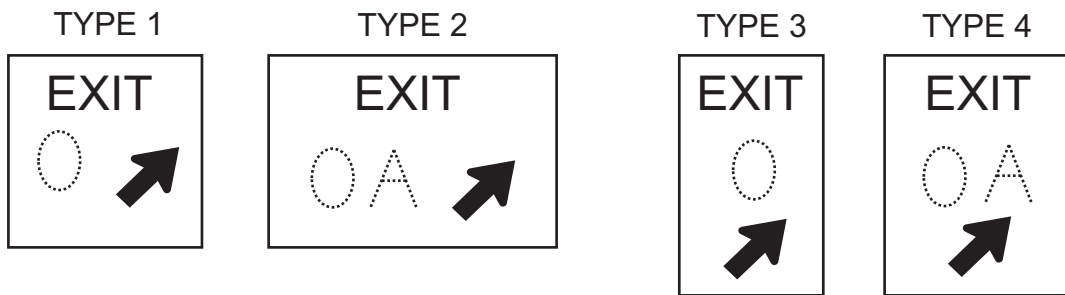
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Exit Gore Widths.

Table J-5 illustrates four possible sign layouts for exit gore signs on the Interstate system or where exit numbers are to be provided. The first layout is the most common and is used where there is a single exit within that milepost. The second layout is used where there are multiple exits within that milepost.

The third and fourth layouts are reserved for those extremely narrow gore areas where it is impossible to install the first two configurations. These signs will be treated as the exception and are included herewith only to make the designer aware of this layout.

The dimensions indicated are the actual sign width upon which the 12"/15" legend is installed.



	SIGN WIDTH feet								
Numeral Shape	1	0	1	10	00	11	11	100	000
TYPE 1	5	5	5	5.5	6	6	6.5	7	7
TYPE 2	5.5	6	6.5	7	7.5	7.5	8	8.5	9
TYPE 3	4	4	4	4	4	4	4	4.5	5
TYPE 4	4	4	4	4.5	5	5	5.5	6	6.5

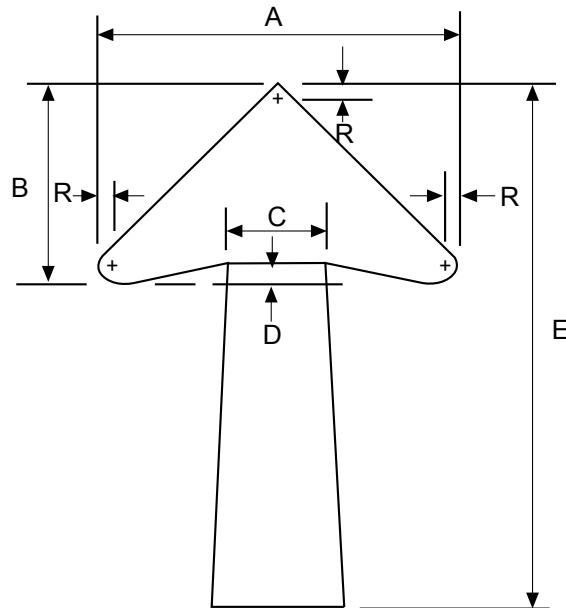
TABLE J-5

	SIGN WIDTH mm								
Numeral Shape	1	0	1	10	00	11	11	100	000
TYPE 1	1500	1500	1500	1650	1800	1800	1950	2100	2100
TYPE 2	1650	1800	1950	2100	2250	2250	2400	2550	2700
TYPE 3	1200	1200	1200	1200	1200	1200	1200	1350	1500
TYPE 4	1200	1200	1200	1350	1500	1500	1650	1800	1950

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GUIDE SIGN ARROW



"UP" ARROW, "DIAGONAL" ARROW OR "HORIZONTAL"

DIMENSIONS (MILLIMETERS)								
ARROW NO.	LETTER SIZE(U.C.)	LINES OF COPY	ARROW DIMENSIONS IN MILLIMETERS					
			A	B	C	D	*E	R
1	200 U.C. OR 200 CAPS	1	278.125	212.25	68.75	21.875	325	12.5
2	200 CAPS	2	278.125	212.25	68.75	21.875	450	12.5
3	266.75 - 333.25 U.C	1	456.25	350	112.	37.5	500	18.75
4	OR 250 CAPS	2	456.25	350	112.	37.5	750	18.75
5	400 U.C. OR	1	556.25	425	134.375	43.75	625	25
6	300 CAPS	2	556.25	425	134.375	43.75	875	25

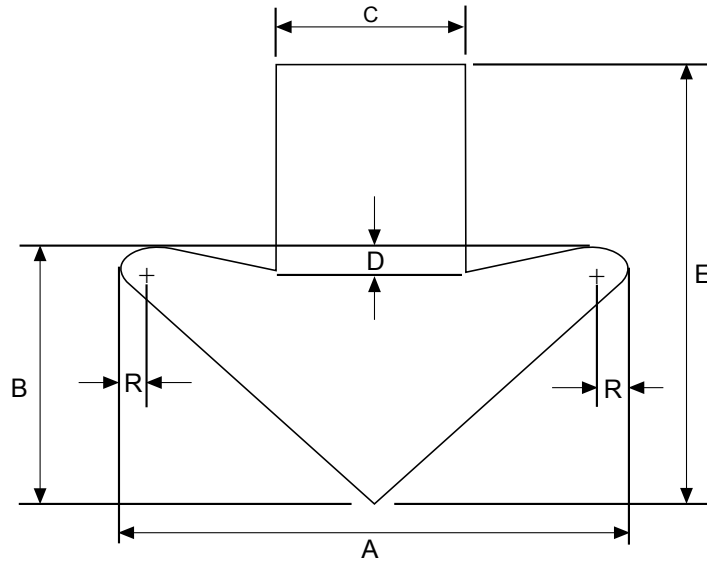
DIMENSIONS (INCHES)								
ARROW NO.	LETTER SIZE(U.C.)	LINES OF COPY	ARROW DIMENSIONS IN INCHES					
			A	B	C	D	*E	R
1	8" U.C. OR 8" CAPS.	1	11	8 1/2	2 3/4	7/8	13	1/2
2	8" CAPS.	2	11	8 1/2	2 3/4	7/8	18	1/2
3	10.67" - 13.33" U.C	1	18 1/4	14	4 1/2	1 1/2	20	3/4
4	OR 10" CAPS.	2	18 1/4	14	4 1/2	1 1/2	30	3/4
5	16" U.C. OR	1	22 1/4	17	5 3/8	1 3/4	25	1
6	12" CAPS.	2	22 1/4	17	5 3/8	1 3/4	35	1

TAPER OF 1/2" PER FOOT SHALL BE HELD CONSTANT FOR LONGER OR SHORTER SHAFT LENGTHS.

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GUIDE SIGN ARROW

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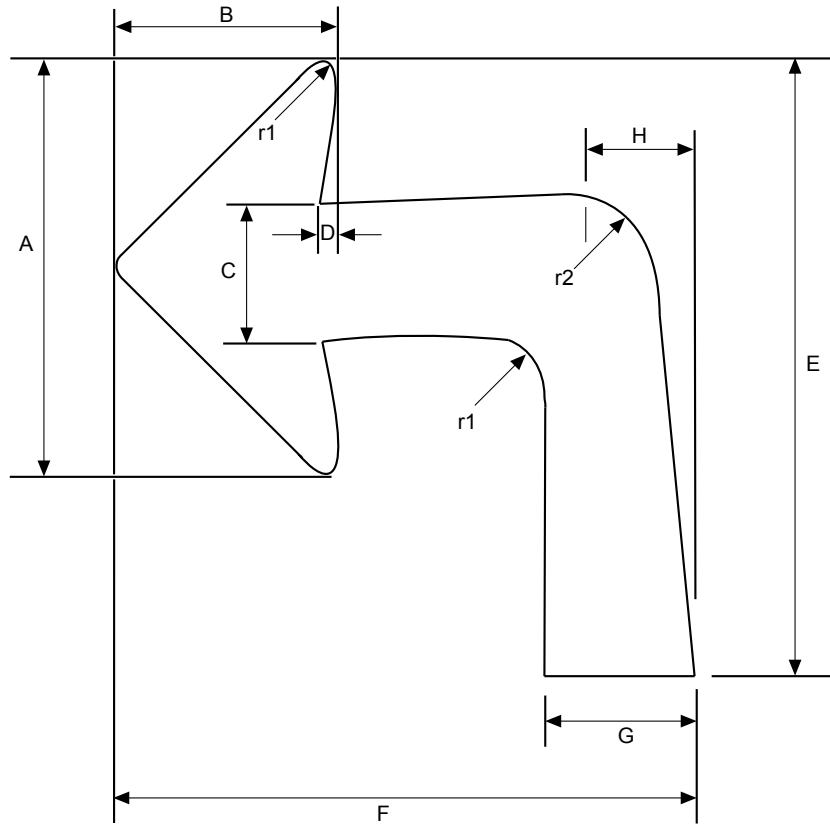
"DOWN" ARROW

DIMENSIONS (MILLIMETERS)							
ARROW NO.	SIZE	ARROW DIMENSIONS IN MILLIMETERS					
		A	B	C	D	E	R
7	266.75 U.C. OR 200	562.5	281.25	125	56.25	412.5	18.75
8	333.25 - 400 U.C. 250 TO 300 C.	800	400	162.5	75	550	25

DIMENSIONS IN INCHES							
ARROW NO.	SIZE	ARROW DIMENSIONS IN INCHES					
		A	B	C	D	E	R
7	10.67 U.C. OR 8 CAPS.	22 1/2	11 1/4	5	2 1/4	16 1/2	3/4
8	13.33 - 16 U.C. OR 10 TO 12 CAPS	32	16	6 1/2	3	22	1

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GUIDE SIGN ARROW
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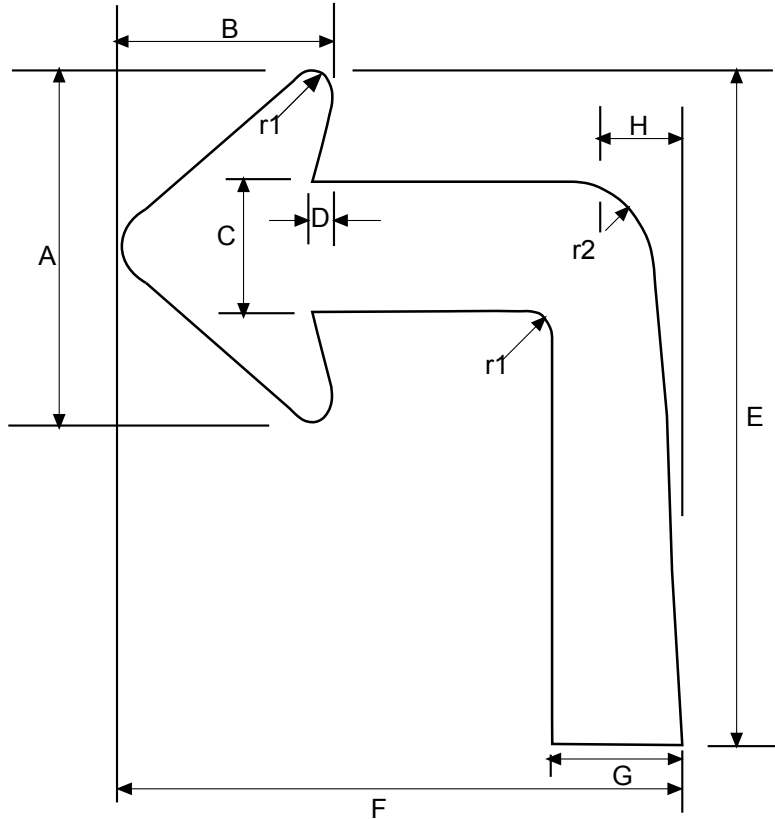


DIMENSIONS IN (MILLIMETERS)										
LETTER SIZE	A	B	C	D	E	F	G	H	r1	r2
150 U.C. 112.5 L.C.	212.5	143.75	50	15.625	337.5	325	87.5	62.5	9.375	50
200 U.C. 150 L.C.	356.25	246.88	84.375	31.25	356.25	356.25	125	87.5	18.75	68.75
266.75 U.C. 200 L.C.	456.25	350	112.5	37.5	600	575	150	100	18.75	75

DIMENSIONS IN (INCHES)										
LETTER SIZE	A	B	C	D	E	F	G	H	r1	r2
6 U.C. 4 1/2 L.C.	8 1/2	5 3/4	2	5/8	13 1/2	13	3 1/2	2 1/2	3/8	2
8 U.C. 6 L.C.	14 1/4	9 7/8	3 3/8	1 1/4	17 1/4	17 1/4	5	3 1/2	3/4	2 3/4
10 2/3 U.C. 8 L.C.	18 1/4	14	4 1/2	1 1/2	24	23	6	4	3/4	3

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GUIDE SIGN ARROW
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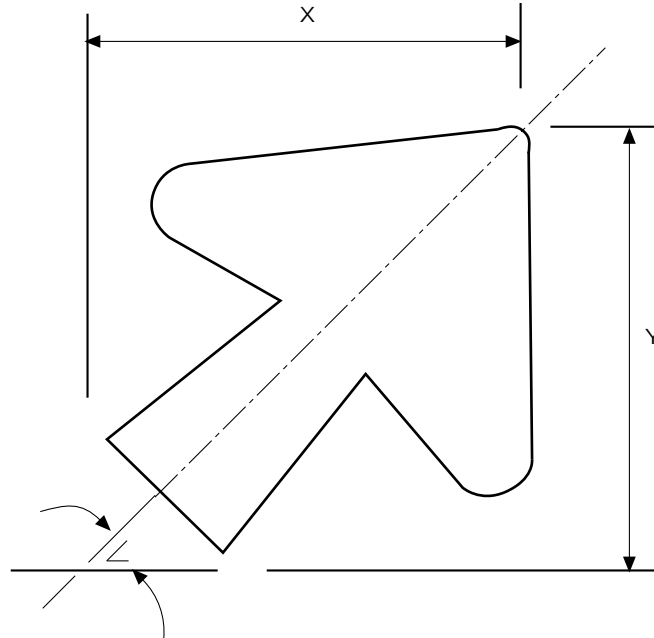


DIMENSIONS IN (MILLIMETERS)										
LETTER SIZE	A	B	C	D	E	F	G	H	r1	r2
150 U.C. 112.5 L.C.	212.5	143.75	50	15.625	450	325	87.5	62.5	9.375	50
200 U.C. 150 L.C.	356.25	246.88	84.375	31.25	600	356.25	125	87.5	18.75	68.75
266.75 U.C. 200 L.C.	456.25	350	112.	37.5	750	575	150	100	18.75	75

DIMENSIONS IN (INCHES)										
LETTER SIZE	A	B	C	D	E	F	G	H	r1	r2
6 U.C. 4 1/2 L.C.	8 1/2	5 3/4	2	5/8	18	13	3 1/2	2 1/2	3/8	2
8 U.C. 6 L.C.	14 1/4	9 7/8	3 3/8	1 1/4	24	17 1/4	5	3 1/2	3/4	2 3/4
10 2/3 U.C. 8 L.C.	18 1/4	14	4 1/2	1 1/2	30	23	6	4	3/4	3

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ROTATION DIMENSION FOR GUIDE

ARROW NO.	DIMENSIONS IN (MILLIMETERS)					
	ANGLE OF ARROW (ζ)					
	30°		45°		60°	
	X	Y	X	Y	X	Y
1	306.2	246.8	271.8	271.8	246.8	306.2
2	421.8	306.2	368.7	368.7	306.2	421.8
3	468.7	400	409.3	409.3	400	468.7
4	693.7	506.2	590.6	590.6	506.2	693.7
5	587.	443.7	506.2	506.2	443.7	587.5
6	806.2	565.6	687.5	687.5	565.6	806.2

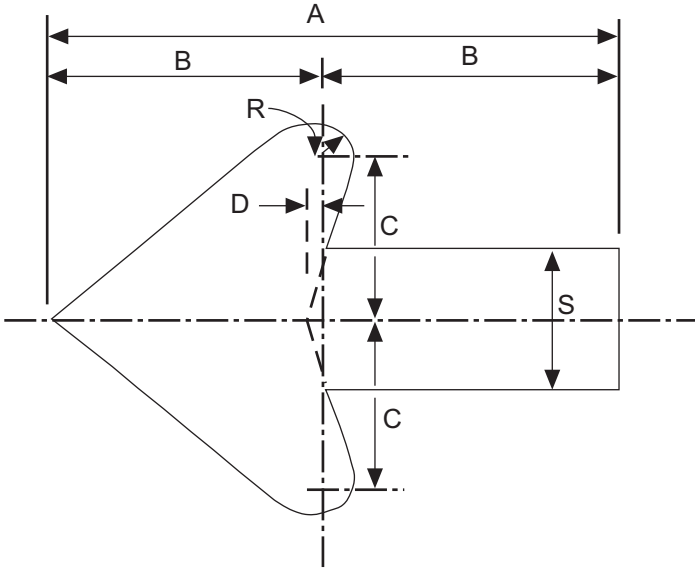
ARROW NO	DIMENSIONS IN (INCHES)					
	ANGLE OF ARROW (ζ)					
	30°		45°		60°	
	X	Y	X	Y	X	Y
1	12 1/4	9 7/8	10 7/8	10 7/8	9 7/8	12 1/4
2	16 7/8	12 1/4	14 3/4	14 3/4	12 1/4	16 7/8
3	18 3/4	16	16 3/8	16 3/8	16	18 3/4
4	27 3/4	20 1/4	23 5/8	23 5/8	20 1/4	27 3/4
5	23 1/2	17 3/4	20 1/4	20 1/4	17 3/4	23 1/2
6	32 1/4	22 5/8	27 1/2	27 1/2	22 5/8	32 1/4

Arrow as per SIGN FABRICATION

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STANDARD 6" X 9" ARROW DETAILS



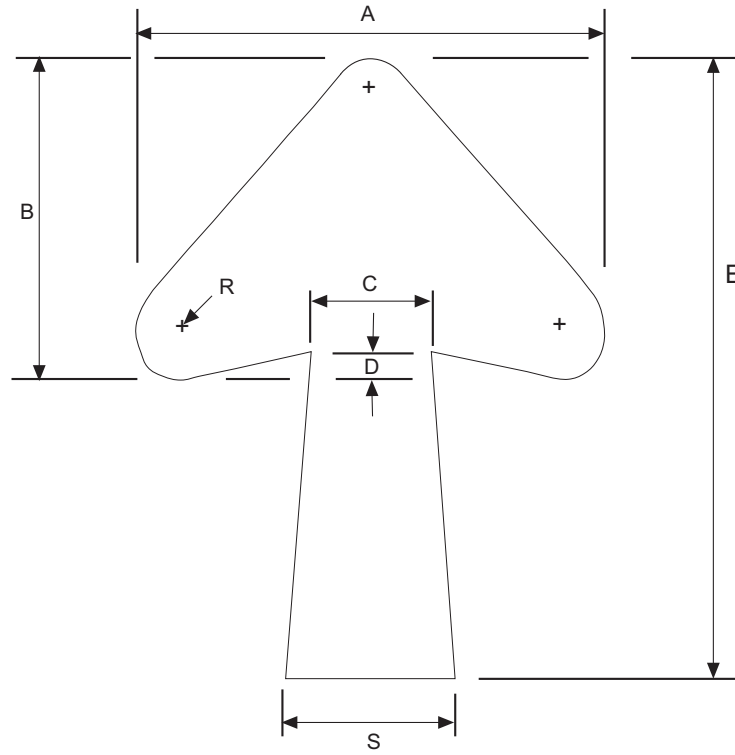
DIMENSIONS IN (MILLIMETERS)					
A	B	C	D	R	S
225	112	64	8	11	56

DIMENSIONS IN (INCHES)					
A	B	C	D	R	S
9	4 1/2	2 9/16	5/16	7/16	2 1/4

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8 1/2 " X 10" ARROW DETAILS



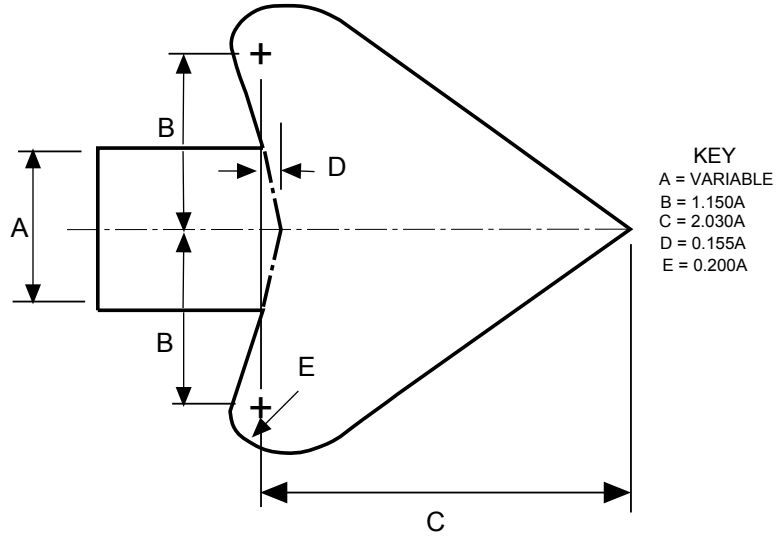
DIMENSIONS IN (MILLIMETERS)						
A	B	C	D	E	R	S
213	144	50	15.63	250	9.38	62.5

DIMENSIONS IN (INCHES)						
A	B	C	D	E	R	S
8 1/2	5 3/4	2	5/8	10	3/8	2 1/2

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STANDARD ARROW DETAILS



DIMENSIONS IN (MILLIMETERS)				
A	B	C	D	E
50	57.81	101.56	7.81	9.38
56.25	65.63	112.	9.38	10.94
62.5	71.88	126.56	9.38	12.5
65.63	75	131.25	9.38	12.5
68.75	75	139.06	10.94	14.06
75	87.5	153.13	10.94	14.06
78.13	90.63	159.38	12.5	15.63
81.25	93.75	165.63	12.5	15.63
82.81	95.31	171.88	12.5	17.19

DIMENSIONS IN (MILLIMETERS)				
A	B	C	D	E
87.5	100	178.13	14.06	17.09
93.75	107.81	190.63	14.06	18.75
100	115.6	203.12	15.63	20.31
101.56	118.7	206.25	15.63	20.31
106.25	121.88	215.63	15.63	20.31
109.38	125	221.88	17.19	21.88
112.	129.69	228.13	17.19	21.88
118.7	135.94	240.63	18.75	25
121.88	140.63	246.88	18.75	25

DIMENSIONS IN (MILLIMETERS)				
A	B	C	D	E
125	143.75	253.13	18.75	25
131.25	150	265.63	20.31	25.56
137.5	159.38	278.13	21.88	28.13
143.75	163.63	292.19	21.88	28.13
150	171.88	304.69	23.44	29.69
162.5	187.5	329.69	25	32.81
175	200	354.69	26.56	34.38
187.5	215.63	375.69	28.13	37.5
200	229.69	406.25	31.25	40.63

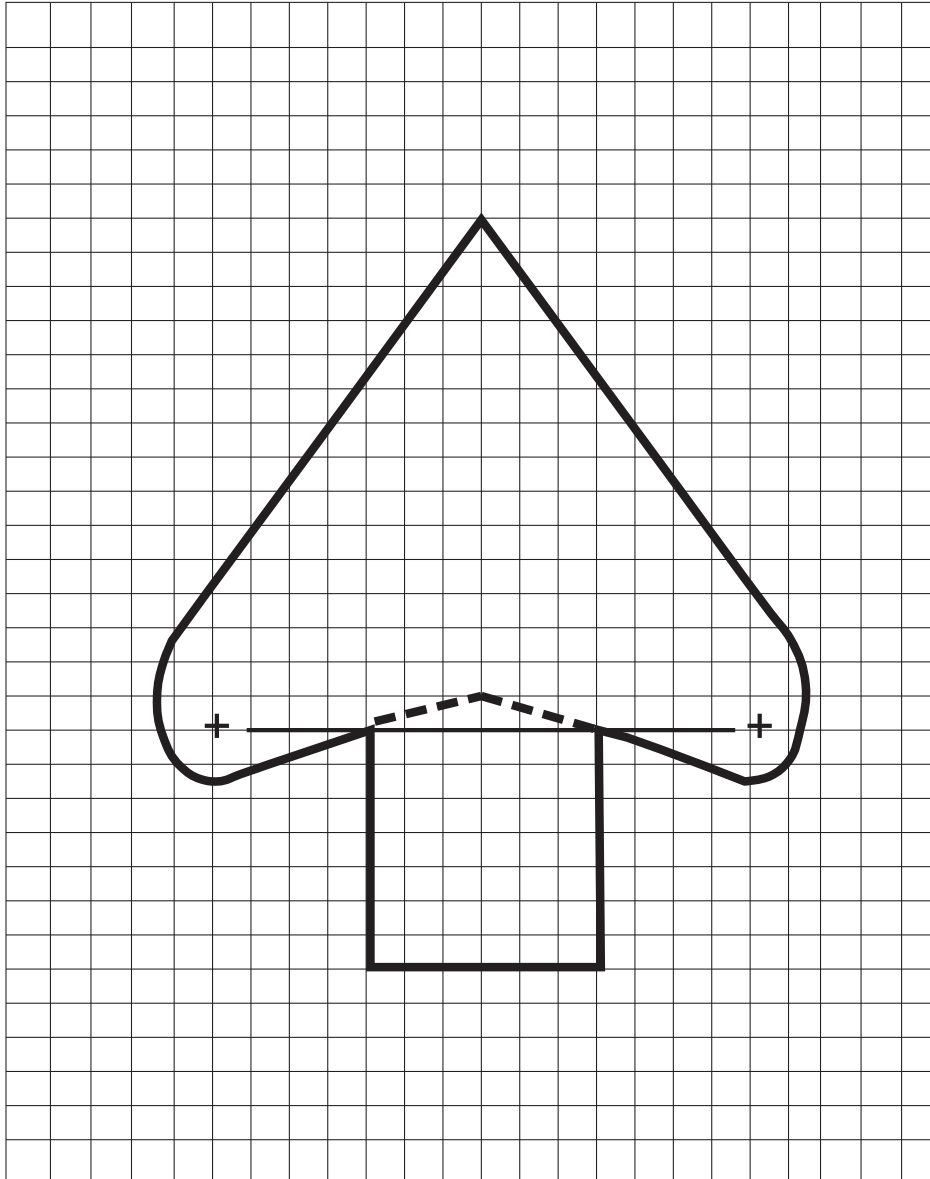
DIMENSIONS IN (INCHES)				
A	B	C	D	E
2	2 5/16	4 1/16	5/16	3/8
2 1/4	2 5/8	4 1/2	3/8	7/16
2 1/2	2 7/8	5 1/16	3/8	1/2
2 5/8	3	5 1/4	3/8	1/2
2 3/4	3	5 9/16	7/16	9/16
3	3 1/2	6 1/8	7/16	9/16
3 1/8	3 5/8	6 3/8	1/2	5/8
3 1/4	3 3/4	6 5/8	1/2	5/8
3 5/16	3 3/16	6	1/2	11/16

DIMENSIONS IN (INCHES)				
A	B	C	D	E
3 1/2	4	7 1/8	9/16	11/16
3 3/4	4 5/16	7 5/8	9/16	3/4
4	4 5/8	8 1/8	5/8	13/16
4 1/16	4 3/4	8 1/4	5/8	13/16
4 1/4	4 7/8	9 5/8	5/8	13/16
4 3/8	5	9 7/8	11/16	7/8
4 1/2	5 3/16	9 1/8	11/16	7/8
4 3/4	5 7/16	9 5/8	3/4	1
4 7/8	5 5/8	9 7/8	3/4	1

DIMENSIONS IN (INCHES)				
A	B	C	D	E
5	5 3/4	10 1/8	3/4	1
5 1/4	6	10 5/8	13/16	1 1/16
5 1/2	6 3/8	11	7/8	1 1/8
5 3/4	6 5/8	11	7/8	1 1/8
6	6 7/8	12 3/16	15/16	1 3/16
6 1/2	7 1/2	13 3/16	1	1 5/16
7	8	14 3/16	1 1/16	1 3/8
7 1/2	8 5/8	15 3/16	1 1/8	1 1/2
8	9 3/16	16 1/4	1 1/4	1 5/8

APPENDIX B-6A

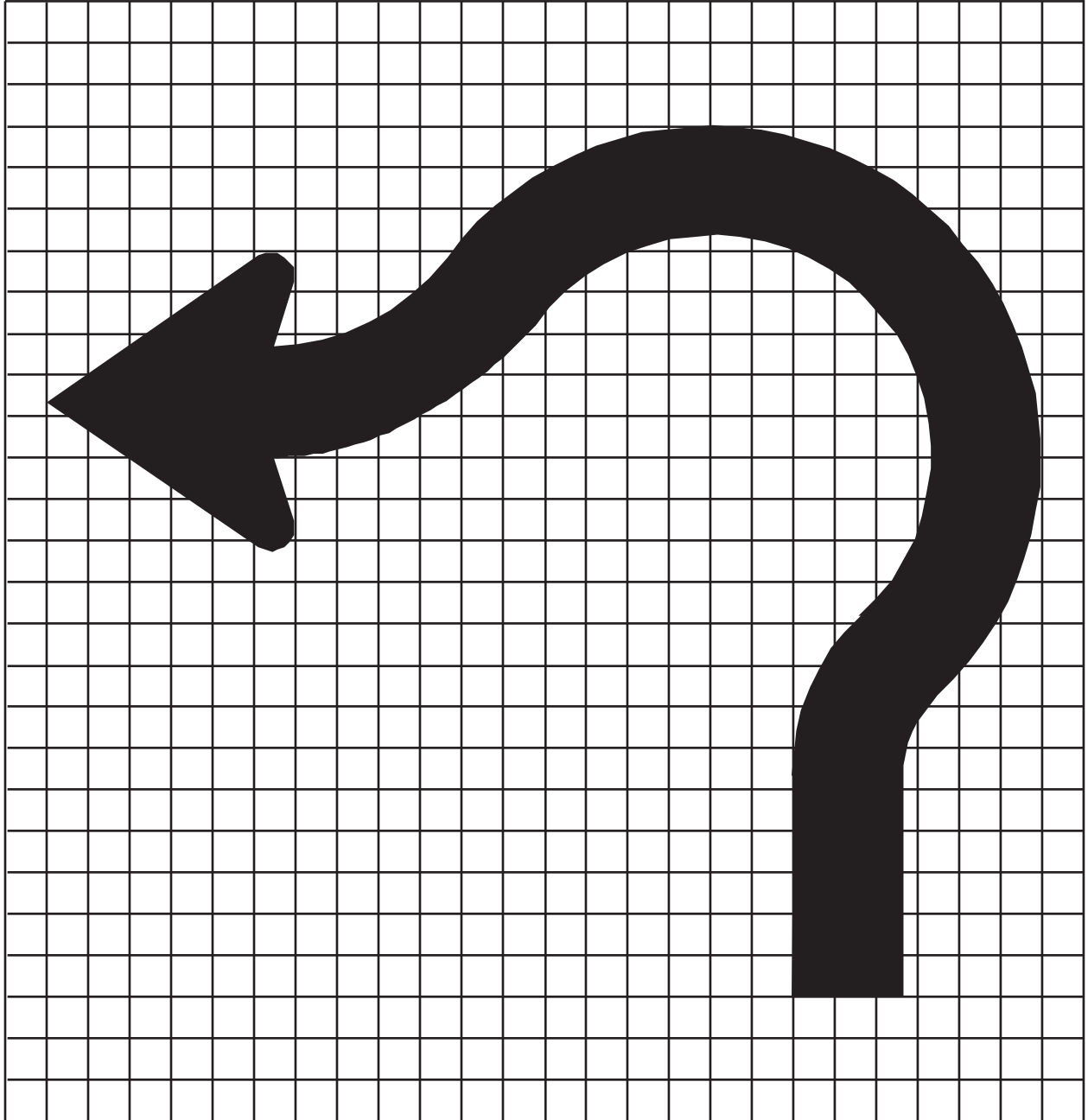
12/94



STANDARD ARROW

APPENDIX B-7

5/06



APPENDIX C-3

SERIES B

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN INCHES)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDEFHIK LMNPRU	CGO OSXZ	AJT VWY
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER							
LETTER HEIGHT	4"	5"	6"	8"	10"	12"	18"
A	2.12	2.66	3.19	4.25	5.31	6.38	9.56
B	1.69	2.11	2.53	3.38	4.22	5.06	7.59
C	1.69	2.11	2.53	3.38	4.22	5.06	7.59
D	1.69	2.11	2.53	3.38	4.22	5.06	7.59
E	1.50	1.88	2.25	3.00	3.75	4.50	6.75
F	1.50	1.88	2.25	3.00	3.75	4.50	6.75
G	1.69	2.11	2.53	3.38	4.22	5.06	7.59
H	1.69	2.11	2.53	3.38	4.22	5.06	7.59
I	0.50	0.62	0.75	1.00	1.25	1.50	2.25
J	1.75	2.19	2.62	3.50	4.38	5.25	7.88
K	1.75	2.19	2.62	3.50	4.38	5.25	7.88
L	1.50	1.88	2.25	3.00	3.75	4.50	6.75
M	1.94	2.42	2.91	3.88	4.84	5.81	8.72
N	1.69	2.11	2.53	3.38	4.22	5.06	7.59
O	1.81	2.27	2.72	3.62	4.53	5.44	8.16
P	1.69	2.11	2.53	3.38	4.22	5.06	7.59
Q	1.81	2.27	2.72	3.62	4.53	5.44	8.16
R	1.69	2.11	2.53	3.38	4.22	5.06	7.59
S	1.69	2.11	2.53	3.38	4.22	5.06	7.59
T	1.50	1.88	2.25	3.00	3.75	4.50	6.75
U	1.69	2.11	2.53	3.38	4.22	5.06	7.59
V	1.84	2.30	2.77	3.69	4.61	5.53	8.31
W	2.50	3.12	3.75	5.00	6.25	7.50	11.25
X	1.84	2.30	2.77	3.69	4.61	5.53	8.31
Y	2.12	2.66	3.19	4.25	5.31	6.38	9.56
Z	1.69	2.11	2.53	3.38	4.22	5.06	7.59

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERALS							
NUMERAL HEIGHT	4"	5"	6"	8"	10"	12"	18"
1	0.81	1.02	1.22	1.62	2.03	2.44	3.66
2	1.69	2.11	2.53	3.38	4.22	5.06	7.59
3	1.69	2.11	2.53	3.38	4.22	5.06	7.59
4	1.94	2.42	2.91	3.88	4.84	5.81	8.72
5	1.69	2.11	2.53	3.38	4.22	5.06	7.59
6	1.69	2.11	2.53	3.38	4.22	5.06	7.59
7	1.69	2.11	2.53	3.38	4.22	5.06	7.59
8	1.69	2.11	2.53	3.38	4.22	5.06	7.59
9	1.69	2.11	2.53	3.38	4.22	5.06	7.59
0	1.81	2.27	2.72	3.62	4.53	5.44	8.16

TABLE III WIDTH OF STROKE	
PRECEDING LETTER	STROKE WIDTH IN INCHES
4"	0.50
5"	0.62
6"	0.75
8"	1.00
10"	1.25
12"	1.50
18"	2.25

TABLE VI WIDTH OF NUMERALS							
CODE NUMBER	4"	5"	6"	8"	10"	12"	18"
1	0.75	0.94	1.13	1.50	1.88	2.25	3.37
2	0.60	0.75	0.90	1.20	1.50	1.80	2.70
3	0.40	0.50	0.60	0.80	1.00	1.20	1.80
4	0.20	0.25	0.30	0.50	0.50	0.60	0.90
SPACE { }							

APPENDIX C-3A

SERIES B

4/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDEFHI K	CGO QX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS										
LETTER	HEIGHT 75	100	125	150	175	200	225	250	300	400
A	40	54	68	81	94	108	122	135	162	216
B	32	43	54	64	75	86	96	107	128	172
C	32	43	54	64	75	86	96	107	128	172
D	32	43	54	64	75	86	96	107	128	172
E	28	38	48	57	66	76	86	95	114	152
F	28	38	48	57	66	76	86	95	114	152
G	32	43	54	64	75	86	96	107	128	172
H	32	43	54	64	75	86	96	107	128	172
I	10	13	16	19	22	25	28	32	38	50
J	33	44	56	66	78	89	100	111	133	178
K	33	44	56	66	78	89	100	111	133	178
L	28	38	48	57	66	76	86	95	114	152
M	37	49	62	74	86	99	111	123	148	198
N	32	43	54	64	75	86	96	107	128	172
O	34	46	58	69	80	92	104	115	138	184
P	32	43	54	64	75	86	96	107	128	172
Q	34	46	58	69	80	92	104	115	138	184
R	32	43	54	64	75	86	96	107	128	172
S	32	43	54	64	75	86	96	107	128	172
T	28	38	48	57	66	76	86	95	114	152
U	32	43	54	64	75	86	96	107	128	172
V	35	47	58	70	82	94	106	117	140	188
W	48	64	79	95	111	127	143	159	190	254
X	35	47	58	70	82	94	106	117	140	188
Y	40	54	68	81	94	108	122	135	162	216
Z	32	43	54	64	75	86	96	107	128	172

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS										
Numeral Height	75	100	125	150	175	200	225	250	300	400
1	16	21	26	31	36	41	46	52	62	82
2	32	43	54	64	75	86	96	107	128	172
3	32	43	54	64	75	86	96	107	128	172
4	37	49	61	74	86	99	111	123	148	198
5	32	43	54	64	75	86	96	107	128	172
6	32	43	54	64	75	86	96	107	128	172
7	32	43	54	64	75	86	96	107	128	172
8	32	43	54	64	75	86	96	107	128	172
9	32	43	54	64	75	86	96	107	128	172
0	34	46	58	69	80	92	104	115	138	184

TABLE III WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN MILLIMETERS
74	10
100	13
125	16
150	19
175	22
200	25
225	28
250	32
300	38
400	50

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS										
CODE NUMBER	75	100	125	150	175	200	225	250	300	400
1	14	19	24	29	34	38	43	48	57	76
2	12	15	19	23	26	30	34	38	46	60
3	8	10	13	15	18	20	22	25	30	40
4	4	5	6	8	9	10	12	13	15	20

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-4

SERIES C

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN INCHES)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO Q SX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER							
LETTER HEIGHT	4	5	6	8	10	12	18
A	2.50	3.12	3.75	5.00	6.25	7.50	11.25
B	2.19	2.73	3.28	4.38	5.47	6.56	9.84
C	2.19	2.73	3.28	4.38	5.47	6.56	9.84
D	2.19	2.73	3.28	4.38	5.47	6.56	9.84
E	2.00	2.50	3.00	4.00	5.00	6.00	9.00
F	2.00	2.50	3.00	4.00	5.00	6.00	9.00
G	2.19	2.73	3.28	4.38	5.47	6.56	9.84
H	2.19	2.73	3.28	4.38	5.47	6.56	9.84
I	0.56	0.70	0.84	1.12	1.41	1.69	2.53
J	2.00	2.50	3.00	4.00	5.00	6.00	9.00
K	2.19	2.73	3.28	4.38	5.47	6.56	9.84
L	2.00	2.50	3.00	4.00	5.00	6.00	9.00
M	2.59	3.23	3.89	5.19	6.48	7.78	11.67
N	2.19	2.73	3.28	4.38	5.47	6.56	9.84
O	2.31	2.89	3.47	4.62	5.78	6.94	10.41
P	2.19	2.73	3.28	4.38	5.47	6.56	9.84
Q	2.31	2.89	3.47	4.62	5.78	6.94	10.41
R	2.19	2.73	3.28	4.38	5.47	6.56	9.84
S	2.19	2.73	3.28	4.38	5.47	6.56	9.84
T	2.00	2.50	3.00	4.00	5.00	6.00	9.00
U	2.19	2.73	3.28	4.38	5.47	6.56	9.84
V	2.44	3.05	3.66	4.88	6.09	7.31	10.97
W	3.00	3.75	4.50	6.00	7.50	9.00	13.50
X	2.34	2.92	3.52	4.69	5.86	7.03	10.56
Y	2.50	3.12	3.75	5.00	6.25	7.50	11.25
Z	2.19	2.73	3.28	4.38	5.47	6.56	9.84

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERALS							
NUMERAL HEIGHT	4	5	6	8	10	12	18
1	0.81	1.02	1.22	1.62	2.03	2.44	3.66
2	2.19	2.73	3.28	4.38	5.47	6.56	9.84
3	2.19	2.73	3.28	4.38	5.47	6.56	9.84
4	2.44	3.05	3.66	4.88	6.09	7.31	10.97
5	2.19	2.73	3.28	4.38	5.47	6.56	9.84
6	2.19	2.73	3.28	4.38	5.47	6.56	9.84
7	2.19	2.73	3.28	4.38	5.47	6.56	9.84
8	2.19	2.73	3.28	4.38	5.47	6.56	9.84
9	2.19	2.73	3.28	4.38	5.47	6.56	9.84
0	2.31	2.89	3.47	4.62	5.78	6.94	10.41

TABLE II WIDTH OF STROKE	
PRECEDING LETTER	STROKE WIDTH
4"	0.56
5"	0.70
6"	0.84
8"	1.12
10	1.41
"	1.69
12	2.53

TABLE VI WIDTH OF NUMERALS							
CODE NUMBER	4	5	6	8	10	12	18
1	0.84	1.05	1.26	1.68	2.11	2.53	3.79
2	0.67	0.84	1.01	1.34	1.69	2.03	3.04
3	0.45	0.56	0.68	0.90	1.12	1.36	2.04
4	0.22	0.28	0.34	0.44	0.56	0.68	1.02

SPACE in inches measured horizontally from the extreme right edge of the preceding letter to the extreme left edge of the following letter (numeral).

APPENDIX C-4A

SERIES C

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDEFHI K	CGO QX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS										
LETTER	HEIGHT 75	100	125	150	175	200	225	250	300	400
A	48	64	79	95	111	127	143	159	190	254
B	42	56	69	83	97	111	125	139	167	222
C	42	56	69	83	97	111	125	139	167	222
D	42	56	69	83	97	111	125	139	167	222
E	38	51	64	76	89	102	114	127	152	204
F	38	51	64	76	89	102	114	127	152	204
G	42	56	69	83	97	111	125	139	167	222
H	42	56	69	83	97	111	125	139	167	222
I	10	14	18	21	24	28	32	36	43	56
J	38	51	64	76	89	102	114	127	152	204
K	42	56	69	83	97	111	125	139	167	222
L	38	51	64	76	89	102	114	127	152	204
M	50	66	82	99	116	132	148	165	198	264
N	42	56	69	83	97	111	125	139	167	222
O	44	59	73	88	102	117	132	147	176	234
P	42	56	69	83	97	111	125	139	167	222
Q	44	59	73	88	102	117	132	147	176	234
R	42	56	69	83	97	111	125	139	167	222
S	42	56	69	83	97	111	125	139	167	222
T	38	51	64	76	89	102	114	127	152	204
U	42	56	69	83	97	111	125	139	167	222
V	46	62	77	93	108	124	140	155	186	248
W	57	76	95	114	133	152	171	190	229	304
X	44	59	74	89	104	119	134	149	179	238
Y	48	64	79	95	111	127	143	159	190	254
Z	42	56	69	83	97	111	125	139	167	222

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS										
Numeral Height	75	100	125	150	175	200	225	250	300	400
1	16	21	26	31	36	41	46	52	62	82
2	42	56	69	83	97	111	125	139	167	222
3	42	56	69	83	97	111	125	139	167	222
4	46	62	77	93	108	124	140	155	186	248
5	42	56	69	83	97	111	125	139	167	222
6	42	56	69	83	97	111	125	139	167	222
7	42	56	69	83	97	111	125	139	167	222
8	42	56	69	83	97	111	125	139	167	222
9	42	56	69	83	97	111	125	139	167	222
0	44	59	73	88	102	117	132	147	176	234

TABLE III WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN
75	10
100	14
125	18
150	21
175	24
200	28
225	32
250	36
300	43
400	57

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS										
CODE NUMBER	75	100	125	150	175	200	225	250	300	400
1	16	21	27	32	38	43	48	54	64	85
2	13	17	21	26	30	34	38	43	52	69
3	8	11	14	17	20	23	26	28	34	45
4	4	6	7	9	10	11	12	14	17	23

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-5

SERIES D

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN INCHES)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO Q SX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER							
LETTER	LETTER HEIGHT						
	4	5	6	8	10	12	18
A	3.34	4.19	5.02	6.69	8.36	10.03	15.06
B	2.69	3.36	4.03	5.38	6.72	8.06	12.09
C	2.69	3.36	4.03	5.38	6.72	8.06	12.09
D	2.69	3.36	4.03	5.38	6.72	8.06	12.09
E	2.44	3.05	3.66	4.88	6.09	7.31	10.97
F	2.44	3.05	3.66	4.88	6.09	7.31	10.97
G	2.69	3.36	4.03	5.38	6.72	8.06	12.09
H	2.69	3.36	4.03	5.38	6.72	8.06	12.09
I	0.62	0.78	0.94	1.25	1.56	1.88	2.81
J	2.50	3.12	3.75	5.00	6.25	7.50	11.25
K	2.75	3.44	4.12	5.50	6.88	8.25	12.38
L	2.44	3.05	3.66	4.88	6.09	7.31	10.97
M	3.09	3.86	4.64	6.19	7.73	9.28	13.94
N	2.69	3.36	4.03	5.38	6.72	8.06	12.09
O	2.81	3.50	4.22	5.62	7.03	8.44	12.66
P	2.69	3.36	4.03	5.38	6.72	8.06	12.09
Q	2.81	3.50	4.22	5.62	7.03	8.44	12.66
R	2.69	3.36	4.03	5.38	6.72	8.06	12.09
S	2.69	3.36	4.03	5.38	6.72	8.06	12.09
T	2.44	3.05	3.66	4.88	6.09	7.31	10.97
U	2.69	3.36	4.03	5.38	6.72	8.06	12.09
V	3.00	3.75	4.50	6.00	7.50	9.00	13.50
W	3.50	4.38	5.25	7.00	8.75	10.50	15.75
X	2.69	3.36	4.03	5.38	6.72	8.06	12.09
Y	3.38	4.22	5.06	6.75	8.44	10.12	15.19
Z	2.69	3.36	4.03	5.38	6.72	8.06	12.09

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	15	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERALS							
NUMERAL HEIGHT	NUMERAL						
	4	5	6	8	10	12	18
1	0.97	1.20	1.45	1.94	2.42	2.91	4.38
2	2.69	3.36	4.03	5.38	6.72	8.06	12.09
3	2.69	3.36	4.03	5.38	6.72	8.06	12.09
4	2.94	3.67	4.41	5.88	7.34	8.81	13.22
5	2.69	3.36	4.03	5.38	6.72	8.06	12.09
6	2.69	3.36	4.03	5.38	6.72	8.06	12.09
7	2.69	3.36	4.03	5.38	6.72	8.06	12.09
8	2.69	3.36	4.03	5.38	6.72	8.06	12.09
9	2.69	3.36	4.03	5.38	6.72	8.06	12.09
0	2.81	3.50	4.22	5.62	7.03	8.44	12.66

TABLE III WIDTH OF STROKE	
PRECEDING LETTER	STROKE WIDTH
4"	0.62
5"	0.78
6"	0.94
8"	1.25
10	1.56
"	1.88
12	2.81

TABLE VI WIDTH OF NUMERALS							
CODE NUMBER	LETTER HEIGHT						
	4	5	6	8	10	12	18
1	0.94	1.17	1.41	1.88	2.34	2.81	4.22
2	0.75	0.94	1.12	1.50	1.88	2.25	3.38
3	0.50	0.62	0.75	1.00	1.25	1.50	2.25
4	0.25	0.31	0.38	0.50	0.62	0.75	1.12

SPACE in inches measured horizontally from the extreme right edge of the preceding letter to the extreme left edge of the following letter (numeral).

APPENDIX C-5A

SERIES D

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDEFHI K	CGO Q SX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS										
LETTER	HEIGHT 75	100	125	150	175	200	225	250	300	400
A	64	85	106	128	149	170	191	212	255	340
B	51	68	85	102	120	137	154	171	205	274
C	51	68	85	102	120	137	154	171	205	274
D	51	68	85	102	120	137	154	171	205	274
E	46	62	77	93	108	124	140	155	186	248
F	46	62	77	93	108	124	140	155	186	248
G	51	68	85	102	120	137	154	171	205	274
H	51	68	85	102	120	137	154	171	205	274
I	12	16	20	24	28	32	36	40	48	64
J	48	64	79	95	111	127	143	159	190	254
K	52	70	87	105	122	140	158	175	210	280
L	46	62	77	93	108	124	140	155	186	248
M	59	78	98	118	138	157	176	196	236	314
N	51	68	85	102	120	137	154	171	205	274
O	54	71	89	107	125	143	161	179	214	286
P	51	68	85	102	120	137	154	171	205	274
Q	54	71	89	107	125	143	161	179	214	286
R	51	68	85	102	120	137	154	171	205	274
S	51	68	85	102	120	137	154	171	205	274
T	46	62	77	93	108	124	140	155	186	248
U	51	68	85	102	120	137	154	171	205	274
V	57	76	95	114	133	152	171	190	229	304
W	66	89	111	133	156	178	200	222	267	356
X	51	68	85	102	120	137	154	171	205	274
Y	64	86	107	128	150	171	192	214	257	342
Z	51	68	85	102	120	137	154	171	205	274

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS										
Numeral Height	75	100	125	150	175	200	225	250	300	400
1	18	25	30	37	44	50	56	61	74	98
2	51	68	85	102	120	137	154	171	205	274
3	51	68	85	102	120	137	154	171	205	274
4	56	75	93	112	130	149	168	186	224	298
5	51	68	85	102	120	137	154	171	205	274
6	51	68	85	102	120	137	154	171	205	274
7	51	68	85	102	120	137	154	171	205	274
8	51	68	85	102	120	137	154	171	205	274
9	51	68	85	102	120	137	154	171	205	274
0	54	71	89	107	125	143	161	179	214	286

TABLE II WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN MILLIMETERS
75	12
100	16
125	20
150	24
175	28
200	32
225	36
250	40
300	48
400	64

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS										
CODE NUMBER	75	100	125	150	175	200	225	250	300	400
1	18	24	30	36	42	48	54	59	71	96
2	14	19	24	28	33	38	43	48	57	76
3	10	13	16	19	22	25	28	32	38	50
4	5	6	8	10	12	13	14	16	19	26

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-6

SERIES E

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN INCHES)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO QSX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER							
LETTER HEIGHT	4	5	6	8	10	12	18
A	4.00	5.00	6.00	8.00	10.00	12.00	18.00
B	3.19	3.98	4.78	6.38	7.97	9.56	14.34
C	3.19	3.98	4.78	6.38	7.97	9.56	14.34
D	3.19	3.98	4.78	6.38	7.97	9.56	14.34
E	2.94	3.67	4.41	5.88	7.34	8.81	13.22
F	2.94	3.67	4.41	5.88	7.34	8.81	13.22
G	3.19	3.98	4.78	6.38	7.97	9.56	14.34
H	3.19	3.98	4.78	6.38	7.97	9.56	14.34
I	0.69	0.86	1.03	1.38	1.72	2.06	3.09
J	3.00	3.75	4.50	6.00	7.50	9.00	13.50
K	3.25	4.06	4.88	6.50	8.12	9.75	14.62
L	2.94	3.67	4.41	5.88	7.34	8.81	13.22
M	3.69	4.61	5.53	7.38	9.22	11.06	16.59
N	3.19	3.98	4.78	6.38	7.97	9.56	14.34
O	3.31	4.14	4.97	6.62	8.28	9.94	14.91
P	3.19	3.98	4.78	6.38	7.97	9.56	14.34
Q	3.31	4.14	4.97	6.62	8.28	9.94	14.91
R	3.19	3.98	4.78	6.38	7.97	9.56	14.34
S	3.19	3.98	4.78	6.38	7.97	9.56	14.34
T	2.94	3.67	4.41	5.88	7.34	8.81	13.22
U	3.19	3.98	4.78	6.38	7.97	9.56	14.34
V	3.62	4.53	5.44	7.25	9.06	10.88	16.31
W	4.19	5.23	6.28	8.38	10.47	12.56	18.84
X	3.44	4.30	5.16	6.88	8.59	10.31	15.47
Y	4.00	5.00	6.00	8.00	10.00	12.00	18.00
Z	3.19	3.98	4.78	6.38	7.97	9.56	14.34

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	15	236890	47
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERALS							
NUMERAL HEIGHT	4	5	6	8	10	12	18
1	1.19	1.48	1.78	2.38	2.97	3.56	5.34
2	3.19	3.98	4.78	6.38	7.97	9.56	14.34
3	3.19	3.98	4.78	6.38	7.97	9.56	14.34
4	3.69	4.61	5.53	7.38	9.22	11.06	16.59
5	3.19	3.98	4.78	6.38	7.97	9.56	14.34
6	3.19	3.98	4.78	6.38	7.97	9.56	14.34
7	3.19	3.98	4.78	6.38	7.97	9.56	14.34
8	3.19	3.98	4.78	6.38	7.97	9.56	14.34
9	3.19	3.98	4.78	6.38	7.97	9.56	14.34
0	3.31	4.14	4.97	6.62	8.28	9.94	14.91

TABLE II WIDTH OF STROKE	
PRECEDING LETTER	STROKE WIDTH
4"	0.69
5"	0.86
6"	1.03
8"	1.38
10	1.72
"	2.06
12	3.09

TABLE VI WIDTH OF NUMERALS							
CODE NUMBER	4	5	6	8	10	12	18
1	1.03	1.29	1.55	2.05	2.58	3.09	4.64
2	0.82	1.03	1.24	1.65	2.06	2.48	3.71
3	0.55	0.69	0.82	1.10	1.37	1.65	2.47
4	0.28	0.34	0.41	0.55	0.68	0.82	1.24

SPACE in inches measured horizontally from the extreme right edge of the preceding letter to the extreme left edge of the following letter (numeral).

APPENDIX C-6A

SERIES E

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO QSX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS										
LETTER	HEIGHT 75	100	125	150	175	200	225	250	300	400
A	76	102	127	152	178	203	228	254	305	406
B	60	81	101	121	142	162	182	202	243	324
C	60	81	101	121	142	162	182	202	243	324
D	60	81	101	121	142	162	182	202	243	324
E	56	75	93	112	130	149	168	186	224	298
F	56	75	93	112	130	149	168	186	224	298
G	60	81	101	121	142	162	182	202	243	324
H	60	81	101	121	142	162	182	202	243	324
I	13	18	22	26	30	35	40	44	52	70
J	57	76	95	114	133	152	171	190	229	304
K	62	83	103	124	144	165	186	206	248	330
L	56	75	93	112	130	149	168	186	224	298
M	70	94	117	140	164	187	210	243	281	374
N	60	81	101	121	142	162	182	202	243	324
O	63	84	105	126	147	168	189	210	252	336
P	60	81	101	121	142	162	182	202	243	324
Q	63	84	105	126	147	168	189	210	252	336
R	60	81	101	121	142	162	182	202	243	324
S	60	81	101	121	142	162	182	202	243	324
T	56	75	93	112	130	149	168	186	224	298
U	60	81	101	121	142	162	182	202	243	324
V	69	92	115	138	161	184	207	230	276	368
W	80	106	133	160	186	213	240	266	319	426
X	66	87	109	131	153	175	196	218	262	350
Y	76	102	127	152	178	203	228	254	305	406
Z	60	81	101	121	142	162	182	202	243	324

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS										
Numeral Height	75	100	125	150	175	200	225	250	300	400
1	22	30	38	45	52	60	68	75	90	120
2	60	81	101	121	142	162	182	202	243	324
3	60	81	101	121	142	162	182	202	243	324
4	70	94	117	140	164	187	210	234	281	374
5	60	81	101	121	142	162	182	202	243	324
6	60	81	101	121	142	162	182	202	243	324
7	60	81	101	121	142	162	182	202	243	324
8	60	81	101	121	142	162	182	202	243	324
9	60	81	101	121	142	162	182	202	243	324
0	63	84	105	126	147	168	189	210	252	336

TABLE III WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN MILLIMETERS
75	13
100	18
125	22
150	26
175	30
200	35
225	40
250	44
300	52
400	70

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS										
CODE NUMBER	75	100	125	150	175	200	225	250	300	400
1	20	26	33	39	46	52	59	66	78	104
2	16	21	26	32	37	42	47	52	63	84
3	10	14	18	21	24	28	32	35	42	56
4	5	7	9	10	12	14	16	17	21	28

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-6B

SERIES E(M)

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO QX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS					
LETTER HEIGHT	200	265	330	400	500
A	203	271	338	406	508
B	162	216	270	324	405
C	162	216	270	324	405
D	162	216	270	324	405
E	149	199	248	298	372
F	149	199	248	298	372
G	162	216	270	324	405
H	162	216	270	324	405
I	40	53	66	80	100
J	152	203	253	304	380
K	165	220	275	330	412
L	149	199	248	298	372
M	187	249	312	374	468
N	162	216	270	324	405
O	168	224	280	336	420
P	162	216	270	324	405
Q	168	224	280	336	420
R	162	216	270	324	405
S	162	216	270	324	405
T	149	199	248	298	372
U	162	216	270	324	405
V	184	245	307	368	460
W	213	284	355	426	532
X	175	233	292	350	438
Y	203	271	338	406	508
Z	162	216	270	324	405

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS					
Numeral Height	200	265	330	400	500
1	60	80	100	120	150
2	162	216	270	324	405
3	162	216	270	324	405
4	187	249	312	374	468
5	162	216	270	324	405
6	162	216	270	324	405
7	162	216	270	324	405
8	162	216	270	324	405
9	162	216	270	324	405
0	168	224	280	336	420

TABLE III WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN MILLIMETERS
200	40
265	53
330	66
400	80
500	100

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS					
CODE NUMBER	200	265	330	400	500
1	52	69	87	104	130
2	42	56	70	84	105
3	28	37	47	56	70
4	14	19	23	28	35

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-7

SERIES F

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN INCHES)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO QSX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER							
LETTER HEIGHT	WIDTH OF LETTER						
	4	5	6	8	10	12	18
A	4.50	5.62	6.75	9.00	11.25	13.50	20.25
B	3.69	4.61	5.53	7.38	9.22	11.06	16.59
C	3.69	4.61	5.53	7.38	9.22	11.06	16.59
D	3.69	4.61	5.53	7.38	9.22	11.06	16.59
E	3.19	3.98	4.78	6.38	7.97	9.56	14.34
F	3.19	3.98	4.78	6.38	7.97	9.56	14.34
G	3.69	4.61	5.53	7.38	9.22	11.06	16.59
H	3.69	4.61	5.53	7.38	9.22	11.06	16.59
I	0.75	0.94	1.12	1.50	1.88	2.25	3.38
J	3.25	4.06	4.88	6.50	8.12	9.75	14.62
K	3.69	4.61	5.53	7.38	9.22	11.06	16.59
L	3.38	4.22	5.06	6.75	8.44	10.12	15.19
M	4.25	5.31	6.38	8.50	10.62	12.75	19.12
N	3.69	4.61	5.53	7.38	9.22	11.06	16.59
O	4.12	5.16	6.19	8.25	10.32	12.38	18.56
P	3.69	4.61	5.53	7.38	9.22	11.06	16.59
Q	4.12	5.16	6.19	8.25	10.32	12.38	18.56
R	3.69	4.61	5.53	7.38	9.22	11.06	16.59
S	3.69	4.61	5.53	7.38	9.22	11.06	16.59
T	3.38	4.22	5.06	6.75	8.44	10.12	15.19
U	3.69	4.61	5.53	7.38	9.22	11.06	16.59
V	4.12	5.16	6.19	8.25	10.32	12.38	18.56
W	4.62	5.78	6.94	9.25	11.56	13.88	20.81
X	4.00	5.00	6.00	8.00	10.00	12.00	18.00
Y	4.50	5.62	6.75	9.00	11.25	13.50	20.25
Z	3.69	4.61	5.53	7.38	9.22	11.06	16.59

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERALS							
NUMERAL HEIGHT	WIDTH OF NUMERALS						
	4	5	6	8	10	12	18
1	1.31	1.64	1.97	2.62	3.28	3.94	5.91
2	3.69	4.61	5.53	7.38	9.22	11.06	16.59
3	3.69	4.61	5.53	7.38	9.22	11.06	16.59
4	4.00	5.00	6.00	8.00	10.00	12.00	18.00
5	3.69	4.61	5.53	7.38	9.22	11.06	16.59
6	3.69	4.61	5.53	7.38	9.22	11.06	16.59
7	3.69	4.61	5.53	7.38	9.22	11.06	16.59
8	3.69	4.61	5.53	7.38	9.22	11.06	16.59
9	3.69	4.61	5.53	7.38	9.22	11.06	16.59
0	3.81	4.77	5.72	7.62	9.53	11.44	17.16

TABLE II WIDTH OF STROKE	
PRECEDING LETTER	STROKE WIDTH IN INCHES
4"	0.75
5"	0.94
6"	1.12
8"	1.50
10	1.88
"	2.25
12	3.38

TABLE VI WIDTH OF NUMERALS							
CODE NUMBER	WIDTH OF NUMERALS						
	4	5	6	8	10	12	18
1	1.13	1.41	1.69	2.25	2.71	3.37	5.06
2	0.90	1.13	1.35	1.80	2.25	2.70	4.05
3	0.60	0.75	0.90	1.20	1.50	1.80	2.70
4	0.30	0.38	0.45	0.60	0.75	0.90	1.35

SPACE in inches measured horizontally from the extreme right edge of the preceding letter to the extreme left edge of the following letter (numeral).

APPENDIX C-7A

SERIES F

10/97

LETTER & NUMERAL WIDTHS AND SPACE BETWEEN LETTERS AND NUMERAL (IN MILLIMETERS)

To determine the proper space between letters or numerals, obtain the code number from table I or II and enter table VI for that code number to the desired letter or numeral height.

TABLE I LETTER TO LETTER CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	BDFHI K	CGO QSX	AJT VW
A	2	2	4
B	1	2	2
C	2	2	3
D	1	2	2
E	2	2	3
F	2	2	3
G	1	2	2
H	1	1	2
I	1	1	2
J	1	1	2
K	2	2	3
L	2	2	4
M	1	1	2
N	1	1	2
O	1	2	2
P	1	2	2
Q	1	2	2
R	1	2	2
S	1	2	2
T	2	2	4
U	1	1	2
V	2	2	4
W	2	2	4
X	2	2	3
Y	2	2	4
Z	2	2	3

TABLE IV WIDTH OF LETTER IN MILLIMETERS										
LETTER	75	100	125	150	175	200	225	250	300	400
A	86	114	143	171	200	229	258	286	343	458
B	70	94	117	140	164	187	210	234	281	374
C	70	94	117	140	164	187	210	234	281	374
D	70	94	117	140	164	187	210	234	281	374
E	60	81	101	121	142	162	182	202	243	324
F	60	81	101	121	142	162	182	202	243	324
G	70	94	117	140	164	187	210	234	281	374
H	70	94	117	140	164	187	210	234	281	374
I	14	19	24	28	33	38	43	48	57	76
J	62	83	103	124	144	165	186	206	248	330
K	70	94	117	140	164	187	210	234	281	374
L	64	86	107	128	150	171	192	214	257	342
M	81	108	135	162	189	216	243	270	324	432
N	70	94	117	140	164	187	210	234	281	374
O	78	105	131	157	184	210	236	262	314	420
P	70	94	117	140	164	187	210	234	281	374
Q	78	105	131	157	184	210	236	262	314	420
R	70	94	117	140	164	187	210	234	281	374
S	70	94	117	140	164	187	210	234	281	374
T	64	86	107	128	150	171	192	214	257	342
U	70	94	117	140	164	187	210	234	281	374
V	78	105	131	157	184	210	236	262	314	420
W	88	117	147	176	206	235	264	294	353	470
X	76	102	127	152	178	203	228	254	305	406
Y	86	114	143	171	200	229	258	286	343	458
Z	70	94	117	140	164	187	210	234	281	374

TABLE II NUMERAL TO NUMERAL CODE NUMBER			
PRECEDING LETTER	FOLLOWING LETTER		
	1 5	2 3 6 8 9 0	4 7
1	1	1	2
2	1	2	2
3	1	2	2
4	2	2	4
5	1	2	2
6	1	2	2
7	2	2	4
8	1	2	2
9	1	2	2
0	1	2	2

TABLE V WIDTH OF NUMERAL IN MILLIMETERS										
Numeral Height	75	100	125	150	175	200	225	250	300	400
1	25	33	42	50	58	67	75	83	100	134
2	70	94	117	140	164	187	211	234	281	376
3	70	94	117	140	164	187	211	234	281	376
4	76	102	127	152	178	203	228	254	305	406
5	70	94	117	140	164	187	211	234	281	376
6	70	94	117	140	164	187	211	234	281	376
7	70	94	117	140	164	187	211	234	281	376
8	70	94	117	140	164	187	211	234	281	376
9	70	94	117	140	164	187	211	234	281	376
0	72	97	121	145	170	194	218	242	291	388

TABLE III WIDTH OF STROKE	
LETTER OR NUMERAL HEIGHT	STROKE WIDTH IN MILLIMETERS
75	14
100	19
125	24
150	28
175	33
200	38
225	43
250	48
300	57
400	76

TABLE VI WIDTH OF NUMERALS IN MILLIMETERS										
CODE NUMBER	75	100	125	150	175	200	225	250	300	400
1	22	29	36	43	50	57	63	69	86	114
2	17	23	29	34	40	46	52	57	69	92
3	12	15	19	23	26	30	34	38	46	60
4	6	8	10	11	13	15	17	19	23	30

Space in millimeters measured horizontally from the extreme right edge of the preceding letter (or numeral) to the extreme left edge of the following letter (or numeral).

APPENDIX C-8

10/97

SERIES E-MODIFIED AND LOWER CASE

The E-modified and lower-case spacing charts are used in determining destination message lengths. The charts may also be used in determining message lengths comprised of all series E-modified letters or numerals (For example in calculating the width of the mileage message on a distance sign the numerals are E-modified).

EXAMPLE:

To determine the length of the word "Kelso" in 10.67" upper-case, (u.c.) E-modified and 8" lower-case (l.c.), first go to table H-1 to find the width of the upper-case letter "K" and then to table H-2 to find widths of the lower case letters "elso". For this example, under the column 10.67"

Table	Col. 1		Col. 2
TABLE H-1	K	=	7-3/4"
TABLE H-2	e	=	6-7/8"
TABLE H-2	l	=	2-1/8"
TABLE H-2	s	=	6-7/8"
TABLE H-2	o	=	6-7/8"
			<u>30-1/2"</u>

Now go to Table H-3 (10.67) to determine letter to letter spacing since we are calculating for 10-2/3" u.c. and 8" l.c.

Col. 1		Col. 2		Space
K	to	e	=	2-1/8"
e	to	l	=	3-3/8"
l	to	s	=	3"
s	to	o	=	2-3/8"
				<u>10-7/8"</u>

Adding letter and spacing we get:

$30\text{-}1/2" + 10\text{-}7/8" = 41\text{-}3/8"$ which can be rounded off to 41" in determining the sign background width.

IN ALL CASES DO NOT FORGET END SPACES AND BORDER WIDTHS.

APPENDIX C-9

10/97

Neat Width of Upper Case Letters and Digits

COL. 1	COLUMN 2						
LETTER	6"	8"	10.67"	13.33"	16"	20"	24"
A	6 1/8	8 1/8	9 3/8	13 1/2	16 3/8	20 3/8	24 1/2
B	4 7/8	6 1/2	7 1/2	10 3/4	13	16 1/4	19 1/2
C	4 3/4	6 3/8	7 1/2	10 5/8	12 3/4	16	19 1/4
D	4 7/8	6 1/2	7 1/2	10 3/4	13	16 1/4	19 1/2
E	4 5/8	6 1/8	7 1/8	10 1/4	12 3/8	15 3/8	18 1/2
F	4 3/8	5 7/8	7 1/8	9 7/8	11 7/8	14 3/4	17 3/4
G	4 3/4	6 3/8	7 1/2	10 5/8	12 3/4	16	19 1/4
H	5	6 5/8	7 3/4	11	13 1/8	16 5/8	19 3/4
I	1 1/4	1 5/8	2	2 5/8	3 1/8	3 7/8	4 3/4
J	4 5/8	6 1/8	7 1/8	10 1/4	12 3/8	15 3/8	18 1/2
K	5	6 3/4	7 3/4	11 1/4	13 1/2	16 7/8	20
L	3 7/8	5 1/8	7 1/8	8 1/2	10 1/8	12 7/8	15
M	6 1/4	8 3/8	8 3/4	13 7/8	16 5/8	21	25
N	5	6 3/4	7 1/2	11 1/4	13 1/2	16 7/8	20
O	5	6 3/4	7 7/8	11 1/4	13 1/2	16 7/8	20
P	4 3/8	5 7/8	7 1/2	9 3/4	11 5/8	14 3/4	17 1/2
Q	5	6 3/4	7 7/8	11 1/4	13 1/2	16 7/8	20
R	5	6 5/8	7 1/2	11	13 1/8	16 5/8	19 3/4
S	5	6 5/8	7 1/2	11	13 1/8	16 5/8	19 3/4
T	4 1/2	6	7 1/8	10	12	15	18
U	5	6 5/8	7 1/2	11	13 1/4	16 5/8	20
V	5 1/2	7 3/8	8 3/8	12 1/4	14 3/4	18 1/2	22
W	6 1/2	8 5/8	9 3/4	14 3/8	17 1/4	21 5/8	26
X	6 1/8	8 1/8	8 1/8	13 1/2	16 1/8	20 3/8	24 1/4
Y	6 1/8	8 1/8	9 3/8	13 1/2	16 1/8	20 3/8	24 1/4
Z	5	6 5/8	7 5/8	11	13 1/8	16 5/8	19 3/4
1	2 1/8	2 3/4	3 1/4	4 1/8	5 3/8	6 3/4	8
2	4 7/8	6 1/2	8 5/8	9 3/4	13	16 1/4	17 1/2
3	4 7/8	6 1/2	8 5/8	9 3/4	13	16 1/4	18 1/4
4	5 3/8	7 1/8	10	10 1/2	14 1/4	17 3/4	21
5	4 7/8	6 1/2	8 5/8	9 3/4	13	16 1/4	18 1/2
6	4 7/8	6 1/2	8 3/4	9 3/4	13	16 1/2	18 1/4
7	4 7/8	6 1/2	8 5/8	9 3/4	13	16 1/4	18 1/4
8	4 7/8	6 1/2	8 5/8	10	13	16 1/4	18 1/2
9	4 7/8	6 1/2	8 3/4	9 3/4	13	16 1/2	18 1/4
0	5	6 3/4	7 7/8	11 1/4	13 1/2	16 7/8	20

TABLE H - 1

APPENDIX C-10

10/97

Neat Width of Lower Case Letters

COL. 1	COLUMN 2						
LETTER	4 1/2"	6"	8"	10"	12"	15"	18"
a	3 7/8	5 1/8	6 7/8	8 5/8	10 3/8	12 7/8	15 1/2
b	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
c	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
d	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
e	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
f	2 7/8	3 3/4	5	6 1/4	7 1/2	9 3/8	11 1/4
g	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
h	3 7/8	5 1/8	6 3/4	8 1/2	10 1/8	12 7/8	15 1/4
i	1 1/4	1 5/8	2 1/8	2 5/8	3 1/4	4	4 3/4
j	2 1/2	3 1/4	4 1/4	5 1/4	6 3/8	8 1/8	9 1/2
k	3 7/8	5 1/8	6 7/8	8 5/8	10 3/8	12 7/8	15 1/2
l	1 1/4	1 5/8	2 1/8	2 5/8	3 1/4	3 3/4	4 3/4
m	6 1/2	8 5/8	11 1/2	14 1/4	17 1/4	21 5/8	25 7/8
n	3 7/8	5 1/8	6 3/4	8 1/2	10 1/8	12 7/8	15 1/8
o	3 7/8	5 1/8	6 7/8	8 5/8	10 3/8	12 7/8	15 1/2
p	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/2
q	3 7/8	5 1/8	6 7/8	8 5/8	10 1/4	12 7/8	15 1/8
r	3 1/8	4 1/8	5 1/2	6 7/8	8 1/4	10 3/8	12 3/8
s	3 7/8	5 1/8	6 7/8	8 5/8	10 3/8	12 7/8	15 1/2
t	2 7/8	3 3/4	5	6 3/8	7 1/2	9 3/8	11 1/4
u	3 7/8	5 1/8	6 3/4	8 1/2	10 1/8	12 7/8	15 1/8
v	4 3/4	6 3/8	8 1/2	10 5/8	12 3/4	16	19 1/8
w	6 1/4	8 1/4	11	13 3/4	16 1/2	20 5/8	24 3/4
x	4 7/8	6 3/8	8 1/2	10 5/8	12 3/4	16	19
y	4 3/4	6 3/8	8 1/2	10 5/8	12 3/4	16	19 1/8
z	4 1/4	5 5/8	7 1/2	9 1/2	11 1/4	14	17

The digits used with the above alphabets are upper case digits of the same size as the initial upper case letter being used. (see preceding page.)

TABLE H - 2

APPENDIX C-11

5/98

Spacing of 6" Upper Case Letters and Digits with 4 1/2" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS Z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	1 3/8	2	1 7/8	1 1/2	1 1/4	7/8	1 1/4	1 3/8	1 3/8	1 7/8	1 1/2
a d g h i j l m n q u	1 3/4	2 1/2	2 1/4	1 7/8	1 5/8	1 1/4	1 5/8	1 3/4	1 3/4	2 3/8	1 7/8
B 3	1 1/2	2 1/4	2 1/8	1 5/8	1 3/8	1 1/8	1 1/2	1 1/2	1 1/2	2 1/8	1 5/8
b f k o p s	1 1/4	2	1 3/4	1 3/8	1 1/8	3/4	1 1/8	1 1/4	1 1/4	1 7/8	1 3/8
C E G	1 1/2	2 1/8	2	1 1/2	1 3/8	1	1 3/8	1 1/2	1 1/2	2	1 5/8
D O P Q R 8 9 0	1 1/2	2 1/8	2	1 1/2	1 1/4	1	1 3/8	1 3/8	1 3/8	2	1 1/2
F T x 7	1 1/4	1 7/8	1 3/4	1 3/8	1 1/8	3/4	1 1/8	1 1/4	1 1/4	1 3/4	1 3/8
H I J M N U 1	2	2 3/4	2 1/2	2 1/8	1 7/8	1 1/2	1 7/8	2	2	2 5/8	2 1/8
K L w	1 1/4	1 7/8	1 3/4	1 1/4	1	3/4	1 1/8	1 1/8	1 1/8	1 3/4	1 3/8
r v y	1 1/8	1 7/8	1 5/8	1 1/4	1	5/8	1	1 1/8	1 1/8	1 3/4	1 1/4
S Y t z 2	1 3/8	2	1 7/8	1 3/8	1 1/8	7/8	1 1/4	1 1/4	1 1/4	1 7/8	1 1/2
Z	1 7/8	2 5/8	2 3/8	2	1 3/4	1 1/2	1 3/4	1 7/8	1 7/8	2 1/2	2
4	1 7/8	2 5/8	2 3/8	1 7/8	1 5/8	1 3/8	1 3/4	1 3/4	1 7/8	2 3/8	2

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (6)

APPENDIX C-12

5/98

Spacing of 8" Upper Case Letters and Digits with 6" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A VWX ce 5 6	1 7/8	2 3/4	2 1/2	2	1 5/8	1 1/4	1 3/4	1 3/4	1 7/8	2 5/8	1 1/2
a d g h i j l m n q u	2 3/8	3 1/4	3	2 1/2	2 1/4	1 3/4	2 1/4	2 1/4	2 3/8	3 1/8	2 1/2
B 3	2 1/8	3	2 3/4	2 1/4	1 7/8	1 1/2	2	2	2	2 7/8	2 1/4
b f k o p s	1 3/4	2 5/8	2 3/8	1 7/8	1 1/2	1 1/8	1 5/8	1 5/8	1 3/4	2 1/2	1 7/8
C E G	2	3	2 3/4	2 1/8	1 7/8	1 3/8	1 7/8	2	2	2 3/4	2 1/4
D O P Q R 8 9 0	2	2 7/8	2 5/8	2	1 3/4	1 1/4	1 3/4	1 7/8	1 7/8	2 5/8	2
F T x 7	1 3/4	2 5/8	2 3/8	1 3/4	1 1/2	1	1 1/2	1 5/8	1 5/8	2 3/8	1 7/8
H I J M N U 1	2 3/4	3 5/8	3 3/8	2 7/8	2 1/2	2 1/8	2 5/8	2 5/8	2 3/4	3 1/2	2 7/8
K L w	1 5/8	2 1/2	2 1/4	1 3/4	1 3/8	1	1 1/2	1 1/2	1 5/8	2 3/8	1 7/8
r v y	1 5/8	2 1/2	2 1/4	1 3/4	1 3/8	7/8	1 3/8	1 1/2	1 1/2	2 1/4	1 3/4
S Y t z 2	1 7/8	2 3/4	2 1/2	1 7/8	1 5/8	1 1/8	1 5/8	1 3/4	1 3/4	2 1/2	2
Z	2 5/8	3 1/2	3 1/4	2 5/8	2 3/8	2	2 3/8	2 1/2	2 1/2	3 1/4	2 3/4
4	2 1/2	3 3/8	3 1/8	2 5/8	2 1/4	1 7/8	2 3/8	2 3/8	2 1/2	3 1/4	2 5/8

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (8)

APPENDIX C-13

5/98

Spacing of 10.67" Upper Case Letters and Digits with 8" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS Z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	2 1/2	3 5/8	3 3/8	2 1/2	2 1/8	1 5/8	2 1/4	2 3/8	2 3/8	3 1/2	2 5/8
a d g h i j l m n q u	3 1/4	4 3/8	4 1/8	3 1/4	2 7/8	2 3/8	3	3	3 1/8	4 1/8	3 3/8
B 3	2 3/4	4	3 5/8	2 7/8	2 1/2	1 7/8	2 1/2	2 5/8	2 3/4	3 3/4	3
b f k o p s	2 3/8	3 1/2	3 1/4	2 3/8	2	1 1/2	2	2 1/8	2 1/4	3 1/4	2 1/2
C E G	2 3/4	4	3 5/8	2 3/4	2 3/8	1 7/8	2 1/2	2 1/2	2 5/8	3 5/8	2 7/8
D O P Q R 8 9 0	2 1/2	3 3/4	3 1/2	2 5/8	2 1/4	1 3/4	2 3/8	2 3/8	2 1/2	3 1/2	2 3/4
F T x 7	2 1/4	3 1/2	3 1/8	2 3/8	1 7/8	1 3/8	2	2	2 1/8	3 1/4	2 3/8
H I J M N U 1	3 5/8	4 7/8	4 1/2	3 3/4	3 3/8	2 3/4	3 1/2	3 1/2	3 5/8	4 5/8	3 7/8
K L w	2 1/8	3 3/8	3	2 1/4	1 7/8	1 1/4	1 7/8	2	2	3 1/8	2 3/8
r v y	2	3 1/4	3	2 1/8	1 3/4	1 1/4	1 7/8	1 7/8	2	3	2 1/4
S Y t z	2 3/8	3 5/8	3 1/4	2 1/2	2	1 1/2	2 1/8	2 1/4	2 3/8	3 3/8	2 1/2
Z	3 1/2	4 5/8	4 3/8	3 1/2	3 1/8	2 1/2	3 1/4	3 1/4	3 3/8	4 3/8	3 5/8
4	3 3/8	4 1/2	4 1/4	4 1/4	3 1/2	3	2 1/2	3 1/8	3 1/4	4 3/8	3 1/2

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (10.67)

APPENDIX C-14

5/98

Spacing of 13.33" Upper Case Letters and Digits with 10" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	3 1/8	4 5/8	4 1/4	3 1/4	2 3/4	2	2 7/8	3	3	4 3/8	3 3/8
a d g h i j l m n q u	4	5 1/2	5 1/8	4 1/8	3 5/8	3	3 3/4	3 7/8	4	5 1/4	4 1/4
B 3	3 1/2	5	4 5/8	3 5/8	3 1/8	2 3/8	3 1/4	3 3/8	3 3/8	4 3/4	3 3/4
b f k o p s	3	4 1/2	4	3	2 1/2	1 7/8	2 5/8	2 3/4	2 7/8	4 1/8	3 1/8
C E G	3 3/8	5	4 1/2	3 1/2	3	2 3/8	3 1/8	3 1/4	3 3/8	4 5/8	3 5/8
D O P Q R 8 9 0	3 1/4	4 3/4	4 3/8	3 3/8	2 7/8	2 1/8	3	3	3 1/8	4 1/2	3 3/8
F T x 7	2 7/8	4 3/8	4	3	2 3/8	1 3/4	2 1/2	2 5/8	2 3/4	4	3
H I J M N U 1	4 5/8	6 1/8	5 3/4	4 3/4	4 1/4	3 1/2	4 3/8	4 1/2	4 1/2	5 7/8	4 7/8
K L w	2 3/4	4 1/4	3 7/8	2 7/8	2 3/8	1 5/8	2 3/8	2 1/2	2 5/8	4	3
r v y	2 5/8	4 1/8	3 3/4	2 3/4	2 1/4	1 1/2	2 3/8	2 3/8	2 1/2	3 7/8	2 7/8
S Y t z 2	3	4 1/2	4 1/8	3 1/8	2 5/8	2	2 3/4	2 7/8	3	4 1/4	3 1/4
Z	3 1/2	5 3/4	5 3/8	4 1/2	4	3 1/4	4	4 1/8	4 1/4	5 1/2	4 1/2
4	4 1/4	5 3/4	5 3/8	4 3/8	3 7/8	3 1/8	4	4	4 1/8	5 3/8	4 1/2

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (13.33)

APPENDIX C-15

5/98

Spacing of 16" Upper Case Letters and Digits with 12" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	3 3/4	5 1/2	5	3 7/8	3 1/4	2 3/8	3 3/8	3 1/2	3 5/8	5 1/8	4
a d g h i j l m n q u	4 7/8	6 5/8	6 1/8	5	4 3/8	3 1/2	4 1/2	4 5/8	4 3/4	6 1/4	5
B 3	4 1/4	6	5 1/2	4 3/8	3 3/4	2 7/8	3 7/8	4	4 1/8	5 5/8	4 1/2
b f k o p s	3 1/2	5 1/4	4 7/8	3 5/8	3	2 1/8	3 1/8	3 1/4	3 3/8	5	3 3/4
C E G	4 1/8	5 7/8	5 3/8	4 1/4	3 5/8	2 3/4	3 3/4	3 7/8	4	5 1/2	4 3/8
D O P Q R 8 9 0	3 7/8	5 5/8	5 1/8	4	3 3/8	2 1/2	3 1/2	3 5/8	3 3/4	5 1/4	4 1/8
F T x 7	3 3/8	5 1/8	4 3/4	3 1/2	2 7/8	2	3	3 1/8	3 1/4	4 7/8	3 5/8
H I J M N U 1	5 1/2	7 3/8	6 7/8	5 5/8	5	4 1/4	5 1/8	5 1/4	5 3/8	7	5 3/4
K L w	3 1/4	5	4 5/8	3 3/8	2 3/4	1 7/8	2 7/8	3	3 1/8	4 3/4	3 1/2
r v y	3 1/8	5	4 1/2	3 1/4	2 5/8	1 3/4	2 3/4	2 7/8	3	4 5/8	3 3/8
S Y t z 2	3 5/8	5 3/8	5	3 3/4	3 1/8	2 1/4	3 1/4	3 3/8	3 1/2	5	3 7/8
Z	5 1/8	7	6 1/2	5 1/4	4 3/4	3 7/8	4 7/8	5	5	6 5/8	5 3/8
4	5	6 7/8	6 3/8	5 1/8	4 5/8	3 3/4	4 3/4	4 7/8	5	6 1/2	5 1/4

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (16)

APPENDIX C-16

5/98

Spacing of 20" Upper Case Letters and Digits with 15" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	4 5/8	6 7/8	6 1/4	4 3/4	4	3	4 1/4	4 3/8	4 1/2	6 1/2	5
a d g h i j l m n q u	6	8 1/4	7 5/8	6 1/8	5 3/8	4 3/8	5 1/2	5 3/4	5 7/8	7 3/4	6 1/4
B 3	5 1/4	7 1/2	6 7/8	5 3/8	4 5/8	3 5/8	4 3/4	5	5 1/8	7	5 1/2
b f k o p s	4 3/8	6 5/8	6	4 1/2	3 3/4	2 3/4	3 7/8	4	4 1/4	6 1/8	4 5/8
C E G	5 1/8	7 3/8	6 3/4	5 1/4	4 1/2	3 1/2	4 5/8	4 3/4	5	6 7/8	5 3/8
D O P Q R 8 9 0	4 3/4	7	6 1/2	5	4 1/4	3 1/8	4 3/8	4 1/2	4 5/8	6 5/8	5 1/8
F T x 7	4 1/4	6 1/2	5 7/8	4 3/8	3 5/8	2 1/2	3 3/4	3 7/8	4	6	4 1/2
H I J M N U 1	6 7/8	9 1/8	8 1/2	7	6 1/4	5 1/4	6 1/2	6 5/8	6 3/4	8 3/4	7 1/4
K L w	4	6 1/4	5 3/4	4 1/4	3 1/2	2 3/8	3 5/8	3 3/4	3 7/8	5 7/8	4 3/8
r v y	3 7/8	6 1/8	5 1/2	4	3 1/4	2 1/4	3 1/2	3 5/8	3 3/4	5 3/4	4 1/4
S Y t z 2	4 1/2	6 3/4	6 1/8	4 5/8	3 7/8	2 7/8	4	4 1/4	4 3/8	6 1/4	4 3/4
Z	6 1/2	8 3/4	8 1/8	6 5/8	5 7/8	4 3/4	6	6 1/8	6 1/4	8 1/4	6 3/4
4	6 1/4	8 1/2	8	6 1/2	5 3/4	4 5/8	5 7/8	6	6 1/8	8 1/8	6 5/8

INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (20)

APPENDIX C-17

5/98

Spacing of 24" Upper Case Letters and Digits with 18" Lower Case Letters

COLUMN 1	COLUMN 2										
	AVW Xac deg oq 5	BDE FHI KLM NPR U	bhi klm npr u	CG OQS z 24 890	J	j	T stv 7	Y wf	xy	Z 1	36
A V W X c e 5 6	5 5/8	8 1/4	7 1/2	5 3/4	4 7/8	3 5/8	5	5 1/4	5 3/8	7 3/4	6
a d g h i j l m n q u	7 1/4	9 7/8	9 1/4	7 3/8	6 1/2	5 1/4	6 3/4	6 7/8	7	9 3/8	7 1/2
B 3	6 1/4	9	8 1/4	6 1/2	5 5/8	4 3/8	5 3/4	6	6 1/8	8 1/2	6 3/4
b f k o p s	5 1/4	7 7/8	7 1/4	5 3/8	4 1/2	3 1/4	4 5/8	4 7/8	5	7 3/8	5 5/8
C E G	6 1/8	8 7/8	8	6 1/4	5 3/8	4 1/8	5 5/8	5 3/4	6	8 1/4	6 1/2
D O P Q R 8 9 0	5 3/4	8 1/2	7 3/4	6	5	3 3/4	5 1/4	5 3/8	5 5/8	7 7/8	6 1/8
F T x 7	5	7 3/4	7	5 1/4	4 3/8	3	4 1/2	4 5/8	4 7/8	7 1/4	5 3/8
H I J M N U 1	8 1/4	1	10 1/4	8 1/2	7 1/2	6 1/4	7 3/4	7 7/8	8 1/8	10 1/2	8 5/8
K L w	4 7/8	7 1/2	6 7/8	5	4 1/8	2 7/8	4 3/8	4 1/2	4 5/8	7	5 1/4
r v y	4 5/8	7 3/8	6 3/4	4 7/8	4	2 3/4	4 1/8	4 3/8	4 1/2	6 7/8	5
S Y t z 2	5 3/8	8	7 3/8	5 5/8	4 5/8	3 3/8	4 7/8	5	5 1/4	7 1/2	5 3/4
Z	7 3/4	10 1/2	9 3/4	7 7/8	7	5 3/4	7 1/4	7 3/8	7 1/2	9 7/8	8
4	7 1/2	10 1/4	9 1/2	7 3/4	6 7/8	5 5/8	7	7 1/4	7 3/8	9 3/4	7 7/8

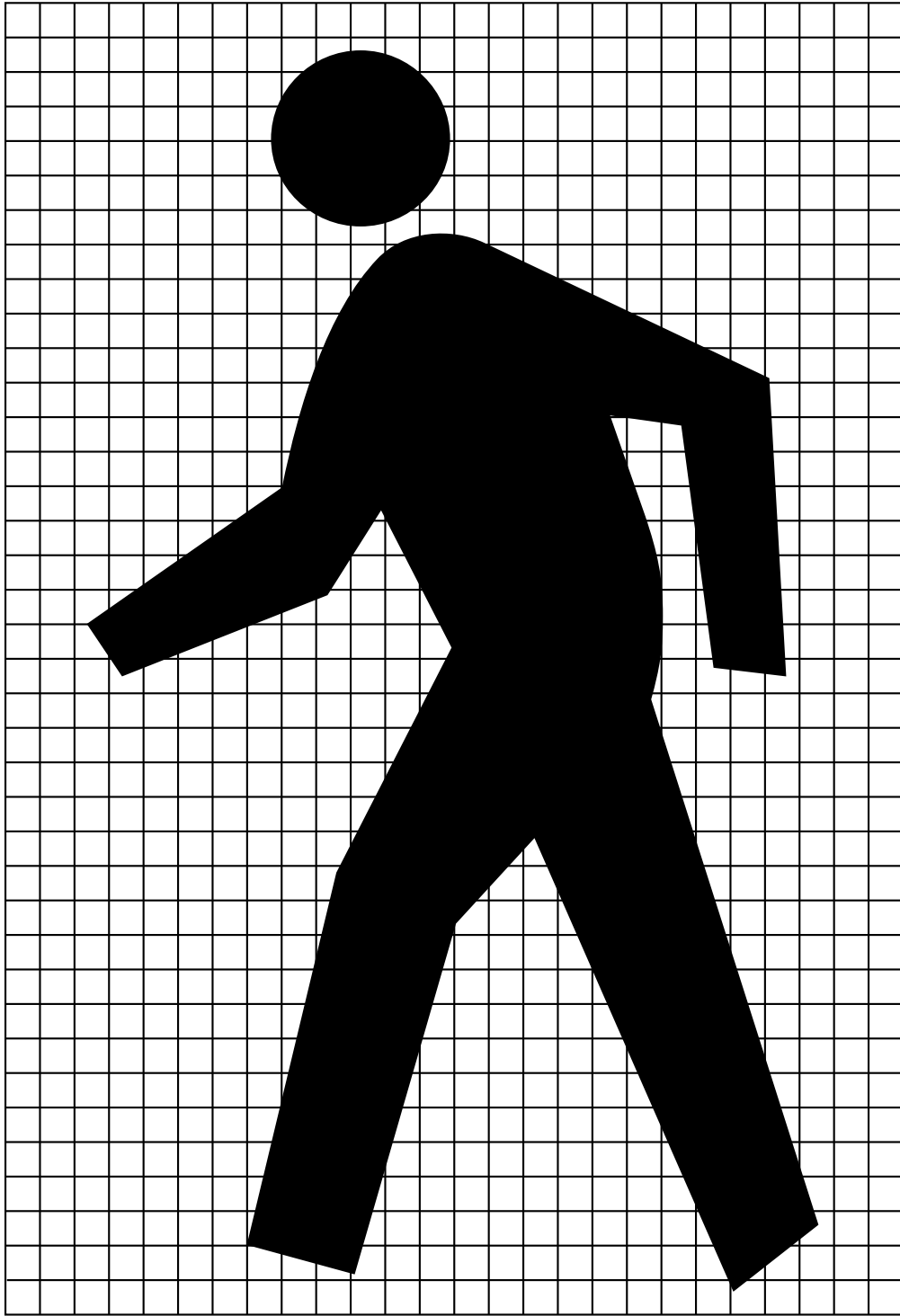
INSTRUCTION FOR USING THE ABOVE TABULATION

Locate the initial letter of the word being spaced in the left hand or "key" column. Locate the following letter in one of the column under the heading "Column 2" to ascertain the spacing between those two letters; then assume the second letter to be the "Key" letter and locate the third letter "Column 2." Proceed in this fashion until spacing for all the letters has been determined.

TABLE H-3 (24)

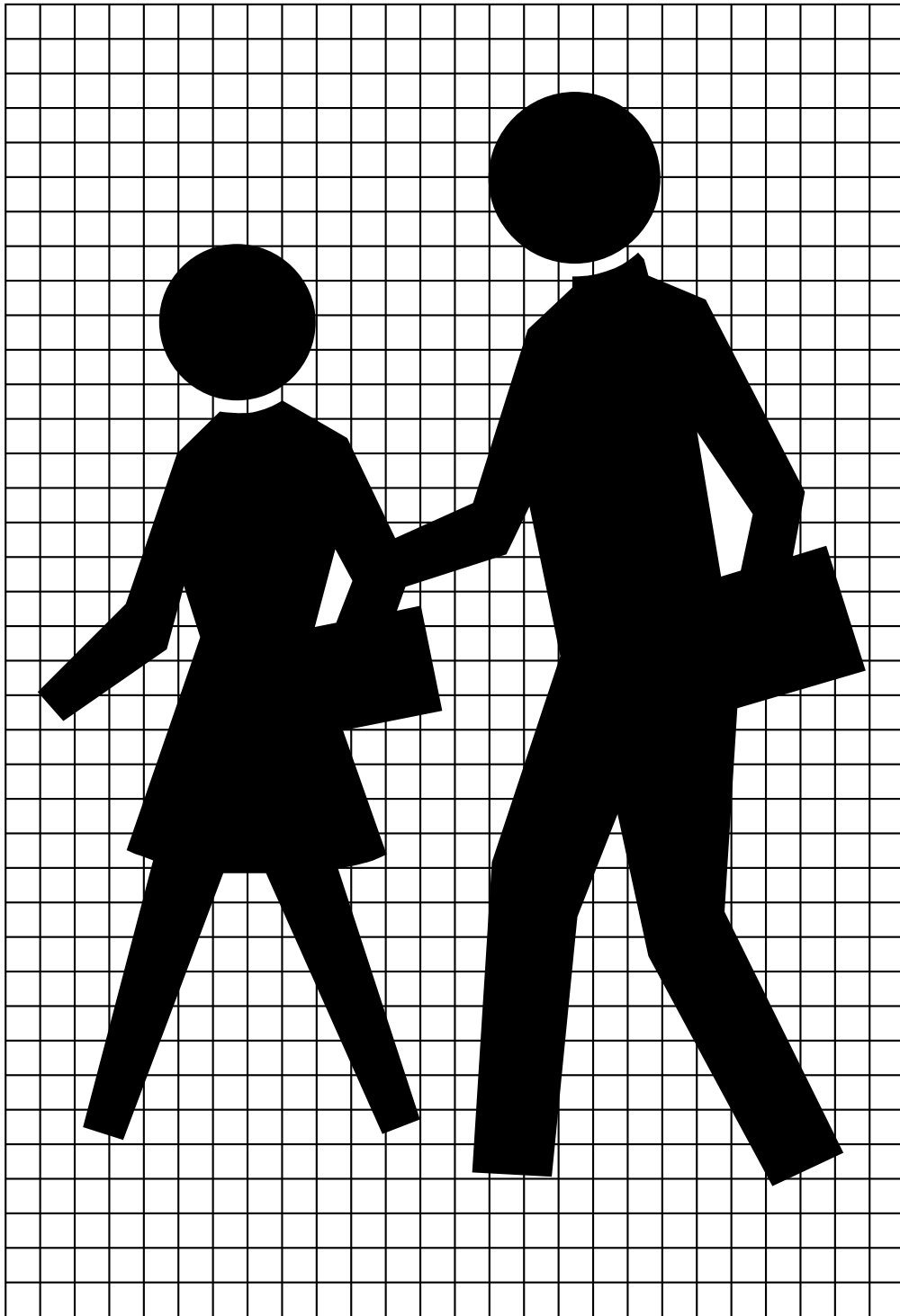
APPENDIX D-1

10/97



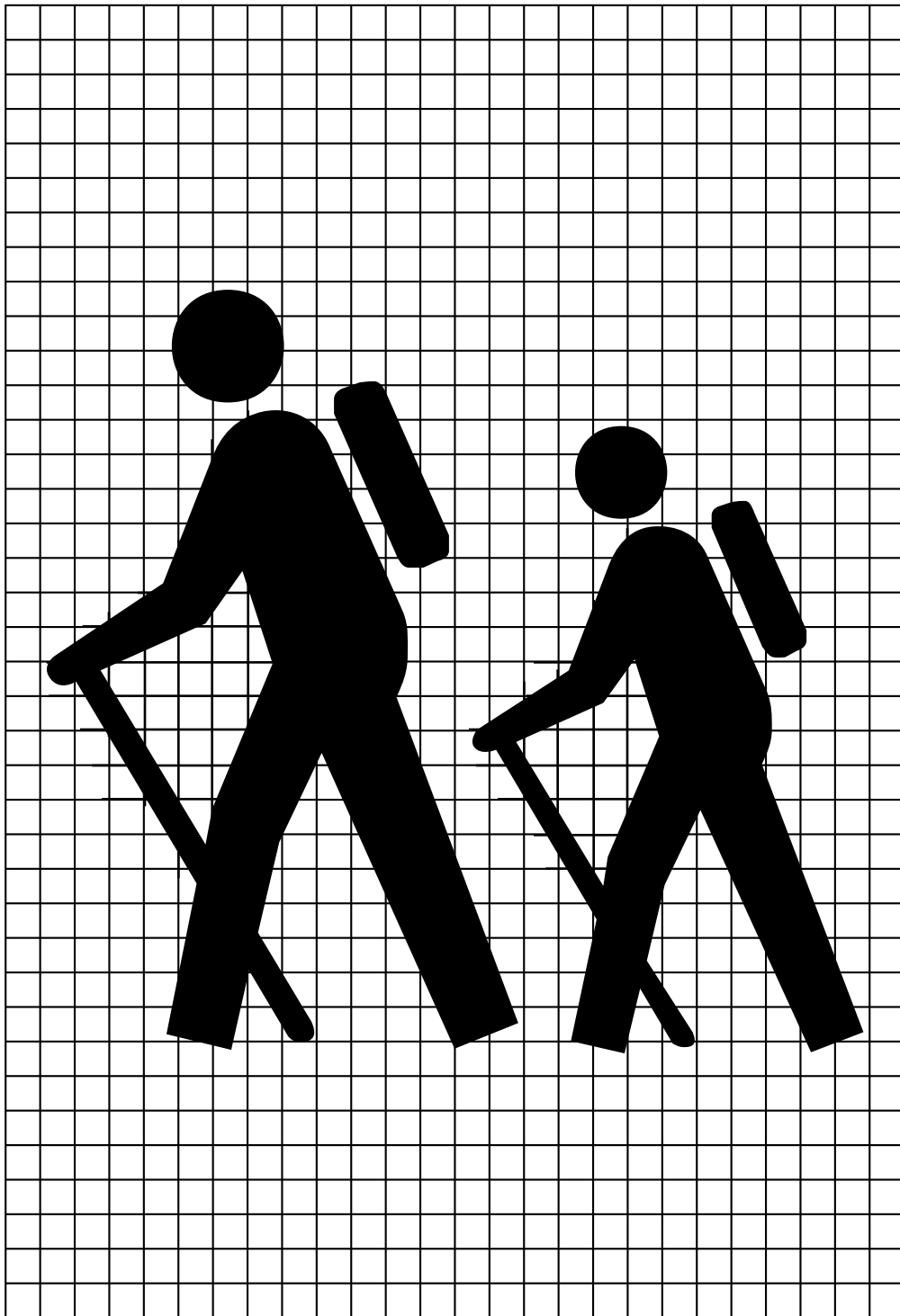
APPENDIX D-2

10/97



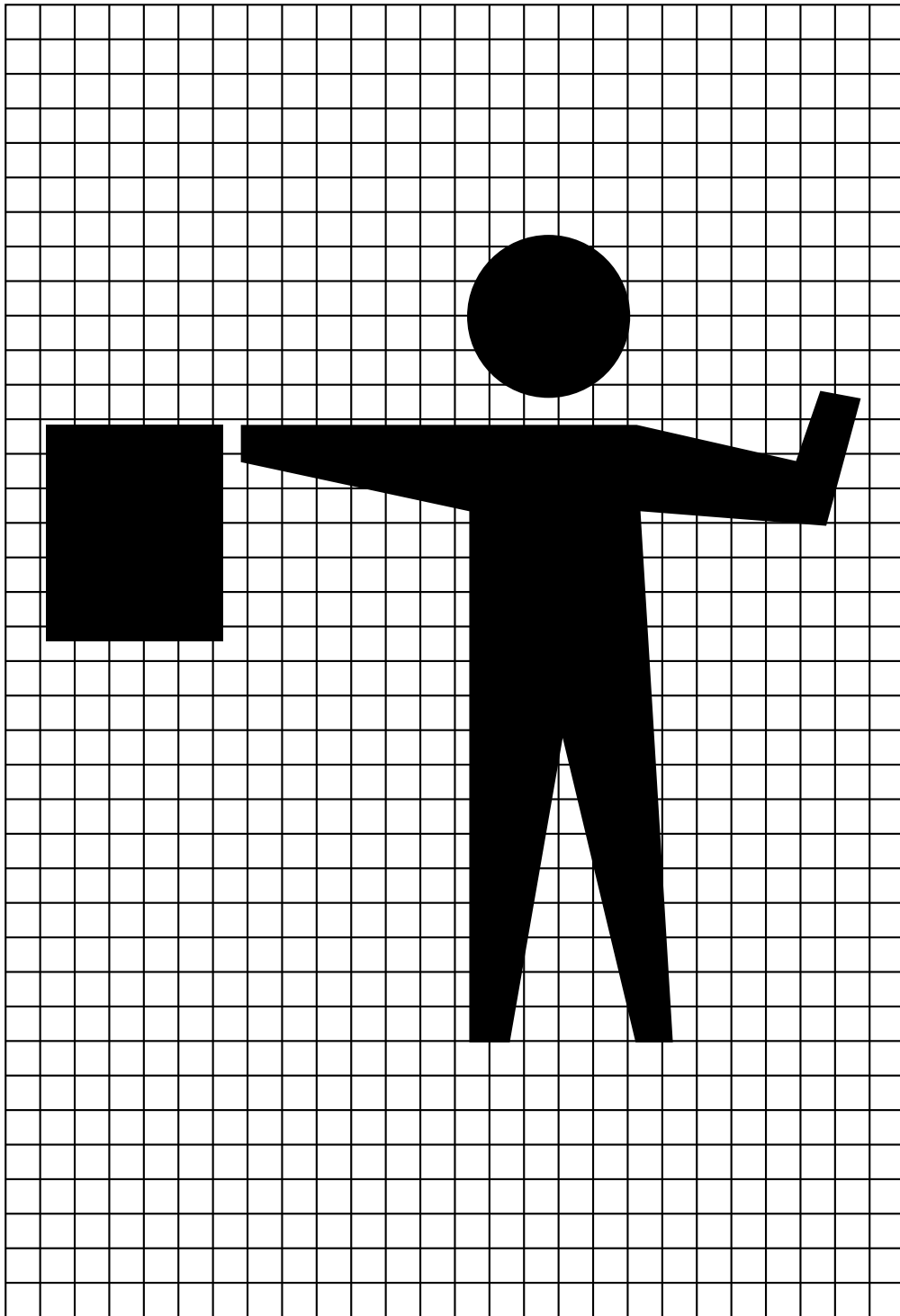
APPENDIX D-3

10/97



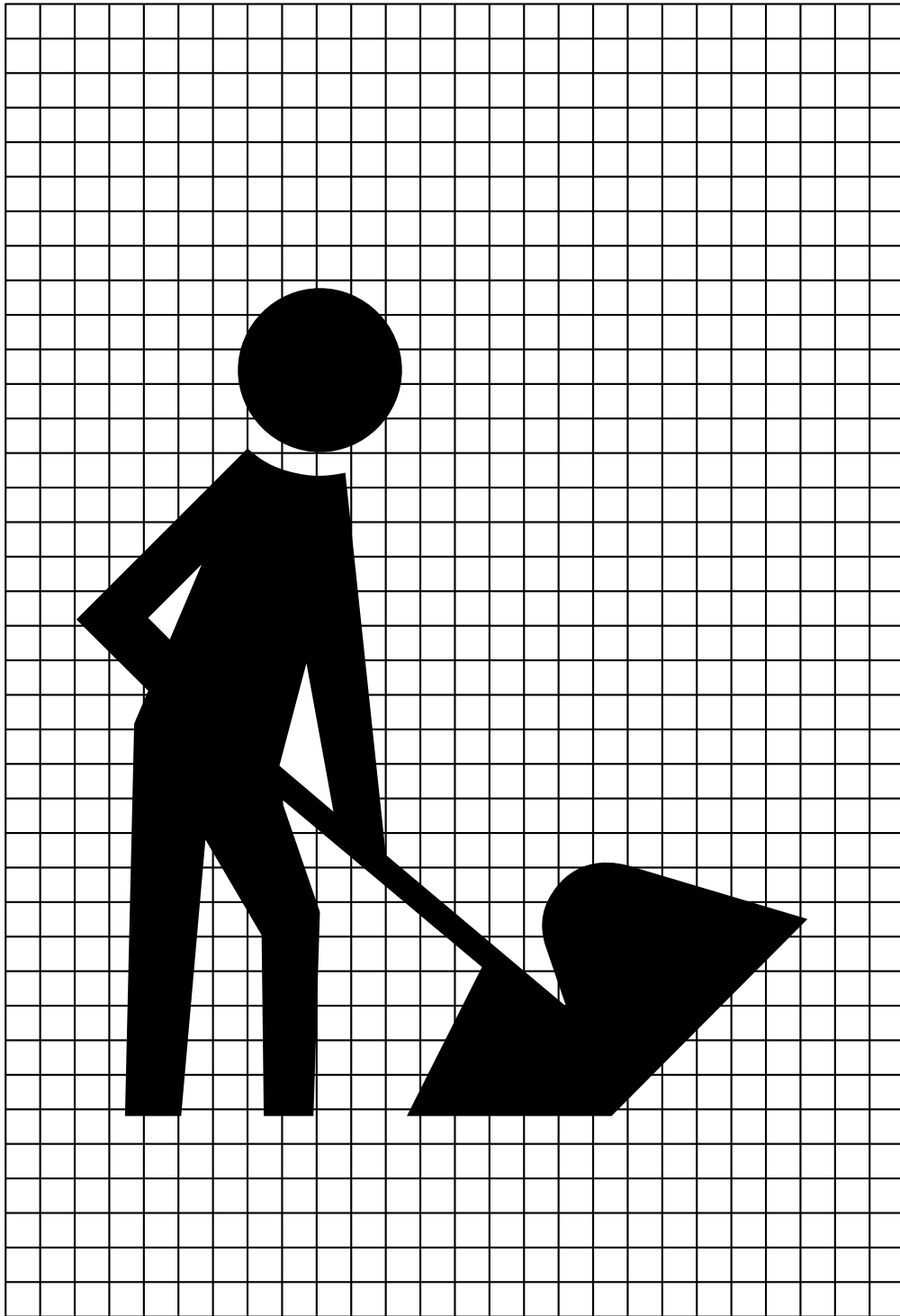
APPENDIX D-4

10/97



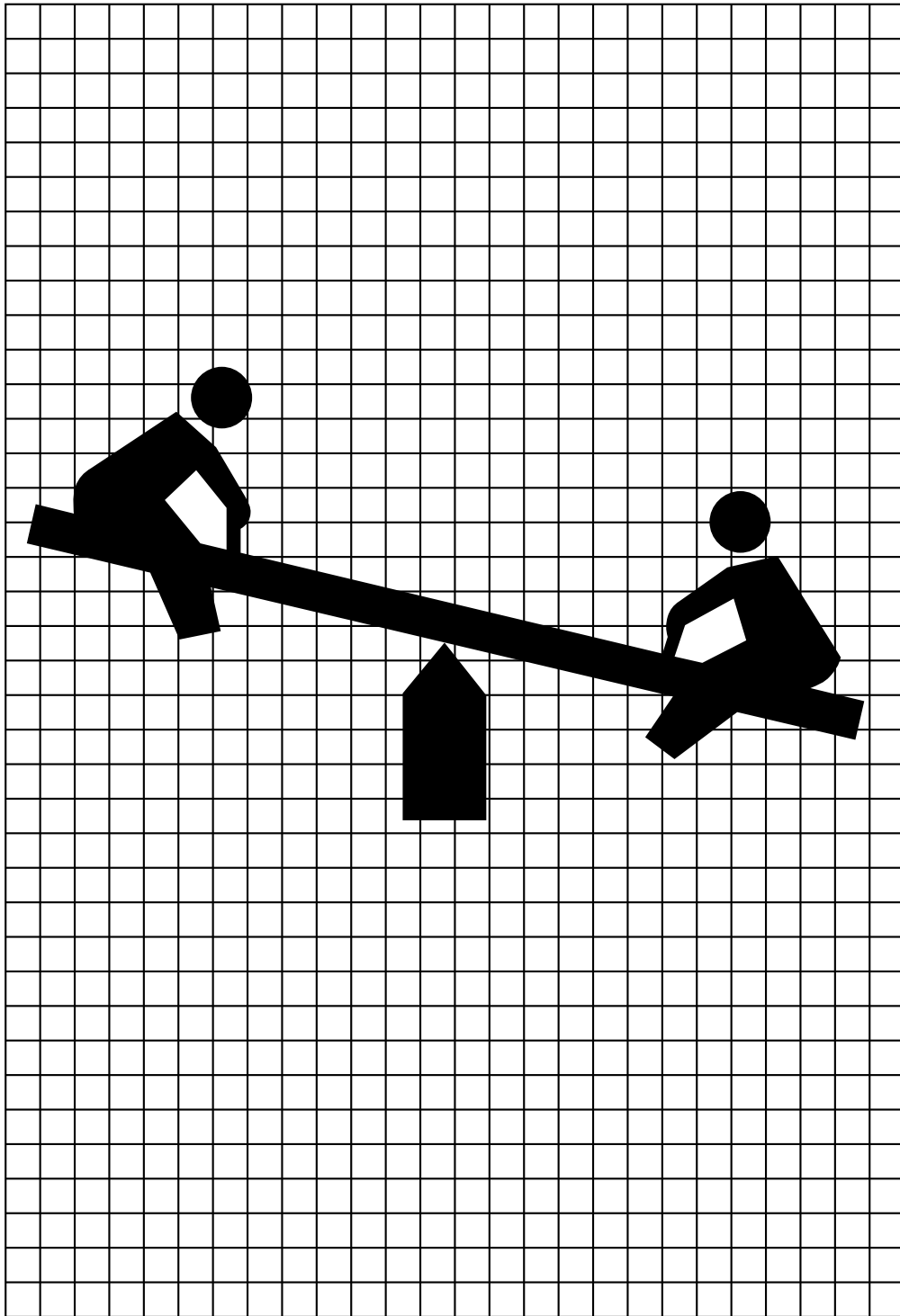
APPENDIX D-5

10/97



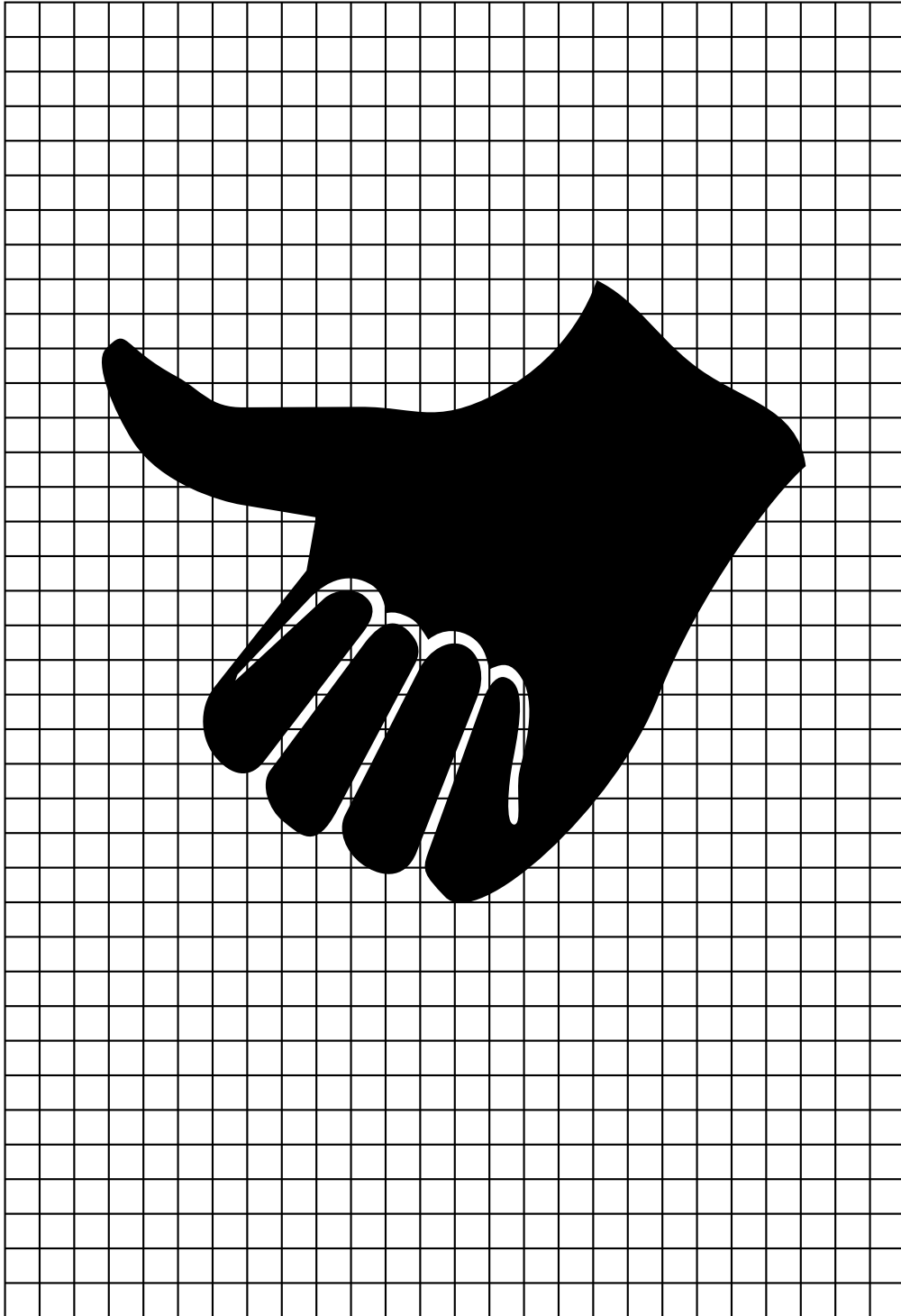
APPENDIX D-6

10/97



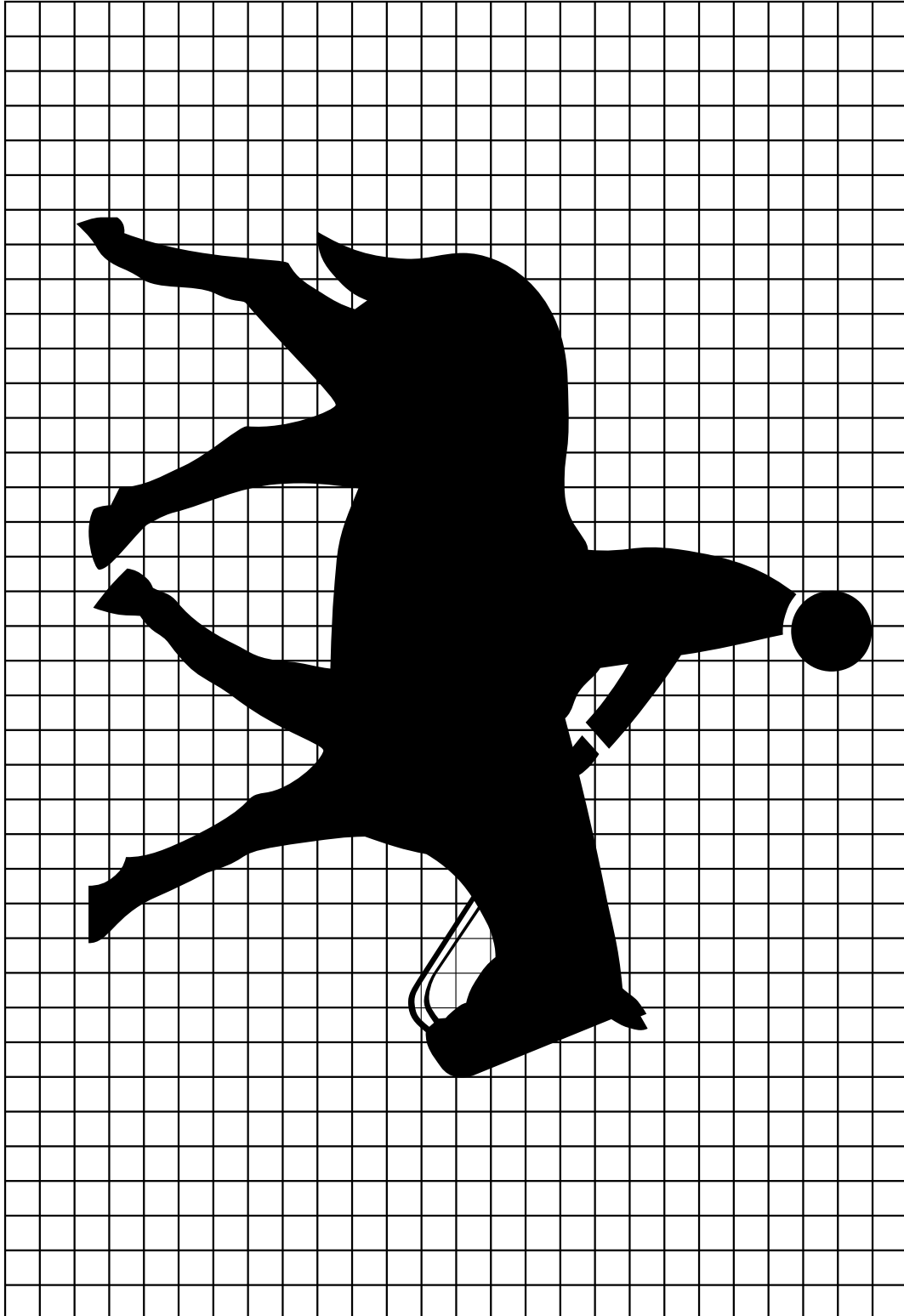
APPENDIX D-7

10/97



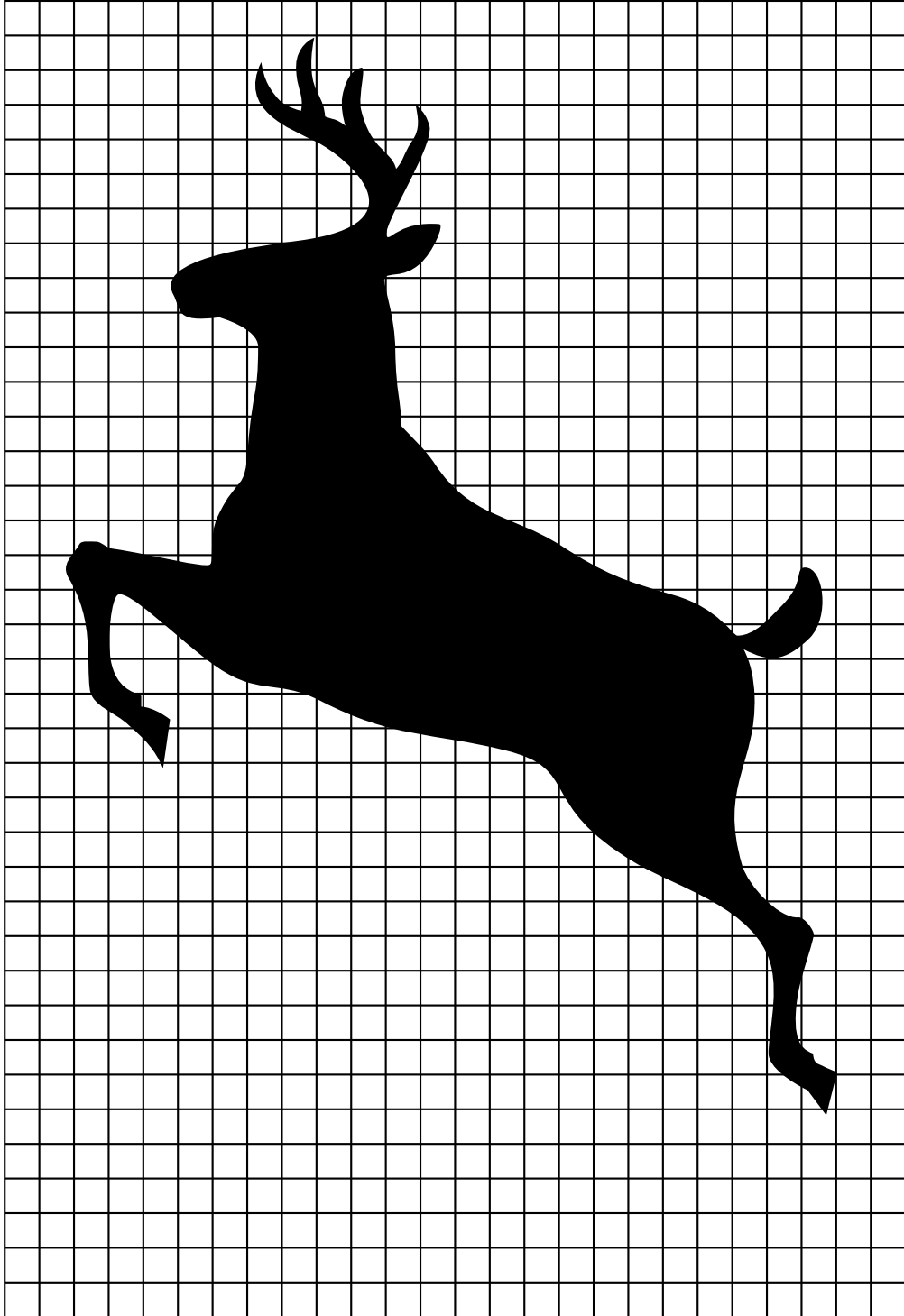
APPENDIX D-8

10/97



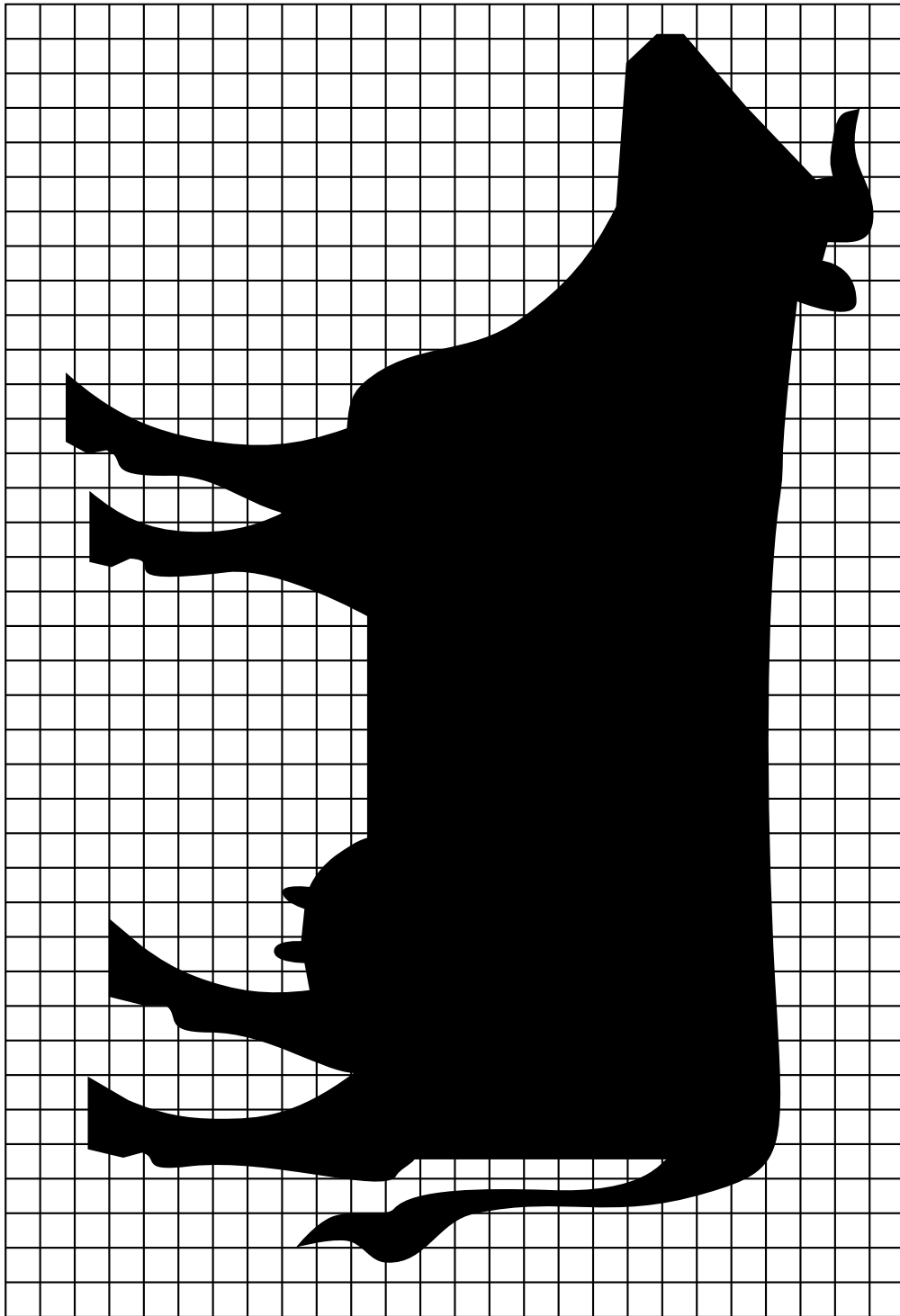
APPENDIX D-9

10/97



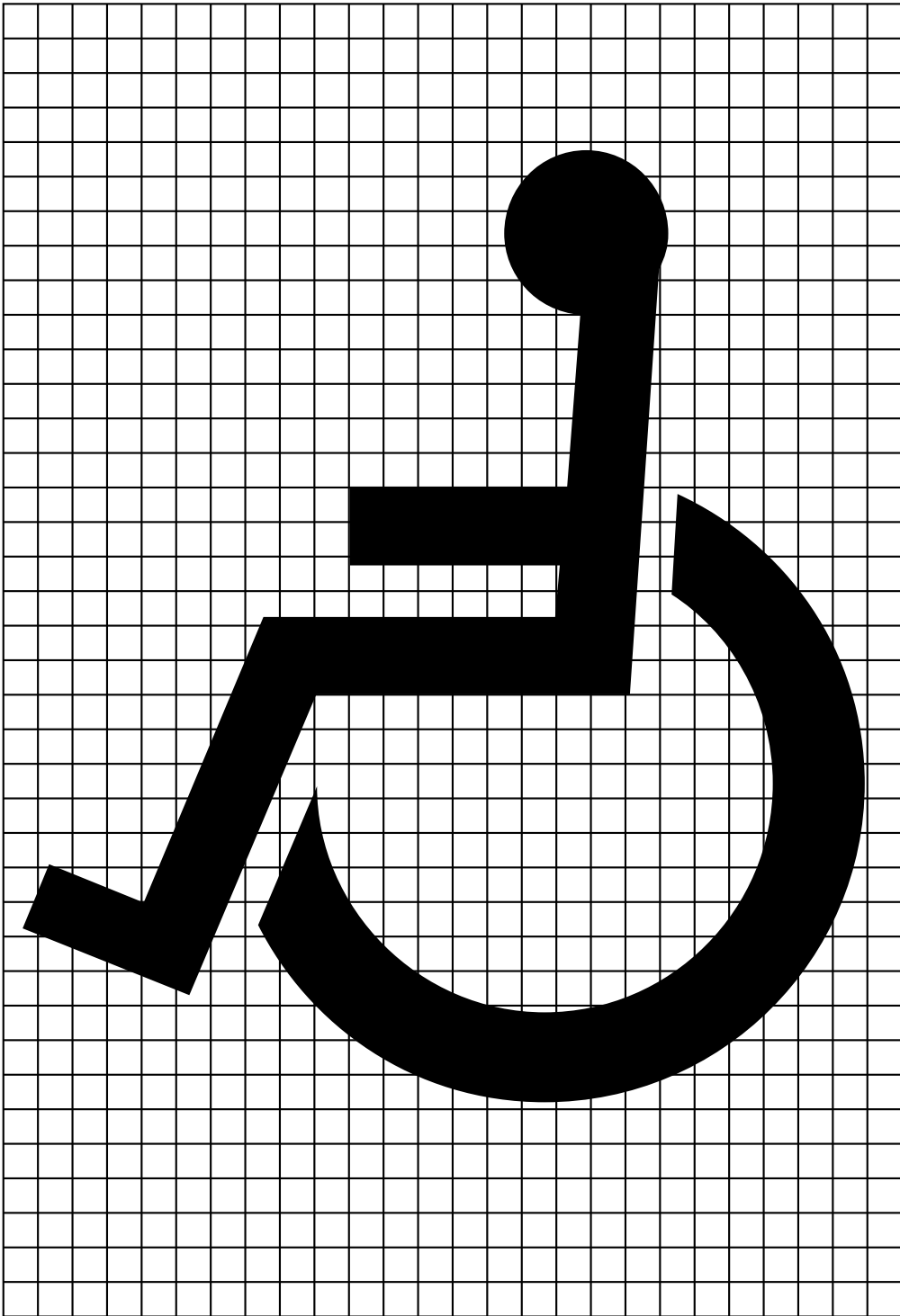
APPENDIX D-10

10/97



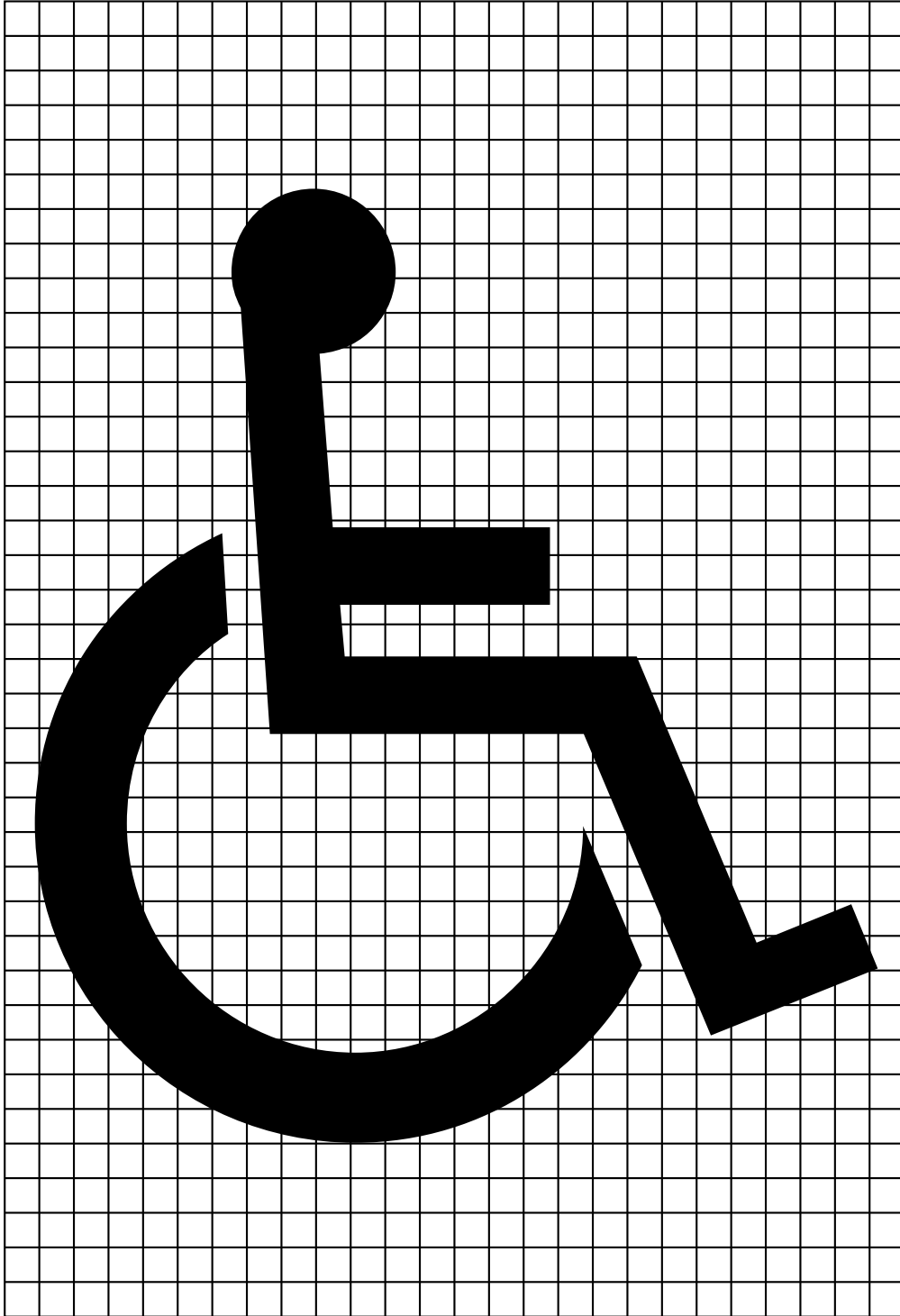
APPENDIX D-11

10/97



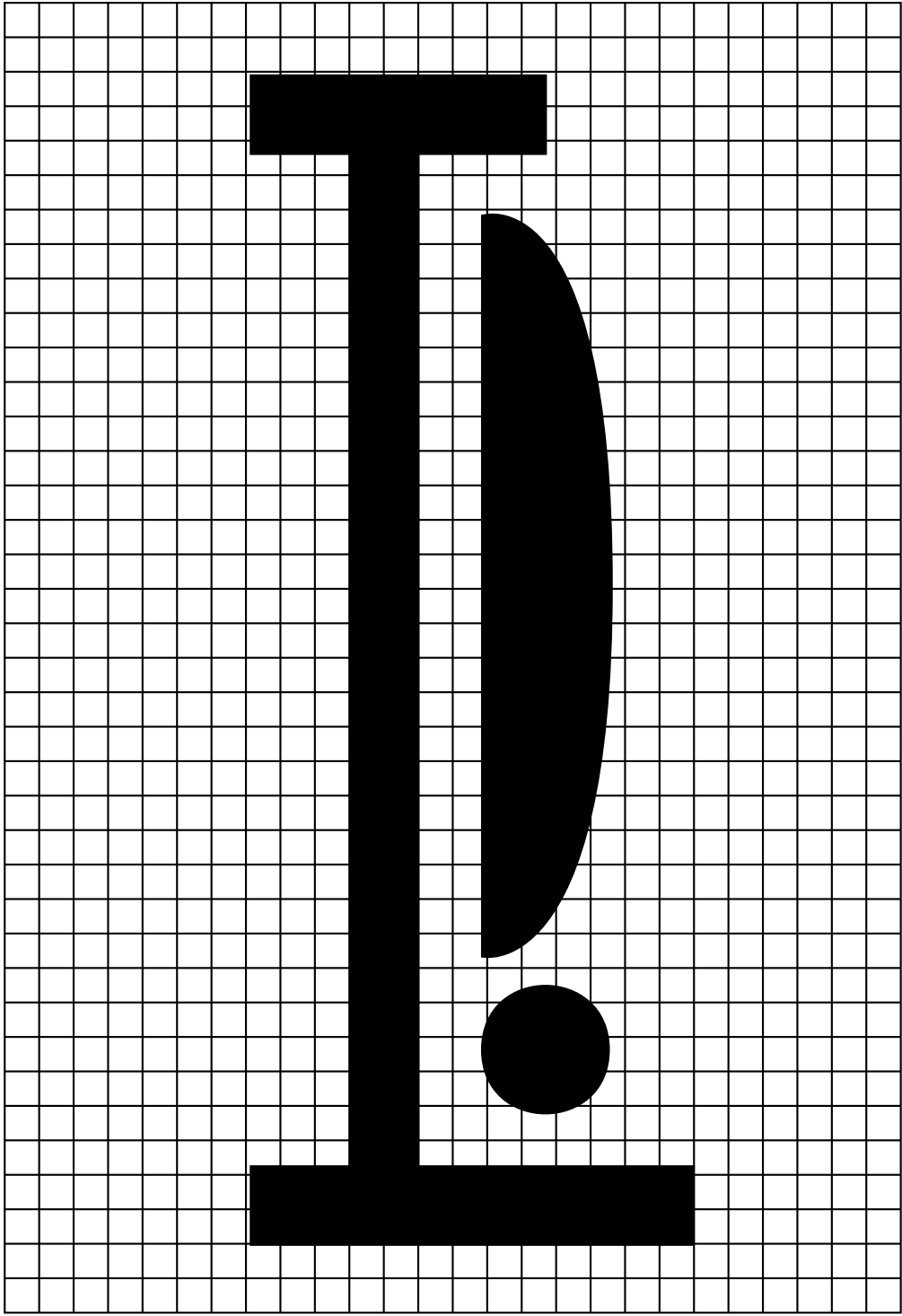
APPENDIX D-12

10/97



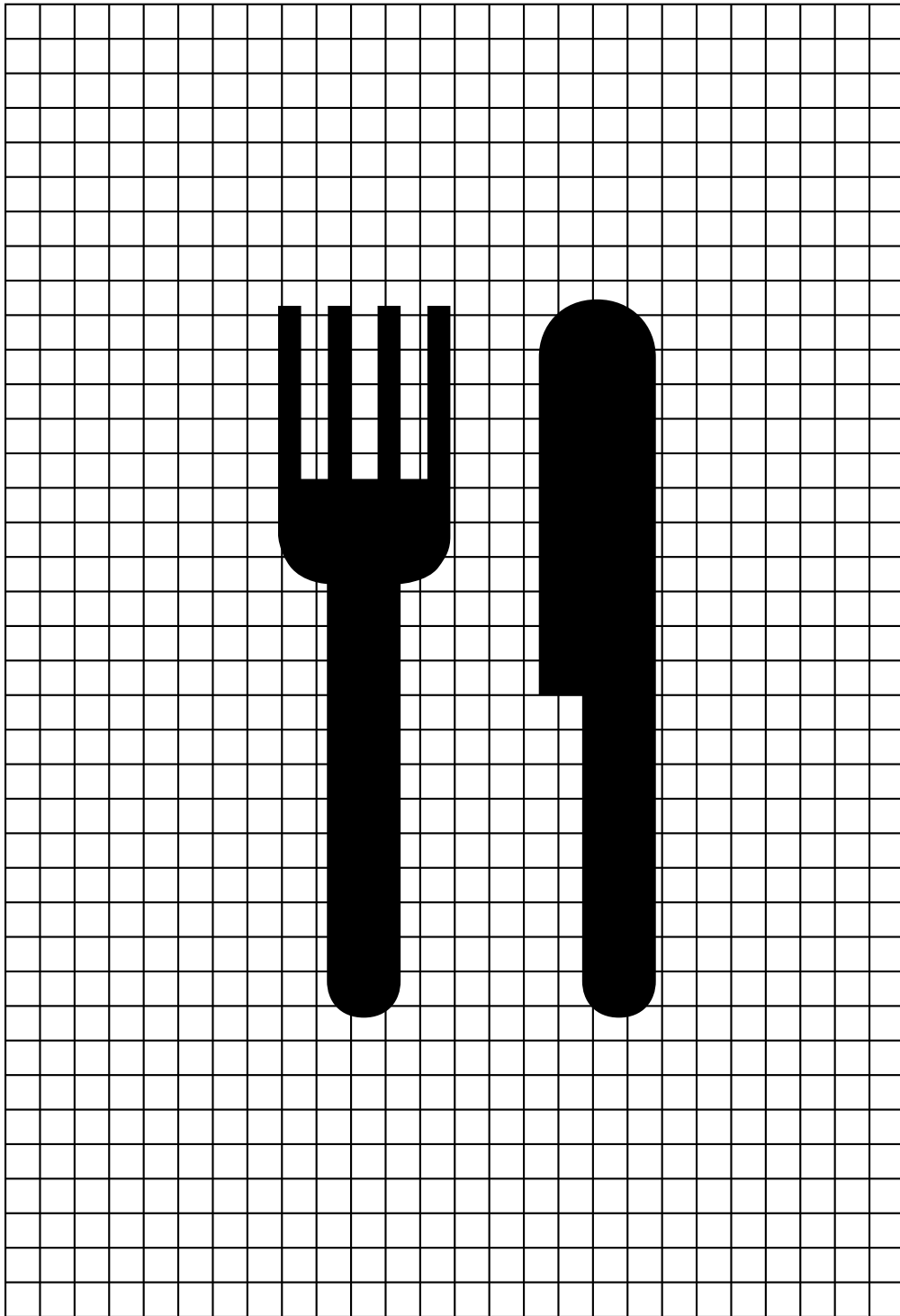
APPENDIX D-13

10/97



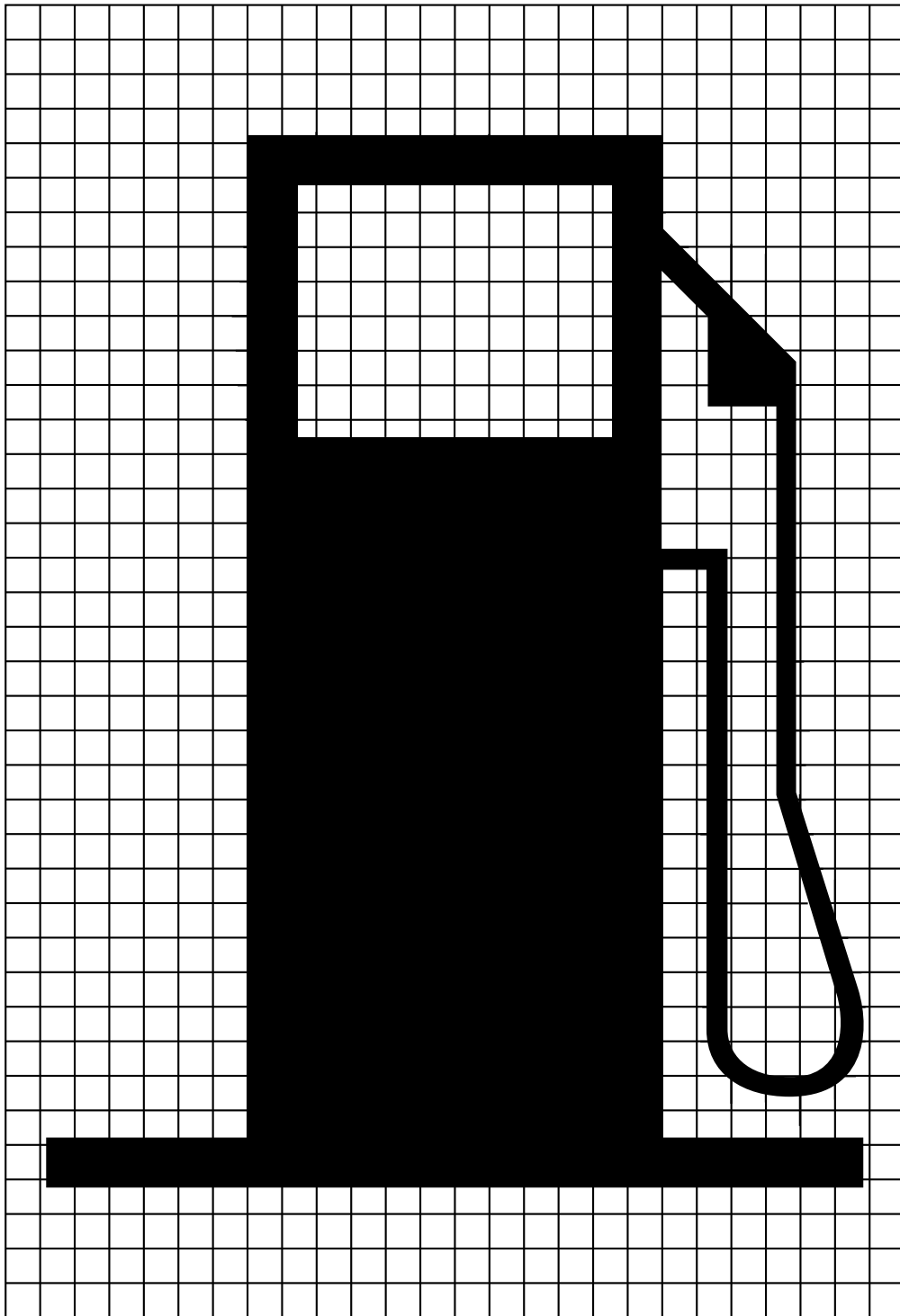
APPENDIX D-14

10/97



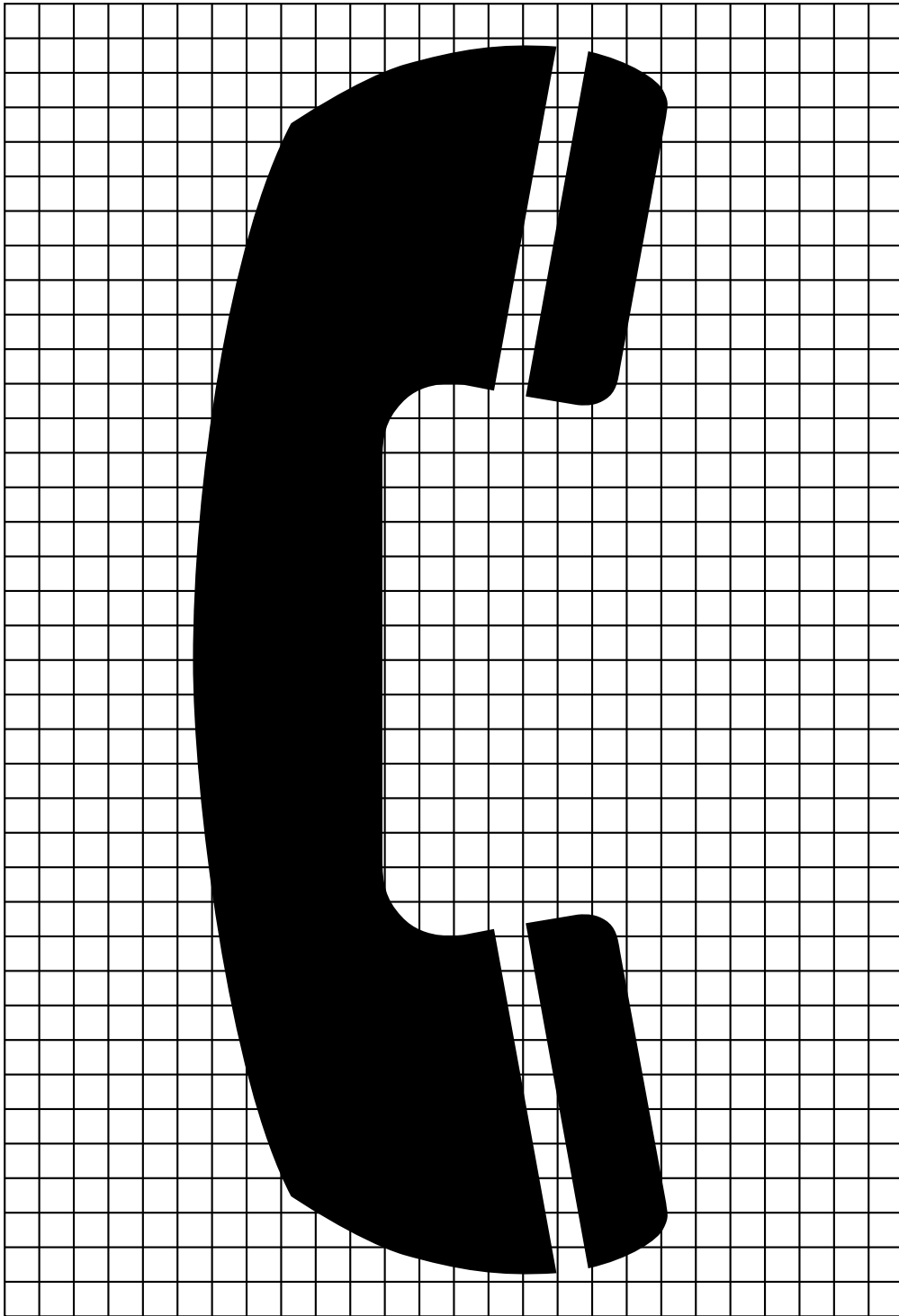
APPENDIX D-15

10/97



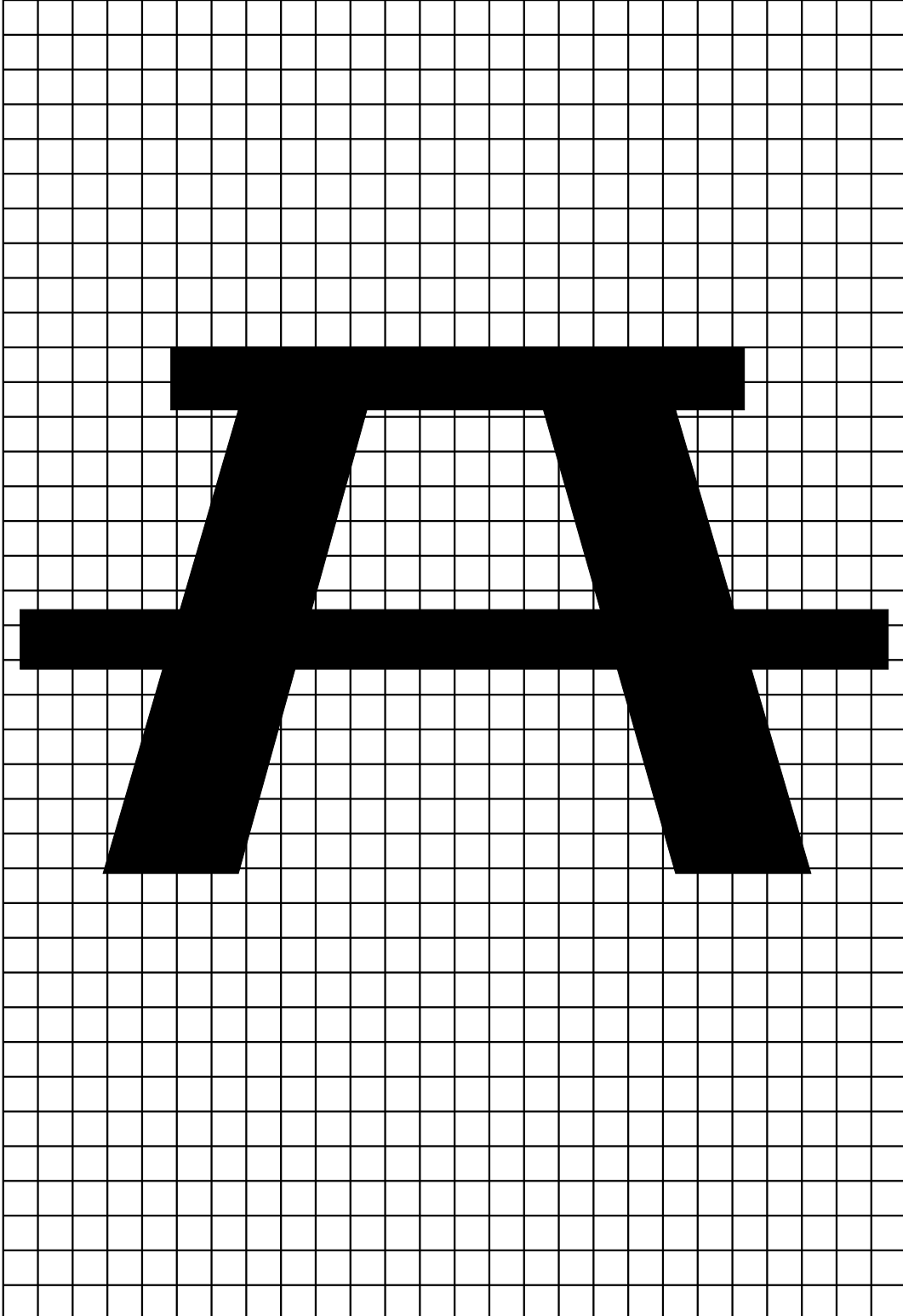
APPENDIX D-16

10/97



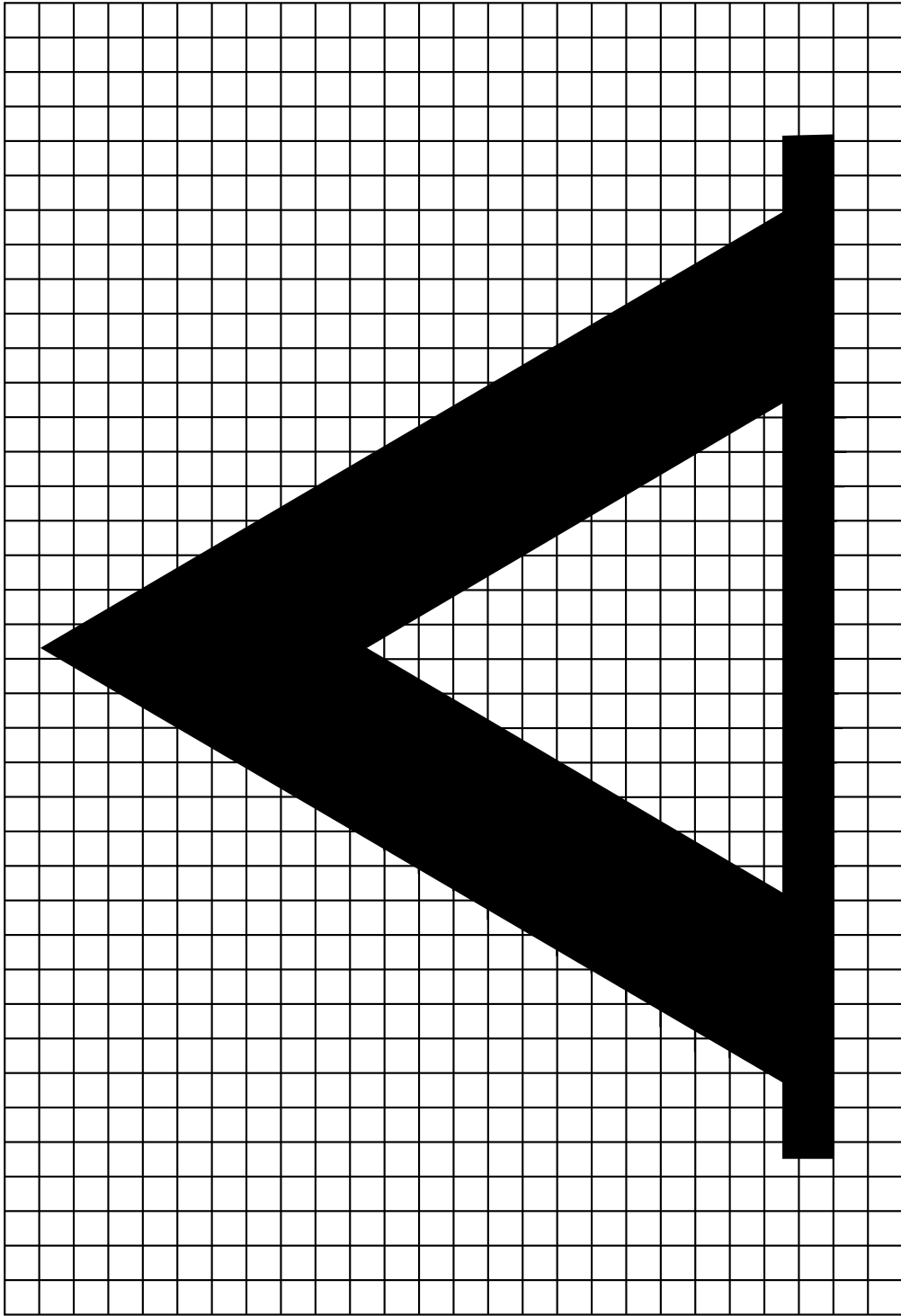
APPENDIX D-17

11/03



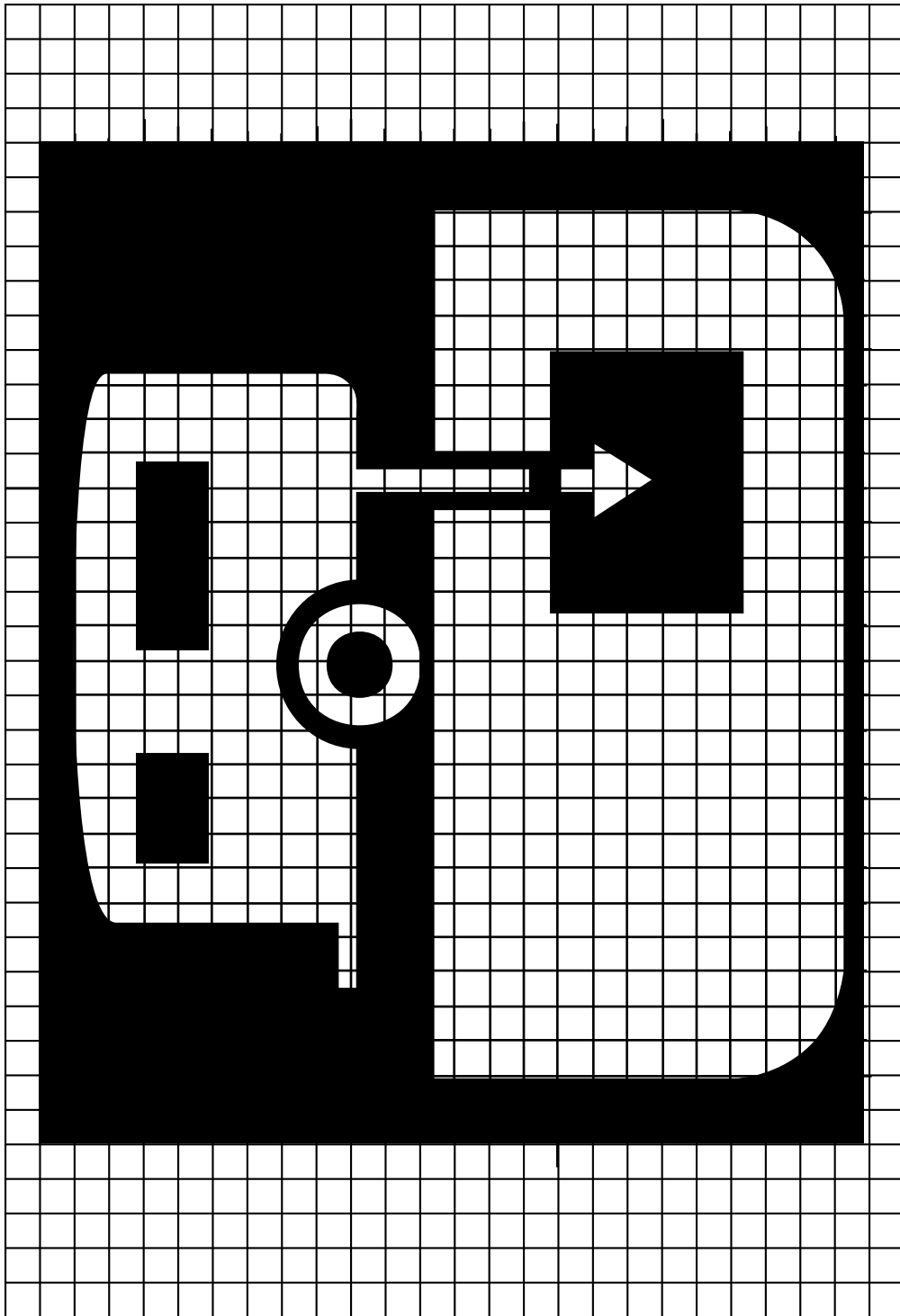
APPENDIX D-18

10/97



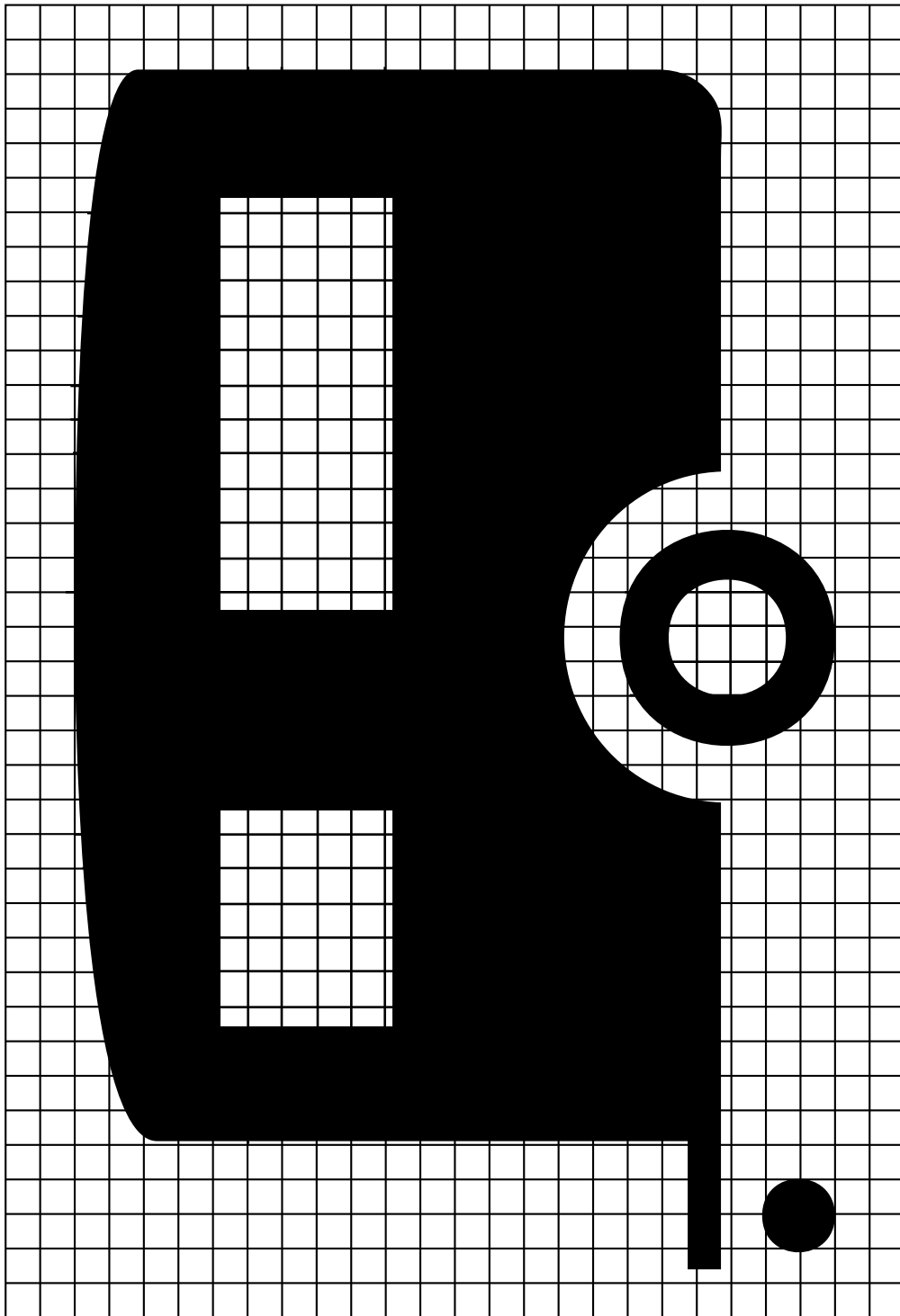
APPENDIX D-19

10/97



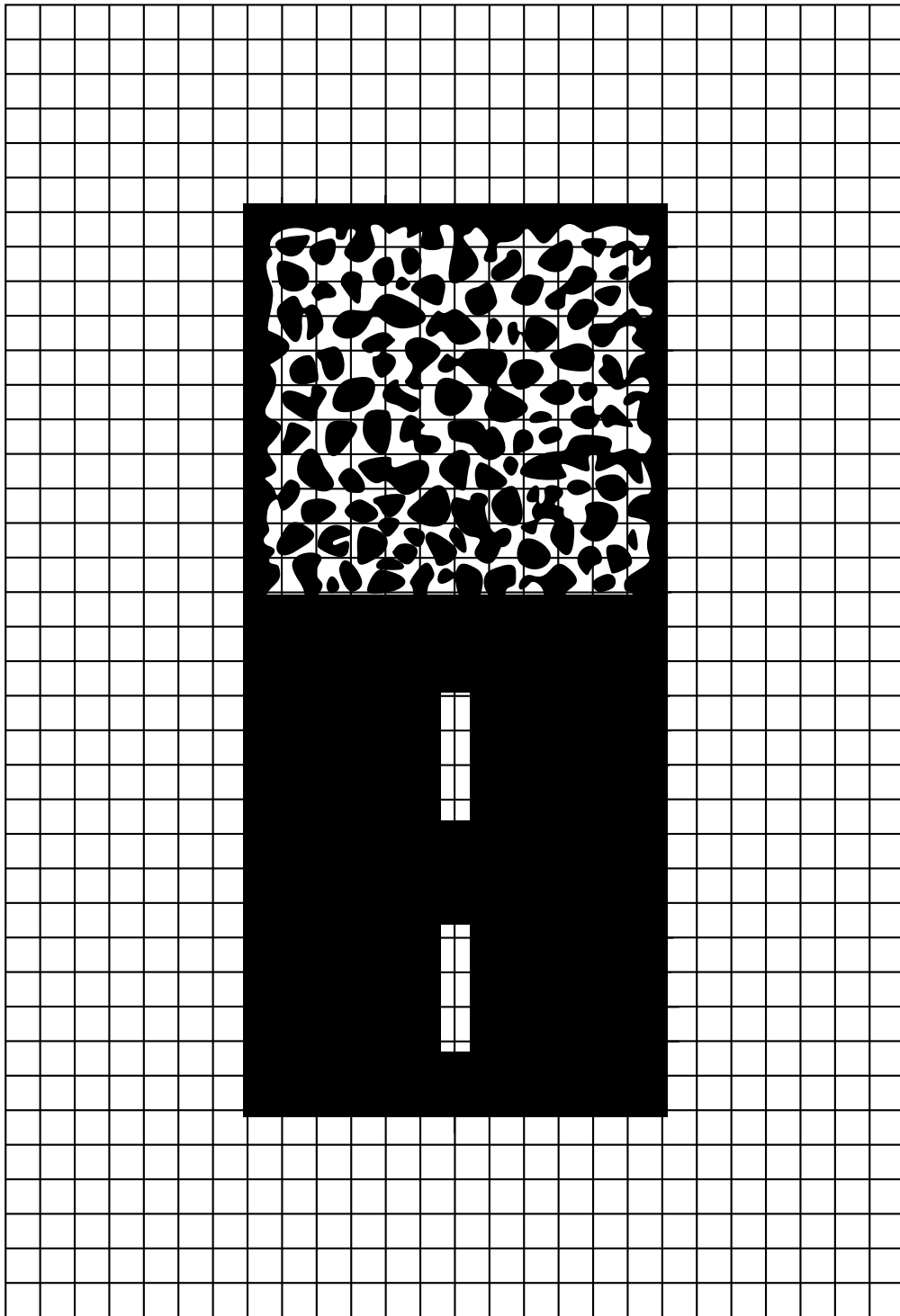
APPENDIX D-20

10/97



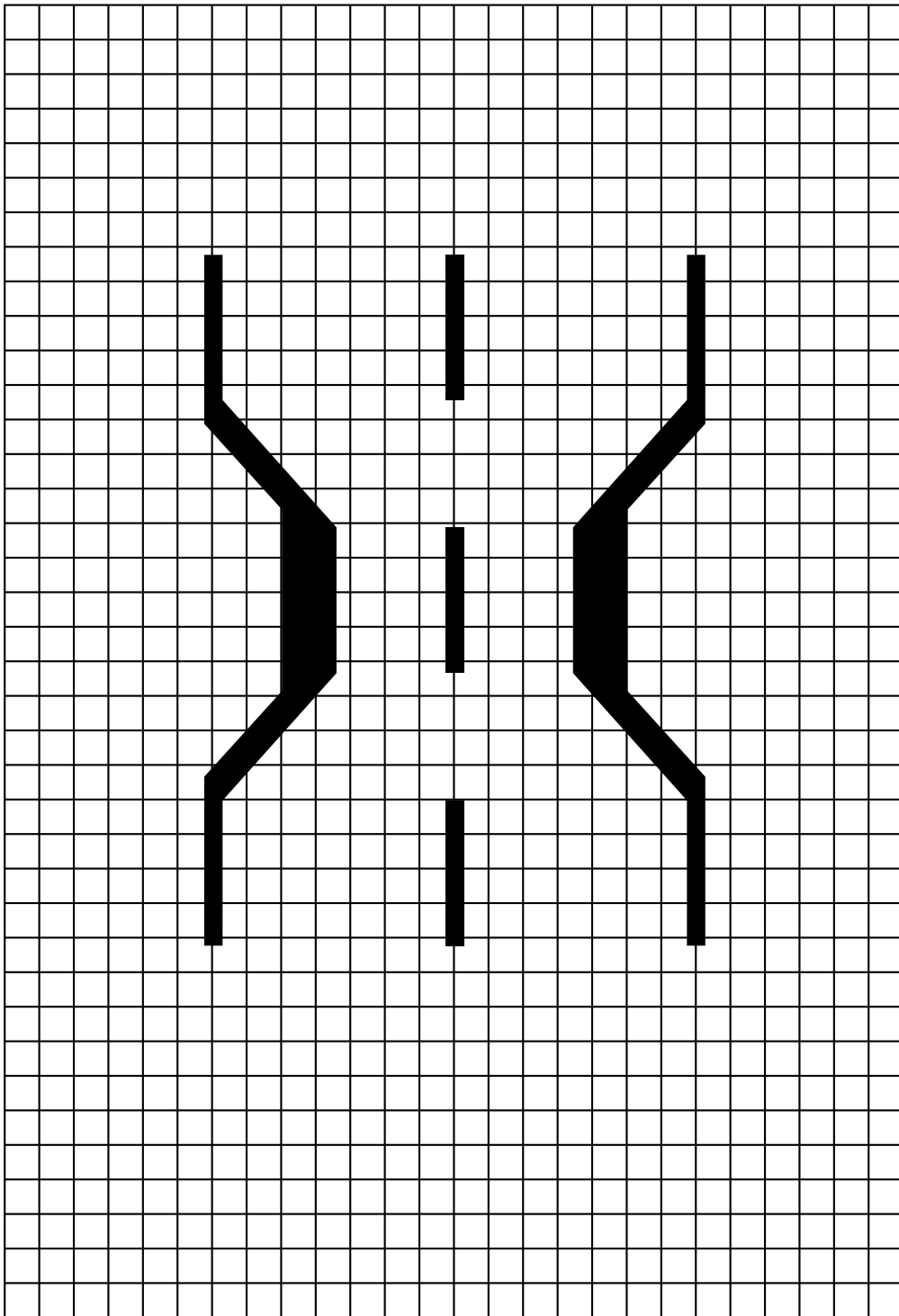
APPENDIX D-21

10/97



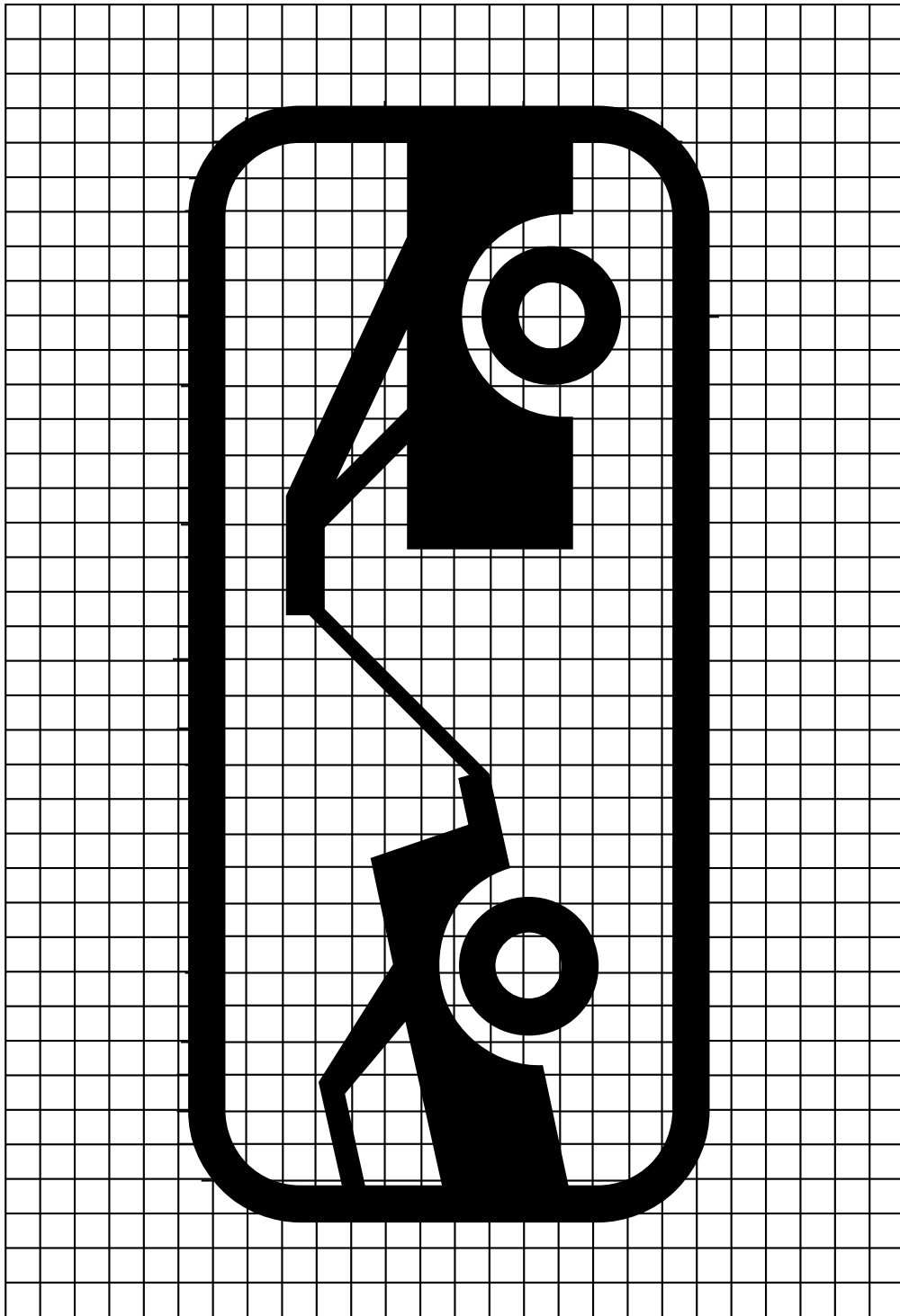
APPENDIX D-22

10/97



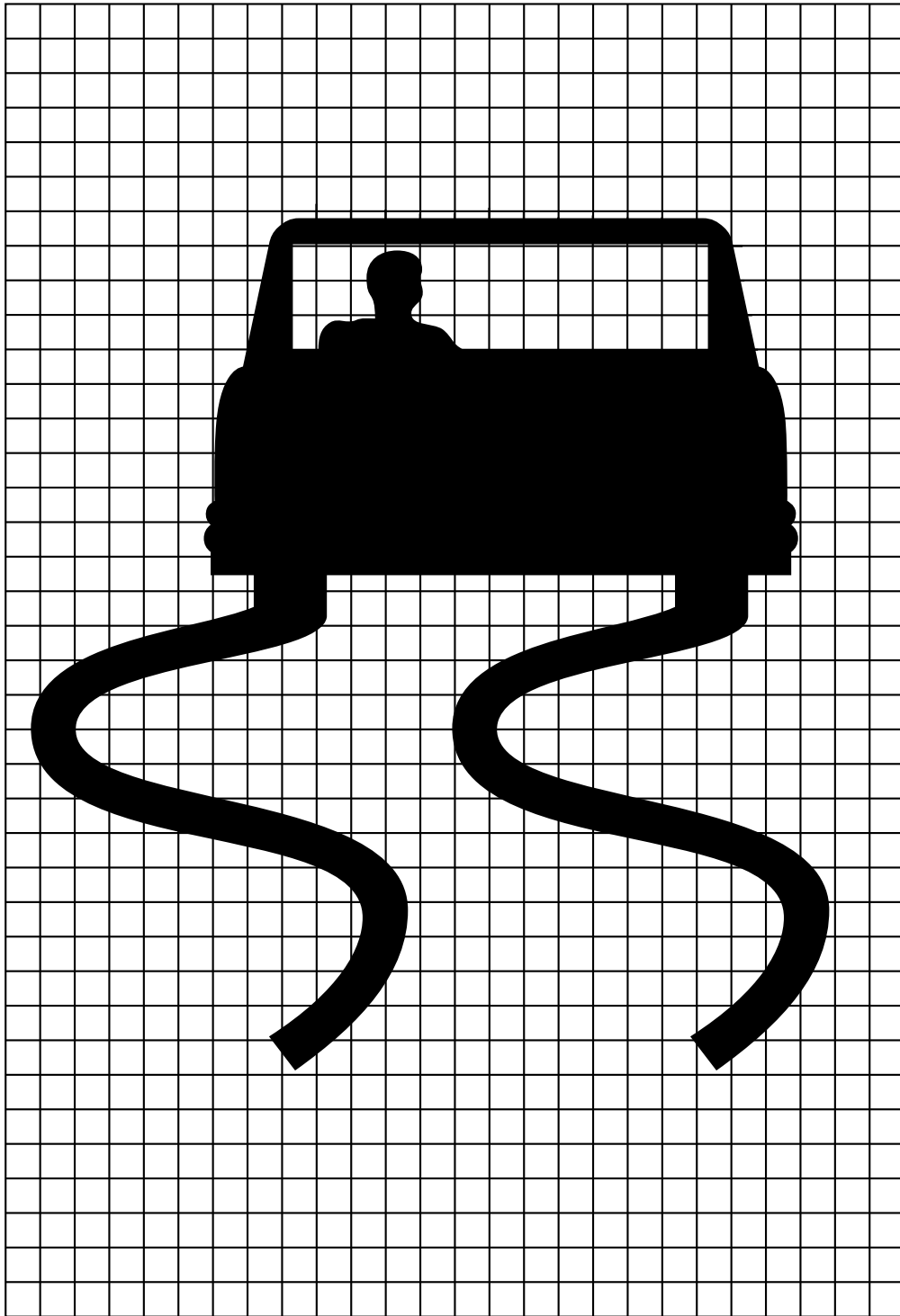
APPENDIX D-23

10/97



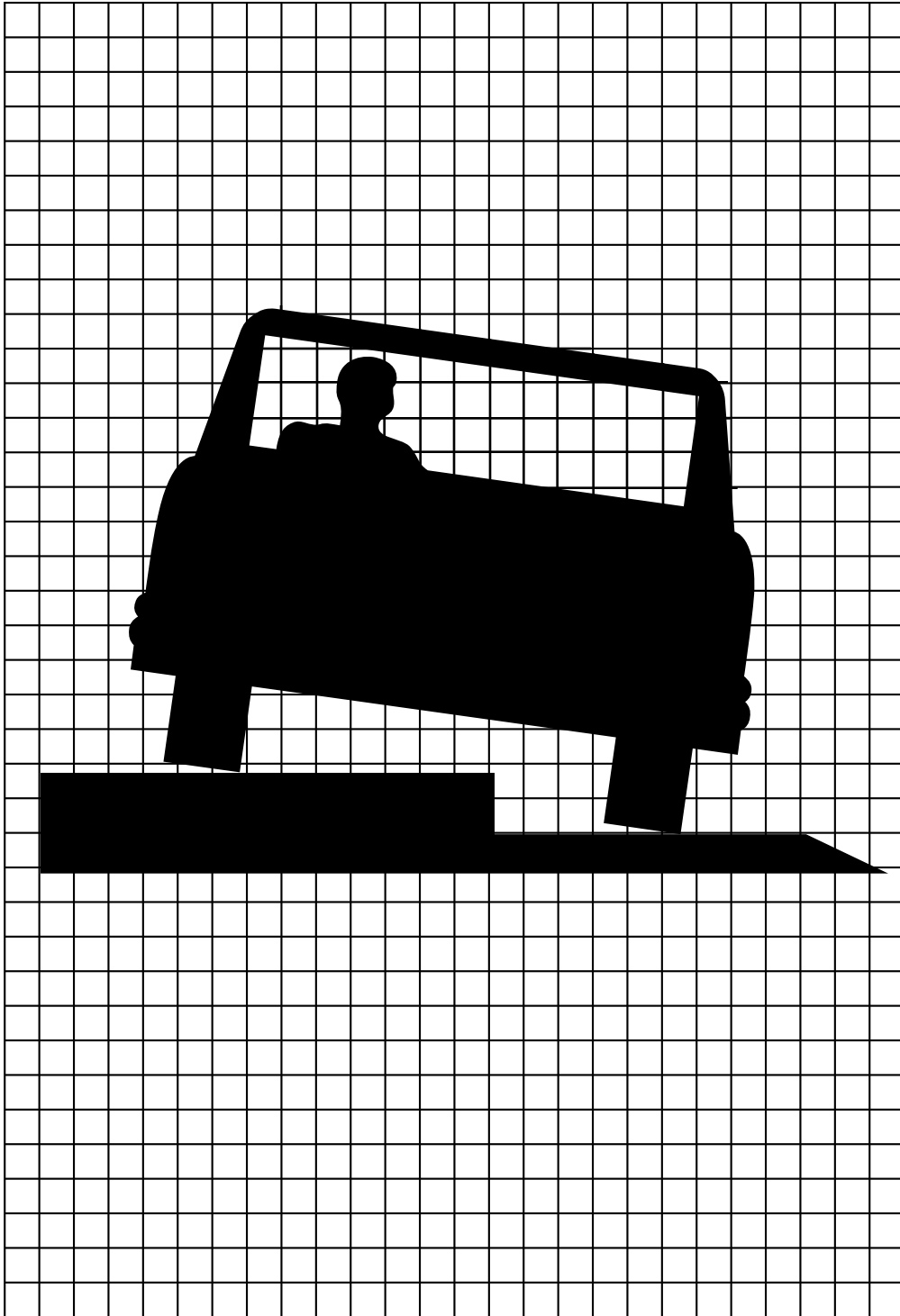
APPENDIX D-24

10/97



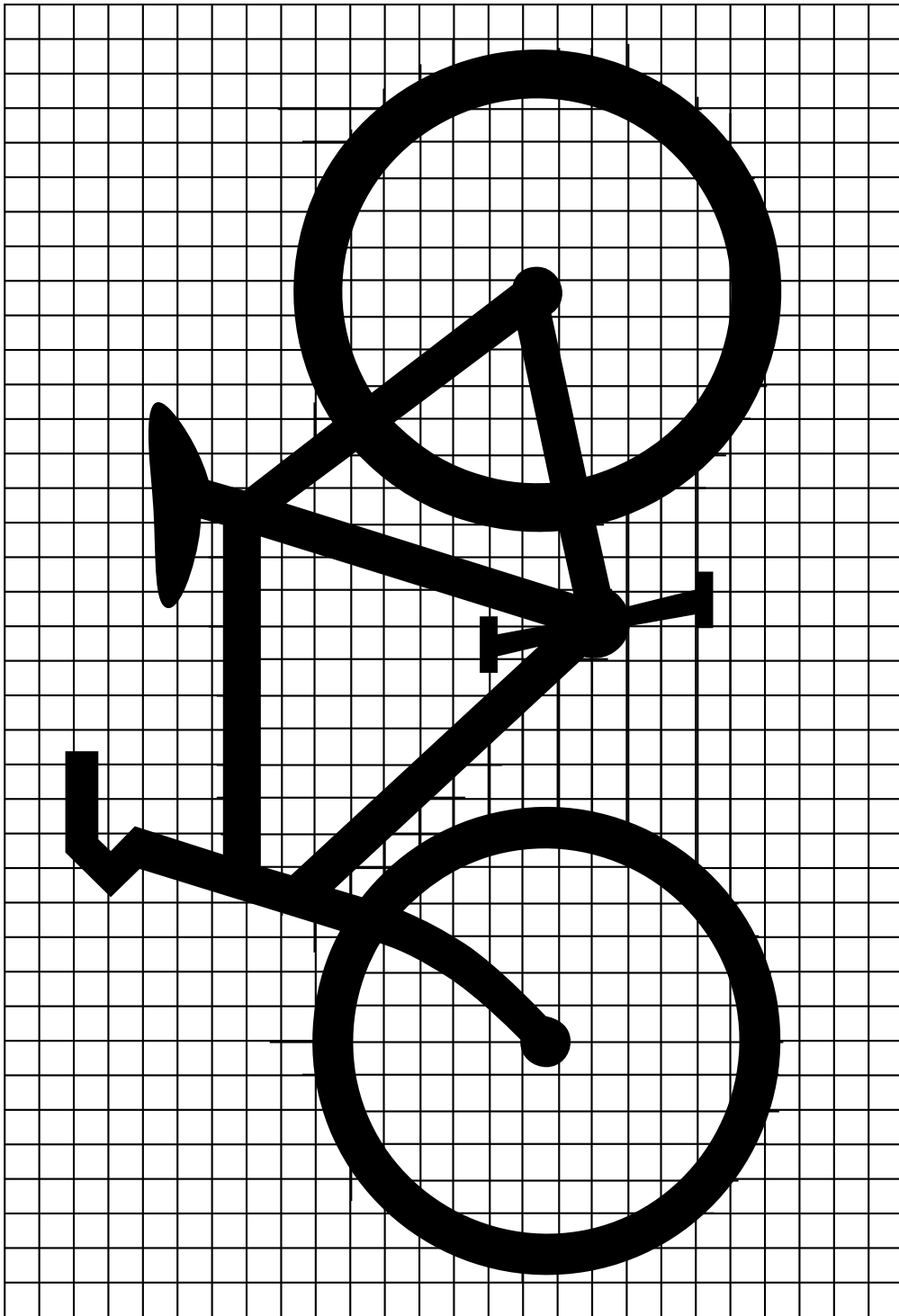
APPENDIX D-25

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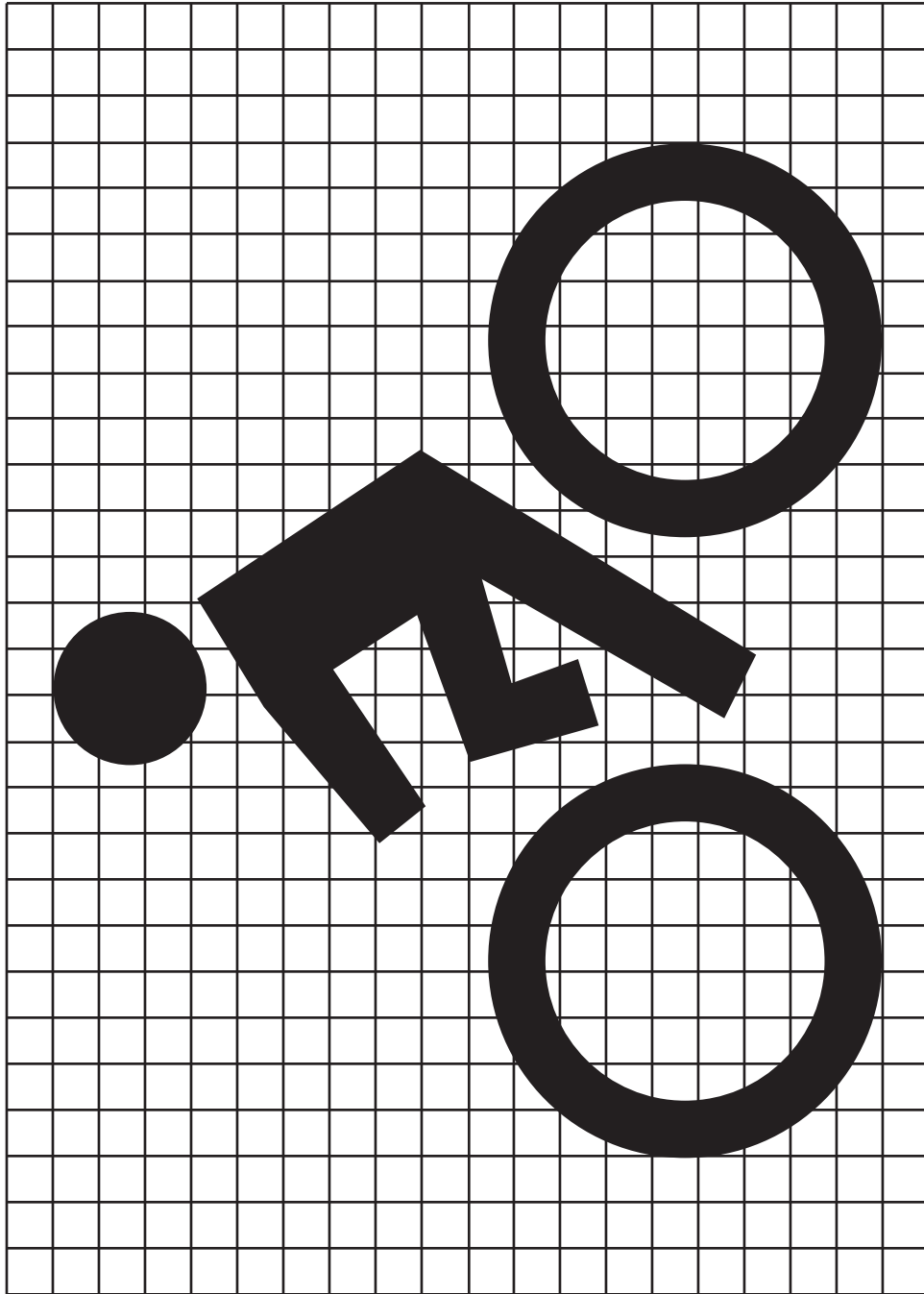
APPENDIX D-26

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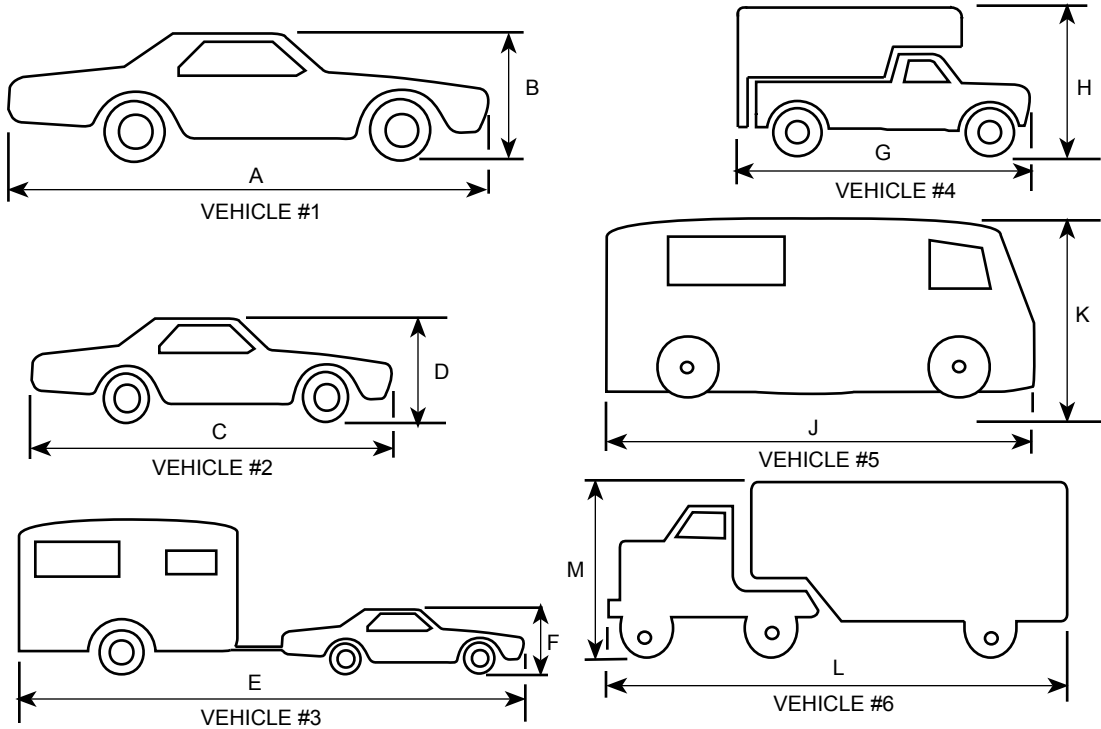
APPENDIX D-26A

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APPENDIX D-27

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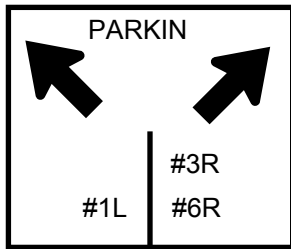


#1L ---- Vehicle #1 faces left
 #3R ---- Vehicle #3 faces right
 #6R ---- Vehicle #6 faces right

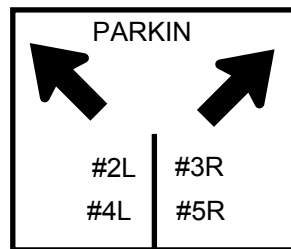
EXAMPLES OF SIGN PLAN LAYOUTS

#2L ---- Vehicle #2 faces left
 #4L ---- Vehicle #4 faces left
 #3R ---- Vehicle #3 faces right
 #5R ---- Vehicle #5 faces right

EXAMPLE



EXAMPLE B



TO BE USED WITH REST AREA PARKING SYMBOL SIGN D4-401

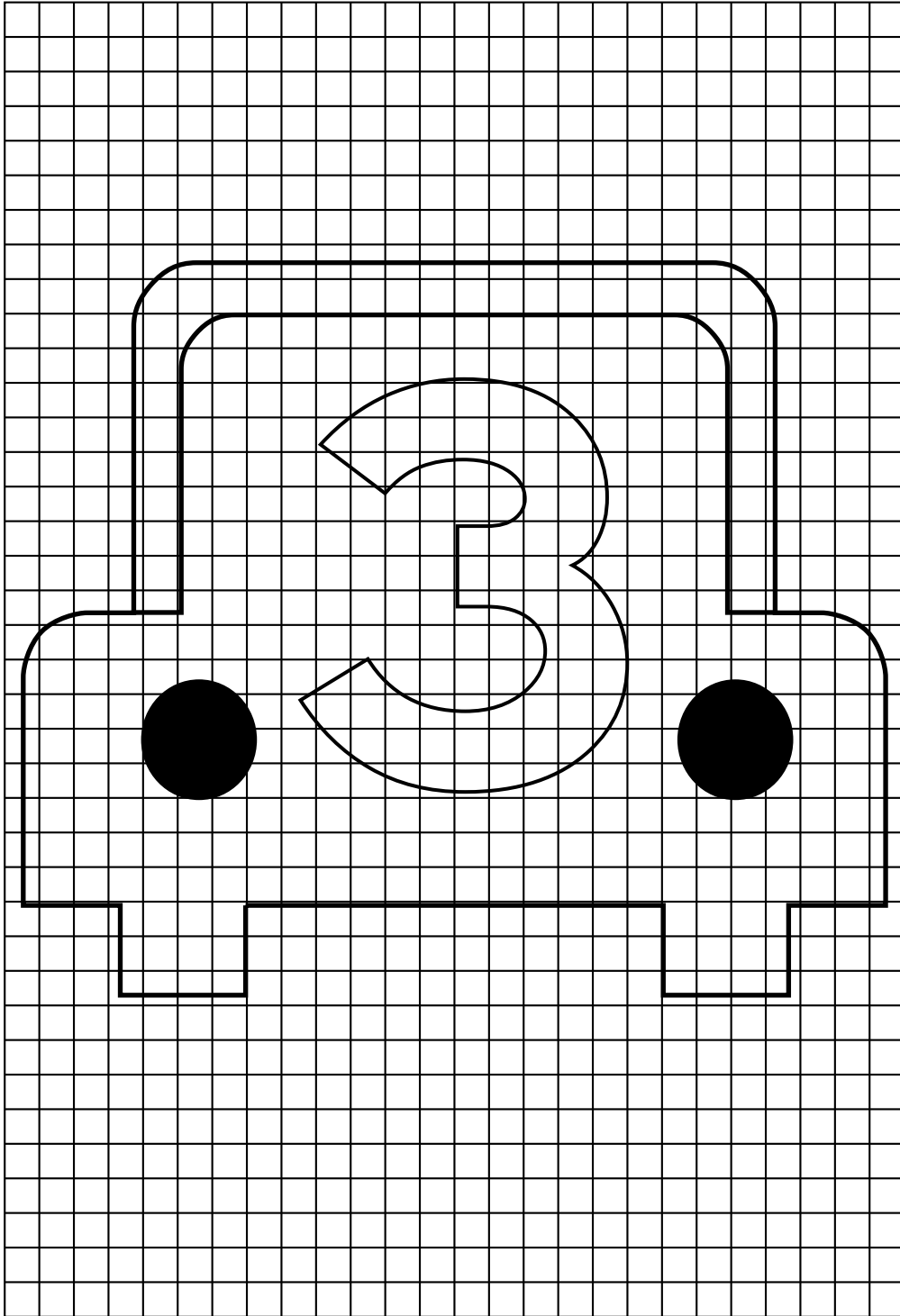
SIGN SIZE	DIMENSIONS (MILLIMETERS)											
	A	B	C	D	E	F	G	H	J	K	L	M
1500 X 1200	600	200	300	125	600	175	375	225	425	225	600	200
2400 X 1800	950	325	475	200	950	275	600	350	675	350	950	325

SIGN SIZE	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
60 X 48	24	8	12	5	24	7	15	9	17	9	24	8
96 X 72	38	13	19	8	38	1	24	14	27	14	38	13

VEHICLE NO. 1 IS INTENDED FOR USE ALONE AS SHOWN ON ABOVE SIGN. VEHICLE NO. 2 IS TO BE USED WHEN AUTOMOBILES AND ANOTHER VEHICLE TYPE ARE SIGNED IN THE SAME DIRECTION.

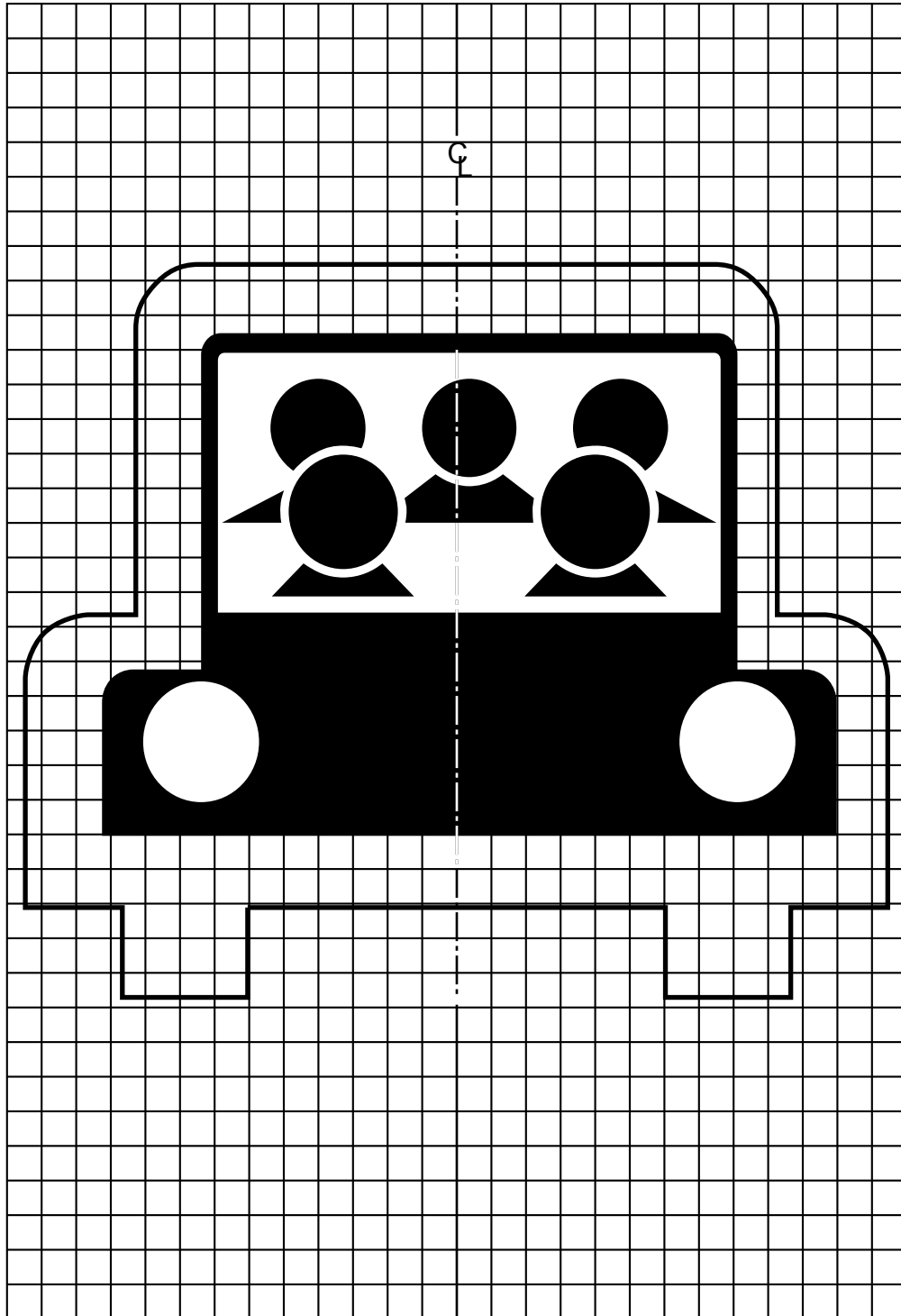
APPENDIX D-28

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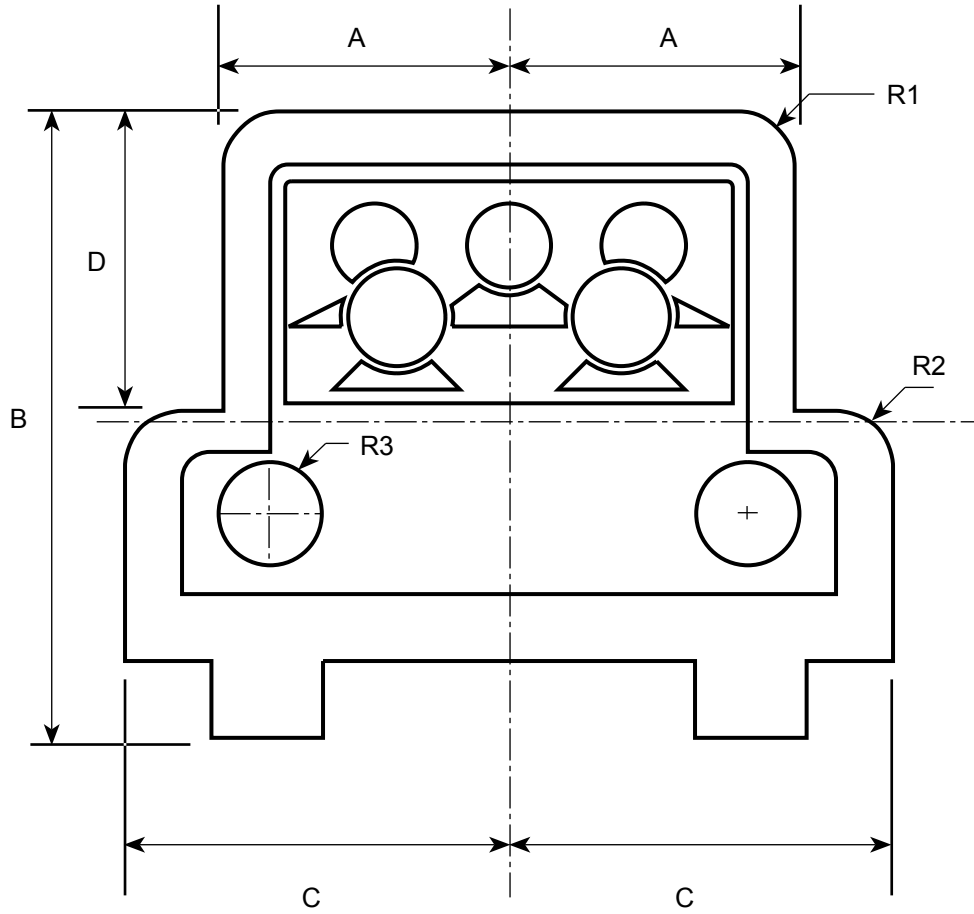
APPENDIX D-29

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APPENDIX D-30

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SIGN	DIMENSIONS (MILLIMETERS)						
	A	B	C	D	R1	R2	R3
STD.	144	300	191	139	38	30	25

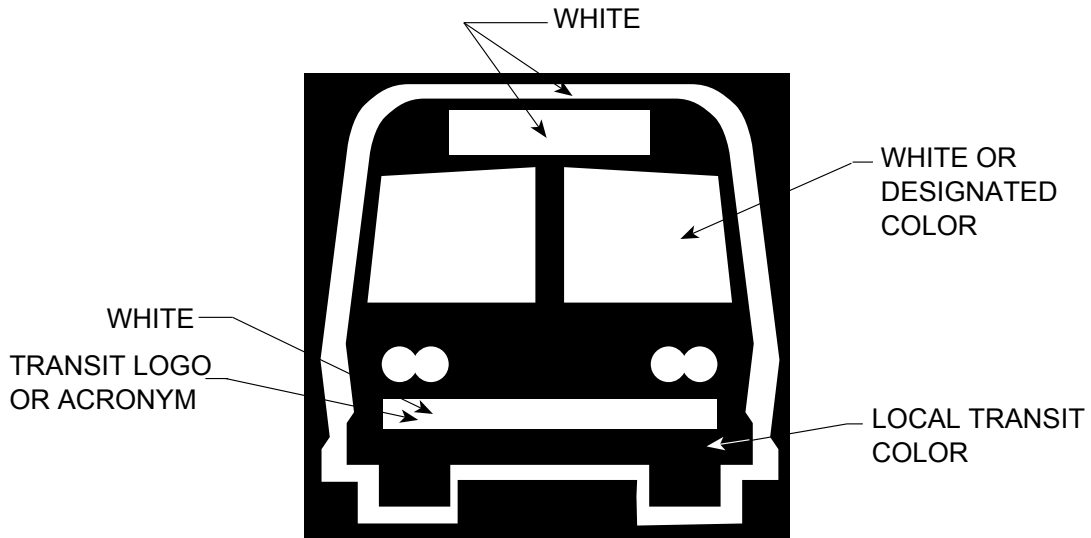
SIGN	DIMENSIONS (MILLIMETERS)						
	A	B	C	D	R1	R2	R3
STD.	5 3/4	12	7 5/8	5 9/16	1 1/2	1 3/16	1

COLORS

BLACK ON WHITE
 WHITE (REFL.)
 BLACK (NON-REFL.)

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NOTE: FULL SIZE PRINTS ARE AVAILABLE FROM HEADQUARTERS TRAFFIC SECTION

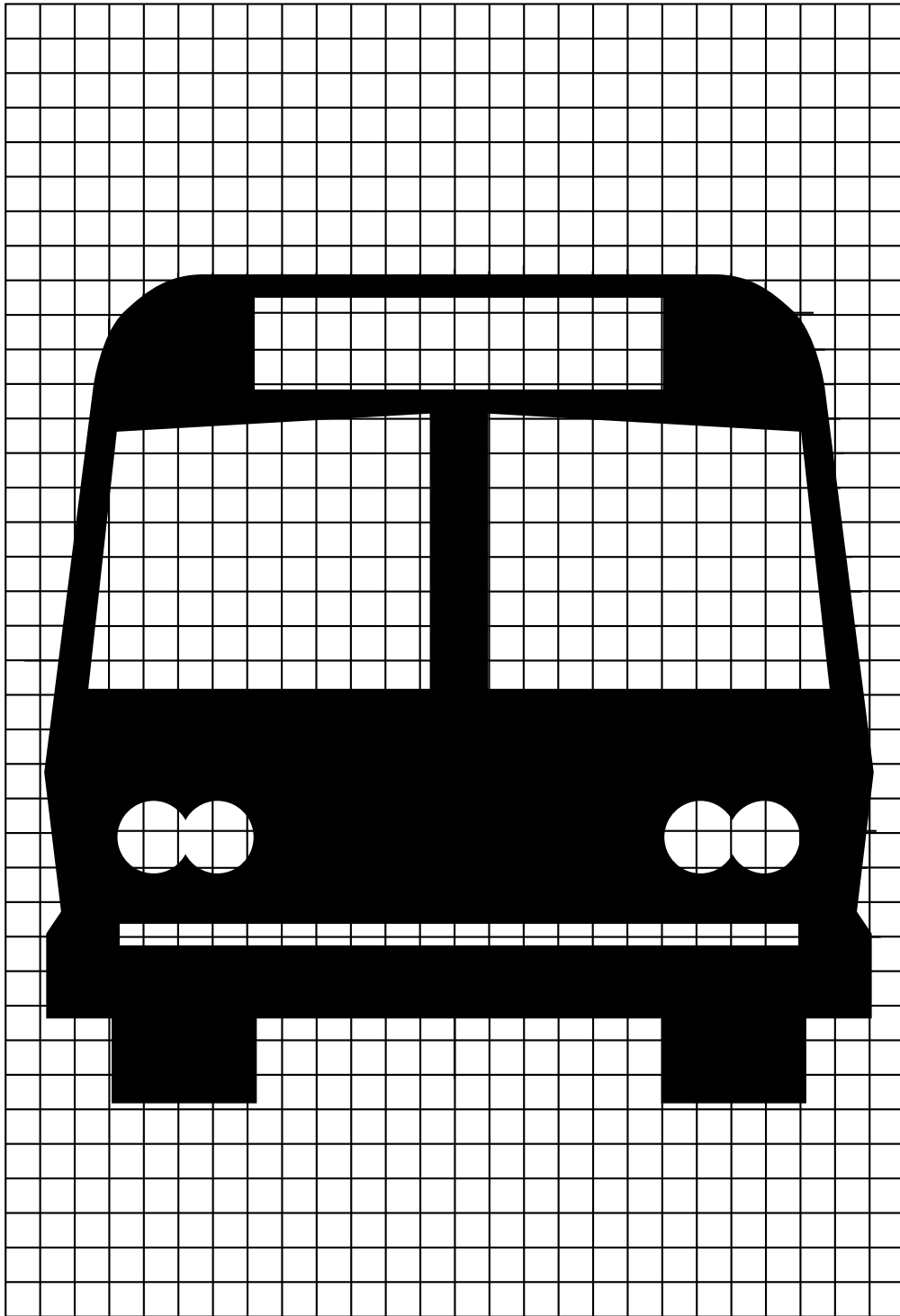
SIG	LOGO SIZE	
	CARPOO	BU
D4-2	237.5	300
D4-3	112.5	150
E13-1	237.5	300
E13-2	350	450

SIG	LOGO SIZE	
	CARPOO	BU
D4-2	9 1/2	12
D4-3	4 1/2	6
E13-1	9 1/2	12
E13-2	14	18

COLORS— PER LOCAL AGENCY

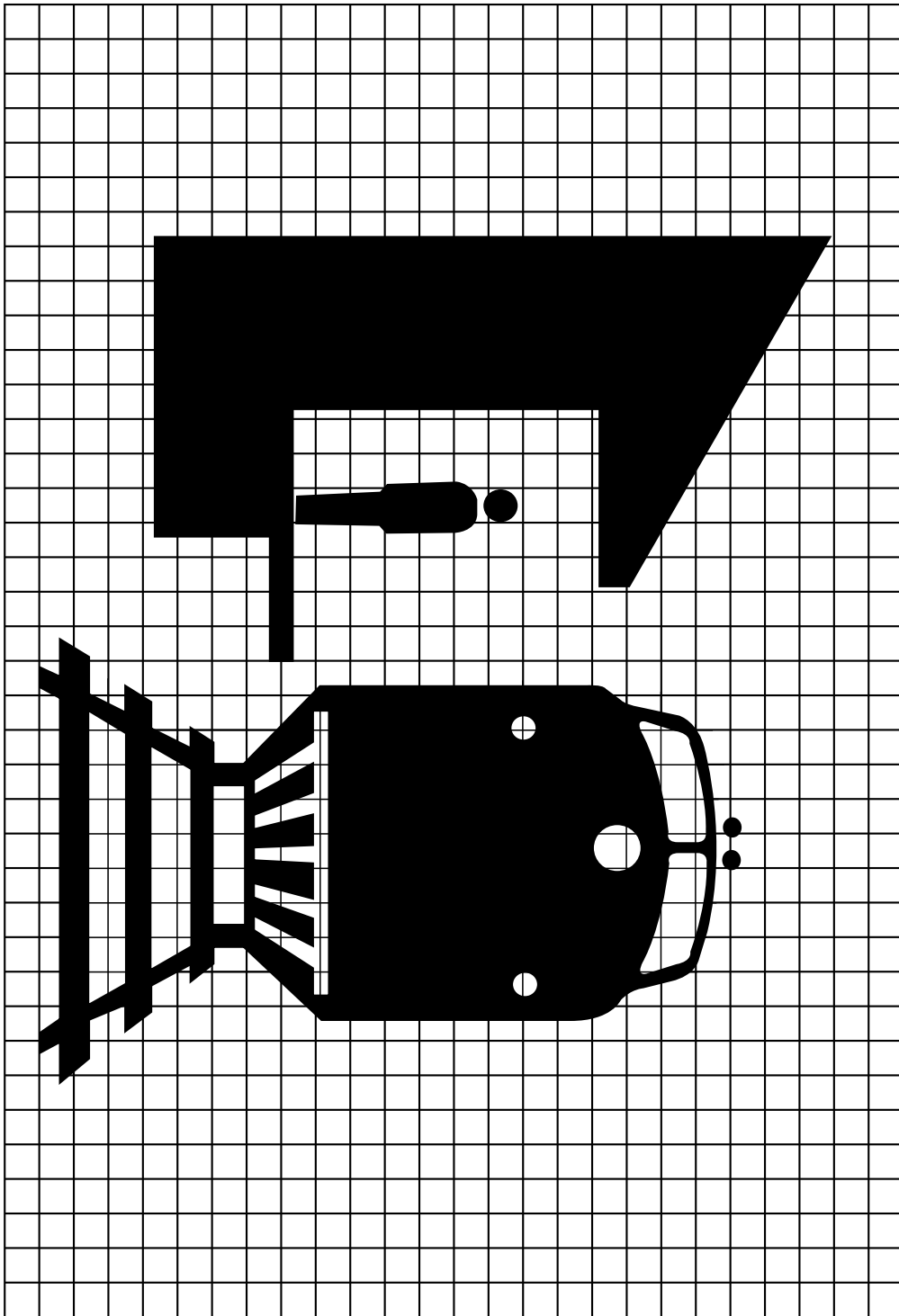
APPENDIX D-32

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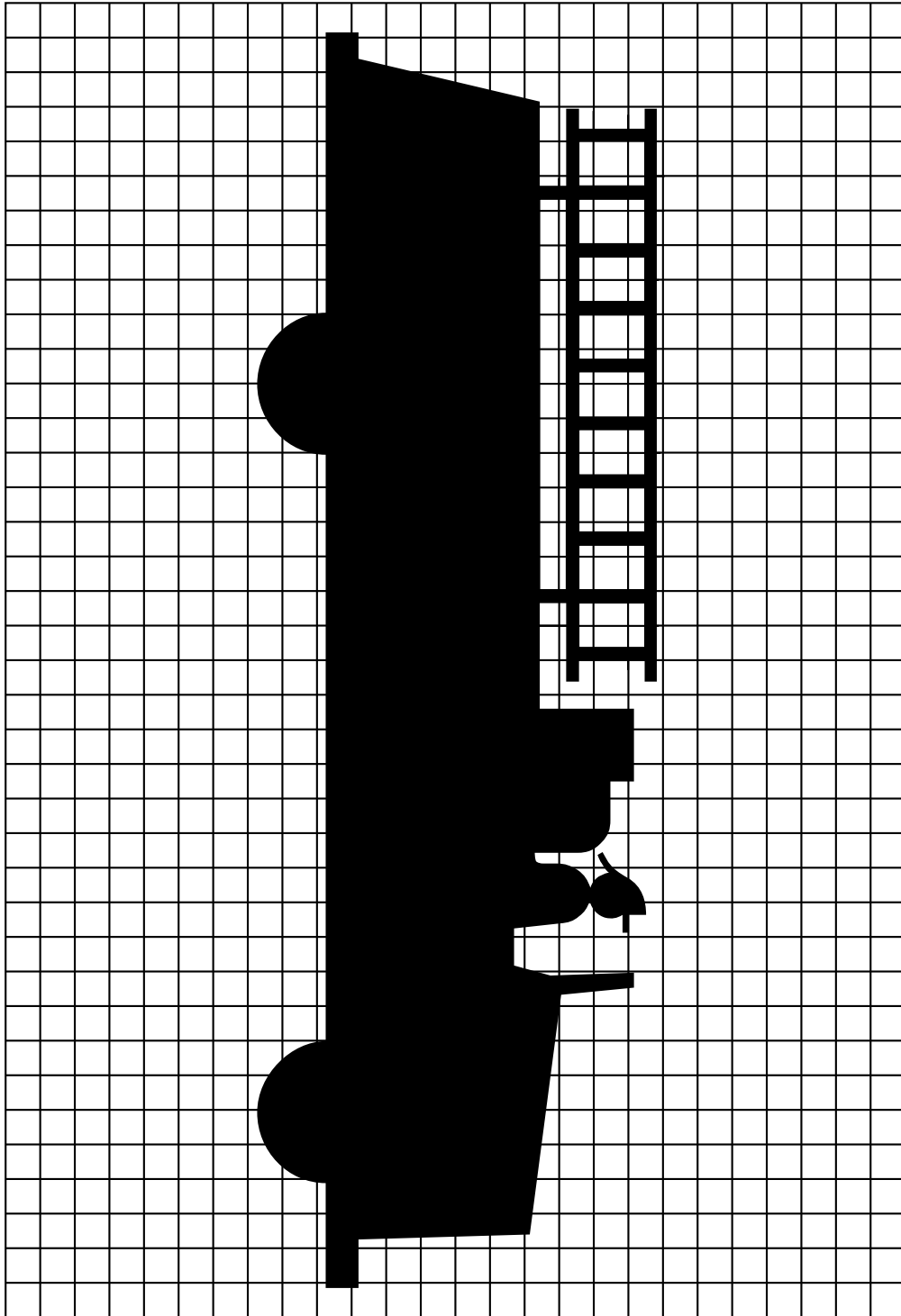
APPENDIX D-33

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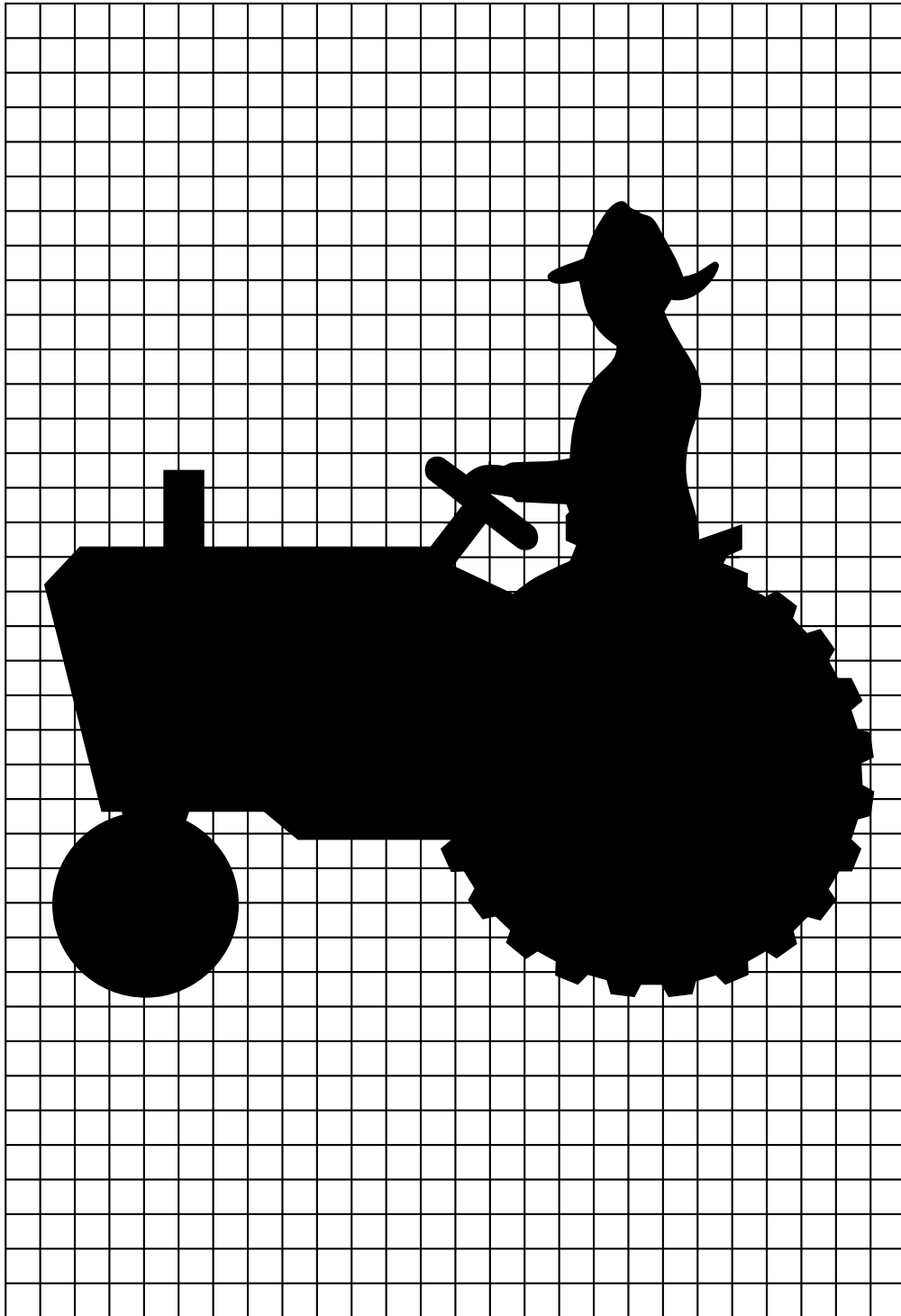
APPENDIX D-34

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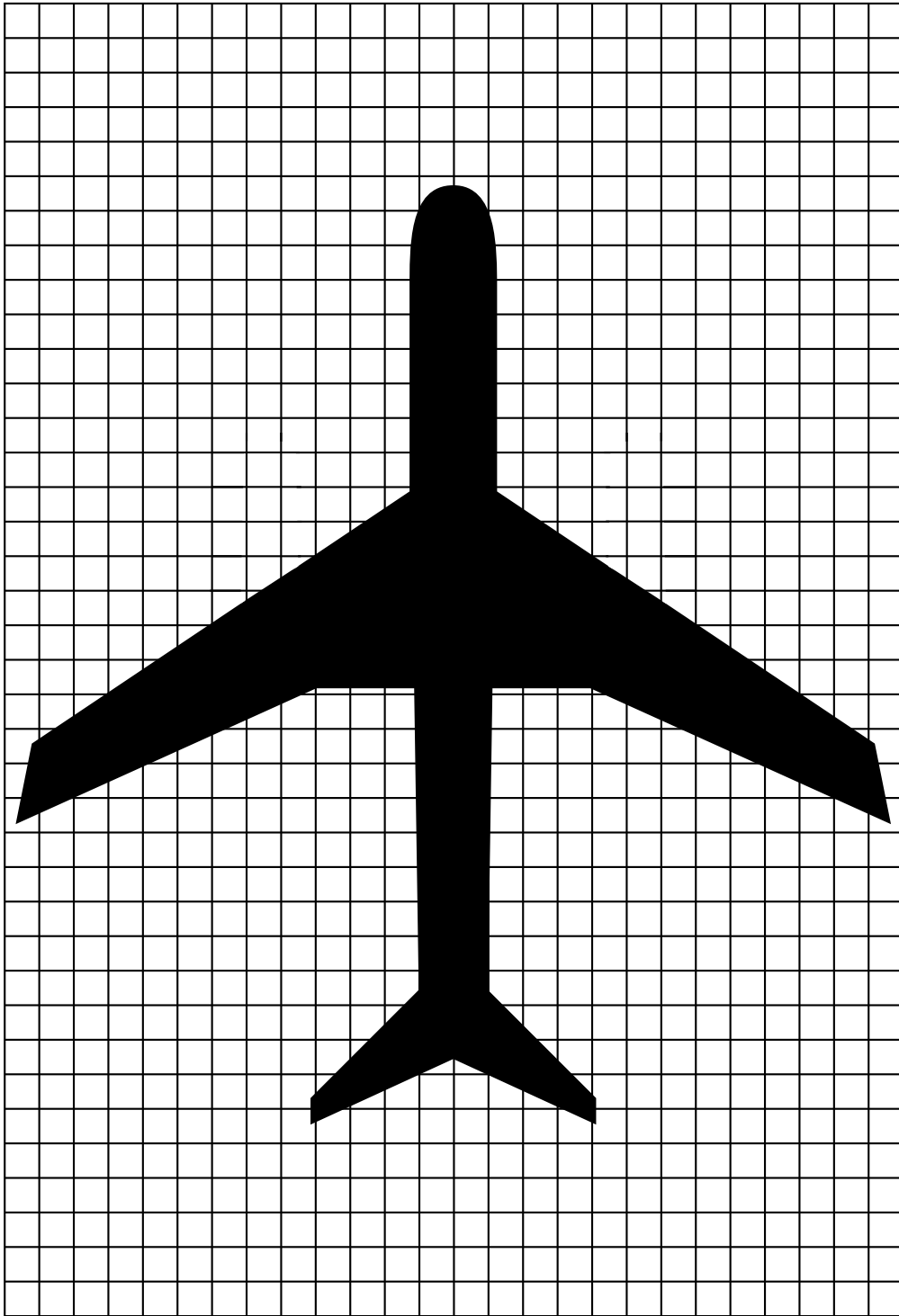
APPENDIX D-35

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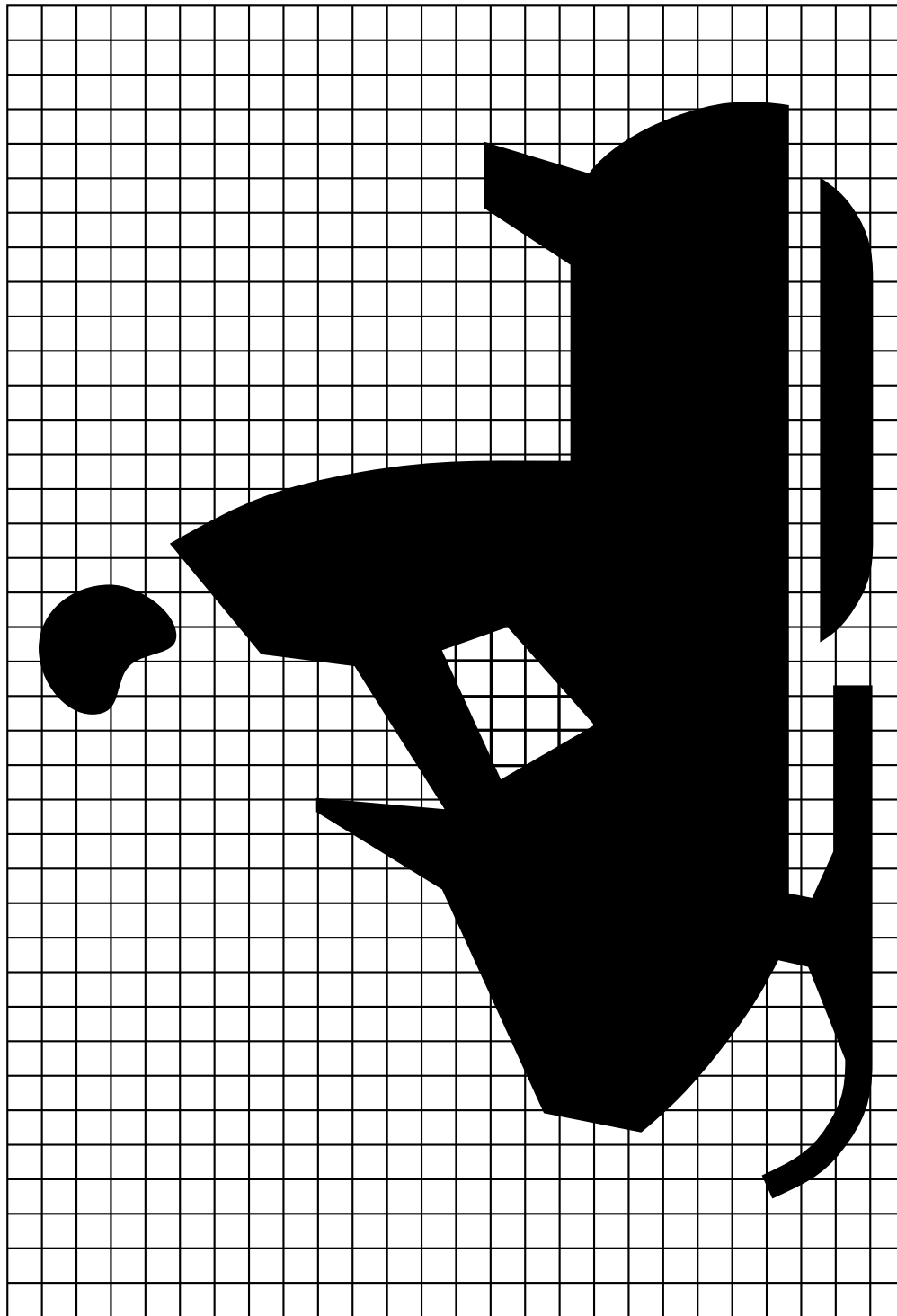
APPENDIX D-36

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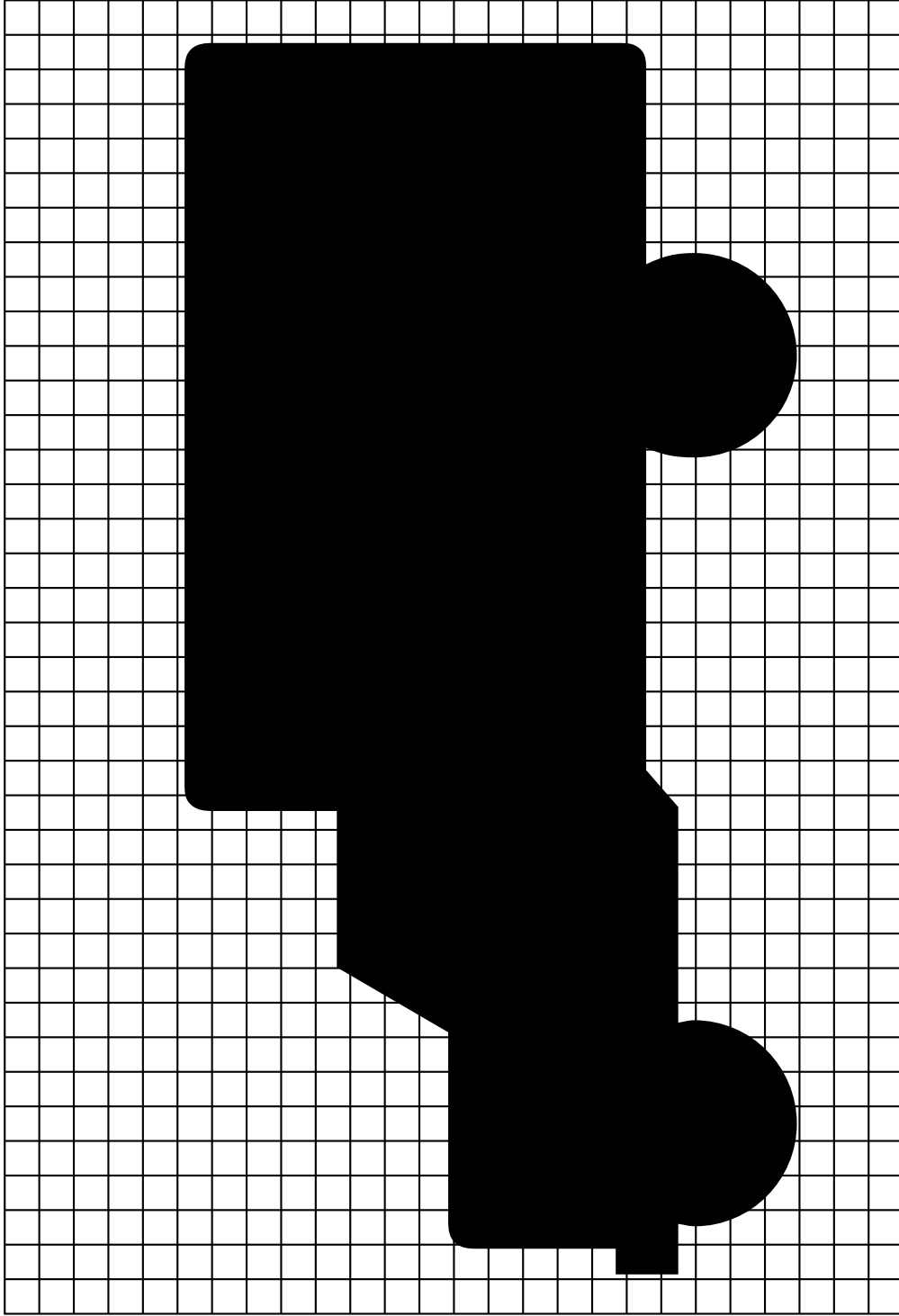
APPENDIX D-37

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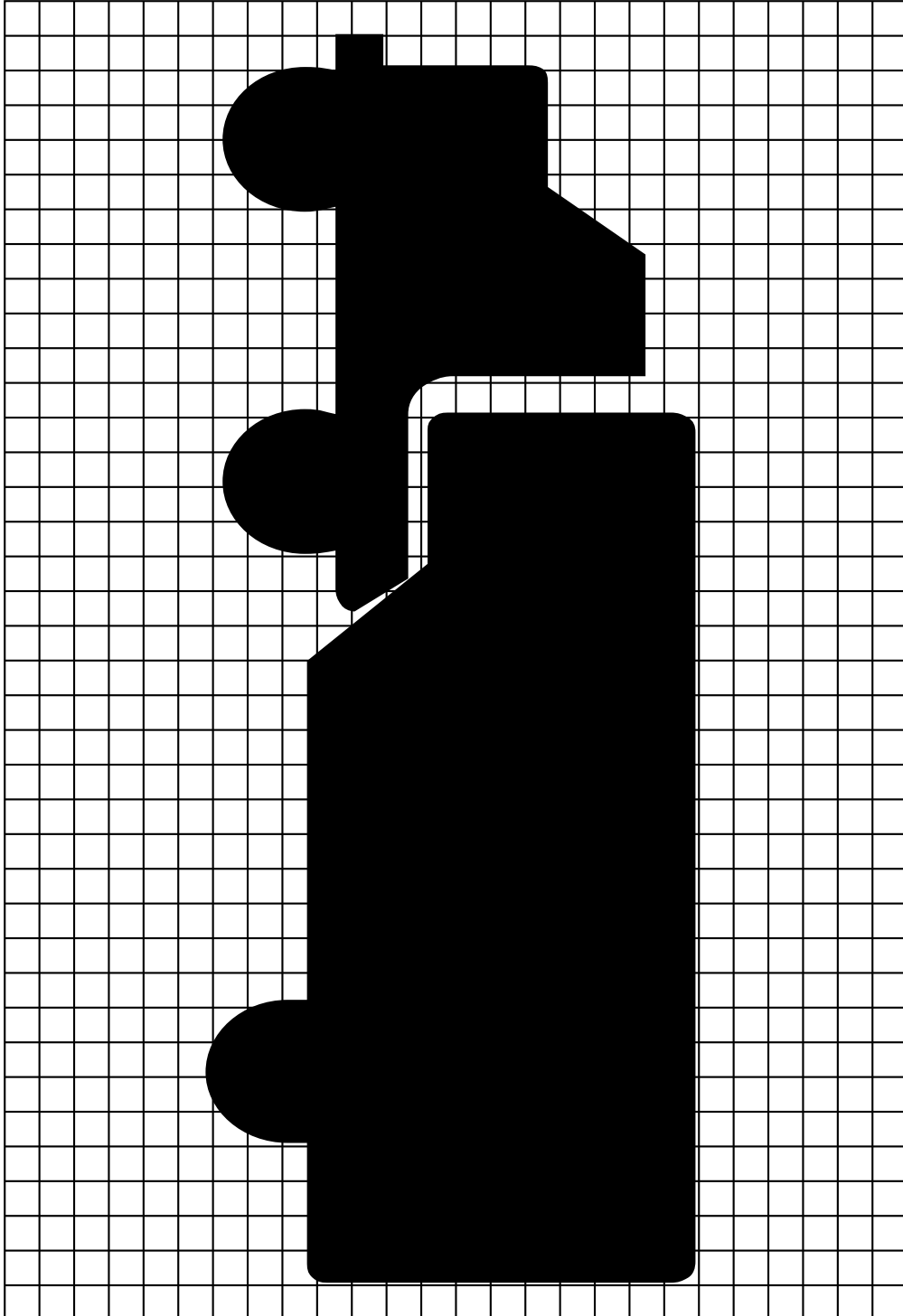
APPENDIX D-38

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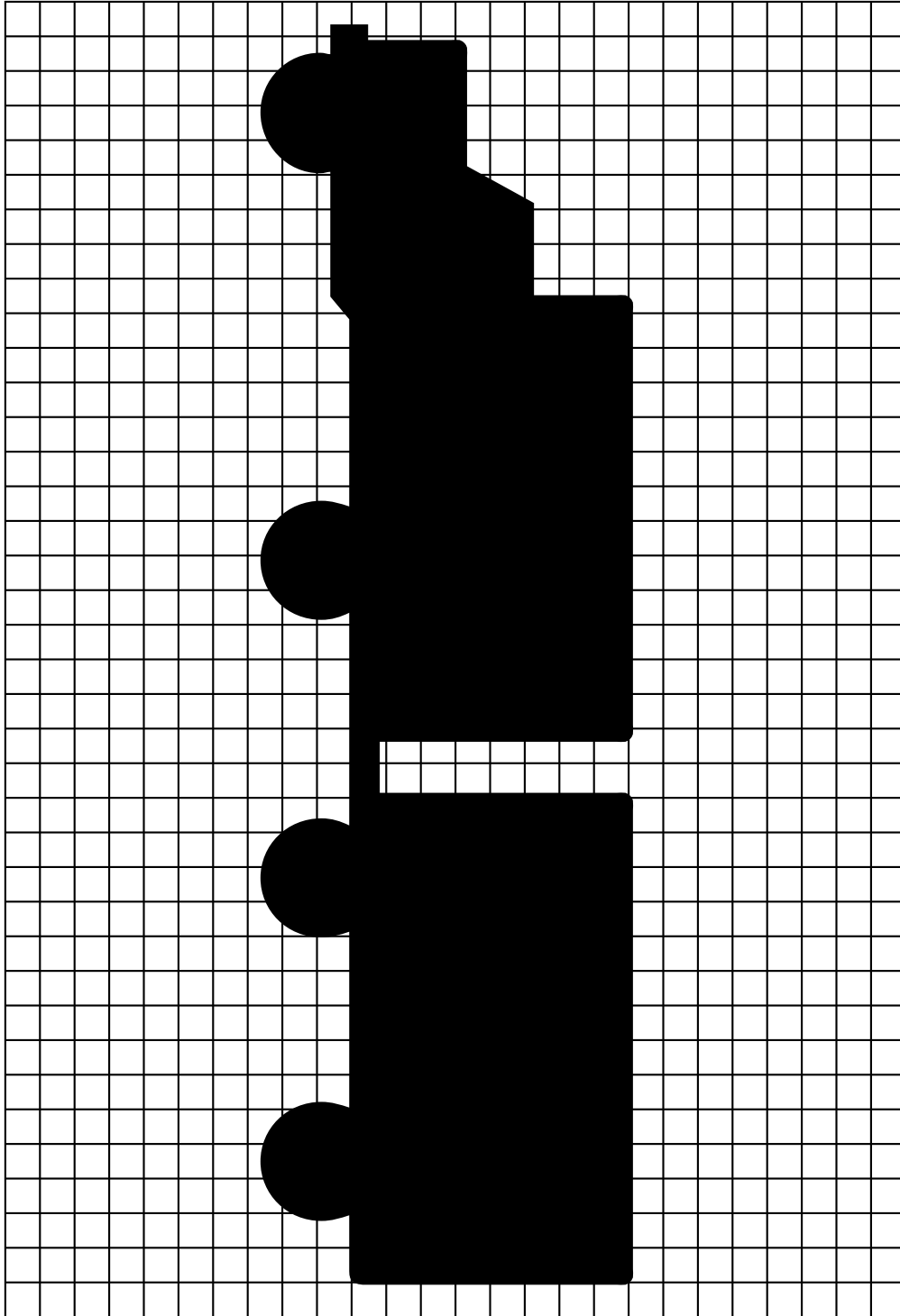
APPENDIX D-39

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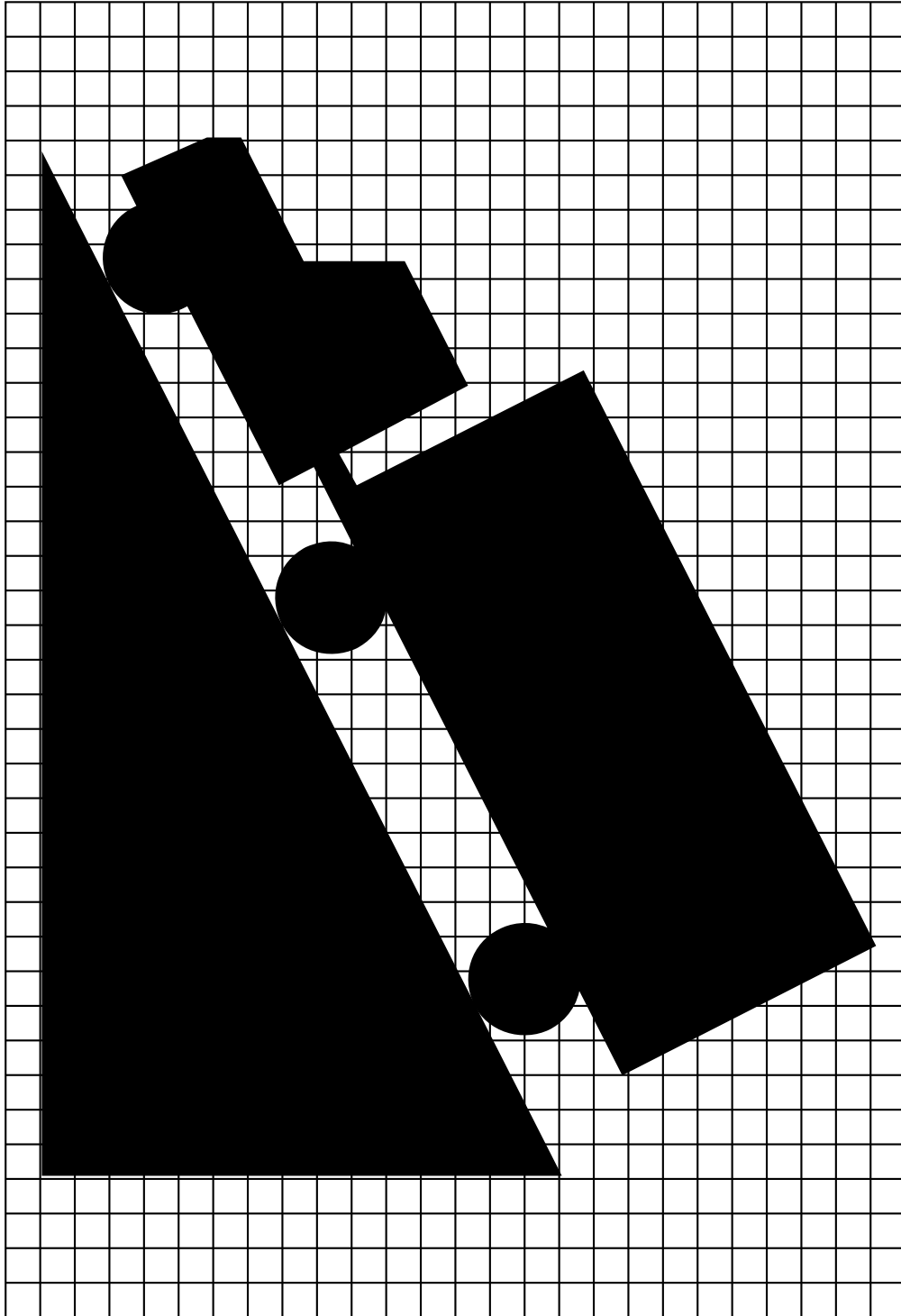
APPENDIX D-40

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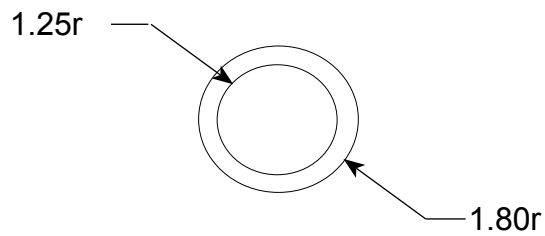
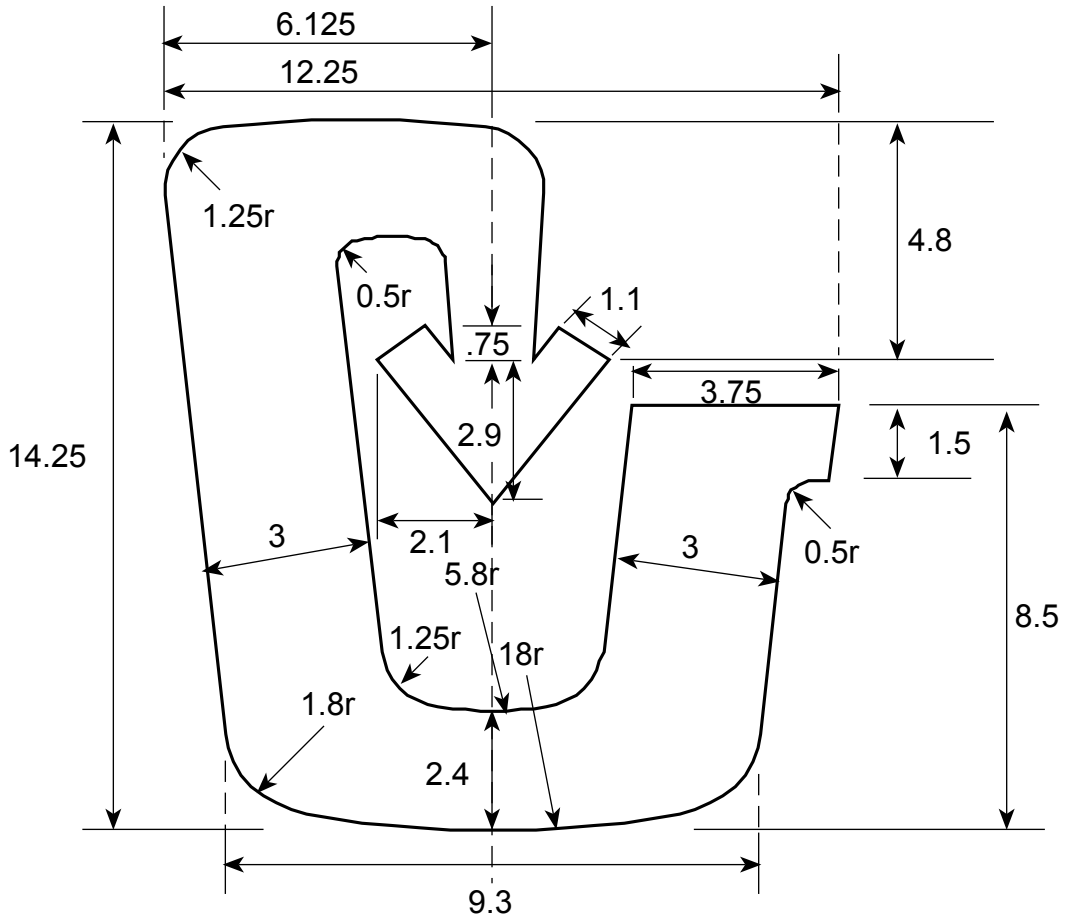
APPENDIX D-41

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APPENDIX D-42

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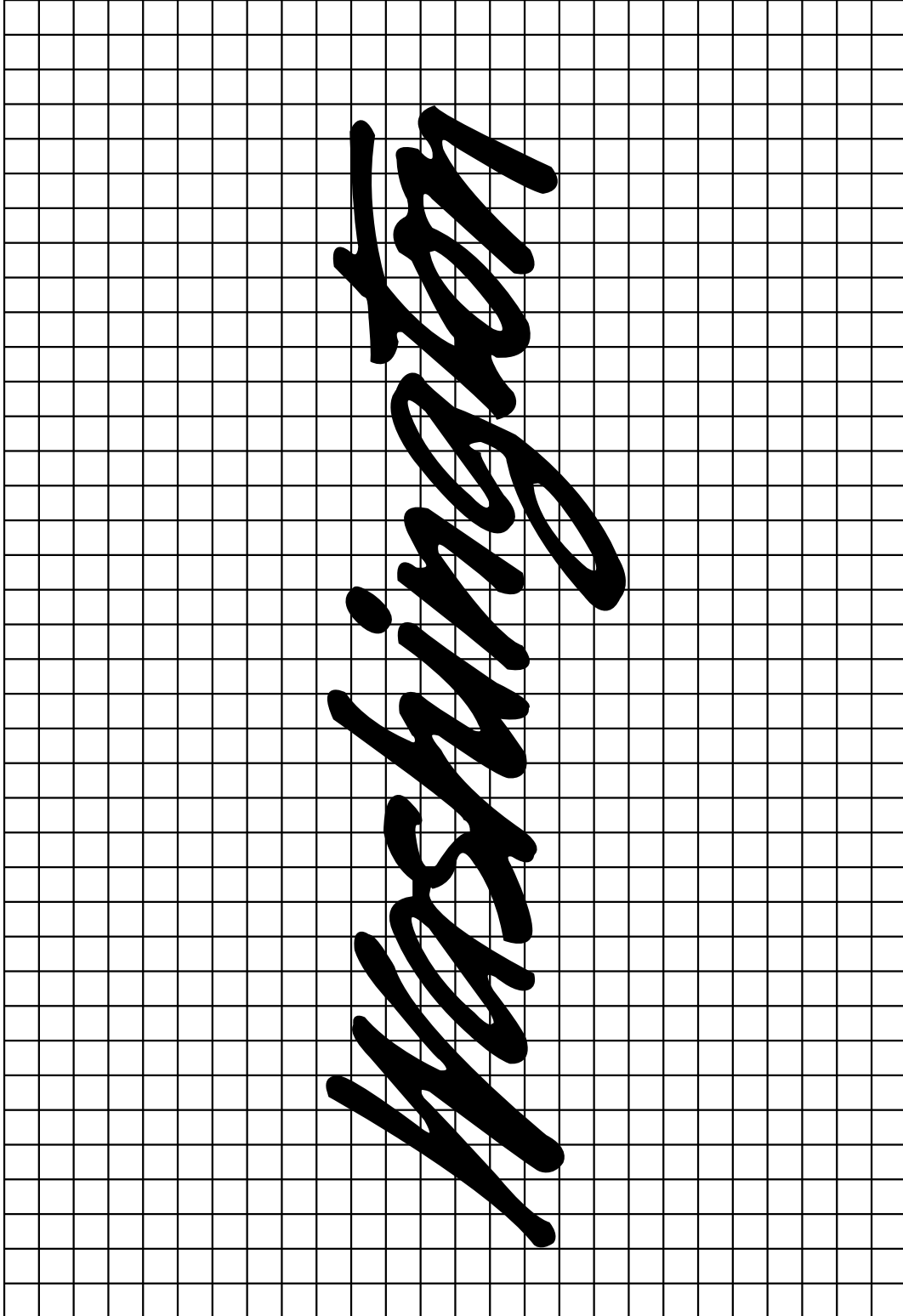


NOTE: MEASUREMENTS SHOWN IN DECIMAL INCHES

LITTER SYMBOL DETAILS
(REFLECTORIZED BLUE)

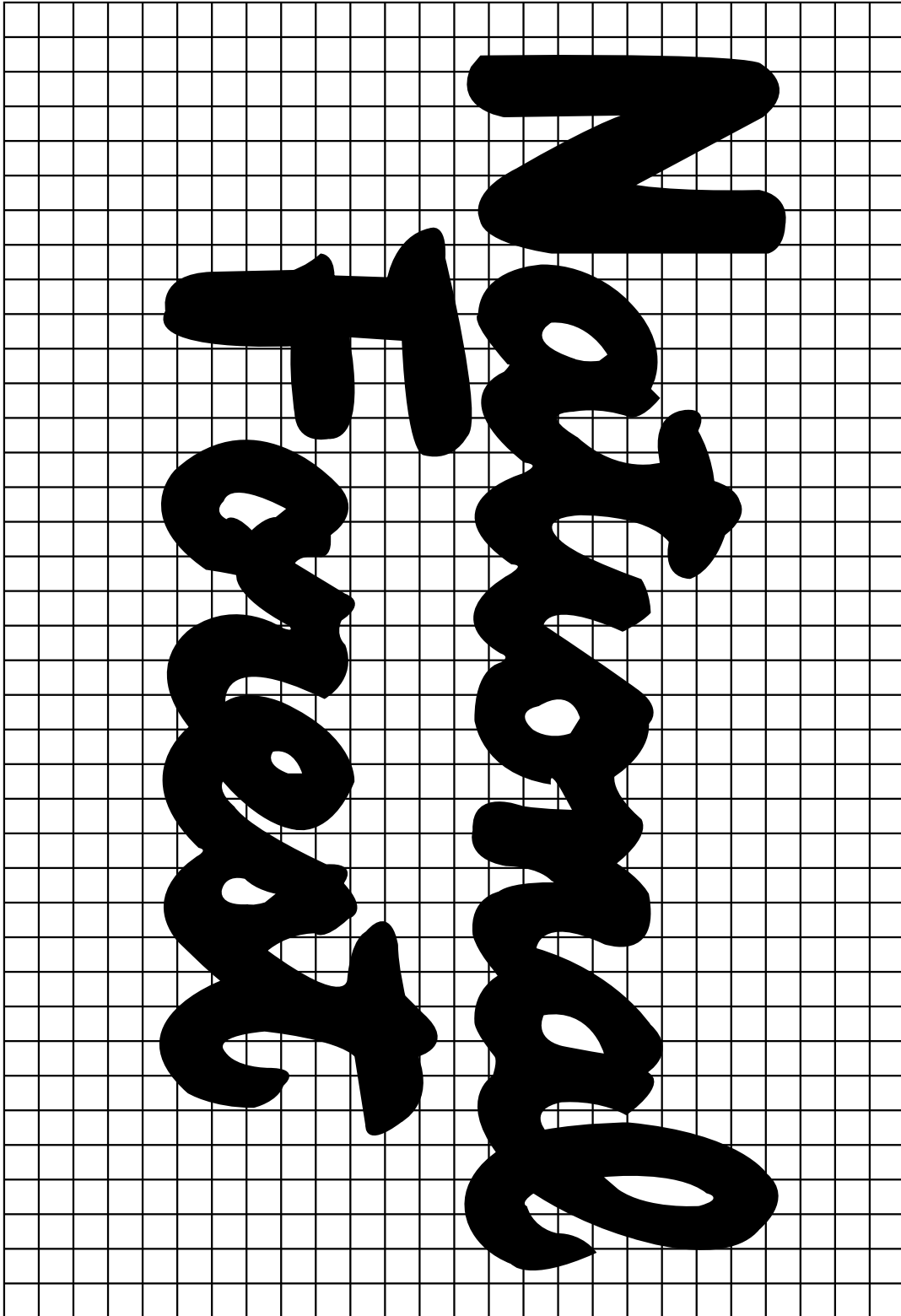
APPENDIX D-43

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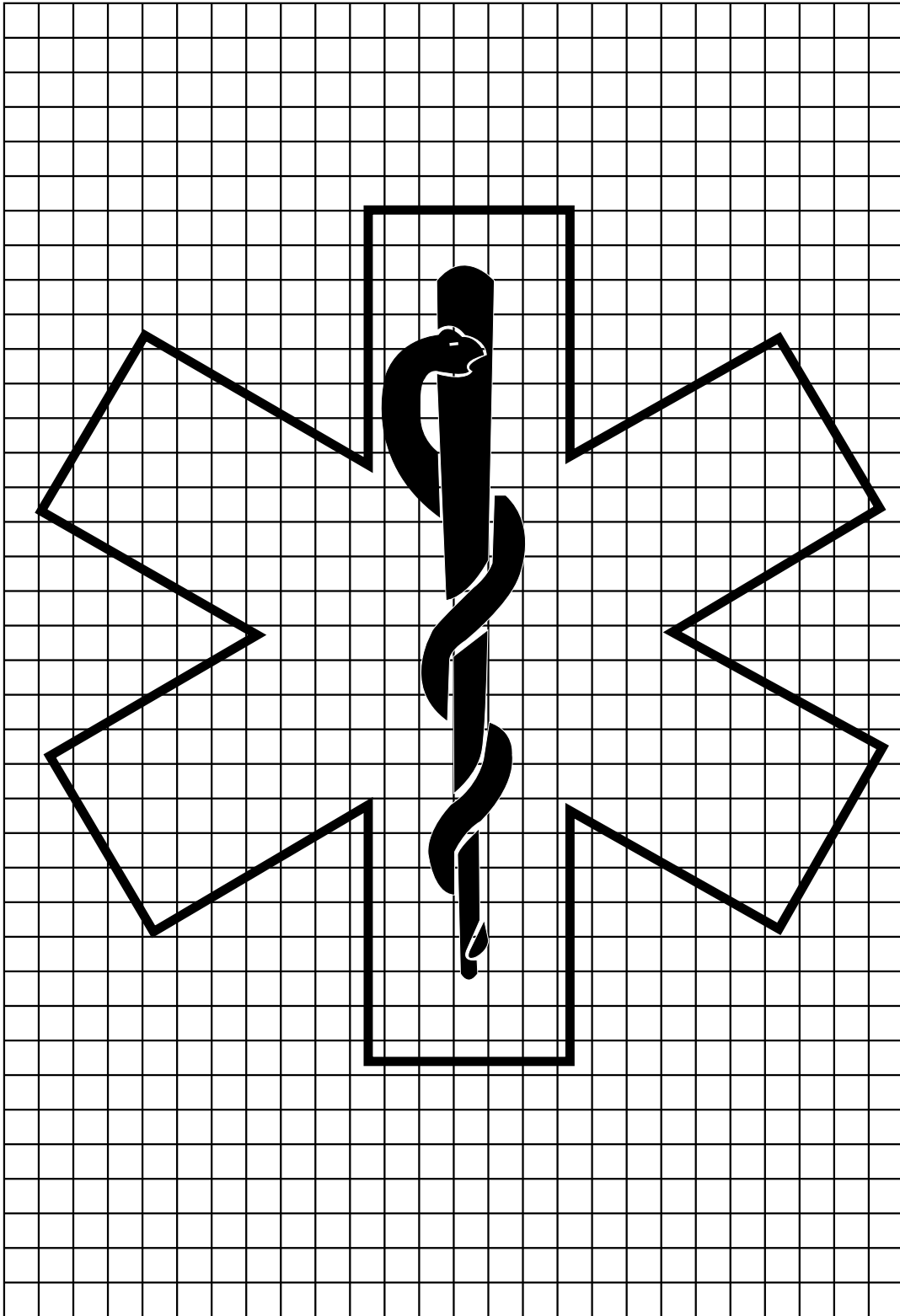
APPENDIX D-44

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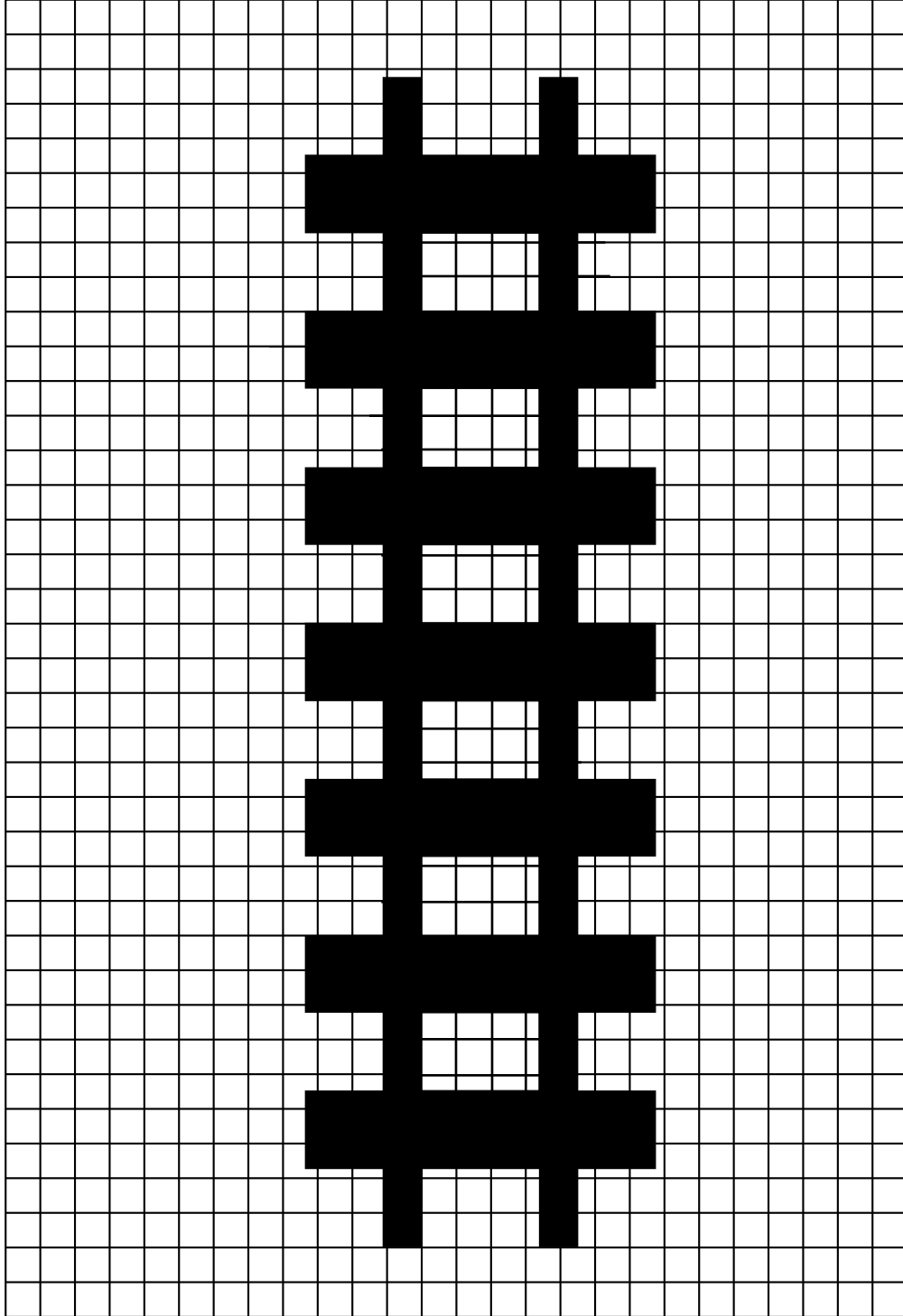
APPENDIX D-45

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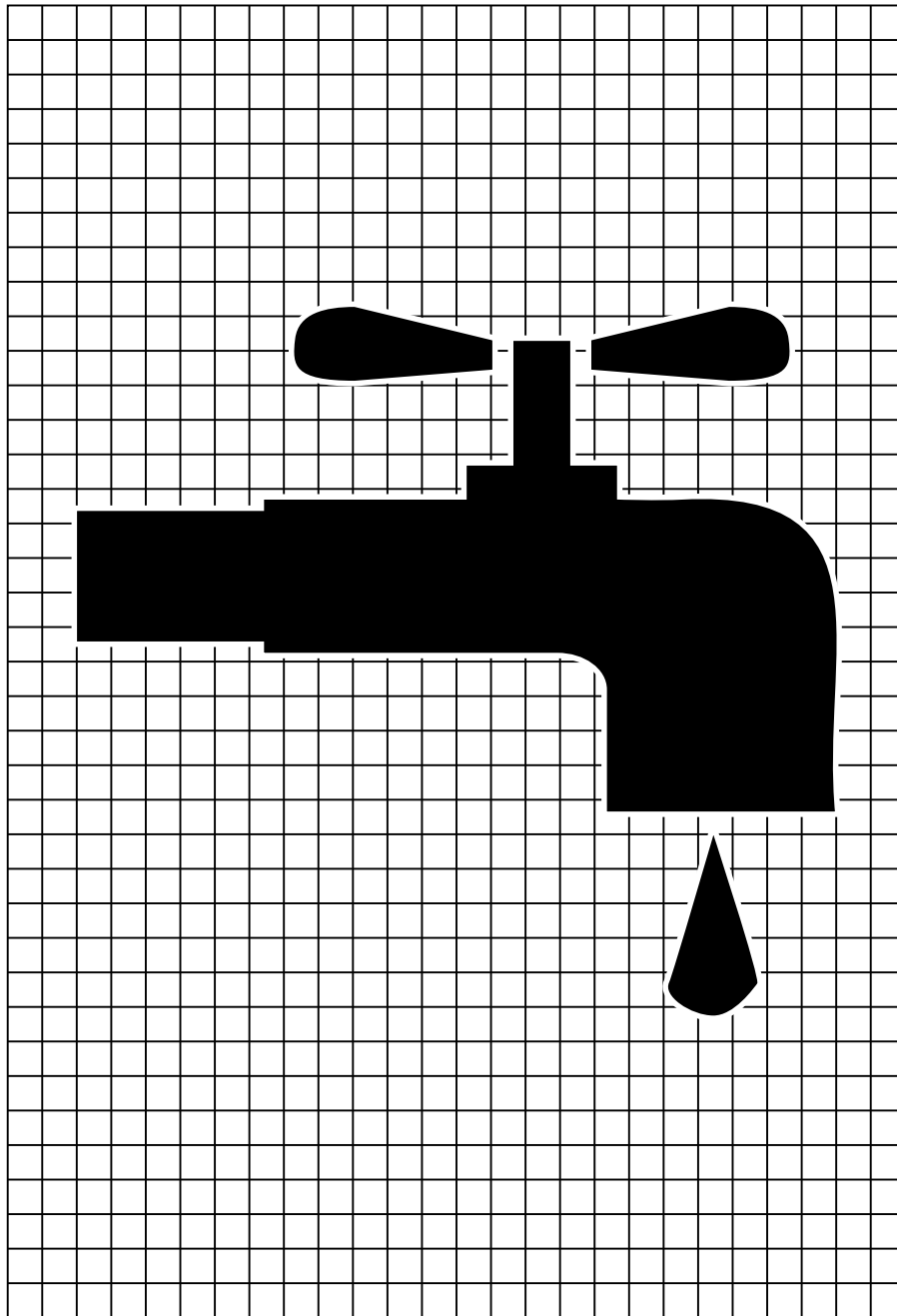
APPENDIX D-46

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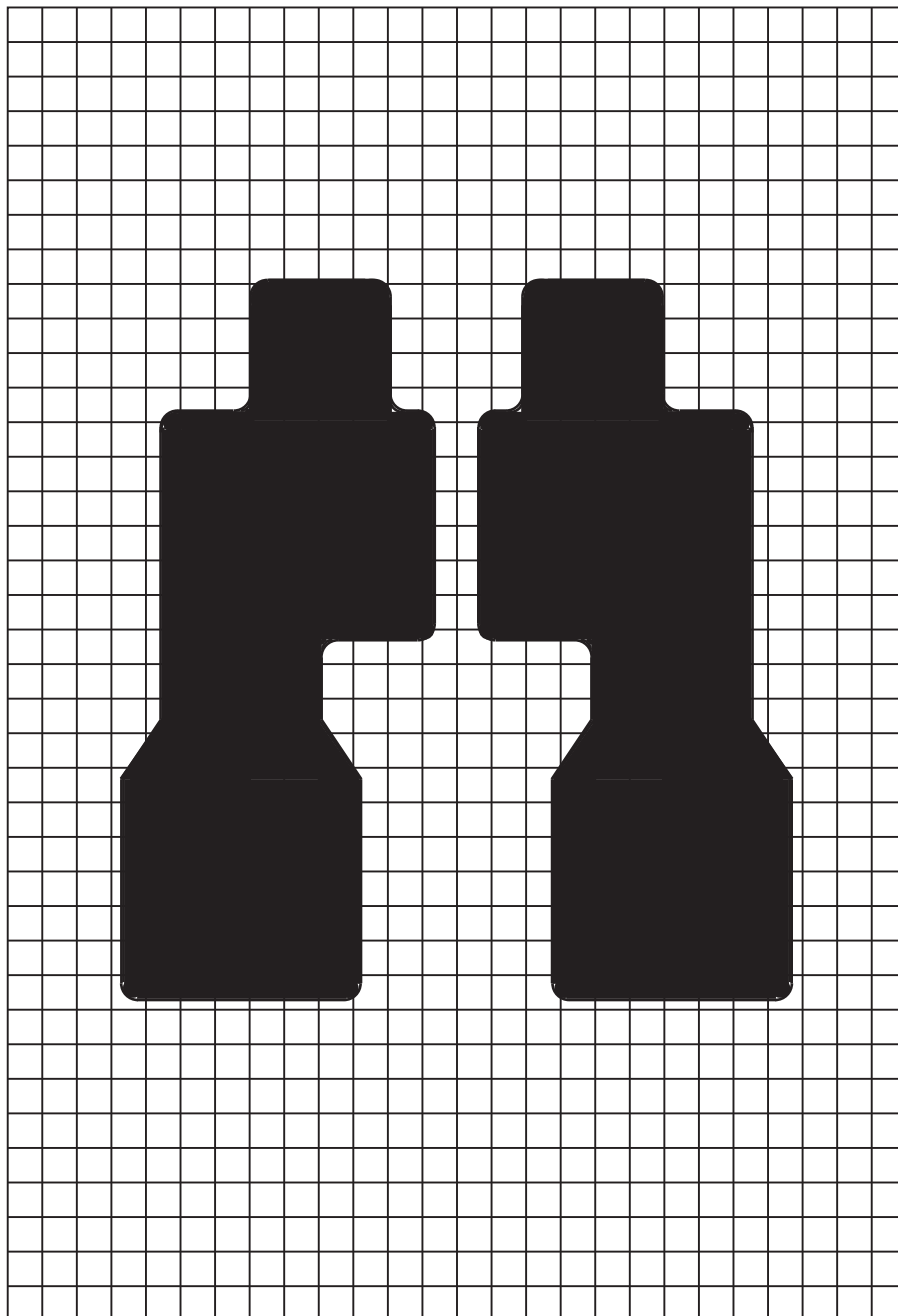
APPENDIX D-47

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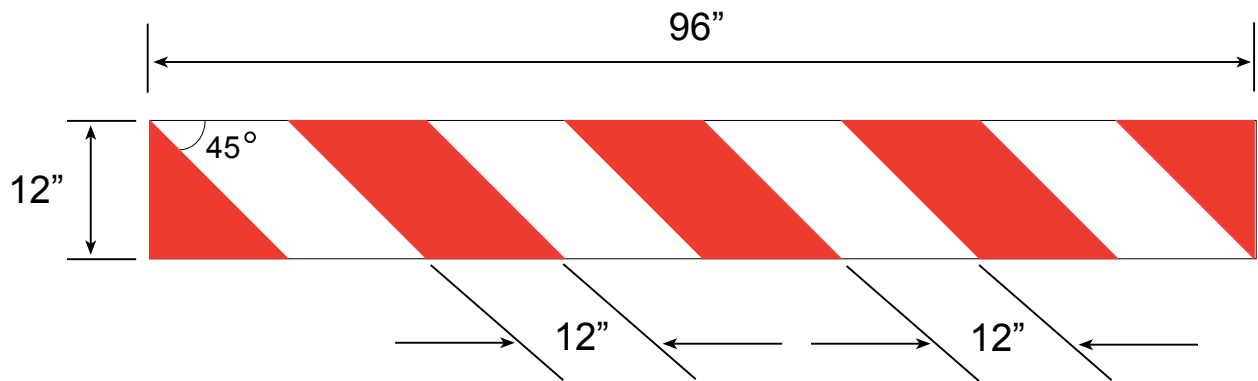
APPENDIX D-48

10/03



APPENDIX E-1

10/00



COLORS
WHITE (REFL)
RED (REFL)