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**STANDARD LETTERS
AND
NUMERALS OF DIFFERENT
HEIGHTS FOR USE
ON
HIGHWAY SIGNS**

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STANDARD LETTERS AND NUMERALS OF DIFFERENT HEIGHTS FOR USE ON HIGHWAY SIGNS

1. INTRODUCTION

1.1 Letters and numerals of different heights are required for use on various high way signs such as the kilometre stones, route marker signs, informatory signs, etc. To meet this need, charts for standard letters and numerals given herein had been prepared by the Specifications and Standards Committee which were approved by the Executive Committee at their meeting held on 24th September, 1968 and finally by the Council at their meeting held at Bombay on 2nd November, 1968, for general adoption on a national basis. The size range for which dimensions of letters and numerals are given is 5-30 cm.

2. SHAPES OF LETTERS/NUMERALS

2.1 The shapes of standard letters and numerals are shown in **Plates I and 2** respectively. The dimensions of different components of standard letters, for various sizes, are indicated in **Table 1**. Similarly the dimensions for standard numerals are given in **Table 2**.

2.2 All characters having an arc at top or bottom are extended slightly above or below the line of the other letters. This is in accord with the accepted practice for rounded letters and numerals.

TABLE
Dimensions for

<i>Height of letters in centimetres</i>	<i>Dimensions in</i>											
5	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	3	20	42	34	14	39	34	29	22	17	1	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	16	38	10	6	11	44	39	32	1	42	18	
8	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	13	31	67	55	23	62	54	46	35	27	2	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	26	60	16	10	18	70	63	51	1	68	29	
10	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	16	39	84	69	28	77	67	58	44	34	2	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	32	75	20	13	22	88	79	64	2	84	36	
13	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	20	51	109	89	37	101	87	75	57	44	3	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	42	98	26	16	28	114	103	83	2	110	47	
15	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	23	59	125	103	42	116	101	87	66	50	4	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	48	113	30	19	33	131	118	96	2	127	54	
20	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	31	78	167	138	56	155	134	116	88	67	5	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	64	150	41	25	44	175	158	128	3	169	72	
25	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	39	98	209	172	70	193	168	145	109	84	6	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	80	188	51	31	55	219	197	160	4	211	90	
30	a	a ₁	b	b ₁	c	c ₁	d	d ₁	e	e ₁	f	
	47	117	251	206	84	232	202	173	131	101	7	
	m	m ₁	n	n ₁	o	o ₁	p	p ₁	q	q ₁	r	
	96	225	61	38	66	263	297	192	5	253	108	

1

Standard Letters

millimetres

f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
7	26	4	13	2	14	9	8	15	2	16	16	2
r₁	s	s₁	t	u	v	w	x	y	z			
7	35	5	14	30	50	7	9	31	17			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
11	42	6	20	4	22	14	13	24	3	25	26	3
r₁	s	s₁	t	u	v	w	x	y	z			
11	56	8	23	49	80	12	14	50	28			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
14	52	8	25	5	27	17	16	30	3	31	33	4
r₁	s	s₁	t	u	v	w	x	y	z			
13	70	9	29	61	100	15	18	63	34			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
18	68	10	33	6	36	22	21	40	4	41	43	5
r₁	s	s₁	t	u	v	w	x	y	z			
17	91	12	38	79	130	19	23	81	45			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
21	79	12	38	7	41	26	25	46	5	47	49	6
r₁	s	s₁	t	u	v	w	x	y	z			
20	105	14	43	91	150	22	27	94	52			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
28	.05	16	50	9	55	34	33	61	6	63	66	8
r₁	s	s₁	t	u	v	w	x	y	z			
27	141	19	58	122	200	30	36	125	69			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
35	131	20	63	12	68	43	41	76	8	78	82	10
r₁	s	s₁	t	u	v	w	x	y	z			
33	176	23	72	152	250	37	45	156	86			
f₁	g	g₁	h	h₁	i	i₁	j	j₁	k	k₁	l	l₁
42	157	23	75	14	82	52	49	91	9	94	98	12
r₁	s	s₁	t	u	v	w	x	y	z			
40	211	28	87	183	300	45	54	188	103			

TABLE
Dimensions for

<i>Height of numerals in centimetres</i>	<i>Dimensions in</i>							
5	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	3	34	1	2	45	5	18	
	k	k ₁	1	m	n	o	p	q
	16	13	14	1	10	15	17	
8	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	4	54	2	3	71	8	29	
	k	k ₁	1	m	n	o	p	q
	26	21	23	1	16	24	27	
10	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	5	67	2	4	89	9	36	
	k	k ₁	1	m	n	o	p	q
	32	27	29	2	20	30	34	
13	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	7	87	3	5	116	12	47	
	k	k ₁	1	m	n	o	p	q
	42	35	38	2	26	40	44	
15	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	8	101	4	6	134	14	54	
	k	k ₁	1	m	n	o	p	q
	48	40	43	2	30	46	50	
20	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	11	134	5	8	178	19	72	
	k	k ₁	1	m	n	o	p	q
	64	53	58	3	41	61	67	
25	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	14	168	6	10	223	23	90	
	k	k ₁		n	o	p	q	
	80	66	72	4	51	76	84	
30	a	a ₁	b	b ₁	c	c ₁	d	d ₁
	16	202	7	12	267	28	108	
	k	k ₁	1	m	n	o	p	q
	96	80	87	5	61	91	101	

Standard Numerals

millimetres

e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
6	75	7	15	4	13	3	6	16	35	20	50
r	s	t	u	v	w	x	y	z			
17	7	13	28	32	36	25	26	2			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
10	120	11	24	7	21	5	9	26	56	31	80
r	s	t	u	v	w	x	y	z			
28	12	20	45	51	58	41	41	4			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
13	150	14	30	9	26	6	12	33	70	39	100
r	s	t	u	v	w	x	y	z			
34	15	25	56	64	72	51	52	5			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
16	195	18	39	11	34	8	15	43	91	51	130
r	s	t	u	v	w	x	y	z			
45	19	33	73	83	93	66	67	6			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
19	225	21	45	13	39	9	18	49	105	59	150
r	s	t	u	v	w	x	y	z			
52	22	38	84	96	108	76	77	7			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
25	300	28	59	17	52	13	23	66	141	78	200
r	s	t	u	v	w	x	y	z			
69	30	50	113	128	144	102	103	9			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
31	375	35	74	21	64	16	29	82	176	98	250
r	s	t	u	v	w	x	y	z			
86	37	63	141	160	180	127	129	12			
e	e₁	f	f₁	g	g₁	h	h₁	i	i₁	j	j₁
38	450	42	89	26	77	19	35	98	211	117	300
r	s	t	u	v	w	x	y	z			
103	45	75	169	192	216	152	155	14			

Table 3 Spacing between Standard Letters or Numerals of Different Heights**TABLE 3 (a)**
Letter to Letter Code Number

Preceding Letter	Following Letter		
	B,D,E,F,H I,K,L,M, N,P,R,U	C,G,O,Q, S,X,Z	A,J,T, V,W,Y
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 3 (b)
Numeral to Numeral Code Number

Preceding Numeral	Following Numeral		
	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 3 (c)
Spacing between Letters and Numerals in mm

Code Number	Letter or Numeral Height in cm							
	5	8	10	13	15	20	25	30
1	12	19	24	31	35	47	59	71
2	9	15	19	24	28	38	47	56
3	6	10	13	16	19	25	31	38
4	3	5	6	8	9	13	16	19

Note: To determine the proper spacing between letters or numerals, obtain the code number from **Tables 3 (a) and 3 (b)** and enter **Table 3 (c)** for that code number to desired letter or numeral height. Spacing is measured horizontally from the extreme right edge of the preceding letter/numeral to the extreme left edge of the following letter/numeral.

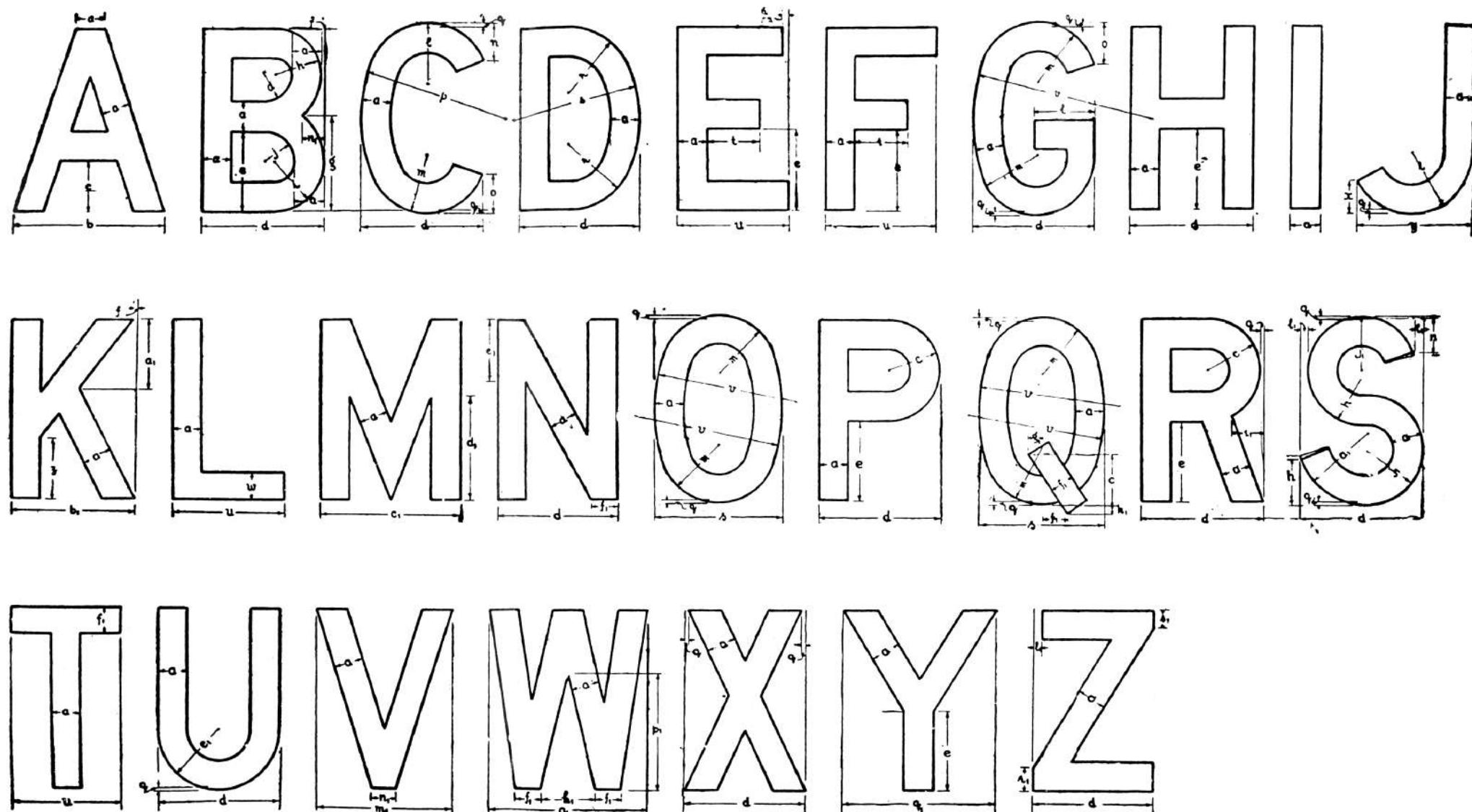
3. SPACING BETWEEN ADJACENT LETTERS/NUMERALS

Table 3 gives the recommended spacings between adjacent letters/numerals of different sizes. The space between any combination of letters/numerals may be obtained through a two-step process described in the footnote to the **Table**. This space is the distance measured horizontally between the extreme right edge of the preceding letter/numeral and the extreme left edge of the following letter/numeral. No part of any letter/numeral may extend into this space.

4. USE OF STANDARD LETTERS/NUMERALS

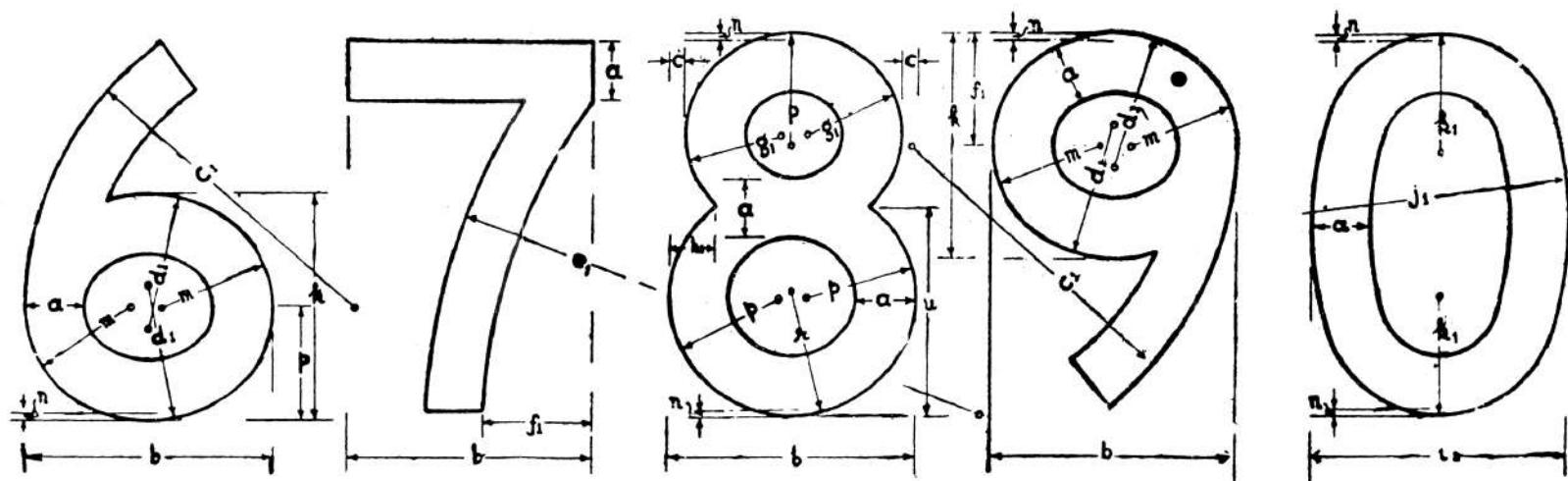
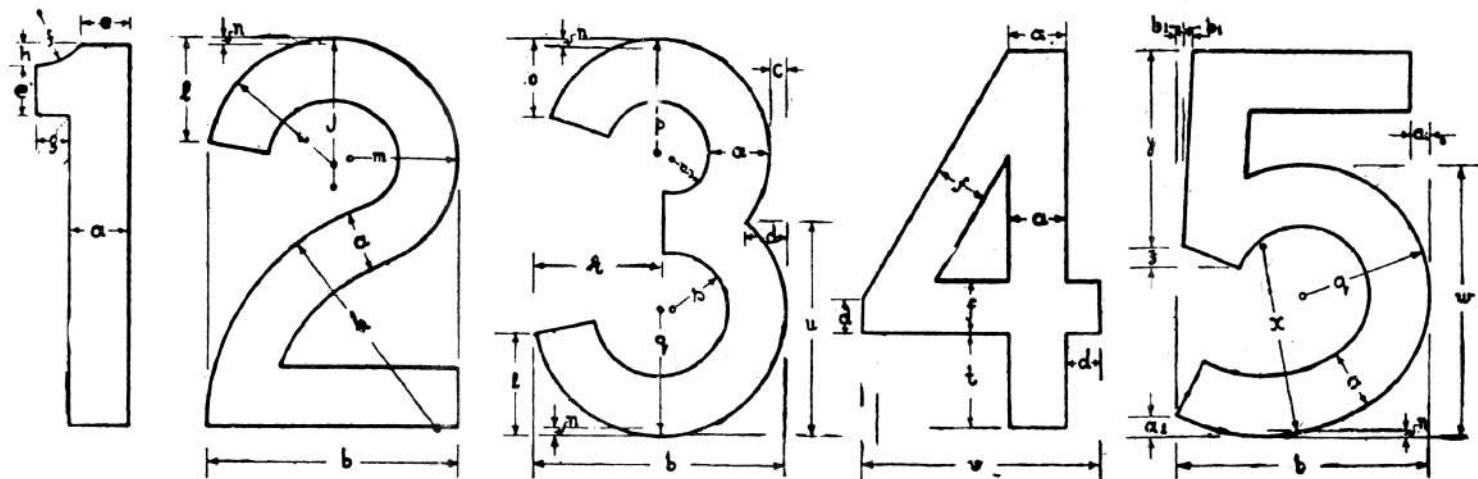
4.1 Most Public Works Departments and sign manufacturers should find it advantageous to make up a set of templates of light metal or other suitable material for letters/numerals of different sizes to simplify the laying out of signs.

4.2 In some cases design of a particular letter or numeral in a given size may be found incompatible with the manufacturing process involved in the production of signs. When that happens, minor modifications to shape/spacing may be made within reasonable limits.

PLATE 1

*Note : For dimensions of letters of different heights, see Table 1.
For spacings between Letters, see Table 3.*

STANDARD LETTERS

PLATE 2**STANDARD NUMERALS**

*Note : For dimensions of Numerals of different heights, see Table 2.
For spacings between Numerals, see Table 3.*