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1977

METRIC EDITION

Standard Alphabets

For Highway Signs and Pavement Markings

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Printed 1977 by
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Office of Traffic Operations

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Standard Alphabets

For Highway Signs and Pavement Markings

A Reference Guide

specified in

THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

Printed 1977 by
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Office of Traffic Operations

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SECTION 1

STANDARD UPPER CASE ALPHABETS

for Highway Signs

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STANDARD

UPPER CASE

ALPHABET

for Highway Signs

The Standard Metric UPPERCASE Alphabet series for highway signs were prepared by the Federal Highway Administration to be used in conjunction with the metric signs shown in the 1977 Manual on Uniform Traffic Control Devices.

Like the previous edition this 1977 edition has been printed showing the characters in exact detail for 50 millimetre letter height. The characters may be enlarged to the desired letter height with any conventional enlarging process and the letters will remain in the proper proportion. A 5 millimetre grid has been superimposed on the letters to facilitate the enlarging process. For example, to obtain 150 millimetre letter height, enlarge the grid squares to 15 millimetres.

The metric characters have the same widths, spacings, and stroke widths as the characters shown in the 1966 edition but the heights have been reduced by about 1.6 percent.

Series E(M) has been added to be used as initial capitals and numerals with the lowercase alphabet series. These have the same dimensions as the Series E uppercase except that the stroke width is widened to approximately one-fifth of the letter heights.

A set of spacing tables is provided for each alphabet series. These tables give the letter and numeral width by direct reading for several standard letter heights. In addition, the recommended dimension for space between any combination of letters or numerals may be obtained through a two-step process described in the table. This space is the distance measured horizontally between the extreme right edge of the preceding letter and the extreme left edge of the following letter. No part of these letters may extend into this space.

The width of a word or name may be readily determined by adding the sum of the letter widths to the sum of the spaces between letters.

All characters having an arc at the top or bottom are extended slightly above or below the grid lines. This is in accord with accepted practice for rounded letters.

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A B C

D E F

G H I

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J K L

M N O

P Q R

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S T U

V W X

Y Z 1

Digitized by Google

2 3 4

5 6 7

8 9 0

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A B C

D E F

G H I

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J K L

M N O

P Q R

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S T U

V W X

Y Z 1

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SERIES C

2 3 4

5 6 7

8 9 0

Digitized by Google

A B C

D E F

G H I

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J K L

M N O

P Q R

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S T U

V W X

Y Z 1

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SERIES D

2 3 4

5 6 7

8 9 0

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ABC

DEF

GHI

Digitized by Google

J K L

M N O

P Q R

Digitized by Google

S T U

V W X

Y Z 1

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SERIES E

2 3 4

5 6 7

8 9 0

Digitized by Google

ABC

DEF

GHI

Digitized by Google

J K L
M N O
P Q R

Digitized by Google

S T U

V W X

Y Z 1

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2 3 4

5 6 7

8 9 0

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Digitized by Google

JKL
MNO
PQR

Digitized by Google

S T U

V W X

Y Z 1

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2 3 4

5 6 7

8 9 0

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LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 IV

WIDTH of LETTER

in millimetres

	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	48	58	69	80	92	104	115	138	184
P	32	43	54	64	75	66	96	107	128	172
Q	34	46	58	69	80	92	104	115	138	164
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	98	107	128	172

TABLE II

NUMERAL TO NUMERAL CODE NUMBER

Following numeral

Preceding 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 V

WIDTH OF NUMERAL

in millimetres

	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	88	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 millimetres
75	10
100	13
125	16
150	19
175	22
200	25
225	28
250	32
300	38
400	50

TABLE VI

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

CODE NO.	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

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SERIES C

LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 II

NUMERAL TO NUMERAL CODE NUMBER

Following numeral

Preceding 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 III

WIDTH of STROKE

Letter or Numeral Height	Stroke Width in millimetres
75	10
100	14
125	18
150	21
175	24
200	28
225	32
250	36
300	43
400	57

TABLE IV

WIDTH of LETTER

In millimetres

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 V

WIDTH of NUMERAL

In millimetres

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 VI

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

CODE NO.	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

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LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 II

NUMERAL TO NUMERAL CODE NUMBER

Following numeral

Preceding 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 III

WIDTH of STROKE

Letter or Numeral Height	Stroke Width in millimetres
75	12
100	16
125	20
150	24
175	28
200	32
225	36
250	40
300	48
400	64

TABLE IV

WIDTH of LETTER

in millimetres

	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 V

WIDTH of NUMERAL

in millimetres

	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 VI

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

CODE NO.	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

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SERIES E

LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 II

NUMERAL TO NUMERAL CODE NUMBER

Following numeral

Preceding 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 III

WIDTH of STROKE

Letter or Numeral Height	Stroke Width in millimetres
75	13
100	18
125	22
150	26
175	30
200	35
225	40
250	44
300	52
400	70

TABLE IV

WIDTH of LETTER

in millimetres

	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	234	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 V

WIDTH OF NUMERAL

in millimetres

	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 VI

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

CODE NO.	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

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LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 II

NUMERAL TO NUMERAL CODE NUMBER

Following numeral

Preceding 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 III

WIDTH of STROKE

Letter or Numeral Height	Stroke Width in millimetres
200	40
265	53
330	66
400	80
500	100

TABLE IV

WIDTH of LETTER

in millimetres

	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 V

WIDTH of NUMERAL

in millimetres

	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 VI

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

CODE NO.	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

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LETTER & NUMERAL WIDTHS and SPACE between letters or numerals

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

Following Letter

Preceding 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 IV

WIDTH of LETTER

In millimetres

	Letter Height 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

Following numeral

Preceding 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 V

WIDTH of NUMERAL

In millimetres

	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 millimetres
75	14
100	19
125	24
150	28
175	33
200	38
225	43
250	48
300	57
400	76

TABLE VI

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

CODE NO.	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

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SECTION 2

STANDARD lower case ALPHABET

for Highway Signs

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STANDARD

lower case

ALPHABET

for Highway Signs

The Standard Metric LOWERCASE Alphabet for Highway Signs has been prepared by the Federal Highway Administration to be used in conjunction with the metric signs shown in the 1977 Manual on Uniform Traffic Control Devices. The alphabet is the approved standard for directional signs on the National System of Interstate and Defense Highways.

The letters are printed in exact detail for 50 millimetre letter height, having a nominal loop height of 37½ millimetres. These letters may be enlarged to the desired letter height with any conventional enlarging process and the letters will remain in the proper proportion. A 5 millimetre grid has been superimposed on the letters to facilitate the enlarging process. For example, to obtain 150 millimetre letters, enlarge the grid squares to 15 millimetres.

The metric characters have the same widths, spacings, and stroke widths as the characters shown in the 1966 edition but the heights have been reduced by about 1.6 percent.

The Manual on Uniform Traffic Control Devices for Streets and Highways specifies that all names of places and highways on guide signs shall be in lowercase letters with initial capitals. The initial capital letters shall be approximately one-third higher than the nominal lowercase loop height. Also, the Manual on Uniform Traffic Control Devices for Streets and Highways states that lowercase letters are an equally acceptable alternate to capital letters for guide signs on other highways.

It is recommended that the initial capitals and numerals used with these lowercase letters be Series E(M).

A spacing table is provided at the end of the lowercase alphabet series. The recommended dimension for space between any combination of letters may be obtained directly for most standard letter heights. This space is the distance measured horizontally between the extreme right edge of the preceding letter and the extreme left edge of the following letter. No part of these letters may be extended into this space.

All letters having an arc at the top or bottom are extended slightly above or below the grid lines. This is in accord with accepted practice for rounded letters.

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a b c

d e f

g h i

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lower case

j k l

m n o

p q r

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s t u

v w x

y z

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LOWER CASE LETTERS

WIDTH of LETTER

Letter height	150	200	250	300	375
	in millimetres				
a	129	171	213	257	321
b	130	171	216	260	324
c	129	171	213	257	321
d	130	171	216	260	324
e	130	171	216	260	324
f	83	111	140	165	206
g	130	171	216	260	324
h	130	171	216	260	324
i	38	51	64	76	95
j	72	95	117	143	178
k	129	171	213	257	321
l	38	51	64	76	95
m	215	286	359	429	536
n	130	171	216	260	324
o	134	178	222	267	333
p	130	171	216	260	324
q	130	171	216	260	324
r	99	133	165	197	248
s	129	171	216	257	321
t	102	136	168	203	254
u	130	171	216	260	324
v	151	203	254	302	378
w	200	270	333	400	502
x	157	210	264	314	394
y	164	219	273	327	410
z	134	178	219	267	333

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SPACING TABLE FOR LOWER CASE ALPHABET

To determine the proper space between letters, start on the horizontal line of the preceding letter and proceed to the desired following letter and letter height column, read the space dimension directly. This space is the distance measured horizontally between the extreme right edge of the preceding letter and the extreme left edge of the following letter. Capital letters are approximately 1/3 higher than the nominal loop height of the lower case letters.

PRECEDING CAPITAL AND LOWER CASE LETTERS	Following Lower Case Letters & Nominal Loop Heights																															
	a c d e g o q				b h i k l m n p r u				f w				j				s t				v y				x				z			
	200	250	300	375	200	250	300	375	200	250	300	375	200	250	300	375	200	250	300	375	200	250	300	375	200	250	300	375	200	250	300	375
A W X	63	80	95	121	72	89	108	133	59	73	89	111	40	51	60	76	51	64	76	95	43	54	64	80	51	64	76	95	65	82	98	124
B	76	95	114	143	97	121	146	181	72	89	108	133	51	64	76	95	70	89	105	130	59	73	89	111	59	73	89	111	79	98	118	146
C E G	72	89	108	133	89	111	133	165	65	82	98	124	47	57	70	89	63	80	95	121	63	80	95	121	68	86	102	127	74	92	111	140
D O Q R	70	89	105	130	91	114	137	171	68	86	102	127	45	57	67	82	63	80	95	121	63	80	95	121	68	86	102	127	72	89	108	133
F	34	41	51	64	68	86	102	127	43	54	64	80	34	41	51	64	38	48	57	70	38	48	57	70	40	51	60	76	51	64	76	95
H I M N	93	118	140	175	110	137	165	206	89	111	133	165	72	89	108	133	87	108	130	162	87	108	130	162	91	114	137	171	95	121	143	178
J U	91	114	137	171	97	121	146	181	87	108	130	162	70	89	105	130	81	102	121	152	81	102	121	152	85	105	127	159	93	118	140	175
K L	55	70	82	102	81	102	121	152	51	64	76	95	32	41	48	60	49	60	73	92	49	80	73	92	53	67	80	98	59	73	89	111
P	65	82	98	124	76	95	114	143	61	76	92	114	34	41	51	64	55	70	82	102	55	70	82	102	59	73	89	111	63	80	95	121
S	63	80	95	121	87	108	130	162	59	73	89	111	43	54	64	80	57	73	86	108	57	73	86	108	61	76	92	114	65	82	98	124
T	51	64	76	95	81	102	121	152	47	57	70	89	38	48	57	70	51	64	76	95	51	64	76	95	55	70	82	102	59	73	89	111
V	47	57	70	89	76	95	114	143	51	64	76	95	40	51	60	76	57	73	86	108	57	73	86	108	61	76	92	114	65	82	98	124
Y	34	41	51	64	68	86	102	127	43	54	64	80	29	38	44	57	32	41	48	60	32	41	48	60	38	48	57	70	55	70	82	102
Z	85	105	127	159	101	127	152	190	83	102	124	156	59	73	89	111	81	102	121	152	81	102	121	152	85	105	127	159	89	111	133	165
a d g h i j l m n q u	83	102	124	156	104	130	156	194	79	98	118	146	59	73	89	111	76	95	114	143	76	95	114	143	81	102	121	152	85	105	127	159
b f k o p s	59	73	89	111	83	102	124	156	55	70	82	102	36	44	54	67	53	67	80	98	53	67	80	98	57	73	86	108	61	76	92	114
c e	63	80	95	121	85	105	127	159	59	73	89	111	40	51	60	76	57	73	86	108	57	73	86	108	61	76	92	114	65	82	98	124
r	40	51	60	76	63	80	95	121	38	48	57	70	17	22	25	32	34	41	51	64	34	41	51	64	38	48	57	70	43	54	64	80
t z	61	76	92	114	85	105	127	159	57	73	86	108	38	48	57	70	55	70	82	102	55	70	82	102	59	73	89	111	63	80	95	121
v y	53	67	80	98	76	95	114	143	49	60	73	92	29	38	44	57	47	57	70	89	47	57	70	89	51	64	76	95	55	70	82	102
w	55	70	83	102	76	95	114	143	51	64	76	95	32	41	48	60	49	60	73	92	49	80	73	92	53	67	80	98	57	73	86	108
x	57	73	86	108	79	98	118	146	53	67	80	98	34	41	51	64	51	64	76	95	51	64	76	95	55	70	82	102	59	73	89	111

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SECTION 3

STANDARD ALPHABET & SYMBOLS

for Highway Pavement Markings

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STANDARD

ALPHABET & SYMBOLS

for Highway Pavement Markings

The Standard Pavement Marking Alphabet and Symbols was prepared by the Federal Highway Administration at the request of the National Advisory Committee on Uniform Traffic Control Devices.

The design of the standard alphabet, numbers, and symbols for pavement marking is shown in exact detail on a 5 mm grid to facilitate enlarging. The characters and symbols may be enlarged to the desired size by any conventional process and will remain in proper proportion. To obtain characters of any height, divide the desired height in millimetres by 25 and use this value for this side dimension of the grid unit. For example, characters 2.5 metres high will require a grid unit dimension of 100 millimetres. Similar means may be used to enlarge the symbols.

Standard characters are 25 grid units high and 4 units wide. Horizontal strokes are 4 units wide and vertical strokes are 1 unit wide. The space between characters should be 1 unit, but optical spacing may be used. All characters having an arc at the top or bottom are extended slightly above or below the grid lines. An identical set of curves is used for "B," "D," and similar characters. Another identical set of curves is used for "C," "G," "2" etc.

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Freeway, Expressway and Ramp Pavement Arrow

Preferential Lane Symbol

Digitized by Google

Railroad Crossing Symbol

Digitized by Google

Bicycle Symbols

Bicycle Trail

Designated Bicycle Lane

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