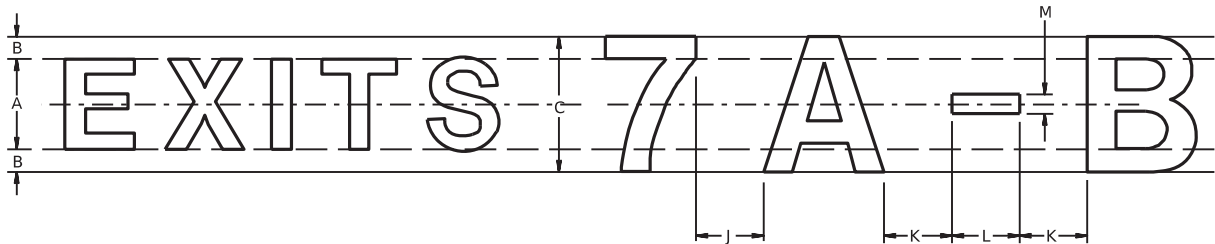


NOTES:

- 1. DIAGONAL OF FRACTION TO BE CENTERED OPTICALLY.
- 2. FOR DIMENSION F, WHEN THE NUMERATOR OF A FRACTION IS 1 (ONE), USE $2.2 \times A$. FOR ALL OTHER NUMERATORS, USE $2.5 \times A$.
- 3. THE SOLIDUS (SLANTED LINE OR FORWARD SLASH) IS INTENDED TO BE USED FOR FRACTIONS ONLY.

SIZE OF THE FRACTION RECTANGLE IS DETERMINED AS FOLLOWS:		
DIMENSION	TITLE	RATIO TO HEIGHT OF UPPER CASE
A	LETTER HEIGHT	$1.0 \times \text{UPPER CASE}$
B	SPACE TO TOP OR BOTTOM OF RECTANGLE	$0.25 \times A$
C	HEIGHT OF RECTANGLE	$1.5 \times A$
D	SPACE TO NEXT CHARACTER	$1.5 \times A$
E	SPACE FROM WHOLE NUMBER TO A FRACTION OR DECIMAL POINT	$0.75 \times A$
F	WIDTH OF RECTANGLE	SEE NOTE 2
G	LENGTH OF DIAGONAL	$1.7 \times A$
H	THICKNESS OF DIAGONAL	LETTER STROKE WIDTH

SIZE AND SPACING OF FRACTIONS
(EXCEPT SEE SHEET 9 OF 12 OF TC-8701D FOR FRACTIONS ON LINES WITH UPPER/LOWER CASE LEGEND)



NOTE:

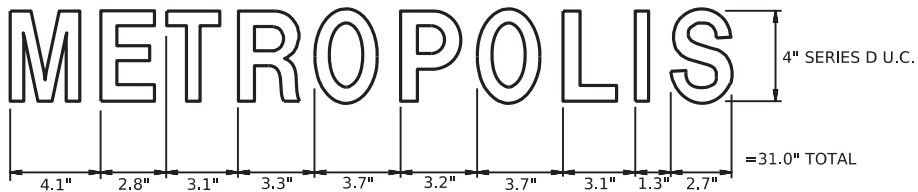
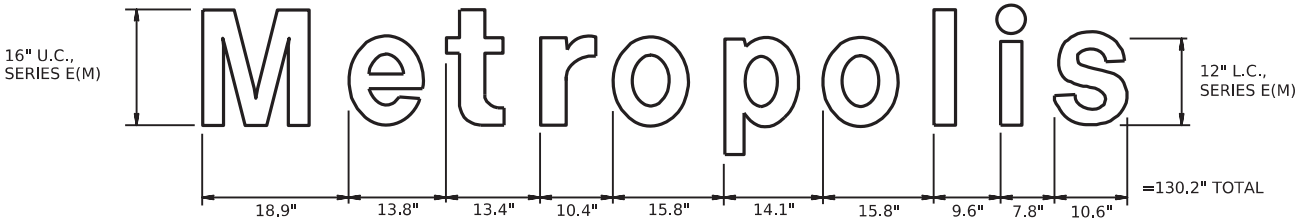
THE DASH IS TO BE CENTERED OPTICALLY.

SIZE AND SPACING OF DASHES ARE DETERMINED AS FOLLOWS:		
DIMENSION	TITLE	RATIO TO HEIGHT OF UPPER CASE
A	LETTER HEIGHT	$1.0 \times \text{UPPER CASE}$
B	SPACE TO TOP OR BOTTOM OF RECTANGLE	$0.25 \times A$
C	HEIGHT OF RECTANGLE	$1.5 \times A$
J	SPACE FROM NUMBER TO A CHARACTER	$0.75 \times A$
K	SPACE FROM DASH TO A CHARACTER	$0.75 \times A$
L	LENGTH OF DASH	$0.75 \times A$
M	THICKNESS OF DASH	STROKE WIDTH

SIZE AND SPACING OF DASHES

HOW TO USE THE SPACING CHARTS ON THE FOLLOWING SHEETS:

- a. SELECT THE PROPER CHART FROM SHEETS 2 THROUGH 31. (FOR LETTER AND NUMERAL SIZES WHERE A SPACING CHART HAS NOT BEEN PROVIDED, USE ONE OR MORE OF THE EXISTING CHARTS TO DETERMINE PROPER SPACING. FOR EXAMPLE, FOR 15" SERIES E NUMERALS, USE 1.5 TIMES THE VALUES SHOWN FOR 10" SERIES E NUMERALS.)
- b. IN THE LEFT-HAND VERTICAL COLUMN, LOCATE THE FIRST LETTER OF THE WORD BEING SPACED.
- c. LOCATE THE NEXT LETTER OF THE WORD BEING SPACED IN THE TOP HORIZONTAL COLUMN.
- d. THE FIGURE AT THE INTERSECTION OF THE TWO COLUMNS IS THE TOTAL WIDTH IN INCHES OF THE FIRST LETTER PLUS THE SPACE TO THE LEFT EDGE OF THE NEXT LETTER.
- e. TO COMPUTE THE LENGTH OF A WORD, ADD THE FIGURES OBTAINED BY REPEATING STEPS a, b, c AND d FOR EACH SUCCESSIVE LETTER PLUS THE LETTER WIDTH ONLY OF THE LAST LETTER. SEE EXAMPLES. (THE LETTER WIDTHS ARE GIVEN IN THE EXTREME LEFT-HAND COLUMN OF EACH CHART.)
- f. THE MINIMUM SPACING BETWEEN WORDS IN THE SAME LINE SHOULD BE THE HEIGHT OF THE UPPER CASE LETTER USED IN THAT LINE.



EXAMPLES

NOTES:

- 1. SEE TC-8701D FOR SIGN LAYOUT DETAILS FOR FREEWAY AND EXPRESSWAY SIGNS.
- 2. TO DETERMINE THE PROPER SIZE, SERIES AND TYPE OF LEGEND TO BE USED, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND TC-8701D.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF OPERATIONS

SPACING CHARTS
DIRECT APPLIED LETTERS & NUMERALS

GENERAL INFORMATION

RECOMMENDED _____
MANAGER, TRAFFIC ENGINEERING AND PERMITS SECTION

RECOMMENDED _____
CHIEF, HIGHWAY SAFETY AND TRAFFIC OPERATIONS DIVISION

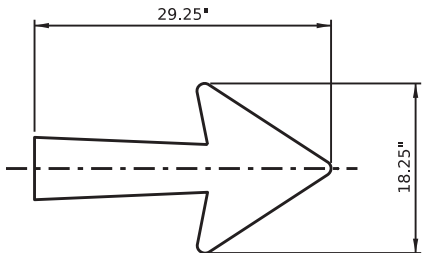
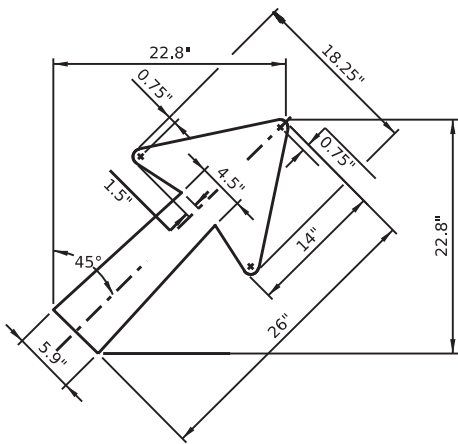
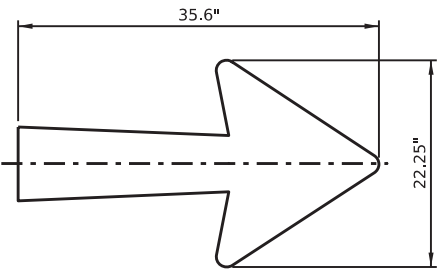
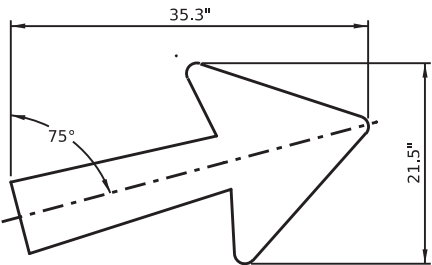
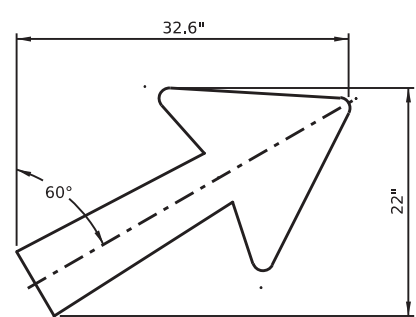
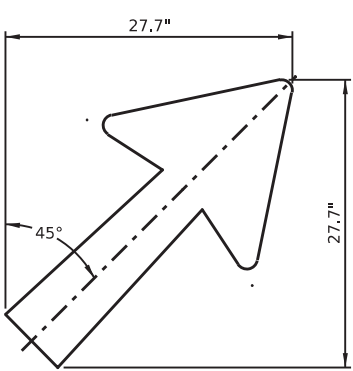
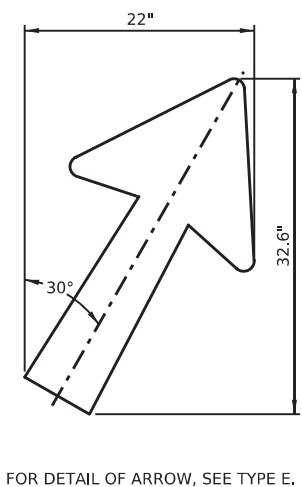
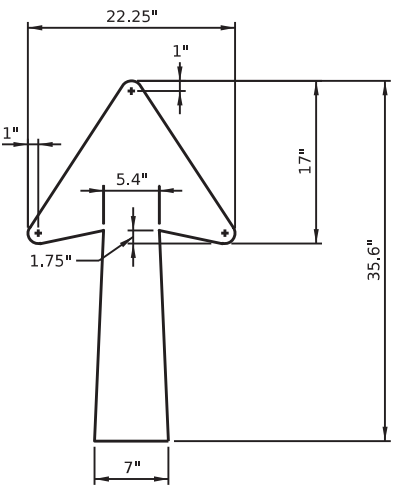
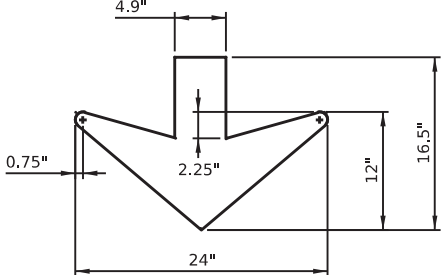
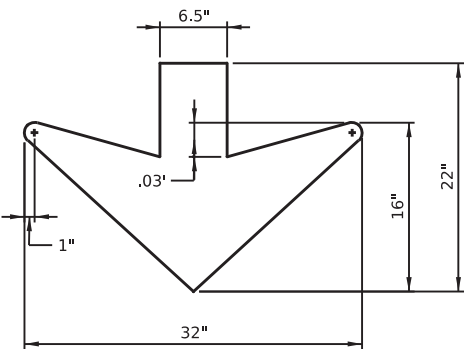
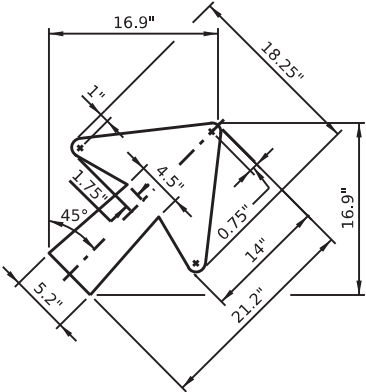
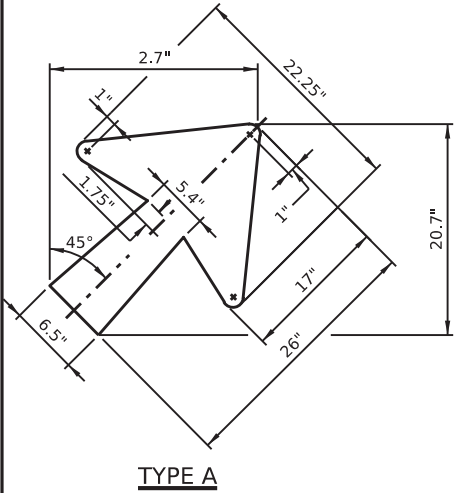
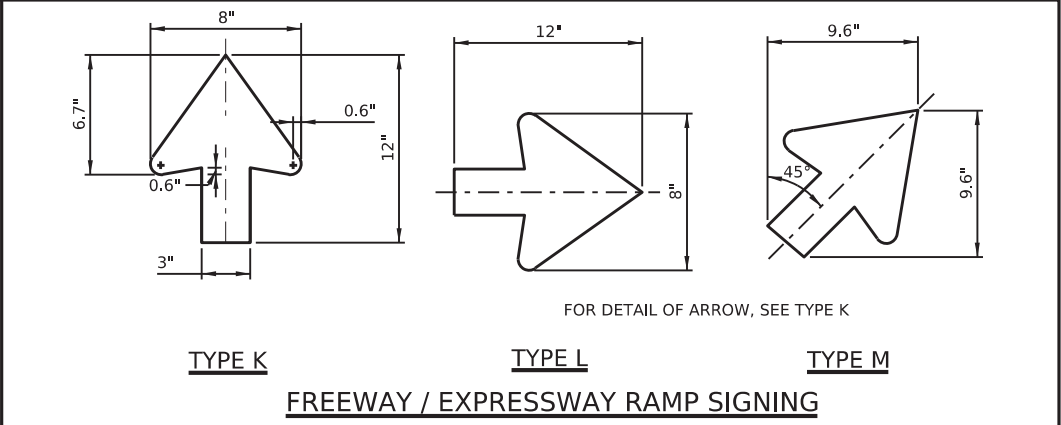
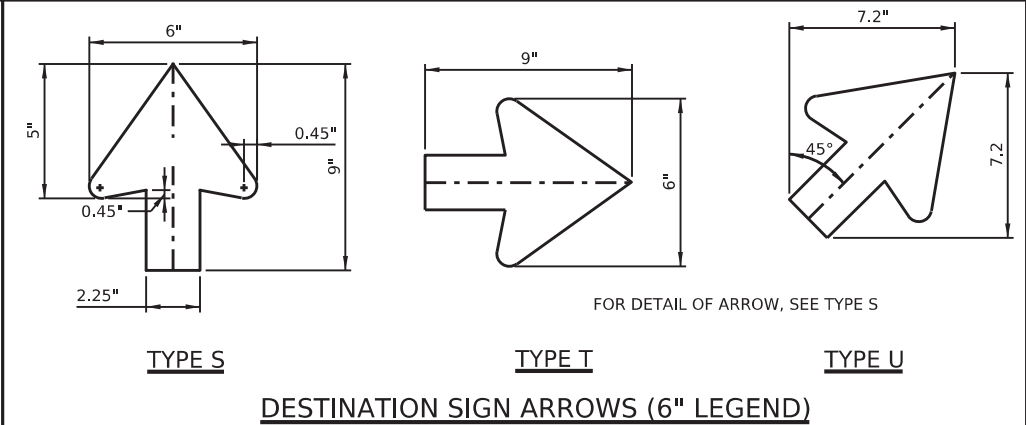
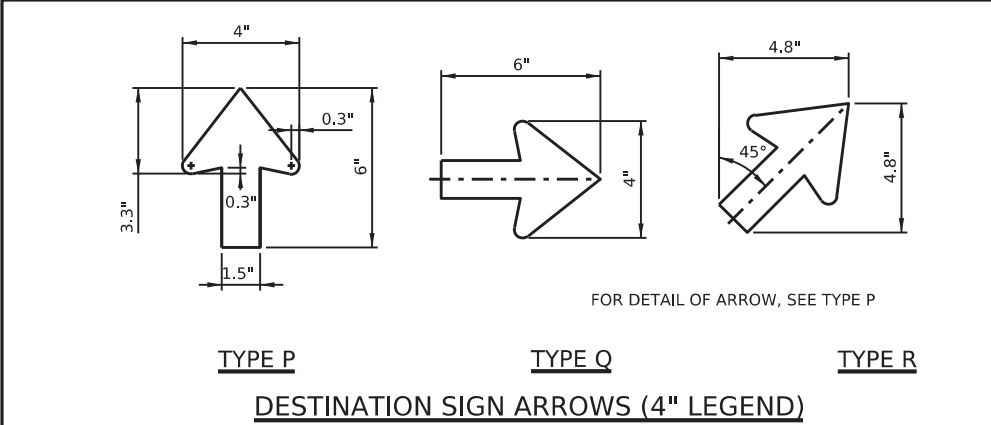
SHEET 1 OF 31
TC-8700C

PLOTTED: \$\$\$\$\$\$DATE\$\$\$\$

Series D		10" UPPER CASE to 7.5" lower case																									
7.5 10		5.7	6.0	5.9	6.0	5.9	3.6	6.0	5.9	1.6	3.3	6.4	1.6	9.9	5.9	6.1	6.0	6.0	3.8	4.7	4.0	5.9	7.1	11.3	7.8	7.5	5.0
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
8.5	A	9.3	9.8	9.4	9.4	9.4	9.2	9.4	9.8	9.8</																	

PLOTTED: \$\$\$\$DATE\$\$\$\$

Series D		8" UPPER CASE to 6" lower case																									
6 8		4.6	4.8	4.7	4.8	4.7	2.9	4.8	4.7	1.3	2.6	5.1	1.3	7.9	4.7	4.9	4.8	4.8	3.0	3.8	3.2	4.7	5.7	9.0	6.2	6.0	4.0
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
6.8	A	7.4	7.8	7.5	7.5	7.5	7.4	7.5	7.8	7.8																	



- NOTES:**
1. ARROW TYPES A THROUGH J, N AND O ARE FOR USE ON FREEWAY AND EXPRESSWAY SIGNS.
 2. ARROW TYPES K, L AND M ARE FOR USE ON FREEWAY AND EXPRESSWAY RAMP SIGNS.
 3. ARROW TYPES P, Q AND R ARE FOR USE ON DESTINATION SIGNS WITH 4" LEGEND.
 4. ARROW TYPES S, T AND U ARE FOR USE ON DESTINATION SIGNS WITH 6" LEGEND.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF OPERATIONS

SPACING CHARTS
DIRECT APPLIED

ARROWS