Engineering Lettering
Objectives

- Tips and Techniques
- Lettering
- Patience and practice needed
Lettering Notes

Lettering Guidelines – Handout

Lettering Styles

- Shape of Letters
- Order of Drawing Lines

Character Uniformity

Spacing
Pencil Techniques

- The best pencil for lettering on most surfaces are the H, F, and HB grades.
- Hold your pencil in the position shown. It should make approximately a 60° angle with the paper.
Pencil Techniques

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Pencil Lead Designation

Note: Reverse order below

<table>
<thead>
<tr>
<th>SOFT</th>
<th>MEDIUM</th>
<th>HARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREE HAND DRAWING</td>
<td>FREE HAND DRAWING AND GENERAL LAYOUT</td>
<td>TECHNICAL DRAWING</td>
</tr>
<tr>
<td>6B</td>
<td>B</td>
<td>2H</td>
</tr>
<tr>
<td>5B</td>
<td>HB</td>
<td>3H</td>
</tr>
<tr>
<td>4B</td>
<td>F</td>
<td>4H</td>
</tr>
<tr>
<td>3B</td>
<td>H</td>
<td>5H</td>
</tr>
<tr>
<td>2B</td>
<td>2H</td>
<td>6H</td>
</tr>
<tr>
<td>B</td>
<td>F</td>
<td>7H</td>
</tr>
<tr>
<td>H</td>
<td>HB</td>
<td>8H</td>
</tr>
<tr>
<td>2H</td>
<td>3H</td>
<td>9H</td>
</tr>
</tbody>
</table>
Freehand Lettering

Developing good lettering is a personal skill which takes practice. Letters must be formed properly. They must be open shaped very legible. Clear communication is essential to avoid mistakes and reduce waste. Lettering may be done using a drafting type pencil, lead holder or technical pen. Which ever tool is used, the letters must properly formed and very black.
Freehand Lettering

Pull the pencil or pen across the paper. All lettering strokes should be a pulling motion.

Right-handed and left-handed drafters may have to develop different styles for forming letters.

Press down hard when using a pencil.
Freehand Lettering

Vertical capital letters are preferred for most technical work. They are formed within a 6 by 6 grid.
Straight Line letters

Most letters are slightly narrower than they are tall. The shapes of the letters are as open as possible. Letters with small loops and crossing strokes are avoided.
Straight Line letters

This sequence is recommended to assure that each letter is the correct width in relation in height. For example, form the two vertical sides of the “H”, “N” and “M” first. Form the top of the “T” first.
Straight Line letters

The “H” and “N” are slightly narrower than they are tall.
The “T” and the “M” are just as wide as they are tall.

**Note:** Proportion: width vs. height is very important in forming letters.
The style of engineering lettering we will use in this course is **Single Stroke Gothic Lettering**

- Notice that only capital letters are demonstrated, since we will use only capital letters on drawings.
Single Stroke Gothic Lettering

ABCDEFGHIJKLMNOPQRSTUVWXYZ
HIJKLMNOPQRSTUVWXYZ
OPQRSTUVWXYZ
VWXYZ&
Single Stroke Gothic Lettering

EXAMPLE OF VERTICAL ENGINEERING LETTERING.
Single Stroke Gothic Lettering

EXAMPLE OF INCLINED ENGINEERING LETTERING.
The importance of good lettering cannot be over-emphasized. The lettering can make or break an otherwise good drawing.

Pencil lettering should be done with a fairly soft, sharp pencil and should be clean-cut and dark. Accent the ends of the strokes.

Examples of good composition using engineering lettering.
Single Stroke Gothic Lettering

ESTIMATE

ESTIMATE

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Examples of Lettering Errors
Single Stroke Gothic Lettering

- **Letters Wrong**
  - A. Poor Letter Forms

- **Letters Thin**
  - B. Strokes Too Thin

- **Letters Heavy**
  - C. Strokes Too Heavy

- **Letters Weak**
  - D. Should Be Blacker

Examples of Lettering Errors
Lettering – Vertical Gothic Font
Lettering – Vertical Gothic Font
Lettering – Vertical Gothic Font
Lettering – Vertical Gothic Font
Lettering with Fractions

Fractions twice as tall

\[ \frac{2}{2} \quad \frac{3}{4} \quad \frac{5}{8} \]

\[ \frac{3}{8} \quad \frac{6}{8} \quad \frac{5}{16} \]

Spaces

Wrong!  Wrong!  Wrong!  Wrong!
Your Turn! Practice Engineering Lettering

Practice Strokes

LETTERING
VERTICAL STROKES

LETTERING
HORIZONTAL STROKES

VERTICAL CAPITALS
Your Turn! Practice Engineering Lettering

Order and direction of Strokes

\[ \text{Order and direction of Strokes} \]