

Interesting Sign Facts

Sign Making

Most of the signs installed and maintained by Johnson City are made by staff. Sign blanks (aluminum) are purchased pre-cut to standard sizes. Rolls of retroreflective sign sheeting and overlay film are purchased. The sign face is designed on the computer (or recalled from disk) and sent to a plotter that holds a precision knife that cuts the overlay material in the plotter. The material is removed from the plotter and the portion of the overlay that is not to be used on the sign face is removed and discarded. The retroreflective sheeting is cut and adhered to the sign blank as the background material. The overlay film is adhered to the retroreflective material on the sign blank.

Using this process saves the City from inventorying vast numbers of signs by making signs as needed for new installation and replacement of damaged signs without concern of needing to place expensive rush orders for signs and delaying the installation of them. With the hundreds of different traffic control signs, sign companies do not stock all of the different signs, making a rush delivery for some signs even slower. The cost savings and versatility of this system are immense.

Retroreflectivity

The retroreflective sign face returns the light from headlights back in the same direction from which it originated. This is important to provide brightly illuminated signs to be easily seen and understood.

There are two primary technologies used to provide retroreflectivity. Tiny glass beads have been used for a number of years to provide retroreflectivity for signs. The beads are fixed to a background and encapsulated with a smooth surface that provides durability and weather protection. The method, size and arrangement of the glass beads have a large impact on the effectiveness of the retroreflectivity. An engineer grade reflective sheeting is one of the oldest designs that loses its effectiveness due to the sun's ultraviolet rays in approximately 3 years (depending on its exposure to the sun by direction, duration and the intensity), while other designs have brighter results and last up to 10 years and beyond.

A more recent technology utilizes tiny prisms to produce a brighter and longer lasting sign sheeting. The prismatic sheeting can provide a sign face that approaches 10 times that of the engineer grade sheeting with a life expectancy of 12 years or longer. These advancements in sign sheeting provide great tools to help compete with the distractions that a driver must contend with on a regular basis. While Johnson City does not use engineer grade sheeting for traffic control, there is no immediate plan to convert all sheeting for signs to the prismatic sheeting. The cost for the new sheeting is significantly higher and not all signs have the same need for being highly conspicuous (such as a parking sign). As prismatic sheeting becomes more competitively priced, the conversion over time can begin on a systematic basis.