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## Coloring Techniques for Decorative Curbing

The decorative curbing industry has seen much expansion over the last few years, growing in both the commercial and residential arenas. The installed curbing not only serves as a physical barrier or border, but adds a greatly enhanced aesthetic quality as well. Decorative curbing installed by a true craftsman, with attention paid to color, shape and texture, will add beauty and value.

The shape and texturing available is greatly determined by the tools and equipment available to each curbing company or contractor. The range and variety of color choices for the primary color and “antiquing” may also vary by contractor. The final choices for these aforementioned options would best be determined by the customer, with thorough consultation with the chosen installation company.

This commentary will address the two principle methods of providing the primary color to the decorative curbing. Integral color is where the pigments (iron oxides) are added directly to the mixture of concrete that is then extruded to produce the curb. The use of curb hardeners (also color hardeners, or “slurry method”) is where a veneer of concentrated mixture of cement and color are applied to the surface of the curb immediately following the extrusion process.

Each of the prescribed methods has their own advantages or situations where one technique may be preferred over the other. The combination of the two could easily be argued as the best. However, this combination can lead to expenses that the customer may need to incur, or that are not required by the particular situation.

### Integral Color Method

Using integral color for curbing saves a step in the process of installation as the color is mixed in with the concrete and is present upon extrusion. The pigments used are evenly distributed through out the entire dimension of the curbing. With only the outside surface being visible a lot of pigment is “wasted” on the interior. This can become rather costly when brighter, vibrant colors are desired.

Another drawback frequently encountered with integrally colored decorative curbing is a higher incidence of efflorescence. Efflorescence is a common, yet unattractive, property of concrete where naturally occurring mineral salts within the concrete migrate to the exposed surfaces and are deposited as unsightly white residue or “staining”. The more porous or open the surface, the more drastic the efflorescence. Typically integral jobs are much more porous then curbing installed with the veneer of curb hardener.

This greater porosity typically associated with integral colored curbing also allows for less resistance to staining or other discoloration brought about by weathering and ageing. And when such staining occurs, this porosity makes removal more difficult.

Integral color is best suited for situations where the color chosen is a muted earth-tone or a medium grey, an extremely large job where installation time might be a cost consideration or where the long term appearance is of low consideration.

### Curb Hardener (Slurry) Method

In this process the color concentrate mixture is applied immediately after the curb is extruded, while the concrete is still wet and capable of fusing with the applied pigmented curb hardener. The exposed surface now has a vibrant, color full veneer, that is actually harder than the underlying concrete curb.

This surface is typically much tighter, smoother than extruded curbing without the colored hardener applied. The installer is troweling the material on to a smooth finish. The smooth finish allows for a brighter surface that is easier to maintain and accepts sealer much better. Staining problems are much less common. Efflorescence is also greatly reduced on the exposed surface, as the mineral salts responsible migrate to the backside of the curb, not the “pretty” side.

Also, the relatively costly pigments are concentrated on the surface and not “wasted” throughout the entire curb. Plus, by being used in a slurried form, FULL color development of the pigments is much more readily achieved.

The most commonly stated drawback to the slurry method is that with the color only on the surface, the underlying grey concrete can be exposed if the curb is damaged. This “problem” is not very frequent and is somewhat negated by the fact that the applied veneer of curb hardener is actually harder (can withstand greater impact) than the underlying curb.

Another option is the ability to change, mix or blend colors to achieve varied hues and effects. The customer may choose to have some of curbing made green and that in another location can be red without a change over that would be incurred if the same was required in an integral color install.

### Combination

Frequently, a base color is integrally mixed with the concrete that is similar in color to the curb hardener that is to be used. By using the combination of the two methods any negatives of one is greatly offset by the other method. The tighter, smoother veneer is over the colored body of the curb. Thus, any serious blows to the curb will expose a color close to that of the remaining veneer.

Notice: As with any type of construction, the final result is greatly affected by workmanship, jobsite conditions and environment, and quality and condition of materials used.