

# Hot-Dip Galvanized Steel Appearance and Weathering

Hot-dip galvanized (HDG) steel is specified because it provides maintenance-free corrosion protection for decades. However, some architects and engineers under utilize HDG because of concerns about its appearance. Due to steel chemistry, fabrication processes, and other factors, the initial appearance of hot-dip galvanized steel can vary from bright and shiny to matte gray, or a mixture of both. Many specifiers erroneously equate the appearance of the coating with coating quality. It is important to note the durability of galvanized coatings is not determined by the appearance, but rather by the zinc coating thickness. Regardless of the external appearance of the coating initially, all galvanized pieces will protect steel from corrosion for decades. Additionally, as the galvanized steel weathers, initial variances in appearance will fade, producing a uniform matte gray coating.

*“...durability of the galvanized coating is not determined by the appearance of the galvanized coating; but rather, the zinc coating thickness.”*

A great example of this transformation is the canopied walkway at Mark Twain Elementary in Riverside, CA. The galvanized canopies were installed in October of 2006, and the initial coating appearance varied (see before photos) from bright and shiny to matte gray on the same beam. In June of 2009, the structure was revisited to examine the appearance and performance. The beams are now all uniformly matte gray with little to no visible difference in appearance. Additionally, as hot-dip galvanizing provides 75 years or more of maintenance-free corrosion protection, the beams show no signs of rust staining or corrosion damage.

Hot-dip galvanized steel not only provides superior corrosion protection, but once in service will also sustain an aesthetically pleasing, uniform matte gray appearance for decades without maintenance. Eliminating unsightly corrosion and rust staining, as well as costly maintenance will provide Mark Twain Elementary with a structure both easy on the eyes and the budget well into the future.



Before: October 2006



After: June 2009



Before: October 2006



After: June 2009

• American Galvanizers Association • 6881 S Holly Cir., Ste 108, Centennial, CO 80112 • [www.galvanizeit.org](http://www.galvanizeit.org)

©2009 American Galvanizers Association. The material provided herein has been developed to provide accurate and authoritative information about after-fabrication hot-dip galvanized steel. This material provides information only and is not intended as a substitute for competent professional examination and verification as to suitability and applicability. The information provided herein is not intended as a representation or warranty on the part of the AGA. Anyone making use of this information assumes all liability arising from such use.

