January 1, 2020

Re: Simpson Strong-Tie® ZMAX® Post Bases installed with Stainless-Steel Titen HD® Heavy-Duty Screw Anchors

To Whom It May Concern:

Simpson Strong-Tie post bases with a ZMAX finish (including Outdoor Accents bases which have a black powder coat over ZMAX finish) may be installed with stainless-steel Titen HD screw anchors. Stainless-steel is made of either Type 316 or Type 304 stainless-steel. See Figure 1, below, for a typical APB44 installation.

Generally, due to galvanic action, dissimilar metals (such as Type 316/304 stainless steel and zinc) in contact with each other and located in a corrosive environment will exhibit an increase in the rate of corrosion activity relative to the rate of corrosion activity for a single metal connection. The increase in the rate of corrosion activity is affected by many factors, such as the specific dissimilar metals and the local environment. See strongtie.com/corrosion for further information on this subject.

Due to the different in-service conditions and the many variables involved, Simpson Strong-Tie cannot provide estimates of service life of connectors, anchors, and fasteners. However, in an effort to better understand the corrosion effect of combining the stainless-steel Titen HD with our post bases, we conducted a controlled corrosion test in a salt-spray environmental chamber (ASTM B117). The test consisted of a zinc-coated washer and zinc coated and powder-coated post bases assembled with both zinc-coated Titen HDs (the control samples) and with stainless-steel Titen HDs (the subject samples). After 1000 hours of salt spray, the corrosion amounts were measured. The results of this test showed that the corrosion rate for these assemblies was not increased when the dissimilar metals of the stainless-steel Titen HD and zinc-coated post base were in direct contact.

An important note is that other dissimilar metal assemblies will not perform the same under similar conditions. In addition, the ASTM B117 salt spray test is an accelerated corrosion test that is not intended to replicate in-service conditions—this test was used for comparative purposes only. The information and test results given in this letter do not apply to other connections. The designer should review all of the relevant information before deciding on which products to use for each application. As always, it is appropriate for there to be periodic inspection and maintenance in corrosive environments regardless of the materials in the connector and anchor.

The information in this letter is valid until 12/31/2021 when it will be re-evaluated by Simpson Strong-Tie. Please visit strongtie.com for additional pertinent information. If you have questions or need further assistance regarding this matter, please contact the Simpson Strong-Tie Engineering Department at 800.999.5099

Sincerely,

SIMPSON STRONG-TIE COMPANY INC.