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Triangle Fastener Corporation  
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### **Statement of Certification**

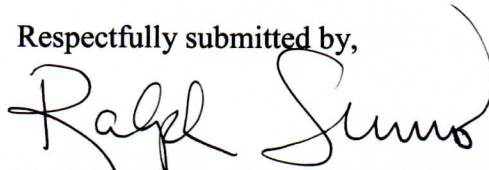
#### **Laboratory Tests on TFC Hillside Washers “Bracer Lite” and “Stress-Lok” Washers**

This is to certify that we have conducted laboratory testing on your TFC “Bracer Lite” hillside washers with ridges, serration, on the curvature of the hillside washers with Stress-Lok washers. Tests were performed at 45 degree angle with the main structural member. Stress-Lok washers were used on all tests. The objective of the testing program was to establish the load carrying capacities and the failure modes. This work was conducted at the Structural Laboratories of the Civil Engineering Department of Mississippi State University under my direction and supervision.

The test results confirmed previous findings made on Triangle Fasteners Corporation using “Bracer” hillside washers. Triangle Fasteners “Bracer Lite” hillside anchors having ridges, serration, on the curvature of the hillside washer with companion Stress-Lok washers were found to be superior to the standard off-the-shelf market available ductile steel hillside washers. They carried higher loads with no failure in any of the tests to neither the hillside anchors, “Bracer Lite”, nor the Stress-Lok washers.

Procedures and calculations established in the literature for the design of x-bracing anchorage can be used with confidence when specifying and selecting ductile iron “Bracer Lite” and using Stress-Lok washers. Stress-Lok washers with ridges were also found to be superior to standard high strength flat washers in load distribution, exhibited no deformation, and hindered localized rod failure by minimizing slippage and rotation of the x-bracing rod.

Respectfully submitted by,



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