CASCADE STEEL ROLLING MILLS, INC.
3200 N Highway 99W P.O. Box 687
McMinnville, Oregon 97128-9399

January 1, 2018

CERTIFICATE OF COMPLIANCE – ASTM A1035 and AASHTO M334

As indicated on the Mill Test Reports, I certify that the melting and the manufacturing processes of Cascade Steel Rolling Mills, Inc. occurred in the United States of America, in accordance with the Buy America Act. [*1] Our MMFX reinforcing steel conforms to ASTM A1035-16b, Type CL, CM, or CS, Grade 100 or 120 and AASHTO M334-17 as indicated on test reports (AASHTO M334-17 only applies to ASTM A1035 Type CS Grade 100).

The steel shipped is in fact composed of the heats indicated on the Mill Test Report and is represented by results obtained on heat samples tested in accordance with ASTM A1035-16b specifications for sampling, chemical analysis, physical testing and measuring. The average spacing and height of deformations have been measured and found to be in accordance with the requirements of ASTM A1035-16b as indicated on the mill test report.

CHEMICAL REQUIREMENTS by A1035 Type			
	CL	**CM**	**CS**
Carbon, max %	0.3	0.2	0.15
Chromium, range %	2.0 – 3.9	4.0 – 7.9	9.2 – 10.9
Manganese, max %	1.5	1.5	1.5
Nitrogen, max %	0.05	0.05	0.05
Phosphorus, max %	0.035	0.035	0.035
Sulfur, max %	0.045	0.045	0.045
Silicon, max %	0.5	0.5	0.5

TENSILE REQUIREMENTS by A1035 Grade			
	Bar Size	**100**	**120**
Tensile Strength, min, psi	**All**	150000	150000
Yield Strength, min, psi	**All**	100000	120000
Elongation in 8 in., min %	**3-11**	7	7
	14, 18	6	6

[*1] Certifications which do not indicated made in America are made from steel purchased outside the United States.

Jeff Kramer
Manager, Quality Assurance
Cascade Steel Rolling Mills, Inc.