LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SPECIFICATIONS

MULTIAXIAL GEOGRID

Approved for
Maintenance Division
By:

DESCRIPTION:

This specification covers multiaxial geogrid to be used for furnishing and placing geogrid stabilization prior to placement of base course. The geogrid will be utilized with geotextile fabric to create a geocomposite system.

GENERAL REQUIREMENTS:

The geogrid shall be a multiaxially oriented polymer grid structure composed of polypropylene.

The geogrid structure shall have apertures that are hexagonal, trapezoidal, and triangular in shape, and ribs with depth-to-width ratios greater than 1.0. The structure shall be designed to interlock with the surrounding fill material including weld or interweave joints at the crossover points. Joints shall be designed in such a manner that the elements will not separate under handling and construction activities or under dynamic loads anticipated over the life of the structure.

The geogrid shall be resistant to damage during construction, including ultraviolet light degradation, and have the specified resistance to chemical and biological degradation caused by the fill materials being stabilized.

DETAILED REQURIEMENTS:

The geogrid shall have the following characteristics:

Geogrid Properties	Longitudinal/ Transverse	Diagonal	General
Continuous parallel Rib Pitch[(1)(2)] (in. min)*			3.25
Mid-rib depth[(1)(2)] (in. min.)*	0.06	0.05	

Mid-rib width[1][2] (in. min.)*	0.04	0.05	
Rib Shape*			Rectangular
Aperture Shape*			Hexagonal, Trapezodial, & Triangular
Junction Efficiency[3] (%, Min.)			100%
Resistance to Chemical Degradation[4] EPA 9090 Exact			100%
Resistance to ultra-violet light and weathering[5] (Min.)			80%

(1) Nominal dimensions.
(2) Measured with calipers.
(3) Load transfer capability determined in accordance with ASTM 06637-10 and ASTM 0773 7-11 and expressed as a percentage of ultimate tensile strength.
(4) Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
(5) Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.
*No ASTM reference for these requirements

CERTIFICATION:

A certificate of compliance from the manufacturer showing the physical properties of the materials used and conformance with the specifications will be required prior to award. The Department reserves the right to randomly sample and test geogrid material.

PACKAGING AND DELIVERY:

Geogrid should be packaged in rolls and delivered on a flatbed truck.