

**RE: Review of Maccaferri MacGrid WG Series (WG06, WG8, WG11, WG15 & WG20)**

**PRODUCT**

Maccaferri MacGrid WG Series geogrids are distributed in Alberta by Maccaferri Canada.

**VENDOR CLAIMS AND INFORMATION**

**CLAIMS:**

MacGrid® WG geogrids are used for soil reinforcement. These high performance geogrids are constructed of high molecular weight, high tenacity polyester yarns woven under tension and utilizing a polymeric coating process to provide superior engineering properties. MacGrid® WG geogrids are engineered to be mechanically and chemically durable, in both the construction phase and in aggressive soil environments ( $4 < \text{pH} < 9$ ). Maccaferri MacGrid WG Series of woven uniaxial geogrids are predominantly used in mechanically stabilized earth (MSE) and reinforced soil slope (RSS) structures of virtually any height, and for stabilizing and reinforcing subgrades. Company website: [www.maccaferri-canada.com](http://www.maccaferri-canada.com).

**DESCRIPTION:**

Maccaferri MacGrid WG Series geogrids are made from a polyester core encased in a tough PVC sheathing. The sheathing and dimensions of the polyester MacGrids means that almost any type of backfill can be used, from large granular fill to more cohesive materials. MacGrid reinforced soil slopes are generally designed to vegetate, therefore a wedge of topsoil is placed behind the face of the reinforced slope. A bio-degradable blanket is installed preventing the topsoil and fill from spilling out between the apertures in the grid, and accelerated the vegetation of the slope.

**POTENTIAL USAGE:**

Soil reinforcement.

**STANDARDS:**

ASTM D4595 Wide width tensile strength; tensile strength at 5%  
ASTM D5262 Creep limited strength  
ASTM D5261 Mass per unit area  
GRI-GG4 Long term design strength in sand

**ALBERTA TRANSPORTATION COMMENTS**

**EXPERIENCE:**

Alberta Transportation has used this product in some of its projects.

**APPLICATION STANDARDS:**

Alberta Transportation does not have a standard for geogrid. All geogrid applications must be properly designed by a Professional Engineer (e.g., registration with APEGGA). The use of extensible reinforcement in MSE bridge abutments or wingwalls shall conform to the current AT MSE Wall Specifications.

**RECOMMENDATIONS:**

Maccaferri MacGrid WG Series (WG06, WG8, WG11, WG15 & WG20) geogrids be listed as a Proven Product under Alberta Transportation Products List, Geosynthetics – Geogrids - Proprietary, based on the information provided.

**TRIAL SITES****WG06:**

Seclusion Valley Estates, Tunnel Valley; St. Albert Crossing, St. Albert; Riversong Subdivision, Canmore.

**WG09:**

Ralph Klein Park, Calgary; South Slope, Blairmore; North Highway Connection, Red Deer.

**WG15:**

Hwy 40, Wapiti River Bridge headslope (BF74228)

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