Problem:
As Stonebridge community's population was growing, a need developed to have an overpass cross highway 11 to bridge the traffic.

The project owners, Dream Asset Management and the City of Saskatoon, published the tender with requirement of Basal reinforcement, geogrid wrapped slope and temporary wall.

Solution:

A Geotechnical investigation was done by AECOM Canada, and due to poor soil conditions and an unstable 45 degree slope, Maccaferri proposed reinforced granular mat and geogrid Reinforced slope. Geocell was placed over the face of Reinforced slope for erosion protection.

The reinforced slope height varied from 0—9 meters. In order to reduce loads applied to the soft foundation soils Reinforced Granular mat was designed based on height of slope. Using MacRead Software a multi layer model was used to design granular mat. The stain within the layers of geogrids was limited to 2%.

Construction of Granular Mat and Reinforced slope started in July 2015 and continued until October. Remaining section was done in Spring 2016 with 8” Geocell on top for erosion control.
The Geocell upon installation were filled with top soil and vegetated.

Steel post guide rails were installed after the construction of the Geogrid Reinforced Slope.

**MacGrid® WG** series geogrids are used predominately in Mechanically Stabilized Earth (MSE) and Reinforced Soil Slope (RSS) structures. MacGrid® WG geogrids are made from high molecular weight, high tenacity polyester multifilament yarns. The yarns are woven under tension in the machine direction and finished with a polymeric coating. MacGrid® is engineered to be mechanically and chemically durable, and resistant to biological degradation.

**MacGrid® EG series** geogrids are used in soft soil stabilization applications such as roads and foundations, and in soil reinforcement applications. MacGrid® EG are polypropylene geogrids, produced by an extrusion process characterized by a tensile resistance both in the longitudinal and in the transverse direction. They are inert to chemicals found in natural soils.