

Spartan Road Grid™ 10

WHAT:

Pavement reconstruction/improvement project of four streets in Portage la Prairie, Manitoba, using Spartan Road Grid™ 10 fiberglass geogrid for asphalt reinforcement to prolong life of the road.

APPLICATION:

The application was to repair the existing reflective road cracks to extend the life and performance of the road, and delay cracking. The goal was to extend the service life of the road to reduce repair costs impacting the city budget.

CHALLENGE:

The challenge was the existing asphalt wearing surface aging and cracking, in addition with a high water table with a weak saturated sub-grade led to instability of the base that effected the overall performance (lengthwise and transverse cracks) of the road. The work was done over the summer during peak traffic hours. With a good weather forecast and above average temperatures, we were able to start work at 6 am before traffic started.

CONVENTIONAL SOLUTION:

The traditional method for pavement construction would involve milling the existing asphalt surface then applying a tack coat, followed by a pavement overlay. Typically with this method repairs are needed within a five year window.

TITAN SOLUTION:

Titan provided a longer term solution using Spartan Road Grid™ 10 to delay cracking and extend the service life of the road. First the reflective cracks were repainted, then a 20mm overlay, working course was applied over the existing surface. Afterwards pure SS1 tack was sprayed at the specified application rate. Once cured the Spartan Road Grid™ 10 was applied over top then overlaid with a 100mm asphalt layer.



Before construction showing significant fatigue in road.



Before construction showing significant fatigue in road.



Construction with Spartan Road Grid™ 10 - 1 year after with no signs of cracking or fatigue.

▼ PRODUCT DESCRIPTION:

Spartan Road Grid™ 10

Representing the latest technology, Titan fiberglass geogrids are specifically designed as an interlayer for asphalt reinforcement. Suitable for all types of asphalt mixes, our fiberglass geogrids feature a unique polymer coating that provides excellent heat resistance and stability. They work to enhance pavement life and performance while helping to reduce maintenance costs.

▼ BENEFITS:

- Lower maintenance costs.
- Increased overall performance with the additional life cycle - additional years of the roads.
- Increase fatigue life. 10- 20 years.
- Increase traffic safety.



Heavy equipment tire on top of grid with no sticking or lifting of material.



Spartan Road Grid™ 10 completed overlay on Peony Bay North Stt.



Geogrid placed in tack before paving.

▼ PROJECT HIGHLIGHTS:

Project:

Pavement Reconstruction/Improvement

Location:

Portage la Prairie, Manitoba

Installation:

2017

Owner:

City of Portage la Prairie

Consulting Engineer:

City of Portage la Prairie

General Contractor:

Meseyton Construction

Product Solution/System:

Spartan Road Grid™ 10

Product Supplier:

Titan Environmental Containment Ltd. Manitoba, Canada

(Supplied the products, and offered design service and technical guidance)

Contact us for more information:

TITAN ENVIRONMENTAL CONTAINMENT

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