



# Lac La Biche Transport Modular Assembly Yard



## *TriAx TX160 provides a long lasting, low maintenance solution*

### LOCATION:

Lac La Biche, Alberta

### PRODUCT:

TriAx TX160  
Nilex 4551 (non-woven geotextile)

### PROJECT PARTNERS:

Owner  
Lac La Biche Transport

Completion Date  
July 2013

### THE NILEX ADVANTAGE:

Cost Savings  
Over \$3,000,000

CO<sub>2</sub> Saved  
1,700 tonnes

Lac La Biche Transport was preparing to lease an 8.5 hectare modular assembly yard to a major Canadian oil sands company.

## Challenge

Along with a surge in new development in the oil sands sector, there has been a more disciplined approach to planning and cost controls. A major part of those cost controls is in the design and execution of modular construction. Our client required a cost effective solution for an unpaved yard that was low maintenance, long-lasting and strong enough to perform under the heavy loads of modular assembly.

## Solution

Nilex recommended the client use TriAx TX160 geogrid and Nilex 4551 non-woven geotextile. Using industry-leading SpectraPave4-PRO Software, which analyzes a variety of support and loading conditions and serviceability constraints, Nilex was able to demonstrate that using TriAx TX160 would reduce the granular thickness required by over 50%. The triangle structure of TriAx geogrid combined with the increased rib thickness and junction efficiency greatly improves the aggregate interlock and confinement, leading to optimal structural performance of the mechanically stabilized layer.

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## Installation

Nilex visited the site several times during construction to ensure that the grid and fabric installation was proceeding correctly and to provide guidance to the contractor as required. Nilex 4551 non-woven geotextile was placed on the prepared subgrade followed by TX160 and 300 mm of D2-20 mm aggregate. Reducing the thickness of the granular fill eliminated the need to haul, place and compact over 100,000 tonnes of fill. This reduced the time required to construct the yard by 50%.



## Results

Nilex's recommended TriAx geogrid solution saved the client over 48,000 m<sup>3</sup> of aggregate versus a conventional design. Using Nilex's Innovation Calculator, we estimate the client was able to save over \$3,000,000 in materials, labour and placement costs using TriAx TX160 while keeping more than 1,700 tCO<sub>2</sub> out of the atmosphere. TriAx TX160 provided a strong, long lasting, low maintenance solution with clear technical, environmental and economic advantages.

[nilex.com](http://nilex.com)

## Think Nilex

Nilex is committed to unearthing better results. Whether it's for a civil, resource or environmental project, we offer the latest engineered and technically superior materials and techniques to save our customers time and money, and minimize the need to move or remove earth, and reduce the need for granular materials.

With over 35 years experience, a long-standing commitment to the environment and highly qualified staff, Nilex delivers the products and technologies that give clients an economic advantage with environmental benefit.



**NILEX**  
CIVIL ENVIRONMENTAL GROUP  
*Unearthing better results.*