

Project Case Studies

Project Profile

Date: 2013 -2014
Name: Metrolinx Union Pearson Express – Carlingview Drive Grade Separation
Owner: Metrolinx
Engineer: McCormick Rankin Co.
Contractor: Soncin Construction Co.
Size: 2,550m² face area



Background and Challenges

Connecting Pearson international airport and the Union Station in downtown Toronto, the Union Pearson Express railway is a key part of Metrolinx’s regional transportation plan. It is also North America’s first dedicated express rail link providing reliable and speedy services to move the travellers between two major transportation hubs.

The at-grade intersection between the railway tracks and Carlingview Drive had been considered a hurdle for the proposed high speed train. Grade separation at the intersection was therefore proposed. To achieve the goal, a new railway bridge along with five high performance retaining walls up to 6.5m in height were required to provide sound, stable and reliable structures to form the separation. These structures were also required to have aesthetically appealing appearance for this high-profile project. In addition, complicated geometry (e.g. curved alignment, special coping/handrail and sloping ground..etc.), congested site constraints and intricate construction sequence presented many challenges to the design and construction of these retaining walls.

Solution

Terrafix had been awarded the project and had successfully designed/provided the TerraFort Retained Soil System, a high performance, full height retaining wall with “Ashlar Stone” architectural texture on the wall facing panels.

Advantages

The project specific customised precast panels have enabled a fast-tracked installation process particularly for long walls with



- adjustable wall geometry
- flexible installation sequence
- simple installation method
- flexible for accommodating utility structures encountered

All the RSS walls were completed within schedule and budget hence facilitated the subsequent construction of other structures in meeting the project deadlines.