



DRAINTUBE®



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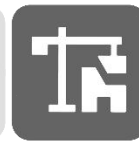
GEOTER®



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Railway Maintenance Center Subslab Depressurization

CONTEXT

Constructing new buildings on old industrial sites (factories, gas stations, etc.) may have to deal with toxic gas emissions from contaminated soils. Depending on the type of contamination, a gas collection system under the building can avoid expensive costs and delays on removing and disposing the polluted soils. This solution was chosen for the construction of a new railway maintenance center in Lachine, Montréal – QC.

ISSUES

Traditionally, the Subslab Depressurization (SSD) system is composed of a 100 - 150 mm (4 to 6 in.) thick granular drainage layer on top of a separation geotextile and covered by a vapor barrier. Depending on the geometry of the building collector pipes and suction pits are placed to collect and evacuate the gas. Because most of the SSD systems are required in high-density population areas (e.g. new construction in old industrial zones), the truck traffic and the noise resulting from the excavation works and the transportation of granular materials is a nuisance for local residents. It also damages the urban road network which is not designed to handle heavy vehicles traffic.

RETAINED DESIGN

Multi-linear drainage geocomposite DRAINTUBE 500P FTB1 D25 is used as part of the SSD system in replacement of the granular drainage layer, the separation geotextile and the vapor barrier. It exhibits the following properties:

- Non-woven geotextile layers needle-punched together with 25 mm (1 in.) diameter mini-pipes regularly spaced on 1 m (40 in.) centers and running the length of the roll
- PE geofilm needle-punched on one side of the geocomposite, acting as a vapor barrier
- Mini-pipes with a pipe stiffness at 5% deflection over 3,000 kPa
- Stable long-term drainage capacity even under high loads

DRAINTUBE® is mechanically connected to the exhaust pipes using the Quick Connect system. It reduces pressure losses and improves the overall SSD system. Quick Connect system is compatible with active SSD.

ADVANTAGES

- Efficient solution for both passive and active SSD systems
- Reduction of the social footprint (less truck traffic and less noise for the neighborhood)
- Reduction of the environmental footprint (85% less GHG emissions compared to the use of granular drainage material)
- Costs saving (no polluted soil to excavate i.e. no fees for polluted soil disposal)
- Very good Health & Safety records for the installation crew on site



Installation of DRAINTUBE 500P FTB1 D25 as part of the subslab depressurization system.



Connection of the DRAINTUBE® to the collector pipe using Quick Connect system for active SSD.



Pouring the concrete slab on the DRAINTUBE 500P FTB1 D25. The needle punched geofilm on top of the product prevents migration of the fresh concrete into the geocomposite.

PROJECT SUMMARY

| | | | |
|--------------------|---|---------------------|--------------------|
| Products | DRAINTUBE 500P FTB1 D25 + Quick Connect System | | |
| Quantity | 10,000 m² (110,000 sq ft) | Design | SNC Lavalin |
| Application | Subslab Depressurization (SSD) system | Installation | Loiselle |
| Owner | - | Years | 2014 |



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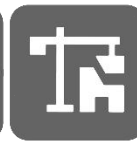
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AFITEX-TEXEL GEOSYNTHETICS ADDED VALUE

The expertise of the AFITEX-Textel team provided the designers with all the necessary information and technical support to choose the most suitable solution based on the project's parameters.

« What AFITEX-TEXEL has to offer »

AFITEX-Textel will be pleased to assist you in the evaluation and design of your next projects, because our approach has always been and always will be the same: the right product, in the right place, well installed with rigorous quality control.

In case you need technical support? Feel free to refer to the AFITEX-Textel team. Expert services will be provided free of charge:

- Technical Assistance
- Assistance during Design
- Technical Training
- Technical Documentation
- Calculation Tools
- Specification & Tender documents
- Installation Guidelines



YOU NEED MORE INFO?

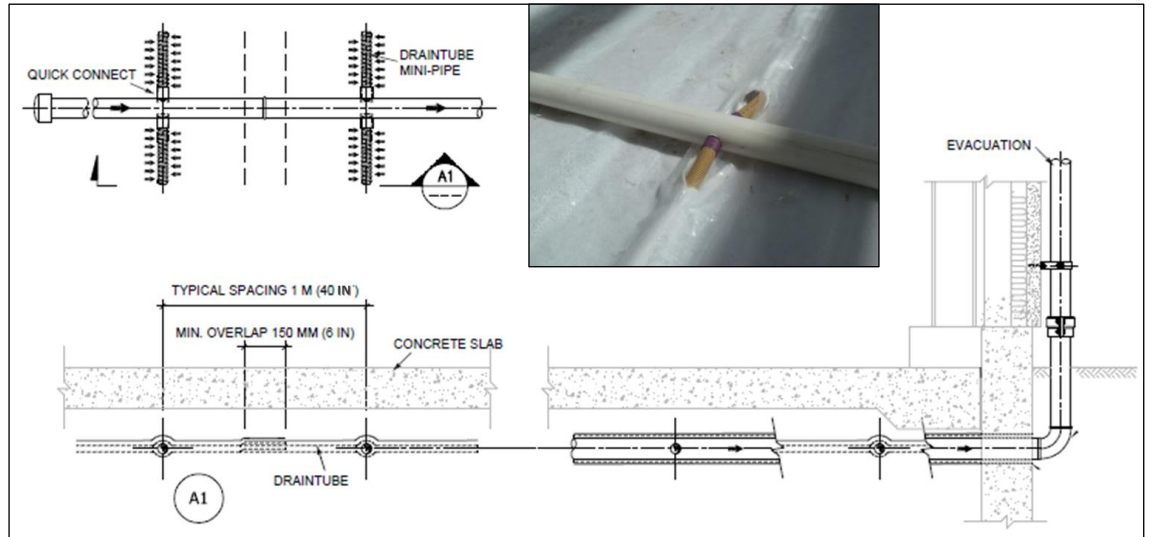
Never hesitate to contact one of our specialists in order to know more about the benefits you can get from your projects

1-800-463-0088

Available documentation

- Technical data sheets
- Installation guidelines
- Standards & Studies
- List of projects
- Design Software

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Typical cross section, Railway Maintenance Center

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