Prefabricated vertical drains (wick drains) drastically shorten consolidation times in soft cohesive soils by providing a low resistance drainage path for relief of excess pore water pressures. Used with a surcharge load, vertical drains are a cost-effective method for improving soft fine-grained soils.

For vertical drains to function properly, a drainage path must be provided to receive flow from the top of the drains and conduct it from under the surcharge to appropriate discharge points. This horizontal drainage system must perform without applying excessive back-pressure to the vertical drains to avoid delaying the consolidation process.

The traditional method of providing horizontal drainage has been to install a sand layer, usually about 1 m (3 ft), thick under the surcharge. The flow capacity of sand drainage blankets is often overpredicted, resulting in inadequate horizontal drainage and delay to the project. The use of composite strip drains for horizontal drainage can provide a reliable, predictable, and cost-effective alternative to the use of a granular drainage blanket.

Strip drains are placed after installation of the wick drains and before placement of the surcharge. They receive the flow from the vertical drains and conduct it horizontally to discharge points at the edge of the surcharge. In most cases the installation of strip drains is less expensive than a granular drainage blanket.

**Horizontal Strip Drain Advantages**

- Lightweight
- Low Cost
- Engineered, Proven Performance
- Simple to Install
- Replaces Granular Materials
HB Wick Drain engineers will be glad to provide more information or assist with specifications and design of an efficient horizontal drainage system.

Above: Strip drain material.
Right: Wick and strip drain installation.
Below: Strip drains installed between rows of wick drains.

Why Should You Choose HB Wick Drains?
As a division of North America’s leader in geotechnical construction, HB Wick Drains has the resources to build your project. Our network of offices and full-service equipment yards means fast mobilization and reduced start-up costs.

From job start-up to installation of the last drain, our attention to quality control helps to ensure that project specifications are achieved. We customize and design our equipment and tooling, helping to ensure that performance and reliability are the best in the industry.

HB Wick Drains has the experience and innovation to assist engineers, contractors, and owners with identifying, developing, and implementing the best horizontal drain solution.