

ICC-ES Evaluation Report


ESR-4078

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<p>DIVISION: 33 00 00— UTILITIES</p> <p>Section: 33 46 00— Subdrainage</p>	<p>REPORT HOLDER: PRINSCO INC.</p>	<p>EVALUATION SUBJECT: PROFORM™ HD</p>	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015 [International Building Code® \(IBC\)](#)
- 2015 [International Residential Code® \(IRC\)](#)

Property evaluated:

- Foundation Drainage

1.2 Evaluation to the following green standards:

- 2015, 2012 and 2008 ICC 700 [National Green Building Standard™](#) (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attribute verified:

- See Section 3.0

2.0 USES

The PROFORM™ HD system is used to provide foundation drainage in accordance with IBC Section 1805.4 and IRC Section R405.

3.0 DESCRIPTION

3.1 General:

The PROFORM™ HD system consists of 10-foot-long (3.05 m) drainage channels, called “lineals”, and connectors which are used to connect the lineals to each other and to the drainage pipe which discharges to an approved area in accordance with the IBC or IRC as applicable.

PROFORM™ HD lineals are manufactured from high density polyethylene (HDPE). The components of the system are described in Sections 3.2 and 3.3. [Figure 1](#) of this report depicts a typical schematic of the PROFORM™ HD system. [Figure 2](#) of this report depicts a section through a typical application of the lineal.

The attributes of the PROFORM™ HD system have been verified as conforming to the provisions of ICC 700-2015 and ICC 700-2012 Section 602.1.3.1 and ICC 700-2008 Section 602.3 for foundation drainage. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.2 PROFORM™ HD Lineal

The PROFORM™ HD lineal is up to 10 feet long (3.05 m), 6.5 inches (165 mm) high and 2.6 inches (66 mm) wide. The lineals are manufactured as hollow corrugated box sections. See [Figure 3](#) of this report for an illustration of a lineal.

Water enters the lineal through slots in the vertical face of the lineal, and passes through the system to outlet fittings which provide the connection of the PROFORM™ HD to an approved discharge area in accordance with the IBC or IRC as applicable.

3.3 PROFORM™ HD Fittings

The PROFORM™ HD fittings are used to connect the lineals to each other and to connect the foundation drain system created by PROFORM™ HD to an approved drainage disposal system. The fittings consist of pre-installed straight couplings, vertical 90° “L” couplings, and adjustable elbows for multiple angles which include 45° and 90°. See [Figure 3](#) of this report for illustrations of these fittings and other miscellaneous fittings and items used in the installation of the PROFORM™ HD system.

The couplings and fittings are manufactured with cleats so that they are snap fitted into the lineals, without the use of solvents or adhesives, to form the foundation drain system.

4.0 DESIGN AND INSTALLATION

The PROFORM™ HD system must be installed in accordance with the manufacturer's published installation instructions and this report. A copy of the manufacturer's published installation instructions must be available at the job site at all times during installation.

See [Table 1](#) for infiltration rates of water into the PROFORM™ HD lineals.

The PROFORM™ HD lineal, gravel or crushed stone, and approved filter membrane material must be placed in accordance with IBC Section 1805.4 or IRC Section R405.1, as applicable. Discharge of the PROFORM™ HD system must be in accordance with IBC Section 1805.4.3 or IRC Section R405.1, as applicable.

5.0 CONDITIONS OF USE:

The PROFORM™ HD system described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 Whenever crossovers are provided through foundations, plans and calculations must be submitted to the code official at the time of permit application, demonstrating the structural integrity of the foundation has been maintained. The calculations and drawings must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's published descriptive literature and installation instructions.
- 6.2 Engineering calculations addressing water infiltration into the PROFORM™ HD system.
- 6.3 Quality documentation in accordance with [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

7.0 IDENTIFICATION

- 7.1 PROFORM™ HD system components must be labeled with the manufacturer's name and this evaluation report number (ESR-4078).
- 7.2 The report holder's contact information is the following:

PRINSCO INC.
1717 16TH STREET NORTHEAST
WILLMAR, MINNESOTA 56201
(320) 222-6800
www.prinsco.com

TABLE 1—DRAIN INFILTRATION RATES

WATER INFILTRATION RATE PER FOOT OF LINEAL (gal/min)					
Feet of Head					
0.5	1.0	1.5	2.0	2.5	3.0
16.7	23.6	28.9	33.4	37.4	40.9

For SI: 1 inch = 25.4 mm, 1 gallon/minute = 0.0631 liter/second

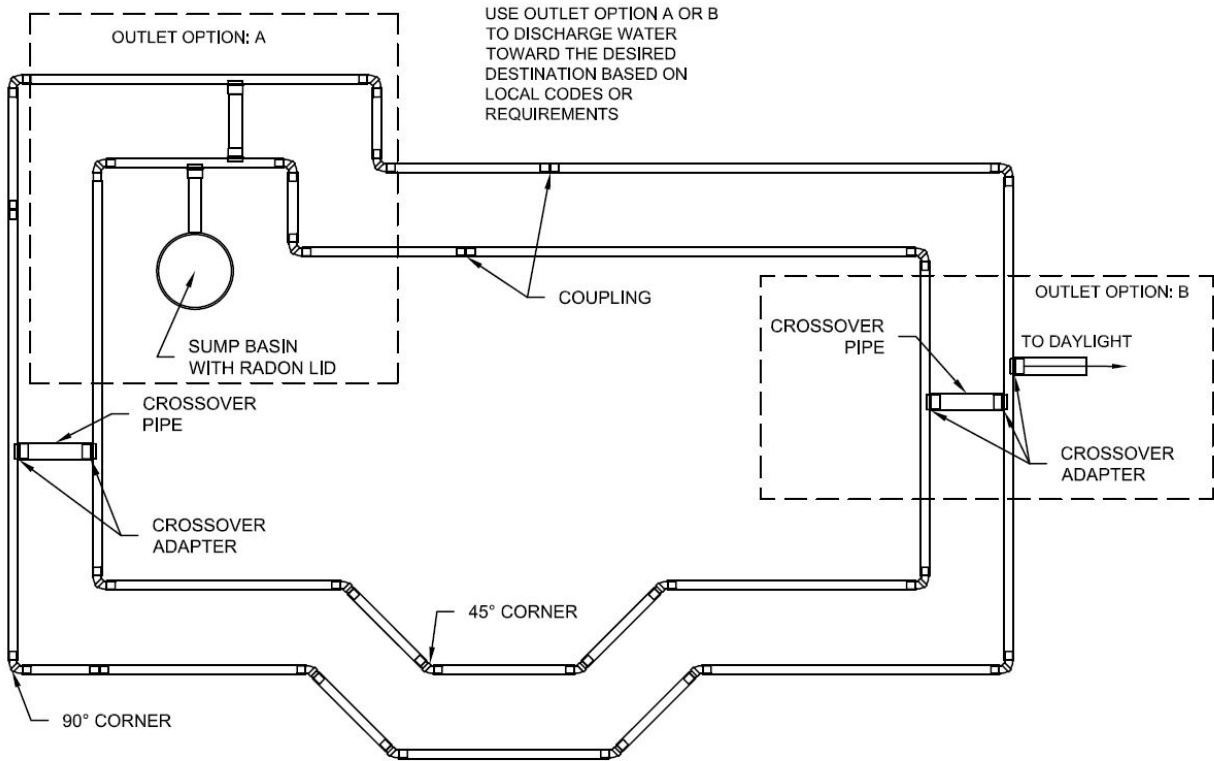


FIGURE 1—SYSTEM SCHEMATIC
Note: For illustrative purposes only

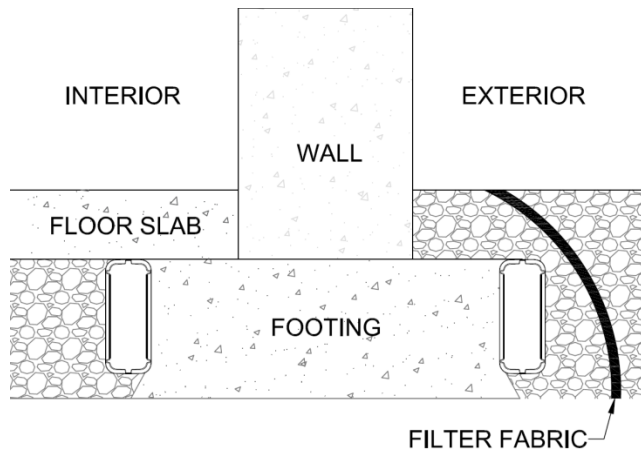


FIGURE 2—INSTALLATION CROSS SECTION
Note: For illustrative purposes only

PROFORM HD FITTINGS & ACCESSORIES









Item	
	6" x 10' PROFORM™ HD
	6" 90° / 45° Elbow
	6" Vertical Elbow
	6" Coupler
	6" End Cap
	4" Crossover Adapter
	8" x 16" Spacer Strap
	8" x 20" Spacer Strap
	8" x 24" Spacer Strap
	Single Outlet
	18" Metal Grade Stake

FIGURE 3—SYSTEM COMPONENTS