SITEDRAIN STRIP **INSTALLATION GUIDE**



800.242.WICK (9425) awd-usa.com

SITEDRAIN Soil Strip Drain - Trench

1. TRENCHING

Dig a 2-4" wide trench using a standard trenching machine, available at local rental outlets. The trench should be approximately 3" deeper than the height of the drain - 9" for 6" tall strip drain.

2. DRAIN INSTALLATION

Place the strip drain oriented vertically against the side of the bottom of the trench. If both subsurface and surface water collection is desired, backfill trench with sand or drainage aggregate and compact. If primarily subsurface drainage is desired, backfill trench with native soil and compact. A minimum of 3" of backfill material should cover the top edge of the drain to protect the drain from UV exposure, aerators and other landscape equipment. Reference Trench -1.

3. SPLICING DRAIN

Strip drains can be spliced together by one of the following methods.

- A. Peel back the filter fabric to expose the first 2 rows of dimples on both ends to be connected. Securely interlock exposed dimples, tapping in place with rubber mallet if needed. Overlap filter fabric flaps and secure joint with AWD Fitting & Joint Tape*. Reference Splice - 3A
- B. Splice Fittings are available for 6" strip drains. Slide one end of drain into each side of the connector. Secure fitting to strip drain using AWD Fitting & Joint Tape. Reference Splice - 3B

4. TEE CONNECTORS (6" Strip Drain)

Strip drains can be installed with branch lines to cover larger surface areas. Tee connectors are used to join straight and branch lines of strip drain together. Place the end section of each branch line 2 inches into the tee connector and secure with AWD Fitting & Joint Tape. Use the stop guide lines on the fitting to ensure the drain inside the connector maintains an open area for water flow. Reference Tee Connector - 6".

5. OUTLET CONNECTIONS

Outlet connections are used to transition the collected water from the strip drain to a 4" smooth wall PVC or 4"corrugated HDPE pipe.

- A. End outlets are available for 6" strip drain only. Reference End Outlet 5A.
- B. Universal end outlets can be used for all strip drain widths. Reference End Outlet 5B.
- C. Universal tee outlets can be used with for all strip drain widths. Reference Tee Outlet 5C.



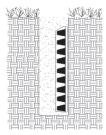




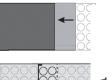
End Outlet - 5B



Tee Outlet - 5C











Splice - 3A



Splice - 3B



Tee Connector - 6"

TB-204



*Any tape designed for underground use is acceptable provided it offers a secure bond.

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SITEDRAIN STRIP



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SITEDRAIN Soil Strip Drain - Walls

SITEDRAIN Strip prefabricated drains can be used alone at the base of a wall or footer as a replacement for perforated pipe and stone drainage systems.

Install SITEDRAIN Strip in a vertical orientation at the base of the wall. Hold in place using mastic, adhesive or mechanical fasterners. Drain must be installed continuously along wall or around perimeter.

Any exposed drain ends should be sealed to prevent soil intrusion into the drainage channel.



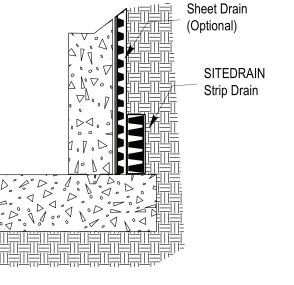
6" Splice Fitting

Connects two sections of SITEDRAIN Strip drain together. Tape edges of splice to strip drain to prevent soil intrusion into the flow channel.



6" End Outlet

End Outlets transition collected water from Strip Drain to 4" pipe. Insert drain into Outlet. Tape fitting edges to drain to prevent soil intrusion into the flow channel.



SITEDRAIN

6" Corner Fitting

Maintains flow around corners. Cut drain at corner and insert each end into the fitting. Tape edges to strip drain to prevent soil intrusion into the flow channel.

AWD Fitting & Joint

Secures fittings to drain and prevents soil intrusion at seams, edges and fitting connections.

TB-204







<u>AWD INSTALLATION DETAIL</u> <u>AWD Strip Drain - Vertical Walls & Footers</u>

SITEDRAIN Strip prefabricated drains can be used alone at the base of a wall or footer as a replacement for perforated pipe and stone drainage systems.

Install SITEDRAIN Strip in a vertical position at the base of the foundation wall. Hold in place using mastic, adhesives or mechanical fasteners. In foundation wall applications, the drain should be installed continuously around the perimeter.

Any exposed drain ends should be sealed to prevent soil intrusion into the drainage channel.

Footing

Concrete

Wall

SITEDRAIN

Strip Drain

Fittings & Accessories



<u>Splice</u> Connects two sections of SITEDRAIN Strip together. Tape edges of splice to drain to prevent soil intrusion.



<u>Corner Guard</u> Maintains flow around corners. Slit fabric, bend drain around corner and tape guard in place to prevent soil intrusion.



End Outlet Outlet transitions SITEDRAIN Strip to 4" pipe. Insert strip drain into outlet. Tape fitting edge to drain to prevent soil intrusion.



Fitting & Joint Tape Used to seal drain edges to prevent soil intrusion and secure fittings before backfill.

Please contact AWD Technical Support at (800) 242-9425 with any questions.

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Concrete

Footing

Wall -

SITEDRAIN

Strip Drain



Installing Strip Drain in Horizontal & Slope Applications

Below are typical installation recommendations associated with installing AWD geocomposite strip drain products in horizontal or slope applications. Please contact AWD for project and/or application-specific recommendations.

Securing strip drain to a soil or aggregate base:

Use 4-6 inch long galvanized nails on approximately 15-foot spacing. Required nail length and spacing may vary depending upon the type of base to which the strip drain is being secured and desired level of security. Nails should have flat heads 1/4-inch to 3/4-inch in diameter. Nails should be placed at the center of the strip drain product and driven through the flat plastic base between rows of dimples until the nail head is flush with the top of the dimples on the strip drain product. Metal or plastic washers may be used.

Securing strip drain to an impermeable base:

For bases that cannot or should not be punctured with nails (such as polymeric liners or waterproofing membranes), the most common methods of securing are gluing, taping, or welding strip drain to the base on approximately 15-foot spacing. Adhesives with high solvent contents should be avoided as they may damage strip drain and/or impermeable base material. Strips of fabric or plastic may also be used as "belt straps", welding the belt directly to the base (per base material manufacturer recommendations) on each side of the strip drain.

Driving equipment over strip drain:

A minimum 6" of self-compacting material (such as aggregate or sand) or a minimum of 6" of compacted material (such as soil) is required to be installed over strip drain products prior to allowing heavy equipment (vehicles, dozers, etc.) to drive over strip drain.

Connecting strip drain at sides:

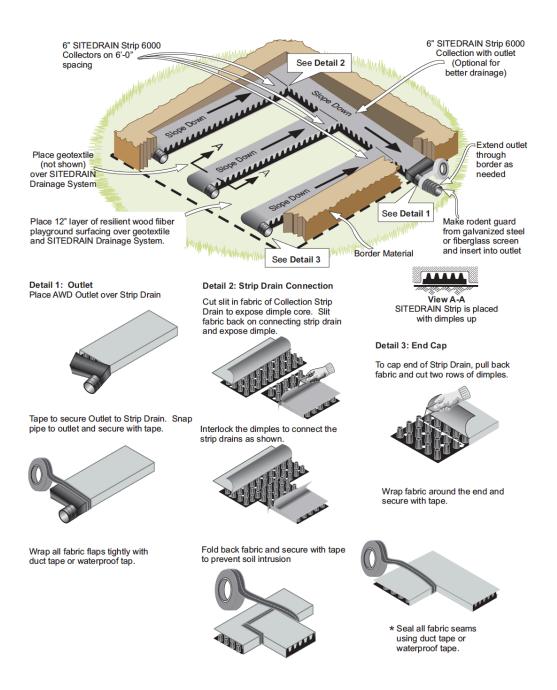
Using a minimum 6" overlap, place the upgradient section over the downgradient section and secure the strip drain sections to each other and the subbase using 4-6 inch long galvanized nails. Required nail length may vary depending upon the type of base to which the strip drain is being secured and desired level of security. Nail should be placed at the center of the connection area and driven through the flat plastic base between rows of dimples until the nail head is flush with the top of the dimples on the upper strip drain section. Nails should have flat heads 1/4-inch to 3/4-inch in diameter. Metal or plastic washers may be used. Additional nails may be used for additional security. Seal exposed core end(s) of connecting strip drain sections with tape or geotextile prior to backfilling. Insure intimate contact is maintained between the connected sections during backfill process.

Please contact AWD Technical Support at (800) 242-9425 with any questions.

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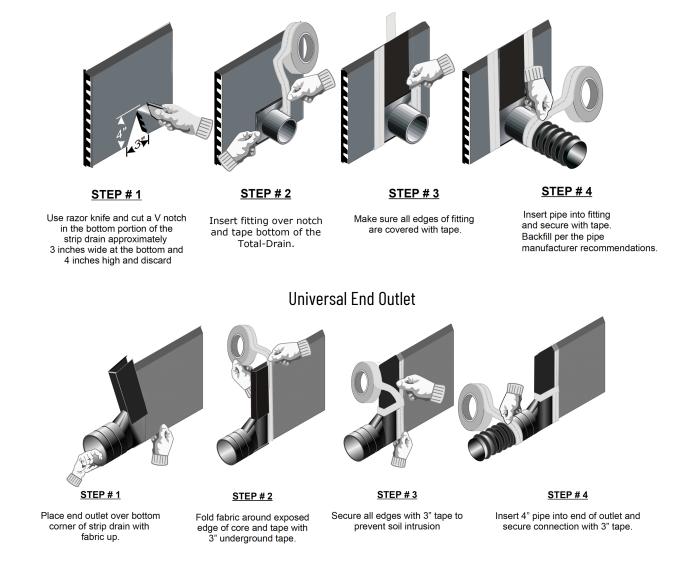
AWD INSTALLATION DETAIL AWD Strip Drain – Playground Applications





AWD INSTALLATION GUIDELINES SITEDRAIN End & Tee Outlets

Universal Tee Outlet



Please contact AWD Technical Support at (800) 242-9425 with any questions.



Tee Outlet & End Outlet Fittings

AWD is a leading manufacturer of geocomposite drainage products in North America, with over 35 years of manufacturing experience.

AWD Tee Outlet and End Outlet fittings are designed to allow for the secure connection of AWD geocomposite drainage products to pipe drainage systems. These fittings have a double bell housing (HUB connection) to allow for connection to either a 4" Sch.40 PVC smooth pipe or 4" HDPE corrugated pipe.

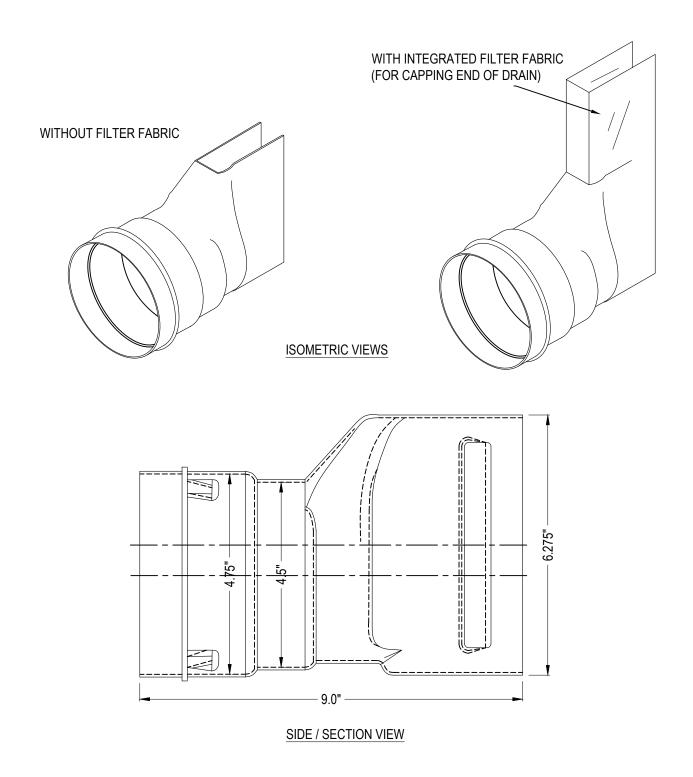
Standard pipe increaser/reducer fittings, available through pipe distributors, may be used to connect to different size pipe systems. Common examples include:

- "Stepping down" to a 3" pipe using a 4" to 3" reducer bushing. The reducer bushing is inserted/cemented into the 4" HUB of the Outlet Fitting, and then the 3" pipe is attached.
- "Stepping up" to a 6" pipe using a short stub of 4" pipe inserted/cemented into the Outlet Fitting to extend the pipe beyond the fitting bell housing, with a 4" to 6" increaser then attached.

End Outlet and Tee Outlet Fittings perform the same function and can be used interchangeably based on outlet pipe system location and design. End Outlet and Tee Outlet Fittings have equivalent maximum outflow rates, which are restricted to the flow capacity of the outlet pipe being connected.

For reference, attached are product data sheets and installation guidelines for AWD Tee Outlet and End Outlet Fittings.

Please contact AWD Technical Support at (800) 242-9425 with any questions.



NOTES:

- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 2. DO NOT SCALE DRAWINGS.
- 3. MATERIAL: HDPE.
- 4. DOUBLE BELL HOUSING FITS 4" SMOOTH (SCH 40 PVC) PIPE OR 4" CORRUGATED (HDPE) PIPE.

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5. AWD ITEM # : 20006, 20007, 20008, AND 20009

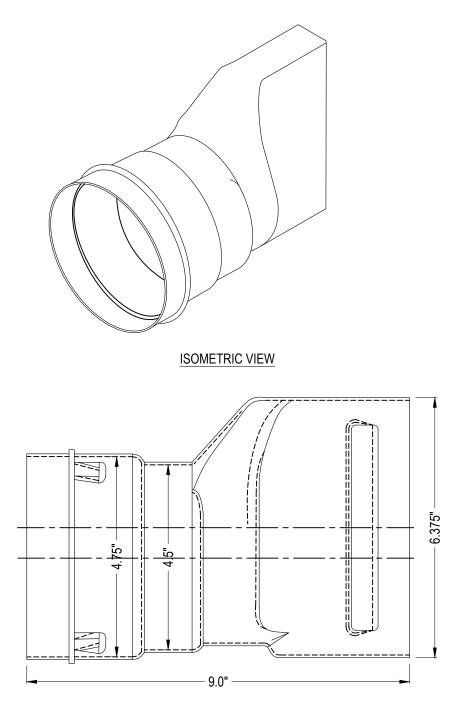


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AWD END OUTLET FITTING DATA SHEET

PREFABRICATED GEOCOMPOSITE DRAINAGE SYSTEM

DRAWN/EDITTED BY :	PROJECT :	REVISION DATE : 12/19/2018	
CHECKED/APRVD BY :	SCALE :	SHEET OF	



SIDE / SECTION VIEW

NOTES:

- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 2. DO NOT SCALE DRAWINGS.
- 3. MATERIAL: HDPE.
- 4. DOUBLE BELL HOUSING FITS 4" SMOOTH (SCH 40 PVC) PIPE OR 4" CORRUGATED (HDPE) PIPE.

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420

5. AWD ITEM # : 20005

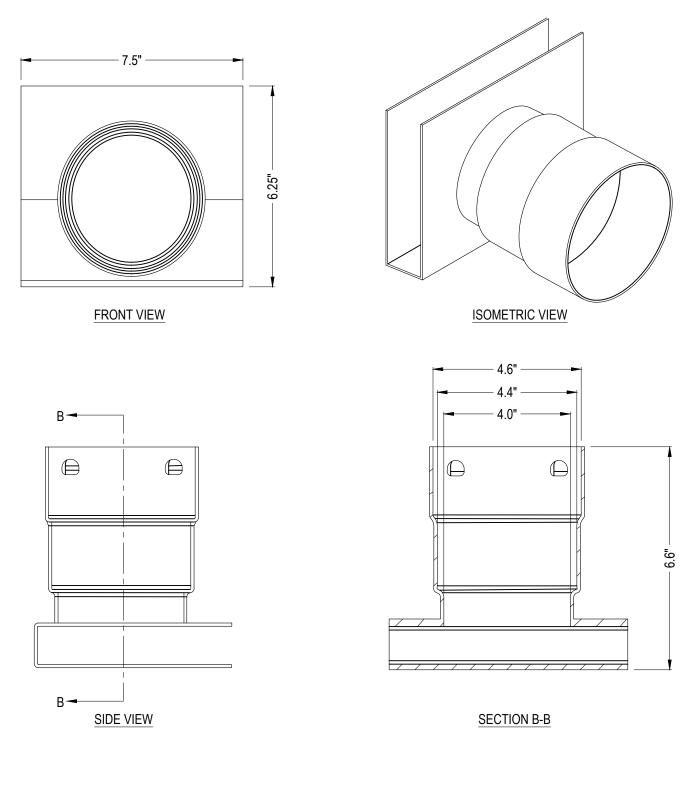


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AWD 6" END OUTLET FITTING DATA SHEET

PREFABRICATED GEOCOMPOSITE DRAINAGE SYSTEM

DRAWN/EDITTED BY :	PROJECT :	REVISION DATE : 12/19/2018	
CHECKED/APRVD BY :	SCALE :	SHEET OF	



NOTES:

- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 2. DO NOT SCALE DRAWINGS.
- 3. MATERIAL: HDPE.
- 4. DOUBLE BELL HOUSING FITS 4" SMOOTH (SCH 40 PVC) PIPE OR 4" CORRUGATED (HDPE) PIPE.

AWD

400

5. AWD ITEM #: 20015, 20016, 20017, 20018, 20019, AND 20024

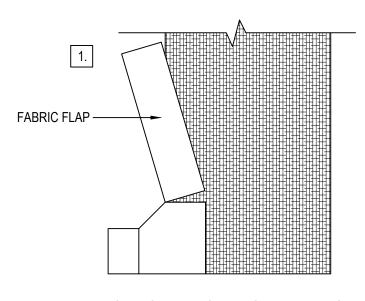


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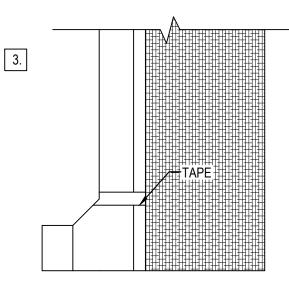
AWD TEE OUTLET FITTING DATA SHEET

PREFABRICATED GEOCOMPOSITE DRAINAGE SYSTEM

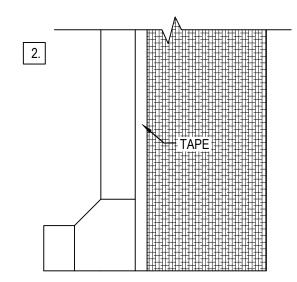
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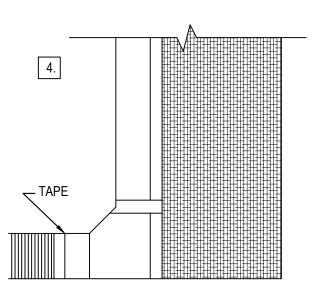
PLACE 'U'-CHANNEL OF END OUTLET FITTING AROUND BOTTOM CORNER OF GEOCOMPOSITE DRAIN WITH FABRIC FLAP EXTENDING UPWARDS.



SECURE ALL FITTING EDGES WITH AWD FITTING & JOINT TAPE TO PREVENT SOIL INTRUSION.



FOLD FABRIC AROUND EXPOSED EDGE OF DRAIN AND SECURE WITH AWD FITTING AND JOINT TAPE.



INSERT 4" PIPE INTO END OUTLET AND SECURE CONNECTION WITH AWD FITTING @ JOINT TAPE. DOUBLE BELL HOUSING ON FITTING ALLOWS SECURE CONNECTION OF 4" SMOOTH OR CORRUGATED PIPE.

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

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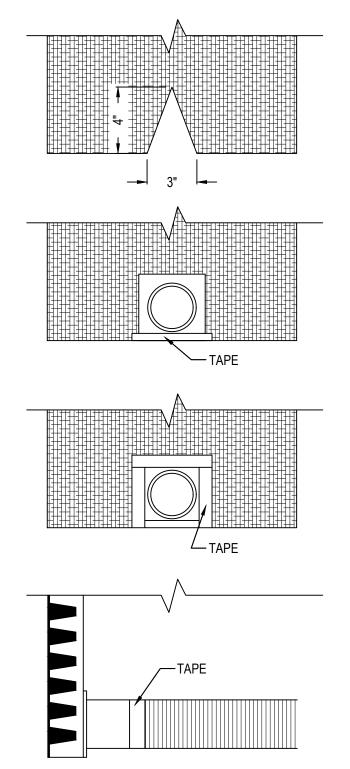
2. DO NOT SCALE DRAWINGS.



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AWD END OUTLET FITTING

300	INSTALLATION INSTRUCTIONS	
DRAWN/EDITTED BY :	PROJECT :	REVISION DATE : 12/19/2018
CHECKED/APRVD BY :	SCALE :	SHEET OF



USE RAZOR KNIFE TO CUT 3"-WIDE X 4"-HIGH 'V'-NOTCH THROUGH GEOCOMPOSITE DRAIN FABRIC AND CORE AT DESIRED TEE OUTLET FITTING LOCATION. DISCARD CUT-OUT SECTION.

PLACE 'U'-CHANNEL OF TEE OUTLET FITTING OVER 'V'-NOTCH AND SECURE BOTTOM EDGE **USING AWD FITTING & JOINT TAPE**

SECURE ALL FITTING EDGES WITH AWD FITTING & JOINT TAPE

INSERT 4" PIPE INTO TEE OUTLET FITTING AND SECURE CONNECTION WITH AWD FITTING & JOINT TAPE. DOUBLE BELL HOUSING ON FITTING ALLOWS SECURE CONNECTION OF 4" SMOOTH OR CORRUGATED PIPE.

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

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2. DO NOT SCALE DRAWINGS.



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AWD TEE OUTLET FITTING

310	INSTALLATION INSTRUCTIONS		
DRAWN/EDITTED BY :	PROJECT :	REVISION DATE : 12/19/2018	
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AWD Technical Bulletin Geo-Outlet Installation



Form a 4-inch diameter round hole in the prefabricated drain (through core and fabric) at the fitting connection location using the Geo Outlet Punch accessory or a standard utility knife.



Place All-Purpose Cement (compatible with both ABS and PVC plastic) on the portion of drainage collector that extends through prefabricated drain



Insert drainage collector through back of prefabricated drain.



Attach retainer ring. Hand squeeze retainer ring to drainage collector to form a seal with prefabricated drain until cement sets (~10 seconds).





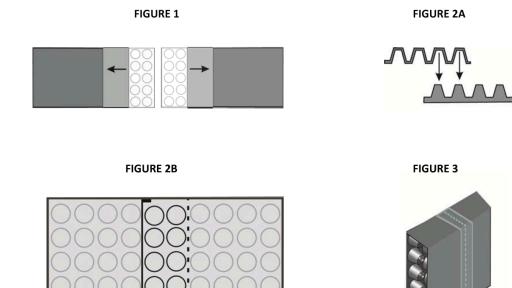
Please contact AWD Technical Support at (800) 242-9425 with any questions.



AWD INSTALLATION DETAIL AWD Strip Drain - In-Line Splice

AWD manufactures various Strip Drain geocomposite drainage products, including SITEDRAIN Strip Series and ExcelDrain Strip Series products. Strip Drain products are available in 6", 12", 18", 24", and 36" roll widths. This installation detail addresses the proper in-line splicing of rolls of Strip Drain to insure a continuous and uninterrupted flow path is maintained.

- 1. Peel back the filter fabric on the two Strip Drains ends to be spliced, exposing the first two rows of dimples on each drainage core (FIGURE 1).
- 2. Interlock the exposed dimples on the upstream drainage core over the exposed dimples on the downstream drainage core (FIGURE 2A & 2B). Tap in place using a rubber mallet to secure connection.
- 3. Overlap filter fabric flaps and secure with 3"-wide underground-rated tape around the joint to prevent soil intrusion (FIGURE 3)



Please contact AWD Technical Support at (800) 242-9425 with any questions.

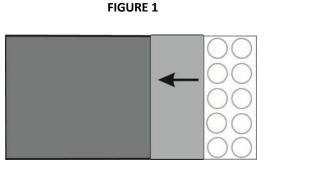


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AWD INSTALLATION DETAIL AWD Strip Drain - End Cap

AWD manufactures various Strip Drain geocomposite drainage products, including SITEDRAIN Strip Series and ExcelDrain Strip Series products. Strip Drain products are available in 6", 12", 18", 24", and 36" roll widths. This installation detail addresses the proper method of capping the end of rolls of Strip Drain.

- 1. At Strip Drain end to be capped, peel back the filter fabric exposing the first two rows of drainage core dimples, using care to avoid tearing fabric (FIGURE 1).
- 2. Cut off and discard the exposed drainage core dimples using a utility knife or shears (FIGURE 2).
- 3. Fold filter fabric flap over trimmed end of drainage core (FIGURE 3).
- 4. Secure filter fabric flap with 3"-wide underground-rated tape to prevent soil intrusion (FIGURE 4).





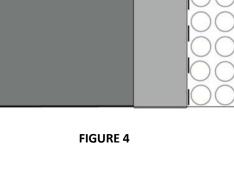
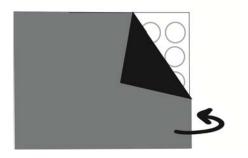


FIGURE 2





Please contact AWD Technical Support at (800) 242-9425 with any questions.



AWD INSTALLATION DETAIL SITEDRAIN Strip Drain - Tee Connection Instructions

A 6" Tee Connector is available to join one run or branch of SITEDRAIN Strip Drain to another.

For 6" strip drain, insert ends of strip drain 2" into each tee connector input. The ends of the strip will be held in place by the retaining clips built into the tee connector. Secure the joints with 3" wide underground tape to prevent soil intrusion.

For 12"-36" strip drain, two 6" tee connectors will be needed for each joint. Using a standard utility knife, cut the top off each 6" tee connector. Slide one tee connector over the bottom and one tee connector over the top of the three strips to be joined, making sure each strip is inserted 2" into each tee connector input. Secure all strip drain joints with 3" wide underground tape to prevent soil intrusion.

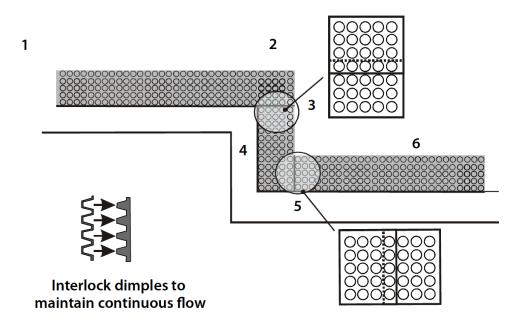


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<u>AWD INSTALLATION DETAIL</u> <u>AWD Strip Drain - Step Down Instructions</u>

- 1. Install SITEDRAIN Strip Drain along the upper footing as shown.
- 2. At the step down, extend the drain beyond the edge of the step to the width of the drain.
- 3. Slit the fabric of the strip drain at the bottom to expose dimples that extend beyond the step down.
- 4. Cut a piece of drain the length of the step down.
- 5. Peel fabric back to expose the dimples on the top end of the step down and interlock with the section of drain that extends beyond the upper step. Cover connection with fabric flap and tape to prevent soil intrusion.
- 6. To continue horizontal installation, cut a slit the width of the drain of the step down drain section. Expose the dimples of the continuing drain and repeat the interlocking with the step down section of drain to maintain flow.



Please contact AWD Technical Support at (800) 242-9425 with any questions.



Geocomposite Handling Requirements

The following are manufacturer requirements for the delivery, storage, and handling of American Wick Drain Corporation (AWD) geocomposite drainage products.

PACKAGING & SHIPPING:

- AWD offers the following packaging and shipping options for geocomposite drainage products
 - Rolls palletized and banded (standard/default shipping method)
 - Rolls loose (upon request)
 - Rolls loose in UV-resistant bags (upon request)

DELIVERY:

- Materials shall be delivered in original, unopened, undamaged packaging bearing manufacturer's name and product identification
- Care must be taken during unloading process to insure materials are not damaged
- Materials shall remain in original packaging until time of installation

STORAGE:

- Store materials in protected environment until time of installation
 - Materials not shipped in UV-resistant bags must be stored indoors or under separate UVprotective cover to protect materials from exposure to direct sunlight
 - UV-resistant bagged materials may be stored in outdoor UV-exposed environments for a cumulative maximum of 180 days

INSTALLATION:

- Limit unpackaged material UV exposure to a cumulative maximum of 14 days during installation
- Do not install materials during high wind events
- Do not install materials when ambient temperatures are below 20 degrees Fahrenheit or above 100 degrees Fahrenheit
- Do not expose materials to chemicals that are strong acids, strong bases, or high in solvents content
- Protect materials from site construction damage, flames, and other environmental conditions that may damage the materials

Please contact AWD Technical Support at (800) 242-9425 with any questions.



Geocomposite Drainage Product Temperature Guidelines

AWD geocomposite drainage products are installed in a variety of applications and conditions. This technical bulletin addresses installation and operational temperature recommendations and restrictions.

Installation Temperature Recommendations:

AWD recommends geocomposite drainage products not be installed when the ambient temperature is below 20°F or above 100°F.

Operational Temperature Restrictions:

AWD geocomposite drainage products should not be installed in applications where the long-term operational temperature is expected to be below -20°F or above 150°F.

Hot-Applied Layer Restrictions:

AWD does not recommend hot-applied layers (i.e. asphalt, hot-mix setting beds, etc.) with application temperatures greater than 200°F be applied directly in contact with geocomposite drainage products.

In instances where the application temperature is above 200°F, AWD recommends a protective layer (such as an asphaltic protection board) or minimum 1″-thick sand layer be used between the geocomposite drain and the hot-applied layer.

Please contact AWD Technical Support at (800) 242-9425 with any questions.