



TABLE OF CONTENTS

| | | | |
|--------------------------------------|----|------------------------------------|----|
| Heavy Duty Agricultural Pipe | 1 | Post Tension Duct | 16 |
| Corrugated Heavy Duty Fittings | 2 | De-watering Vacuum Pipe..... | 16 |
| Heavy Duty Pipe & Tubing | 5 | Accessories..... | 17 |
| Highway Pipe | 6 | Riveted Corrugated Metal Pipe..... | 18 |
| Leach Tubing and Sock Tubing | 7 | Safety Slope End Sections..... | 18 |
| Smooth Flow Pipe | 8 | Tapered Sleeves | 18 |
| WT Pipe..... | 9 | Detention/Retention Systems..... | 19 |
| Smooth Flow Fittings..... | 10 | Storm Water Quality Unit..... | 20 |
| Soil Separators..... | 14 | Eco-Chambers | 21 |
| Sump & Sump Accessories..... | 14 | Technical Data..... | 22 |
| Tri-Wall Pipe..... | 15 | Quality Assurance..... | 23 |
| 2" Tubing..... | 16 | Delivery | 25 |

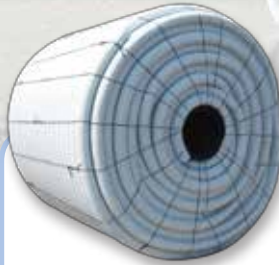


Haviland Drainage strives to be an ecologically minded company. With that endeavor in mind we are producing eco earth friendly products. Many of our products are available with recycled content. Please contact us when certifications are needed for LEED projects or recycled requirements.

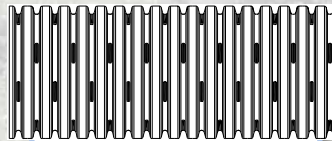
AGRICULTURAL PERFORATION PATTERNS AVAILABLE



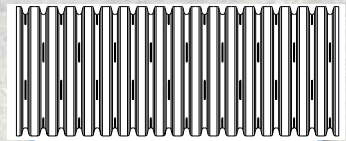
4" x 250' CoEx Staggered



4" x 3250' CoEx Staggered



418 Staggered Slot
1/8" Width



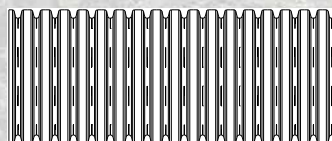
416 Staggered Slot
1/16" Width



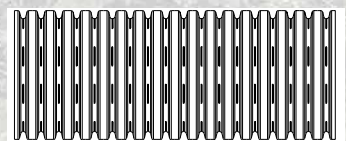
4" x 250' Perf



4" x 3250' Perf



Sand Slot



416 8-Row Slot
1/16" Width

HEAVY DUTY AGRICULTURAL PIPE

Haviland Drainage Products is located in an agricultural community. Therefore, we understand the necessary standards and competitive requirements of the agricultural market. The many types of perforations Haviland offers allows for the maximum drainage in all types of soil without further costs. Black and Co-Extruded tubing are both available. Co-extruded tubing is manufactured with a layer of white plastic on the exterior of the pipe. This layer reflects sunlight, keeping the tubing cooler and strong prior to installation. Special Extra Heavy Duty tubing is also available in 4", 5", and 6" diameters in jumbo coils.

| Size | Length (ft) | Description | Stock |
|------|-------------|-------------------------------|-------|
| 2" | 100 | Perf | N |
| | 100 | Solid | |
| | 500 | Perf | |
| | 500 | Solid | |
| | 5200 | Perf | |
| 3" | 100 | Perf | |
| | 100 | Solid | |
| | 250 | Perf | |
| | 250 | Solid | |
| | 250 | Sand | |
| | 300 | Perf | |
| | 300 | Solid | |
| | 5600 | Solid* | |
| | 5600 | Perf * | |
| | 5600 | Sand * | |
| 4" | 100 | Perf | |
| | 100 | Sand | |
| | 100 | Solid | |
| | 100 | Co-Ex Perf | |
| | 150 | Perf | |
| | 150 | Solid | |
| | 250 | Co-Ex 416 8-Row | |
| | 250 | Co-Ex 418 | |
| | 250 | Co-Ex Sand | |
| | 250 | Co-Ex Solid | |
| | 250 | Co-Ex Staggered | |
| | 250 | Perf | |
| | 250 | Sand | |
| | 250 | Solid | |
| | 3250 | Co-Ex 416 8-Row * | |
| | 3250 | Co-Ex 418 * | |
| | 3250 | Co-Ex Sand * | |
| | 3250 | Co-Ex Staggered * | |
| | 3250 | Extra Heavy Co-Ex Sand * | |
| | 3250 | Extra Heavy Co-Ex 418 * | |
| | 3250 | Extra Heavy Co-Ex Staggered * | |
| | 3250 | Extra Heavy Co-Ex Solid * | |
| | 3250 | Extra Heavy Black Sand * | |
| | 3250 | Extra Heavy Black Staggered * | |
| | 3250 | Black Staggered | |
| | 3250 | Black Sand * | |
| | 3250 | Black Solid * | |
| 5" | 150 | Perf | N |
| | 150 | Sand | |
| | 150 | Solid | |
| | 2150 | Perf * | |
| | 2150 | Sand * | |
| | 2150 | Solid * | |
| | 2150 | Extra Heavy Perf * | |

| Size | Length (ft) | Description | Stock |
|------|-------------|--------------------|-------|
| 6" | 20 | Perf | |
| | 20 | Solid | |
| | 100 | Perf | |
| | 100 | Solid | |
| | 100 | Sand | |
| | 935 | Perf * | |
| | 935 | Solid * | |
| | 1600 | Perf * | |
| | 1600 | Sand * | |
| | 1600 | Solid * | |
| | 1600 | Co-Ex Staggered * | |
| | 1600 | Co-Ex Sand* | |
| 8" | 1600 | Extra Heavy Perf * | N |
| | 1600 | Extra Heavy Sand* | |
| | 20 | Perf | |
| | 20 | Sand | |
| | 20 | Solid | |
| | 620 | Perf * | |
| | 620 | Sand * | |
| | 620 | Solid * | |
| | 875 | Perf * | |
| 10" | 875 | Sand * | |
| | 875 | Solid * | |
| | 20 | Perf | |
| | 20 | Solid | |
| | 20 | Sand | |
| | 580 | Perf * | |
| 12" | 580 | Sand * | N |
| | 580 | Solid * | |
| | 20 | Perf | |
| | 20 | Solid | |
| | 20 | Sand | |
| | 24 | Solid | |
| | 24 | Perf | |
| | 330 | Perf * | |
| | 330 | Sand * | N |
| | 330 | Solid * | |
| | 330 | Solid * | |

* requires specialized handling equipment

NOTE: • See Page 7 for Muck/Leach and Sock Tubing



CORRUGATED HEAVY DUTY FITTINGS



4" Internal Tee



4" Tee



8" Reducing Blind Tee



4" Combo Tee



3" Wye



15" x 15" x 12" x 10" Tee



4" Internal Tap Tee



4" Long Tap Tee



4" Adaptor

| Size | Item Desc. | #/Bag | Stock |
|--------------|--|-------|-------|
| TEES | | | |
| 2" | Tee | 10 | |
| 3" | Tee | 25 | |
| | Short Tap Tee | 50 | |
| | Blind Tee | 25 | |
| | 4" Combo Tee (Internal 4"/External 3") | 25 | |
| 4" | Tee | 25 | |
| | Short Tap Tee | 50 | |
| | Long Tap Tee | 50 | |
| | Internal Tap Tee | 50 | |
| | Blind Tee | 25 | |
| | Internal Tee | 10 | |
| | 4" Combo Tee (Internal 4"/External 3") | 25 | |
| 5" | Tee | 10 | |
| 5x4 | Tee | 10 | |
| 5 | Reducing Blind Tee | 10 | |
| 6" | Tee | 5 | |
| 6x6x5x4 | Tee | 5 | |
| 6 | Blind Tee | 5 | |
| 6 | Double Tee | 5 | |
| 8"x8x6x5x4 | Tee | 5 | |
| 8 | Reducing Blind Tee | 5 | |
| 10"x10x8x6 | Tee | 3 | |
| 10 | Reducing Blind Tee | 3 | |
| 12"x12x10x8 | Tee | 3 | |
| 12 | Reducing Blind Tee | 3 | |
| 15"x15x12x10 | Tee | 1 | |
| 15 | Reducing Blind Tee | 1 | |
| 18"x18x15 | Reducing (Blind) Tee | 1 | |
| Size | Item Desc. | #/Bag | Stock |
| WYES | | | |
| 3" | Wye | 25 | |
| 4" | Wye | 10 | |
| 5" | Reducing Wye | 5 | |
| 6" | Reducing Wye | 5 | |

Haviland's corrugated heavy duty fittings are manufactured to the highest standard of quality. They complement our single wall pipe and tubing, which together provide solutions for many drainage applications.

| Size | Item Desc. | #/Bag | Stock |
|----------------------------|-------------------------------------|-------|-------|
| COUPLERS | | | |
| 2" | Internal Coupler | 50 | |
| | Split Coupler | 50 | |
| 3" | Internal Coupler | 50 | |
| | Split Coupler | 50 | |
| 4" | Internal Coupler (Blow Molded) | 50 | |
| | Internal Coupler (Injection Molded) | 50 | |
| | Snap Coupler | 50 | |
| | Split Coupler | 50 | |
| 5" | Internal Coupler | 25 | |
| | Split Coupler | 50 | |
| 6" | Internal Coupler | 20 | |
| | Snap Coupler | 20 | |
| | Split Coupler | 50 | |
| 8" | Internal Coupler | 10 | |
| | Snap Coupler (Without Tabs) | 5 | |
| | Split Coupler | 30 | |
| 10" | Internal Coupler | 5 | |
| | Snap Coupler (Without Tabs) | 5 | |
| | Split Coupler | 30 | |
| 12" | Internal Coupler | 5 | |
| | Split Coupler | 20 | |
| | Double Bell Coupler | 1 | |
| 15" | Split Coupler | 5 | |
| | Double Bell Coupler | 1 | |
| 18" | Split Coupler | 5 | |
| | Double Bell Coupler | 1 | |
| 24" | Split Coupler | 5 | |
| | Double Bell Coupler | 1 | |
| 30" | Split Coupler | 3 | |
| | Double Bell Coupler | 1 | |
| 36" | Split Coupler | 1 | |
| | Double Bell Coupler | 1 | |
| 42" | Double Bell Coupler | 1 | |
| 48" | Double Bell Coupler | 1 | |
| | MarMac | 1 | |
| 60" | MarMac | 1 | |
| DOWN SPOUT ADAPTORS | | | |
| 2x3x3 | Down Spout Adaptor | 50 | |
| 2x3x4 | Down Spout Adaptor | 50 | |
| 3x4x4 | Down Spout Adaptor | 50 | |
| 4x6x6 | Down Spout Adaptor | 25 | |



CORRUGATED HEAVY DUTY FITTINGS



15" End Cap



4" 402 End Plug



6" x 5" x 4" Reducer



4" End Cap

| Size | Item Desc. | #/Bag | Stock |
|------------------------------|-------------------------|-------|-------|
| ELBOWS & ADAPTORS | | | |
| 3" | Elbow | 25 | |
| | Adaptors | 25 | |
| 4" | Elbow | 25 | |
| | Clay to Plastic Adaptor | 50 | |
| | PVC to Plastic Adaptor | 50 | |
| 5" | Clay to Plastic Adaptor | 50 | |
| 6" | Elbow (6" Blind Tee) | 5 | |
| | Clay to Plastic Adaptor | 20 | |
| 8" | Clay to Plastic Adaptor | 10 | |
| 10" | Clay to Plastic Adaptor | 1 | |
| 12" | Clay to Plastic Adaptor | 1 | |
| 15" | Clay to Plastic Adaptor | 1 | |

| Size | Item Desc. | #/Bag | Stock |
|-----------------|------------|-------|-------|
| REDUCERS | | | |
| 4"x3 | Reducer | 25 | |
| 5"x4 | Reducer | 10 | |
| 6"x5x4 | Reducer | 10 | |
| 8"x6 | Reducer | 5 | |
| 10"x8 | Reducer | 5 | |
| 12"x10 | Reducer | 5 | |
| 15"X12 | Reducer | 5 | |
| 15x12x10 | Reducer | 1 | |
| 18"X15 | Reducer | 1 | |
| 24"X18 | Reducer | 1 | |

| Size | Item Desc. | #/Bag | Stock |
|-----------------|-------------------------------|-------|-------|
| END CAPS | | | |
| 2" | End Cap | 100 | |
| 3" | End Cap | 50 | |
| 4" | End Cap | 50 | |
| 5" | End Cap | 50 | |
| 6" | End Cap | 20 | |
| 8" | End Cap | 10 | |
| 8x4 | Offset End Cap | 10 | |
| 10" | End Cap | 10 | |
| 10x4 | Offset End Cap | 10 | |
| 10X4 | Offset w/ Rubber Grommet | 10 | |
| 12" | End Cap | 5 | |
| 15" | End Cap | 1 | |
| 18" | End Cap (Split Style) | 1 | |
| | Green End Cap (Flat w/Screws) | 1 | |
| 24" | End Cap | 1 | |
| | Green End Cap (Flat w/Screws) | 1 | |
| 30" | End Cap | 1 | |
| 36" | End Cap | 1 | |
| 42" | End Cap | 1 | |
| 48" | End Cap | 1 | |
| 60" | End Cap | 1 | |

| Size | Item Desc. | #/Bag | Stock |
|------------------|---|-------|-------|
| END PLUGS | | | |
| 2" | End Plug | 100 | |
| 3" | 302 End Plug | 100 | |
| | Internal End Plug (Black- Bullet Style) | 50 | |
| 4" | 401 End Plug | 100 | |
| | 402 End Plug | 100 | |
| | 402 Perf End Plug | 100 | |
| | HD White End Plug | 50 | |
| | HD Black End Plug (3" End Cap) | 50 | |
| | Internal End Plug (Black- Bullet Style) | 50 | |
| 5" | 501 End Plug | 100 | |
| | 502 End Plug | 100 | |
| 6" | 601 End Plug | 100 | |
| | 602 End Plug | 100 | |
| | Internal End Plug (Black- Bullet Style) | 50 | |

Haviland's heavy duty pipe and tubing has the strength, flexibility and endurance to fulfill most job requirements. Made of high-density polyethylene plastic, our tubing meets or exceeds ASTM F 405 and ASTM F 667 standards. Our tubing and pipe is available in 2" through 24" diameters in the lengths listed below.

HEAVY DUTY PIPE & TUBING

| Size | Length (ft) | Description | Stock |
|-------------------------------------|-------------|---------------------------|-------|
| HEAVY DUTY PIPE & TUBING | | | |
| 2" | 100 | Perf | |
| | 100 | Solid | |
| | 500 | Perf | |
| | 500 | Solid | |
| 3" | 10 | Perf | |
| | 10 | Perf w/Coupler 10/Bundle | |
| | 10 | Solid | |
| | 10 | Solid w/Coupler 10/Bundle | N |
| | 100 | Perf | |
| | 100 | Solid | |
| | 250 | Perf | |
| | 250 | Solid | |
| | 250 | Sand | |
| | 300 | Perf | |
| | 300 | Solid | |
| | 5600 | Perf * | |
| | 5600 | Solid * | |
| | 5600 | Sand * | |
| 4" | 10 | Perf w/Bell 10/bundle | |
| | 10 | Solid w/Bell 10/bundle | |
| | 100 | Perf | |
| | 100 | Solid | |
| | 100 | Sand | |
| | 150 | Perf | |
| | 150 | Solid | |
| | 250 | Yellow Solid | |
| | 250 | Perf | |
| | 250 | Sand | |
| | 250 | Solid | |
| | 3250 | Staggered * | |
| | 3250 | Sand * | |
| | 3250 | Solid * | N |
| 5" | 150 | Perf | |
| | 150 | Sand | |
| | 150 | Solid | |
| | 2150 | Perf * | |
| | 2150 | Sand * | |
| 6" | 20 | Perf | |
| | 20 | Solid | |
| 8" | 100 | Perf | |
| | 100 | Solid | |
| | 100 | Sand | |
| | 100 | Extra Heavy Solid | |
| | 935 | Perf | |
| | 935 | Solid | |
| | 1600 | Perf * | |
| | 1600 | Sand * | |
| | 1600 | Solid * | |
| | 875 | Perf * | |
| | 875 | Sand * | |
| | 875 | Solid * | |

| Size | Length (ft) | Description | Stock |
|-------------------------------------|-------------|--------------|-------|
| HEAVY DUTY PIPE & TUBING | | | |
| 10" | 20 | Perf | |
| | 20 | Solid | |
| | 20 | Sand | |
| | 580 | Perf * | |
| | 580 | Sand * | |
| | 580 | Solid * | |
| 12" | 20 | Perf | |
| | 20 | Solid | |
| | 20 | Sand | |
| | 24 | Perf | N |
| | 24 | Solid | |
| | 330 | Perf * | |
| | 330 | Sand * | |
| 15" | 330 | Solid * | |
| | 20 | Perf | |
| | 20 | Solid | |
| 18" | 24 | Solid | |
| | 20 | Perf | |
| 24" | 20 | Solid | |
| | 20 | Solid (only) | |

* requires specialized handling equipment

NOTES:

- See Page 7 for Muck/Leach, Pipe and Tubing
- See Page 1 for Extra Heavy Weight Pipe available in Jumbo

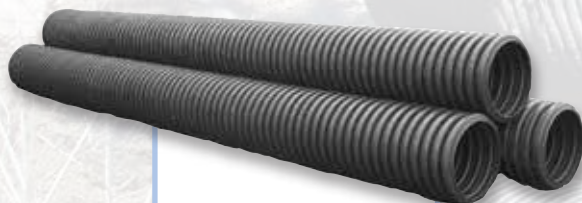


HIGHWAY PIPE

Used mainly for highway related drainage applications, Haviland's highway pipe conforms to AASHTO M 252 and AASHTO M 294 standards. Superior strength, durability and quality are just a few of the many reasons for choosing our highway pipe. Call for special pricing based on job size and location, denoting the applicable job and DOT specification numbers. It is necessary to refer to your local DOT requirements before ordering highway pipe.



10" x 580'



18" x 20' Solid



4" x 3250' Perf



4" x 250' Perf

| Size | Length (ft) | Description | Stock |
|--|-------------|-------------|-------|
| CORRUGATED HIGHWAY PIPE | | | |
| 4" | 250 | Perf | N |
| | 250 | Sock * | |
| | 250 | Solid | |
| | 3250 | Perf | |
| | 3250 | Solid | |
| 6" | 100 | Perf | |
| | 100 | Sock * | |
| | 100 | Solid | |
| | 935 | Perf | |
| | 935 | Solid | |
| | 1600 | Perf | |
| 8" | 20 | Perf | |
| | 20 | Solid | |
| | 620 | Perf | |
| | 620 | Solid | |
| | 875 | Perf | |
| | 875 | Solid | |
| 10" | 20 | Perf | |
| | 20 | Solid | |
| | 580 | Perf | |
| | 580 | Solid | |
| 12" | 20 | Perf | |
| | 20 | Solid | |
| | 330 | Perf | |
| | 330 | Solid | |
| 15" | 20 | Perf | |
| | 20 | Solid | |
| 18" | 20 | Perf | |
| | 20 | Solid | |
| 24" | 20 | Solid | |
| * MDOT approved | | | |
| NOTES: | | | |
| • See Page 7 for Muck/Leach, Pipe and Tubing | | | |
| • See Page 7 for Sock, Pipe and Tubing | | | |
| • See Pages 8 & 9 DOT Smooth Flow Pipe | | | |

LEACH TUBING & SOCK TUBING

| Size | Length (ft) | Description | Stock |
|---------------------------------------|-------------|-------------------------------------|-------|
| LEACH (MUCK) & SOCK TUBING | | | |
| 2" | 100 | Perf w/Sock | N |
| | 500 | Perf w/Sock | N |
| 3" | 100 | Perf w/Sock | N |
| | 250 | Perf w/Sock | N |
| | 250 | Leach | |
| | 300 | Perf w/Sock | N |
| 4" | 10 | Leach w/Bell 10/bundle | |
| | 10 | MI Leach w/stripe & bell 10/bundle | |
| | 20 | Smooth Flow Perf w/Sock w/Bell End | N |
| | 100 | Perf w/Sock | |
| | 100 | Leach | |
| | 100 | Sock Material Only | |
| | 150 | Perf w/Sock | |
| | 250 | Leach | |
| | 250 | Leach w/Sock | N |
| | 250 | Perf w/MI Hwy Sock | |
| | 3250 | Leach* | |
| | 3250 | Leach w/Sock* | N |
| | 3250 | Perf w/Sock* | |
| | 3250 | Sand w/Sock* | N |
| | 3250 | Co-Ex 418 w/Sock * | N |
| 5" | 150 | Leach | |
| | 150 | Leach w/Sock | N |
| | 150 | Perf w/Sock | |
| | 2150 | Leach | |
| | 2150 | Leach w/Sock * | N |
| | 2150 | Perf w/Sock * | N |
| 6" | 20 | Smooth Flow Perf w/Sock w/Bell End | N |
| | 100 | Sock Material Only | |
| | 100 | Leach | |
| | 100 | Leach w/Sock | N |
| | 100 | Perf w/Sock | |
| | 100 | Perf w/ MI Hwy Sock | |
| | 1600 | Perf w/Sock * | |
| | 1600 | Extra Heavy Perf w/Sock * | N |
| | 1600 | Leach w/Sock | N |
| 8" | 1600 | Leach * | |
| | 20 | Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/Sock w/Bell End | N |
| | 20 | Solid | |
| | 620 | Perf w/Sock * | N |
| | 620 | Leach w/Sock * | N |
| | 620 | Leach * | N |
| | 875 | Perf w/Sock* | |
| | 875 | Extra Heavy Perf w/Sock * | N |
| 10" | 875 | Leach * | N |
| | 875 | Leach w/Sock * | N |
| | As Needed | Sock Material Only | |
| | 20 | Perf w/Sock | |
| | 20 | Smooth Flow Perf w/Sock | N |
| 12" | 20 | Smooth Flow Perf w/Sock w/Bell End | N |
| | 580 | Perf w/Sock * | N |
| | As Needed | Sock Material Only | |
| 12" | 20 | Perf w/Sock | |
| | 20 | Smooth Flow Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/ Sock w/Bell End | N |
| | 24 | Smooth Flow Perf w/ Sock* | N |
| | 330 | Perf w/ Sock* | |

For leachfield applications, Haviland offers tubing with an inlet area of 7.7in²/ft, which consists of 4 rows of staggered oblong holes, that are approximately .27" x .62" per corrugation. This large amount of inlet area provides greater drainage than conventional slots. To prevent soil infiltration, a deep understanding of soil types is imperative prior to use. Check health department regulations for permissible use of this product in your area. Tubing with 1/2" diameter perforations is available for special applications.

Sock tubing is a combination of heavy duty pipe and a polyester filter wrap. Primarily used in sandy soils, filter sock ranges in weight from 2.5 to 3.9 oz/yd². Sock wrap is typically purchased pre-wrapped but is also available separately.



8" x 20' Sock



4" x 250' Leach



4" x 250' Sock

| Size | Length (ft) | Description | Stock |
|---------------------------------------|-------------|-------------------------------------|-------|
| LEACH (MUCK) & SOCK TUBING | | | |
| 15" | As Needed | Sock Material Only | |
| | 20 | Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/ Sock w/Bell End | N |
| 18" | As Needed | Sock Material Only | |
| | 20 | Perf w/Sock | N |
| | 20 | Smooth Flow Perf w/Sock | N |
| 24" | As Needed | Sock Material Only | |
| | 20 | Smooth Flow Perf w/Sock | N |
| 30" | As Needed | Sock Material Only | |
| | 20 | Smooth Flow Perf w/Sock | N |
| 36" | As Needed | Sock Material Only | |
| | 20 | Smooth Flow Perf w/Sock | N |

* requires specialized handling equipment

NOTE: • Mini Smooth Flow Socks Also Available With Sock Upon Request

*MDOT Approved Sock Available In All Sizes Upon Request

SMOOTH FLOW PIPE

| Size | Length (ft) | Description | Stock |
|-------------------------|-------------|-------------------------------|-------|
| SMOOTH FLOW PIPE | | | |
| 4" | 20 | Water Tight | N |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock w/ Bell | N |
| | 20 | SF Solid w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 1520 | Pallet/SF Solid w/ Bell | |
| | 1520 | Pallet/SF Perf w/ Bell | |
| | 1520 | Pallet/SF Solid w/ Bell F-477 | |
| 6" | 20 | Water Tight | N |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock w/ Bell | N |
| | 20 | SF Solid w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 780 | Pallet/SF Solid w/ Bell | |
| | 780 | Pallet/SF Solid w/ Bell | |
| | 780 | Pallet/SF Solid w/ Bell F-477 | |
| 8" | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock | N |
| | 20 | SF Sock w/ Bell | |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |
| 10" | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock | N |
| | 20 | SF Sock w/ Bell | N |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |

| Size | Length (ft) | Description | Stock |
|------------|-------------|------------------------|-------|
| 12" | 10 | SF Perf w/ Bell | N |
| | 10 | SF Solid w/ Bell F-477 | |
| | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock | N |
| | 20 | SF Sock w/ Bell | N |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 24 | SF Solid | |
| | 30 | SF Solid | N |
| 15" | 20 | Water Tight | |
| | 9.5 | SF Solid w/ Bell F-477 | |
| | 9.5 | SF Perf w/ Bell | |
| | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock | |
| | 20 | SF Sock w/ Bell | |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 24 | SF Solid | |
| | 30 | SF Solid | |
| | 20 | Water Tight | |

CONTINUED ON NEXT PAGE



36", 48", 60"
Smooth Flow Pipe

Smooth Flow pipe is a corrugated polyethylene pipe with a smooth interior. This combination provides a lightweight, durable product for storm sewers, culverts, and many other applications where high strength and maximum flow are essential. Haviland Smooth Flow pipe is available with plain ends from 8" to 30" and with belled ends from 4" to 60". Smooth Flow pipe conforms to ASTM 2648, AASHTO M-252 or AASHTO M-294 specifications. An installation guide is available specifically for Smooth Flow pipe on our website. As shown below, 4" through 6" pipe can be ordered in pallets.

| Size | Length (ft) | Description | Stock |
|-----------------------------------|-------------|------------------------|-------|
| SMOOTH FLOW PIPE CONTINUED | | | |
| 18" | 10 | SF Solid w/ Bell F-477 | N |
| | 10 | SF Perf w/ Bell | |
| | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock | |
| | 20 | SF Sock w/ Bell | |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 24 | SF Solid | |
| | 30 | SF Solid | |
| | 20 | Water Tight | |
| 24" | 9.25 | SF Perf w/ Bell | N |
| | 9.25 | SF Solid w/ Bell F-477 | |
| | 20 | SF Perf | |
| | 20 | SF Solid | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Sock w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 24 | SF Solid | |
| | 30 | SF Solid | |
| | 20 | Water Tight | |
| 30" | 13.5 | SF Perf w/ Bell | N |
| | 13.5 | SF Solid w/ Bell F-477 | |
| | 20 | SF Perf | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Solid | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |
| 36" | 14.5 | SF Solid w/ Bell F-477 | N |
| | 14.5 | SF Perf w/ Bell | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |
| 42" | 13 | SF Perf w/ Bell | N |
| | 13 | SF Solid w/ Bell F-477 | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |
| 48" | 14.5 | SF Perf w/ Bell | N |
| | 14.5 | SF Solid w/ Bell F-477 | |
| | 20 | SF Perf w/ Bell | |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |
| 60" | 14.5 | SF Solid w/ Bell F-477 | N |
| | 20 | SF Solid w/ Bell F-477 | |
| | 20 | Water Tight | |

Note: All pipe is standard class II perforations. Please notify your sales representative if class I perforations are needed.

| Size | Length (ft) | Description | Stock |
|------------------------------------|-------------|-------------|-------|
| WATER TIGHT PIPE ALL W/BELL | | | |
| 4" | 20 | Water Tight | |
| 6" | 20 | Water Tight | |
| 8" | 20 | Water Tight | |
| 10" | 20 | Water Tight | |
| 12" | 20 | Water Tight | |
| 15" | 20 | Water Tight | |
| 18" | 20 | Water Tight | |
| 24" | 20 | Water Tight | |
| 30" | 20 | Water Tight | |
| 36" | 20 | Water Tight | |
| 42" | 20 | Water Tight | |
| 48" | 20 | Water Tight | |
| 60" | 20 | Water Tight | |



SMOOTH FLOW FITTINGS

| Size | Description | Plain End Stock | Bell End Stock |
|-----------------------|------------------|-----------------|----------------|
| 22 1/2° ELBOWS | | | |
| 4" | SF 22 1/2° Elbow | | |
| 6" | SF 22 1/2° Elbow | | |
| 8" | SF 22 1/2° Elbow | | |
| 10" | SF 22 1/2° Elbow | | |
| 12" | SF 22 1/2° Elbow | | |
| 15" | SF 22 1/2° Elbow | | |
| 18" | SF 22 1/2° Elbow | | |
| 24" | SF 22 1/2° Elbow | | |
| 30" | SF 22 1/2° Elbow | | |
| 36" | SF 22 1/2° Elbow | | |
| 42" | SF 22 1/2° Elbow | N | |
| 48" | SF 22 1/2° Elbow | N | |
| 60" | SF 22 1/2° Elbow | N | N/A |
| 45° ELBOWS | | | |
| 4" | SF 45° Elbow | | |
| 6" | SF 45° Elbow | | |
| 8" | SF 45° Elbow | | |
| 10" | SF 45° Elbow | | |
| 12" | SF 45° Elbow | | |
| 15" | SF 45° Elbow | | |
| 18" | SF 45° Elbow | | |
| 24" | SF 45° Elbow | | |
| 30" | SF 45° Elbow | | |
| 36" | SF 45° Elbow | | |
| 42" | SF 45° Elbow | N | |
| 48" | SF 45° Elbow | N | |
| 60" | SF 45° Elbow | N | N/A |
| 90° ELBOWS | | | |
| 4" | SF 90° Elbow | | |
| 6" | SF 90° Elbow | | |
| 8" | SF 90° Elbow | | |
| 10" | SF 90° Elbow | | |
| 12" | SF 90° Elbow | | |
| 15" | SF 90° Elbow | | |
| 18" | SF 90° Elbow | | |
| 24" | SF 90° Elbow | | |
| 30" | SF 90° Elbow | | |
| 36" | SF 90° Elbow | | |
| 42" | SF 90° Elbow | N | |
| 48" | SF 90° Elbow | N | |
| 60" | SF 90° Elbow | N | N/A |

| Size | Description | Plain End Stock | Bell End Stock |
|-----------------|-------------|-----------------|----------------|
| END CAPS | | | |
| 30" | SF End Cap | | |
| 36" | SF End Cap | | |
| 42" | SF End Cap | | |
| 48" | SF End Cap | | |
| 60" | SF End Cap | N | N/A |

COUPLERS

NOTE: • See page 3 for a full listing of all couplers; diameters and types.

• **OTHER ELBOW DEGREES AVAILABLE BY SPECIAL ORDER**

• **ALL SMOOTH FLOW FITTINGS AVAILABLE IN PLAIN END (PE) AND BELL END (BE). PLEASE CHECK FOR STOCKED OR NON STOCKED ITEMS.**



SF 22 1/2° Elbow



SF 45° Elbow



SF 90° Elbow w/ Bells

Smooth Flow fittings are fabricated from Smooth Flow pipe to maintain good flow characteristics through the fitting. Available with plain or belled ends, Smooth Flow fittings can be custom-fabricated to satisfy the most unique applications. Call your Haviland sales representative to check the price and availability of custom-made items.

| Size | Description | Plain End Stock | Bell End Stock |
|-----------------|-------------|-----------------|----------------|
| REDUCERS | | | |
| 6x4 | SF Reducer | | |
| 8x4 | SF Reducer | | |
| 8x6 | SF Reducer | | |
| 10x4 | SF Reducer | | |
| 10x6 | SF Reducer | | |
| 10x8 | SF Reducer | | |
| 12x4 | SF Reducer | | |
| 12x6 | SF Reducer | | |
| 12x8 | SF Reducer | | |
| 12x10 | SF Reducer | | |
| 15x4 | SF Reducer | | |
| 15x6 | SF Reducer | | |
| 15x8 | SF Reducer | | |
| 15x10 | SF Reducer | | |
| 15x12 | SF Reducer | | |
| 18x6 | SF Reducer | | N |
| 18x8 | SF Reducer | | N |
| 18x10 | SF Reducer | | |
| 18x12 | SF Reducer | | |
| 18x15 | SF Reducer | | |
| 24x6 | SF Reducer | | N |
| 24x8 | SF Reducer | | |
| 24x10 | SF Reducer | | N |
| 24x12 | SF Reducer | | |
| 24x15 | SF Reducer | | |
| 24x18 | SF Reducer | | |
| 30x10 | SF Reducer | | N |
| 30x12 | SF Reducer | | N |
| 30x15 | SF Reducer | | N |
| 30x18 | SF Reducer | | |
| 30x24 | SF Reducer | | |
| 36x12 | SF Reducer | | |
| 36x15 | SF Reducer | | |
| 36x18 | SF Reducer | | |
| 36x24 | SF Reducer | | |
| 36x30 | SF Reducer | | |
| 42x12 | SF Reducer | | N |
| 42x15 | SF Reducer | | N |
| 42x18 | SF Reducer | | N |
| 42x24 | SF Reducer | | |
| 42x30 | SF Reducer | | |
| 42x36 | SF Reducer | | |
| 48x12 | SF Reducer | | N |
| 48x15 | SF Reducer | | N |
| 48x18 | SF Reducer | | N |
| 48x24 | SF Reducer | | N |
| 48x30 | SF Reducer | | N |
| 48x36 | SF Reducer | | N |
| 48x42 | SF Reducer | | N |

| Size | Description | Plain End Stock | Bell End Stock |
|--------------------|---------------|-----------------|----------------|
| 60x24 | SF Reducer | N | N/A |
| 60x30 | SF Reducer | N | N/A |
| 60x36 | SF Reducer | N | N/A |
| 60x42 | SF Reducer | N | N/A |
| 60x48 | SF Reducer | N | N/A |
| 60x60 | SF Reducer | N | N/A |
| DOUBLE TEES | | | |
| 4" | SF Double Tee | | |
| 6" | SF Double Tee | | |
| 8" | SF Double Tee | | |
| 10" | SF Double Tee | | |
| 12" | SF Double Tee | | |
| 15" | SF Double Tee | | |
| 18" | SF Double Tee | N | N |
| 24" | SF Double Tee | N | N |
| 30" | SF Double Tee | N | N |
| 36" | SF Double Tee | N | N |
| 42" | SF Double Tee | N | N |
| 48" | SF Double Tee | N | N |
| 60" | SF Double Tee | N | N |



SF Reducer



SF Large
Diameter Elbow

SMOOTH FLOW FITTINGS

| Size | Description | Plain End Stock | Bell End Stock |
|---|-------------|-----------------|----------------|
| REDUCING & NON-REDUCING TEES | | | |
| 4x4 | SF Tee | | |
| 6x4 | SF Tee | | |
| 6x6 | SF Tee | | |
| 8x4 | SF Tee | | |
| 8x6 | SF Tee | | |
| 8x8 | SF Tee | | |
| 10x4 | SF Tee | | |
| 10x6 | SF Tee | | |
| 10x8 | SF Tee | | |
| 10x10 | SF Tee | | |
| 12x4 | SF Tee | | |
| 12x6 | SF Tee | | |
| 12x8 | SF Tee | | |
| 12x10 | SF Tee | | |
| 12x12 | SF Tee | | |
| 15x4 | SF Tee | | |
| 15x6 | SF Tee | | |
| 15x8 | SF Tee | | |
| 15x10 | SF Tee | | |
| 15x12 | SF Tee | | |
| 15x15 | SF Tee | | |
| 18x4 | SF Tee | | |
| 18x6 | SF Tee | | |
| 18x8 | SF Tee | | |
| 18x10 | SF Tee | | |
| 18x12 | SF Tee | | |
| 18x15 | SF Tee | | |
| 18x18 | SF Tee | | |
| 24x4 | SF Tee | | N |
| 24x6 | SF Tee | | |
| 24x8 | SF Tee | | |
| 24x10 | SF Tee | | |
| 24x12 | SF Tee | | |
| 24x15 | SF Tee | | |
| 24x18 | SF Tee | | |
| 24x24 | SF Tee | | |
| 30x4 | SF Tee | | N |
| 30x6 | SF Tee | | |
| 30x8 | SF Tee | | |
| 30x10 | SF Tee | | |
| 30x12 | SF Tee | | |
| 30x15 | SF Tee | | |
| 30x18 | SF Tee | | |
| 30x24 | SF Tee | | |
| 30x30 | SF Tee | | |
| 36x6 | SF Tee | | |
| 36x8 | SF Tee | | |
| 36x10 | SF Tee | | |
| 36x12 | SF Tee | | |
| 36x15 | SF Tee | | |
| 36x18 | SF Tee | | |
| 36x24 | SF Tee | | |
| 36x30 | SF Tee | | |
| 36x36 | SF Tee | | |

| Size | Description | Plain End Stock | Bell End Stock |
|-------|-------------|-----------------|----------------|
| 42x6 | SF Tee | | |
| 42x8 | SF Tee | | |
| 42x10 | SF Tee | | |
| 42x12 | SF Tee | | |
| 42x15 | SF Tee | | |
| 42x18 | SF Tee | | |
| 42x24 | SF Tee | | |
| 42x30 | SF Tee | | |
| 42x36 | SF Tee | | |
| 42x42 | SF Tee | | |
| 48x6 | SF Tee | | N |
| 48x8 | SF Tee | | N |
| 48x10 | SF Tee | | |
| 48x12 | SF Tee | | |
| 48x15 | SF Tee | | |
| 48x18 | SF Tee | | |
| 48x24 | SF Tee | | |
| 48x30 | SF Tee | | |
| 48x36 | SF Tee | | |
| 48x42 | SF Tee | | |
| 48x48 | SF Tee | | |
| 60x4 | SF Tee | N | N/A |
| 60x6 | SF Tee | N | N/A |
| 60x8 | SF Tee | N | N/A |
| 60x10 | SF Tee | N | N/A |
| 60x12 | SF Tee | N | N/A |
| 60x15 | SF Tee | N | N/A |
| 60x18 | SF Tee | N | N/A |
| 60x24 | SF Tee | N | N/A |
| 60x30 | SF Tee | N | N/A |
| 60x36 | SF Tee | N | N/A |
| 60x42 | SF Tee | N | N/A |
| 60x48 | SF Tee | N | N/A |
| 60x60 | SF Tee | N | N/A |



SF Reducing Tee



SF Double Tee

Smooth Flow fittings are available in 4" through 60" diameters. All diameters are available as: elbows, end caps, reducers, tees and wyes. Please call your Haviland sales representative for special job specific fittings.

| Size | Description | Plain End Stock | Bell End Stock |
|-------------|-------------|-----------------|----------------|
| WYES | | | |
| 4x4 | SF Wye | | |
| 6x4 | SF Wye | | |
| 6x6 | SF Wye | | |
| 8x4 | SF Wye | | |
| 8x6 | SF Wye | | |
| 8x8 | SF Wye | | |
| 10x4 | SF Wye | | |
| 10x6 | SF Wye | | |
| 10x8 | SF Wye | | |
| 10x10 | SF Wye | | |
| 12x4 | SF Wye | | |
| 12x6 | SF Wye | | |
| 12x8 | SF Wye | | |
| 12x10 | SF Wye | | |
| 12x12 | SF Wye | | |
| 15x4 | SF Wye | | |
| 15x6 | SF Wye | | |
| 15x8 | SF Wye | | |
| 15x10 | SF Wye | | |
| 15x12 | SF Wye | | |
| 15x15 | SF Wye | | |
| 18x4 | SF Wye | | |
| 18x6 | SF Wye | | |
| 18x8 | SF Wye | | |
| 18x10 | SF Wye | | |
| 18x12 | SF Wye | | |
| 18x15 | SF Wye | | |
| 18x18 | SF Wye | | |
| 24x4 | SF Wye | | N |
| 24x6 | SF Wye | | N |
| 24x8 | SF Wye | | |
| 24x10 | SF Wye | | |
| 24x12 | SF Wye | | |
| 24x15 | SF Wye | | |
| 24x18 | SF Wye | | |
| 24x24 | SF Wye | | |
| 30x4 | SF Wye | N | N |
| 30x6 | SF Wye | N | N |
| 30x8 | SF Wye | N | N |
| 30x10 | SF Wye | N | N |
| 30x12 | SF Wye | | N |
| 30x15 | SF Wye | | N |
| 30x18 | SF Wye | | N |
| 30x24 | SF Wye | | N |
| 30x30 | SF Wye | | N |
| 36x6 | SF Wye | N | N |
| 36x8 | SF Wye | | |
| 36x10 | SF Wye | | |
| 36x12 | SF Wye | | |
| 36x15 | SF Wye | | |
| 36x18 | SF Wye | | |
| 36x24 | SF Wye | | |
| 36x30 | SF Wye | | |
| 36x36 | SF Wye | | |

| Size | Description | Plain End Stock | Bell End Stock |
|-------|-------------|-----------------|----------------|
| 42x42 | SF Wye | N | N |
| 48x12 | SF Wye | N | N/A |
| 48x15 | SF Wye | N | N/A |
| 48x18 | SF Wye | N | N/A |
| 48x24 | SF Wye | N | N/A |
| 48x30 | SF Wye | N | N/A |
| 48x36 | SF Wye | N | N/A |
| 48x42 | SF Wye | N | N |
| 48x48 | SF Wye | N | N/A |
| 60x4 | SF Wye | N | N/A |
| 60x6 | SF Wye | N | N/A |
| 60x8 | SF Wye | N | N/A |
| 60x10 | SF Wye | N | N/A |
| 60x12 | SF Wye | N | N/A |
| 60x15 | SF Wye | N | N/A |
| 60x18 | SF Wye | N | N/A |
| 60x24 | SF Wye | N | N/A |
| 60x30 | SF Wye | N | N/A |
| 60x36 | SF Wye | N | N/A |
| 60x42 | SF Wye | N | N/A |
| 60x48 | SF Wye | N | N/A |
| 60x60 | SF Wye | N | N/A |



SOIL SEPARATORS

SUMPS & SUMP ACCESSORIES

In leachfield systems where lack of soil infiltration is essential, we offer non-biodegradable soil separators. These separators are available in several sizes and lengths for your convenience.

| Width (in) | Length (ft) | Color | Oz/yd2 |
|------------------------|-------------|-------|--------|
| SOIL SEPARATORS | | | |
| 24 | 1500 | white | 0.50 |
| 36 | 300 | white | 0.50 |
| 36 | 1500 | white | 0.50 |
| 48 | 1500 | white | 0.50 |
| 60 | 1500 | white | 0.50 |
| 72 | 1500 | white | 0.50 |

| Specification | Test Method | Soil Separator |
|--|-------------|----------------------|
| <i>Fiber</i> | | <i>Polypropylene</i> |
| Weight (Ox/yd2) Applied | ASTM D-3776 | 0.50 |
| "Thickness, in (mm)" | | 0.10 |
| "Mullen Burst, p.s.i. (kpa)" | ASTM D3786 | 20 |
| Air Permeability | ASTM D-737 | 800 |
| Trapezoid Tear | ASTM D-4533 | n/a |
| Water Permeability by Permittivity s(-1) | ASTM D-4491 | n/a |
| "AOS, US sieve" | ASTM D-4751 | 20 |
| "AOS, (UM)" | ASTM D-4751 | 840 |






| Size | Item Description | Qty./Bag |
|-------------------------------------|---------------------------|----------|
| SUMPS & SUMP ACCESSORIES | | |
| 16x24 | Sump | 1 |
| 16x30 | Sump | 1 |
| 18x24 | Sump | 1 |
| 18x30 | Sump | 1 |
| 16" | HD Solid Locking Sump Lid | 5 |
| 16" | HD Locking Sump Lid | 5 |
| 18" | Solid Locking Sump Lid | 5 |
| 18" | HD Locking Sump Lid | 5 |
| 18" | HD Non-Locking Sump Lid | 5 |
| 18" | Radon Sump Lid | 1 |

Molded from polyethylene, Haviland sump liners are lightweight, durable, easy to install and completely corrosion proof. Pre-formed collars and flat molded panels allow quick and convenient connections. Sump lids twist on without the use of bolts or fasteners and are available in solid and slotted styles.



TRI-WALL PIPE

| Size | Length (ft) | Description | Hole Diameter |
|---|-------------|-----------------|---------------|
| TRI-WALL PIPE | | | |
| 3" | 1380 | Tri-Wall Solid | |
| | 1380 | Tri-Wall 2 Hole | 1/2" |
| 4" | 900 | Tri-Wall Solid | |
| | 900 | Tri-Wall 2 Hole | 1/2" |
| | 900 | Tri-Wall 4-6-8 | 5/8" |
| | 900 | Tri-Wall 4-8-12 | 5/8" |
| 6" | 390 | Tri-Wall Solid | |
| | 390 | Tri-Wall 2 Hole | 1/2" |
|    | | | |
| 2-Hole 4-6-8 4-8-12 | | | |

Tri-Wall pipe is a three layered high density polyethylene sewer and drain pipe. With a welded bell for a consistent fit, the product is truly revolutionary. It provides better impact resistance, added strength and is easier to handle than conventional sewer and drain pipe. Consisting of a white exterior and black interior, tri-wall pipe meets or exceeds ASTM F 810 when installed in accordance to ASTM F 481. It is available in 3", 4" and 6" diameter, in 10' lengths and bundled in pallets. Thirty pallets can be shipped per truckload on 53' trailers. 4" 2 Hole Tri-Wall is available with 5/8" holes upon special request.



4" Tri-Wall Bell End



3" x 1380' Tri-Wall Perf



4" x 900' Tri-Wall Solid



2" TUBING, POST TENSION DUCT & DE-WATERING PIPE

Typically used for drainage and irrigation, 2" tubing is a single wall corrugated pipe made of high density polyethylene. Excellent quality makes this product a top choice for many landscaping projects.

Post Tensioning Duct is an extra heavy walled corrugated tubing used to encase steel bridge reinforcements. Because each application is unique, please call for pricing and availability.

Haviland's De-watering Vacuum pipe is a heavy wall corrugated tubing. It is available in 2", 3", 4", 5", 6", and 8" diameters, and in perf or sock styles. Contact your friendly sales representative for more information on these products.

| Size | Length (ft) | Description | Stock |
|--|-------------|-----------------|-------|
| POST TENSIONING DUCT & DE-WATERING PIPE | | | |
| 2" | 100 | Solid | |
| | 100 | Perf | |
| | 500 | Solid | N |
| | 500 | Perf | N |
| | 500 | Post Tensioning | |
| 3" | 5600 | Solid | |
| 4" | 3250 | Solid | |
| 5" | 2150 | Solid | |
| | 2150 | Perf | |
| 6" | 935 | Solid | |
| | 935 | Perf | |
| | 1600 | Solid | |
| | 1600 | Perf | |
| 8" | 620 | Solid | |
| | 620 | Perf | |
| | 875 | Solid | |
| | 875 | Perf | |
| NOTE: Must Be Used With Split Couplers | | | |



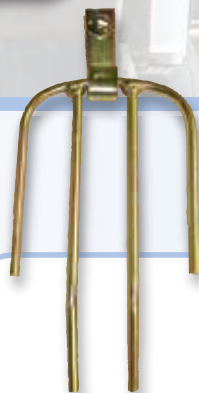
2" x 100' Solid



8" x 20' Dewatering Pipe



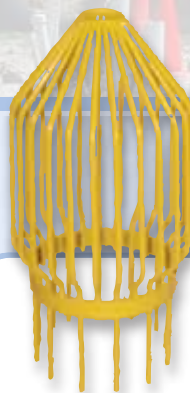
24" Green Lid



4" Finger Animal Guard



12" Aluminum Animal Guard



8" Bar Guard Intake



Surface Inlet

From yellow tubing to animal guards, Haviland has many accessories to meet your drainage needs. Call a Haviland Drainage Sales representative for advice on proper applications.

ACCESSORIES

| Size | Description | Stock |
|-----------------------------|---------------------------|-------|
| ANIMAL GUARDS | | |
| 4" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| | Plastic Animal Guard | |
| | Steel Finger Animal Guard | |
| 6" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| | Plastic Animal Guard | |
| | Steel Finger Animal Guard | |
| 8" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| | Plastic Animal Guard | |
| | Screen Animal Guard | |
| 10" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| | Steel Finger Animal Guard | |
| 12" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| 15" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| 18" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| 21" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| 24" | Aluminum Animal Guard | |
| | Bar Guard Intake | |
| 30" | Aluminum Animal Guard | N |
| | Bar Guard Intake | N |
| Size | Description | Stock |
| ROUND PLASTIC GRATES | | |
| 4" | Round Plastic Grate | |
| 6" | Round Plastic Grate | |
| 8" | Round Plastic Grate | |
| 12" | Round Plastic Grate | |
| 15" | Round Plastic Grate | |
| 18" | Round Plastic Grate | |
| 24" | Round Plastic Grate | |

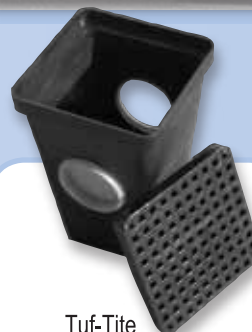
| Size | Description | Stock |
|---------------------------------|---------------------------|-------|
| SURFACE INLET STRUCTURES | | |
| 6x1 | Surface Inlet | |
| 6x 5/16 | Surface Inlet | |
| 6 | Black Solid Surface Inlet | |
| 6 | Surface Inlet Tee | |
| 6 | Hickenbottom Orifice | |
| 8x1 | Surface Inlet | |
| 8x5/16 | Surface Inlet | |
| 8 | Surface Inlet Tee | |
| 8 | Hickenbottom Orifice | |
| 10x1 | Surface Inlet | |
| 10x5/16 | Surface Inlet | |
| 10 | Surface Inlet Tee | |
| 12x1 | Surface Inlet | |
| 12x5/16 | Surface Inlet | |
| 12 | Surface Inlet Tee | |
| Size | Description | Stock |
| PLASTIC END SECTIONS | | |
| 12" / 15" | Plastic End Section | |
| 18" | Plastic End Section | |
| 24" | Plastic End Section | |
| 30" / 36" | Plastic End Section | |
| Size | Description | Stock |
| ACCESSORIES | | |
| 15 1/2x11x11 | Bull Run Valve w/Key | |
| | Tuf-Tites | |
| | Tile Tape | |
| | Ball of Twine | |
| 4' | Tile Probe | |
| 5' | Tile Probe | |
| 6' | Tile Probe | |
| | Tile Probe Tip | |



12" Round Plastic Grate



Bull Run Valve



Tuf-Tite



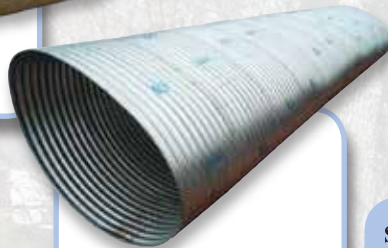
12" / 15" Plastic End Section

RIVETED CORRUGATED, GALVANIZED & ALUMINIZED METAL PIPE

SAFETY SLOPE, END SECTIONS & TAPERED SLEEVES



36" x 20' 16 Gauge



71" x 47" x 24' Pipe Arch

Many federal regulations require end sections to have low slopes and safety bars. Haviland safety slope end sections, used with corrugated metal pipe, meet or exceed these specifications.

Galvanized Metal end sections can be used in conjunction with plastic or metal pipe. Our expert design typically results in easier installation and reduced maintenance costs. Please note when ordering: end sections require longer straps when installed with plastic pipe.

Also available are tapered sleeves. Tapered sleeves allow end sections to be used with concrete pipe. Fabricated from high quality galvanized metal, these items are very durable. Please call for sizes and availability.



18" 6:1 Safety Slope End Section



12" / 15" Plastic End Section



18" End Section 16 Gauge



18" Tapered Sleeve

Riveted corrugated metal pipe is available in 2' increments of 16 gauge through 8 gauge annular riveted styles. It is typically used for culverts, bridge work, conduits, and storm sewers. Ideal for limited headroom conditions, arched pipe is also available. 6" spiral pipe is offered in 16 and 18 gauge.

| Size | Description | Stock |
|--|------------------------------|-------|
| SAFETY SLOPE & END SECTIONS | | |
| 15" | 4:1 Safety Slope End Section | N |
| 18" | 4:1 Safety Slope End Section | N |
| 21" | 4:1 Safety Slope End Section | N |
| 24" | 4:1 Safety Slope End Section | N |
| 30" | 4:1 Safety Slope End Section | N |
| 36" | 4:1 Safety Slope End Section | N |
| 15" | 6:1 Safety Slope End Section | N |
| 18" | 6:1 Safety Slope End Section | |
| 21" | 6:1 Safety Slope End Section | |
| 24" | 6:1 Safety Slope End Section | |
| 30" | 6:1 Safety Slope End Section | N |
| 36" | 6:1 Safety Slope End Section | N |
| 15" | Safety Slope End Sect W/Bar | |
| 18" | Safety Slope End Sect W/Bar | |
| 24" | Safety Slope End Sect W/Bar | |
| 30" | End Section 14 GA | |
| 36" | End Section 14 GA | |
| 6" | End Section 16 GA | |
| 8" | End Section 16 GA | |
| 10" | End Section 16 GA | |
| 12" | End Section 16 GA | |
| 15" | End Section 16 GA | |
| 18" | End Section 16 GA | |
| 21" | End Section 16 GA | |
| 24" | End Section 16 GA | |
| 17x13 | End Section 16 GA | |
| 21x15 | End Section 16 GA | |
| 24x18 | End Section 16 GA | |
| 28x20 | End Section 16 GA | |
| 35x24 | End Section 14 GA | |
| Size | Description | Stock |
| PLASTIC END SECTIONS | | |
| 12" / 15" | Plastic End Section | |
| 18" | Plastic End Section | |
| 24" | Plastic End Section | |
| 30" / 36" | Plastic End Section | |

DETENTION / RETENTION SYSTEMS

PRODUCT FEATURES

Subsurface detention/retention systems are often used as a more efficient use of land, rather than the use of a pond. A pond takes up a large amount of space, rendering it unusable for anything other than storm water storage, whereas the use of a subsurface system leaves the surface land available to be developed. Often times retention/detention ponds have many pit falls such as: safety concerns, stagnate water, lack of available ground space for development, etc. The use of a subsurface system alleviates most or all of those concerns.

Benefits of Subsurface Detention/Retention Systems are, but not limited to:

- Effective use of developable land
- Reduction of safety concerns/hazards
- H20 & H25 Loading capacities
- Cost Effective
- Can be customized
- Ease of maintenance
- Long term durability

Haviland Drainage Products is happy to work with you and your engineer in developing the best subsurface system to suit your needs, in 12" through 60".



Custom Made Structure



Custom Made
24" SF Header

CUSTOM SMOOTH FLOW & GALVANIZED METAL STRUCTURE FABRICATION

Structures can be fabricated to suit your storm water drainage needs, from pond overflow to complex manifold systems. Please speak with you Haviland representative regarding customized pricing and availability. Structures can be fabricated out of either smooth flow pipe 4" – 60" or galvanized metal pipe 6" – 84".

STORM WATER QUALITY UNIT



| Product Numbers | Diameter | | Length | | Inlet Size | | Outlet Size | | Treated Flow Rate* | | Sed. Vol. | | Floatable Vol. | | Sieve Size |
|-----------------|----------|--------|--------|------|------------|-------|-------------|-------|--------------------|-------|-----------------|-------------------|-----------------|-------------------|------------|
| | in | (mm) | ft | (m) | in | (mm) | in | (mm) | cfs | (l/s) | ft ³ | (m ³) | ft ³ | (m ³) | |
| SWQU 36X20-A | 36 | (900) | 20 | (6) | 10 | (250) | 10 | (250) | 1.5 | (43) | 64 | (2) | 29 | (1) | 140 |
| SWQU 36X40-A | 36 | (900) | 40 | (12) | 10 | (250) | 10 | (250) | 3.1 | (89) | 135 | (4) | 62 | (2) | 140 |
| SWQU 36X20-B | 36 | (900) | 20 | (6) | 10 | (250) | 10 | (250) | .075 | (21) | 64 | (2) | 29 | (1) | 200 |
| SWQU 36X4-B | 36 | (900) | 40 | (12) | 10 | (250) | 10 | (250) | 1.5 | (43) | 135 | (4) | 62 | (2) | 200 |
| SWQU 42X20-A | 42 | (1050) | 20 | (6) | 12 | (300) | 12 | (300) | 1.7 | (49) | 86 | (2) | 40 | (1) | 140 |
| SWQU 42X40-A | 42 | (1050) | 40 | (12) | 12 | (300) | 12 | (300) | 3.7 | (106) | 182 | (5) | 84 | (2) | 140 |
| SWQU 42X20-B | 42 | (1050) | 20 | (6) | 12 | (300) | 12 | (300) | 0.8 | (23) | 86 | (2) | 40 | (1) | 200 |
| SWQU 42X40-B | 42 | (1050) | 40 | (12) | 12 | (300) | 12 | (300) | 1.8 | (51) | 182 | (5) | 84 | (2) | 200 |
| SWQU 48X20-A | 48 | (1200) | 20 | (6) | 12 | (300) | 12 | (300) | 2.3 | (66) | 121 | (3) | 60 | (2) | 140 |
| SWQU 48X40-A | 48 | (1200) | 40 | (12) | 12 | (300) | 12 | (300) | 4.8 | (137) | 255 | (7) | 128 | (4) | 140 |
| SWQU 48X20-B | 48 | (1200) | 20 | (12) | 12 | (300) | 12 | (300) | 1.1 | (31) | 121 | (3) | 60 | (2) | 200 |
| SWQU 48X40-B | 48 | (1200) | 40 | (12) | 12 | (300) | 12 | (300) | 2.4 | (69) | 255 | (7) | 128 | (4) | 200 |
| SWQU 60X20-A | 60 | (1500) | 20 | (6) | 15 | (375) | 15 | (375) | 2.9 | (83) | 390 | (11) | 88 | (2) | 140 |
| SWQU 60X40-A | 60 | (1500) | 20 | (6) | 15 | (375) | 15 | (375) | 6.2 | (177) | 186 | (5) | 186 | (5) | 140 |
| SWQU 60X20-B | 60 | (1500) | 20 | (6) | 15 | (375) | 15 | (375) | 1.4 | (40) | 390 | (11) | 88 | (2) | 200 |
| SWQU 60X40-B | 60 | (1500) | 40 | (12) | 15 | (375) | 15 | (375) | 3.1 | (89) | 390 | (11) | 186 | (5) | 200 |

140 Sieve is equal to a particle size of 0.0042" (0.106mm)

200 Sieve is equal to a particle size of 0.0030" (0.075mm)

*Flow Rate subject to change. Please call for up to date information.



ecoChamber

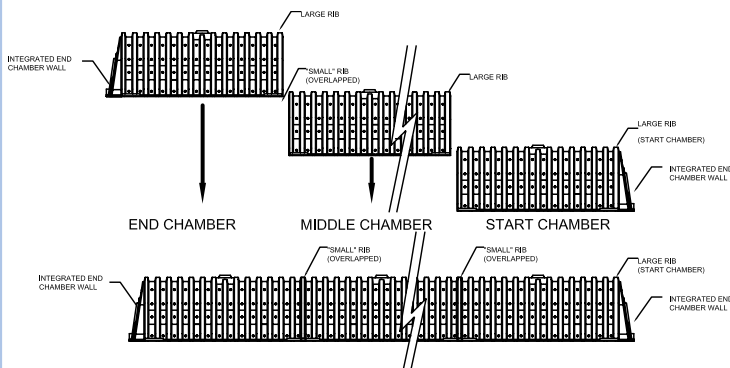
SUBSURFACE STORMWATER MANAGEMENT & DETENTION-RETENTION-RECHARGE

PRODUCT FEATURES

- Maximize land utilization with ecoChamber's underground stormwater storage system.
- Light weight - Two people can quickly and easily install chambers.
- Eco-3052 Chamber's unique design will accept 24" HDPE.
- Eco-2036 Chamber's unique design will accept 15" HDPE.
- High impact resistant HDPE material.
- Arch design - Proven geometric design for optimal H-20 live loads and deep burial loads.
- Re-engineering is not required when considering as an alternate to similar chamber products.
- High storage capacity reduces cost and maximizes land usage.
- ecoChambers are used for commercial, municipal and residential applications.
- ecoChambers have integrated end caps (no extra parts).
- Each Chamber has 5/8" diameter drain holes along each side to increase lateral flow during extreme storm events.
- Each Chamber has interlocking connections with adjacent chambers.
- ecoChambers meet the HDPE material cell classification of 445500 as defined by ASTM D3350 with ASTM F2136 avg stress crack resistance exceeding 24 hrs.

ecoChambers are an ecologically friendly product and contain no less than 50% recycled HDPE materials, which enhances ability to obtain LEED points.

ASSEMBLY SEQUENCE



Each Chamber has interlocking connections with adjacent chambers for easy installation.

ECO-2036

Size (W x H x Installed L): 36" (914 mm) x 20" (508 mm) x 76" (1930 mm)

Chamber Storage Volume: 21 f³ (.59 m³) or 3.31 f³/Lf (.3 m³/m)

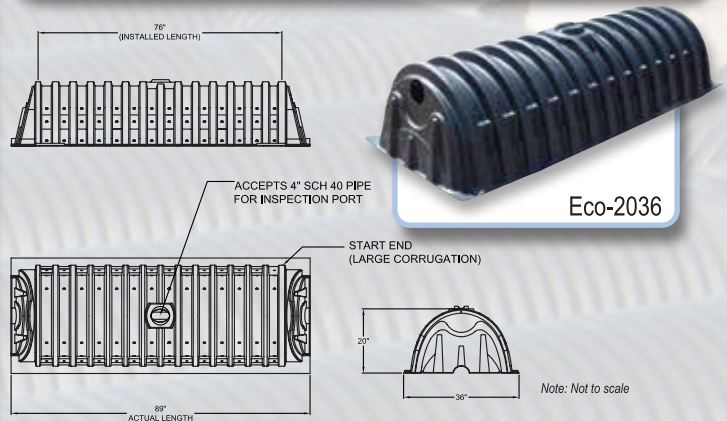
Installed Storage*: 36.3 f³ (1.05 m³) or 5.7 f³/Lf (.54 m³/m)

Leaching Port Area: 31.8 in² (205.2 cm²)

Weight: Approximately 35 lbs.

Shipping: Up to 700 chambers (> 25,500f³ installed storage) per truck load.

* Assumes 6" (150 mm) of stone below and around chambers and 40% stone porosity



ECO-3052

Size (W x H x Installed L): 52" (1340 mm) x 30.5" (775 mm) x 75" (1905 mm)

Chamber Storage Volume: 46.6 f³ (1.31 m³) or 7.4 f³/Lf (.69 m³/m)

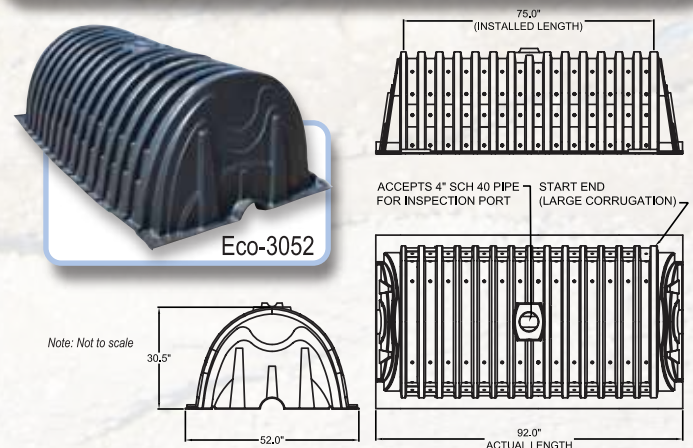
Installed Storage*: 70.0 f³ (2.0 m³) or 11.2 f³/Lf (1.05 m³/m)

Leaching Port Area: 45.9 in² (296.4 cm²)

Weight: Approximately 65 lbs.

Shipping: Up to 420 chambers (> 29,900 f³ installed storage) per truck load.

* Assumes 6" (150 mm) of stone below and around chambers and 40% stone porosity



TECHNICAL DATA SHEET

SMOOTH FLOW PIPE NOMINAL DIAMETER (I.D.)

| | 4" | 6" | 8" | 10" | 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 60" |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|
| WEIGHT Pounds Per Foot | 0.49 | 0.94 | 1.54 | 2.29 | 3.53 | 5.15 | 7.00 | 11.19 | 16.10 | 24.72 | 34.84 | 46.31 | 68.91 |
| INSIDE DIAMETER (Nominal) | 4" | 6" | 8" | 10" | 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 60" |
| OUTSIDE DIAMETER (Corrugation) | 4.6" | 6.8" | 9.5" | 11.75" | 14.5" | 17.5" | 21.3" | 27.9" | 35.5" | 41.8" | 48.5" | 53.5" | 67.5" |
| OUTSIDE DIAMETER (Bell) | 5" | 7.45" | 10" | 12.25" | 15" | 17" | 21" | 26.75" | 34.95" | 42" | 46.5" | 52.25" | 66" |
| OUTSIDE DIAMETER (Spigot) | 4.6" | 6.8" | 9.5" | 11.75" | 13.4" | 16.35" | 19.9" | 26.1" | 34.37" | 40.25" | 45.4" | 50.75" | 64.4" |
| INNER LINER WALL THICKNESS | .030" | .030" | .035" | .035" | .045" | .050" | .060" | .070" | .070" | .075" | .080" | .080" | .080" |
| PIPE STIFFNESS 5% DEFLECTION (MINIMUM) | 50 PSI | 50 PSI | 50 PSI | 50 PSI | 50 PSI | 42 PSI | 40 PSI | 34 PSI | 29 PSI | 22.5 PSI | 21 PSI | 20 PSI | 15 PSI |
| WATER INLET AREA (PERFORATED PIPE) (MINIMUM) | 3.8 SQ.IN/FT | 3.3 SQ.IN/FT | 4.2 SQ.IN/FT | 2.8 SQ.IN/FT | 2.6 SQ.IN/FT | 3.5 SQ.IN/FT | 2.1 SQ.IN/FT | 2.0 SQ.IN/FT | 2.0 SQ.IN/FT | 2.0 SQ.IN/FT | 2.6 SQ.IN/FT | 2.6 SQ.IN/FT | N/A |
| MARKINGS | DPI 4" | DPI 6" | DPI 8" | DPI 10" | DPI 12" | DPI 15" | DPI 18" | DPI 24" | DPI 30" | DPI 36" | DPI 42" | DPI 48" | DPI 60" |
| | 100 MM | 150 MM | 200 MM | 250 MM | 300 MM | 375 MM | 450 MM | 600 MM | 750 MM | 900 MM | 1050 MM | 1200 MM | 1500 MM |
| | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY |
| | ASTM F405 | ASTM F 405 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 |
| | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 |
| | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE |

REGULAR CORRUGATED PIPE NOMINAL DIAMETER (I.D.)

| | 2" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 15" | 18" | 24" |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| WEIGHT Pounds Per Foot | 0.14 | 0.21 | 0.35 | 0.50 | 0.75 | 1.29 | 1.69 | 2.98 | 4.23 | 5.90 | 10.80 |
| INSIDE DIAMETER (Nominal) | 2" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 15" | 18" | 24" |
| OUTSIDE DIAMETER (Nominal) | 2.45" | 3.5" | 4.6" | 5.7" | 6.8" | 9.5" | 11.75" | 14.5" | 17.5" | 21.3" | 27.9" |
| WALL THICKNESS (Nominal) | .025" | .030" | .033" | .035" | .040" | .042" | .045" | .075" | .090" | .90" | .110" |
| PIPE STIFFNESS 5% DEFLECTION (Minimum) | 35 PSI | 35 PSI | 35 PSI | 35 PSI | 35 PSI | 35 PSI | 50 PSI | 50 PSI | 42 PSI | 40 PSI | 34 PSI |
| WATER INLET AREA (PERFORATED PIPE) (Minimum) | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.0 SQ.IN/FT | 1.5 SQ.IN/FT | 1.5 SQ.IN/FT | 1.5 SQ.IN/FT | 2.0 SQ.IN/FT |
| MARKINGS | | DPI 3" | DPI 4" | DPI 5" | DPI 6" | DPI 8" | DPI 10" | DPI 12" | DPI 15" | DPI 18" | DPI 24" |
| | | 75 MM | 100 MM | 125 MM | 150 MM | 200 MM | 250 MM | 300 MM | 375 MM | 450 MM | 600 MM |
| | N/A | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY | HEAVY DUTY |
| | | ASTM F405 | ASTM F 405 | ASTM F405 | ASTM F405 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 | ASTM F667 |
| | | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M252 | AASHTO M294 | AASHTO M294 | AASHTO M294 | AASHTO M294 |
| | | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE | DATE CODE |

QUALITY ASSURANCE

Quality at Haviland Drainage Products begins long before pipe is produced. We carefully test incoming resins to ensure the utmost quality. Each step of the manufacturing process is carefully monitored, resulting in high caliber products. Serving our customers is our top priority, through our high quality products and customer service.”

Haviland is excited to offer a vast array of quality control testing and equipment in order to provide our customers with the highest quality products. Haviland’s lab is on site and able to test density with our new density machine. The FTIR scanner makes it easy to analyze different types of plastics. We also have the ability to perform stiffness and flattening tests on the full gamut of diameters that Haviland has to offer. Our ability to perform IZOD testing helps us to provide our customers with the most durable products on the market. Most of the noted tests are done numerous times a day, each shift, on every diameter of pipe being produced, and all material being utilized for production. In addition, our lab is able to perform other various types of quality control testing to help ensure we are providing a high quality product.



Resin Cell Classifications

ASTM Specification D3350 Polyethylene Resins

| | |
|--------------------|---|
| Density | 4 |
| Melt Index | 3 |
| Flexural Modulus | 5 |
| Tensile Strength | 4 |
| ESCR | 0 |
| HDB | 0 |
| UV Stabilizer Code | C |

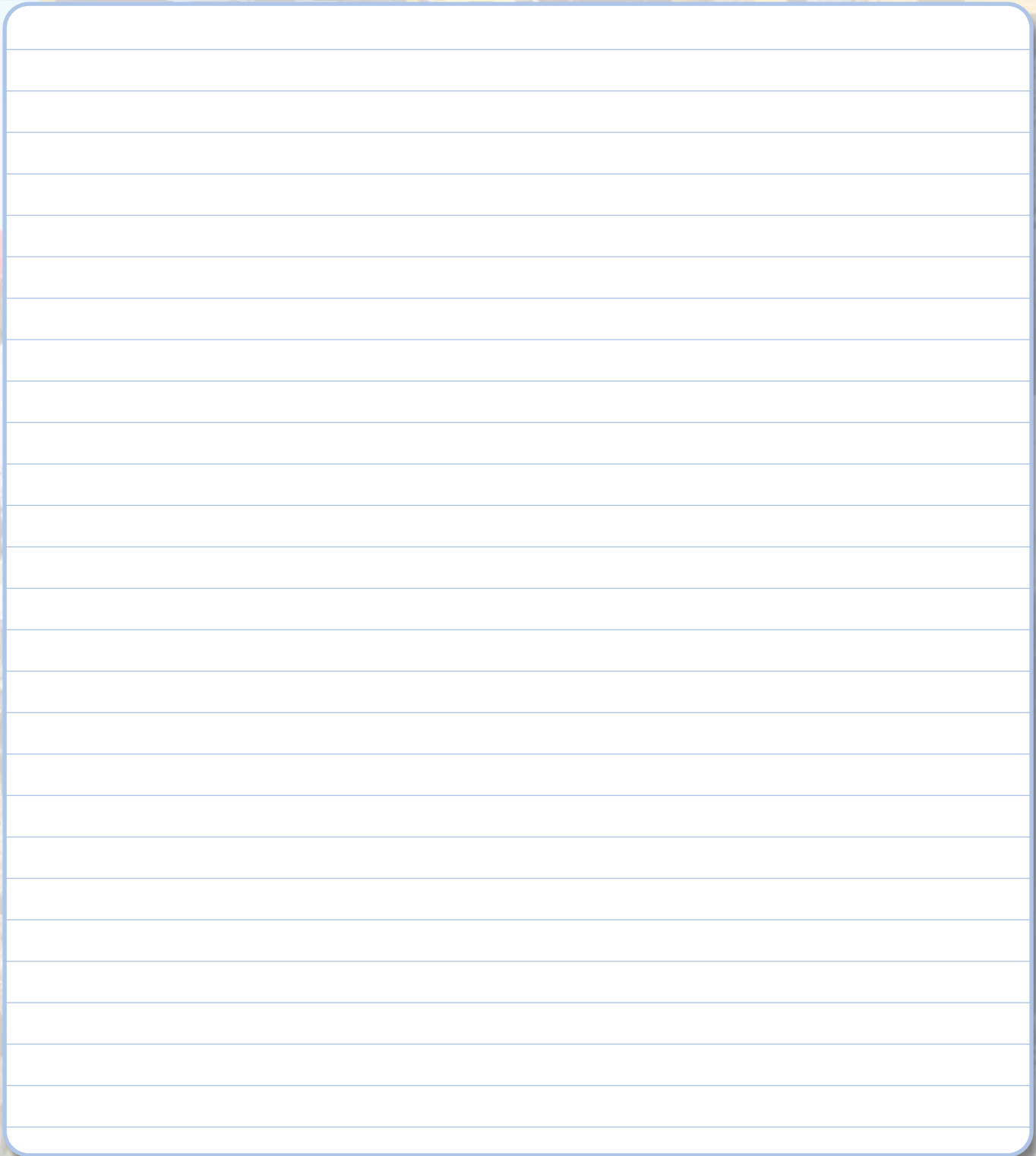
Applicable Standards

| | |
|--------------|--|
| ASTM D 2321 | Standard Specification for Thermoplastic Pipe for Sewers & Other Gravity Flow Applications |
| ASTM D 3212 | Standard Specification for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals |
| ASTM D 3350 | Standard Specification for Polyethylene Plastic Pipe & Fitting Material |
| ASTM F 405 | Standard Specification for Corrugated Polyethylene Pipe & Fittings |
| ASTM F 449 | Standard Specification for Corrugated Polyethylene Pipe for Agricultural Drainage or Water Table Control |
| ASTM F 477 | Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe |
| ASTM F 667 | Standard Specification for Large Diameter Corrugated Polyethylene Pipe & Fittings |
| ASTM F 810 | Standard Specification for Smoothwall Polyethylene Pipe for Use in Drainage and Waste Disposal Absorption Fields |
| ASTM F 892 | Standard Specification for Polyethylene Corrugated Pipe With a Smooth Interior & Fittings |
| ASTM F 894 | Standard Specification for Polyethylene Large Diameter Profile Wall Sewer * Drain Pipe |
| ASTM F 1417 | Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air |
| ASTM F 2306 | Standard Specification for 12 - 60 in. Annular Corrugated Profile-Wall Polyethylene Pipe & Fittings |
| ASTM F 2487 | Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Corrugated High Density Polyethylene Pipelines |
| ASTM F 2648 | Standard Specification for 2 - 60 Annular Corrugated Profile Wall Polyethylene Pipe & Fittings for Land Drainage Applications |
| AASHTO M 252 | Standard Specification for Corrugated Polyethylene Drainage Pipe, 3” thru 10” diameter |
| AASHTO M 294 | Standard Specification for Corrugated Polyethylene Pipe, 12” thru 60” diameter |

All materials must be installed in accordance with ASTM and AASHTO standards

Note: Please see website (www.haviland-drainage.com) for current state and organizational approvals.

NOTES



A large, lined notepad area for taking notes, set against a background image of a construction site with a worker in a white shirt and safety gear.

To provide customers with prompt deliveries, Haviland Drainage Products keeps hundreds of items in inventory. We have a large network of outside carriers and maintain our own fleet of trucks, many of which are customized for greater unloading ease. Whether it is sticks, pallets, small rolls, jumbo rolls, or a combination of each, endless effort is given to ensure customer satisfaction.

DELIVERY



| Multiplier for % of Truckloads | | |
|--------------------------------|------|-------------|
| Size | % | Pieces |
| 3 x 100 | 0.20 | 270 |
| 3 x 250 | 0.70 | 143 |
| 4 x 10 | 0.50 | 200 |
| 4 x 100 | 0.50 | 200 |
| 4 x 250 | 1.10 | 88 IN/93 OH |
| 4 x 150 | 0.70 | 143 |
| 5 x 150 | 1.10 | 88 IN/96 OH |
| 6 x 100 | 1.10 | 90 IN/96 OH |
| 8 x 20 | 0.34 | 275 |
| 10 x 20 | 0.60 | 167 |
| 12 x 20 | 0.86 | 116 |
| 15 x 20 | 1.25 | 80 |
| 18 x 20 | 1.95 | 48 |
| 24 x 20 | 3.70 | 30 |
| 30 x 20 | 5.55 | 18 |
| 36 x 20 | 8.33 | 12 |
| 42 x 20 | 10 | 10 |
| 48 x 20 | 12.5 | 8 |
| 60 x 20 | 22 | 4 |

8" and up can be telescoped
36" will not go into 42"

Mission Statement

For more than nine decades, Haviland Drainage Products has built its business on this rule:

Service to our customers is one of our top priorities.

Beginning with our dedicated employees, our well-trained sales staff, friendly order entry and shipping personnel, we are determined to provide superior drainage materials and service to you, our customer. Our professional staff is easily accessible before and after the sale for assistance in product information. We maintain a large inventory and our own fleet of trucks. With our manufacturing capabilities and quality control, be assured that you will receive prompt attention and delivery.

An excellent product and superior service for a competitive price in today's market will continue to be our goal. As a service and convenience for our customers, we have developed this catalog to provide you with a better understanding of our products. Please feel free to contact anyone in our customer service department or our sales representative in your area.



Haviland Drainage Products Co.

Box 97 • Haviland, Ohio 45851 • Ph. (419) 622-4611 • Fax (419) 622-6911 • www.haviland-drainage.com