

**TRINITY  
COMPOSITES, LLC**

# Installation Guidelines for the Enviro-Span Culvert Systems

**ENVIRO**  **SPAN**  
*Modular Culvert Systems*

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Enviro-Span is a product line within Trinity Composites, LLC.



The following installation guide is based on engineering principles and standard practice for installation of arch culverts. Stream crossings are highly regulated in many regions. Check your regional regulating agencies prior to installation to ensure that the Enviro-Span is permitted for your individual stream crossing.

## Guide for Installation

- Read this guide in its entirety before attempting an installation. Professional engineering supervision is recommended.
- Complete a detailed site plan and specification drawings for the crossing based on initial site assessments, stream hydrology, terrain stability considerations and/or other factors.
- Select crossing location so that the wetted perimeter of the stream will be entirely encompassed by the footing logs. For example, if a stream is normally 3-1/2 feet (1070 mm) wide, a 7 foot (2150 mm) diameter Enviro-Span unit could be selected.
- Hydrological computations should be done to determine the peak design runoff from the watershed above the crossing, to ensure the structure is adequately sized for each application.
- Select two straight and sound logs of 11.75" (300mm) maximum diameter and approximately 48 inches (1200mm) longer than the proposed structure to use as footings. Heavy wall plastic pipe, steel pipe or drill casings of maximum 11.75 inches (300mm) diameter can be substituted for the log footing. Place these footings parallel to the streambed, with center to center spacing to match the dimension of the Enviro-Span module. Footing locations should be prepared by hand so the footing rests on mineral soil with no obstructions in between. Additional excavation and foundation compaction is not required due to the flexibility of the Enviro-Span system.
- Lift each module into place. Starting 24 inches (600mm) from either end of the footing, place the first module straddling the stream with the module's footing arches centered on the round footing.
- Place the second module tight against the first. Place the Enviro-Span connector over the adjacent flanges... no bolts or tools are required. If your site plan requires riprap rock for channel lining, it can be placed inside the modules, section by section, as assembly progresses. Continue to add modules until the desired width is achieved per your site plan.

- When the last module is placed, we recommend covering the entire structure with a single layer of geotech landscaping fabric material or per your site plan requirements.
- Have clean granular backfill on hand, sufficient to cover the entire structure with backfill and top-fill (see backfill amount listed on the table below for the Enviro-Span size you are installing). To achieve load ratings, use a high quality granular backfill with a Standard Proctor density between 90 and 95%.
- With the geotech material in place, loads of material should be backfilled, equally in height between the two sides at any time. Care is required in placing the first bucket of backfill against the module, so that the Enviro-Span connectors are not knocked out of position. Backfill is a critical operation, so care and attention spent at this stage of the operation will ensure a satisfactory installation.
- **USE THE AMOUNT OF TOP-FILL LISTED ON THE TABLE BELOW FOR THE SIZE ENVIRO-SPAN YOU ARE INSTALLING. IMPROPER INSTALLATION, INADEQUATE BACKFILLING/ COMPACTION OR VEHICLE OVERLOADING MAY RESULT IN FAILURE OF THE GOODS TO WITHSTAND SPECIFIED LOAD.**
- Refer to the sketch drawings for additional installation considerations and details.

Topfill / Backfill Table	
2150mm (7 foot) Span	Minimum of 3 feet of top fill required

## WARRANTY

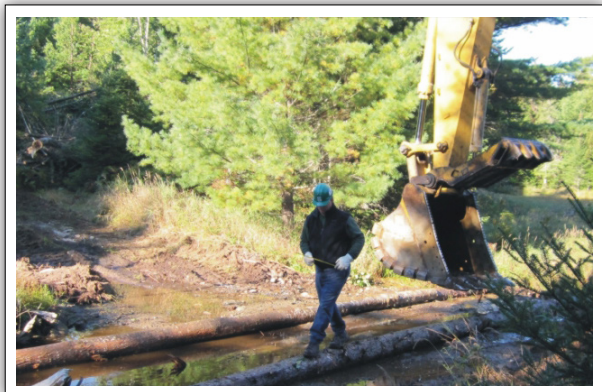
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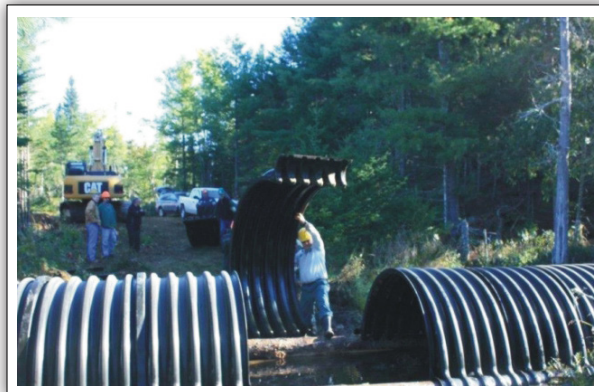
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### WARNING

IMPROPER INSTALLATION, INADEQUATE BACKFILLING/ COMPACTION OR VEHICAL OVERLOADING MAY RESULT IN FAILURE OF THE GOODS TO WITHSTAND SPECIFIED LOADS



1. Place footing logs parallel to stream. Space to match the width of the Enviro-Span modules.



2. Place Enviro-Span modules on top of the footings.



3. Slide the connectors over the adjacent module flanges.



4. Cover the assembled Enviro-Span with geotextile.



5. Build up backfill on both sides, compacting the native material with the excavator bucket. Cross over as soon as minimum fill cover is achieved.



6. Place rip rap as required and start using the crossing immediately.





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