ABT, INC.
LEED Manual

LEED-2009
Green Building Rating System

New Construction & Major Renovations

The following pages are designed to assist Engineers acquire LEED Credits in the design of Green Sustainable building utilizing ABT Inc's Polydrain, Trench Former, and First Flush product lines.

Contents – List of Potential Credits for ABT Inc Products

SS Credit 6.1: Stormwater Design: Quantity Control

Intent:
Limit disruption of natural water hydrology by reducing impervious cover, increasing on- site infiltration, reducing or eliminating pollution from stormwater runoff, and eliminating contaminants.

Requirements
CASE 1 — EXISTING IMPERVIOUSNESS IS LESS THAN OR EQUAL TO 50%

Option 1

Implement a stormwater management plan that prevents the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one- and two-year 24-hour design storms.

OR

Option 2

Implement a stormwater management plan that protects receiving stream channels from excessive erosion by implementing a stream channel protection strategy and quantity control strategies.

CASE 2 — EXISTING IMPERVIOUSNESS IS GREATER THAN 50%
Implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the two-year 24-hour design storm.

Potential Product Applications:

ABT Inc. manufactures trench drain systems that can be implemented into the stormwater management plan to prevent the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one and two-year 24-hour design storms.

ABT Inc's trench drain systems can also be used to channel stormwater for reuse in many non-potable water applications. ABT Inc's FirstFlush systems can be used for onsite filtration.

ABT Inc Products*:*

Trench Drains: All PolyDrain and TrenchFormer Systems.

FirstFlush: all models will reduce pollution from stormwater runoff.

SS Credit 6.2: Stormwater Design: Quality Control Water Efficiency

Intent
Limit disruption and pollution of natural water flows by managing stormwater runoff.

Requirements

Implement a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable best management practices (BMPs).

BMPs used to treat runoff must be capable of removing 80% of the average annual post development total suspended solids (TSS) load based on existing monitoring reports. BMPs are considered to meet these criteria if

- they are designed in accordance with standards and specifications from a state or local program that has adopted these performance standards,

or

- there exists in-field performance monitoring data demonstrating compliance with the criteria. Data must conform to accepted protocol (e.g., Technology Acceptance Reciprocity Partnership [TARP], Washington State Department of Ecology) for BMP monitoring.

Potential Product Applications:
ABT Inc's FirstFlush systems are ideal for onsite filtration and can be used in conjunction with trench drain systems to develop acceptable BMP's.

ABT Inc Products:

FirstFlush: all models will reduce pollution from stormwater runoff.
Trench Drains: All PolyDrain and TrenchFormer Systems.

WE Credit 1: Water Efficient Landscaping

Option 1

Intent

Limit or eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

Option 1. Requirements

Reduce potable water consumption for irrigation by 50% from a calculated mid-summer baseline case.

Reductions shall be attributed to any combination of the following items:

- Plant species, density and microclimate factor
- Irrigation efficiency
- Use of captured rainwater
- Use of recycled wastewater
- Use of water treated and conveyed by a public agency specifically for non-potable uses

Potential Product Applications:

ABT Inc's Trench Drain Systems can be used for capture and conveyance of stormwater in conjunction with an onsite storage system.

ABT Inc Products:

All trench drain systems: PolyDrain and TrenchFormer Systems.

WE Credit 1: Water Efficient Landscaping: No Potable Water Use or No Irrigation

Option 2:

Intent
Eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

Option 2 Requirements
Meet the requirements for Option 1

Use only captured rainwater, recycled wastewater, recycled greywater, or water treated and conveyed by a public agency specifically for non-potable uses for irrigation.
OR
Install landscaping that does not require permanent irrigation systems. Temporary irrigation systems used for plant establishment are allowed only if removed within one year of installation.

Potential Product Applications*:*
ABT Inc's Trench Drain Systems can be used for capture and conveyance of stormwater in conjunction with an onsite storage system.

ABT Inc Products:

All trench drain systems: PolyDrain and TrenchFormer Systems.

WE Credit 2: Innovative Wastewater Technologies

Intent
Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.

Requirements
OPTION 1
Reduce potable water use for building sewage conveyance by 50% through the use of water-conserving fixtures (water closets, urinals) or non-potable water (captured rainwater, recycled greywater, and on-site or municipally treated wastewater).
OR
OPTION 2
Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

Potential Product Applications*:*
ABT Inc's Trench Drain Systems can be used for capture and conveyance of stormwater. ABT Inc's FirstFlush systems can be used for onsite filtration.

ABT Inc Products*:*

Trench Drains: PolyDrain and TrenchFormer Systems.
FirstFlush: all models will reduce pollution from stormwater runoff.

MR Credit 2: Construction Waste Management

Intent

Divert construction, demolition and land-clearing debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

Requirements

Recycle and/or salvage non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or co-mingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout. The minimum percentage debris to be recycled or salvaged for each point threshold is as follows:

Recycled or Salvaged	Points
50%	1
75%	2

Potential Product Application:

Conventional hand-formed trench drains require extensive use of lumber in there construction which is disposed of after being deformed. Trench Former utilizes 100% recyclable EPS to form the trench drain, thus diverting almost all construction waste associated with the drain system from a landfill Using a precast modular system, such as the Polydrain products eliminates the issue all together.

ABT Inc Products:

All TrenchFormer and PolyDrain Trench Systems.

MR Credit 4.1: Recycled Content

Intent
Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements
Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project. The minimum percentage materials recycled for each point threshold is as follows:

Recycled Content	Points
10%	**1**
20%	**2**

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.
Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 7 Certified Wood.

Potential Product Applications:
ABT Inc's products are made of recyclable material or material that can be recycled. Examples include but are not limited to: Ductile Iron, EPS, Plastic, and Stainless Steel.

ABT Inc also makes use of corrugated post-consumer cardboard when shipping products. Corrugated cardboard manufactured from recycled pulp uses around 75% of the energy used in the manufacture of corrugated cardboard made from virgin pulp. Construction sites may eliminate disposal fees by preparing the cardboard for hauler pickups or delivering it (drop-off) to a recycling facility.

ABT Inc Products: All of ABT Inc's products

MR Credit 5.1: Regional Materials

Intent:
Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements
Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. The minimum percentage regional material for each point threshold is as follows.

Regional Material	Points
10%	1
20%	2

Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Include only materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credit 3: Material Reuse through MR Credit 7: Certified Wood.

Potential Product Applications:
ABT Inc. has several manufacturing facilities around the United States thus allowing the product to be within 500 miles of many project sites.

ABT Inc's Manufacturing Facilities:

Troutman, NC / Statesville, NC

ID Credit 1–1.4: Innovation in Design

Intent:
To provide design teams and projects, the opportunity to be awarded points for exceptional performance above the requirements set by the LEED- Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED-Green Building Rating System.

Potential Product Application:
ABT Inc's goal of providing for safe and sustainable "Green" buildings will help all Engineers and Architects with strategies, submittals, and drawings to help meet the Innovation in Design points.

ABT Inc Products: All of ABT Inc's products