

ENGINEERED SOILS



**Plaisted
Companies**
INCORPORATED



WE ARE
SOIL EXPERTS



ROOFTOP GARDEN MIXES

Green roofs are part of the healthy city movement, absorbing noise pollution and creating a peaceful meditative environment with aesthetic appeal on building rooftops. Plus, they're helping to increase property values.

Plaisted Rooftop Garden Mixes are designed for extensive and intensive growing environments. They create a stormwater management system, improved energy efficiency of the building, and increase usable space for tenants.

We blend 3 types of rooftop materials comprised of washed sand, compost and lightweight aggregate. These blends are engineered to retain a high percentage of a typical rainfall. Depths vary depending on what types of plant materials are going to be used and what the roof weight load is designed to handle:

- Extensive mixes are generally used at a 3" to 6" depth
- Intensive mixes are generally 6" to 12" or more in depth
- Turf mixes are 6" to 12"
- Custom blends are per your specifications



RAIN GARDEN MIXES

Architects have been able to increase square footage in parking lots and building space, while also creating a more inviting environment.

Plaisted garden mixes effectively collect water from pervious and impervious surfaces while filtering out sediment and pollutants. Garden mixes also store water for the short term to be used by plants and permits clean water to infiltrate the soil and subsoil slowly, thus recharging the groundwater.

• Plaisted Rain Garden Peat Mix

Offers excellent drainage properties and meets MPCA Stormwater Manual Guidelines. It's comprised of a homogeneous blend of washed construction sand (70 to 90%) and Minnesota-harvested sphagnum peat moss (10 to 30%). Peat moss can acidify its surroundings and is also used to absorb phosphorus. Standard blends include 70-30, 80-20, 85-15, and 90-10

• Plaisted Rain Garden Compost Mix

A homogeneous blend of washed construction sand (70 to 90%) and organic leaf compost (10 to 30%). Standard blends include 70-30, 80-20, 85-15, and 90-10



INSTALLATION NOTE: Rain garden soil depths range up to 3 feet. Compaction decreases porosity—keep construction vehicles off the mix and use rubber tracked equipment when being installed.



CU-STRUCTURAL SOIL®

Plaisted Companies is the 5-state area's licensed supplier of CU-Structural Soil. Developed by Cornell University, this patented (#5,849,069) soil blend provides tree roots a better environment, encouraging growth with an improved soil porosity matrix.

- Use where soil compaction is imminent such as under sidewalks, parking lots, medians, plazas and low-access roads
- Excellent for growing trees in an urban concrete environment
- Installation depth of 24 to 36 inches for proper tree pit growth
- Designed with a CBR value of 50 or greater
- Properly compacted to 95 to 100% Proctor Density or Modified Proctor Density

This engineered soil is created through the blending of uniformly graded 3/4" to 1-1/2" angular crushed stone, clay, Minnesota-harvested peat, and Gelscape® hydrogel. Any contractor with five years experience in excavating or paving can assist with installation.

IRON-ENHANCED SAND & MIXES

A more cost effective way to clean up stormwater runoff. This innovation in runoff treatment is centered on the reduction of phosphorus through the use of elemental iron mixed with sand.

Testing revealed that sand mixed with 5% iron filings captures an average of 88% phosphate for at least 200m of treated depth, significantly greater than a sand filter without iron filings.

Iron-sand filtration works through a chemical process in which phosphorus molecules in water bind to iron particles within the sand filter as water passes through.

- Suitable to conditions with minimal groundwater intrusion or tailwater effects; cold climates.
- High pollutant removal rates; good for nutrient impaired water.
- Use in a treatment sequence, as a stand-alone BMP, or as a retrofit for existing areas.
- Little maintenance is required after initial installation. The natural flow of groundwater does all the work.

Information on how to use iron-enhanced sand is available at www.pca.state.mn.us. This product, designed to meet standards developed using EnviroMetal Technologies, Inc. (ETI) patented technology, has been proven effective in laboratory testing and in over 100 full-scale systems.





MN DOT SOIL MIXES

Computerized-blended and tested to meet project requirements:

- MN DOT 3877-1A Common Topsoil Borrow** - General use turf growing medium
- MN DOT 3877-2B Loam Topsoil Borrow** - Plant growing medium for designated areas such as landscape beds.
- MN DOT 3877-3C Sandy Clay Topsoil Borrow** - Plant growing medium in critical areas and for topdressing erosion stabilization mats.
- MN DOT 3877-D Rooting Topsoil Borrow** - For vegetative plant restoration and preservation, or as a plant growing medium for rooting and infiltration.
- MN DOT 3877-E Boulevard Topsoil Borrow** - Structural soil for plant establishment in streetscape boulevards.
- MN DOT 3877-F Filter Topsoil Borrow** - Use to enhance water quality, or as a plant growing medium, or filtration medium
- MN DOT 3877-G Organic Topsoil Borrow** - Plant growing medium to enhance existing soils.

MPCA SOIL MIXES

- Mix A** - Water Quality Blend
- Mix B** - Enhanced Filtration Blend
- Mix C** - NC State University Water Quality Blend
- Mix D** - Water Quality Blend w/phosphorus presence
- Mix E** - MN DOT 3877.2 type F "Filter Topsoil Borrow"
- Mix F** - Custom Infiltration Basin Planting Soil

Plaisted Accublender™

Consistent quality,
reliable delivery!



Our four-bin Accublender™ is used to create these mixes. It features a computerized blender with an on-board screen deck that removes oversized particles and a mechanical paddle wheel that ensures uniformity. It automatically adjusts for flow rates of material and stops the conveyor belt when feed bins need to be replenished.

NAKED Char® Biochar - Available!

- Improves physical and biological soil characteristics
- Increases soil cation exchange capacity
- Improves water holding capacity
- Reduces leaching of fertilizer and nutrients
- Decreases soil compaction
- Remediate contaminants and excess salts
- Reduces carbon footprint



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