Materials Management: A Service Path to Sustainability
LEED, Green Service, and Green Activity
Over the lifetime of a building, service vehicle activity can significantly contribute to a building’s overall carbon footprint.

Materials Management Overview

Materials Management is a vital component of a successful campus sustainability effort. Campuses need more than just green buildings. They need green service and support of buildings and building occupants. Materials Management reduces the environmental impact of the delivery of goods and services.

Many buildings and campuses, both existing and new, are not designed to handle the pressures associated with society’s modern consumption rates, with scores of just-in-time deliveries, multiple vendors, and facility maintenance service calls. Ad-hoc service strategies generate pollution, consume energy, and negatively impact the urban landscape and architectural aesthetics.

An understanding of the service demand, proper design of service infrastructure, and an efficient operational strategy can significantly reduce pollution, consumption, and congestion. With this key understanding, designers and planners can make the critical connections between service infrastructure design and operational efficiency in order to reduce the carbon footprint of campus and building services and deliveries.

A Service Path to Sustainability

A Place for Everything and Everything in its Place

The short term sustainability goal of materials management is to adequately accommodate the service flow for occupant activity. Proper planning can reduce truck idling and queuing, reduce impervious surface, increase open space, and provide adequate infrastructure for standard recycling.

Green Planning, Design, and Operations

The next step is to provide green servicing. Green support and servicing of occupant activity looks to reduce the frequency and redundancy of delivery, increase service vehicle fleet efficiency, reduce packaging, increase waste diversion, and add recycling streams.

Changing the Nature of Occupant Activity

The long term goal of materials management is to reduce the volume and flow of consumed materials by greening occupant activity. Sustainable occupant activity would eliminate packaging, localize consumption, eliminate disposables, and change the waste and recycling mindset, making waste the exception, not the norm.
Based on our understanding of individual projects and the goals set by the US Green Building Council, we have identified opportunities for projects to earn LEED Innovation in Design (ID) Credits through the implementation of Materials Management to new and existing facilities.

Achieving Leadership in Energy and Environmental Design (LEED) Credits with Materials Management

Materials Management services contribute to achieving a number of existing LEED credits. Kleinfelder has also developed five suggested Materials Management Innovation in Design (ID) Credits for exceptional performance beyond the prerequisites and standard credits. Here is a sampling of the credits and ID credits that our Materials Management services can help your project achieve:

**LEED New Construction**

- MR Prereq 1 Storage and Collection of Recyclables
- ID Credit 1.1 Alternative Transportation: Service Vehicle and Delivery Management and Reduction
- ID Credit 1.2 Comprehensive Waste Management

**LEED Existing Buildings Operation and Maintenance**

- MR Prereq 2 Storage and Collection of Recyclables
- MR Credit 6 Solid Waste Management: Waste Stream Audit
- MR Credit 7 Solid Waste Management: Ongoing Consumables 50% Waste Diversion
- MR Credit 8 Solid Waste Management: Durable Goods
- ID Credit 1.1 Service Area Management Plan

**LEED Neighborhood Design (In Pilot)**

- GCT Credit 19 Comprehensive Waste Management
  1) Hazardous Waste Drop-Off Point
  2) Recycling or Reuse Station
  3) Food Composting Station
- ID Credit 1.1 Service Vehicle and Delivery Management and Reduction
- ID Credit 1.2 Energy Efficient or Renewable Fuel Service Vehicles
About Kleinfelder Higher Education Segment
Kleinfelder focuses on serving colleges and universities throughout the United States. We support traditional engineering strengths with skills that address elements of the “invisible campus” such as underground utilities, stormwater management, and Materials Management. We create teams of in-house specialists to find sustainable solutions that improve the campus environment and integrate above- and below-ground systems. We offer the following services: campus planning; Materials Management planning; roadway design and streetscape planning, environmental planning and design; and 3-D Modeling.