



SOLID WASTE
MANAGEMENT
CONSULTANTS

Gershman, Brickner & Bratton, Inc.
8300 Boone Boulevard, Suite 500
Vienna, VA 22182
(703) 573-5800 / www.gbbinc.com

Sustainable Waste Management in Building Design, Construction, Operation, & Demolition

Overview

With today's growing number of sustainable building project certification programs such as Leadership in Energy and Environmental Design (LEED), and the desire for public and private organizations to meet sustainability and zero waste goals, **more attention has focused on the role of designers, architects, general contractors, and facility and operations managers to sustainably manage—and prevent—waste.** The design and construction community has had to adapt over the past several years to the increasing complexity and rigor of certification programs, and also to the unique building materials entering the market as technology advances.

The U.S EPA estimates that in 2017, construction and demolition (C&D) activities in the United States generated approximately 569 million tons of waste, more than twice that of municipal solid waste (MSW). An estimated 32% of C&D waste is attributable to buildings, and over 90% of C&D waste is generated from demolition activities alone. **Finding reuse and recycling outlets for C&D waste is vital to the sustainability of public and private waste management programs.**

Further, with the evolution of governmental policies, including new requirements to provide recycling in commercial and multifamily buildings, regulations for organic waste diversion, and C&D recycling mandates, effectively meeting these requirements has grown increasingly complicated. **Specialized expertise is more frequently required to assist design and construction teams with retrofitting existing buildings to meet new public policies and forecasting needs in newly designed buildings.**

Multi-Disciplinary Teams Led by GBB

GBB has been active in the C&D processing, recovery, and recycling field since 1991 and has **performed over 150 C&D-related project activities for clients**, ranging from full-scale C&D recycling facility feasibility studies to project procurement and implementation assistance. As the design- and construction-related waste industry has evolved, GBB's team has evolved to include experienced design and materials processing specialists who can assist the industry in meeting its goals and requirements. With its strategic approach, extensive experience, wide range of resources, and partnerships with firms specialized in areas of expertise key to waste management and diversion, GBB leads **multi-disciplinary teams that assist can assist both public and private clients with developing design, construction, operations, and demolition plans to minimize waste generation and maximize waste diversion.**

GBB's specialized expertise can assist the design, C&D, and building operations teams with:

- Analysis and interpretation of local recycling and diversion regulations for building design, operations and C&D
- Development of sustainable materials management and waste hierarchy guidance documents
- Drafting C&D waste management plans, and document/drawing review and analysis to prevent waste, maximize diversion, and sustainably manage waste management in design, construction, operations and demolition
- High-level lifecycle and impact analyses to evaluate the sustainability of building materials
- Compliance assistance with and documentation for certification programs, such as Green Globes, LEED, TRUE Zero Waste, and UL Environment Zero Waste Claim Validation
- Sustainable waste management site visit and monitoring during construction, operation, and demolition
- Regionally based C&D recycling facility and market assessments
- Helping Organizations and Local Governments comply with policies

YEARS PROVIDED:

1991-present

KEY EXPERTS:

Bradley Kelley
Senior Project Engineer
(703) 663-2097
bkelly@gbbin.com

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Past Performance

GBB is proud to share the following two ambitious circular economy projects it is undertaking which are expected to bring economic (investments), social (local jobs), and environmental benefits to their communities:

Confidential Client – Private Retail Company

A large retail company with a global presence and a desire to enhance the sustainability of its operations approached GBB to assist the company with achieving zero C&D waste during the renovations of its retail store locations. GBB completed a thorough review of company policy documents, typical construction document sets for its renovations, performed site visits to observe on-site waste management activities during construction, and evaluated individual materials for their reuse and diversion potential and overall sustainability. GBB then developed a set of recommendations and steps to achieve zero C&D waste, and the client has retained GBB to execute these recommendations, the first of which is to develop a standardized process for evaluating and selecting the most appropriate C&D recycling facility in the region surrounding each store renovation location.

Mixed-Use Building Solid Waste Management Infrastructure Design Review – Craine Architecture (Denver, Colorado)

As Craine Architecture developed a mixed-use property in Denver, Colorado, consisting of 2 connected 90,000-square-foot buildings (180,000-square-foot total) with a variety of programs, including hotel and restaurants/lounges, Craine tasked GBB with providing design review support pertaining to the solid waste management infrastructure, including feedback on:

- Current and potential future local regulations for waste and recycling in commercial buildings within the context of national trends
- Loading docks right-sizing and placement of solid waste containers
- Collection containers (bins, dumpsters, roll-offs, compactors) placement, types, and sizing
- Waste collection container signage
- Vector control recommendations



Thought Leadership

GBB Consultants and Officers regularly author and present often on this topic. Recent articles and presentations include:

- [*The Importance of Materials Recovery Coordination in Construction & Demolition*](#), (March 2020), Corinne Rico, published in the Construction & Demolition Recycling Magazine
- [*Building Something Sustainable*](#), (April 2019) Ashlea Smith and Steve Faber; Waste Today Magazine
- [*Incentivizing Infrastructure for Sustainable Waste Solutions*](#), (April 2019) Tom Reardon; Waste Today Magazine
- [*The Circular Economy: How Local Governments Can Close the Resource Loop*](#), (November 2018) Corinne Rico; presented at the Illinois Counties Solid Waste Management Association Conference, Oglesby, IL
- [*Advancing a More Circular Economy and the Reinvention of the Waste-to-Energy Industry through Sustainable Business Park Development*](#), (June 2019) Tom Reardon and Jennifer Porter; presented at the Waste Conversion Technology Conference & Trade Show, Atlantic City, NJ
- [*Circular Solutions to a Growing Recyclables Market Problem*](#), (April 2018) Jennifer Porter; Waste Today Magazine
- [*Is the US Ready for a Paradigm Shift in Solid Waste Management?*](#), (December 2017) Steve Simmons; Waste Today Magazine
- [*Circular Economy Actions: Cities and Solid Waste Management*](#), (June 2017) Steve Simmons; presented at the Sustainability and Circular Economy Summit, Washington, DC
- [*Key Lessons to Draw from the Development of the Prince William Energy Park*](#), (April 2013) Tom Reardon; presented at the North American Waste-to-Energy Conference, Sanibel Island, FL