



DECONSTRUCTION

A Zero Waste Boston Initiative



CITY OF BOSTON

- 1. The alternate practice of demolishing a building to achieve resource conservation and material reuse.**

- 2. It is the systematic dismantling of whole or parts of a structure to:**
 - Maximize material salvaged for reuse;
 - Recycle what is not reusable;
 - Minimize the amount of material going to landfill or incineration.

- 3. The discipline enables projects to:**
 - Reduce their carbon footprint and consumption of virgin materials;
 - Preserve historic and architectural character, and;
 - Support the growth of secondary building material markets.

C&D WASTE

~30%

of all discarded materials generated in MA are from C&D activities*

DEMOLITION

99%

Of Boston buildings that apply for demolition are demolished annually
1% are preserved.

CARBON EMISSIONS

78%

of carbon emissions from discarded materials can be reduced with a 90% diversion rate**

[*2019 Solid Waste Data Update \(October 2020\), MassDEP](#)

[**Zero Waste Boston Plan, page 16](#)

IMPACT OPPORTUNITIES - STAKEHOLDERS

Why Deconstruction



ENVIRONMENT

- Preserving Natural Resources - reducing consumption of virgin materials
- Embodied Carbon Savings - in energy and emissions from materials and construction
- GHG Emissions Reduction - preventing methane release, bypassing new materials

DEVELOPERS

- Cost Savings - decreased disposal cost, reuse of select items
- Tax deductions for donated materials
- Positive Environmental Impact - avoided use of raw materials, tons of materials diverted

COMMUNITY

- Preserving Boston History - retaining building character within neighborhoods
- Job Creation/Training - entrypoint and economic opportunities in the building trades
- Salvaged materials can be more affordable, which can support residents

CITY

- Economic Development - Market Supply, Market Growth, Business Creation, Job Creation/Training
- Durable Goods Recovery - support affordability

COLLECTIVE

- Lead By Example - marketability and recognition
- Collaborating on policy
- New/improved data collection and metrics to support engagement and decision making

Zero Waste Boston, in partnership with RecyclingWorks MA, is connecting developers to technical assistance and support for deconstruction.



RecyclingWorks MA is a **free** recycling assistance program for businesses and institutions looking to recycle and reduce their waste. RecyclingWorks MA is funded by the Massachusetts Department of Environmental Protection.

FREE TECHNICAL ASSISTANCE:

- Reuse, recycling, and waste management planning
- Outlet for salvage materials
- Onsite assessment with local reuse organizations
- Identifying deconstruction crews
- Sorting-equipment planning
- Training recommendations for staff
- Customizable signage for sorting procedures
- Material tracking templates

DECONSTRUCTION

Pathways




PRESERVATION & ADAPTIVE REUSE

The reuse of a building for its original or different purpose



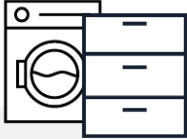
WASTE MANAGEMENT PLAN

Planning for reuse and recycling materials throughout the project.




PRE-DEMO CLEANOUT

Removing items like furniture that can be donated before the project begins.




SOFT-STRIPPING

Easy-to-capture and high value materials like appliances, cabinetry, and architectural items.



HYBRID

Additional material including flooring, windows, and doors.



FULL DECONSTRUCTION

Salvaging all wood and valuable materials.

Min  **Scale:** investment & impact  **Max**

7-unit Victorian, 160-room Hotel,



University Science Lab



