

SUSAN CHRISTOPHERSON  
**CENTER FOR COMMUNITY PLANNING**

**Supporting New York State municipalities in  
their efforts to achieve a more equitable,  
climate-resilient built environment**

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## An alliance grows into a CR0WD



Began in 2020 as a network to work toward a more **sustainable built environment** in New York State.

Supports building material reuse and recognizes the environmental, cultural and economic value of **deconstruction and a circular building economy.**

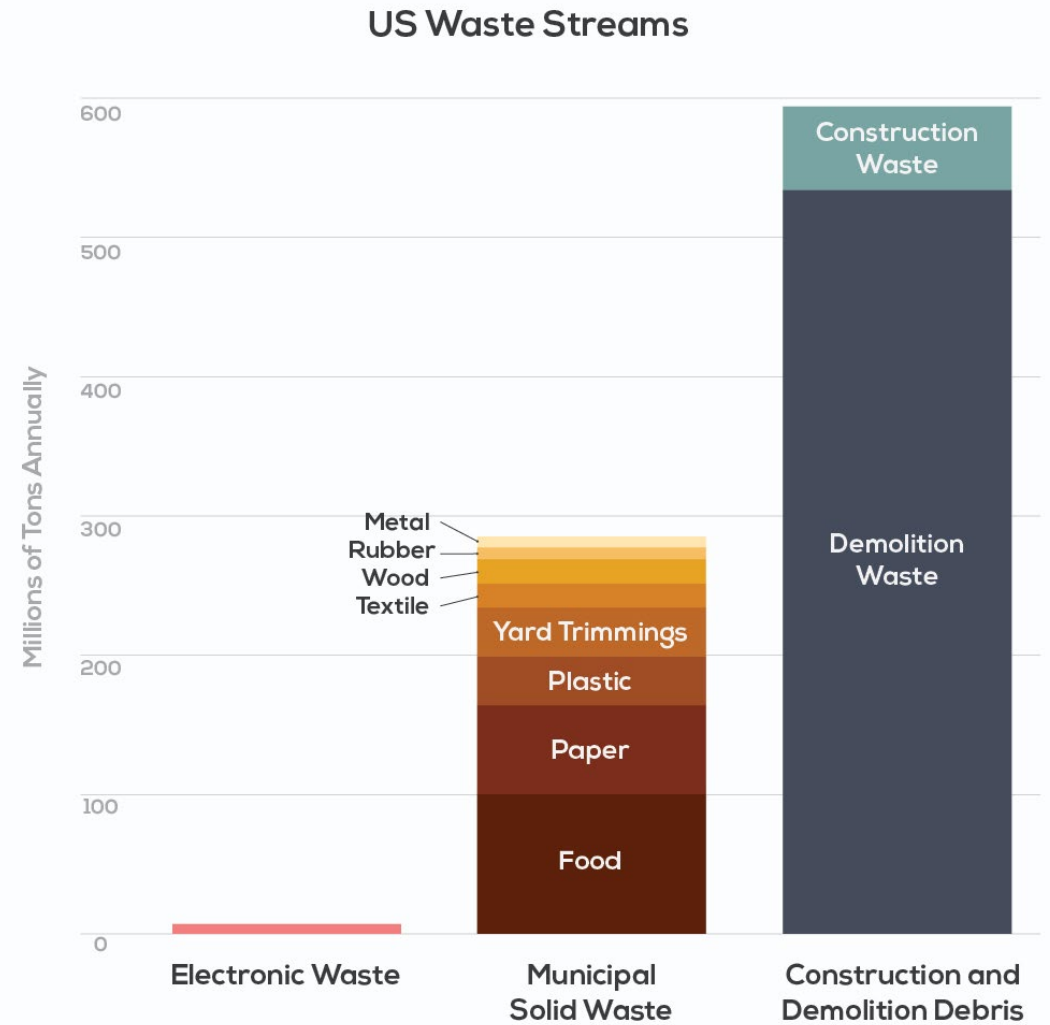
Preservationists, planners, architects, policymakers, salvage and reuse professionals, university faculty and students, and more.




**600 MILLION TONS  
ANNUALLY**



Andrew Roblee





**It's not waste.  
It's just wasted.**

## **Construction and Demolition Debris (CDD)**

- **Largest single component of landfill waste**
- **90% comes from demolition rather than new construction – yet upwards of 80 percent of building materials can be reused**
- **Majority is asphalt and concrete (sometimes recycled) and significant tonnages of wood, brick and other reusable building materials in addition to architectural salvage.**
- **Few local governments in the northeast have adopted deconstruction ordinances/building material diversion requirements.**

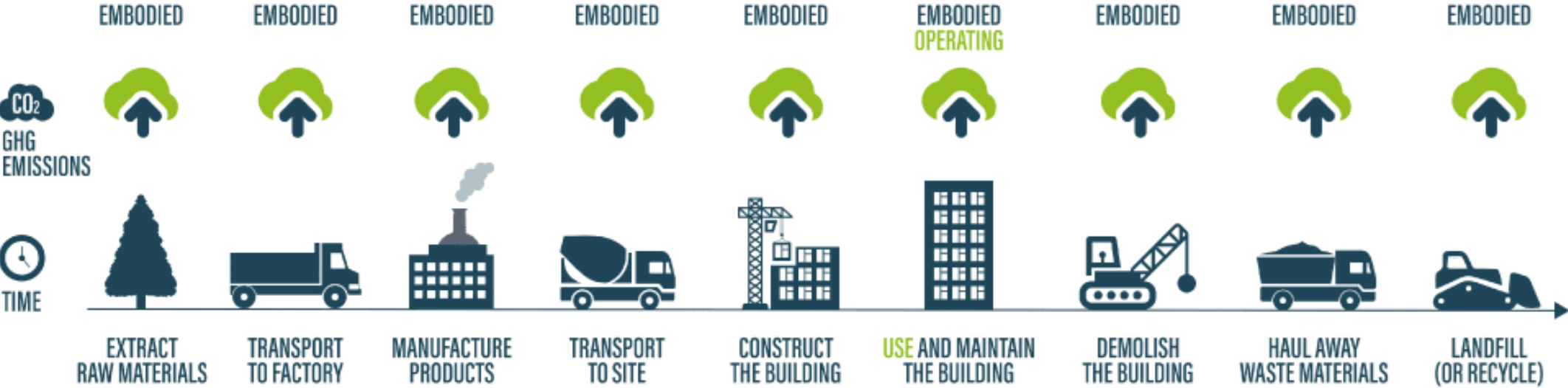
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# Built environment generates 40% of CO2 emissions

13% = extraction/manufacture/transportation (EMBODIED CARBON)

27% = building heating, cooling, etc (OPERATIONAL CARBON)

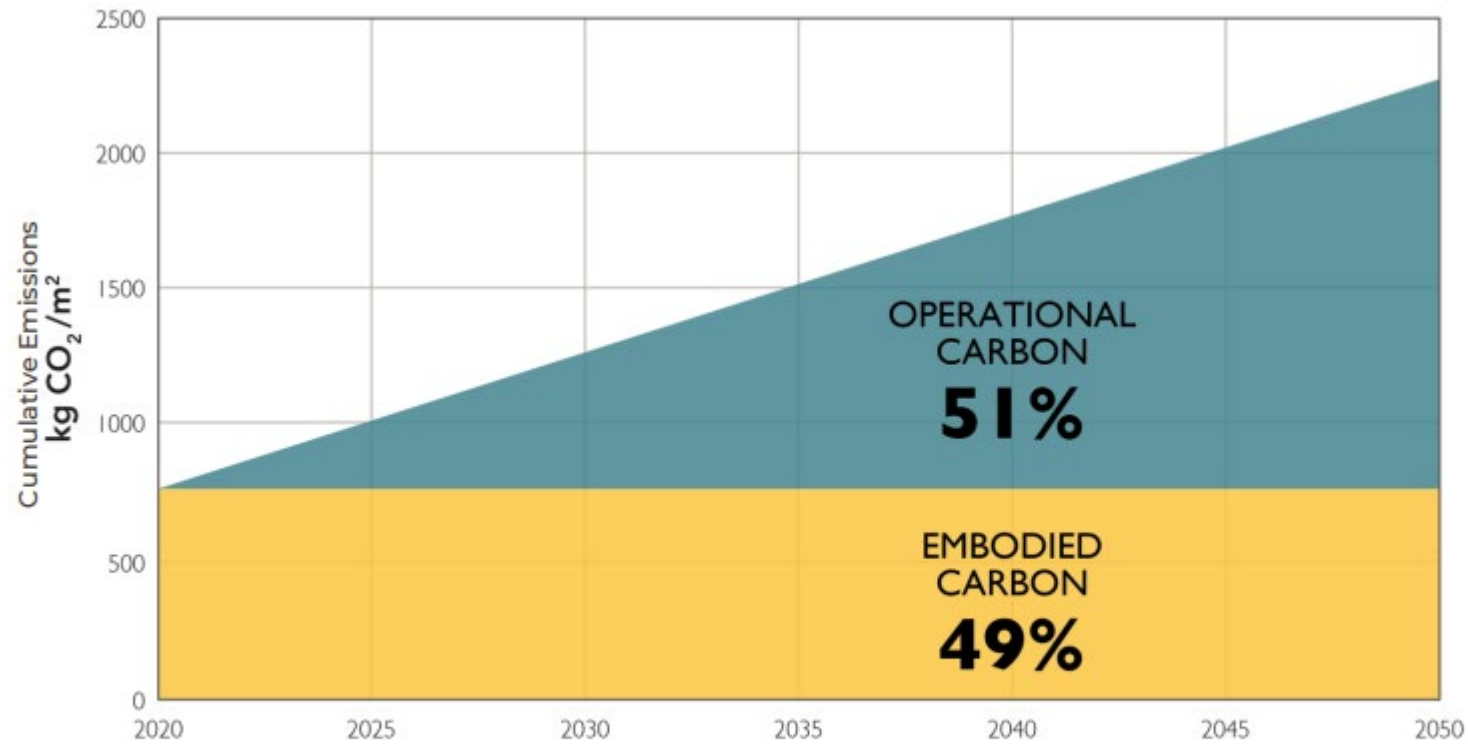
– Architecture 2030



Embodied Carbon Lifecycle

# The greenest building is the one that is already built.

– Carl Elefante, former president, American Institute of Architects



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Image Credit: Architecture 2030

## ENVIRONMENTAL

- Reduce waste to landfills
- Retain embodied carbon
- Conserve natural resources
- Lower carbon emissions
- Reduce toxic pollutants
- Improve public health and safety

# Circular Construction Economy

## SOCIAL/CULTURAL

- Improve design and manufacturing process/products
- Honor history and craftsmanship
- Develop trade skills being lost generationally
- Encourage sustainable treatment of our neighborhood buildings and infrastructure

## ECONOMIC

- Create equitable green jobs to benefit local economies
- Augment existing material supply
- Strengthen vulnerable supply chains
- Lower cost of maintaining landfills





# Education and community engagement

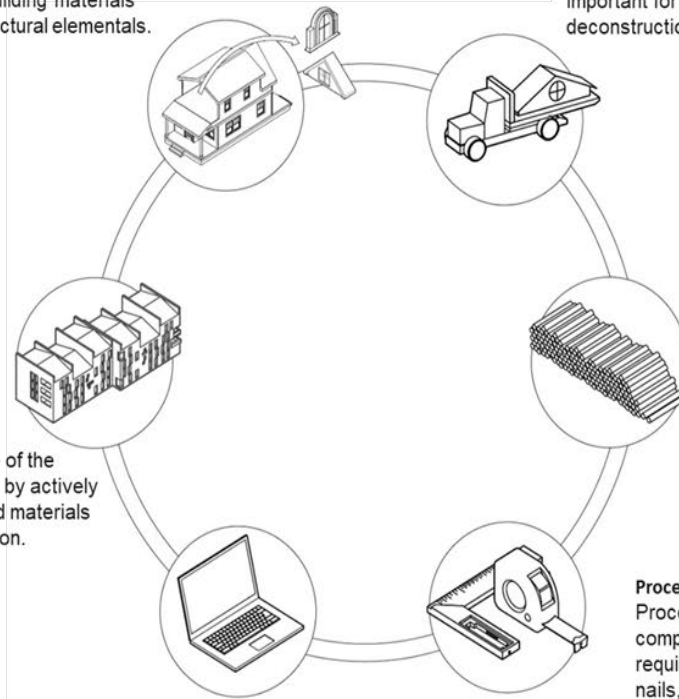


# Policy development, local and state



**Deconstruction + Salvage**  
Deconstruction of structures slated for removal leads to maximum recovery of reusable building materials and architectural elements.

**Transport**  
Infrastructure to haul deconstructed structures from building site to storage and processing centers is important for speed of deconstruction.



**Material Reuse**  
Closing the circle of the circular economy by actively employing reused materials in new construction.

**Storage**  
A flexible, large storage capacity is necessary to properly manage varying quantities of materials as structures are removed

**Processing**  
Processing space and compensated jobs are required to clean, remove nails, sort, bundle, and price recovered materials for resale. This presents opportunity for low-barrier green jobs.

**Marketplace**  
Physical and digital marketplaces are used to market and sell materials back into the material stream.



# Green workforce creation/development



Photos: Finger Lakes ReUse



# Research, data gathering and analysis

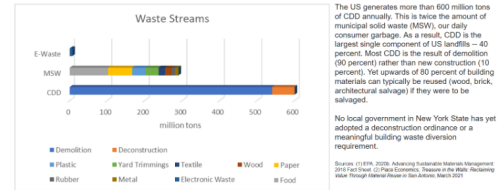
## Deconstruction Ordinance Examples from US/Canada

An increasing number of local governments are adopting deconstruction ordinances and/or building waste diversion requirements. Below are examples of some of the best-known, successful initiatives from cities around the US and Canada, including unique approaches they have taken.

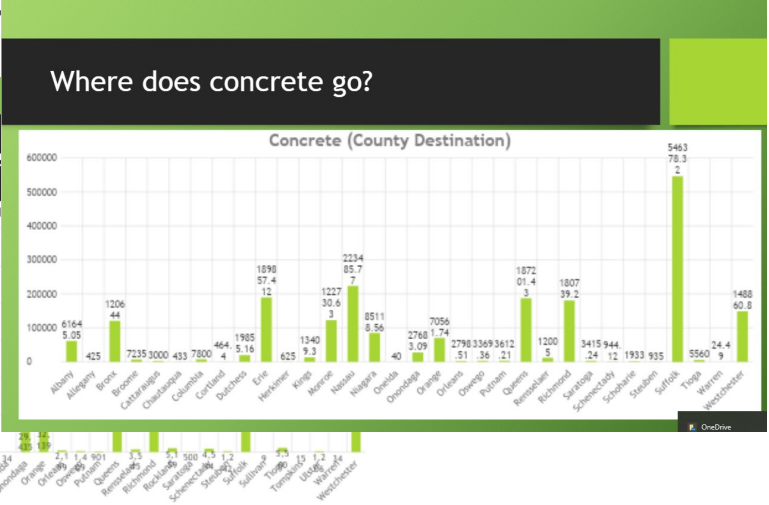
|   |   |
|---|---|
| <b>Palo Alto, CA</b>                        | <b>Deconstruction is required for all full structural removals -- residential and commercial.</b>   |
| <b>Ordinance</b>                            | Deconstruction and Construction Materials Management Ordinance  |
| <b>Date</b>                                 | Adopted Summer 2019; effective July 1, 2020   |
| <b>Summary</b>                              | Deconstruction is required for any residential or commercial project in which the structure is being completely removed, regardless of year built and project value. (Accessory dwelling units (ADUs), structurally unsound buildings, remodeling or additions projects are excluded.)  |
| <b>Requirements</b>                         | <ol style="list-style-type: none"> <li>1. Before applying for a building permit, a salvage survey by a city-approved reuse organization must be completed and becomes part of the permit application.</li> <li>2. Source separation is required on site, which ensures a larger amount of reusable and recyclable materials is salvaged (mixed CDD waste lowers the "capture" rate). Source separation requires materials be placed in separate containers that are delivered to a city-approved materials recovery facility.</li> <li>3. Before final inspection for the building permit, documentation must show that all materials indicated on the salvage survey were properly salvaged by a city-approved reuse organization, with their weight included. (This information is uploaded to an online waste recovery and recycling tracking system for verification.)</li> </ol> |
| <b>Results/Implications/Recommendations</b> | <ol style="list-style-type: none"> <li>1. Clarify effective date and what happens to permit applications already "in process."</li> <li>2. Offer internal training &amp; FAQs for building staff, C&amp;D staff, inspectors, haulers.</li> <li>3. Work with hauler and processing facilities to define <a href="#">guideline</a> on source separation stream.</li> <li>4. Offer multiple touchpoints for outreach prior to deconstruction.</li> <li>5. Build partnerships with contractors during a "pilot" phase.</li> </ol>   |

## Waste Stream Data

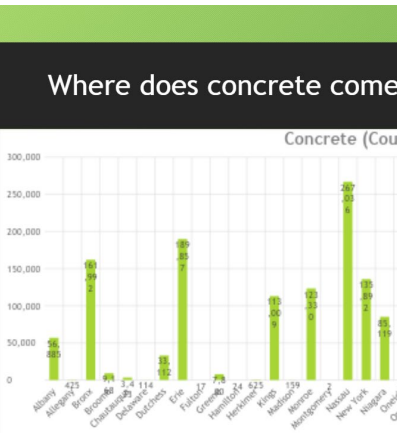
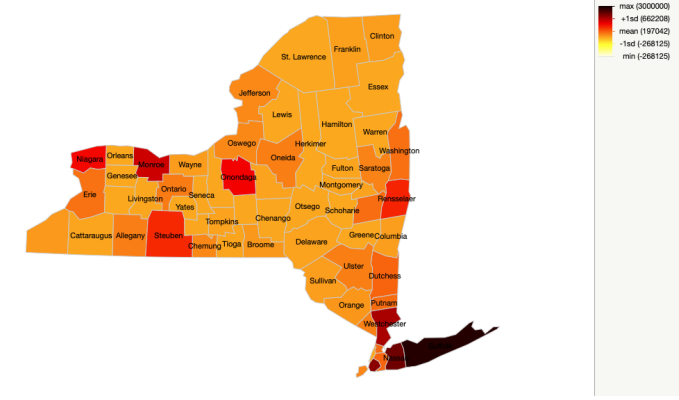
- Compiled research on national perspective of waste streams for display in the Deconstruction Exhibition
- Includes waste streams people are familiar with (e-waste) to compare to deconstruction and demolition CDD Waste: [link](#)
- More [E-Waste Research](#)
- Compiled data into graph: [data link](#)



Additional

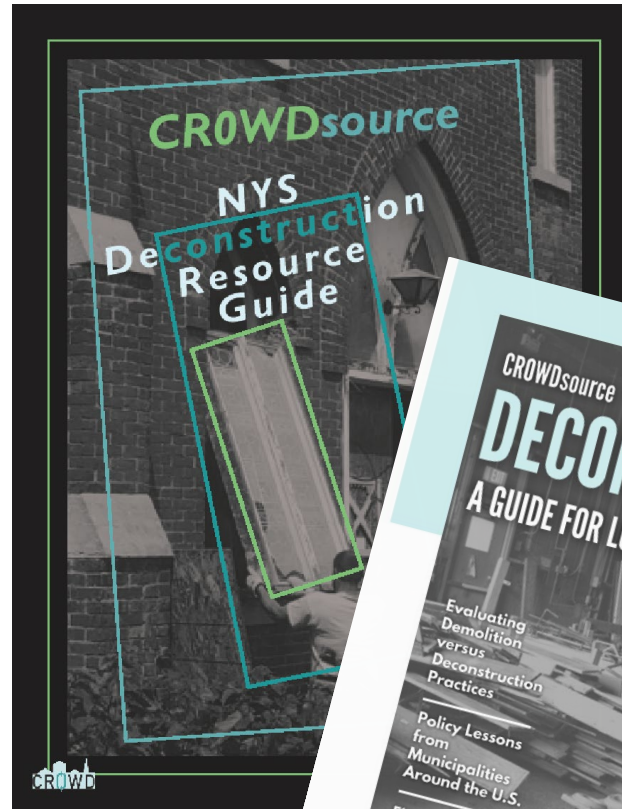


Recipient Distribution of C&D Debris Amount in New York State (Standard Deviation Scale Type)



# Resources available at [www.crowd.org](http://www.crowd.org)

- Free guides
- CROWD partner contacts
- CROWD Conversations (virtual)
- Conference schedules
- Exhibitions and events
- National websites and resources
- And more...coming soon



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**Thank you!**