

CROWD (Circularity, Reuse & Zero Waste Development) supports New York State communities in their plans to achieve sustainable, equitable and resilient built environments. CROWD promotes deconstruction, salvage and reuse of building materials and architectural elements through data-driven policy recommendations, engagement and education.

CROWD members include architects, planners, preservationists, reuse professionals, municipal staff, and students associated with // <u>Cortland Reuse // Circular Construction Lab</u>, Cornell University // <u>Finger Lakes ReUse, Inc</u>. // <u>Historic Ithaca // Just Places Lab</u>, Cornell University // <u>Preservation Association of Central New York // Susan</u> <u>Christopherson Center for Community Planning</u>

Why Deconstruction?

Economic Benefits

- * Create a green workforce and training programs to increase job networks and visibility for the field
- * Boost local economies
- * Link regional salvage markets through an active network of buyers and sellers
- * Add scarce high-quality materials (old-growth wood) to supply of construction materials





Jim Henderson Creative Commons

Socio-cultural Shift

- * Retain and preserve historic and culturally relevant materials within a community
- * Encourage a material-conservation approach to property removal
- * Create more equitable and better-paying jobs that stay local
- * Foster community pride by increasing neighborhood control over materials and spaces

Environmental Stewardship

- * Achieve safer management of toxins (asbestos, lead, mercury, etc.) compared to demolition
- * Eliminate waste sent to landfills
- * Reduce the need for natural resource extraction
- * Decrease transportation emissions (materials stay local), toxic compounds (contained in new lumber) and greenhouse gas emissions (concrete production)
- * Reduce carbon emissions through preservation of embodied carbon in the built environment



The U.S. National Archives

Key Considerations of Construction Lifecycle NOW



Aim for Deconstruction

Deconstruction is a preferred method to remove or renovate a structure -- particularly those that contain wood, specialty architectural materials and elements. and high-quality brick with low-quality mortar.

HIRING

Market **Opportunities**

of Supplies deconstructed materials such as old-growth wood, brick and architectural elements are limited due to the perception of used materials as effective less over time. However, reused materials are valuable and present opportunities to protect the environment and provide green jobs.



Design for Deconstruction

After considering salvaging valuable materials from existing buildings, we should shift our focus to the application of circular business models, which considers nontoxic materials and disassembly design for future transformable building construction.

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Incorporate Evaluation

Since not all materials can be reused, experts such as architects, carpenters, and tradesmen may be invited to evaluate the quality of the salvaged material for desired reuse in new structures.

Choose among Contractors

Selecting the appropriate licensed professionals that match the characteristics of building projects is a must. Labor and resource management plans should include specific recovery goals, time frames, which contractors are responsible for what stage of operation, and what methods will be used.

Dispose of Hazards

CRUWD

Deconstruction is desirable for environmental sustainability. When it comes to dealing with hazardous materials such as leadbased paint (LBP), and asbestoscontaining materials (ACM), it is preferable to demolition.

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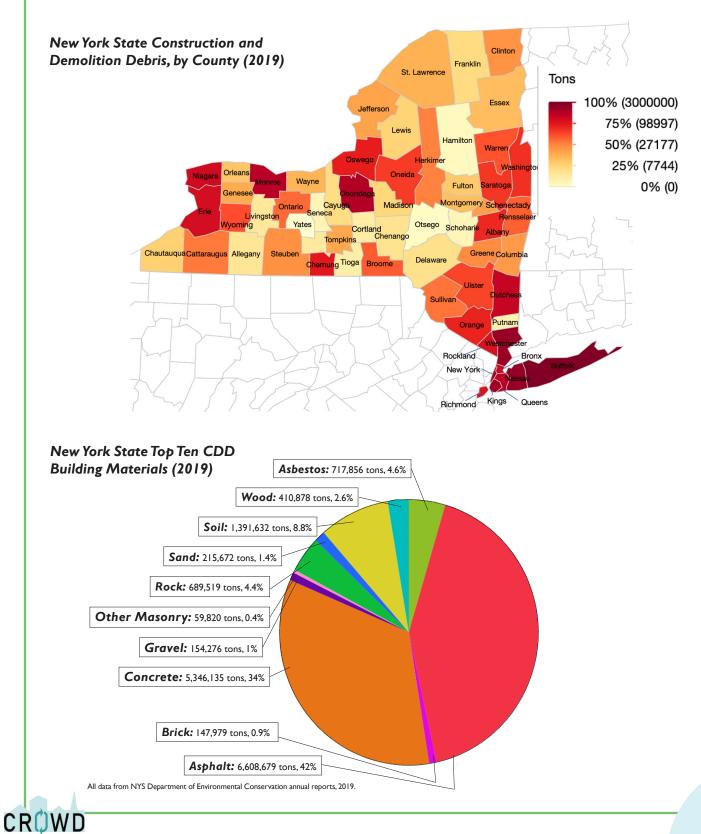
Think about Reuse

Requiring less processing and material reuse can limit the extraction and processing of new local raw materials and reduce the transportation cost as well. Reincorporating the unused or excess material in the manufacturing process provides yet another opportunity for reuse.

Reference: A Guide To Deconstruction Я Lifecycle Construction Resource Guide

Construction and Demolition Debris, New York State

New York State produces more than 15 million tons of construction and demolition debris (CDD) each year. Wood, brick, metal, and other materials that make up CDD waste are reusable and can be turned back into sources of revenue, if properly salvaged. Even concrete and asphalt, the state's most common CDD wastes, are reusable with proper processing techniques. Because CDD is not federally regulated, New York State residents and municipalities have an opportunity to take meaningful, local action to address building waste.



Salvageable Building Materials



Wood Cabinets

Masonry



Buildings constructed prior to 1960 contain valuable amounts of old-growth wood, stained and leaded glass, architectural elements, and other salvageable materials. Building waste results largely from both demolition and renovation of residential and non-residential buildings. Waste quantities are determined based on building material makup and typology that are difficult to broadly estimate. The EPA states that waste assessments prior to demolition would reduce uncertainties.

Residential demolition

* An average 1,600 ft² house built in 1975 with a full basement and garage is estimated to produce about 127 tons of demolition debris.

Residential renovations

*A 560 ft² kitchen remodel and room addition produces over **5 tons** of demolition debris.

*A total remodel of a 1,330 ft² house produces about 13 tons of demolition debris.

Non-residential building demolition

Debris varies greatly between roughly 36 lbs/ft^2 to 358 lbs/ft^2 with a 1992 study of a 44,000 ft² department store in Portland, OR, that is near the average, which generated 165 lbs/ft^2 or a total of over **3,600 tons** of demolition debris.

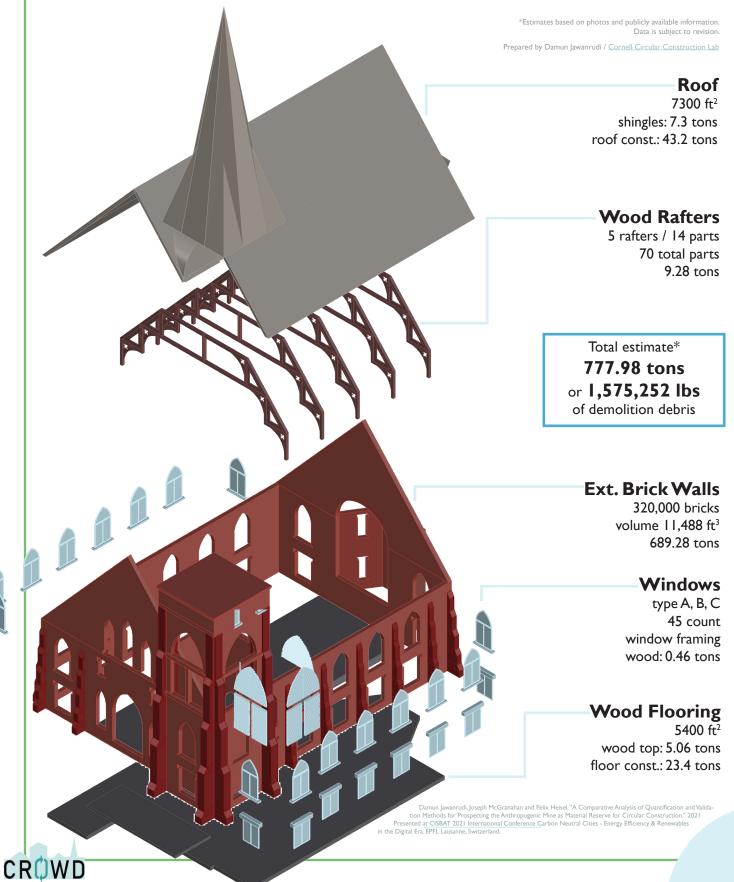
Much of the materials that make up these structures can in fact be reused if salvaged correctly and in time. Examples of this can be seen in the images on this page.

U.S. Environmental Protection Agency: Estimating 2003 Building-Related Construction and Demolition Materials Amounts

photos (5) Christine O'Malley, Historic Ithaca/Significant Elements *masonry photo by Andrew Roblee

Salvageable Building Materials

Around New York State churches, schools, office buildings, and warehouses are routinely demolished and valuable building materials are lost as a result. Below is an example of a typical late-19th century brick church that was recently demolished.



Resource Guide











This guide organizes businesses by primary region and office location. Check online to determine whether a business operates in a region convenient to you.

Albany

Albany Asbestos 2 Bertha Street (518) 964-2081 AlbanyAsbestos@gmail.com http://www.AlbanyAsbestos.com/

Albany Environmental + Construction Group

911 Central Avenue Suite 24-335 (518) 320-7412 info@albanyenv.com https://www.albanyenv.com/ Deconstruction + salvage, decommissioning, hazard remediation, waste hauling, dumpsters



7 Binghampton Street (866) 617-6254 https://www.ehardhat.com/directory/engineers/NY/albany/champagne-demolition-llc/339091 Demolition, remodeling

71 Fuller Road #6 https://recovery.cascades.com/en Recoveryplus_Service@cascades.com





(518) 877-7007 https://www.county-waste.com/ Dumpsters, contracting, waste + recycling, waste diversion

Cristo Demolition 241 N Pearl Street

(518)463-6985 ryan@cristodemolition.com https://www.upstatenydemolition.com/ Dumpsters, total + selective demolition

DiTonno & Sons Demolition

4216 Albany Street (518) 463-1555 https://www.buzzfile.com/business/Ditonno.And.Sons-Demolition-518-463-1555 Demolition + specialty contracting

Historic Albany Parts Warehouse 89 Lexington Avenue

(518) 465-2987 warehouse@historic-albany.org https://www.historic-albany.org/warehouse

Orion DES (Demolition & Environmental Services)

8D Petra Lane (518) 250-5658 http://www.oriondes.com/ Selective + structural demolition, abatement + remediation

Ramos Construction & Demolition

(518) 384-4721 https://www.facebook.com/ramosconstruction I/ Construction + demolition

Sessler Environmental Services 💥 🛆 🛼



II Herbert Drive, Latham (844) 834-6982 info@sesslerenv.com http://www.sesslerenv.com/ Environmental contracting, hazard abatement, structure + material decommission

Tri-County Masonry & Excavating

(518) 528-1646 https://masonrycontractorsalbany.com/ mike@tcmalbany.com Repair, demolition, excavation, masonry specialists

Amherst



Experienced Brick and Stone 4536 Main Street, Suite 102 (800) 560-5811 info@exbricks.com

https://www.experiencedbricks.com/

Buyers +sellers of reclaimed brick, stone pavers. Storage yards throughout NY and Northeast

Auburn





32 Perrine Street (800) 564-7206 http://shaverbrothers.com

Ballston Spa

274 Greenfield Avenue (518) 885-4100 or (518) 885-4200 tdawson@planitsalvage.com http://planitsalvage.com/ Metals/automotive sepcialization, recycling, salvage, transport, dumpsters



(607) 222-7754 https://bylerexcavating.com/ Excavation, grading, earthwork, trenching, site work

Gorick 27 Track Drive

(607) 775-1765 info@gorickconstruction.com http://www.gorickconstruction.com/ Demolition, earthwork, aggregate crushing/recycling services

Brooklyn

Atlas Roll-Off Corp. 895 Essex Street

(718) 345-6451 https://www.atlasrolloff.com/ Dumpster rental

BIG (Build It Green!) Reuse

69 9th Street, Gowanus (718) 725-8925 https://www.bigreuse.org/ facebook.com/bigreuse Building material, furniture, clothes + appliances

ExTech Building Materials

87 Bowne Street (833) 270-7679 https://www.extechbuilding.com/ Reclaimed brick stock

Buffalo

Buffalo ReUse 296 East Ferry Street (716) 218-9401 facebook.com/Buffalo-ReUse-26675117496

Gothic City Antiques

1940 Niagara Street (716) 874-4479 facebook.com/gothiccityantiques

Roll-Off Dumpster Direct 1

(888) 885-2048 https://www.rolloffdumpsterdirect.com/ Residential + commercial

ReUse Action

980 Northampton Street (716) 894-3366 http://reuseaction.com facebook.com/ReUseAction

Sessler Environmental Services 💥 🛆 🕽

2558 Hamburg Turnpike, Lackawanna (716) 770-7414 info@sesslerenv.com http://www.sesslerenv.com/ Environmental contracting, hazard abatement, structure + material decommission

Total Wrecking and Environmentals 💥 🛆 🛼 70 Pearce Avenue

(716) 692-2002119 or (607) 753-8136 info@totalwrecking.com https://www.totalwrecking.com/ Industrial dismantlement, abatement + reuse

Cortland

Contento's 119 1/2 Pendleton Street (607) 753-8136 https://contentosny.com/ Info@contentosny.com CDD recycling center (unprocessed CDD) Demolition, container + general requests

Depew

Cascades Recovery 3241 Walden Avenue (866) 839-0800 https://recovery.cascades.com/en

Fort Ann

CV Waste Removal Container Services 💥 🔬 🔂



70 Anne Street (518) 746-1558 https://www.cvwasteremovalinc.com/ Waste removal, dumpster rental + hauling

Fort Plain

Fort Plain Antiques and Salvage 55 Willett Street (518) 332-0395 http://fortplainantiques.com

Gouverneur



(315) 250-8295 (Rick Haller, shop foreman) https://www.vintagewoods.com/ lehmer@peoplepc.com Barn wood + element salvage



Holtsville

Island Architectural Salvage 194 Morris Avenue

(631) 745-4526 http://islandarchitecturalsalvage.com facebook.com/IslandArchitectualSalvage

Ithaca

Ithaca ReUse Center

214 Elmira Road (607) 257-9699 http://ithacareuse.org facebook.com/ithacareuse

Significant Elements

212 Center Street (607) 277-3450 http://www.significantelements.org/ facebook.com/pg/SignificantElements.org

Triphammer ReUse MegaCenter

2255 North Triphammer Road (607) 257-9699 https://ithacareuse.org/ facebook.com/ithacareuse Half an acre of reusable goods

Islandia

United Water Restoration



74 Bridge Road (631) 494-4764 office@unitedliny.com https://unitedliny.com/ Debris clearout, demolition, hazard remediation

Kingston

Zaborski Emporium 27 Hoffman Street (845) 338-6465 facebook.com/Zaborski-Emporium-145018648885741

Macedon

Sessier Environmental Services 💥 🛆 🔂 1330 Research Forest

(585) 617-5710 info@sesslerenv.com http://www.sesslerenv.com/ Environmental contracting, hazard abatement, structure + material decommission

New York City

87-29 188th Street, Hollis



(917) 335-4195 https://www.everestenterprises.nyc/ Asbestos removal, abatement, demolition, lead remediation

Midvalley Contractors 💥 🛆 🔂

32 Walnut Street, New Windsor (845)-565-4089 https://midvalleycontractors.com/ office@midvalleycontractors.com Asbestos abatement, interior demolition, and mold remediation

New York Dumpster Rental



82 Nassau Street New York, NY 10038 (917) 818-0741 https://www.newyorkdumpsterrental.com/ info@NewYorkDumpsterRental.com

Olde Goode Things

302 Bowery + 2420 Broadway + 333 West 52nd Street (212) 498-9922 or (212) 877-0845 or (212) 989-8814 http://ogtstore.com facebook.com/OGTstore Architectural antique dealer (including church items)



158 Franklin Street (212) 371-4646 http://urbanarchaeology.com facebook.com/urbanarchaeologyltd

The Demolition Depot

216 East 125th Street (212) 860-1138 http://demolitiondepot.com facebook.com/demolitiondepot

Latham



Classic Environmental

12 Wade Road (518) 591-0234 singalls@classicenvironmental.com http://www.classicenvironmental.com

Waste material removal, hazard remediation, salvage + recycling services

Oneonta

New York Salvage 35 Otsego Street

(607) 433-9890 http://newyorksalvage.net facebook.com/Architiques-100216503388810

Phoenix, NY

CDP Services Excavating 9192 River Road



(315) 430-0048 https://cdpexcavating.com/ Demolition + excavation

Rochester



(585) 527-8000 https://www.aac-contracting.com/ Hazard remediation, selective demolition

Cascades Recovery 1845 Emerson Street (585) 527-8110 https://recovery.cascades.com/en

Frederico Demolition

1005 Chili Avenue, Suite 2 (585) 563-3567

https://fredericodemolition.com Deconstruction, central NYS building material stock

Historic Houseparts

528-540 South Avenue (585) 325-2329 http://historichouseparts.com facebook.com/historichouseparts





(716) 285-9280 info@metroenvironmental.com https://www.metroenvironmental.com/

Environmental contracting, hazard remediation, select demolition + dismantlement

1075 Buffalo Road



(585) 647-9933 grny@pauldavis.com https://greater-rochester.pauldavis.com/ Natural-disaster triage, mitigation, hazard remediation + restoration

ReHouse Architectural Salvage

469 West Ridge Road (585) 288-3080 facebook.com/ReHouseArchitecturalSalvage



69 Seneca Avenue (585) 340-6799 https://www.rockenv.com/ Building + interior demolition, hazard remediation. emergency restoration

Vestal

LCP Group & A 50 450 Commerce Road

(607) 592-2866 cpierce@lcpgroup.net (Christina Pierce) lcpgroup@yahoo.com http://www.lcpgroup.net/ Demolition, deconstruction, asbestos remediation, recycling, online sales of building material

Syracuse



843 N Salina Street (315) 925-4439 or (315) 299-5897 https://www.chuckithaulers.com/

Dumpster rental, waste removal, clean-outs, clutter removal + organizing, hauling, demo

Empire State Professionals, Inc. 💥 🛱 🛼



5553 Cairns Trail, Clay (315) 503-0000 https://empirestatepros.com/ Home remodeling, renovations, custom additions



(315) 254-2047 https://www.junk-king.com/locations/syracuse/ "Junk" physical removal, pickup, hauling, donation + recycling

Purcell Construction Corp

566 Coffeen Street (315) 782-1050 http://www.purcellconstruction.com/ Historic remodel + renovation

Sessier Environmental Services A to the services of the servic (844) 834-6982 info@sesslerenv.com http://www.sesslerenv.com/

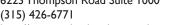
Environmental contracting, hazard abatement, structure + material decommission



308 Otisco Street + various other locations (315) 475-9172 https://www.syracuserestore.org/ restoremanager@syracusehabitat.org Sells donated furniture,

appliances, home goods + building materials

Syracuse Haulers 💥 🛱 🛆 🛼 6223 Thompson Road Suite 1000



http://syracusehaulers.businesshomepage.services/residential Commercial dumpster rental, full + selective demolition, hazard remediation, CDD recycling, cleanup + detailing



(315) 313-3853 Demolition, material removal, hauling

Weedsport, NY O'Connell Excavation

(315) 252-0705, or 315-246-0075

https://www.facebook.com/OConnell-Excavating-951839991645338/ Demolition, excavation + earthwork



PO BOX 409 (518) 438-9800 http://www.danshauling.com demodan@danshauling.com Demolition, hauling, CDD recycling





All for Reuse http://allforreuse.org/ National network of building professionals committed to material reuse

Bay Area Deconstruction Work Group

http://www.deconstructionbayarea.com West-coast based deconstruction advocacy and resource organization

Build Reuse

https://www.buildreuse.org/

National nonprofit targeting deconstruction/reuse investment and workforce development

Building Green

http://buildinggreen.com International green building knowledge base

Climate Heritage Network

http://climateheritage.org International interdisciplinary network whose member are committed to achieving Paris Agreement goals

Construction and Demolition Recycling

http://www.cdrecycler.com National CDD magazine + database

Construction and Demoltion Recycling Association

https://www.cdrecycling.org/ International material database and coalition of organizations supporting CDD reuse

Delta Institute

https://delta-institute.org/

Midwest nonprofit for interdiciplinary community and landscape reforms via research

Ellen MacArthur Foundation

https://www.ellenmacarthurfoundation.org/

UK-based network committed to the creation of materials reuse and circular economies

Northeast Recycling Council https://nerc.org/

Norhteast interstate nonprofit in policy research, education and technical assistance for CDD reuse

Reclamation Administration

http://www.reclamationadministration.com/ North American network of local government professionals committed to accelerating urban sustainability

Recycle Search Database

https://recyclesearch.com/ Recycling and reuse resource database

Reuse Wood

http://www.reusewood.org Online materials database and CDD directory

Salvo Directory

https://www.salvoweb.com/salvo-directory International architectural salvage directory

Urban Sustainability Directors Network

https://www.usdn.org/ National network of building professionals committed to material reuse

Waste Heritage Research (Carleton College)

https://wasteheritageresearch.wordpress.com/about/ Carleton College's research hub including glossary, news site and publisher for material salvage information

NYS Department of Environmental Conservation https://www.dec.ny.gov/

U.S. Environmental Protection Agency

https://www.epa.gov/

(NY is in <u>EPA Region 2:</u> https://www.epa.gov/aboutepa/ epa-region-2)

Glossary

Circular economy	A circular economy is restorative and regenerative by design and aim to keep products, components, and materials at their highest utility an value at all times. (Ellen MacArthur Foundation, 2015) This is in contrast to the linear econ omy that begins with the extraction of resources from the environment to their use and eventual deposit into a landfill. (Felix Heisel, Circular Construction Lab. 2021)
Construction and demolition debris	Also known as CDD, this is material that is generated during renovation construction, deconstruction, or demolition of buildings and infrastruc- ture; it is considered non-water soluble and non-hazardous and may have the potential to be reused or recycled. (Palo Alto municipal code)
Deconstruction	The careful and systematic dismantling of a part or a whole buildin structure in order to maximize the recovery of valuable material. It is a environmentally friendly alternative to demolition, which produces larg amounts of pollution and waste that ends up in landfills. (Jennifer Minner, Just Places Lab 2021)
Embodied carbon	All CO ₂ emissions generated during the production and handling of a building's materials throughout its life: product and construction stage (raw material, manufacturing, transport, construction, and installation), use stage (repair, replacement, refurbishment), and end-of-life stage (deconstruction/demolition, transport, waste processing). If these materials end in landfill or incineration, the embodied carbon is lost. Operational carbon refers to all CO ₂ emissions related to the operation of a buildin during its use stage (heating, cooling, electricity, etc.). While operational carbon emissions are emitted over time, the majority of embodied carbon emissions happen before the first day of a building's use. (Felix Heisel, Greular Construction Lab 2021)
Recycle	An umbrella term for processes that convert waste into usable products, materials, or substances with the goal of reintroduction to the marketplace. In contrast to reuse, recycling processes generally change the physiognomy (and may also change the composition) of the resource Recycling processes divert material from the landfill or incinerator. (Feix Heisel, <u>Greater Construction Lab 2021</u>)
Reuse	A process that further utilizes a component, products, or material in it original composition and shape. (Felix Heisel, <u>Circular Construction Lab.</u> 2021)
Salvage	A systematic and careful intervention to extract valuable building mater als, components, and products before demolition. The salvaged materia







Campbell / Courtesy of Finger L es ReUse

an asset for your community? For more information, contact CR0WD. info@christophersoncenter.org

Want to turn building waste into



Sean Campbell / Courtesy of Finger Lakes ReUse



Courtesy of Cortland ReUse



Campbell / Courtesy of Finger Lakes ReUse

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