

A Model **DECONSTRUCTION ORDINANCE**

for Maryland Municipalities



**SMART
GROWTH**
MARYLAND

A PROGRAM OF
PRESERVATION MARYLAND

*What if we could reduce
waste, create jobs, and
preserve our community's
historic character -
all at the same time?*

Smart Growth Maryland is a program of Preservation
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INTRODUCTION

Deconstruction is the careful dismantling of a building to recover reusable materials—often called “unbuilding.” It is not an alternative to building preservation, but an alternative to demolition. When buildings must come down, for whatever the reason, deconstruction carefully removes building components for reuse or recycling and hazardous limits environmental impacts. Maryland has recognized waste reduction goals through legislation like the Greenhouse Gas Reduction Act and the Climate Solutions Now Act, aiming for net-zero emissions by 2045. Deconstruction reduces waste and greenhouse gas emissions, creates local jobs, preserves historic materials, and supports Maryland’s climate and economic goals by salvaging and reusing valuable building components instead of sending them to landfills.

Municipalities like Portland, OR, Palo Alto, CA, and San Antonio, TX were early adopters and many others are looking to follow. Successful implementation of a new municipal program requires numerous pieces of legislation or published guidelines that municipal staff, grassroots advocates, and elected officials need to consider before adoption. Those include:

1. Municipal Ordinance
2. City Council Resolution
3. Administrative/programmatic rules that are not codified
4. Research, industry and community feedback etc demonstrating needs and anticipated impacts

The follow pages detail model ordinance language with notes and commentary to provide context, probing questions, and best practice examples. The purpose of a deconstruction ordinance is important to consider: is it more environmental, heritage, workforce development or public health focused? This multi-prong approach means multiple allies. Adding a new piece of city code is a large legislative lift, but the non-codified administrative guidelines offer chances to start small and increase the program in a phased manner. Together the city code and departmental administration can work together to launch a successful deconstruction program.

DECONSTRUCTION MUNICIPAL CODE LANGUAGE

This ordinance focuses on lessening or eliminating construction waste from mechanical demolition of buildings by instead requiring deconstruction of buildings which enables reusable or recyclable materials. It likely will be best placed in the City Code chapter regulating building and construction or solid waste management. It may be a whole new section or replace existing language in your city code.

Title: Deconstruction and Construction Materials Management

Purpose

The accumulation, collection, removal and disposal of waste associated with construction, deconstruction, and demolition activities must be controlled for the protection of the public health, safety, welfare, and the natural environment. Maryland state law addressed this need through numerous iterations of the Greenhouse Gas Reduction Act (2009, 2012) and more recent Climate Solutions Now Act (2022) with ambitious goals to reach net-zero carbon emissions by 2045.

The City may adopt more stringent laws and regulations for addressing this need locally than Maryland law, and this chapter establishes local requirements which further both state law and the city's adopted policies. The purpose of this Chapter is to provide minimum standards and requirements regulating the deconstruction, or demolition of buildings and structures.

Insert reference to any other chapters or adopted policies that are relevant to enhancing public welfare or environmental sustainability. This may also include references to protecting historic building materials, and workforce development initiatives in construction, building trades, and deconstruction. The "whereas" clauses in the city council resolution is also a good spot to highlight the purpose and goals of the ordinance.

Definitions

"Deconstruction" means systematic dismantling of a structure, typically in the opposite order it was constructed, to maximize the salvage of materials for reuse, as a higher and better use than recycling to avoid disposal via landfilling or incineration. Deconstruction includes both partial deconstruction and full or complete deconstruction.

"Demolition" means destruction and removal of partial or all components and materials of a building or structure from a lot or parcel, typically with use of heavy machinery.

"Diversion" means any activity, including recycling, source reduction, reuse, deconstruction, or salvaging of materials, which causes materials to be diverted from disposal in landfills and instead puts the material to use as the same or different usable product.

"Recycling" means the processing of waste materials into new products or material feed stock for products. Materials that can be recycled include but are not limited to concrete, metal piping, and asphalt roofing shingles.

"Reuse" means the utilization of a product or material that was previously installed for the same or similar function to extend its life cycle. Materials salvageable for reuse include but are not limited to cabinets, doors, hardware, fixtures, flooring, siding, and framing lumber.

"Salvage" (noun) means any building material that has any potential for reuse.

"Salvage" (verb) is the act of aggregating materials for the specific purpose of reuse; materials saved must meet one of the following criteria:

1. For donation
2. For resale
3. For personal reuse

Terms like "deconstruction" and "salvage" are probably not already defined terms in your city code. Insert relevant definitions in the chapter as appropriate and ensure the use of that term elsewhere in the code does not differ.

Regulations/Minimum Requirements/Best Management Practices

i. Applicability.

This chapter shall be applicable to all residential and commercial projects that include a whole structure demolition requiring a demolition permit.

- *It is recommended to start small, but best practice is to expand regulations to include all residential and commercial structure removals.*
- *It is best to start with an applicability section which tells readers what projects need to follow these regulations. This could be applicable to all residential and commercial projects that include a whole structure demolition permit such as in Palo Alto, CA; or applicable to buildings built prior to 1940 or earlier or structures that have been designated as a historic resource such as in Portland, OR; or a phased approach such as in San Antonio, TX.*
- *Analyze the types of building stock in your municipality to help decide applicability. Buildings built prior to 1940, such as a wood frame house, typically result in more salvageable material than a 1970s reinforced concrete office building. Follow the logic of maximizing salvage for reuse over recycling to guide the policy development in your city.*
- *Analyze your local waste stream, how much construction and demolition waste is currently going to landfill, what types of projects or buildings demolished are the largest contributors?*



Left: Image of the deconstruction of the c. 1870s Sisson House, which resulted in an 82% diversion rate, diverting 29 tons of material from the landfill including over 13,000 linear feet of old-growth lumber. More than 20 categories of materials were recovered for reuse.

Photo curtesy of the City of San Antonio Office of Historic Preservation.

San Antonio's ordinance Phase I (2022) includes residential structures four units or less built on or before 1920 and before 1945 in designated historic districts for city-executed demolitions, Phase II (2023) expands the criteria to include those building types for demolition permits in addition to city projects, and Phase III (2025) expands the criteria to residential structures for those building types of up to eight units.

ii. Certified Deconstruction Contractor

Deconstruction work must be performed by a Certified Deconstruction Contractor, as certified by the building official.

- *The requirement of a certified or licensed deconstruction contractor is a best practice that can enhance public safety, worker safety, and regulatory compliance. Many existing demolition firms in your community can expand their services and existing demolition licensing to add deconstruction but will need training to do so safely.*
- *Existing workforce development programs can support this training, as a Deconstruction Technician is available through the federal Department of Labor's Registered Apprenticeship Program (RAP). Apprenticeships are a proven method for effective training and employee retention, as they provide paid training and on-the-job education. Employers can hire apprentices just like any other employee, just with some extra paperwork. There are Workforce Training Grants available through the Maryland Department of Labor and local Workforce Development boards that can assist employers to cover wages and training costs. Preservation Maryland's Campaign for Historic Trades sponsors a deconstruction technician RAP. The Campaign can assist with funding, recruiting apprentices, education and contractor training.*

DECONSTRUCTION TECHNICIAN

4000 OTJ hours

315 RI hours

\$18/hour Journeyworker Rate

Unbuild structures partially or fully and salvage as much viable building material as possible. Document and research the structure prior to deconstruction. Handle materials and process for resale and reuse. Craft new goods with saved materials.



Registered Apprenticeship Programs are a formal and structured training initiative that is overseen and recognized by the Department of Labor (DOL). The DOL issues a certification that articulates set requirements. The requirements for a Deconstruction Technician are listed to the left.

iii. Salvage Survey and Reuse/Diversion Report

A salvage survey and reuse proposal plan shall be submitted as part of the application for a deconstruction permit, and the final permit inspection will not be complete without a diversion report.

1. The Salvage Survey and Reuse Proposal Plan shall detail the materials to be diverted from waste disposal in landfill by reuse and recycling, and include the specified purpose (donation, resale, personal reuse), destination of diverted materials, and hauling method. This includes plans for proper removal of any toxic materials such as lead and asbestos.
2. The quantity of materials to be diverted shall be specified by weight whenever possible. When the receiving facility does not have the ability to weigh materials, quantity may be estimated or reported in cubic yards.
3. The Diversion Report shall include reuse, recycling, and landfill receipts, weight tickets, hauler receipts, and other documentation related to the diversion throughout the project for verification and final close out.

The use of a salvage survey, reuse plan, and diversion report provides the necessary data to ensure the program meets the desired results for waste diversion and enforces compliance with the regulations. This could include targeted materials to reuse/recycle with a phased implementation to reach diversion goals such as in Nashville, TN. Consider having a FAQ page to point users towards known community resources like in Seattle, WA. It is also best practice to have any municipal funded projects lead by example to incentivize deconstruction and maximize salvage.

Encourage the resale of salvaged materials on the job site, therefore allowing a shorter journey for the materials and less the haul away.

iv. Enforcement/Inspections/Incentives

- a. The city shall be authorized to inspect, upon reasonable notice, and audit individual project waste streams generated at permitted projects to determine compliance with this chapter.

Include typical enforcement language cited in other chapters for a stop work order or similar suspension of construction activities and any relevant fees or penalties. Include any codified incentive programs such as providing grants or fee reductions in a certain geographic area, or for certain building types, or building owners. Portland, OR enacted a phased approach with small grants \$2,500-\$3,000. Hennepin County, MN offers up to \$5,000 for residential deconstruction grants and up to \$10,000 for commercial properties.

v. Appeal/Exemption

a. Appeal.

Include typical appeal language cited in other chapters for when an applicant wishes to file an appeal for building related permits or processes.

b. Exemptions.

1. Where evidence can be shown that certain types of buildings or structures, or portions thereof, do not have acceptable or adequate materials for reuse or recycle, divert materials to the maximum extent possible, with building official approval.
2. Where evidence can be shown that the building or structure, or portion thereof, has excessive damage from conditions such as hazardous materials, fire damage, water damage, rot, mold, etc., may be exempt, with building official approval.
3. Buildings or structures, or portions thereof, ordered to be abated under the City Dangerous Buildings Code may be exempt, with building official approval.

In addition to the code language, which should be kept simple and objective, use the city council resolution as an opportunity to cite more specific reasons for the ordinance. The framing of deconstruction as a means for helping achieve net zero emissions, sustainability, environmental justice, workforce development, and historic preservation goals will aid the popularity of the program.

Use municipal program guidelines/non-codified administrative avenues to add in more details and ensure applicants know this is a permit just like any other. Partnerships with facilities and organizations that can enhance the efficiency of waste diversion is recommended, as well as deconstruction workforce training initiatives.

DECONSTRUCTION RESOURCES

Campaign for Historic Trades/Build Reuse: Deconstruction Technician Apprenticeship webinar, 2024.

Build Reuse, a national nonprofit targeting deconstruction/reuse with an upcoming conference in St. Paul, MN August 4-6, 2025. buildreuse.org/

Energy Justice Network, a national nonprofit for environmental and energy justice agenda. <https://energyjustice.net/waste/cd/>

CROWD (Circularity, Reuse, Zero Waste Development) a network in New York with an extensive resources page. cr0wd.org/

Treasure in the Walls: Recovering Value Through Material Reuse in San Antonio (2021)

Deconstruction: The Story of Two Homes, 4 minute video by the City of San Antonio Office of Historic Preservation

Breaking it Down: A Comprehensive Guide to Building Deconstruction and Material Reuse Policy (2023) by Sara Badiali