

IMPACT STATEMENT

Legislation title: Amend Deconstruction of Buildings Law Code to include houses and duplexes built in 1940 or earlier (Ordinance; amend Code Chapter 17.106)

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Purpose of proposed legislation and background information:

The proposed amendment would expand the existing Deconstruction of Buildings Law (“deconstruction ordinance”) to apply to more structures resulting in additional building material salvage/reuse, increased economic activity, more protection from hazardous materials, and increased carbon benefits.

In July of 2016, Portland City Council unanimously adopted the nation’s first ordinance requiring deconstruction instead of mechanical demolition (Ordinance 187876).

Deconstruction involves the disassembly of a structure (most often by hand) in the opposite order it was constructed with the primary purpose of salvaging building materials (e.g., old-growth lumber, wood flooring, fixtures) intact for reuse. Today Portland’s deconstruction ordinance serves as a model and inspiration for other jurisdictions across North America who have either adopted similar ordinances or are in various stages of consideration.

Portland’s deconstruction ordinance was adopted in large part to help address community concerns about the impacts of mechanical demolition in neighborhoods. When compared to mechanical demolition, deconstruction creates more jobs, has twice the carbon benefit, produces less dust, and increases the likelihood of discovering hazardous materials hidden behind walls. From the beginning, advancing deconstruction in Portland has prioritized inclusion of people of color, women, and other disadvantaged groups in the field of construction. Expanding the deconstruction ordinance helps contribute to a more prosperous, healthy, and equitable Portland. It also specifically supports Portland’s Climate Action Plan – Action 10B Deconstruction and Salvage and Portland’s 2035 Comprehensive Plan Policy 4.64 – Deconstruction.

Currently the ordinance requires deconstruction for any project that seeks a demolition permit for a house or duplex built in 1916 or earlier or if the house or duplex is designated as a historic resource regardless of age. This year-built threshold typically captures approximately 33 percent of all house/duplex demolitions annually. The historic resource threshold captures around one percent of house/duplex demolitions annually. The threshold of 1916 was originally chosen because it represented a reasonable first step in requiring deconstruction – one that focused on older buildings rich in quality material and sustainable in terms of what the deconstruction/salvage industry could successfully handle in terms of both labor and market.

The proposed amendment raises the year-built threshold to houses/duplexes built in 1940 or earlier. This amendment builds on a multi-phased approach that began with grants for voluntary deconstruction (2015) followed by requirements (2016) that could be expanded over time. Expanding the program to include houses and duplexes built before 1941 by 2019 is a stated goal in the original deconstruction ordinance.

Raising the year-built threshold to 1940 would result in capturing approximately 66% of applicable demolitions on an annual basis. While this doubles the percentage of demolition permits captured, demolition permit applications have been declining since 2016 when the deconstruction ordinance was first adopted. Raising the year-built threshold to 1940 results in a slight increase in the total number of projects (approximately 7) annually compared to activity in 2016. Continued decline in demolition permits is unlikely over the long term, therefore BPS will continue to support and foster efforts that expand the market and infrastructure for salvaged building material. Both Metro and Oregon Department of Environmental Quality (DEQ) have active grant programs which include focus areas for salvage and reuse.

Over the past three years, the deconstruction ordinance has led to numerous positive outcomes:

- Over 200 houses have been deconstructed (instead of mechanically demolished)
- Approximately 2 million pounds of material has been salvaged for reuse
- 11 companies are currently Certified Deconstruction Contractors (3 more in training)
- Cost to deconstruct has come down (due to increased competition)
- All Certified Deconstruction Contractors have current lead-based paint and asbestos certifications
- Two new salvage retail facilities have opened
- Portland's deconstruction ordinance has served as a model for other cities (Milwaukee, WI; Vancouver, BC; Palo Alto, CA)

Financial and budgetary impacts:

Impacts to the Bureau of Planning and Sustainability: Administration of the current deconstruction ordinance is the responsibility of the Bureau of Planning and Sustainability (BPS). The current staffing requirement is approximately 0.5 FTE. Additional work created by the proposed amendment would be covered by existing staff and would require a modest increase in time for a total 0.6 FTE. No budget changes are needed nor requested. No additional demolition permit review fees are charged for deconstruction projects. This will not change with the proposed amendment.

Impacts to the Bureau of Development Services: All demolition permit applications are taken in by the Bureau of Development Services (BDS). The assignment of any required deconstruction review (BPS) based on the year-built threshold is programmed into the permit database (TRACS) and does not require BDS staff resources. Updating the permit database to reflect the 1940 change would require a one-time modification to TRACS programming by BDS. Due to a current moratorium on changes to TRACS programming, BPS submitted an exception request to BDS so that the update to 1940 can be processed if the proposed amendment is approved. The exception request was approved.

Community impacts and community involvement:

The Deconstruction Advisory Group (DAG) was first established in April of 2015 for the purpose of advising the Bureau of Planning and Sustainability on developing recommendations to City Council to advance deconstruction in Portland. The DAG consists of deconstruction contractors, salvage retailers, home builders, historic preservationists, demolition contractors, Bureau of Development Services (BDS), DRAC, neighborhood activists, Multnomah County, Metro and Earth Advantage. This group has met over 20 times and has been instrumental in helping develop a successful deconstruction grant program and ultimately the current deconstruction ordinance. Expanding the deconstruction ordinance to include more houses has been evaluated several times with the DAG over the past three years. With their guidance and combined feedback, BPS has not proposed expansion until now. At this point the workforce has matured and expanded, the retail infrastructure has expanded, bids have come down and the deconstruction contractors and retailers are ready for more projects/materials.

It should be noted that an earlier draft amendment proposal shared with DAG included 3- and 4-unit buildings as well as accessory structures. While including the additional structure types would lead to more consistency across City Code, for technical reasons it could also create some difficulty in implementation. Based on stakeholder feedback and considering the deconstruction program has always focused on single-dwelling development and has a robust review process in place for these structures, BPS made the decision to focus just on house and duplex deconstructions (the current amendment proposal).

Public Comment: The proposed deconstruction ordinance amendment was released for a three-week public comment period on July 25, 2019. Notice of the request for comments was published in the Bureau of Planning and Sustainability's monthly e-newsletter as well as directly emailed to neighborhood coalitions, the DAG members, Certified Deconstruction Contractors, the Home Builders Association, and City bureaus/programs (BDS, BES, Prime Contractors Development Program, and Ombudsman Office). The proposal was also covered by the Portland Tribune in an August 12, 2019 article by Jim Redden. A total of 22 comments were received during the public period. A copy of all the received comments are attached as Exhibit B. Eighteen comments were in support, two expressed concern, and two were received from BDS with specific requests.

Support: Eighteen comments were supportive of the proposed changes. In addition to neighborhood residents, letters of support were received from Restore Oregon and Multnomah County Health Department.

Key points:

- Consider going beyond 1940 and including commercial structures
- Salvaging valuable materials (old-growth lumber) is important
- Deconstruction helps protect residents from hazardous material exposure
 - Consider eliminating exemption for limited reuse
 - Consider expanding to 1978 (when lead paint was prohibited)

- The economic discussions concerning expansion fail to place a value on potential public health risks of not using deconstruction
- Preservation of existing houses should be the first priority

Staff Response:

Preservation of an existing structure and the embodied carbon and energy it represents is often the most sustainable approach. Balancing increased density and preservation of existing buildings/neighborhood character is an important consideration. This is outside the scope of the deconstruction ordinance, however other BPS efforts such as the Residential Infill Project (RIP) and Better Housing by Design include proposed incentives for preservation of existing structures.

The year-built threshold of 1916 was deliberately chosen to capture the number of projects that the industry could successfully take on in terms of labor and material market. The infrastructure to handle the work and the sale of materials is in place (and currently expanding) and raising the year to 1940 can be supported by this infrastructure. Going beyond 1940 risks overwhelming the industry and the material market. Houses built up to 1978 represent 97 percent of annual house demolitions.

Commercial structures and the construction type/materials can vary widely as compared to the general homogeneity of single-dwelling structure construction. Combined with the larger size of commercial structures and limited expertise of the industry to deconstruct commercial structures, the deconstruction ordinance will continue to focus on single-dwelling structures.

The current exemption for houses with limited material reuse (more than 50 percent of the framing is unsuitable for reuse) has only been granted a handful of times over the past three years. Most of these structures were severely fire damaged and well over the 50 percent threshold.

Concerns: Two comments expressed concern or questioned expanding the deconstruction ordinance. One comment was from the Home Builders Association of Metropolitan Portland and one was from a permit management company.

Key Points:

- Deconstruction can add to the cost of housing
- Demolition is faster and critical to timely housing construction
- City has not considered carrying costs associated with deconstruction
- Significant increase in deconstruction projects will lead to longer wait times for contractors
- Less reusable material in 1917 to 1940 houses
- Delay consideration until other planning projects that could impact infill development are in place for one year
- Actual numbers of reclaimed material sales and clarity of what happens with surplus material is needed before expansion

Staff Response:

Several factors over the past three years have brought the cost of the two methods closer together and in some cases, deconstruction costs the same as mechanical demolition. Increased competition amongst multiple deconstruction contractors is the primary reason the cost to deconstruct has come down. Meanwhile, the cost to mechanically demolish has gone up due to declining markets for hog fuel (wood burned for energy) and new regulations associated with lead-based paint (hand removal of painted exterior material prior to mechanical demolition). What was an \$8,000 cost difference three years ago, today is between \$0 and \$3,000. Permit analysis shows that for every deconstruction project, an average of 12 units are created. Assuming a \$3,000 premium on deconstruction, the additional cost is spread amongst 12 units (\$250 per unit).

To better understand if deconstruction impacts carrying costs, staff performed an analysis of house demolition permits from August 2018 to April 2019 and associated new construction permits or land use reviews through July 2019. On average, projects that use mechanical demolition receive final inspection approval of their demolition permit 21 days sooner than a deconstruction project. This is expected due to the longer duration of deconstruction projects. However, on average it takes another 45 days after the mechanical demolition permit is finalized (work completed) before the new project/land use review is issued/approved. What could take a few days to mechanically demolish and get started on the new project takes an average of 104 days (3 months). For projects involving a land use review, the gap between removal of the original structure and new construction would be even greater.

For deconstruction projects, the average permit review time is 4 days less than mechanical demolition. Despite the longer duration of the house removal with deconstruction, new construction on the replacement structure occurs 5 days earlier with these projects as compared to those using mechanical demolition. In summary, permit data shows that the holding time (carrying cost) is essentially the same for the two methods with deconstruction having slightly less holding time.

Houses built in Portland prior to World War II are rich in old-growth lumber, which is the most predominant material salvaged for reuse during deconstruction. The primary difference between houses built prior to 1917 and those built from 1917 to 1940 is the transition from rough-sawn lumber to smooth lumber. However, the smooth lumber these houses were constructed from is still old-growth material and current design trends are favoring a smoother appearance. Rough-sawn lumber can be prepared for reuse with the saw marks intact or planed smooth depending on the customer preference.

Capacity of the industry to complete deconstruction projects has always been an important consideration and has shaped the code and how it was implemented. An example is the existing code has a provision whereby the Director (BPS) has the authority to temporarily suspend or modify the deconstruction requirements if economic or technical circumstances make the requirements infeasible (Code

Subsection 17.106.030.C). This provision has not been used to date. There are currently 11 Certified Deconstruction Contractors (companies). In anticipation of expanding the deconstruction ordinance, additional contractor training/certification is in process with three companies (all minority- or woman-owned businesses). This training is provided at no cost through an Earth Advantage program funded with a Metro Innovation and Investment Grant. One company that participated in this training opportunity was recently certified and has begun work on their first project. It is anticipated that there will be a total of 14 Certified Deconstruction Contractors by October.

Finally, the current demolition trend is decreasing, having peaked in 2016. Other development-related permits (e.g., new residential and commercial construction, remodels, commercial demolitions) are all declining both in Portland and surrounding local jurisdictions. Current planning projects such as Residential Infill Project (RIP) and Better Housing by Design may impact future demolitions. However, both projects are proposing incentives for retaining existing structures and economic analysis has indicated that with RIP the outcome will be a higher rate of unit development for each demolition, not necessarily an appreciable increase in demolitions. Further, areas anticipated for higher levels of unit development generally fall in post-war areas of the city (i.e., not covered by the proposed 1940 or less year-built threshold).

Bureau of Development Services (BDS) Comments: Two comments were received from the Bureau of Development Services.

Key Points:

- Rebecca Esau (BDS Director) requested consideration of an effective date that avoids a spike in demolition permits around the December holidays
- Jill Grenda (Planning and Zoning Supervising Planner) requested additional web content related to the deconstruction requirements

Staff Response:

New (more restrictive) regulations related to permitting predictably lead to an increase in permit application activity just prior to the effective date of the new regulations. Permit applications submitted before the effective date of a new regulation are vested in the existing code at the time of application. The original effective date for the proposed amendment released for public comment was December 31, 2019. This could potentially lead to a greater-than-average number of permit applications received during December holidays, thus requiring additional staffing at a time when vacation requests are common. Therefore, in response to Director Esau's request the proposed effective date is January 20, 2020.

Additionally, in response to the request for additional information on deconstruction requirements as they relate to demolition permits, BPS staff worked with BDS staff to develop new web content and other resources to facilitate permit application and

intake as well as help field questions that arise from staff and customers. This web content has been added to both bureau's web pages.

Geographic Impacts: The deconstruction requirements are based on the year the structure was built. Historic development patterns in Portland are evident when looking at a map of single-dwelling structures and when they were constructed. The current deconstruction ordinance covers houses/duplexes built up until 1916. These areas predominantly follow and radiate from historic streetcar lines and extend roughly to 82nd Avenue. Expanding the ordinance to cover houses/duplexes built up until 1940 begins to fill in the radial gaps and extends to some parts east of 82nd Avenue.

Economic Impacts: The existing ordinance has resulted in the creation and/or expansion of companies and two new retail outlets have opened to sell material salvaged from the deconstructed houses. Two whole-house deconstruction contractors existed prior to the ordinance. Today there are 11 contractors (companies) certified to perform work covered by the ordinance. Three additional companies are in the process of receiving training and certification in deconstruction as part of a capacity-building initiative focusing on increasing equitable opportunities. Expanding the ordinance to 1940 would provide additional opportunities for both existing and new contractors. The cost to deconstruct has come down over the past three years because of increased competition and the vision and hard work of the people in the industry. Meanwhile, the cost of mechanical demolition has increased because of new regulations and increased disposal costs.

On average, for every one deconstruction, 12 new housing units are created. If the net additional cost for deconstruction versus mechanical demolition is \$3,000 then the average additional cost per unit is \$250. Projects that remove a single house and replace it with one or two units will incur a higher cost per unit. These projects typically involve removal of a modest-priced house and replacement with a high-market-value house. Projects that create multiple units from a single deconstruction (one-to-many) add to the supply of available housing and help alleviate pressure on housing prices. These same projects will see the least incurred cost associated with deconstruction when divided among the total units created. One economic consideration that is not accounted for but should be noted is the economic impact associated with protecting human health.

The demand for salvaged material, particularly old-growth wood/lumber, remains strong. Two new salvage retail facilities have opened in response to the ordinance and are going on their third year of business. One of these retailers is opening a second location and the other is planning on expanding once a suitable new location is secured. Two retailers that were operational well before the ordinance combine for a total of four retailers selling a majority of the material from deconstructed homes.

The lumber sold from these retailers is transformed into wall and ceiling cladding, flooring, mantels, siding, and furniture. Doors, fixtures, and hardware also make up a portion of material sales. The projects that incorporate the material range from remodels to new construction, tiny houses to wineries, and the customers include the houseless, renters, home owners and professional builders, craftspeople and artists. The market area for this

material is not isolated to Portland and includes Seattle, areas east of the Cascades, and occasional national and international opportunities. The benefit of this material goes beyond the aesthetics. Green building includes addressing the longer-term operational impacts (energy efficiency) as well as the material impacts. The material impacts of construction are increasingly becoming a critical focus area in reducing shorter-term carbon impacts associated with buildings. The carbon, aesthetic, historic, economic, and health benefits of deconstruction and reuse point to a strong future for the material that comes from Portland's oldest and most historic houses and duplexes.

Health Impacts: Deconstruction is considered a best practice by Oregon Health Authority (OHA) for minimizing impacts of lead-based paint and asbestos. All Certified Deconstruction Contractors have lead-based paint and asbestos certifications. The current deconstruction ordinance covers one-third of house demolitions. In recognition that not all houses are required to be deconstructed, the Bureau of Development Services developed additional requirements for mechanical demolitions (e.g., wetting, restrictions on windy days, and hand removal of exterior painted material). Deconstruction has the added benefit of hand removing not only the exterior painted material but also the interior painted material. Both can contain lead paint.

Both deconstruction and mechanical demolition projects must be surveyed and abated for asbestos before a demolition permit is issued. As a house is deconstructed, it is common that additional unabated asbestos is discovered, triggering a stop of work and proper removal/disposal. Identifying suspect asbestos containing material during a mechanical demolition is far less likely. Wetting of the structure during mechanical demolition and material loading helps limit dust migration, however workers at recovery facilities that process the waste material could potentially be exposed. Therefore, expanding the deconstruction ordinance to include a greater number of projects will further protect human health. Expansion is also supported by the Multnomah County Health Department.

Environmental Impacts: Based on Oregon Department of Environmental Quality research and analysis conducted on the first 36 houses deconstructed under the existing ordinance, deconstructing a house has twice the carbon benefits of mechanically demolishing the same house. Deconstruction yields a net carbon benefit of approximately 7.6 metric tons of CO₂eq per house compared to demolition. This is primarily due to the benefits of reusing materials as opposed to burning or landfilling waste material associated with mechanical demolition. To date, the beneficial impact of the deconstruction ordinance is equivalent to removing approximately 350 cars from the road for a full year. Expanding the deconstruction ordinance to include houses and duplexes built up until 1940 would serve to increase this environmental benefit proportional to the number of additional deconstructions.

100% Renewable Goal:

The proposed amendment does not contribute to the City's goal of meeting 100 percent of community-wide energy needs with renewable energy by 2050.

Budgetary Impact Worksheet

Does this action change appropriations?

- YES:** Please complete the information below.
- NO:** Skip this section

Fund	Fund Center	Commitment Item	Functional Area	Funded Program	Grant	Sponsored Program	Amount