



Codes and Compliance

Bay Area Deconstruction Work Group

December 12, 2024

Bay Area (& Beyond) Deconstruction Workgroup

- **Started by learning about Portland's Mandatory Deconstruction Ordinance (2017)**
- **Workgroup**
 - **Focus: San Francisco Bay Area Reuse – Fall/Winter 2024**
 - Hybrid – Bay Area, national & international participation
- **Website & Contact Us:**
<https://www.stopwaste.org/BADWG>



Agenda – BADWG Codes and Compliance

10:00-10:10 – Welcome

- **James Slattery**, SF Environment

10:10-11:30 – Panel discussion and Q&A

- **Brad Guy**, Material Reuse, LLC.
- **Melissa Wenzel**, Minnesota Pollution Control Agency
- **Shawn Wood**, U.S. EPA

11:30-11:40 – Presentation

- **Lauren Zimmermann Onstad**, City of Portland Bureau of Planning and Sustainability

11:40-11:55 – Outcomes

- **Annika Sial**, SF Environment

11:55-12:00 – Closing



Deconstruction + Material Reuse: Codes and Compliance

December 12, 2024

SAN FRANCISCO

ENVIRONMENT

DEPARTMENT

Session #1: Bridging the Gaps



Image: Hilda Weges

PHYSICAL 'LAYDOWN' SPACE



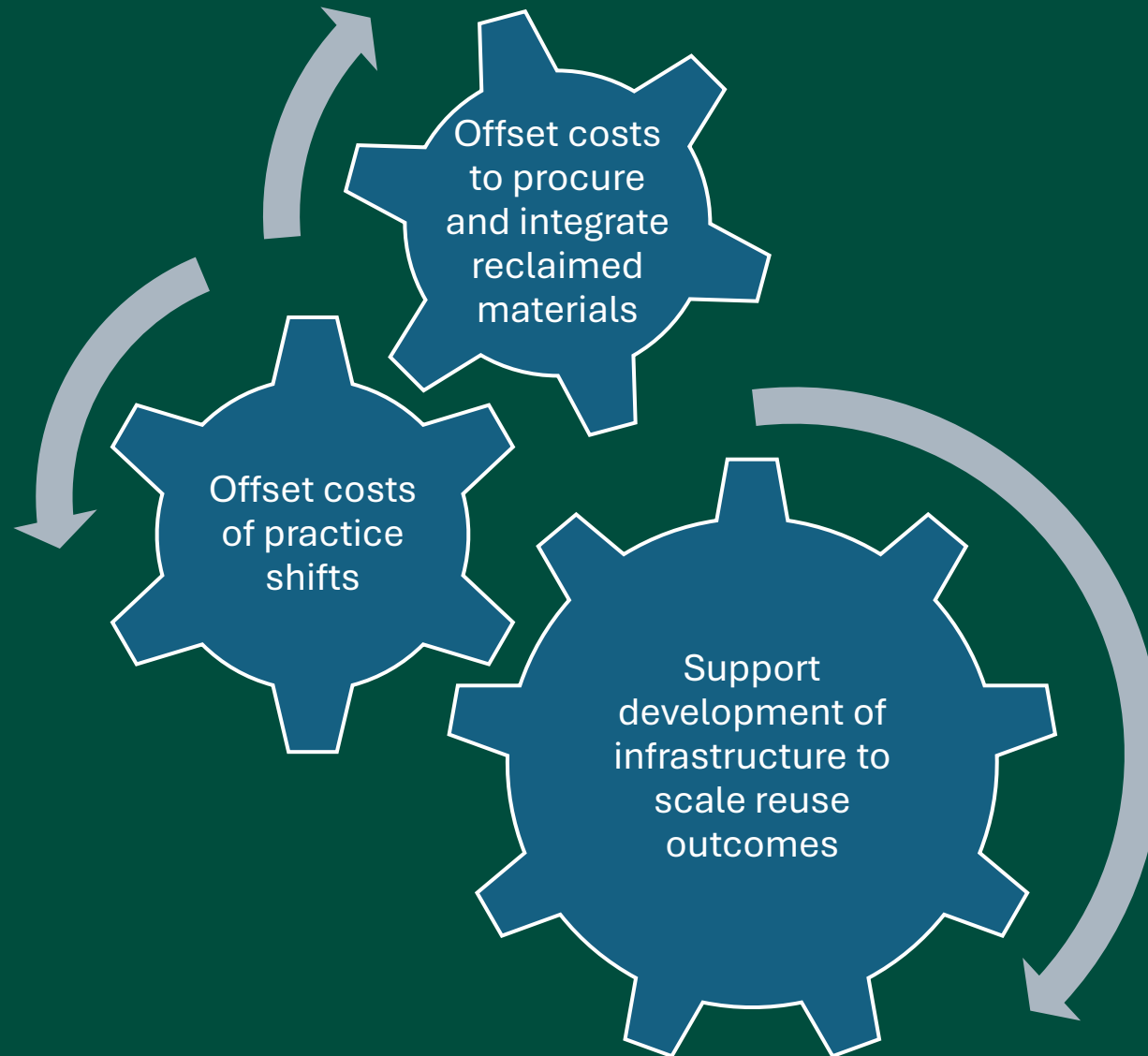
HUMAN RESOURCES



Image: Madrone

SERVICES

Session #2: Funding



Session #3: Practice Shifts



Image: Humanim, Social Enterprise Division

Three-Stage Policy Framework



1. Deconstruction Surveys



2. Diversion-to-Reuse Outcomes



3. Set Procurement Thresholds

Compliance monitoring for procurement

- Indicate intent to integrate reclaimed items in permit application
- Submit documentation:

Reuse source	Documentation requirement
On-site reuse	Blueprints and specifications; logistics/storage documentation
Direct exchange	Form indicating completion of exchange signed by item supplier
Online marketplace	Transaction receipt from approved online platform*
Reuse enterprise	Receipt from approved reuse enterprise*

- Green Building Compliance Professional of Record inspection

A top-down view of several people sitting on a wooden floor, looking at a large architectural blueprint spread out before them. The blueprint contains various technical drawings, including floor plans, elevations, and tables of data. Some parts of the drawing are highlighted in red. The people's hands are visible, pointing to specific areas on the plan. The scene is dimly lit, with the primary light source coming from above, creating a focused and professional atmosphere.

Codes and Compliance

BADWG - Codes and Compliance Discussion

- US ASTM rep **ISO 20887 “Design for disassembly and adaptability”**
- AIA Materials Knowledge Working Group **“AIA Materials Pledge”**
- USGBC **Materials and Resources** TAG for LEED v4
- USGBC Social Equity WG **“Social Equity in the Supply Chain”** credit
- Co-author **“Unbuilding: Salvaging the Architectural Treasures of Unwanted Houses”**, Taunton Press
- Chair / member of a local Plan Board, numerous citizen advisory groups, etc.

12 December 2024
Brad Guy, Architect, AIA
Material Reuse LLC
materialreuse@gmail.com

US Deconstruction and Reuse

- Annual revenues **\$2.5 billion**
- F.T.E. jobs **18,100**
- Annual tons reused **1.2 million** (~0.7% of demolition)

- 1,762 est. tracked as of this date; all 50 States
- **For-profit to non-profit 51% to 49%**
- Deconstruction / salvage services by **36%** of non-lumber est.
- **Non-profits divert the highest amounts** of materials per est.
- **Reclaimed lumber firms generate highest revenues** per est.
- Reclaimed lumber largest number of employees per est.

California Deconstruction and Reuse

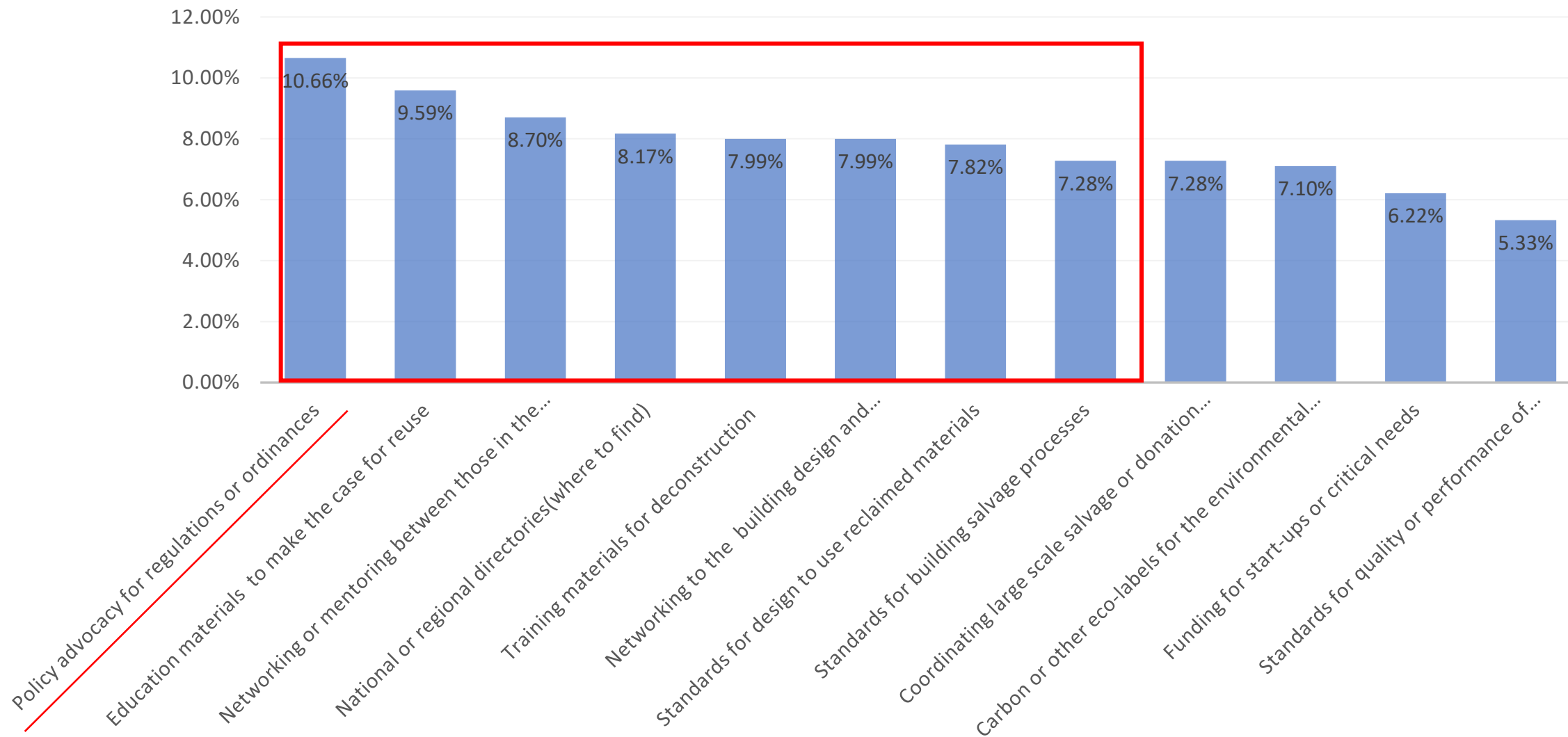
- Annual revenues **\$182 million**
- F.T.E. jobs **1,400**
- Annual tons reused **88,000** (~0.6% of demolition debris)

- **For-profit to non-profit 67% to 33%**
- Deconstruction / salvage services by **27%** of non-lumber est.
- **CA 12% of US population & 7.4% of deconstruction / reuse est.**
- **OR & WA 3.5% of US population & 7.4% of deconstruction / reuse est.**

Ordinances – salvage assessments / plans

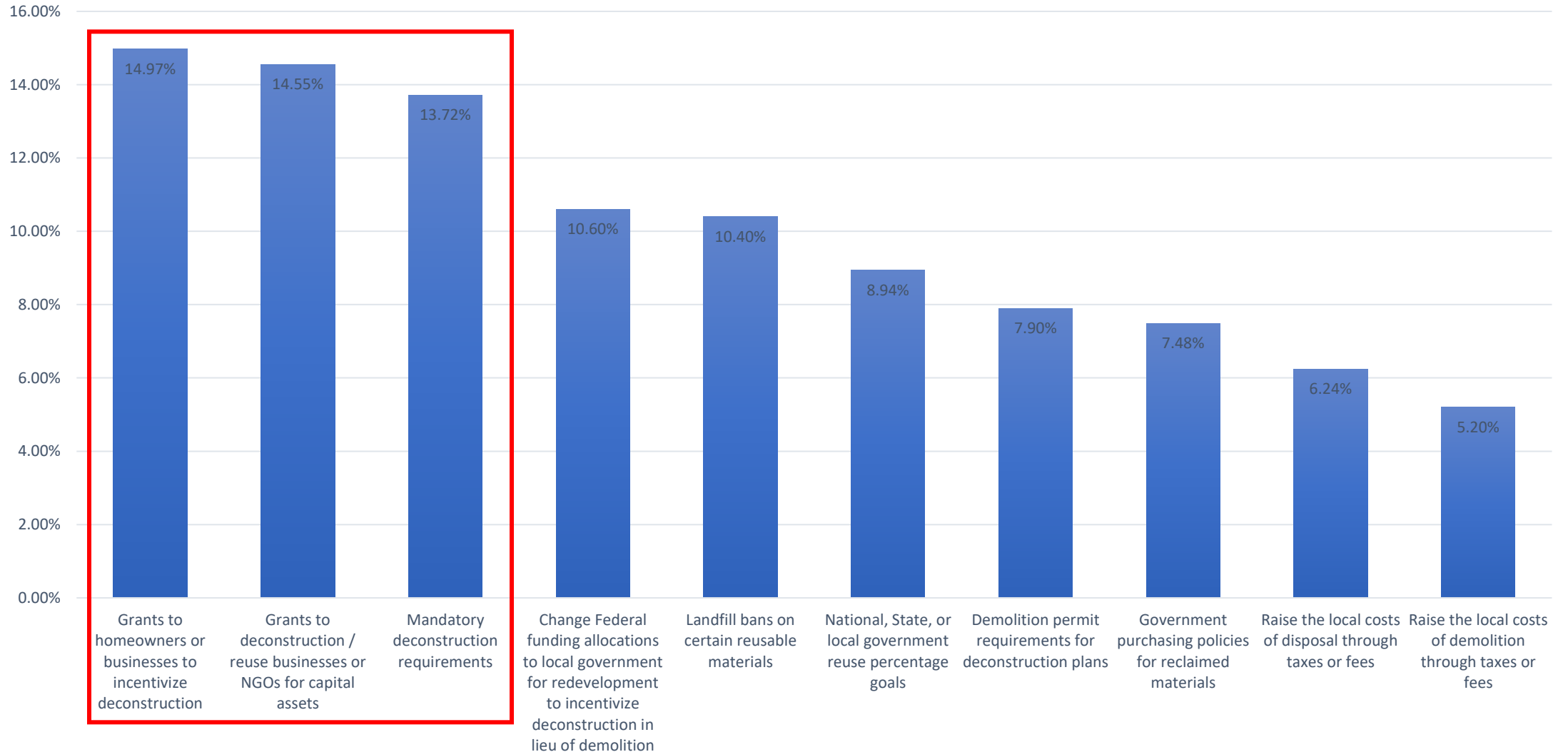
- Seattle, WA
- King County, WA
- Shoreline, WA
- Lake Oswego, OR
- Portland, OR
- City of Palo Alto, CA
- San Mateo, CA
- Boulder, CO
- Boulder County, CO
- San Antonio, TX
- Cook County, IL
- Milwaukee, WI
- Hennepin County, MN
- Sarasota, FL
- Boise, ID
- Orange County, NC

Support for Deconstruction / Reuse (US Survey 2023)



Respondent organization type: 46% for-profit and 54% non-profit

Government Support (US Survey 2022)



Respondent organization type: 47% for-profit and 53% non-profit

Government Support Other (US Survey 2022)

Salvage Assessment and Plans / Permits

- “First Step” deconstruction assessment & plans (verified)
- Incentive or requirement for minimum “break-even” salvage
- Wait periods (BG - early notifications, rights of salvage)

Building Code

- IBC 104.11 Alternative materials, design and methods of construction, and equipment
- Reclaimed lumber grading

Fees and Funds

- Low to zero-interest loans (BG – California GHG Reduction Fund uses carbon tax cap and trade; revolving loans for deconstruction incremental costs)
- Demolition tax vis a vis deconstruction waiver

Government Support Other (2) (US Survey 2022)

Land-Use and Taxes

- Incubators, grants for facilities, property tax and TIF incentives (BG – RMDZ per California), short-term storage
- Sales tax exemption for purchase of reuse
- Tie redevelopment assistance to deconstruction and zero waste

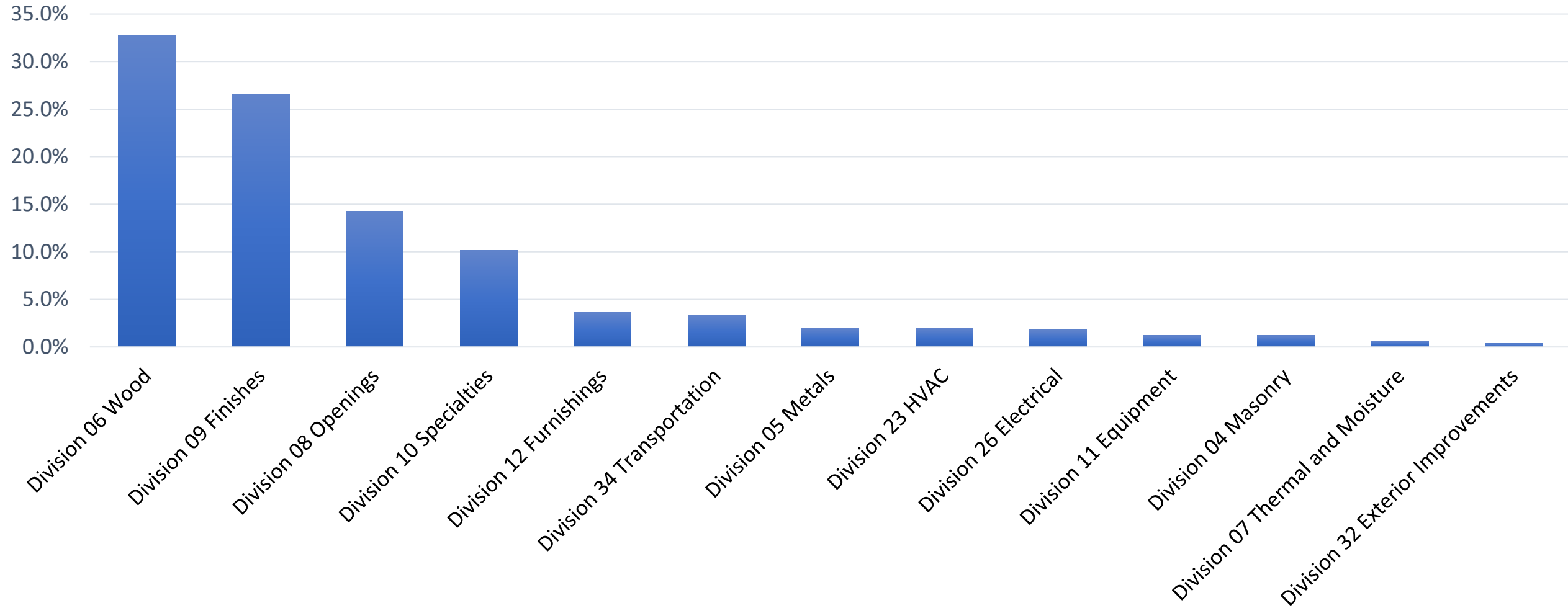
Technical Assistance

- OSHA, licensing, insurance, marketing, project design, code training (BG – embodied carbon “raters” or “inspectors”), IPD design assist

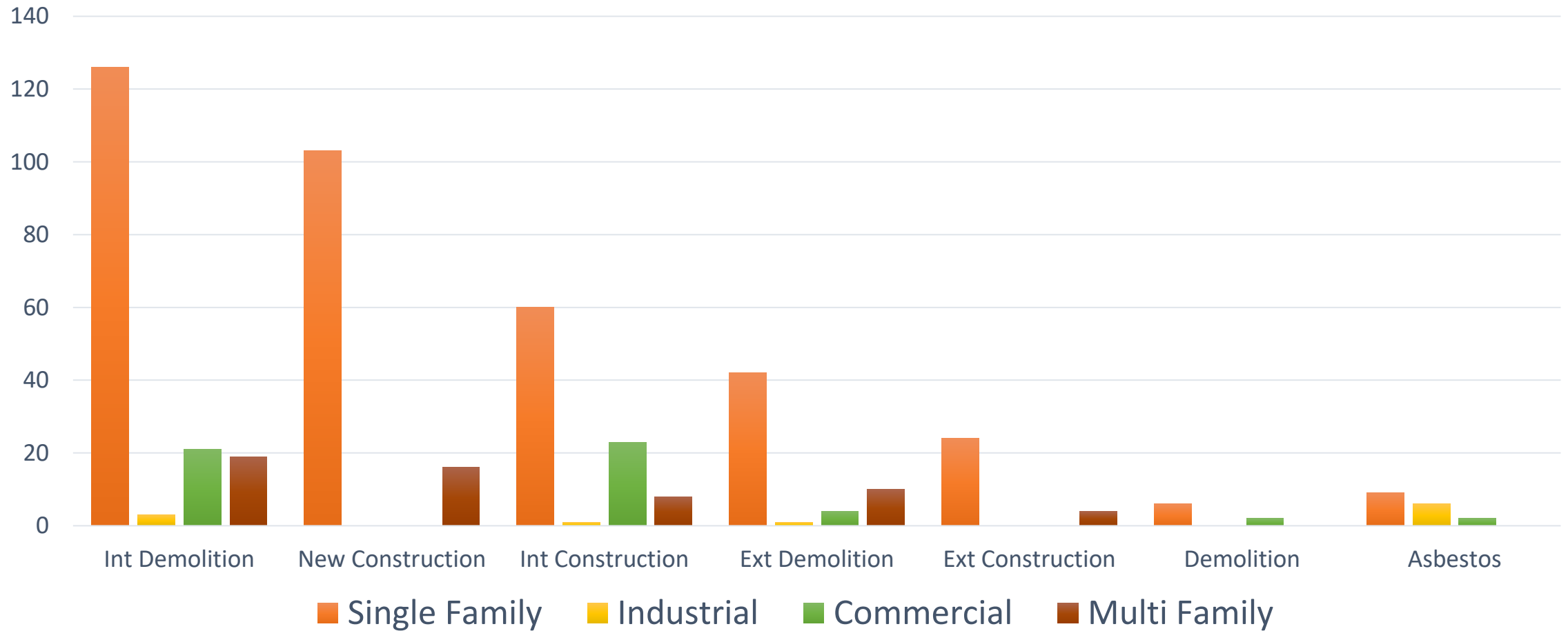
Information Infrastructure

- Permit refinement, data, monitoring, staffing, (BG - use of AI in reviews and streamlining)

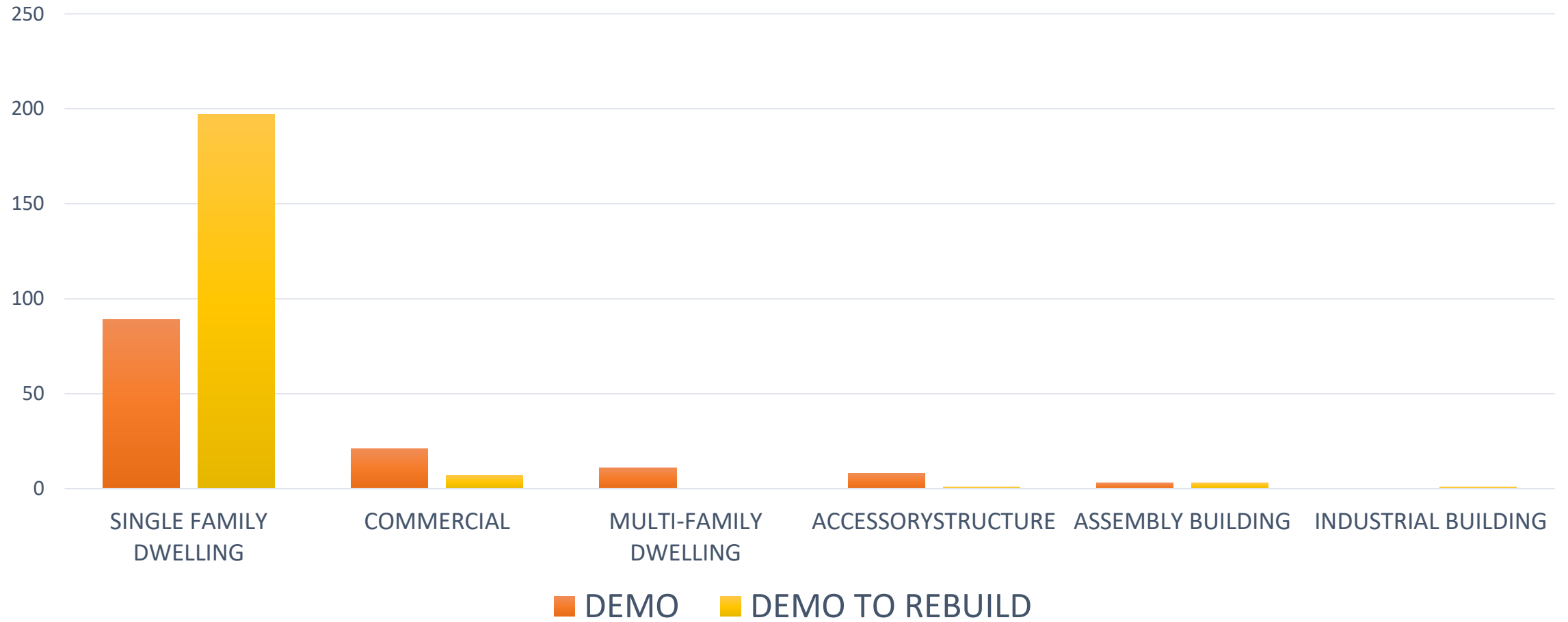
Data: commercial use of reused materials by types



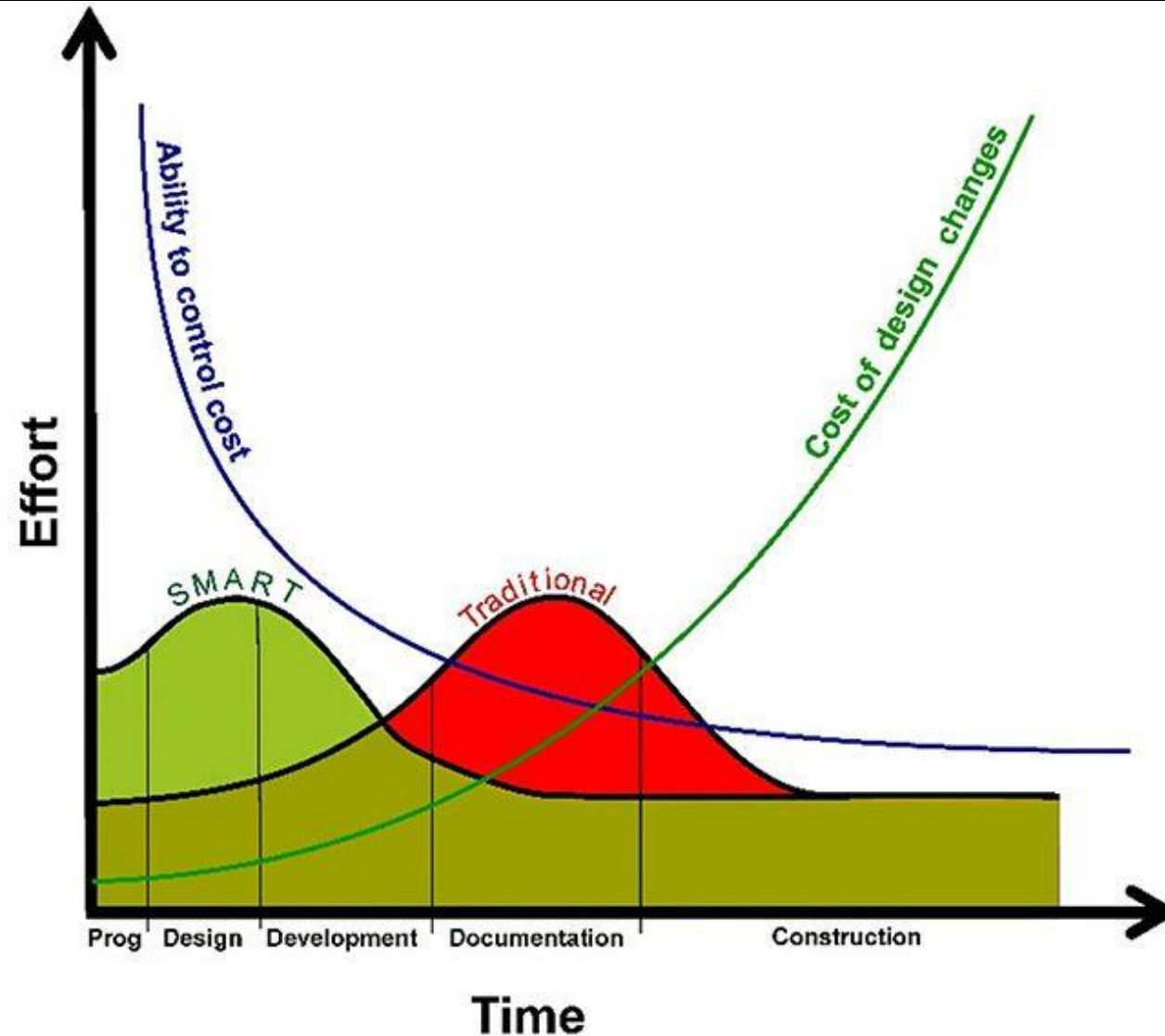
Data (2): permits by type of work



Data (3): permits by type of building



MacLeamy Curve for integrative process in design



Integrative Process ANSI National Standard

- **Integrated Project Delivery (IPD)** – a project delivery approach that integrates people, systems, business structures, (contract and legal agreements) and practices into a process that collaboratively harnesses the talents and insights of all participants to optimize project results, increase value to the owner, **reduce waste**, and maximize efficiency through **all phases of design, fabrication and construction.**”
- AIA Contracts A195; A295; B195
- **The power of data / knowledge, procurement and supporting success**

A photograph of three construction workers in a building under construction. They are wearing hard hats and high-visibility vests. The building has a wooden frame and is surrounded by trees. A yellow caution tape is strung across the area. The workers are standing on a concrete floor, and one worker is pointing towards the ceiling. The background shows a clear blue sky and bare trees.

Minnesota's built environment:

Tools and resources for a more sustainable building environment system

Funding opportunities

Secured funding through gov budget/legislature for sustainable built environment grant opportunities.

\$2 million secured!

We supported funding for a studying adaptive reuse opportunity-the [South St. Paul Library](#) reuse feasibility study





Carver, Hennepin, Ramsey & Washington County building material reuse grants

- Residential projects can receive up to **\$5,000**
- Commercial projects can receive up to **\$10,000***

Requirements:

- Structure built prior to 1970
- Project size at least 500 square feet
- Must deconstruct at least six materials types, including 1,000-2,000 lbs of lumber

** Carver County max is \$5,000 for any project*

Learn more at:

- recyclingandenergy.org/deconstruction
- hennepin.us/building-reuse
- [Google "Carver County deconstruction"](#)

Want your local gov't to offer building reuse grants?

Ask them!

- Tell them what MN counties are doing
- Ask them to start with a pilot, a single project
- Have them consider Hennepin County's "use building materials" grant program
- Tell them how many materials can be diverted from landfill with a single project

Help them meet solid waste reduction goals!



Full house move



Hennepin County Environmental and Energy

Built in
1900,
located in
Minneapolis,
the move
diverted 220
tons of
material!





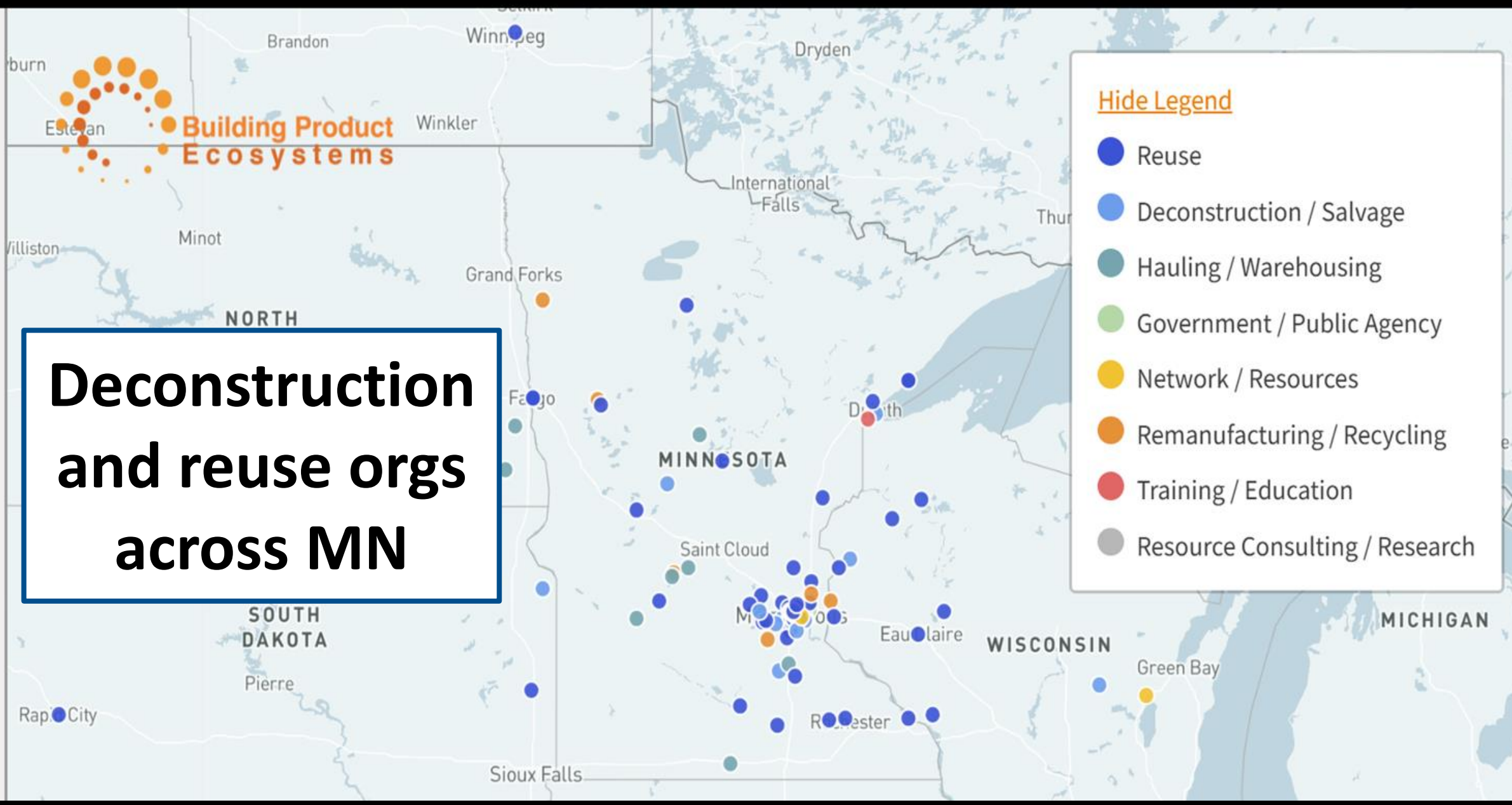
Integrate salvaged building materials

Find outlets for materials:

www.hennepin.us/salvage

www.allforreuse.org/ecosystem-map

- Unique pieces to match or add character
- Affordable fixes for newer items
- Closes the loop & reduces waste
- Supports local businesses



**Deconstruction
and reuse orgs
across MN**



Habitat for Humanity Restores

- 🔄 Northwoods Habitat For Humanity
- 🔄 Habitat For Humanity Mankato Restore
- 🔄 Habitat for Humanity of West Central Minne...
- 🔄 ReStore outlet (Twin Cities Habitat for Huma...
- 🔄 ReStore outlet (Twin Cities Habitat for Huma...
- 🔄 Two Rivers Habitat For Humanity
- 🔄 Habitat for Humanity of West Central Minne...
- 🔄 St Croix Valley Habitat for Humanity Restore
- 🔄 Wild Rivers Habitat for Humanity ReStore
- 🔄 Brookings Habitat Restore
- 🔄 Chippewa Valley Habitat for Humanity Resto...
- 🔄 Habitat for Humanity North Central Iowa
- 🔄 Habitat for Humanity of Redwood River Rest...
- 🔄 Habitat For Humanity of Douglas County MN



Habitat Restores offering deconstruction

- 🔄 Lakes Area Habitat For Humanity
- 🔄 Itasca County Habitat for Humanity ReStore
- 🔄 Habitat for Humanity Greater Sioux Falls
- 🔄 Habitat For Humanity La Crosse Area & ReSt...
- 🔄 Lake Agassiz Habitat for Humanity



Support government reuse centers



**Dodge County
Renovation &
Reuse**



**Western Lake
Superior
Sanitary District**



**Becker County
Diversion and
Reuse program**



**Linwood
Township Reuse
Area**



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ABOUT US

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(612) 789-3322

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Donate your used office and home furniture to
Furnish Office & Home

furnish
OFFICE & HOME

Donate or
buy used
furniture and
office
equipment!

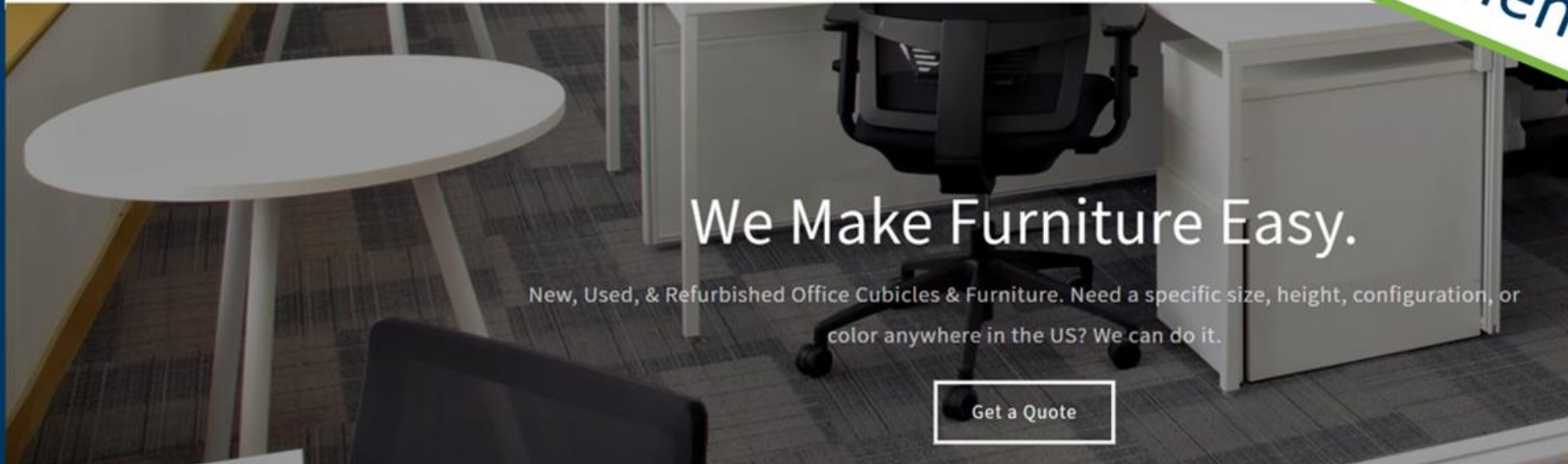


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community
sustainability
programs



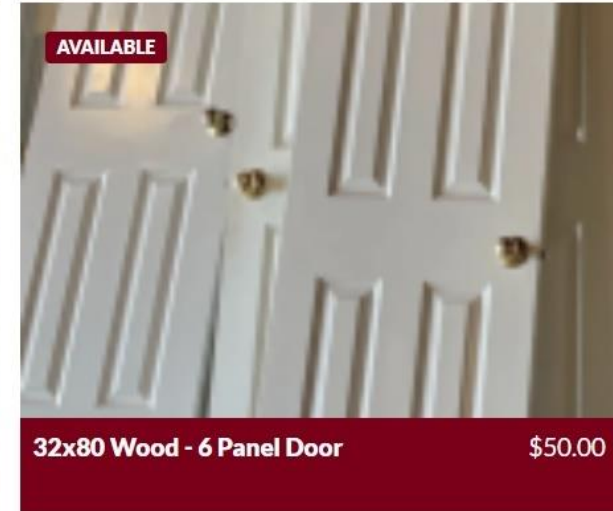
Minnesota
GreenStep Cities



AmeriCorps

Support statewide education-based efforts

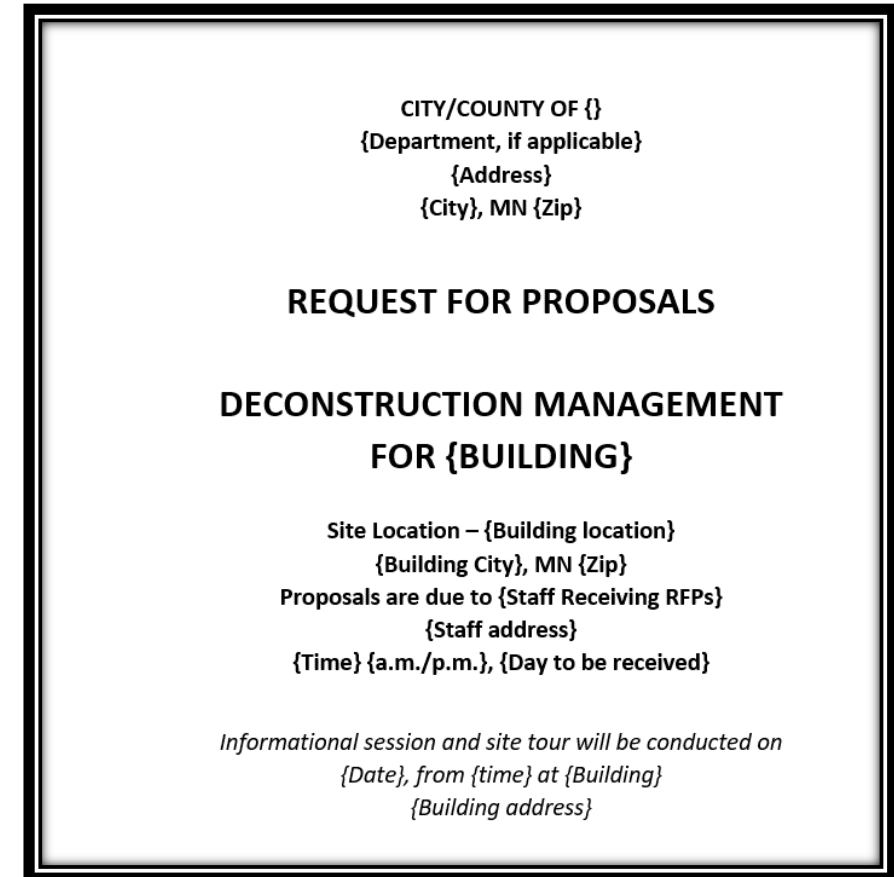
- U of MN's Material Exchange Program
- U of MN's the Sustainable Systems Management Capstone Project mentorship
- U of MN Center for Sustainable Building Research
- U of MN's Natural Resource Research Institute
- MN Retired Environmental Assistance Program



Tools and templates



**Building Material
Management Plan**



**Deconstruction Request
for Proposal Template**

Sign up for MN updates!

Managing building materials

WASTE INITIATIVES

- Preventing wasted food
- Recycling in Minnesota
- Reducing toxics in products
- Using and developing products responsibly
- Managing building materials**

Contact

Melissa Wenzel
melissa.wenzel@state.mn.us

The U.S. generates more than twice the amount of construction and demolition debris than municipal solid waste, according to U.S. EPA estimates. Such a large amount of material presents a big opportunity for reducing waste and its environmental effects. Extending the life of existing structures and reusing building materials rather than producing new reduces both waste and greenhouse gas emissions. When reuse isn't possible, recycling is an important alternative for reducing waste and environmental impacts when it replaces virgin materials. Learn more:



- [Construction debris reuse and recycling](#)
- [The MPCA convened a group of stakeholders to develop recommendations for reducing the environmental impacts of building construction and demolition in Minnesota. The group prioritized strategies that extend the useful life of existing buildings and materials.](#)

- [Sustainable Building Group stakeholder process 2019-2020 \(w-sw5-56\)](#)

The group's recommendations included:

- Establish a state training program to teach deconstruction skills that help preserve reusable building materials.
- Incentivize the preservation of existing buildings
- Draft model ordinances to help local governments implement deconstruction and material-diversion requirements
- Create a rebate program to encourage use of reusable building materials

Construction and demolition landfills

Many Minnesota landfills that accept construction and demolition debris were constructed at a time when they didn't require linings. But moisture and stormwater that percolate through debris (leachate) in unlined landfills can carry pollutants from the waste into the surrounding soil and contaminate groundwater. MPCA monitoring shows that groundwater near unlined demolition landfills in Minnesota is contaminated:

- [Groundwater impacts of unlined construction and demolition debris landfilling \(w-sw5-54a\)](#)
- [Groundwater impacts of unlined construction and demolition debris landfilling: Appendices \(w-sw5-54b\)](#)

The MPCA plans to amend existing Minnesota rules to address the effect of unlined construction and demolition debris landfills on groundwater.

- [Construction and demolition debris landfill rule](#)

Stay connected

Sign up for the Building materials and demolition debris email newsletter for updates.

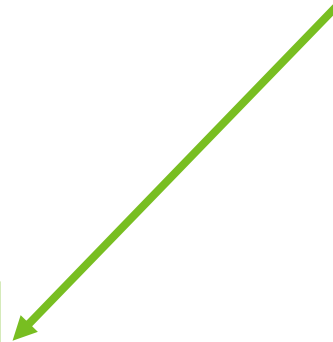
More information

- [Construction and demolition materials composition study \(w-sw5-55\)](#)
- [Building materials focus groups report \(w-pst-04\)](#)

www.pca.state.mn.us/air-water-land-climate/managing-building-materials

Stay connected

Sign up for the Building materials and demolition debris email newsletter for updates.





Thank you!

Melissa Wenzel

Built Environment
Sustainability Administrator

m MINNESOTA POLLUTION
CONTROL AGENCY

melissa.wenzel@state.mn.us

Salvaged Lumber and Building Codes

Shawn Wood

US Environmental Protection Agency

For Bay Area Deconstruction Workgroup (BADWG)

December 12, 2024





Non-structural applications of salvaged lumber

Graded and Stamped Lumber



Modern lumber - graded



Salvaged lumber - ungraded

Typical Building Code Language

International Residential Code (IRC)

Chapter 1 Scope and Administration

R104.9.1 Used materials and equipment

Used materials, equipment and devices shall not be reused unless approved by the building official.

Oregon Residential Specialty Code

Section R104 Duties and Powers of the Building Official

R104.9.1 Used materials and equipment.

Used materials, equipment and devices shall not be reused unless approved by the building official. **Used or salvaged dimensional lumber shall be permitted to be used in accordance with all of the following:**

- 1. Used or salvaged dimensional lumber shall be in generally good condition and free of any obvious areas of decay.**
- 2. Where used or salvaged dimensional is identified by a grade mark or where a certificate of inspection is provided from a lumber grading or inspection agency approved by an accreditation body that complies with DOC PS 20, structural properties for the used or salvaged lumber shall be as determined by the approved agency in accordance with the grade stamp or certificate provided.**

Exception: In lieu of the grade mark or certificate described in Item 2, used or salvaged dimensional lumber not bearing a grade stamp or provided with a certificate shall be assumed to be Douglas fir-larch No. 2 grade and shall have structural properties assigned in accordance with current adopted standards.

Washington Residential Code

CHAPTER 6 WALL CONSTRUCTION

Section R602—Wood wall framing.

R602.1.1.1 Used sawn lumber. Used sawn lumber identified with a grade mark, in good condition and devoid of areas of decay shall be assumed to meet the requirements of Section 602.1.1 **or** shall comply with the following:

1. Dimensional lumber not identified with a grade mark that has a nominal thickness of **2 inches with a nominal width of 6 inches, or less, shall be assumed to be spruce-pine-fir stud grade** and shall have structural properties assigned in accordance with current adopted standards. **All other dimensional lumber shall be assumed to be hem-fir No. 2 grade** and shall have structural properties assigned in accordance with current adopted standards.

Washington Commercial Code

Chapter 23 WOOD

Section 2303—Minimum standards and quality.

2303.1.1.3 Used solid-sawn lumber. Used solid-sawn dimensional lumber in good condition and devoid of areas of decay, not meeting the requirements of Section 2303.1.1, 2303.1.1.1, or 2303.1.1.2, that has a nominal thickness of 2 inches with a nominal width of 6 inches or less, shall be assumed to be spruce-pine-fir stud grade and shall have structural properties assigned in accordance with current adopted standards. All other dimensional lumber shall be assumed to be hem-fir No. 2 grade and shall have structural properties assigned in accordance with current adopted standards.

ICC/IRC Code Change Effort

Recommends adding salvaged lumber sections to four different chapters in the 2027 International Residential Code (IRC):

- **IRC Chapter 5 Floors; Chapter 7 Wall Covering; Chapter 8 Roof-Ceiling Construction**
 - Permits use of salvaged lumber in these applications.
- **IRC Chapter 6 Wall Construction**
 - Specifies under what conditions salvaged lumber can be used in **structural** and **non-structural applications**.
 - Structural applications require a grade mark or certificate of inspection.

Recommends adding provisions above (structural/non-structural to 2027 International Building Code (IBC) - commercial code

Roadmap

ICC Residential Code Development Schedule

January 2024 thru June 2026

START

JANUARY THRU MARCH 2024:
DEVELOP STRATEGIC PARTNERSHIPS WITH BCD, OBOA, AIA, AWC, ALSC, EPA, KING COUNTY, REUSE INSTITUTE, RMI, SAN ANTONIO, SAN FRANCISCO, URBAN MACHINE, VOSWG, ETC.



APRIL THRU JUNE 2024:
UNDERSTAND CASE STUDIES FROM PARTNERS AND INSPECTORS, BUILDERS / ARCHITECTS WHO'VE BUILT HOMES WITH SALVAGE WOOD; SUBMIT TO ICC BUILDING CODE ACTION COMMITTEE (BCAC) FOR FEEDBACK

CASE STUDIES

WRITE

JULY THRU SEPTEMBER 2024:
WRITE SUPPORTING DOCUMENTATION & EDIT WITH PARTNERS: INCLUDE NO COST IMPACTS; NO CHANGE TO STRUCTURAL / FIRE; ALIGNMENT WITH COMMENTARY / INTENT OF CODE; ADDRESS POSSIBLE REBUTTALS FROM CONCRETE / STEEL / TIMBER INDUSTRIES; BCAC FEEDBACK



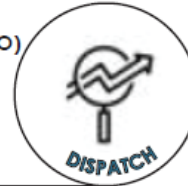
OCTOBER 15, 2024:
cdpACCESS OPEN FOR CODE CHANGE SUBMITTALS
DECEMBER 1, 2024 DEADLINE ***
*** DUE JANUARY 10, 2025

SUBMIT



ANSWER

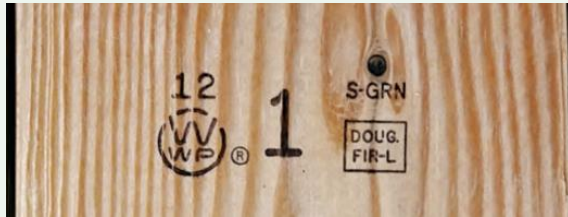
4/27 - 5/6/2025 COMMITTEE ACTION HEARING #1 (ORLANDO)
8/27/2025 WEB POSTING OF "COMMENTS TO CAH #1"
10/8 - 10/16/2025 COMMITTEE ACTION HEARING #2 (LA)
1/5/2026 +/- WEB POSTING OF "COMMENTS TO CAH #2"
MAY 2026 ONLINE GOVERNMENTAL CONSENSUS VOTING (OGCV)



JUNE 2026 WE DID IT!
SALVAGE WOOD TO BE PUBLISHED IN 2027 ICC RESIDENTIAL CODE



Structural Use of Salvaged Lumber



Graded



Un-Graded

Oregon

Per grade stamp/cert

Washington

Per grade stamp/cert

ICC (E)

If approved by Building Official

ICC (N)

Per grade stamp/cert

Douglas Fir-Larch No. 2

<=2x6 (Nom)
Spruce-Pine-Fir Stud Grade

If approved by Building Official

Non-structural

>2x6 (Nom)
Hem-Fir No.2



DECONSTRUCTION AND CODE

Ongoing work in residential deconstruction program 8 years after the ordinance.

Lauren Zimmermann Onstad

Sustainable Building and Deconstruction Specialist



THE BUREAU OF
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Deconstruction Ordinance

- Ordinance effective date October 31, 2016
- Residential structures only: single dwelling and duplexes
- Year-built limit: 1940 and older
- Exemptions for significant hazard or damage



Demolition Administrative Rule

- Oregon SB871 was prompted by OHA “Best Practices for the Demolition of Residences with Lead-Based Paint” published 2018
- Admin Rule effective date December 1, 2020
- Residential structures only: 1-4 dwelling units
- Year-built limit: Pre-1978
- Manually remove exterior painted materials (assuming lead paint) by certified contractor
- Requires asbestos survey



City of Portland
Portland Permitting & Development

1900 SW Fourth Avenue, Suite 5000
Portland, OR 97201
Telephone: (503) 823-7300

PERMANENT RULE

RELATING TO
Chapter 24.55 – Demolitions

FOR INFORMATION CONTACT
Mike Liefeld
(503-865-6554)

PPD No. 25.01

TITLE **Demolitions**

AUTHORITY

Portland City Code (PCC) Chapter 24.55 (Building Demolition) sets out the requirements related to demolitions in the City of Portland. Section 3.30.040.A. provides authority for the Director of Portland Permitting & Development (PP&D) to adopt administrative rules, policies, and procedures for the enforcement of applicable code provisions and laws.

CITATIONS

Senate Bill 871

The 2017 Oregon legislature enacted Senate Bill (SB) 871, which allows any city in Oregon to establish a program by ordinance that requires anyone demolishing a pre-1978 residence to follow certain best practices to minimize exposure to lead dust. The bill also requires contractors to submit proof of holding one of four training certifications as defined in Oregon Administrative Rules (OAR) 333-068. SB 871 also authorized local jurisdictions to require that asbestos surveys be submitted to them prior to issuing a demolition permit.



Benefits and Outcomes

- # of Projects through 6/2024
 - Over 680 house deconstructions
 - Over 4.2 million pounds of lumber recovered for reuse
 - Per house: 4 tons diverted, ~3,200 BF of lumber, 7.6 metric tons of CO₂eq emissions avoided vs. demo
- Economic
 - 30+ jobs in deconstruction, fabrication, retail
 - 3 new salvage retail locations
- Permitting
 - Cost of deconstruction has come down while mechanical demolition costs have increased
 - Turnaround timeframe – equal to demolition



Oregon Building Code

ORS 455.040

State building code preempts local ordinances and rules

- (1) The state building code shall be applicable and uniform throughout this state and in all municipalities, and no municipality shall enact or enforce any ordinance, rule or regulation relating to the same matters encompassed by the state building code but which provides different requirements unless authorized by the Director of the Department of Consumer and Business Services. The director's authorization shall not be considered an amendment to the state building code under [ORS 455.030 \(Rulemaking\)](#). The director shall encourage experimentation, innovation and cost effectiveness by municipalities in the adoption of ordinances, rules or regulations which conflict with the state building code.



Residential Code Changes

2014

R104.9 Approved materials and equipment. Materials, *equipment* and devices *approved* by the *building official* shall be constructed and installed in accordance with such approval.

R104.9.1 Used materials and equipment. Used materials, *equipment* and devices shall not be reused unless *approved* by the *building official*.

2017 (and 2021)

R104.9 Approved materials and equipment. Materials, *equipment* and devices *approved* by the *building official* shall be constructed and installed in accordance with such approval.

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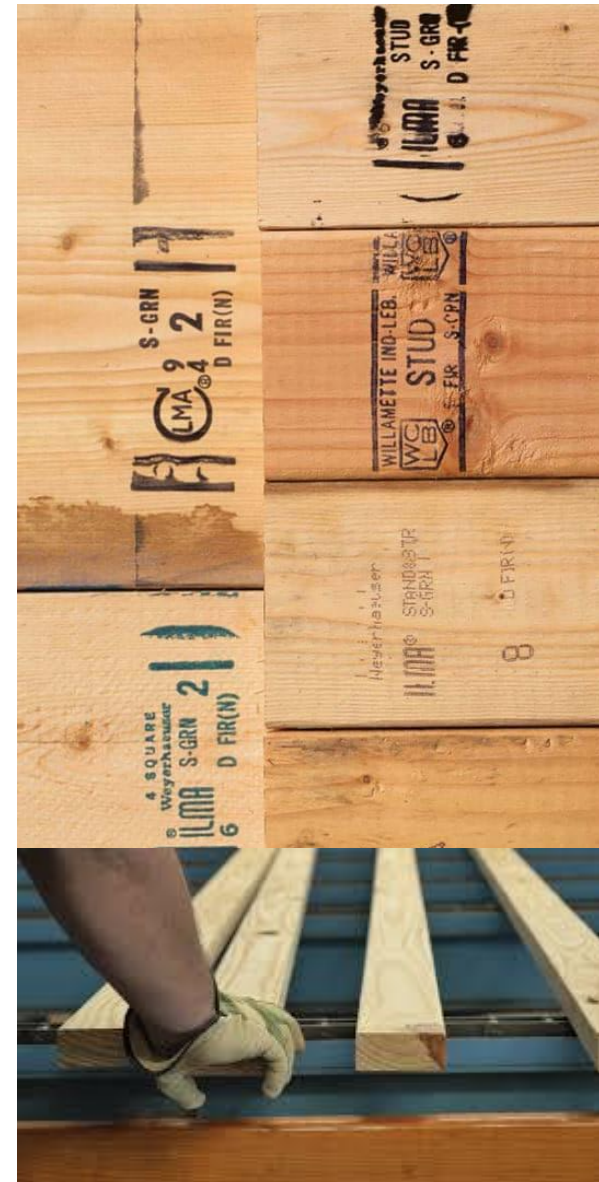
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Salvage Lumber Data Project

- Bundle 100+ sticks each of 2x4 and 2x6 from resi decon program
- Individually grade for dataset
- Memo/presentation to Portland Permitting and Development (PP&D, formerly BDS)
- Develop Portland salvage stamp?



What's Next

- Push to operationalize code allowing salvage lumber for residential structural use
- Exploring increasing requirements for year-built
- Piloting commercial deconstruction & expecting a long learning phase
- Reviewing C&D recycling policies
- Collaborating with regional jurisdiction Metro on reuse materials planning
- Remove barriers to transport used building materials
- How do we achieve commodity lumber resale with a thriving local market of retailers?





THE BUREAU OF **PLANNING** & **SUSTAINABILITY**

Lauren Zimmermann Onstad

Sustainable Building and Deconstruction Specialist
lauren.zimmermann@portlandoregon.gov

VISIT US ONLINE portland.gov/bps

The City of Portland is committed to providing meaningful access. To request translation, interpretation, modifications, accommodations, or other auxiliary aids or services, contact 311, Relay: 711.

Traducción e Interpretación | Biên Dịch và Thông Dịch | अनुवादन तथा व्याख्या | 口笔译服务 | Устный и письменный перевод |
Turjumaad iyo Fasiraad | Письмовий і усний переклад | Traducere și interpretariat | Chiaku me Awewen Kapas | 翻訳または通訳 |
ການແປພາສາ ຫຼື ການອະທິບາຍ | الترجمة التحريرية أو الشفهية | [Portland.gov/bps/accommodation](https://portland.gov/bps/accommodation)



Moving forward: Enacting reuse in the Bay

December 12, 2024

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ENVIRONMENT

DEPARTMENT

Three-Stage Policy Framework



1. Deconstruction Surveys



2. Diversion to Reuse Outcomes



3. Set Procurement Thresholds

Procurement

What would procurement requirements look like?

- Minimum procurement thresholds
- Percentage basis with varying metrics by product category
 - e.g. require the inclusion of 20% reclaimed products in 3 of 5 Tier I product categories
- Start small and scale percentages to support market development
- Slow ramp-up: starting with incentives

Priority Product Categories

Tier I:

Ease of recovery,
storage, handling,
resale
Existing market

Tier II:

Challenging, but not
impossible, to
recover and resell

Tier III:

Structural materials

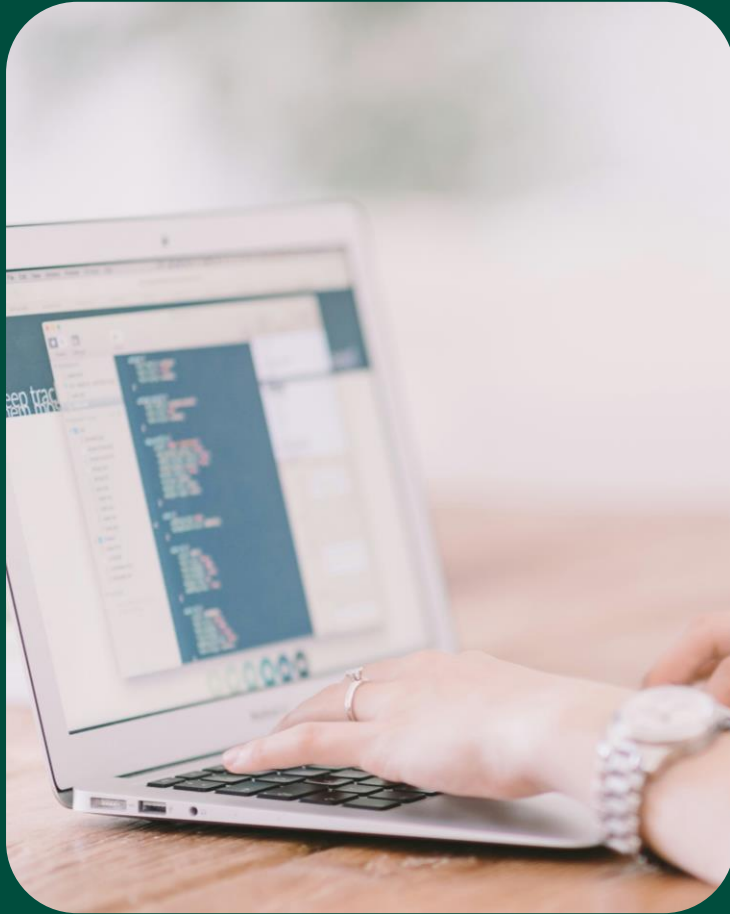
Compliance monitoring

- Indicate intent to integrate reclaimed items in permit application
- Submit documentation:

Reuse source	Documentation requirement
On-site reuse	Blueprints and specifications; logistics/storage documentation
Direct exchange	Form indicating completion of exchange signed by item supplier
Online marketplace	Transaction receipt from approved online platform*
Reuse enterprise	Receipt from approved reuse enterprise*

- Green Building Compliance Professional of Record inspection

Leading with municipal projects



Virtual Warehouse



Pilots



Mandates

Continue to develop markets in tandem



Residential



Commercial

CalGreen code amendment petition

- Voluntary standards
- 3 stage framework
- Intended to make it easier for municipalities to adopt deconstruction and reuse policy
 - Options to approach depending on local priorities

Deconstruction



SURVEY



PERMIT



HISTORIC BUILDINGS

Closing the loop



Diversion



Reuse

Repurposing under-utilized CalTrans parcels



Thank you!

SFEnvironment.org/bmm

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SAN FRANCISCO

ENVIRONMENT

DEPARTMENT

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*Thank you for your
important work to
scale up reuse!*

<https://www.stopwaste.org/BADWG>

Contact Annika Sial at annika.sial@sfgov.org
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