



San Antonio Deconstruction & Salvage Initiative

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CITY OF SAN ANTONIO
OFFICE OF HISTORIC PRESERVATION



Initiative summary
(2018 - present)



Preliminary policy
recommendations
and next steps

What is deconstruction?

Deconstruction refers to the systematic disassembly of a structure in the opposite order it was constructed to **maximize the opportunity to reclaim materials** for reuse or recycling

In contrast, traditional demolition uses heavy machinery to quickly remove a structure, resulting in most materials crushed and landfilled



Business as Usual



Nationally, construction & demolition (C&D) waste accounts for approximately 30% of the total waste stream - more than double the amount we throw into our household trash bins in volume.

Sources: EPA (2017), Delta Institute

On average, a ~1,000 square foot house has the equivalent of **16 mature trees**.

100+

Estimated tons of material that could be diverted from area landfills and re-utilized locally, annually

The laws of physics haven't changed. However, the quality of building materials has.





Figure 1: Many homes contain materials that have financial value in the reuse market.

The Secretary of the Interior's Standards

If a historic feature or material is deteriorated beyond repair or missing, it should be reconstructed or **replaced in-kind.**




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RENT A FENCE
800-352-9675

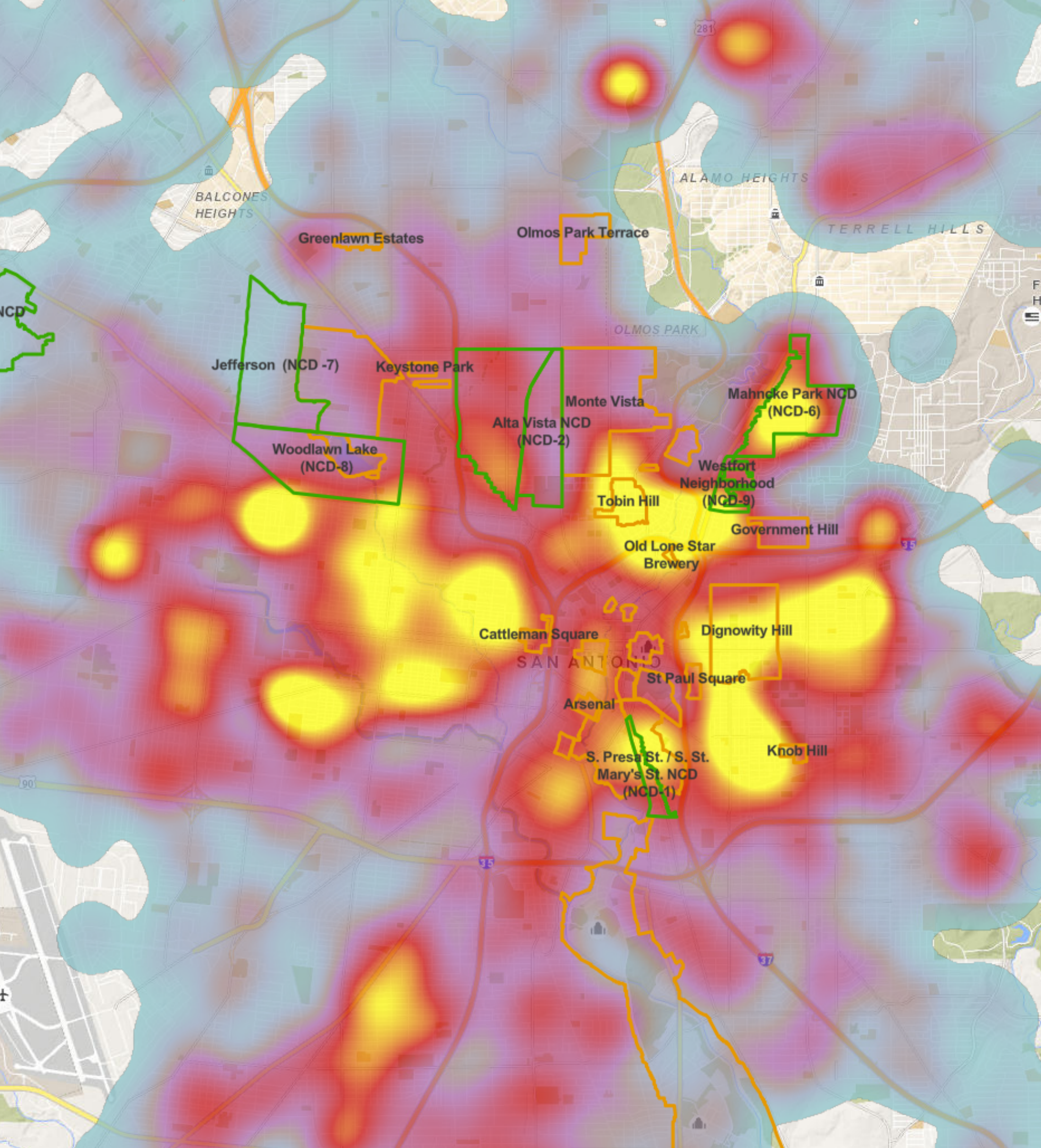
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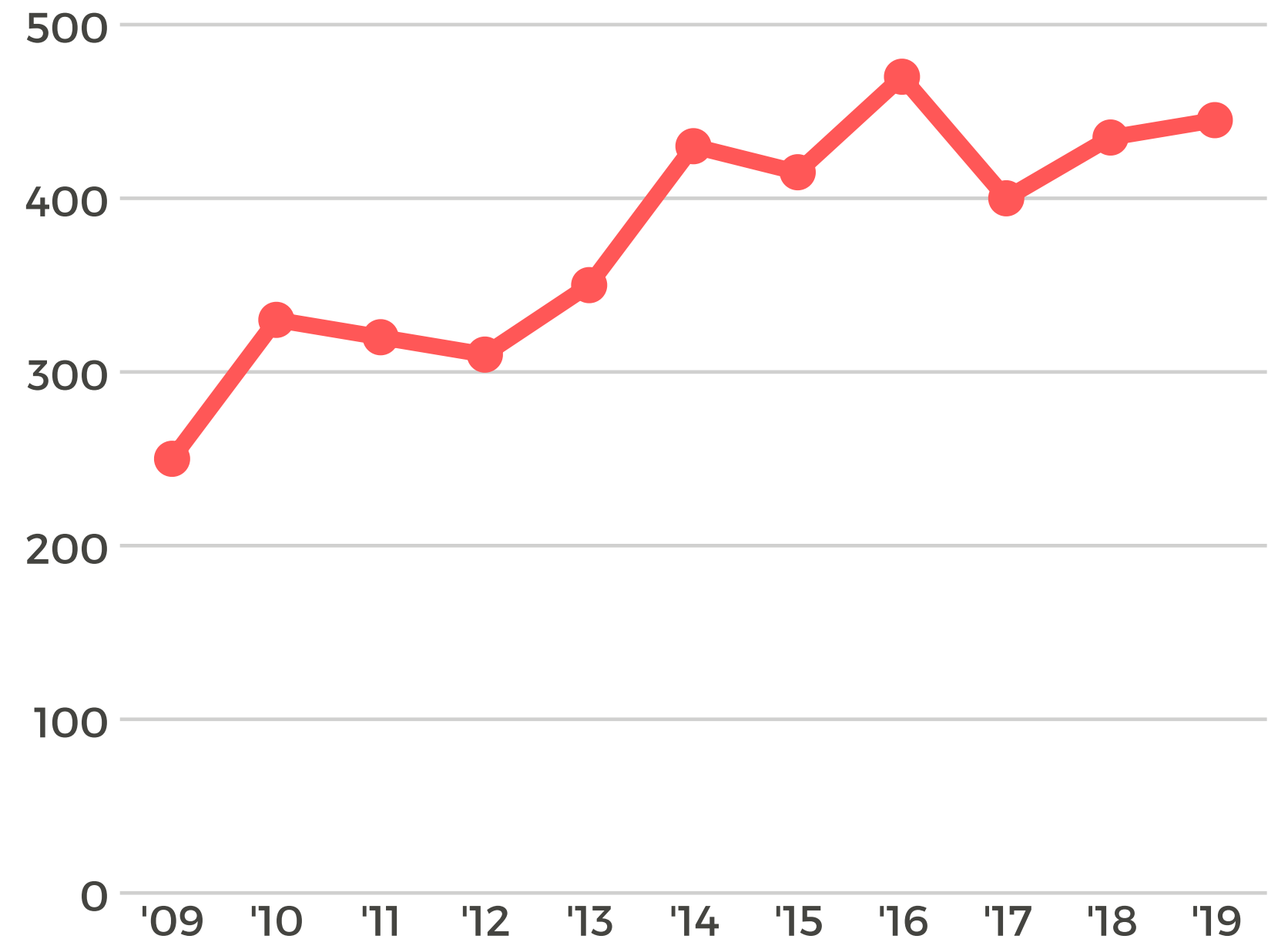
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Like an organ donor, a structure may have reached the end of its life, but its pieces could help extend the lives of dozens of other historic structures.



DEMOLITIONS BY YEAR (PERMIT DATA)



DECONSTRUCTION ADVISORY COMMITTEE



- Solid Waste Management Department
- Office of Sustainability
- Development Services Department
- Neighborhood and Housing Services Department
- Metro Health
- Build San Antonio Green
- Habitat for Humanity
- Alamo Area Council of Governments (AACOG)
- Local demolition, salvage, and house moving contractors
- Developers and real estate industry representatives
- UTSA Construction Science and Architecture educators
- The Conservation Society of San Antonio
- Community advocates
- Local architects and designers

This initiative is not about **if** a building comes down, but rather **how** a building comes down.

WORKERS TO BEGIN ACTIVITY MONDAY

Old Postoffice Will Be Down Within 30 Days, Con- tractor Says

After 45 years of service to the public, San Antonio's post office and Federal building Monday will give way to the crowbars and hammers of wrecking crews who within 30 days will have demolished the structure preparatory to building the new building.

Some 40 men will begin razing the mail shed adjoining the rear of the old building as the first phase of the razing program. That levelled, workmen will transfer to the main building, beginning wrecking activities with removal of the tile roof and working downward until every tile, stone and piece of woodwork is removed.

A maximum of 200 men will be employed for the work. It was made plain that no men will be hired at the site. All workmen will be selected from registration lists of the National Re-employment office.



Climate Action and Adaptation Plan (2019)

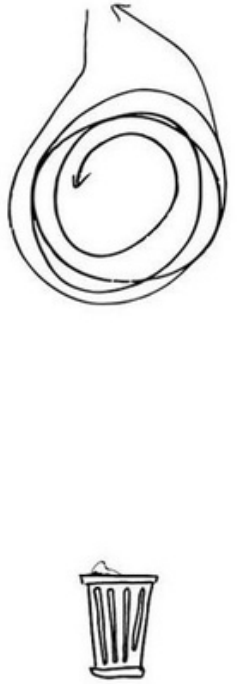
		STRATEGIES
ADVANCE THE CIRCULAR ECONOMY	★ 14	COMMERCIAL WASTE REDUCTION Building on the City of San Antonio Solid Waste Management Department's ReWorksSA Program, ⁴⁰ continue to reduce landfilled commercial waste.
	★ 15	RESIDENTIAL WASTE REDUCTION Continue to reduce landfilled residential waste with the goal of becoming a zero-waste community.
	16	ORGANICS DIVERSION Accelerate the diversion of organics from landfills to the highest and best use opportunities and ensure low-carbon composting solutions.
	★ 17	MATERIAL REUSE AND CIRCULARITY Support the development of a local circular economy to extend product lifespan through improved design and servicing and relocating waste from the end of the supply chain to the beginning.
	★ 18	REDUCED-LANDFILL CONSTRUCTION Building on CoSA's Deconstruction Pilot Program, ⁴¹ accelerate the acceptance of low-waste construction projects through education, incentives and partnerships, and continue to pursue zero-landfill waste practices for all construction projects.



LINEAR ECONOMY

RECYCLING
ECONOMY

CIRCULAR
ECONOMY



A foundation for material circularity
& circular economy policy

Every week over the last ten years, San Antonio has lost 3 units of pre-1960 housing to demolition.



OPPORTUNITY AT RISK

San Antonio's Older Affordable Housing Stock



- Existing, older buildings largely provide existing affordable housing but are at risk
- Older buildings also largely house at-risk communities
- Deferred maintenance contributes to accelerated deterioration; recommended increased focus on routine maintenance programs
- More than 25% of all homes in San Antonio were constructed prior to 1960

Community Engagement



Community
events



Neighborhood
Association
meetings



Public input
meetings





CITY OF SAN ANTONIO "PROCLAMATION"

- WHEREAS, On November 16, 2019, Build San Antonio Green hosted its 19th Annual Solar Festival at Hemisfair; and
- WHEREAS, The City's recent adoption of the Climate Action and Adaptation Plan prioritizes strategies to reduce landfill waste and encourage a circular economy of materials through reuse; and
- WHEREAS, The City's Deconstruction and Salvage Initiative, led by the Office of Historic Preservation, aims to explore both architectural and creative reuse of reclaimed building materials; and
- WHEREAS, The City of San Antonio Office of Historic Preservation, as a leader within the international Climate Heritage Network, promotes historic preservation and building reuse policies that address the impacts of climate change on built and cultural heritage; and
- WHEREAS, Solar Festival organizers have agreed to the pardoning of a wood turkey constructed from reclaimed building materials, known as Sally the Salvaged Turkey, to remind us of the role we all play in achieving waste reduction goals.

Now, therefore, I, Ron Nirenberg, Mayor of the City of San Antonio, in recognition thereof, do hereby proclaim Sally the Salvaged Turkey
PARDONED FROM THE LANDFILL.



Ron Nirenberg, Mayor



CITY OF SAN ANTONIO
OFFICE OF HISTORIC PRESERVATION

Innovation & tech

How can the City quantifiably reduce the volume of reusable or recyclable building materials that end up in the landfill by developing a digital tool that connects sellers and buyers of salvaged materials?

Refinder **ALPHA**

Find materials near you...

Explore

- Wood**
Find pallets, planks, fence...
- Bricks & Concrete**
Find bricks and concrete
- Slates & Tiles**
Find slates, tiles, mason
- Glass**
Find mirrors, structural gl...
- Fixtures**
Find doors, windows, cabi...
- Flooring**
Find wood floors, natural ...
- Antique**
Find historic items



Rustic wood siding from old homes, good condition 1 month ago
📍 403 Harding Place



1000 Red Bricks 1 month ago
📍 514 Enrique M Barrera Parkway



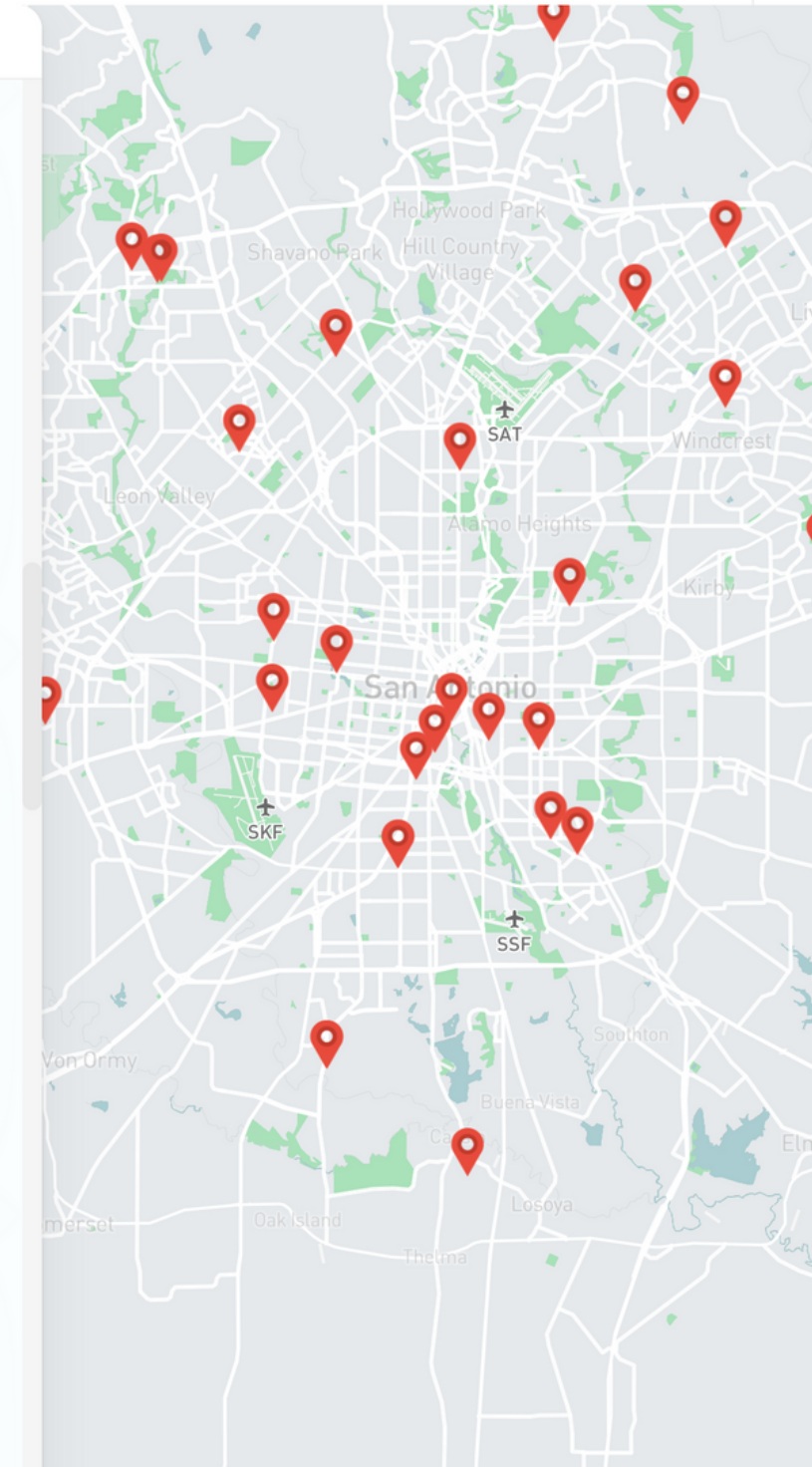
Furniture Pecan Wood Slabs 4 weeks ago
📍 399th District Court



Cheap wooden pallets (nails included), all must go! 1 month ago
📍 3823 Briar Hollow Street



27 1/4 x 30 inches double pane windows 1 month ago





Engaging nationally across sectors

DECONSTRUCTION
THINK TANK

FEBRUARY 2020



Engaging
internationally in
the growing
Climate Heritage
movement

CLIMATEHERITAGE.ORG

WE ARE A MEMBER OF THE



Climate Heritage
N E T W O R K

Mobilising arts, culture & cultural heritage for
#climateaction



Training a workforce



6:1

The national average ratio of jobs created by deconstruction versus demolition

DECONSTRUCTION

economic, community, and environmental benefits



Remove hazardous structure +



Deconstruction jobs (up to 3 weeks) +



Warehouse jobs +



Retail jobs +



Value-added manufacturing jobs +



Job training & skill-building +



Avoided landfill costs & emissions

DEMOLITION

economic, community, and environmental benefits



Remove hazardous structure +



Demolition jobs (1 day) +

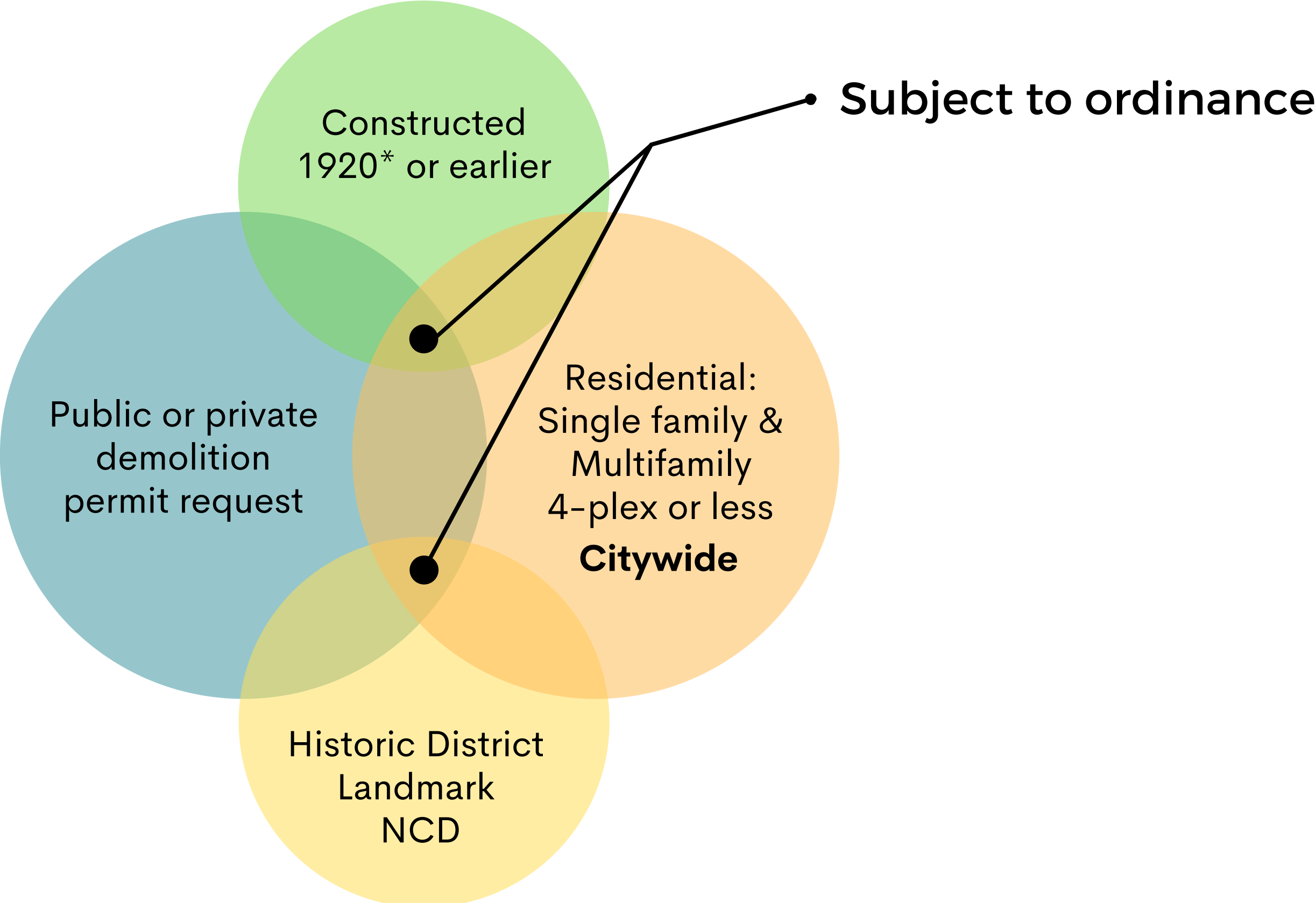


Landfill jobs

Stakeholder Feedback

Stakeholder	Concern	Proposed Solution
Developers	Cost	Competition, fee structure, incentives
Developers	Time	Competition, incentives
Developers	Contractor availability	Contractor training
Developers	Flooding material market	Year-built threshold, phased policy
Contractors	Advancing local market	Partnerships, innovations
Contractors	House feasibility/worthiness	Year-built threshold, exemptions
Contractors	Location for materials	Temporary warehouse, partnerships
Community	Maximizing salvage	Certified contractors
Community	Public health	Certified contractors, inspections
Community	Retaining materials in neighborhood	Signage, partnerships, innovations

Proposed Ordinance (2020)



Recommended Phasing

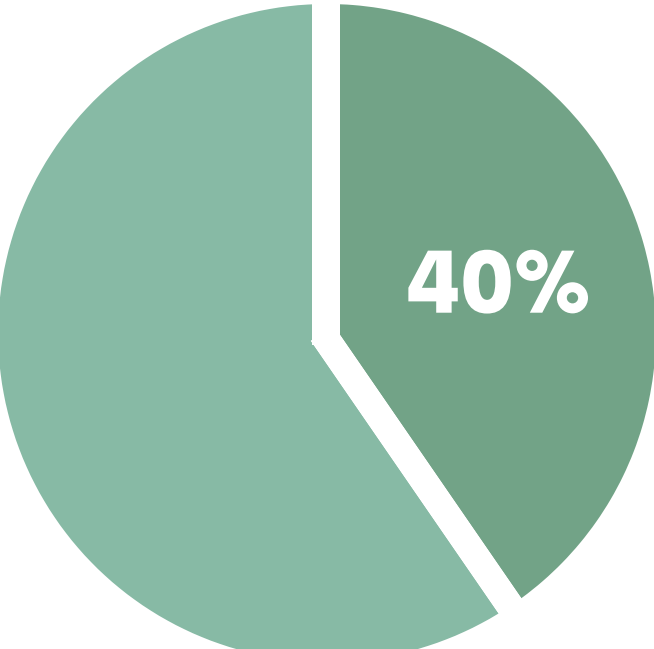
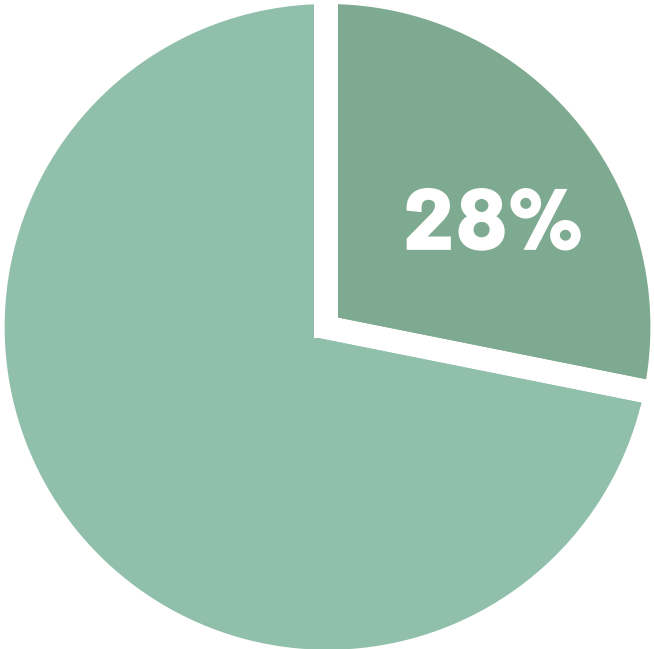
Phase I

- Residential single family + multifamily 4 units or less built in 1920 or earlier
- Residential single family + multifamily 4 units or less in Historic Districts, landmarks, or NCDs, regardless of age
- **Estimated per year: 70 - 90**

Phase II (18-24 months after)

- Residential single family + multifamily 8 units or less built in 1945 or earlier
- Residential single family + multifamily 8 units or less in Historic Districts, landmarks, or NCDs, regardless of age
- **Estimated per year: 120 - 140**

Percent of permits



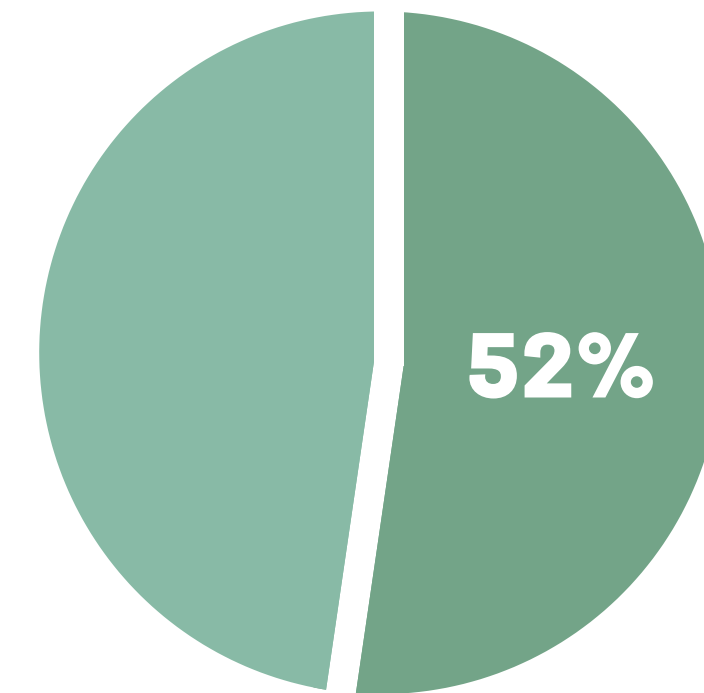
Future Phases*

Phase III

- Any structure built in 1945 or earlier
- Any structure in Historic Districts, landmarks, or NCDs, regardless of age
- Requirement or incentive to utilize salvaged materials in exterior of new construction receiving City incentives or in design overlays
- Incentive for use of salvaged materials in affordable housing structures or developments
- **Estimated per year: 170 - 190**

**would require future Council action*

Percent of permits



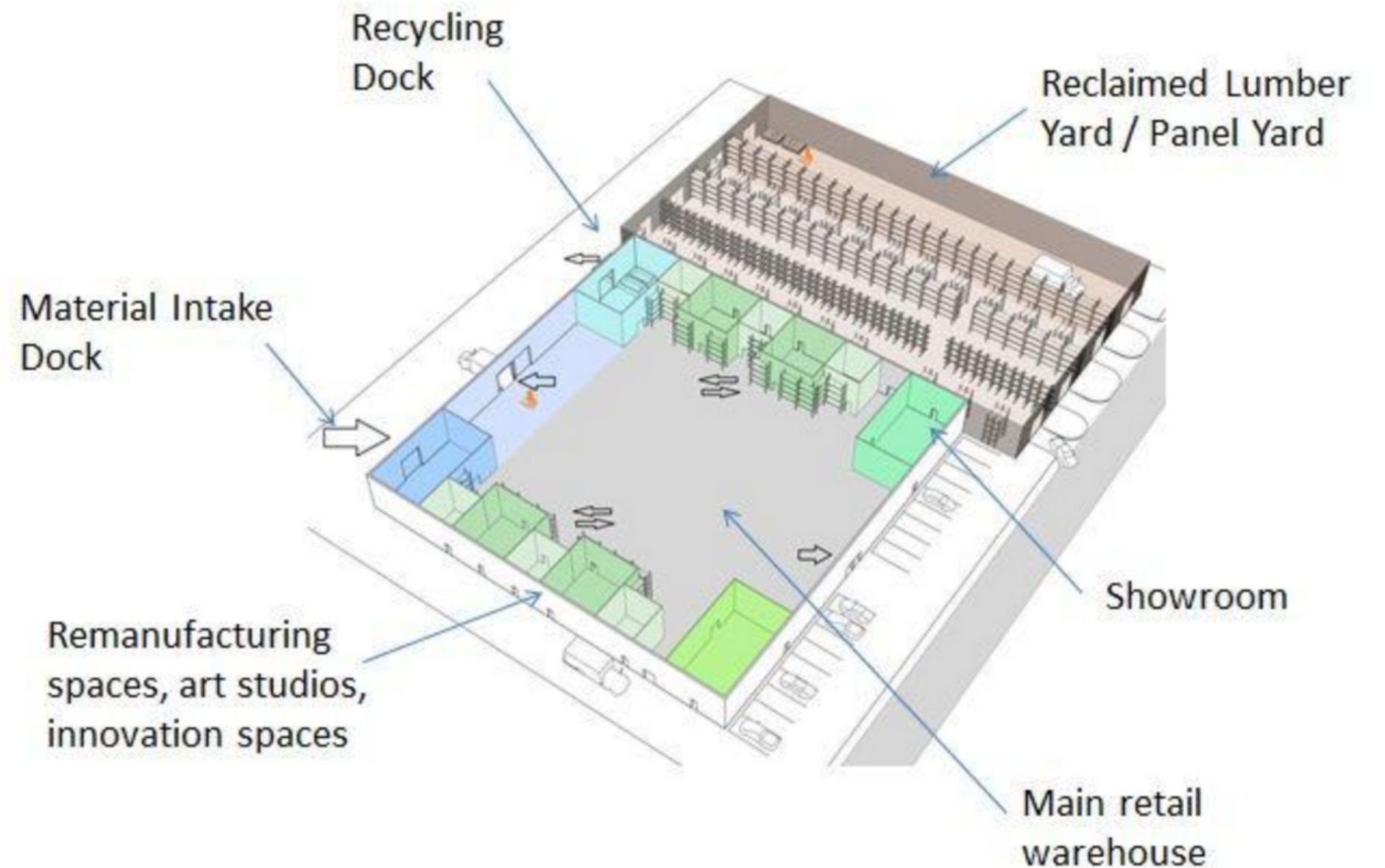
Deconstruction Strategic Plan

- AACOG Solid Waste Pass Through Grant for study
- Assess how the deconstruction & reuse industry can aid in COVID-19 economic recovery
- Assigning dollar value to job creation, industry revenue potential, and landfilled materials - "*cost of loss*"
- Assessment of City reuse innovation center or hub approaches
- Target completion: Fall 2020

Reuse Innovation Center

- Open ended
- City role in incubating (space, land, another method)
- Trades education and reuse as a circular economy tool
- Affordable housing connection
- Potential to house or expand into other reuse sectors

Example center concept



December, 2019

To Shawn Wood - The City of Portland, Oregon.

Thank you for your support. Together we were able to produce the first 100% Salvaged Lumber Cross-Laminated Timber panels with material from Portland, OR deconstruction practices. This is a great step towards a more sustainable future.



Sincerely,

Raphael Arbelaez
M.S. Wood Science



@rapnarbelaez



linkedin.com/in/raphaelarbelaez

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NLC 02/08/20
Capstone Dis

Goals / desires
- Highlight all of
climate intersec
lives
- Complex a
around climate
Showcase
that are broken
series in p

- Workforce development
- Addressing obstacles to reusing materials that re
- deconstruction - code obstacles
- Political will to jump on low-hanging fruit
- Future solar panel waste, omg scary, and how our industry needs to be read
- to take advantage of that. Solar specialist position in Urban Ore. Also ties in
- providing panels to low income communities

TOMORROW: embodied carbon, what are your cities doing? If we're
reduce emissions, how is our industry handling this?

on sites and pressing it toget

“Never demolish, never remove
or replace, always add, transform,
and reuse!”

Address affordable housing goals

Workforce development, building on existing trades education

Job creation and reuse-focused



Deconstruction & Salvage Initiative

www.SAreuse.com



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