

Deconstruction and Building Material Reuse

Austin Sustainable Building Materials Forum
June 30, 2017



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Why Salvage Building Materials?

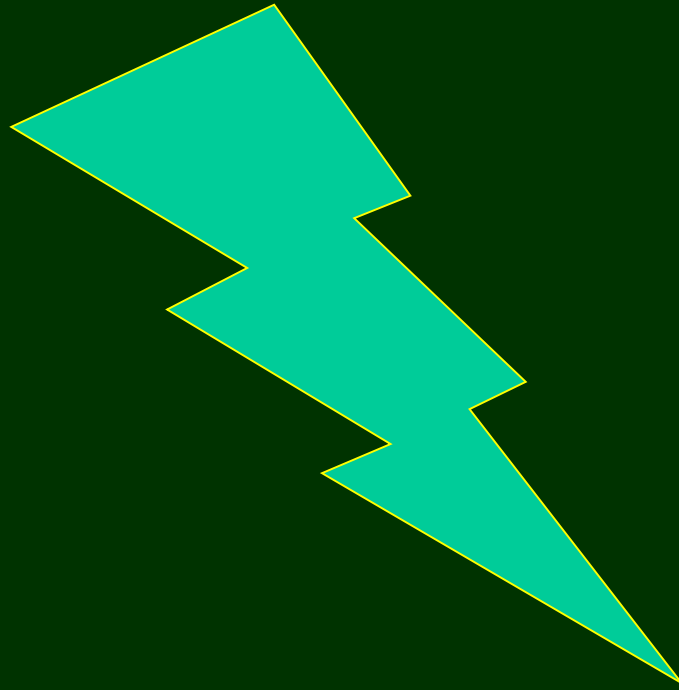


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Improves the Environment

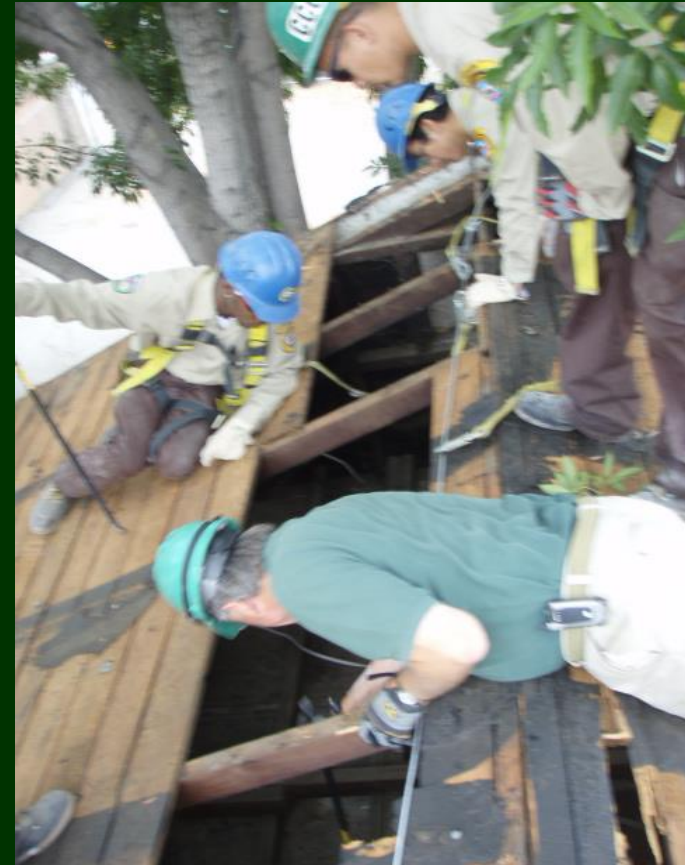


Saves Embodied Energy



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Provides Green Jobs Training



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Improves the Standard of Living



Why Buy New



How Much Can Be Diverted?

- Average house is 2,000 sq. ft. & weighs 80 tons*
- 250,000 single family residences are demolished each year*
- That represents 20,000,000 tons
- Between concrete recycling and materials reuse we can divert from our landfills about 90 to 95%
- Only 5 to 10% (5 to 8 tons) need to be landfilled



What Materials Can Be Salvaged?

- Appliances
- Bricks
- Cabinets
- Doors
- Flooring
- Hardware
- Heating & Cooling
- Lighting fixtures
- Lumber
- Plumbing fixtures
- Roof tiles
- Sinks
- Trim
- Windows
- Vanities



Appliances



Bricks and Pavers



Cabinets



Doors



Flooring



Hardware



Heating and Cooling



Lighting



Bulk Lumber



Self-Service Lumber Rack



Plumbing Fixtures



Roof Tile



Windows



Vanities



Summary of Environmental & Economic Benefits

- Reusing
 - In new project
 - Available to the community
- Providing training & jobs
- Retaining embodied energy
- Saving landfill space
- Knowing that you are doing the right thing



Benefits to Owner



The Benefits to a Private Owner (residential, commercial/industrial, developer)

- Eligible for tax-deductible donations
- Reduces overall project costs
 - Through donation and reuse elsewhere
 - Reuse on the existing project
- Reduces disposal costs
- Improves the local standard of living
- Extends the life of local landfills



Cost-Benefit Analysis

- A 2000 square foot home
- 3 Bedrooms & 2 ½ baths
- Raised foundation
- Composite (asphalt) shingles
- Single paned wood windows with divided lights
- Wood siding
- Carpeting & 5/8" hardwood flooring
- 12 x 20 wood deck
- The following does not include removal of concrete or asphalt



Full Deconstruction



Deconstruction

Demolition

Lowering of house	\$26,000	\$ 7,000
Disposal	4,000	4,000
Appraisal cost	<u>2,500</u>	<u>0</u>
Total costs	32,500 =====	11,000 =====
Donation value	90,000	0
Cash Value (after tax value of donation at 35%)	31,500	0
Total cost (from above)	32,500	<u>10,100</u>
After Tax Benefit (Cost)	\$(1,000) =====	\$(11,100) =====



Full Deconstruction Donation Values

City	Sq. Ft.	Donation Value
San Diego (remodel)	2,100	\$ 57,000
Los Angeles	2,800	\$ 97,321
Oakland	1,650	\$ 63,690
Seattle	1,400	\$ 41,000
Boulder	5,800	\$232,000
Kansas City	3,000	\$121,300
Chicago	2,100	\$102,900
Dallas	2,810	\$158,000

Just for Austin

Sq Ft	Demolition	Deconstruction	Appraisal
1349	\$ 5,800	\$10,825	\$40,942
2147	\$16,000	\$24,000	\$65,743
2195	\$12,000	\$22,000	\$78,000
1614	\$ 8,900	\$19,300	\$63,395
989	\$ 7,000	\$11,430	\$39,951
1272	\$ 9,800	\$17,400	\$68,455



Full Remodel & Soft-Strip



Full Remodel & Soft-Strip Donation Values

City	Sq. Ft.	Donation Value
San Diego	2,100	\$ 57,000
Los Angeles	2,980	\$ 42,180
Oakland	1,200	\$ 25,550
Chicago	4,200	\$ 68,070
New York	2,110	\$ 96,450
Durham	3,340	\$ 41,980
Houston	2,200	\$ 32,110

Small Soft-strip



Small Soft-Strip Donation Values

- Standard Kitchen
 - 10 cabinets
 - Refrigerator, Oven, cooktop, microwave & dishwasher
 - Light fixture
 - 2 interior doors
- Costs of demolishing and disposal _____?
- Cost to deconstruct and salvage
 - 2 to 3 workers and a box truck for 1 day & no disposal
 - _____?
- Up to \$4,999 tax deductible donation



90 % Reuse



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For More Reuse Examples

For 9 years of reuse projects see

<http://thereusepeople.org/reusecontest>

A National Reuse Contests sponsored by
The ReUse People.





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Thank You

