

Deconstruction

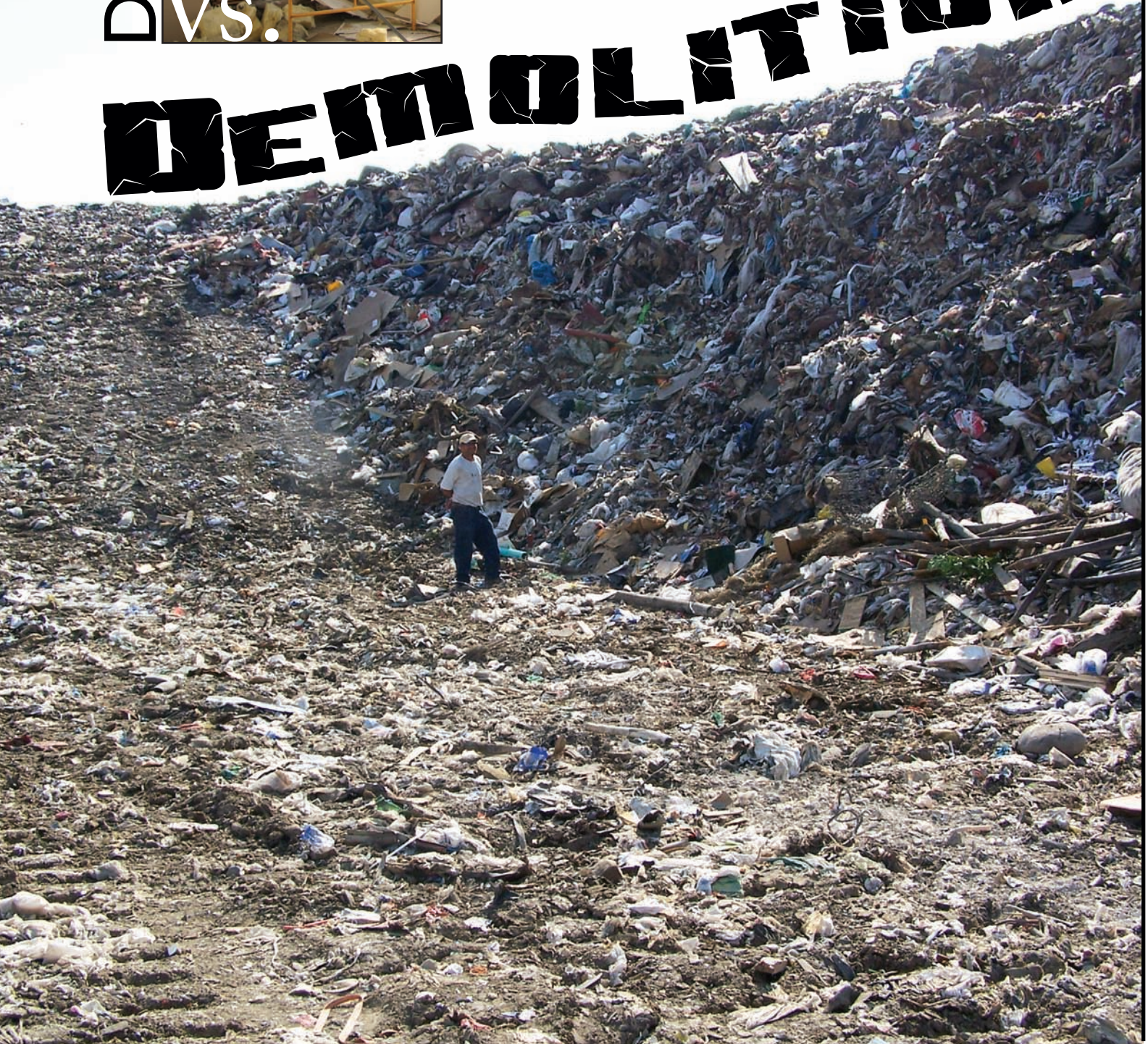


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HOME RESOURCE

**S**teamboat Springs has a limited number of undeveloped lots, thus much of the development that takes place requires either demolition or renovation of existing buildings. The traditional way to remove a building is by demolition, using heavy machinery to tear a structure apart and then haul it to the dump to be buried. This approach destroys many potentially reusable materials, creates more trash, and increases our need for new materials.

# DEMOLITION



Deconstruction is the environmentally friendly way to remove a building; it doesn't involve bulldozers, backhoes, or dump trucks. In this process structures are systematically taken apart piece by piece, so the materials can be reused in other structures. This process minimizes our carbon footprint, saves trees, energy, oil, water and countless other resources, as well as space in our landfills.

Excluding food and fuel, construction activities consume 60% of all materials used in the US. The United States Environmental Protection Agency has estimated that the US generates 136 million tons of building related construction waste each year, 92% of which is from renovation and demolition.

Though deconstruction takes more time, people and planning, it also creates more jobs and much less waste. Besides being better for the environment, deconstruction can also cost less than demolition. It costs more upfront, but the money can be recouped through the sale or reuse of salvaged items, or through a tax deduction provided by giving the materials to a non-profit building supply salvage store, such as our local Home ReSource located at the Milner Landfill.

Case studies of deconstruction projects around the US show savings averaging 30 – 50% less than demolition costs. The Center for Construction and the Environment at the University of Florida found deconstruction costs in Florida to be 37% less than demolition. In San Francisco a deconstruction project came out at half the estimated demolition cost. In NYC a developer saved \$490,000, averaging 49 cents per square foot.

Local builder, Jack White, who has done several deconstruction projects, says that currently only about 10% of clients are asking for this service. The cost averages about \$1,000 a day in Steamboat for a crew of four people, or \$40 an hour per person, and it can take several weeks to complete a typical 3,000 sq. ft. home. Michael Osterman paid to have his Steamboat home deconstructed in 2005 and said he came out a little ahead after figuring the tax write-off for the donation of materials.

David Epstein is one of White's biggest clients and founder of Home ReSource. Epstein saw the benefits of reusing long ago and began collecting doors, windows, tile, sinks, toilets, and anything else home related. When his collection became extensive enough, he started the non-profit, Home ReSource. It wasn't long before he found clientele like Bob Congdon, Leslie Hunt, and Noreen Moore, people who want cheaper, more earth friendly options when building a new home. Congdon, Hunt and Moore built their homes in Steamboat using as many second-hand products as they could and saved thousands of dollars.

White said most people don't ask for deconstruction because of the time factor and when they do ask for it they usually only want to do a partial deconstruction, taking out big things like cabinets, appliances, windows, doors, and roofing since these are relatively easy to get out and are typically worth the most. Osterman said he didn't think the additional time was a problem, it just meant having to plan ahead. It takes a shift in thinking; we need to abandon the idea that

**WE SHOULD BE RECYCLING OUR BUILDINGS  
JUST LIKE WE RECYCLE OUR TRASH.**



time is money in favor of the understanding that keeping our environment healthy is priceless.

It is usually easiest to take something apart in reverse order of how it was put together, so generally the last thing on is the first off. White said if a deconstruction is conducted by professionals, less than 10% of salvageable items are destroyed. Breakage that cannot be avoided is due mostly to differing installation techniques. Tongue and groove for example can be taken out for reuse if it wasn't glued in; if it was however, it is often difficult, if not impossible, to remove and may not be worth spending time on, as there is often a time constraint on deconstruction projects and thus the need to prioritize.

In this country we spend time and energy recycling our would-be household trash, and ignore the way we scrape off our old buildings. We should be recycling our buildings just like we recycle our trash. If you are planning to build on a site with an existing home, talk to your contractors and ask if they do deconstruction. If they don't, find someone who does. And remember, it's just as important to buy recycled materials as it is to recycle.



Safety is an important consideration when planning a deconstruction. A walk-through is necessary to determine the amount and quality of salvageable materials and any safety precautions that must be addressed. If a structure was built before 1980, testing should be done to make

## Safety

sure there is no asbestos or lead paint present. If lead or asbestos is found, it must be removed by an abatement contractor and a safety certificate issued before deconstruction begins. Other concerns are whether the structure is stable and if there are any environmental health hazards present: these can range from mold to mouse droppings.

**CASE STUDIES OF DECONSTRUCTION PROJECTS... SHOW SAVINGS AVERAGING 30-50% LESS THAN DEMOLITION COSTS.**

