

# Steel: The Sustainable Material for Building Construction



**Steel is a superior construction material with many benefits, including strength, durability, versatility and sustainability. The proven performance and quality of steel have also caused it to dominate commercial interior wall framing applications for many years. Developers and builders are now selecting cold-formed steel as the main structural material for applications, including mid-rise and multifamily projects.**

Increasing economic and environmental considerations in the building industry have fueled steel's ongoing growth in mid-rise commercial structures. Architects, engineers, contractors and business owners are recognizing the benefits of choosing steel as an alternative building material.

## ★ **Steel: reaping benefits for builders and business owners**

Steel framing is easy to handle on-site. It is light in weight because steel has the highest strength-to-weight ratio of any construction material, resulting in the use of less framing material compared to wood for an equal size structure. While many construction sites may have large amounts of construction and demolition waste to dispose, using steel will minimize that problem as it can be easily recycled responsibly. In addition, builders reduce their disposal costs, and divert material from local landfills. More builders are taking advantage of panelizing: either building or purchasing reassembled wall, floor and truss components.

Steel framing is cost-effective. It can be purchased to specific lengths, minimizing jobsite scrap. Steel does not twist, warp or split, so there is no need to sort out poor-quality product, which saves time and money. Steel's consistent quality and dimensional stability enhance efficiency in-plant or at the jobsite. Panelizing helps speed the framing process for the builder. Steel is noncombustible, performs well in high wind and seismic areas and resists corrosion. It doesn't shrink or swell with time or humidity changes, so steel framing contributes to better drywall and exterior appearance, as well as the fit of doors and windows.

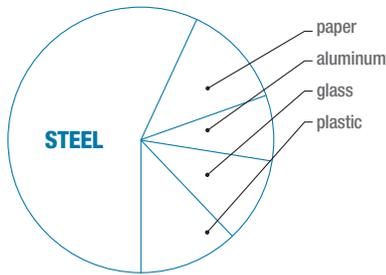
**MORE THAN 65 MILLION  
TONS OF STEEL SCRAP ARE  
RECYCLED EACH YEAR.**





An average 2,000 square foot steel framed house can generate as little as a cubic yard of recyclable scrap.

### Steel Recycling vs Other Materials



### Steel: framing a new dimension of environmental benefits

All steel products, including steel framing and steel roofing, contain recycled steel. Steel framing contains at least a minimum of 25 percent recycled steel and is continually and completely recyclable. Using recycled steel takes the pressure off renewable resources. In contrast to many other building materials, steel is routinely collected in aggregate quantities from construction and demolition sites and recycled into new steel products. Often times the money brought back into a project from selling the recyclable scrap steel can offset many project expenses.



### About steel recycling

Steel has long been North America's most recycled material. For the steel industry, using old steel products and other forms of ferrous scrap to produce new steel lowers a variety of steelmaking costs and reduces the amount of energy used in the process. That is why more than 65 million tons of steel scrap are recycled each year. In fact, more steel is recycled than paper, aluminum, glass and plastic combined.

**BY RECYCLING ONE TON OF STEEL, 2500 POUNDS OF IRON ORE, 1400 POUNDS OF COAL AND 120 POUNDS OF LIMESTONE ARE CONSERVED.**

As an end result, recycling steel scrap also saves landfill space and natural resources. By recycling one ton of steel, 2500 pounds of iron ore, 1400 pounds of coal and 120 pounds of limestone are conserved. Steel construction materials, like other steel products, are a part of the steel industry's massive recycling efforts.

When these steel products have outlived their current intended use, they can be recycled into new steel to be used for any variety of new products. In addition, all new steel made in North America contains recycled steel. Sections of steel framing may have once been a part of an automobile, refrigerator or soup can. Choosing steel construction materials means buying and using a product that contains recycled steel.

### For more information

[www.buildsteel.org](http://www.buildsteel.org)  
[www.buildusingsteel.org](http://www.buildusingsteel.org)



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