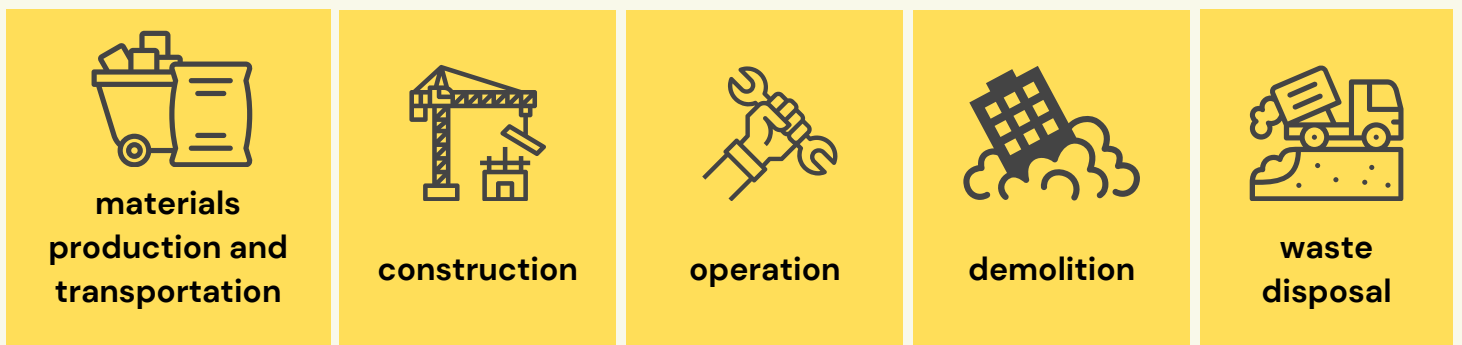


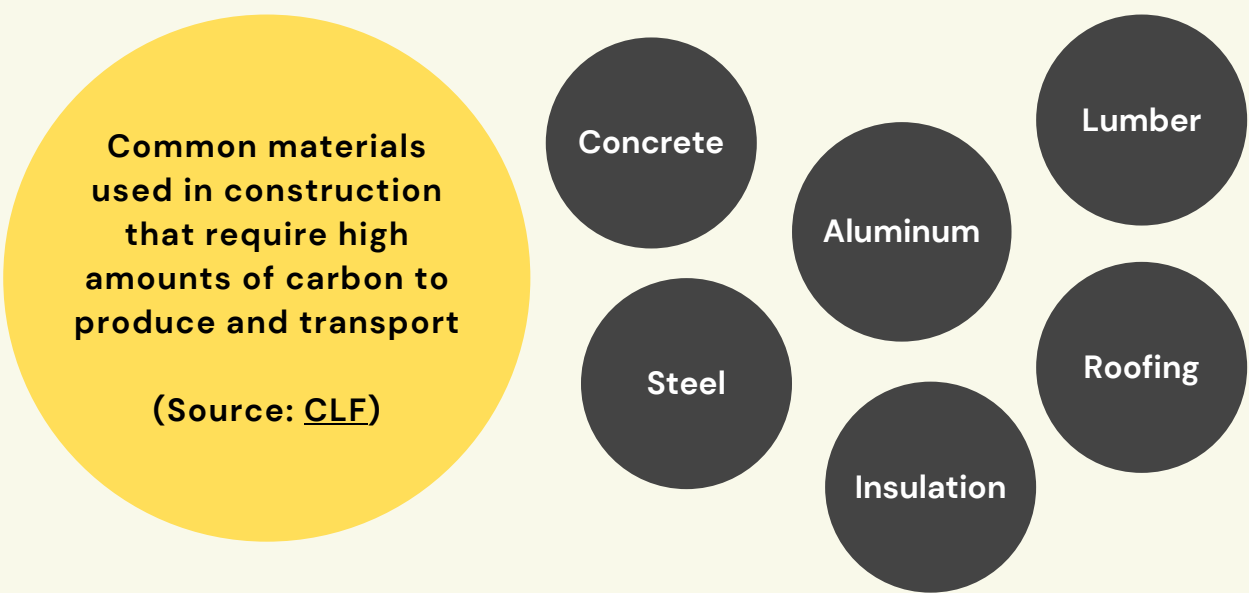
HOW BUILDINGS EMIT CARBON

All buildings go through five stages. This is referred to as the **building lifecycle**, which includes:



STAGES 1 & 2: MATERIALS/CONSTRUCTION

Globally, materials production and construction creates **28%** of the emissions produced by all buildings ([DOE](#)).



STAGE 3: OPERATION / MAINTENANCE

The operation and maintenance stage begins and ends with tenants. Whenever tenants occupy a building, the building is operational and will require maintenance. This stage can produce both direct and indirect emissions related to energy use.



Direct emissions are produced from fossil fuel-based appliances like gas-powered stoves and water heaters ([C2ES](#)).

Indirect emissions are produced from fossil fuel power plants. When we use electric versions of appliances, like electric stoves and heat pumps, emissions can still be created if we are using fossil fuels to generate electricity ([C2ES](#)).



STAGES 4 & 5: DEMOLITION / WASTE DISPOSAL

Demolition and waste disposal are the last stages of the building lifecycle. In the US, building demolition has created millions of tons of waste. Building demolition both discards useful recyclable materials and fills our landfills with unnecessary waste. ([EPA](#))

Demolishing a building requires heavy lifting. Often, diesel powered machinery is needed to demolish a building and move the debris. Although powerful, diesel machinery pollutes local communities and increases local air emissions. Because municipal landfills are the 3rd largest source of methane emissions in the U.S., filling up landfills with building waste contributes to the emissions created in landfills, and creates a need to extract even more materials. ([EPA](#))