# Step 15. Identify and prioritize the key construction materials and systems for the project – those which are most critical to creating a project which is "built to last."

**Why is this important?**

Up to this stage we have concentrated on steps that focus on meeting user needs and enhancing the neighborhood. This step adds the final crucial element in a truly well designed project: making sure that it is built to last.

Just as adjustments to the *design* of the development are usually necessary as the project progresses, trade-offs and adjustments to the building *materials and systems* (structure, envelope, HVAC, etc.) are also often necessary. For example, you may wish to use brick veneer for all your exterior walls but find that it is too expensive; so you compromise and do only the front and sides in masonry and the rear walls in vinyl siding. Alternatively, you may find that the extra insulation you wish to add for energy conservation reasons, even though it costs extra, allows you to reduce the size of your heating system – overall costs remain the same and you've built in lower energy costs for your residents.

To manage these trade-offs and adjustments effectively and ensure that design quality is not compromised you need to determine – just as you did with key design components in **Step 13** - which construction components are critical to the overall design quality of the project.

These are the components worth fighting hardest for as the inevitable process of adjustment and compromise plays itself out.

**When should this be done?**

During the **Design Development** phase of Predevelopment, when the building's basic structure, envelope (exterior walls, roof, windows), and mechanical systems (heating, ventilating and air conditioning) are being designed.

**Who should do this?**

The owner/developer and the design team, with input from a contractor if possible.

**What should be done?**

- As the design develops, a list of the project's major building materials and systems – its structure, envelope and heating/ventilating/air conditioning components - will emerge. The list will form the basis of the cost estimates made during design development.
- Analyze this list and determine which materials or systems are the most critical to ensure that the project is "built to last."

- As you refine and redesign the project to make your cost estimates fit your budget, make sure that your top priority materials and systems are not compromised.
- Consider favoring "public" elements especially those which enhance the neighborhood where the project is located (for example, entry stairs) over more "private" components, especially those which the occupants can maintain, repair or replace themselves (for example, interior stairs).
- Print the **Prioritized List of Key Construction Materials and Systems Form**, fill it out and add it to the Project Book.
  (The list should also accompany the completed Design Development drawings.)

**How can doing this help move my project forward?**

- Clear priorities will help speed up and rationalize decision-making during cost driven redesign.
- The fact that these decisions are driven by concerns for the project's overall design quality and, in particular, for its long term "lastability," will give added credibility to the project in the loan application and other approval phases.

**Additional resources available from the Affordable Housing Design Advisor CD-ROM.**

**The Materials Handbook**, a review of building materials and products for high density affordable housing developed by Asian Neighborhood Design of San Francisco.

# Prioritized List of Key Construction Materials and Systems

**Project Name** _____
**Date** _____

## Key Construction Materials and Systems

# Example
## Prioritized List of Key Construction Materials and Systems

**Project Name** DOVE STREET
**Date**

**Key Construction Materials and Systems**

MASONRY WALLS
CONCRETE STOOP
LOW E DOUBLE PANE WINDOWS
3/4" SUBFLOOR
PLYWOOD SHEATHING
HOT WATER GAS BOILER
A-C CENTRAL
VINYL ROOF
WOOD WINDOWS
SOLID WOOD DOORS ON CABINETS