

ADVANTAGES OF USING HOLLOW CORE PLANK

Single Source – Design assistance, budgeting, sales, detailing, delivery and erection

Fast Erection Time – 5,000 to 8,000 square feet per day

Non-combustible – up to four (4) hour fire ratings possible

Low Life Cycle Costs – Compartmentation – controls/limits fire from spreading
Reduced insurance costs
Low maintenance – not affected by rot, termites, bugs, water, sun damage
Low noise – quieter for tenants, occupants, and owners

Long clear spans eliminate columns and beams and allow for large open areas

APPLICATIONS

Floor, roof and mezzanine systems

- Housing, either single or multi-family (condos, apartments)
- Dormitories
- Aging-in-place facilities, nursing facilities
- Hotels and motels
- Office and industrial buildings
- Warehouses
- Schools and educational facilities
- Jails, judicial facilities
- Single level parking structures
- Short-span access bridges (pedestrian and/or vehicle)

SPACE ECONOMY

Hollow core plank increases usable space as much as 20% when compared with conventional and floor ceiling systems.

Long Span Construction – Hollow core plank allows longer spans, much thinner decks and greater rigidity when compared with steel or wood joist flooring systems, and is lighter than poured-in-place concrete construction. Due to the hollow core prestressed design, span length is increased. This eliminates obstructing interior beams and columns, thereby achieving a more flexible, more valuable space.

Decreased Exterior Wall Heights – A typical installation can save 6” to 10” per floor. A savings of 4 feet can be realized on a 6 story building. In many cases an additional story is possible within building code maximum height limitations.

Save Time and Money with Hollow Core – Simple buildings can be designed to save architect’s time and supervision. Decreased exterior wall heights result in lower cost of wall facings and masonry, with additional savings in plumbing, duct work and service stacks.

Ready-Made Ducts – Using hollow core provides horizontal raceways for electrical, plumbing and heating installations.

Lower Heating and Air Conditioning Costs – Costs are lower per square foot because the thinner floor section reduces overall cubic feet being heated/cooled.

Fire Resistance – Construction using hollow core plank can be considered non-combustible, in accordance with National Board of Fire Underwriters definition of combustibility. Hollow core floor and roof assemblies construed using precast prestress slabs with a two-inch thick concrete topping will afford up to a 4-hour fire rating. This in turn lowers insurance rates substantially as top fire ratings are made possible.

Low Sound Transmission – Excellent impact absorption is essential in building construction to ensure quieter buildings for more pleasant living and working conditions. Sound insulation of floors and ceilings can be divided in to 2 categories (1) impact sound such as footsteps and (2) airborne sound such as voices or radios. Hollow core plank density is superior to wood or steel floor systems far exceeding recommended sound insulation standards. Hollow core construction is exceptionally beneficial in buildings such as schools, apartment blocks, or buildings where noise must be minimized.

Rapid Installation – allows for earlier occupancy, shorter financing time and therefore giving the owner quicker return on the initial investment.

Dry erection of slabs means savings in time, work and money. Less framing is required because of hollow cores’ relatively light weight and long clear span capability. Its resistant construction means less has to be spent on fire-proofing materials. This results in overall job-time reduction, thus permitting earlier occupancy and ensuing additional rental income.

HOLLOW CORE 50% LIGHTER

A hollow core slab, when compared with a poured-in-place flat slab, reduces weight about 50% yet retains the equivalent, if not greater, strength. This means a substantial savings of raw materials, erection labor and also provides ready-made duct work for electrical, plumbing, heating and cooling lines.

HOLLOW CORE SYSTEMS PROVIDES THESE ADDITIONAL ADVANTAGES

All-weather construction

Inclement weather seldom affects hollow core erection. Slabs can be placed on the job in all weather conditions. They are precast, cured and cut to proper lengths at the manufacturing plant. In severe cold, a short break in the weather is all that's needed to allow enough time for grouting to be finished. In the meantime, a workdeck exists.

Work Decks

The day after erection and grouting, a working surface is ready for other trades. Bricklayers can be kept on the job continually and work can be organized by the contractor, for subtrades, to permit prompt scheduling of erection.

Under ideal conditions, over 10,000 square feet of hollow core plank has been placed in one work day.

Attractive interiors

Precast concrete hollow core slabs have been accepted for many years as building units which give factory controlled structural strength and a high quality bottom finish. The underside of a hollow core slab has a smooth finish, with special finishes available from some manufacturers. In buildings, such as warehouses and garages, hollow core ceilings present an attractive appearance just as they are. Painting is the only finishing required producing a high quality ceiling surface.

Product Highlights

- ◇ Cost effective
- ◇ Controlled production environment
- ◇ Just in time deliver
 - Delivered the day of erections
 - Less jobsite congestion
- ◇ Shorter, faster construction times in all weather conditions
- ◇ Flexible, versatile applications for both roofing and flooring
 - Engineered for numerous load-bearing systems
 - Provides working platform when installed
- ◇ High-strength, high-density
- ◇ Manufactured with non-combustible materials
 - 2-hour fire rating
 - 4-hour fire rating with concrete topping
- ◇ Continuous voids provide raceways for electrical, heating and/or plumbing trades
- ◇ Reduced sound transmission and vibrations between floors
 - Eliminates squeaks