

Ocon SOLUTIONS

Martin Ocon, P.E., Principal and Project Manager for Browder + LeGuizamon and Associates Inc. in Atlanta. He has more than 23 years of structural engineering and design experience, and has presented seminars for the American Society of Civil Engineers. With Jon Lebkisher, R.A, Project Architect for Niles Bolton Associate and Tom Bourne, Fabricator, Universal Steel, he focused his team and used the AISC Steel Solutions Center to help determine the most cost effective and fastest-to-erect framing system for a six-story apartment building in Atlanta, Georgia.



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CHOICES Conventional thinking on apartment complexes over four stories is to use wood or concrete framing. But for the Alexan apartment project, a six-story, 330,000-sq.-ft. building, that option wouldn't fit into the owner's fast track schedule – the framing needed to be completed within 12 weeks.

FOCUS The challenge became choosing a cost-effective frame that could be erected quickly. Wood is often used in these applications, but it has certain limitations. Team discussions raised additional considerations, such as fire rating. Other building types, including hotel construction, were studied for guidance. However, the choice still wasn't clear. Was it going to be post-tensioned concrete flat plate, metal framing with wood flooring, metal stud framing with steel deck, or structural steel framing with a hollow-core slab?

POSSIBILITIES Needing to bring a design to the owner as quickly as possible, the fabricator approached the AISC Steel Solutions Center – the industry clearinghouse for innovative framing solutions and technical data. The Solutions Center specializes in providing options – including cost and scheduling information. The Solutions Center offered three possible options, and one became the choice: Structural steel framing with a hollow-core slab. Steel framing reduced total construction time by half, allowing apartment leasing to begin sooner.

STEEL SOLUTIONS Steel framing gave us flexibility and more open space. There were not as many load bearing walls – meaning bigger clear spans, creating more living space, and more leasing space.

OPEN DOOR The team's open door policy was the key to accomplishing such favorable results. Everyone involved in the design and construction process – from fabricator to onsite project manager, architect, engineer and owner – was engaged early in the planning stage. Frequent meetings enabled the team to expedite cost evaluations of various framing options supplied by the Solution Center and keep the schedule on track. This close collaboration resulted in savings for all team members. The owner received a better building for his investment.

STEEL The framing choice allowed more design flexibility – which is especially important in a residential project – and even permitted more column-free space in living areas and eliminated firewall issues. Steel allowed for greater speed of construction. The frame was up in thirteen weeks, allowing subcontractors to begin work sooner in the construction schedule than usual and completing the 300-unit project in an unprecedented 26 months. Steel did exactly what the team thought it was going to do.

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