

A Towering Task

Logistical Challenges of Office-to-Residential Conversions

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As hybrid and fully remote work become increasingly popular, many office tenants have begun rethinking their office space requirements. Long-term office leases will act as a buffer to the inevitable transition to smaller, more functional, and more modern tenant space. However, without question, lower revenue is an impending threat for many older office buildings.

Building owners will soon be faced with several choices. They can continue to operate the building as is and accept lower rental revenue from tenants in the future. They can attempt to upgrade the building to compete with newer office properties. They can sell the building and take a profit or loss, depending on their cost basis in the building. They can demolish the building and create a vacant site for new construction. Finally, they can convert the existing building to a different use that generates a higher return. Higher interest rates and pending refinancing deadlines can limit these options. Discovering the optimal choice will involve significant cost/benefit analysis by landlords.

Given the current housing shortage sweeping the country, this article focuses on the choice to convert

Takeaway

Turning older office space into residential space is becoming a popular option in the country's most densely populated cities. However, converting such space is complicated, so building owners and developers need to consider the structural, environmental, legal, and financial issues involved.

an existing office building to residential use. The pros and cons of such a decision will be discussed based on extensive interviews with architects and developers. Special consideration is given to office buildings built during the 1980s. Buildings in this age group are fast becoming four decades old, making it increasingly harder for them to compete with newer developments.

Although some existing office buildings are much older, '80s vintage buildings are by far the majority of older properties by decade. The Economic Recovery Tax Act of 1981 created an unparalleled glut of office space during the 1980s. CoStar office data reveal Dallas' central business district (CBD) added more than ten million

square feet of new office space from 1982 to 1987, a 39 percent increase in just five years. Even more striking, the 11-county Dallas-Fort Worth-Arlington Metropolitan Statistical Area (MSA) had an increase of more than 89 million square feet (an 81 percent increase) during the same period. CoStar's only office data going back to the early 1980s are limited to the DFW metro area.

Because of the large number of architectural firms and developers in Texas, the choice of who to contact for interviews had to be narrowed down. Only those connected to larger Class A office buildings completed during the 1980s inside the CBDs of the five major Texas metros were contacted initially. This group then provided additional referrals to other firms specifically involved in office-to-residential (OTR) conversions nationwide. CoStar data lists 44 office buildings of 100,000 square feet or more completed in the Austin, Dallas, Fort Worth, Houston, and San Antonio CBDs between 1981 and 1989. Their total square footage exceeds 36 million square feet, with the largest building surpassing 1.9 million square feet.

Insights From Architects

Architects focused primarily on structural and environmental considerations when choosing to convert an office building to residential use. Within those two categories, conversion criteria involved a wide variety of factors. A surprisingly high level of agreement was found. Major structural factors include floor-to-floor heights, column spacing, elevators, age of mechanical/electrical/plumbing (MEP) and HVAC systems, floorplate size, and floorplate shape.

A minimum height of nine feet six inches is typical for new residential development. Most office buildings are at least 11 feet floor-to-floor, which should provide adequate clearance for a residential conversion. If existing heights are lower, removing a floor to create two-story units is an option. While this may be physically feasible, the two-story unit would need to produce rents at least double those of their single-story counterparts to provide a similar revenue-to-cost ratio.

Another problem can arise when considering cutting through floorplates. The majority of '80s vintage buildings are of steel construction. However, many building slabs are made of post-tension concrete. Embedded steel cables in the concrete cannot be cut, making modifications virtually impossible. As a result, architects were unanimous in their opinion that converting buildings using post-tension concrete can dramatically increase cost and risk.

The location of structural support columns throughout an office building will dictate the ability to modify the floor layout. Typical column spacing for a 1980s office building is 30 feet by 30 feet, which would be considered adequate for a residential development. Smaller spacing may be unfit for conversion to residential units.

Configuration and number of elevators is a critical factor in conversions. In larger buildings, separate elevator banks are typically used to service different groups of floors. This could be an advantage in partial conversions where both office and residential tenants would occupy the same building. All architects agreed that perceived quality of the building will be negatively impacted if both tenant types are required to share the same elevators. Separate access is a must.

In a 1980s-era office building, the age and condition of MEP and HVAC systems must be assessed. The amount of capital necessary to replace/refurbish existing MEP and HVAC can be significant. Because system requirements are often different for a residential building, most will require upgrades or modification. If these systems can be designed to run vertically through all floors, major time and cost savings can be achieved.

Floorplate shape can have a huge impact on a building's desirability for conversion. Because modern office buildings are designed for tenant flexibility, interior walls are generally easily relocated. The shape of a floorplate will dictate the layout of units within a floor, directly impacting the unit mix and, ultimately, cash flow. Shape will impact "relief spans" as well.

To maximize natural light, residential buildings are often rectangular in shape. The optimal distance from a residential building's core to exterior walls (the relief span) is typically 25 to 35 feet. If this span is longer, which is often the case in office buildings, a tunnel effect in residential units may result. A lack of windows and natural light throughout a unit will significantly affect a residential tenant's perception of quality, directly impacting rental rates.

Interior space near the core may be converted into public space, such as a lounge area or gym. Atriums are another alternative to bring in more natural light if some core space can be removed. However, none of these options are preferable to a shorter relief span.

Smaller floorplates are the most desirable because they can be more easily divided into an optimal mix of residential units. The relief span is also generally shorter, providing the maximum amount of window space and

natural light to residential tenants. A number of architects gravitated around 8,000 to 10,000 square feet as the most attractive floorplate size. This puts much larger office buildings at a distinct disadvantage for conversion.

Grants for green building construction could help with conversion costs. All architects agreed that the greenest building is one that already exists. “Embodied carbon” is defined as greenhouse gas emissions that were created by the manufacturing, transportation, installation, maintenance, and disposal of building materials used to develop an existing building. Preserving an existing building’s embodied carbon is always environmentally superior to creating more embodied carbon by demolishing a building and constructing a new one.

Other factors, such as adequate parking, a desirable location for residential tenants, and incentives for affordable units, were mentioned. Generally, affordable units will not be financially feasible in a conversion without some form of government subsidy. Also, even if the parking garage in an office building is excessive for residential use, their much lower floor-to-floor height makes them unacceptable for conversion to additional residential living space.

Insights From Developers

Developers focused on legal, physical/structural, and financial issues when considering an OTR conversion. They agreed it is much easier to build a residential building from scratch than take on a conversion. Legal concerns primarily involved determining a building’s current zoning restrictions and assessing whether zoning could be changed from office to residential.

Two major advantages of a conversion over new construction were possible savings in time to completion and access to a superior location. However, unexpected problems often arise when converting existing buildings, which could lead to a loss of the time advantage and possible budget overruns. A lack of as-built plans for existing buildings is common, slowing the time to completion. Alternative vacant locations are always considered as well.

Similar to the architects, developers preferred office buildings with smaller floorplates. With increasing size comes increasing complexity. One developer said no building larger than 200,000 square feet would be considered for conversion. Another said buildings taller than ten to 15 stories would not be considered. Developers

also felt buildings from the 1910s to 1940s with more classical architecture were better conversion candidates than those built in the 1980s.

All developers agreed that a way to assess a large number of buildings quickly and efficiently is an advantage. At least one architectural firm offers a proprietary software product to quickly assess an office building’s viability for conversion, and most developers were familiar with the product. One major developer said the firm had looked at over 20 office buildings for possible conversion and determined that only one was an acceptable candidate.

Reconfiguring existing office space to Class A residential space is difficult. Several developers questioned whether any OTR conversion could command top residential rental rates. The consensus was that developing a high quality Class A residential product would almost always necessitate new construction.

All developers agreed the structure must be purchased at an extremely low cost. Paying nothing for the structure would be optimal. Pending refinancing could lead to lower building valuations, possibly making buildings a better conversion candidate. Otherwise, new construction will usually be the better financial decision. Developers generally look for distressed owners or lenders who have taken a building back and want it off their books.

Vacant office buildings are by far the most desirable. Several developers reported nightmare scenarios when attempting to remove or relocate existing tenants. Tenants can have significant leverage in any negotiations based on the terms of their lease agreement. One developer reported paying tenants to leave to vacate the building for conversion.

Future of Texas OTR Conversions

Although OTR conversions are becoming increasingly popular in larger, more densely populated cities such as New York or Chicago, Texas has seen few so far.

If current trends in office and residential markets continue, expect to see more interest in OTR conversions in Texas. However, the hurdles to a successful conversion are not insignificant. 📌

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