T3: Timber, Transit & Technology
Minneapolis, MN

Content

Executive Summary

The T3 Building in Minneapolis' North Loop neighborhood represents a paradigm shift in the development of commercial office buildings. As the first multi-story, commercial mass-timber building built in the United States in the last 100 years, T3 has become a model for sustainable design, efficiency, and profitability. T3, which stands for "Timber, Transit & Technology", was a speculative development led by Hines from 2013 to 2016. In general, the real estate industry has not been known to innovate at the pace of business. The T3 model challenged that notion by capturing what today's businesses and employees are seeking.

With a project cost of $31 million and total square footage of 225,000, the T3 Development was designed for progressive, tech-forward businesses looking to attract (and retain) the best talent. Using engineered wood materials, Hines was able to capture the warmth and character of historic old-growth timber office buildings while providing the modern amenities that today's businesses seek in the city's central business district. Following construction completion at the end of 2016, leasing partner JLL secured Amazon as the primary tenant by leasing the top three floors. Smaller technology, finance, and consulting businesses have filled out most of the building since.

From a development perspective, T3 has proven that progressive design and sustainability are not a detriment to the bottom line. In fact, the construction of the building shed light on the efficiencies of using engineered heavy timber that is prefabricated off-site. The structural timber framework and floors were erected in two-and-a-half months - roughly an average time of one floor per nine days. T3 is 30% lighter than a comparable steel structured buildings and 60% lighter than post-tensioned concrete building. While the design and planning of T3 required more upfront investment and planning, the back end implementation of the project paid dividends.

With T3, Hines has proven concept. The project team successfully blended a vintage design with a modern office amenities and features, all while maintaining its sustainable integrity. Today's younger workforce is attracted to this juxtaposition, especially in historic business districts around the country. With new T3 developments being constructed in Atlanta and Chicago, Hines has found a concept that is changing the landscape of office building design.

Project Overview

Name
T3 (Timber, Transit & Technology)

Address
323 N. Washington Ave.
Minneapolis, MN 55401

Type: Mixed-Use Office & Retail

Projet Cost: $31 million

Site: 1 acre

Floor Plate Size: 34,361 SF

Parking Stalls: 65 (below grade)

Developer
Hines Interests Limited Partnership

A&E Partners
Michael Green Architects
DLR Group
Dunham Associates (MEP)

Builder
Kraus-Anderson

Leasing Partner
Jones Lang LaSalle
The C. Chase Company

KEY TENANTS

amazon

DUFFY & PARTNERS

DALTON & WADE

INDUSTRIOUS

the bar method

PROJECT TIMELINE

Nov 2014 — T3 Plans Unveiled

July 2015 — Construction Kickoff

Oct 2016 — Construction Completion

Jan 2017 — Amazon Signs Lease

May 2018 — Sale of T3 to LaSalle Holdings

Development Team

DEVELOPER

Hines

Hines is a privately owned international real estate investment, development, and management firm. Founded in Houston in 1957, the firm has been guided by a fundamental belief - buildings of superior quality and architectural merit attract better tenants, maintainer higher occupancy and retain longer term value. This tenet, coupled with the firm's long-standing financial strength, has propelled Hines from a one-person enterprise to a fully integrated, multi-national real estate firm.

KEY PARTNERS

MGA
A KATERRA COMPANY

Michael Green Architecture is an architectural and interior design firm based in Vancouver, British Columbia. Founded in 2012, MGA has been a leading proponent for engineered mass-timber design and construction due to its sustainable benefits. In 2013, the firm's founder, Michael Green, presented a TED Talk on the subject. Since then, MGA has been one of the world's leading architects and designers of mass-timber structures.

DLR Group

DLR Group is an international integrated design firm offering architectural, engineering, interior design and planning services. Founded in 1966 in Omaha, Nebraska, the firm has grown through acquisition and currently has 30 office locations around the globe. With a primary office in Minneapolis, Hines approached the group to lead the T3 project in conjunction with MGA.

KRAUS-ANDERSON

Kraus-Anderson is a Minneapolis-based construction management and real estate development enterprise. In business for over 120 years, Kraus-Anderson has grown with a national portfolio that features work in nearly every sector of commercial construction. Hines selected Kraus-Anderson as the General Contractor given their locality, experience, and reputation.

JLL

Jones Lang LaSalle is a real estate-focused professional services and investment management company based in Chicago, Illinois. With offices in Minneapolis, JLL was selected by Hines to lead up agency office leasing for the T3 building.

Project Vision

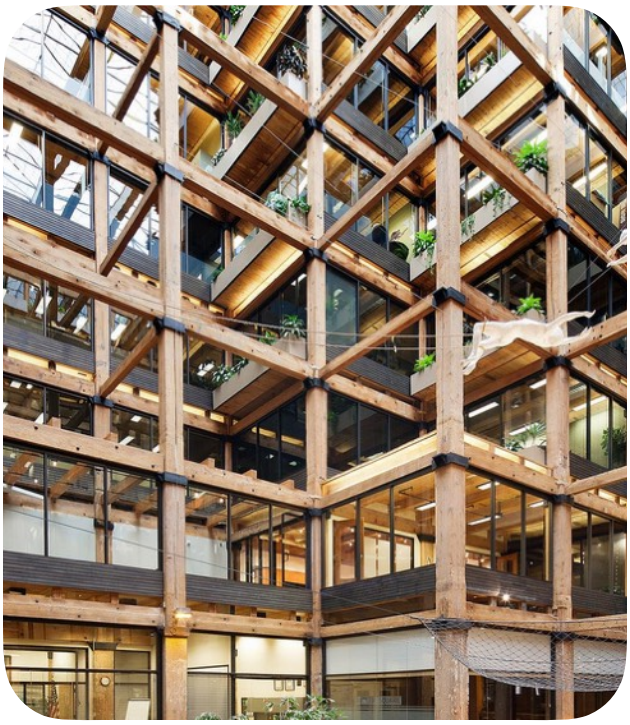
North Loop Green Site

Prior to the development of T3, Hines presented a vision for its seven-acre plot of land in the epicenter of Minneapolis' Warehouse District. The master plan, called North Loop Green, represented urban living connected through recreational green space, sustainable design, and public transit. The plot of land extends from Washington Avenue, the main artery in Minneapolis' North Loop neighborhood, down to Target Field - the ballpark of the Minnesota Twins. The land runs adjacent to two main Light Rail lines that intersect at the southwest corner of the property. In addition, the property sits next to the Cedar Lake bike trail, Metro Transit bus system hub and three major parking garages that service the local business community.

North Loop Green Plan & T3 Site

Hines envisioned North Loop Green to be a dense, transit-oriented development that creates a social urban community in an up and coming Minneapolis neighborhood. Given the company's commitment to sustainable design, they proposed seeking LEED certification for all individual projects within the development. This started with the Dock Street Flats, a multi-family apartment building that was completed in 2013. From there, Hines focused on a new office site that would ultimately become the T3 development.

Over the past ten years, Minneapolis North Loop neighborhood has become the premier destination for business, entertainment and residential dwelling. Located within the Minneapolis Warehouse Historic District, the neighborhood's industrial charm has made it the fastest growing neighborhood in the city. Many creative and technology-focused businesses lease space in older, historic buildings around the area; but what the old buildings offer in aesthetic and feel, they lack in modern amenities and operational efficiencies. Creaky floors, drafty windows and floor plates that don't conform to today's desired workplaces reduce the appeal of old heavy timber buildings. Despite this, businesses continue to occupy spaces within given their location, character and popularity among creative and tech businesses.



Butler Square in Minneapolis, Built 1906

In 2013, Hines identified an opportunity that existed between this reality and the development of new office buildings across the country. Why not a create a structure that seamlessly blends into the historic fabric of the neighborhood that can also attract businesses on the cutting edge? T3 was born from this idea, and its forward-thinking characteristics are a product of Hines' commitment to sustainable design and its master plan for the site.

Preliminary T3 Rendering

T3 was developed on a one-acre site within the North Loop Green plot of land. The site straddles the I-94W entrance ramp and finds itself in the epicenter of the city's public transit system. Adjacent to the Cedar Lake Bike Trail, commuter lines, light rail and skyway system, the site lends itself to any number of commuter types - a key factor in workforce recruitment and retention for potential tenants.
All of these factors combined led to the genesis of T3 - a development that brings timber, technology and transit to the forefront to create a modern building that is changing the paradigm in new office development.

Site History & Planning

To understand the City of Minneapolis' position with the site used for T3, it's important to take in the full context of how this area was initially developed and learn about the recent activity that has taken place. The District's period of growth was from 1865 to 1930, as it helped Minneapolis become a major distribution and jobbing center for the northwest. In addition to industry, the area was also known for its architectural prominence, as many of the city's leading architects created vibrant Italianate-style commercial buildings in the 1860s.

As time passed and the city developed further, two major railroad giants - the Great Northern (now known as Burlington Northern Santa Fe–BNSF) and Minneapolis St. Louis Railroads (now known as Union Pacific) engaged in a legal dispute that created the current landscape of the area. The rail yards and the rail corridors of these two companies were separated by grade changes supported by a retaining wall. This additional lowering of the grade required access to the rail yards and led to the formation of Traffic Street next to the site area. This demonstrated the transformative power that railroads had on the city landscape; and how they aided in connecting the Minneapolis warehousing district to the railroads that increased the City's economic vitality.

In 2010, the Historic Preservation Commission decided to break up the Minneapolis Historic District into smaller character areas. Today;'s North

Minneapolis Warehouse District Rail Yards

Loop Green site ended up being renamed the Rail Yards Area.

This site is different from many of the other areas in the Warehouse Historic District in that there were no warehouses, manufacturing buildings or other structures. This was the only rail yard in the city that had yet to be developed. With multifamily and office buildings being developed in the North Loop, there is no evidence of the city's freight past in any of the former rail yards in the city. The Rail Yards area remained the only traditional rail yard with one active railway, the NorthStar Commuter Railway.

Given the site's significant manipulation of the grade to adjacent properties, the importance as the only undeveloped railway in Minneapolis and the City's hope to preserve this railroad history, Hines needed to ensure that its plans incorporated the City's historical objectives. All while

Minneapolis' Warehouse District

maintaining flexibility in its building and landscape designs.

In approving the site plan for Hines, the City required that any development in this Rail Yards area maintain three distinct corridors that represent the railroad activity in the area, and the connections created by the lowered grade of the site. They required that the existing BNSF rail corridor, the Third Street North View corridor and the Fourth Street North View corridor "remain open to visual access and not decked over or built over by buildings." The City also required that the lowered grade of the rail yards not be lost in the development of the site as this is an integral characteristic of the district.

Hines met all these requirements with ease.

T3 also needed to conform to the use requirements set forth by the City of Minneapolis' Plan for Sustainable Growth and the North Loop Small Area Plan with respect to future land use. Although there was no requirement for mixed-use with residential, both plans permitted uses that mixed retail, office or residential within a building or district. The plans sought to promote these types of developments near the commercial corridors and transit stations nearby. As a light rail transit hub was built near Target Field, the plans encouraged more residential and commercial density in the area to support the adjacent transit facilities.

Twin Cities Market Analysis

The office market profile for the Twin Cities market shows considerable strength in terms of both rent growth and development activity for the 195 million square feet of office space in the metropolitan area. In the last 12 months, over 2 million square feet of office space has been delivered, and 823,000 square feet has been absorbed. The high delta between the two is due to an abundance of build to suit projects that were included in the market data reported. The market has a low 7.8% vacancy rate and has demonstrated strong 4.3% rent growth over the last 12 months, which suggest that supply and demand are in balance. The market data reflects both the value that office tenants see in properties with premium amenities and the value tenants place on being located in thriving urban neighborhoods that are being embraced by millennials and empty nesters. Those underlying factors explain why Minneapolis' North Loop neighborhood has seen considerable interest from developers.

The project's submarket shows demand for office space far outpacing supply. Downtown Minneapolis boasts 43 million square feet of office space. 871,000 sf of office space was absorbed over the last year, while only 271,000 sf of space has been delivered. This imbalance supports the 7% increase in rents realized over the last year. Overall office vacancy rate in Minneapolis' downtown is 10.3%, the brunt of which is borne by older, less desirable properties.

As a result of the strong market profile of the Twin Cities office market, Hines opted to build the T3 building on a speculative basis, the first large scale office development built speculatively in the market in more than 15 years.

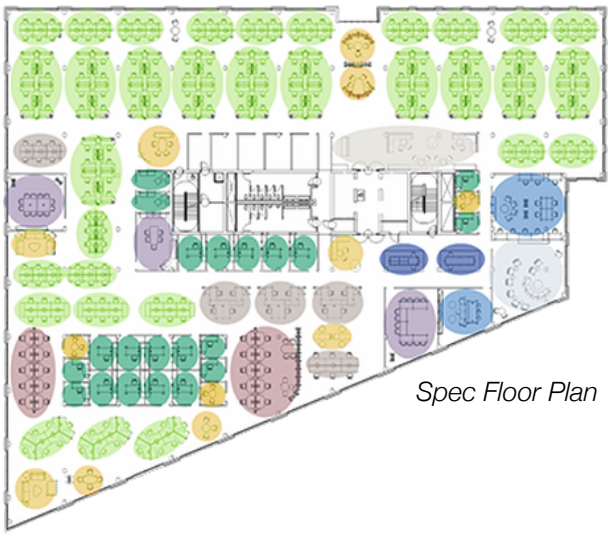
Project Financing

The Project's total cost was $31 million.

Hines partnered with the AFL-CIO Building Investment trust for construction financing. Specific financial information was not disclosed by the principals of the project. In lieu of specific financial information, standard financing assumptions were made for the project. Using a 75% loan to cost assumption, $23,250,000 of construction financing was provided. The remaining $7,750,000 of equity for the project was allocated to the developer to complete the capital stack.

		per SF
Office Rents	$ 4,631,000	$ 22.00
Retail Rents	$ 218,500	$ 19.00
	$ 4,849,500	
Recoverables	$ 2,616,651	$ 11.79
	$ 7,466,151	
RE Taxes	$ 1,171,431	$ 5.28
Recoverables	$ 1,445,220	$ 6.51
Nonrecoverables	$ 1,547,340	$ 6.97
Total	$ 4,164,000	$ 18.76
Net Operating Income	$ 3,302,000	$ 14.87
Cap Rate on Sale	3.80%	
Value	$ 87,000,000	

The developer also did not disclose any pro-forma financials relating to the project. Pro-forma that was made is based off of a sale sheet obtained from



Spec Floor Plan

a local appraiser that recorded a net operating income of $3,300,000 and a 3.8% Cap Rate. Net office rents were based off of developer's projection, verified with Co-Star information. Actual real estate taxes were obtained from Hennepin County records. Additional cost recoveries were sourced from developer's pro-forma cost projections. Non-recoverable expenses account for management fees, a capital reserve, leasing commissions and TI associated with turnover and lease-up.

An important financial component of the T3 project are the cost efficiencies to be gained stemming from the building's sustainable design. The building is being marketed as a Class A building with Class B operating expenses, creating value for the tenant, and gives T3 a competitive advantage in leasing space. The building fully leased up within 90 days of opening. The cost savings passed on to the tenant are especially favorable to smaller high-tech companies that are desired in T3's neighborhood.

	CBD Class A	CBD Class B	T3 High Density Plan	T3 Ultra High Density Plan
SF Per Employee	225	225	164	106
Net Rent Per SF	$22.00	$15.00	$22.00	$22.00
Tax and Ops Per SF	$15.50	$11.50	$11.75	$11.75
Gross Rent Per Employee	$8,438	$5,963	$5,724	$3,699
Gross Occupancy Cost Savings vs Class A			32%	56%
Gross Occupancy Cost Savings vs Class B			4%	38%

Gross Occupancy Cost Comparison

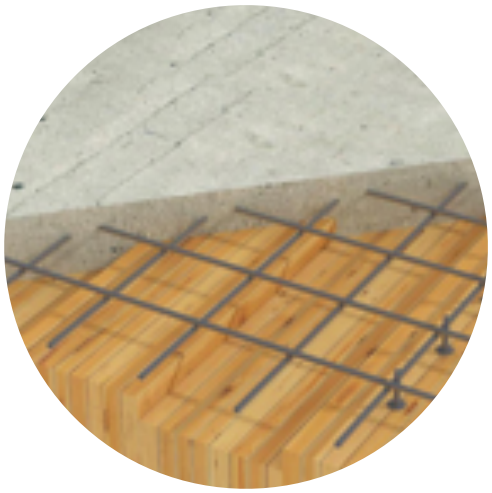
T3's open floor plates are conducive to a collaborative working environment desired by many of today's high-tech tenants. The floor plan gives the tenants flexibility to adapt to the changing office environment, which projects to have a significantly lower square foot per employee versus historical norms. Hines' exit strategy was to dispose of the asset upon lease-up. They successfully sold the property to LaSalle Investment Management in May of 2018 for $87 million, which equated to a 3.8% cap rate, a strong premium to the market comps due to securing Amazon as a primary tenant.

Engineered Timber Construction

Heavy timber projects are not a new phenomenon in commercial development. For centuries, builders used heavy timber as a fundamental component of their building projects, as seen in many historic office buildings in Minneapolis. However, as steel and concrete became staples in modern architectural design, lumber took a back seat.

Glulam Beams

Until recently, engineered mass-timber has been reintroduced by advocates like Michael Green. He and his firm have been on the leading edge of the building type, as evidenced by his TED talk on the subject in 2013. As a leading developer of sustainable projects, Hines partnered with Michael Green Architecture to bring this project to life. The proposed design incorporated the old with the new. Using an older “vintage-inspired” resource as the primary component of its structure, this modern building is demonstrating that you can modernize a classic idea by incorporating technological advances to its design.



Timber Concrete Compositie

Mass Timber is a category of framing style often using small wood members formed into large panelized, solid wood construction, including (but not limited to): cross-laminated timber (CLT) panels, nail-laminated timber (NLT) panels, and Glulam beams/columns.

Nail-Laminated Timber (NLT)

Why are mass timber projects appealing to builders? One of the primary drivers for the implementation of mass timber is the speed and efficiency of construction. By using engineered timber, Hines created a Type IV building where a concrete podium was topped by six floors of mass timber. Kraus Anderson, the General Contractor, was able to erect the structure in just about nine weeks while adhering to all building codes and best practices. According to Lucas Epp of StructureCraft, manufacturer of the mass-timber material used, the builder was able to finish a floor about every nine days while not contributing to the collateral noise that's typical from traditional steel and concrete construction. While the implementation of engineered wood is not new to builders, the scale and configuration of the panels was. The placement and setting of the structure needed to be done with precision given it's exposed nature within the space.

Another benefit of mass timber comparable to steel or post-tensioned concrete is its weight. This allows for a smaller foundation requirement as well as lower seismic loads. The use of mass timber provided Hines with a competitive advantage in the very hot Minneapolis market. The natural warmth and beauty that wood provides has been a significant differentiator for employers and leasing agents given young millennials desire for spaces that are open, warm and modern.

Innovation & Sustainable Design

One of the biggest achievements of T3 to-date has been its environmental impact. As young professionals seek out more sustainable food, vehicles and living spaces, the attractiveness of T3 is an example of how developers can create beautiful buildings that leave a small carbon footprint - yet do not compromise on lifestyle amenities that younger professionals seek.

T3 was designed to meet the needs that many employers in today's workplace face: how to attract the group on track to be the largest generation in history by 2020 - Millennials. With different preferences in where and how they want to work,

Millennials are known to value flexible, forward-thinking workplaces and tend to seek the historic loft-style buildings over traditional office spaces.

The building and landscape design for T3 was a focused response to the changing cultural landscape that many of these tech-savvy professionals want to work in today. T3's building design was meant to complement and take cues from the neighborhood and site context. It was designed to take full advantage of its proximity to transit-oriented and bicycle-first design approaches, such as the Cedar Lake Bike Trail, commuter rail, light rail, and pedestrian skyway system.

T3 was and is a sustainable building from conception. As described in the previous section, T3 used engineered wood components (mainly Glulam and nail-laminated timber) for floors, columns and beams. Hines sourced these timbers from young trees using certified sustainable forestry practices and melded them together to emulate the look of heavy, old-growth lumber. It would take 15 minutes in all the forests within the US and Canada to grow the amount of wood used to build T3. The

environmental impact of using the wood in T3 is equivalent to taking 966 cars off the road for one year. The energy and greenhouse gas emissions reduced by using this wood is equivalent to operating a household for 430 years, which illustrates the dramatic environmental effect.

T3 uses clean, energy-efficient systems and technologies to reduce the lifecycle carbon footprint of the project. The carbon that is absorbed by the trees through photosynthesis is sequestered in the wood fiber throughout its lifetime. The building envelope design features continuous insulation and high-performance glass. High-efficiency HVAC systems maintain occupant comfort and health, with reduced energy inputs, and modern lighting technology, occupancy sensors, and daylight sensors to reduce electrical loads.

Coupled with its mass timber design, T3 is also impactful for its other T: Technology. T3 is the first WiredScored pre-certified building in Minneapolis.

WiredScore's Wired Certification standard rates and recognizes buildings with best-in-class internet connectivity. T3 incorporates a cell phone booster system that ensures tenants have better talk, text, and high-speed internet. Through Wilson Electronics' patented signal boost technology, the receivers at T3 are able to take the existing cellular outside signal and amplify it up to 32X.

In many ways, T3 Minneapolis has become the prototype for Hines. The project success and learnings have impacted the design of future projects from both Hines and Michael Green Architecture.

Lease Up Period

Understanding the competitive advantage of being the first developer to leverage engineered mass-timber in a new office development, Hines took an investment risk in pursuing this project without any tenants pre-leased.

As Bob Pfefferle, Managing Director at Hines, told the Urban Land Institute, “we knew going into it that there was a good likelihood that we may not get any of it leased prior, and if we wait for it to get pre-leased we may never break ground or we lose potential to be first in.” However, gaining interests from potential tenants was not an issue once the building was quickly erected. When tenants were able to walk the space and experience the sensory differences of the exposed mass-timber building, leasing quickly took off with Jones Lang LaSalle and The C. Chase Company at the helm. Within three months of opening, the building saw an initial occupancy rate of 95%.

In a transaction that created buzz around the Twin Cities’ CRE market, JLL was able to secure Amazon as the primary tenant in the office building. Once this company leased the top three floors of the building, other tenants began to sign on shortly thereafter.

Future Impact

While T3 was by no means the first building to incorporate engineered mass-timber material, it's scale and subsequent success has developers on notice in the United States. Since the opening of T3 in 2016, Hines immediately began developing two additional sites in Atlanta and Chicago.

In Atlanta, Hines is developing a 205,000 square-foot building on a site in the city's flourishing West Midtown sub-market. The project is currently under construction with an expected completion in 2019. The design of the building is similar to T3 Minneapolis with the exception of the exterior Corten steel material (a climate-driven decision). In Chicago, Hines is co-developing T3 Goose Island which is currently in the planning phases. Hines identified the Goose Island site given its up-and-coming status as a hub for progress, innovation and transit. The 270,000 square-foot building will be the first wood-structured office building developed in Chicago since the 1800s.

West Midtown T3, Atlanta

As Hines continues to develop and grow the T3 brand presence across the country, other developers are following suit. Lotus Equity Group of New Jersey recently partnered with Michael Green Architecture to develop a half-million square feet of mass-timber constructed office space in Newark's Central Business District. The development will be the largest mass-timber office building in the United States and anchor the new Riverfront Square development.

Another long-term result of T3 extends well beyond its location in Minneapolis' North Loop. A reason that Minneapolis was an attractive location to develop a mass timber office building is the large amount of woodland in the northern half of the state. Minnesota's northern forests are concentrated with red pine, jack pine, spruce and balsam which are all considered viable materials for mass timber. The building of the T3 building started a conversation about growing mass timber production in northern Minnesota, which would give rural Minnesota communities a much-needed economic lift. The opportunity for mass timber development is currently being studied and assessed for its feasibility, with funds appropriated from the Timber Innovation Act of 2018, a component of the 2018 farm bill passed in the US Senate.

Conclusion

The long-term impact of the T3 development will not be fully realized today. While Hines created a highly-desirable building that is being enjoyed by current tenants, the future impact on office building design and development is what highlights this project's significance.

A new generation of workers (and employers) value a mix of authenticity, sustainability and modern amenities. T3 has delivered these attributes in spades. More importantly, however, is Hines' proof of concept through financial feasibility, engineering, construction, tenant acquisition and exit. While sustainable design once was (and still is) thought to be cost-prohibitive, T3 has shifted the narrative amongst developers. The prefabrication of engineered timber has sped up the construction process, saving time and dollars. The feasibility and success of this project has been proven, given Hines' future development plans for T3s across the country.

T3 Minneapolis has signified a paradigm shift in the industry, one that will be become more apparent in the months and years to come.