TopProjects
DJC | 2008

Nomination Cover Page

Submitting Company Birtcher Development & Investments City Lake Oswego

Award Category Private building from $5M-$15M

Contact Name Chris Humphries Phone (503) 675-8585

Project Name Lane Miles Standish Redevelopment Project

Location NW 19th Avenue between NW Quimby and NW Raleigh Street. Portland, Oregon

Project Cost approx. $8 million Project Size 44,296 s.f. total

Start Date September 2006 Completion Date November 2007

General Contractor JE Dunn NW Construction

Architect(s) Opsis Architecture Engineer(s) DCI Engineers, Mke & Assoociates, WRG Design, GeoDesign

Owner/Developer: AJL Enterprises\ Birtcher Development Project Manager Chris Humphries

2008 Nomination Requirements:

Payment via check by Bryce Benge.

- Completed nomination cover page.
- Category of nomination.
- Detailed written description of project, including size and scope,unique challenges faced in completion, and any details you believe make it a top project.
- Complete list, with contact information, for all contractors, architects, engineers, owners, subcontractors, project managers and suppliers involved.
- Cost of project.
- Color photo(s) of completed project (300 dpi jpg minimum)
- $75 application fee (includes two tickets to April 24 awards event)

Incomplete nominations may not be judged. Nominations become property of Daily Journal of Commerce unless otherwise specified.

Please email completed pdf nomination (1MB max) packets to Trish Sternthal at trish.sternthal@djcoregon.com, with TopProjects Nomination as subject line. Completed nominations may also be mailed or dropped off to Daily Journal of Commerce, 921 SW Washington Street, Suite 210, Portland, OR 97205. All nominations must be received by 4 pm on Thursday, Jan. 31, 2008.

IMPORTANT DATES

Nomination close . . . . . Jan. 31, 2008
Finalists Announced . . . . . Feb. 8, 2008
Ad/Material close . . . . March 21, 2008
Publication . . . . . April 24, 2008
Event . . . . . April 24, 2008

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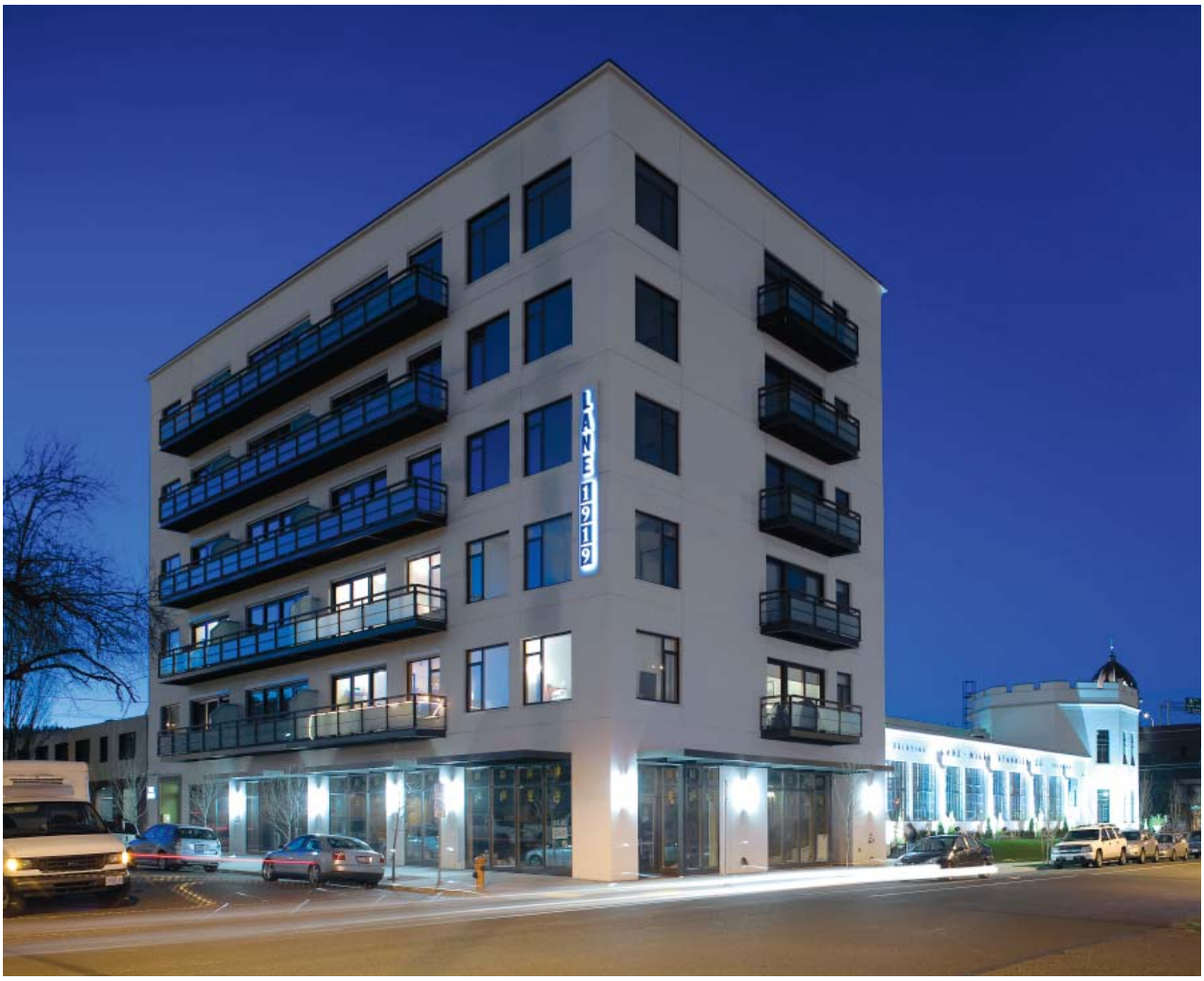
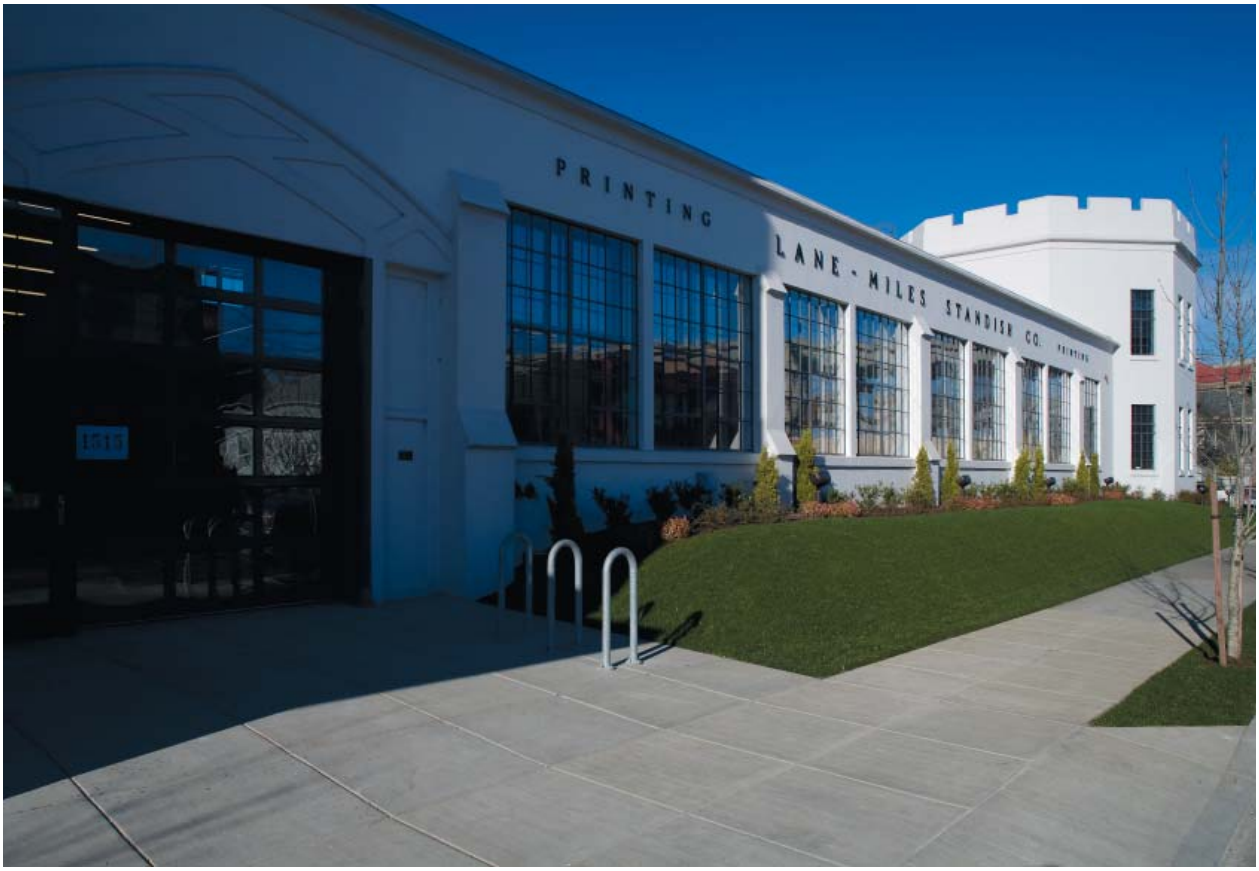
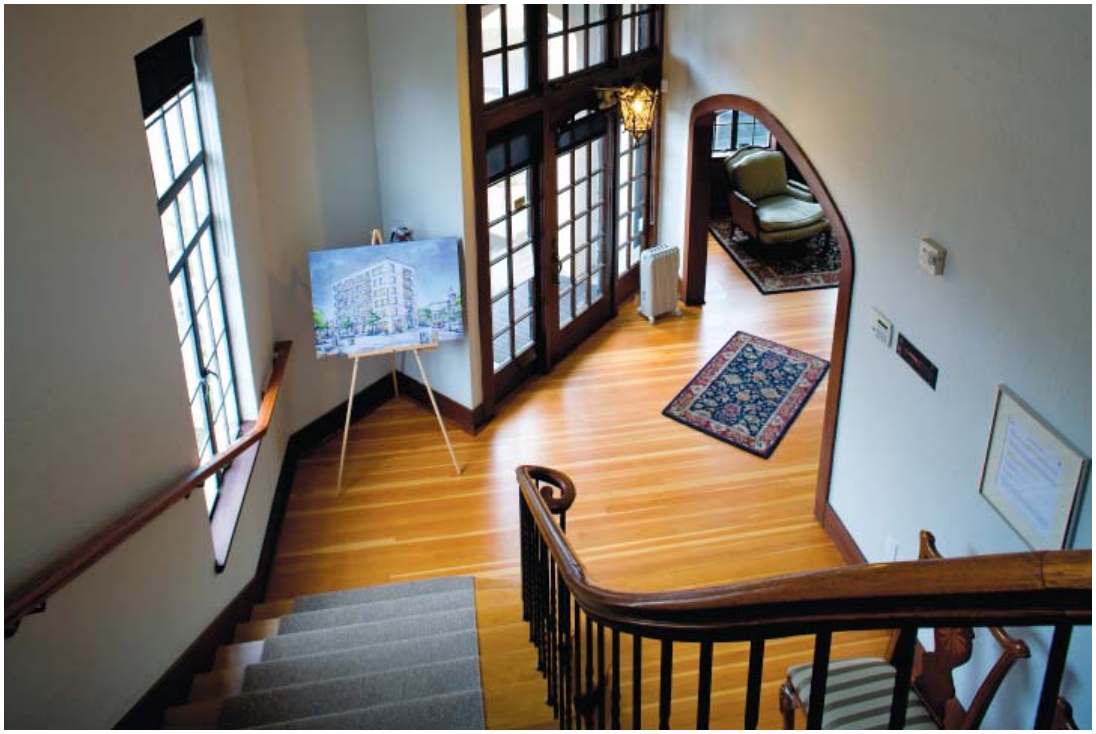
Lane Miles Standish Redevelopment Project

“Green, just because it makes cents…”



Project	**Lane Miles Standish Redevelopment** 1929 Print House Redevelopment Lane 1919 Mixed Use Tower	**Category**	Private Building from $5M - $15M
		Project Cost	Approximately $8M
		Building Sizes	**1929 Print House Redevelopment** 14,296 SF Office **Lane 1919 Mixed Use Tower** 25,000 SF Luxury Apartments 5,000 SF Retail


PRINTING
LANE - MILES STANDISH CO.



General Description

The historic Lane Miles Standish print house in Northwest Portland was transformed from what was considered innovative construction and design in 1929 to a one of a kind mixed use redevelopment/new construction project. The historic print house with it's distinctive turret was renovated into office space and was placed upon the historic national register (see historic building description for more info). A block warehouse built in the 1970's was recycled to make room for a new mixed used luxury apartment/retail tower. Twenty luxury condo grade apartments on five floors were designed with 5,000 square feet of retail at the ground level.

Project goals that focused on quality, life-cycle costs, and the creation of value for the next 80 years drove the Lane family, Birtcher Development and rest of the project team to create a mixed used project that kept the historic significance while combining modern innovative design and construction.

The combination of a historic redevelopment (1929 Print House Redevelopment), new multi-story construction (Lane 1919 Mixed Use Tower), small lot size (5,000 SF), and innovative construction techniques (ICF multi-story construction) made the Lane Miles Standish Development Project one of the most unique and innovative projects of 2007.

Unique Challenges and Achievement Overview

A. Combining a historic renovation with a new construction multi-story tower.

B. Create a viable income producing property that will last for at least the next 80 years.

C. Design and integrate all building systems between old and new construction while balancing energy efficiency and long life cycle equipment and materials.

D. Insulated Concrete Form (ICF) walls used on Lane 1919 tower to create a long lasting high performance shell. ICF construction techniques are new to many contractors, developers, and designers in the NW area. This new construction technique brought design and on site construction challenges that were overcome to successfully complete the Lane 1919 tower.

E. High efficiency mechanical systems, including boilers and fan coil units were shared between the historic Lane 1929 building and the Lane 1919 tower. This sharing of mechanical systems created design and engineering challenges while giving the project the highest energy efficiency and longevity.

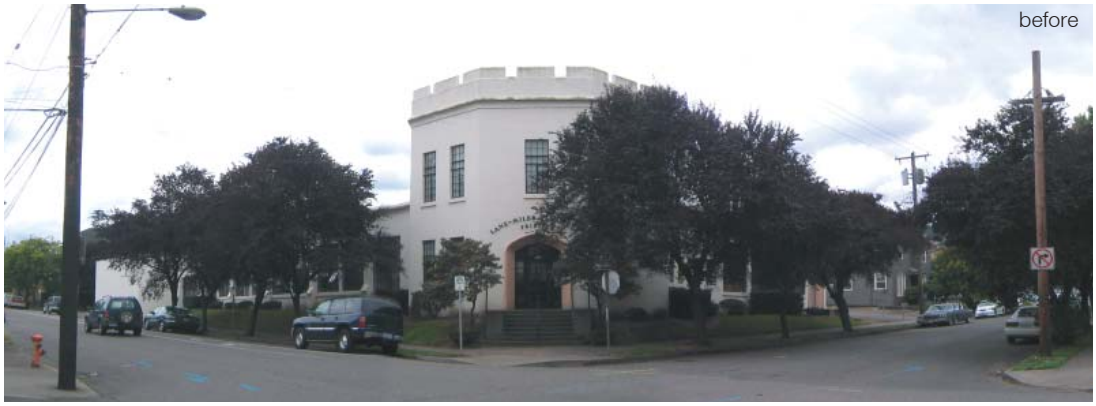
F. New construction techniques (ICF), integrated building systems, and an historic renovation all created unique challenges that were successfully overcome by the project team to deliver a new income producing property and new iconic buildings for the NW neighborhood.

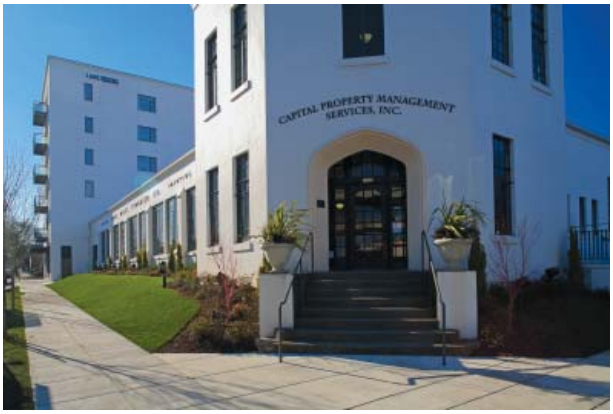
Detailed Project Description

Lane Miles Standish History…
The Lane Miles Standish print house was custom built in 1929 by the Austin Company. The building represents the only historic example of work in Portland by the Austin Company which pioneered the concept of combining design, engineering and construction into a single process in the 1920's. The building is also one of the first purpose-built printing production facilities in the northwest and the only known Gothic-Revival style industrial structure in the city. The print house building was announced in the Oregonian newspaper on February 24th, 1929 that the printing plant is "the most modern of its kind". The design of the building was an amalgam of an Austin "Standard Daylight Building" and unique Gothic Revival elements at the request of Alan Lane. The design boasted technological innovations such as a concrete slab for reduced vibration and flexible equipment and production layout options and large windows for abundant natural light. In order to satisfy the Owner's requirement for "physical sturdiness", the facility was built to last with poured in place concrete walls and heavy timber roof construction. According to the national register nomination, "The 1929 Lane-Miles Standish Printing Plant is the first full expression of an industrial design that would be replicated into the 1940's into the present".

Lane Family and Birtcher Development and Investments Create Partnership…
When the Lane family's third generation contemplated the future of the property they turned to Birtcher Development to help them determine the best plan to revitalize this historic property into an income producing investment that was positioned to last at least another 80 years…

While state of the art when constructed, the print house building was not particularly energy efficient. The large windows were distinctive and produced incredible light but the windows also served as a heat sink in the building causing intense swings in temperature throughout the day. The walls and ceiling were not insulated and the heating system was originally fed by coal fuel and even recently only boasted a 70% steam boiler with radiator heat. It featured an unimproved gravel parking lot and a block warehouse addition from 1970's at the South end of the building that was used to inventory the printing goods. Further, the structure had not been updated to current earthquake resistant standards and the infrastructure did not meet today's office tenant expectation with outdated phone service and no fire alarm or sprinkler systems. The print house building was poised to become "state of the art" once again…



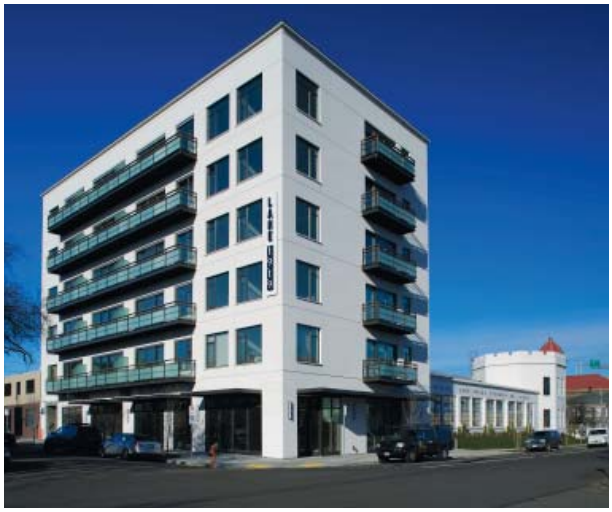


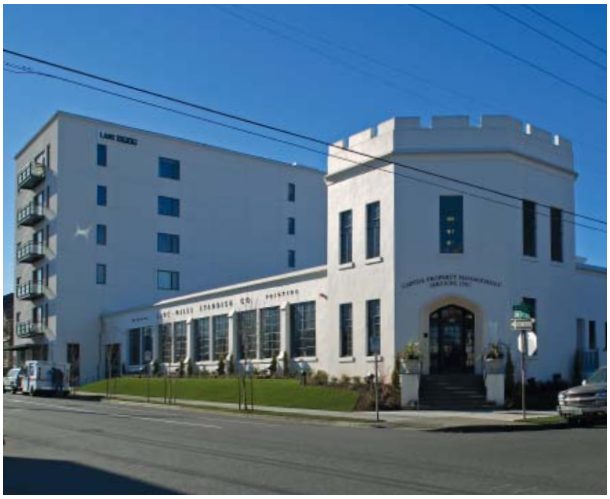
Lane Miles Standish Development
Innovations and Challenges…

The project didn't start out as a "green" or "LEED" project. The project criteria carefully weighed the investment performance of the project and the goal of using quality, long term solutions for each design challenge. What we discovered in this process was that all of the long term solutions were also the "greenest" solutions available. Generally speaking, the most efficient products are built to last and since the Lane family was in this for the long term, they would be around to realize the savings or premiums associated with each decision.

Adjacent to the original concrete print house was a cinder block warehouse built in the 70's that was demolished and recycled. In its place, a six story mixed use tower would be constructed with luxury apartments and new retail space below. The mixed-use tower is built from highly-efficient, insulated concrete form (ICF) walls that provide significant thermal mass in the 6" to 10" thick concrete walls and the equivalent of a R50 performance due to the 2" of foam on each side of the walls. Not only is the building skin and structure super efficient, it can also claim the title of the tallest ICF building west of the Mississippi.

The "green" elements used in this renovation and new construction were selected because they were good for the development in terms of performance, life cycle costs and marketing of the project, not just better for the environment. Birtcher Development prides itself on using smart development in all phases of every project. Birtcher has implemented "green" means, methods, and materials because they make sense (and cents) to Lane Miles Standish Development Project.





1. Single, dual-zone, high efficiency natural gas condensing boiler provides heat for both the print house and the mixed-use tower.

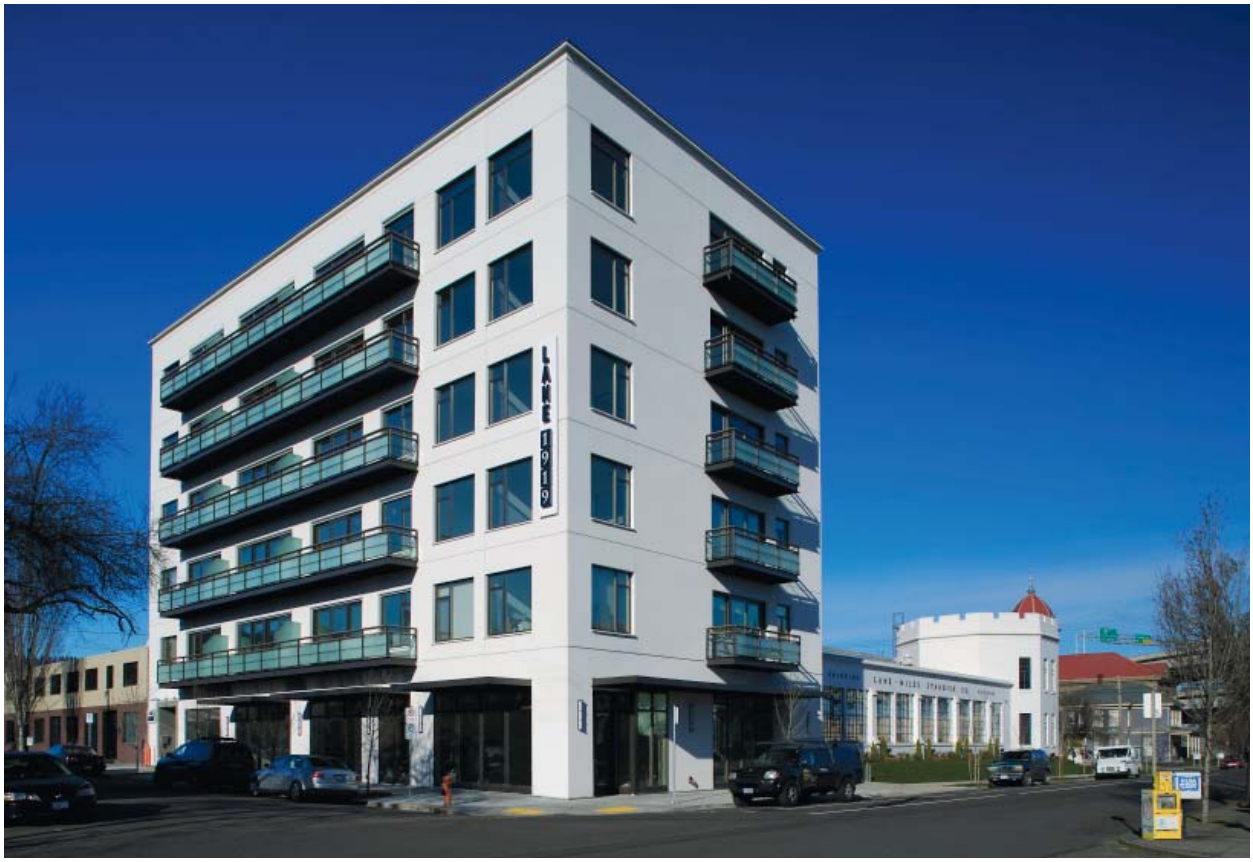
   The original print house building and warehouse was heated with a less than 70% efficient natural gas boiler. This heating system was replaced with a gas-fired 94% efficient boiler for heat. The boiler was designed to utilize 140 degree water so that it will run predominately in condensing mode (more efficient). All secondary pump motors were designed with the highest efficiency ratings. This boiler was designed and installed to provide heat to both the print house redevelopment and the new apartment tower. This single point heating system significantly lowers the heating costs for the projects while also providing a more comfortable temperature due to the hydronic, forced air delivery method.

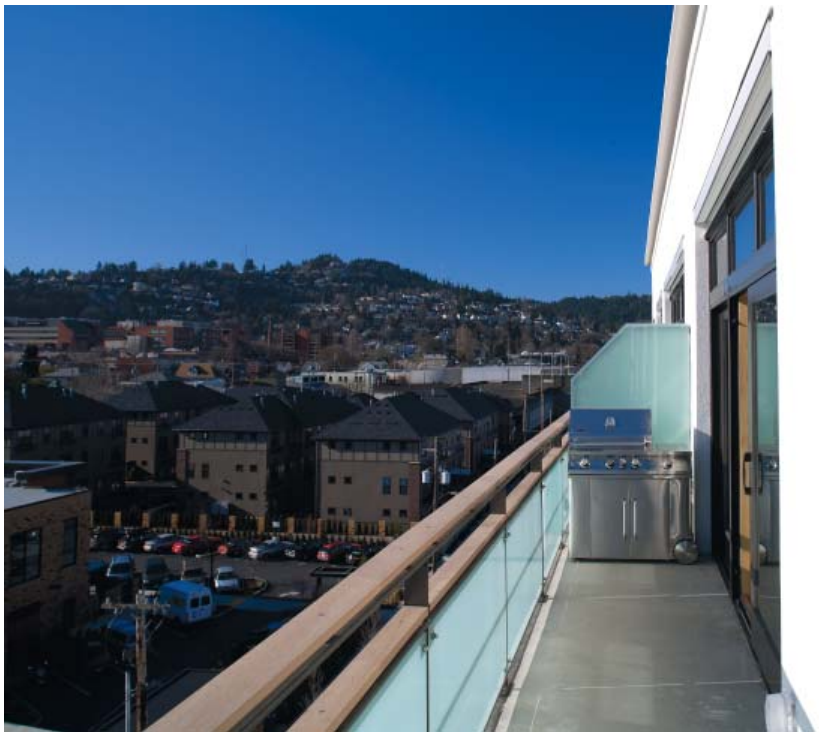
2. High efficiency fan coil units provide cooling and air circulation to the print house and mixed use tower.

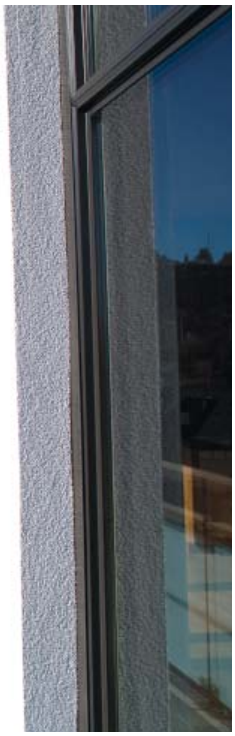
   Inside the print house and mixed use tower, the 13 SEER (Seasonal Energy Efficiency Ratings) fan coils with 100% outside air economizers provide high efficiency air circulation and ventilation. Roof top air cooled condenser/compressors all rated 13 SEER or higher provide the cooling for this space. Energy codes require that these spaces utilize 11 SEER cooling. These higher efficiency units use the highest quality parts and engineering ensuring their viability for decades to come. The less costly energy bills are just an added benefit.

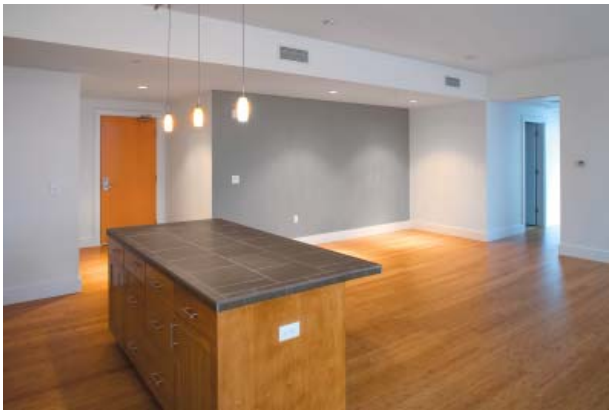
3. The print house turret utilizes a separate high efficiency heat pump system HVAC system.

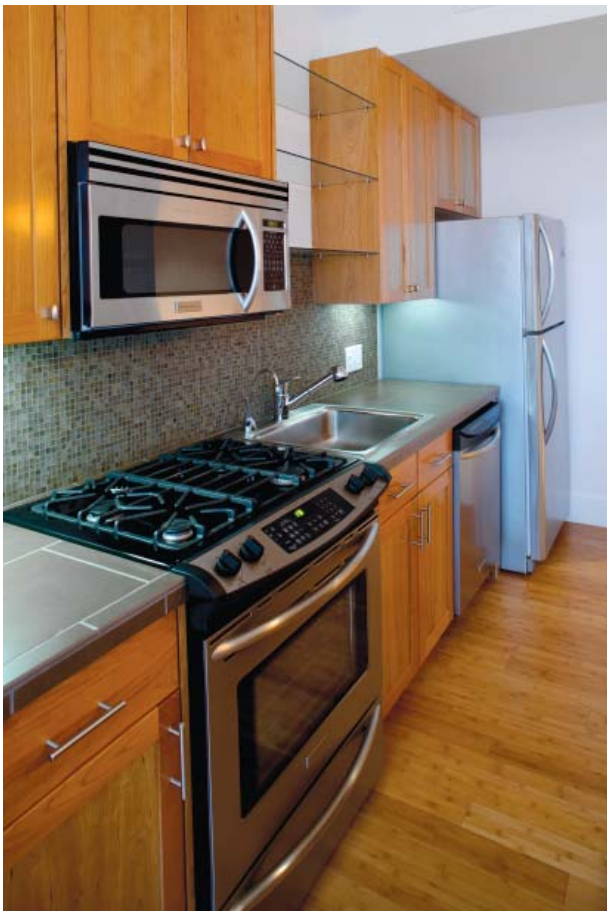
   The original two story office in the turret portion of the print house was a historic renovation and did not include room for ductwork distribution. This portion of the project was renovated with a separate heat pump system to control it's heating and cooling. The Mitsubishi "City Multi" system chosen has the equivalent of an 18 SEER rating making the turret office space some of the most desirable in the whole development. The individual fan coil units deliver both heat and cooling as necessary.


LANE 1919









4. A digital building controls system was installed to coordinate and create maximum efficiencies between the separate print house and mixed use tower HVAC systems.

   A Siemens Building Controls system was installed so that all of the different heating and cooling systems could work together maximizing their efficiency and creating a 57% natural gas savings. The office, retail and apartment components are all separately metered to provide property management with the information necessary to adjust the system for maximum performance and efficiency.

5. High efficiency hot water heaters.

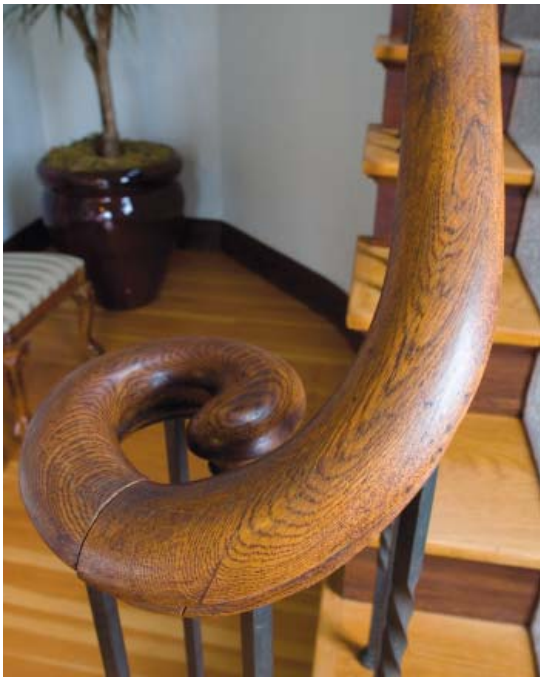
   In the apartment tower, to central, high efficiency gas hot water heaters were installed to provide domestic hot water to the apartments. These water heaters have a +90% efficiency rating.

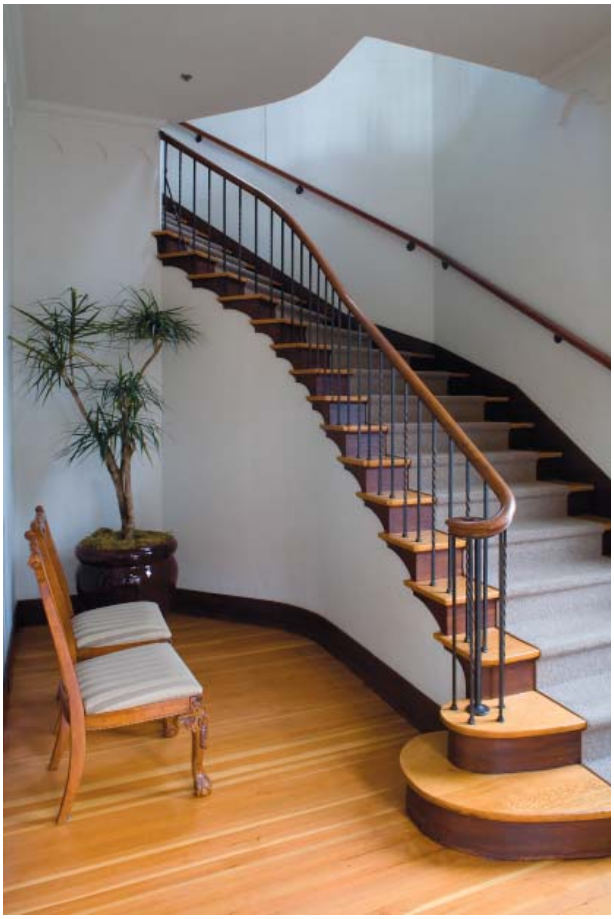
6. Low flow toilets and fixtures create a greater than 20% water savings.

   Dual flush toilets and low flow fixtures were specified for all of the apartments creating greater than 20% water savings for the project. Since the landlord will be responsible for the cost of water use in the project, the savings realized from these fixtures allowed the project to justify the extra cost for the fixtures.

7. Refurbished high efficiency lighting use in the print house.

   The print house office area lighting was refurbished for their historical significance and retrofitted with high efficiency ballasts and fluorescent lamps.





8. **Insulated concrete formed wall created one of the highest efficiency building envelopes available.**

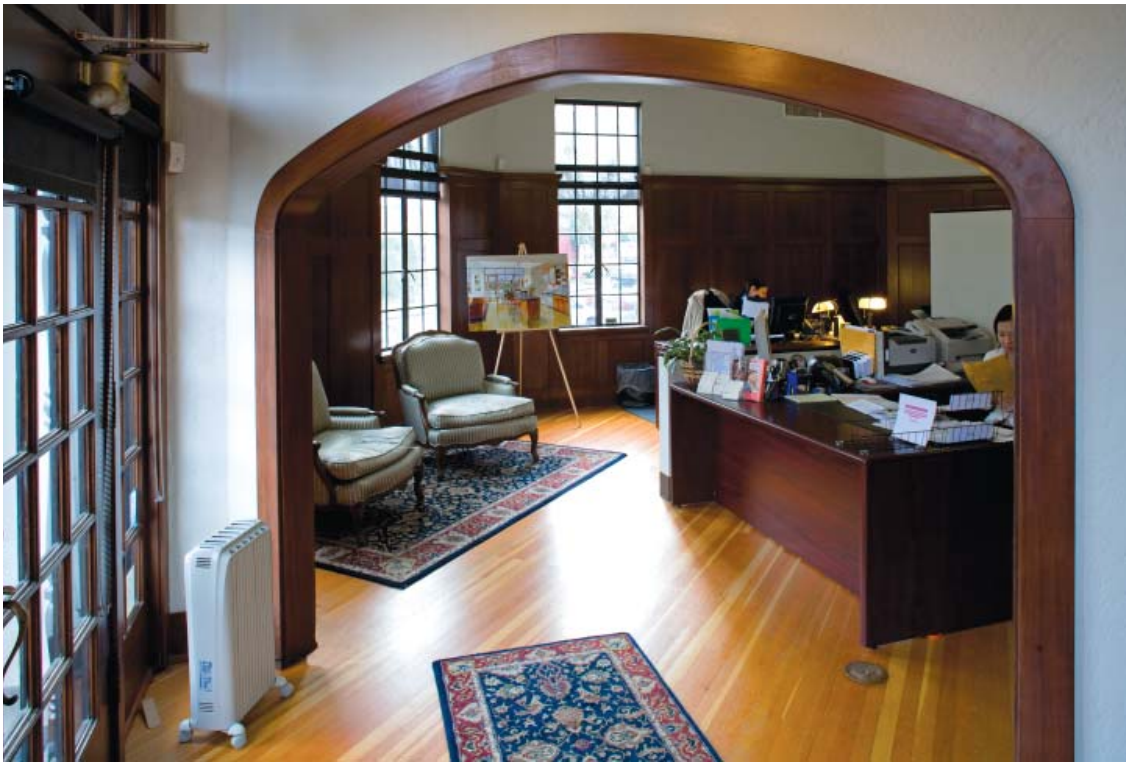
   The Lane 1919 mixed use apartment tower project incorporated one of the highest efficiency building practices in use today. The six story tower was building out of insulated concrete forms or ICF. Rigid insulation is used to form cast in place concrete walls. This wall system creates a natural R value of at least 29 (the manufacturer lists the performance as high as R50). The R29 insulation rating on the walls is almost double the code required R value. This innovative construction technique allowed us to not only get a high efficiency product, but a concrete building that will stand the test of time. At this current time we understand that the Lane 1919 building is the tallest ICF building in the west of the Mississippi.

9. **High insulation value roof materials create and complete the mixed use tower building envelope.**

   Roof insulation assemblies for the tower were raised to an R-32 value. This extra insulation creates a complete building envelope with at least an R-29 value. That is something that very few other buildings can say. The formerly un-insulated print house was given a rigid insulation roof assembly that was not required by code but provided significant energy savings for the redevelopment of the office space. Also, the TPO roofing material is a long lasting, reflective material that reduces the heat “halo” of the project.

10. **Original concrete print house walls were furred and insulated to create a high efficiency office space.**

    The North and East walls of the print house were furred-out and insulated to provide a more comfortable and finished interior and to house the new storm window system.



11. High efficiency glazing completes high performance Lane 1919 building shell.

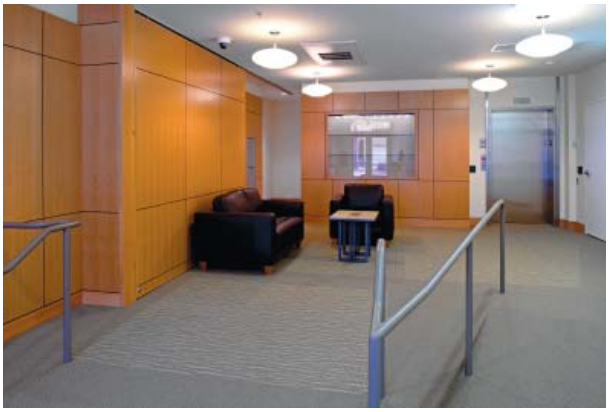
    The mixed use tower project selected insulated glazing with a U-value of .32 and a shading coefficient of .39 exceeding the code requirement of a .54 U-value and a .57 shading coefficient. The large window openings for the apartments demanded a quality window that would help create an energy efficient living space and last with the life of the building.

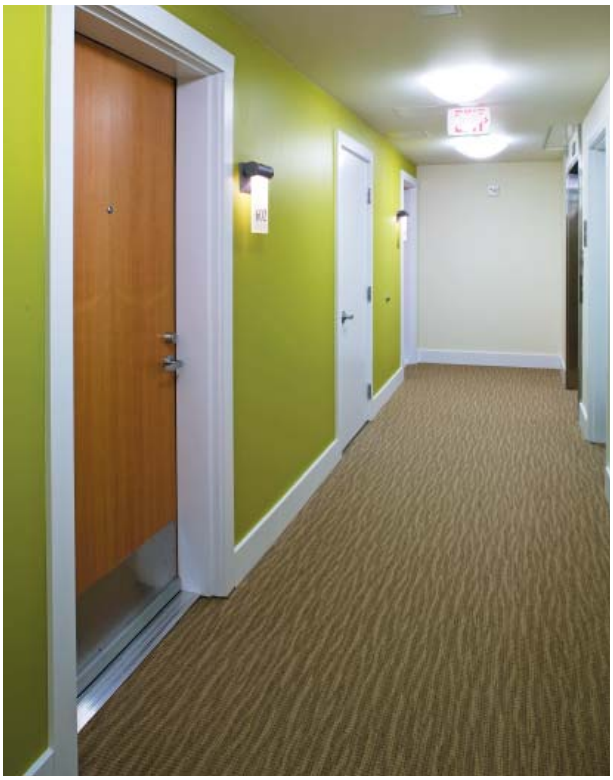
12. Woven sun shades on the mixed use tower windows help reduce solar gain and loss which creates energy efficient spaces.

    The towers large view windows have woven fabric operable solar shades. These exterior shades raise and lower as the sun heats and cools the different sides of the building. The solar gain is reduced dramatically through these openings when the shades are in use. This strategy combined with the thermal mass of the building envelope as the effect of limiting rapid changes in temperature which will reduce energy costs, increase comfort and reduce wear on the building envelope due to rapid expansion and contraction.

13. Low-E glass storm windows were installed over the existing single pane glass openings of the print house to create an energy efficient building envelope.

    The print house's north and east walls are dominated with huge glass openings consisting of steel frames segmented with single pane glass. These frames were resealed and painted to ensure the look and preserve the historic nature of the building. A set of low-e glass storm windows was installed on the interior of these glass openings to achieve a higher efficiency system.





14. **Historic print house materials, fixtures, and components were re-used or refurbished to ensure the vitality and nature of the original design.**

    Light fixtures in the print house were refurbished with high efficiency ballasts and lamps. Wood paneling, existing wood stairs, railings, heave timber support beams, and the two by roof structure were all refurbished and re-used.

15. **Recycled content materials were specified and used throughout the mixed use tower and print house projects.**

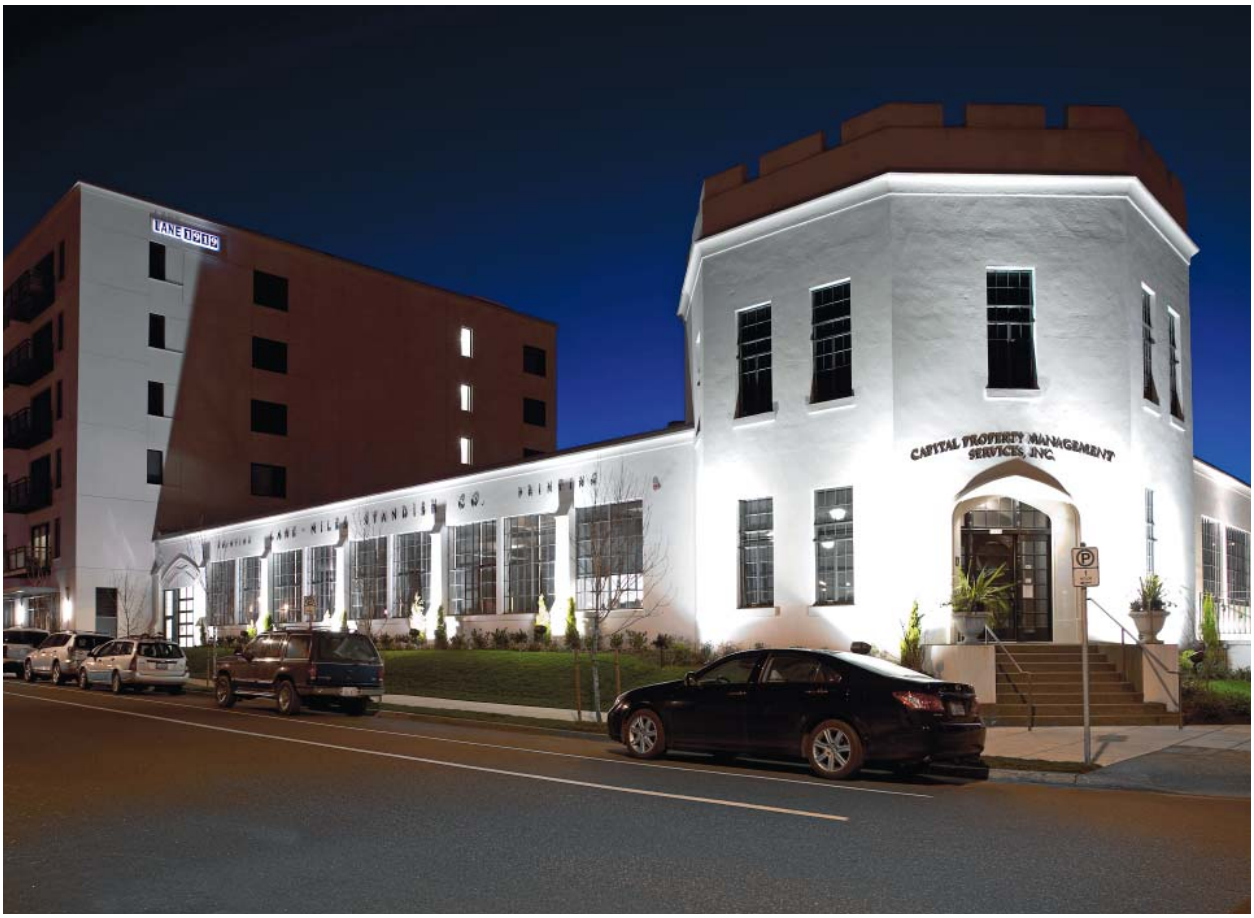
    The mixed use tower utilized recycled steel in all of the interior walls, floor decking, exterior decks, stair ways, etc. The concrete used in the flooring and ICF walls includes recycled materials. The gypsum board interior walls all were manufacture with recycled content materials.

16. **Highly renewable products like bamboo floors were used to create apartments in the mixed use tower that had the aesthetic we were looking for but still had a low impact on the environment.**

17. **All mechanical, electrical, and plumbing system underwent rigorous commissioning, testing, and balancing to ensure that they are running at optimum efficiency and will last for the life of the building.**

The listed items were all major building system decisions that were compared and contrasted to traditional commercial systems and products. This sampling of the green elements of this project were complemented by simpler but no less important green building practices of, a reused project site, access to public transportation, sub metering of all tenants, and recycled construction debris.

All of these means, methods and materials have contributed to the overall environmentally sensitivity of the Lane Miles Standish Development project. Birtcher Development brings this smart development mentality to all of its projects whether it is certified “green” or “Green, just because it makes cents…”



all photos © Gregg Galbraith

The Lane-Miles Standish Printing Plant is located at 1539 NW 19th Avenue. Specifically, it is located on Lots 1-3 and 6 of Block 263 in Couch's Addition to the City of Portland. The 1929 building was designed by the Austin Company as a printing plant for the Lane-Miles Standish Company.

The resource is eligible for listing in the National Register under Criterion "C" for architecture. Specifically, the Lane-Miles Standish Building is the only documented historic example of work in Portland by the Austin Company, which pioneered the concept of combining design, engineering, and construction into a single process in the 1910s. The building is also the only known Gothic-Revival style industrial structure in the city.

The building is listed in the City of Portland's Inventory of Historic Resources and was determined eligible for listing on the National Register by the State Historic Preservation Office and the National Park Service.

The Lane-Miles Standish Building is the only historic example of work in Portland by the Austin Company, which pioneered the concept of combining design, engineering and construction into a single process in the 1910s.

The building is the design of the Cleveland-based Austin Company. The Austin Company was a worldwide leader in the design and development of industrial and other buildings, and pioneered the concept of combining design, engineering, and construction into a single process. This concept ultimately expressed itself as "design-build". The Lane-Miles Standish Building is thought to be the only vintage example of the firm's work in Oregon.[1]

The Austin Company's roots date to the 1870s. Samuel Austin, a 21-year old English carpenter settled in Cleveland in 1872 and began working with a residential contractor. By the end of the decade, Austin established his own business. In 1889, he won a contract to construct a building for the Broadway Savings Bank. Among the bank's clientele were industrial executives who saw the quality of Samuel's work and who soon called him to undertake factory projects. These projects took Austin beyond the city and led to larger commissions. By way of example, in 1895, Samuel received a contract for Cleveland's first electric lamp factory, followed by a succession of contracts from the National Electric Lamp Association, predecessor to General

[1] Ferriday, Virginia Guest, et. al, Historic Resources Inventory of Portland (Portland, OR: City of Portland, 1984); www.theaustin.com.

Electric.[2]

In 1911, Austin's son, Wilbert, an engineering graduate of Case School of Applied Sciences (now part of Case Western Reserve University), conceived of the then heretical idea of combining design, engineering and construction in one firm to offer a complete facility service. He further extended this concept to developing standardized buildings. In part, this concept relied heavily on Henry Ford's notions of interchangeable parts and assembly production in the automobile industry, which elicited cost savings by standardization and speed. This concept broadened the traditional approach to construction by offering essentially "turn-key" contracts that started with architecture and engineering and ended with the finished building. The company codified the approach into "The Austin Method" published by the company in 1913. Within three years, it also launched a national advertising campaign, using popular outlets as *The Literary Digest* and *Saturday Evening Post*, rather than professional journals.

In a very real sense, "The Austin Method" paralleled in commercial and industrial buildings the techniques of mail-order prefabricated housing that grew to prominence at the same time. That concept was developed first by the Aladdin Company of Bay City, Michigan in 1908, followed by Sears Roebuck & Company in 1911. By the 1920s, Sears came to dominate this housing market, in large part because Sears offered clients the convenience of buying not only the house but all of the furnishings and because Sears offered financing. By 1930, Sears offered over 100 housing styles and the company was the premier catalog retailer of prefabricated houses. The company reportedly sold over 100,000 houses through mail orders between 1908 and 1940, though ended the practice just prior to World War II.

What is particularly noteworthy of "the Austin Method," however, is that the effort for standardization and rapid construction did not inherently compromise architectural design or identity. The firm did have ten standard buildings and it anticipated modular construction. Yet, Austin could also produce designs that were wholly, partially, or even slightly unique.

This design build/standard building concept opened the door for rapid growth for the company, particularly in industrial buildings. With a short period of time, the firm had contracts for manufacturing plants and other buildings in New England, Canada, Chicago, St. Louis, and on

[2] The Austin Company history is based on Martin Grief, The New Industrial Landscape: The Story of the Austin Company (Clinton, NJ: The Main Street Press, 1978); Richard Cartwright Austin, Building Utopia: Erecting Russia's First Modern City, 1930 (Kent, OH: Kent State University Press, 2004); and the Austin Company's website, www.theaustin.com.

the Pacific Coast. To feed that growth, the firm also established regional offices in Michigan, Pennsylvania and Connecticut. No fewer than eleven major construction companies copied the notion of standardized buildings with their own designs.

Demand for rapid construction in World War I accelerated growth and moved the company worldwide. The firm's sales volume grew by 35% with projects such as the Franklin Arsenal in Philadelphia. In 1918, Austin designed and constructed what was then the world's largest aircraft manufacturing facility for Curtiss Aeroplane and Motor Company in Buffalo, New York. At the same time, Austin provided 170 railroad freight cars of 13 pre-fabricated buildings for shipment to Newport News and then to France for the Army. Demand for rapid construction following the war further accelerated growth in Europe and in 1918 Austin established its first fully staffed overseas office in Paris for work on the European Continent.

The national building boom in the 1920s then continued Austin's growth both nationally and internationally. Examples of their diverse work in the era include Max Sennett Film Studios in Hollywood, California; Johnson Motor Co. manufacturing plant in Waukegan, Illinois; and the West Coast plant of Link-Belt Co. in San Francisco, California. Other non-industrial projects included the Cheasty's Department Store in Seattle, Washington; Mildred Apartments in Beaumont, Texas, a Spanish Revival-style private residence in Coral Gables, Florida and most of the buildings for Philadelphia's Sesquicentennial. In 1927, the company constructed what was then the world's largest building for the Oakland Motor Car Company in Pontiac, Michigan. This project extended Austin's reputation to the Soviet Union, where in 1930, Austin was awarded a contract to design and construct a $60 million integrated automobile manufacturing complex and workers' city at Gorki. This project included an assembly plant capable of producing 150,000 cars a year and an infrastructure for a workers' city with a population of 50,000. Using peasant labor under Austin's supervision, the project was completed by December 31, just 18 months after groundbreaking.[3]

In 1929, the Lane-Miles Standish Printing Company turned to the Austin Company for a new printing plant. Lane-Miles Standish was a joint enterprise of Alan Lane and Miles Standish. Alan Lane was born in Washington, D.C. in 1883 and at the age of 26, in 1909, moved to Portland and began working as a sales representative for the Glass & Prudhomme Printing Company.[4] Standish had been born in Oak Park, Illinois in 1887 and arrived in Portland in 1913,

[3] Ibid.
[4] Lane, Alan Jr., *A Brief History of the Lane-Miles Standish Company* (unpublished, 1990).

first working as a sales clerk at Meier & Frank. Lane arranged for Glass & Prudhomme to hire Standish as a sales representative.[5] In 1919, the pair left Glass & Prudhomme and established a new printing enterprise, located at SW 309 Oak Street, the present site of the US Bancorp's Plaza. They purchased used equipment and pirated some of Glass & Prudhomme's major accounts. (One of the larger ones was that of the Spokane, Seattle & Portland Railway, an account that the firm retained until 1978, when the rail company merged with Great Northern and Northern Pacific. During their first decade, the company grew and reasonably prospered.[6]

By 1929, the pair decided to move to a new plant in northwest Portland. On February 24th of that year, the Oregonian carried an article announcing that the printing plant, "the most modern of its kind", would be built for $25,000. The design of the new building was an amalgam of an Austin "Standard Daylight Building" and unique Gothic Revival elements. The standard building featured a steel-sash monitor with concrete floor and walls with steel sash windows. The most dramatic Gothic elements are the castellated octagonal two-story tower at the northeast. This item was specific to the Lane-Miles Standish building, added at the request of David Lane. It is patterned after an armory in Washington, D.C. where Lane grew up. Other notable Gothic Revival exterior elements include the buttresses along the east façade and door surrounds at the northeast, east and north. On the interior, the space was divided into two functional areas: the standard building housed the printing operations while the octagon tower housed the administrative activities. Highlighting the administrative area is wood trim, wood paneling, scalloped plaster crown, and arched door openings. The entrance foyer is also treated elegantly with varnished wood trim, scalloped plaster crown molding, and decorative iron accents in the central hanging light fixture and the balusters. These treatments make the offices attractive and memorable, yet not opulent or ostentatious. The printing space is open and located on a single floor, allowing flexibility in the arrangement of machinery and production processes, both current and future. The floor is concrete, minimizing vibration in an industry where the registration of colors in repeated printings is critical. And the space offers considerable natural light though oversized east and north windows and a nearly full length monitor window. At the south is a loading dock for delivery of both materials, paper supplies and finished product. Doorways at both levels of the tower allow easy access by both administrative and management, and a balcony off the second floor executive offices provides management with an excellent point of observation. Ghosting indicates a stair that connected this balcony with the printing

[5] Ibid.
[6] Ibid.; Polk's Portland, Oregon City Directory. (Portland, OR: Polks, 1919).

floor, which further connected management with production.[7]

The Lane-Miles Standish Printing plant was constructed at a time when the printing industry made enormous strides in the first half of the twentieth century. The offset press for paper printing came into use about 1908 and steadily made its way into the 650 printing companies that nationwide comprised the printing industry. The offset continued the tradition of printing from raised images. Ink rollers travel over the image and the inked image is then transferred onto the paper. The press operated faster and produced a higher quality. Letterpress shops had huge cylinder presses and could produce fine quality work in black and white and full color. Type was set from machines that cast a complete line in one piece. Large tables were used to assemble the lines of cast type along with illustrations and the resulting pages were locked into a chase that were then positioned on the press for printing. The presses were slow compared to modern day printing. Twenty-five hundred impressions per hour was an accepted standard. If color was added the sheets had to be printed an additional time for each additional color.

Turn-of-the-century graphic processes focused on photogravure and photo-engraving, which allowed the image to be directly transferred from the original drawing to the printing surface photographically. These processes, however, transferred only the outline, not the color. At the same time zinc plates replaced cumbersome lithography stones and further accelerated the printing process.

Technological advances continued into the 1930s, with the photographic process, transference of film images for printing and in the printing machinery. The invention of the trichromic halftone allowed color reproduction by using film which was sensitive to color and a series of filters for the camera lens which filtered out all but either the red, yellow, or blue section of the spectrum. The result was a wide color palette with the colors appearing bright and true to the original. Color printing became more common while the physical labor of printing grew less. By the start of the 1930s, there were approximately 1,000 printing companies; by the end of the decade, the number doubled.

Nationally, World War II accelerated this growth, with the need for military graphics -- maps, charts, manuals, instruction books, and technical data sheets. These demand encouraged the installation of new technologies -- web-fed offset presses, four-color presses, specialty presses and plate making equipment. However, much of this growth occurred on the major metropolitan

[7] Lane, Alan Jr., *A Brief History of the Lane-Miles Standish Company*; Oregonian, February 29, 1929, p. 2-2.

areas of the northeast, Midwest and southern California. For Portland, the war meant rationing (including paper) and a repressed market.

Following the war, the industry took on sensational growth. The number of printers doubled while sales volume grew seven-fold to nearly a billion dollars. In New York City alone, capital investment jumped by $20 million with a resulting sales growth of $250 million. Eighty percent nationally of these plants fit into Lane-Miles Standish's niche of volume producer to color and all types of material.

The printing process in the postwar world varied slightly: The process began with print designers creating camera-ready work. Often, this work was done by graphic artists, but typically printers maintained some capacity, often by business associations. The camera ready art arrived in the camera room where technicians produced the image in real size onto film, plate or paper. The negative was then fixed, washed, and dried, and then preceded to the art department, where touch ups or hand artwork was done. The negatives were then assembled and were made ready for plate making. In transferring the image for printing, in the 1940s, a photocomposing machine was commonly used. It was a small vacuum frame, which could be set over a plate. The plate could then be run through the lithographic proof press to make sure the image appeared as expected before a big run was made. Finally, the plate was strapped onto the press for printing. Printing depended upon the well-known principle that water and oil do not mix. Through a chemical process the image on the plate was rendered oily or greasy ink receptive. Similarly the non-image area was rendered water receptive. When the plate is strapped on the press, two sets of rollers pass over the plate. One set of rollers carries the greasy ink and the other set of rollers carries water. The water prevents ink from depositing on the non-image area and the ink prevents water from depositing on the image area. The image is then transferred to paper from this surface. A complicated roller system carries ink and water to the plate cylinder, completing the roller unit, while the rest of the press carries the paper to the blanket and from these to the delivery pile. Several roller units may be placed between feeder and delivery, making the multi-color offset press.

The specific attributes of the Lane-Miles Standish building for the industry was described, but focus on physical sturdiness, a flexible floor plan and extensive access to natural light should be stressed. Research in the Oregon State Historic Preservation inventories identified only two other buildings in the state built as a printing company. The first is the Metropolitan Printing Company Graphic Arts Building, located at 110-118 NW 9th Avenue in Portland. Built in 1921, it is a 3-story reinforced concrete structure of commercial design. It has since been adapted for

office use with ground floor retail space. The second is the Sweeney, Straub & Dimm Printing Plant, designed by Pietro Belluschi in 1949. It has since been adapted for retail space.

Other printing-related buildings such as the 1911 Healy Building (731 SW Morrison Street) were used for printing but reflective of an earlier period when printing occupied generic commercial space, often upper floors. Similarly, the James Kerns and Abbot printing company located in a former laundry building at 338 NW 9th Avenue in 1917 and remained there through the 1950s.

These resources spanning from the 1911 Healy Building to the 1946 Sweeney Straub & Dimm building illustrate the transition and growing professionalism of the printing industry, and illustrate the rise of industry-specific buildings for printing. They also provide a context for appreciating where the Lane-Miles Standish Building fits as a building type. Prior to World War I, generic space centrally located sufficed; the upper floor of the non-reinforced masonry Healy Building being typical. After the war, technology required reinforced concrete construction, efficiency prompted single floor operations, competitiveness demanded natural light and the automobile allowed remote locations. The 3-story reinforced concrete 1921 Graphic Arts Building responded to the structural demands, but not the access to natural light nor the location of operations on a single floor.

The 1929 Lane-Miles Standish Printing Plant is the first full expression of an industrial design that would be replicated into the 1940s and to the present.

In the ensuing years, Austin's standard building approach would continue to grow and the company to thrive. The firm's most readily recognized building design is the ubiquitous pre-fabricated porcelain enameled automobile service station. In its first hundred years, the firm was responsible for over 12,000 facilities worldwide for general manufacturing, food production, warehouse and distribution, institutions, health care, offices, research and development, and retail merchandising. In Oregon, however, only two buildings designed by Austin are known to exist: The Lane-Miles Standish Printing Company is the first. The second is the Oregonian Printing Plant, located at 1621 SW Taylor Street, built in the 1980s.[8]

[8] Ferriday, Virginia Guest, et. al. Historic Resources Inventory of Portland. (Portland, OR: City of Portland, 1984).

By way of comparison, the Austin Company is recognized in five buildings in the National Register:

- 1900 H. Black & Co. Building, Cleveland, OH
- 1925 Boeing/United Airlines Terminal, Laramie, WY
- 1925 Howard Motor Company Building, Los Angeles, CA
- 1929 Mildred Buildings, Beaumont, TX
- 1950 Rocky Flats Plant, Jefferson County, CO

Lane-Miles Standish Building as an example of Gothic Revival design applied to industrial buildings

The typical Gothic Revival style (as used primarily in 19th century residential architecture) is distinguished by:

- A flat roof with projecting towers, spires, or pinnacles;
- Strong vertical emphasis;
- Asymmetrical composition except for commercial buildings;
- Pointed-arched openings as well as flat-topped openings;
- Brick or masonry facing, frequently on a steel or concrete frame;
- Gothic ornamentation, often in terra cotta: quatrefoil trim, hood moldings and battlements.

Major non-residential examples in the state include the 1924 Odd Fellows Building in Portland; 1922-26 John Jacob Astor Hotel in Astoria, 1926 Elsinore Theater in Salem, and the 1913 United Presbyterian Church in Albany.[9]

[9] Clark, Rosalind. Oregon Style: Architecture from 1840s to the 1950s. (Portland, OR: Professional Book Center, 1983).

Particular elements that define the Gothic Revival design of the Lane-Miles Standish Building include:

- A largely flat roof with a castellated octagonal two-story mass at the northeast
- Asymmetrical composition
- Pointed arched openings at the doors
- Buttresses at the pilasters on the east
- Pointed arched tracery at the loading dock doorway.

These Gothic Revival treatments continue on the interior with round or pointed arched interior doorway and scallop detailing at the first and second floor office areas.

Of castellated buildings within the City of Portland, the Lane-Miles Standish Building is among a small group.[10] This list includes:

- Portland Oregon National Guard Armory Annex, 1891
  (128 NW 11th Avenue; McCaw & Martin, architect)
- Gleall Castle, 1892
  (2591 Buckingham Terrace; Charles Henry Piggot, architect)
- Canterbury Castle, 1930
  (2910 SW Canterbury; J. O. Fry, architect)

Within this may also be considered the buildings and structures associated with the City's reservoir system, both in Washington Park and Mt. Tabor Park. These range in date from the 1890s to the 1910s, largely designed by Issac Smith and Charles Oliver. Other than the Lane-Miles Standish Building, there is no commercial example of castellated design.

[10] Ferriday, Virginia Guest, et. al. Historic Resources Inventory of Portland. (Portland, OR: City of Portland, 1984); City of Portland Historic Landmarks Database

The broader collection of Gothic Revival and related styles (Collegiate Gothic, Carpenter Gothic) is also small in Portland.[11] This portfolio is largely religious in form with buildings that include:

- Ascension Episcopal Chapel (1823 SW Spring Street; 1889)
- Bishop's House (219 SW Stark Street; 1879)
- Calvary Presbyterian (1422 SW 11th Avenue; 1882)
- Church (6401 NE 10th Avenue; 1891)
- Congregation Kesser Israel (136 SW Meade Street; 1900)
- Ebenezer German Congregational Church (636 NE Stanton Street;; 1898)
- First Congregational Church (1126 SW Park Avenue; 1890)
- First Immanuel Evangelical Lutheran Church (632 NW 19th Avenue; 1904)
- First Norwegian-Danish Methodist Episcopal (607 NW 18th Avenue; 1888)
- First Presbyterian Church (1200 SW Alder Street; 1890)
- First United Evangelical Church (1804 SE 16th Avenue; 1909)
- Mizpah Presbyterian Church (2456 SE Tamarack Avenue; 1891)
- St. Andrew Parish Church (4919 NE 9th Avenue; 1928)
- St. James Lutheran Church (1365 SW Park Avenue; 1891)
- Sunnyside United Methodist Church (3520 SE Yamhill Street; 1910)
- Westminster Presbyterian Church (1624 NE Hancock Street; 1912)

Non-ecclesiastical examples are limited to Eliot Hall at Reed College (3203 SE Woodstock Blvd.; 1912); Odd Fellows Building (1019 SW 10th Avenue; 1924), Worthington Apartments 708 NW 19th Avenue; 1929) and the R. Pulvermacher House (230 SW Woods Street; 1902).[12]

The Lane-Miles Standish Building is the only historic example of work in Portland by the Austin Company, which pioneered the concept of combining design, engineering and construction into a single process in the 1910s.

[11] Ibid.
[12] Ibid.