



The Nicolai Site Redevelopment Plan Four Visions

Fall 2012 • Planning, Public Policy, and Management

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About SCI

The Sustainable Cities Initiative (SCI) is a cross-disciplinary organization at the University of Oregon that promotes education, service, public outreach, and research on the design and development of sustainable cities. We are redefining higher education for the public good and catalyzing community change toward sustainability. Our work addresses sustainability at multiple scales and emerges from the conviction that creating the sustainable city cannot happen within any single discipline. SCI is grounded in cross-disciplinary engagement as the key strategy for improving community sustainability. Our work connects student energy, faculty experience, and community needs to produce innovative, tangible solutions for the creation of a sustainable society.

About SCYP

The Sustainable City Year Program (SCYP) is a year-long partnership between SCI and one city in Oregon, in which students and faculty in courses from across the university collaborate with the partner city on sustainability and livability projects. SCYP faculty and students work in collaboration with staff from the partner city through a variety of studio projects and service-learning courses to provide students with real-world projects to investigate. Students bring energy, enthusiasm, and innovative approaches to difficult, persistent problems. SCYP's primary value derives from collaborations resulting in on-the-ground impact and expanded conversations for a community ready to transition to a more sustainable and livable future. SCY 2011-12 includes courses in Architecture; Arts and Administration; Business; Economics; Journalism; Landscape Architecture; Law; Oregon Leadership in Sustainability; and Planning, Public Policy, and Management.

About Springfield, Oregon

The City of Springfield has been a leader in sustainable practices for more than 30 years, tackling local issues ranging from waste and stormwater management to urban and suburban redevelopment. It is the first and only jurisdiction in Oregon to create two separate Urban Renewal Districts by voter approval. Constrained by dramatic hillsides and rivers to the north and south, Springfield has worked tirelessly to develop efficiently and respectfully within its natural boundary as well as the current urban growth boundary. Springfield is proud of its relationships and ability to work with property owners and developers on difficult developments, reaching agreements that are to the benefit of both the project and the affected property owners. These relationships with citizens are what continue to allow Springfield to turn policy and planning into reality. Springfield recruited a strong, diverse set of partners to supplement city staff participation in SCYP. Partners include the Springfield Utility Board, Willamalane Park and Recreation District, Metro Wastewater Management Commission, United Way of Lane County, and Springfield School District 19.

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Executive Summary

In the fall term of 2012, graduate students in the Department of Planning, Public Policy and Management (PPPM) at the University of Oregon developed concept plans for an industrial site in Springfield, Oregon. The students were asked to develop a long-term plan for this property, taking into account the context of the neighboring areas and the city as a whole. These plans were to address land use, transportation, economic development, and other factors by considering site layout, building footprint options, and circulation as urban design concepts. Students were divided into four teams. Each team developed a final report detailing their recommendations. This report is a concise summary of those recommendations.

Common elements such as research and site analysis are presented as a synthesis of the teams' findings. The historical context of an area plays an important role in the planning process. To anticipate the future, planners must have an understanding of the environmental, cultural, and economic forces that have shaped an area. To better assess the social and economic climate of Springfield and its opportunities for growth, a summary of key trends are provided.

Each team's recommendations for use and design were unique, so each team's vision is presented separately.

Vision 1

Team One envisioned the site as the Downtown Springfield Wellness Park (DSWP), which would be an established employment center for both Springfield and Eugene. The medical campus would be a symbol of economic prosperity and would enhance community identity, serve as a model of sustainable development, and facilitate pedestrian, cycle, and transit uses.

Vision 2

Team Two developed a vision for the Nicolai site reflecting a commitment to serving the needs of Springfield's residents over the next 20 years. Their site will be an employment hub reflecting the transition in the regional economy. The redevelopment plan will connect the site with the downtown area, but remain unique with its own supporting amenities. This plan focuses on attracting the growing industries of high technology and back-office functions, as well as public amenities.

Vision 3

The third team envisioned the Nicolai site as the anchor for an eco-district. The two primary buildings would be an Eco-industrial Innovation Center and an Eco-emporium. As a green industry cluster, this vision also has a strong focus on sustainable transportation, ecology and civic engagement as important goals.

Vision 4

The fourth team developed a vision with two broad goals – to establish an employment center and to create a destination woven into the fabric of Springfield. As an employment center, the Nicolai site would be the center of a cluster around innovative wood products. The vision also uses the site’s historic qualities and proximity to the developing Mill Race Restoration Project to create a place of social value.

Introduction

In the fall term of 2012, graduate students in the Department of Planning, Public Policy and Management (PPPM) at the University of Oregon developed concept plans for an industrial site in Springfield, Oregon. This project was coordinated by the Sustainable Cities Initiative, developed in collaboration with city staff and the owners of the site, and presented on November 28th, 2012.

The site, known as the Nicolai site after a former business, is 14.6 acres, used primarily for timber processing throughout its history. The site is located adjacent to downtown and has easy access to road and rail transportation. It is part of a larger industrial area that included some of the original employment centers of Springfield. Much of this land is slated for redeveloped for a wider array of uses, and a multi-year project has converted a small canal (Mill race) south of the site into a flowing waterway and wetland. The close proximity to downtown, bus rapid transit, rail and other activities make it a site with significant potential. The site also has many complications, including a history of industrial activity, low rents in the city, access issues from Main Street to the north, noise from the railroad track and large amounts of vacant or underutilized land in the area.

The students were asked to develop a long-term plan for this property, taking into account the context of the neighboring areas and the city as a whole. These plans were to address land use, transportation, economic development, and other factors by considering site layout, building footprint options, and circulation as urban design concepts.

Students were divided into four teams. Two teams were asked to develop office/commercial plans, and two teams were asked to develop light industrial plans. Each team developed a final report detailing their recommendations. This report is a concise summary of those recommendations. Common elements such as research and site analysis are presented as a synthesis of the teams' findings. The individual recommendations for use and design were unique, and so each team's vision is presented separately. In spite of separate analysis and development, several common themes emerged from the recommendations, which are presented in the conclusion of this report.

Common Background Research

Historical Context

The historical context of an area plays an important role in the planning process. To anticipate the future, planners must start with an understanding of the environmental, cultural, and economic forces shaping an area.

Environmental

Geology

The Willamette Valley is bounded by the coast, Calapooya, and Cascade mountain ranges to the west, south, and east, respectively. These mountains are a mixture of ancient volcanoes and folded rock that were pushed up through geologic collisions, beginning about 38 million years ago. The valley floor was formed during repeated glacial flooding, known as the Missoula Floods, which filled the valley with a lake 300 feet deep. When the waters receded, deposited silt layers remained and created the valley's fertile farmlands of today.

Hydrology

The Willamette River flows north through the valley and has helped to shape the landscape and urban development. The 130-mile long river collects water from a 670-square-mile area before entering the Columbia River and eventually the Pacific Ocean. The McKenzie River, which drains the southwest portion of the Oregon Cascades, joins the Willamette near present-day Springfield. Together, the McKenzie and the Willamette watersheds comprise 2,500 miles of waterways, from streams to wide river gorges.

Flora and Fauna

Historically, the Willamette Valley was a mixture of grassland, wet prairie, and oak savanna habitat, created and managed for thousands of years through controlled burning by the aboriginal peoples of the valley. Europeans began settling the valley in the early 19th century, and by the 1850s the practice of controlled burns ceased, causing much of the oak savanna habitat to give way to forests overgrown with underbrush, and prairie covered with domesticated grazers. Despite this, one can



Figure 1: Oak savannas like the one pictured here used to make up most of the Willamette Valley. Today they are almost completely gone from the landscape (Haight 2008).

still find prairie, oak savannah, coniferous forest, wetland, and riparian habitats in small pockets throughout the valley.

The diversity of ecosystems supports an equally great diversity of wildlife. West-central Oregon is home to a multitude of mammals, birds, fish, and amphibians. The region makes up a portion of the Pacific Flyway, which is a corridor for birds that migrate annually between Latin America and the northwest portion of North America. Species that have at least indirectly affected human settlements in Oregon include beaver, fisher, otter, fox, spotted owl, game birds, and Chinook and silver salmon.

Cultural and Economic

Indigenous

Prior to the immigration of Euro-Americans in the early and mid-1800's, the Kalapuya populated the Willamette Valley for nearly 10,000 years. The Kalapuya were comprised of three families – the Chafan, the Mohawk, and the Winfelly. The Kalapuya divided their lifestyle along two distinct seasons of summer and winter, traveling to food-gathering areas in the summer while living in simple thatch huts and hunkering down in low plank houses throughout the cold winter rains. As fur trappers and traders explore the area into the 1830s, they brought with them smallpox and malaria, causing near extinction of the Kalapuya by 1833.

Early Springfield

In 1848, Elias and Mary Briggs became the first settlers of present-day Springfield. Obtaining 640 acres of land from the government, the Briggs gave Springfield its name. The Briggs, along with another settler, William Stevens, started and operated a ferry across the Willamette for travelers headed south to pan for gold in California. Springfield was incorporated as a city in 1885 and received its charter in 1893. The neighboring city of Eugene grew along a similar timeline.

Industrial Springfield

In 1871, the railroad came through the area and brought the opportunity to export goods like wood products to a larger market. In 1901, the milling boom commenced when the Booth-Kelly Company purchased the Springfield sawmills and 70,000 acres of timberland in the region. Lumber sales increased dramatically during the Alaska Gold Rush between 1900 and 1903 and also



Figure 2: The Northern Spotted Owl is an iconic species of the Pacific Northwest and has played a huge role in its logging history (Northern Spotted Owl 2013).

after the earthquake in San Francisco in 1906. By 1911, half of the Springfield community worked at the Booth-Kelly Mill. The Great Depression brought industrial expansion in Springfield to a halt, but the economy picked back up in the 1940s with the start of WWII. The Rosboro Company established in the Springfield area in the late 1940s as “one of the largest and most modern sawmills in the state.”

Post-Industrial Springfield

In the 1970s, Springfield’s shopping district moved from the downtown core to the city outskirts, along with much of the population, due largely to the increased ownership of automobiles and the Federal Interstate Highway System’s construction of I-5. The decline of the timber industry began with the recession of the late 1970s. The Endangered Species



Figure 3: An early image of downtown Springfield (Historic Springfield 2013)

Act, which passed in 1973, significantly altered logging regulations, which in turn hurt the local economy. Timber production has not reached pre 1970s levels, and has continued to suffer since the housing bubble began in 2007. Timber companies eventually laid off workers, closed, and/or went bankrupt. One such company was the Nicolai Lumber Company, which was the previous owner of our study area.

As the timber industry lagged, the technological sector expanded. The development of the Gateway retail and business park in the early 1990s, along with the relocation of Sony Industries created a need for workers in Springfield. To help provide for the community, Springfield worked with Lane Community College to develop training programs. Sony eventually relocated, leaving Springfield with a stronger labor force, but high unemployment. Technology and medical industries are marked as future growth industries for Springfield.

Springfield Today

Today, Springfield is a city on the verge of redevelopment. It has a growing population of 59,000, and its mild climate, accessibility to the outdoors, and low cost-of-living are attractive to residents. The city suffers from significant underutilized space, left over from heavy industries now out of business. Recent redevelopment at the Booth Kelly site, south and west of Nicolai, is on-going, and the city has plans for a new, vibrant downtown. The labor force is ready to work; however the high unemployment rate illustrates the lack of jobs. Healthcare is now the largest employer in the city and promises to add economic vitality to the area.



Figure 4: Downtown Springfield today (Fingerhood 2010).

Modern Context

To better assess the social and economic climate of Springfield and its opportunities for growth, a summary of key trends are provided.

Demographic and Economic Trends

Demographic

- **Growing Population.** With a 2010 population of 59,403, Springfield's population has increased 33% since 1990, equating to an average annual growth rate (AAGR) of 1.4%, comparable to Oregon's rate over the same period of 1.5%, and higher than the county rate of 1.1%. The majority of growth has come from in-migration. Over the next 20 years, if the area follows historical growth rates, the estimated 2030 population will be 78,973 people.
- **Ageing Baby Boomers.** Over 50% of the city's population is younger than 35 years and Springfield has a larger percentage of people under age 35 than does Lane County or Oregon. However, Springfield is starting to see a change, with an ageing baby boomer population. At state, county, and local levels, the baby boomers make up a large proportion of the population, between 25% and 30%. In the last decade, the 45-to-64 age group in Springfield had a 66% increase. In contrast, Springfield's 18-24 cohort grew by 17% less in the last decade than it did between 1990 and 2000.

- **Lower than Average Educational Attainment.** The educational attainment for the city of Springfield is also below the regional and statewide averages. Thirty-two percent of Springfield adults finished high school or an equivalent, compared to 25% for both the metro area and Oregon. Only 11% have a bachelor's degree, which is 11 percentage points less than Eugene, and 7 points less than Oregon. Twenty-eight percent have some college experience, which is slightly higher than Oregon (26%). Historically, with the primary industries in manufacturing requiring unskilled labor, the demand for residents to pursue higher education was not present.
- **Increasing Rentership.** Rentership increased between 2007 and 2011 at the national, state, regional, and local levels. Oregonians rent at a slightly greater rate than the nation as a whole, at 38% and 35% respectively in 2010. In Lane County, the proportion of renting households increased by 6% in 10 years, while Springfield increased renting tenure at about the same rate as the nation (3%). However, the city's residents still rent at much higher rates than the nation, with 48% rentership in Springfield.
- **Diversifying Race and Ethnicity.** Oregon's population is 84% white and 11.7% Hispanic or Latino. Springfield is 86% white alone with 6.9% Hispanic or Latino. Springfield's Hispanic and Latino population increased by 97% from 2000 to 2010. Springfield's racial minority groups are growing significantly. For example, from 2000 to 2010 the Black or African American population grew by 64.3%, the Asian population grew by 26.1%, and the Native Hawaiian and other Pacific Islander population grew by 26.0%.

Economic

- **Low Wage Jobs.** Income in Lane County is lower than the state average. This is largely because wages are lower for similar jobs and the market has a higher percentage of lower-paying jobs. Also, many in Springfield are receiving transfer payments, or are not working/unemployed. Springfield's median household income in 2010 was \$37,738. This is compared to the 2006-2010 median of \$42,923 for Lane County and \$49,260 for Oregon.
- **High Unemployment.** As of August 2012, Springfield's unemployment rate was 9.9% compared to Oregon's unemployment rate of 8.9%, and Lane County's unemployment rate of 8.8%. Since the height of the economic recession in 2009, Springfield, Lane County, and Oregon's unemployment rate has slowly but steadily declined.
- **Changing Economic Base.** Employment in the US, Oregon, and Springfield is decreasing in manufacturing industries and increasing in service industries. In Oregon, service industries increased from an average of 19% total employed during the 1970s, to 30% in 2000. During the same time frame, employment in manufacturing decreased from an average of 18% to 12%. The same is true for Lane County. Between 1980 and 2006, the sectors with the largest percent change were services and retail trade, contributing

to 73% of the new jobs created during that time compared to 8% added by manufacturing.

- **Large Labor Force.** Springfield has a sufficient labor force that has grown over the last decade. There has been a 14% increase in adults between the age of 25 and 34 over the last 10 years, and 50% of the population is between the ages of 20 and 54.
- **Majority of Workers Commute.** Commuting plays an important role in Springfield's economy. Those who live in Springfield generally have a shorter commute time than residents of Lane County or Oregon. Nearly 80% of Springfield's workforce lives in Lane County – 29% in Springfield and 23% in Eugene. Of Springfield's residents, 81% work in Lane County, 25% in Springfield and 40% in Eugene. This shows that commuting is a fact of life for those living in the area, and that the workforce available to Springfield encompasses Lane County, Eugene, and Springfield.

Policy, Planning, and Political Context

Progressive Land Use Law

In response to the sprawl that was taking place throughout the Willamette Valley, then Governor Tom McCall made it clear that continued sprawl was a threat to the quality of life in Oregon. In 1973, the Oregon State Legislature passed the Land Use Planning Act (SB100). The bill, challenged several times over the years, established the most progressive land use law in the nation. At the state level, it outlined 19 goals for the state and its people. Significantly, the law requires metropolitan areas to submit comprehensive plans for approval and also established Urban Growth Boundaries (UGB). As a result, growth in Oregon is relatively controlled and moves forward by methodically examining available lands within the UGBs, protecting the assets of the state's economy, like agriculture.

Numerous plans impact the area surrounding the Nicolai site. The Springfield Development Code addresses development standards and zoning designations for the city. The Glenwood Refinement Plan focuses Springfield's future growth into the Glenwood community. Finally, the Downtown District Urban Design Plan discusses strategies to reinvigorate downtown.

Eugene-Springfield Metro Plan

The Eugene-Springfield Metro Plan (Metro Plan) is a comprehensive plan for future regional development. This plan identifies broad planning goals and objectives regarding metropolitan growth, land use, transportation, economic development, and environmental protection. The Metro Plan includes a regional land use map (Metro Plan Diagram), which provides graphic expressions of the goals, objectives, and recommendations. In this plan, the Nicolai site is designated Heavy Industrial.

Glenwood Refinement Plan

The Glenwood Refinement Plan (GRP) encompasses 684 acres in the southwest corner of Springfield. With an abundance of underdeveloped and underutilized land, convenient access to downtown Springfield, ample transportation infrastructure, and Willamette River frontage, the Glenwood area has great potential for development. Building on these advantages, the GRP focuses Springfield's growth into this planning area. Allocating land for primarily high-density housing and commercial/office developments, the GRP addresses both Springfield's projected population growth and subsequent demand for employment in a manner consistent with the Metro Plan's goal of compact urban growth (Metro Plan-II-B-1).

Downtown District Revitalization Plan

The Downtown District Urban Design Plan strengthens downtown Springfield's role as the economic and cultural heart of the city. The planning area borders the Glenwood Riverfront District and refers to the Glenwood Refinement Plan. The plan expresses the city's effort to develop a "mobility-oriented downtown" by focusing on land use and transportation. To achieve mobility, the plan designates a one-mile radius hot spot in the center of downtown that is serviced by expanded bike, transit, and pedestrian infrastructure. This hot spot focuses on commercial, retail, and residential development, which promotes concentrated development of desired services within a distance easily navigated by foot, bike, or transit. Additionally, a civic plaza serves as the cultural center of the community, acting as a gathering place for the community functions.

Target Industries

An economic opportunities analysis performed for Springfield took into account the social and economic trends in identifying growth industries for the city. The analysis identified the following industries as potential opportunities for growth:

- Medical Services
- Small Scale Manufacturing
- Call Centers
- Back-Office Functions
- Tourism
- High-Tech
- Wood Products
- Biotech

Springfield's Comparative Advantage

Springfield has several advantages that make it attractive to potential industries compared to other cities. These are discussed below.

- **Location.** Springfield is located along I-5, which makes shipping up and down the West Coast easy. Springfield is also close to Eugene, which has the University of Oregon and Lane Community College. Springfield shares a labor force with Eugene and vice versa. In addition, the area is excellent for outdoor recreation and has a temperate year round climate. This may be attractive to companies looking to locate where there is a high quality of life for its workers.
- **Transportation.** The Springfield area has access to a variety of transportation modes. These include automotive, rail, public transportation, and air.
- **Labor Market.** Springfield has a large labor force that is ready to work.

Site Analysis

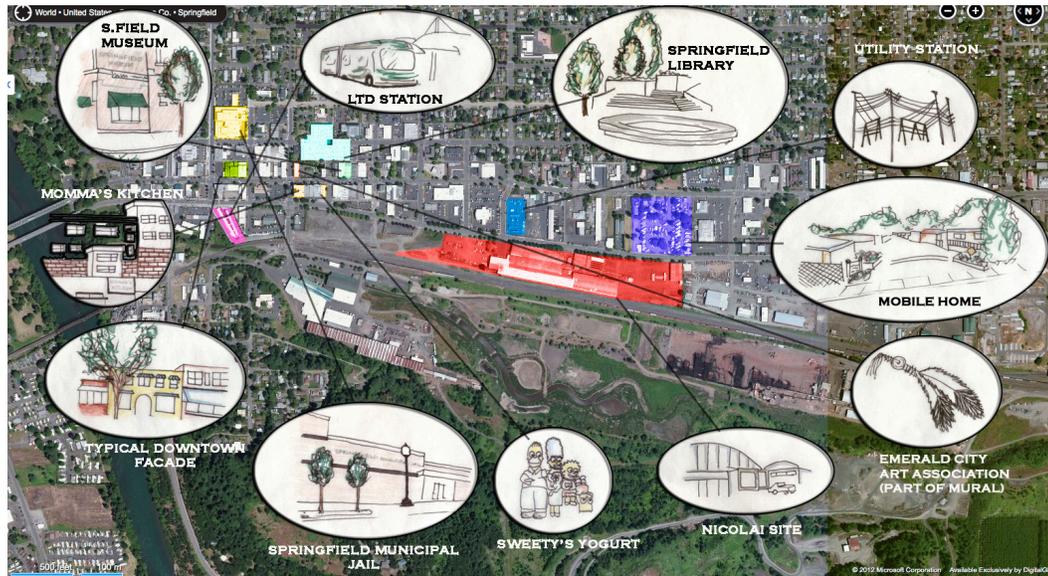


Figure 5: The Neighborhood Context of the Nicolai Site.

Local Context

Location and Access

The Nicolai site is located five blocks southeast of the downtown center. The site is 14.36 acres and extends from 9th Street on the west to the Rosboro Lumber property past El Rancho Drive on the east, and between South A Street on the north and the Union Pacific railway to the south. South A Street, also known as State Highway 126, or Route 126, is the eastbound couplet of Main Street from 20th Street to the bridge entering Eugene.

The site has five deeded access points along its 2,060-foot frontage on South A Street. The site has good access to I-5 through Exit 191 (2.3 miles away via Glenwood Boulevard). The site is 0.3 miles (6 minute walk) away from City Hall and 0.4 mile (7 minute walk) from the Springfield Transit Station. The station provides access to Eugene Station via the EmX Rapid Bus Line. Proposed EmX routes show the bus line continuing further east on South A Street, passing the Nicolai site. This future expansion of the EmX would provide easier public transit access to the site both from the east and west.

Amenities and Nearby Land Uses

Two hundred and forty eateries are located within three miles of the site along with shopping and other amenities. The Richard E. Wildish Community Theater is located nearby on Main Street. The Gateway Mall and other shopping accommodations are located two miles away. Three medical centers are located nearby:

- Sacred Heart Medical Center at Riverbend is 3.48 miles away,
- Sacred Heart Medical Center- University District is 3.65 miles away, and
- McKenzie-Willamette Medical Center is 0.99 miles away.

In the immediate vicinity surrounding the site there is an adult store, the Springfield Utility Board (SUB) Service Center, two grocery stores, a Toyota dealership, multiple auto repair shops, a mobile home park, Springfield Rentals, and apartment buildings.

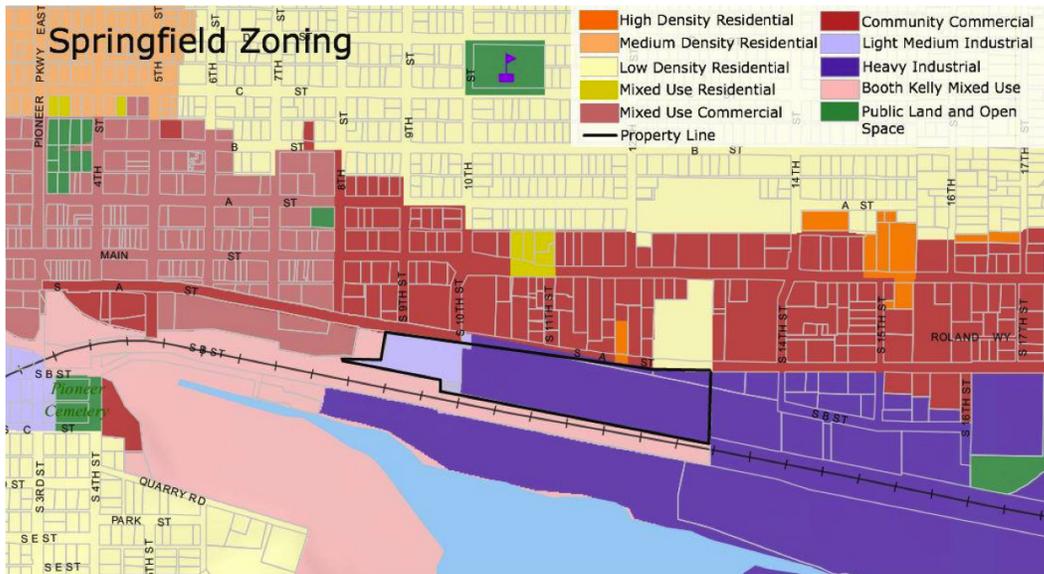


Figure 6: Zoning for the Nicolai site and nearby neighborhood (Development Services Department 2012).

Zoning

Oregon’s Department of Land Conservation and Development requires each city and county to adopt a comprehensive plan and subsequent zoning and land-division ordinances needed to put the plan into effect. Given this requirement, the Nicolai site is under the jurisdiction of both the Eugene-Springfield Metro Plan and Springfield Development Code.

The Springfield Development Code is responsible for ensuring that development in the Springfield area is consistent with the Eugene-Springfield Metro Plan and statewide planning goals. The code achieves consistency through land use districts. Each land use district embodies subsequent permitted uses and development standards that ensure development is appropriate for the Springfield community. The Nicolai site is currently zoned light/medium industrial (LMI). This designation permits secondary processing of materials into finished products, which is the work done by the site’s current tenant, 9Wood. Compared to the other industrial designations, the LMI zone generally has fewer external impacts on transportation, and business needs are generally met by truck.

Environment

Climate

Springfield resides in a marine west coast climate, also known as an oceanic climate. This climate type is known for its cool, dry summers and mild, wet winters. Oceanic climates have much in common with Mediterranean climates, but have cooler summers and more precipitation. Most of continental Europe features an oceanic climate, as well as San Francisco, Portland, and Seattle.

Temperature

Temperatures remain mild throughout most of the year. The coolest month is December with highs in the mid 40s, and lows just above freezing. The hottest month is August with highs in the low 80s. An average of 15 days per year reach above 90°F and 54 nights per year drop below freezing.

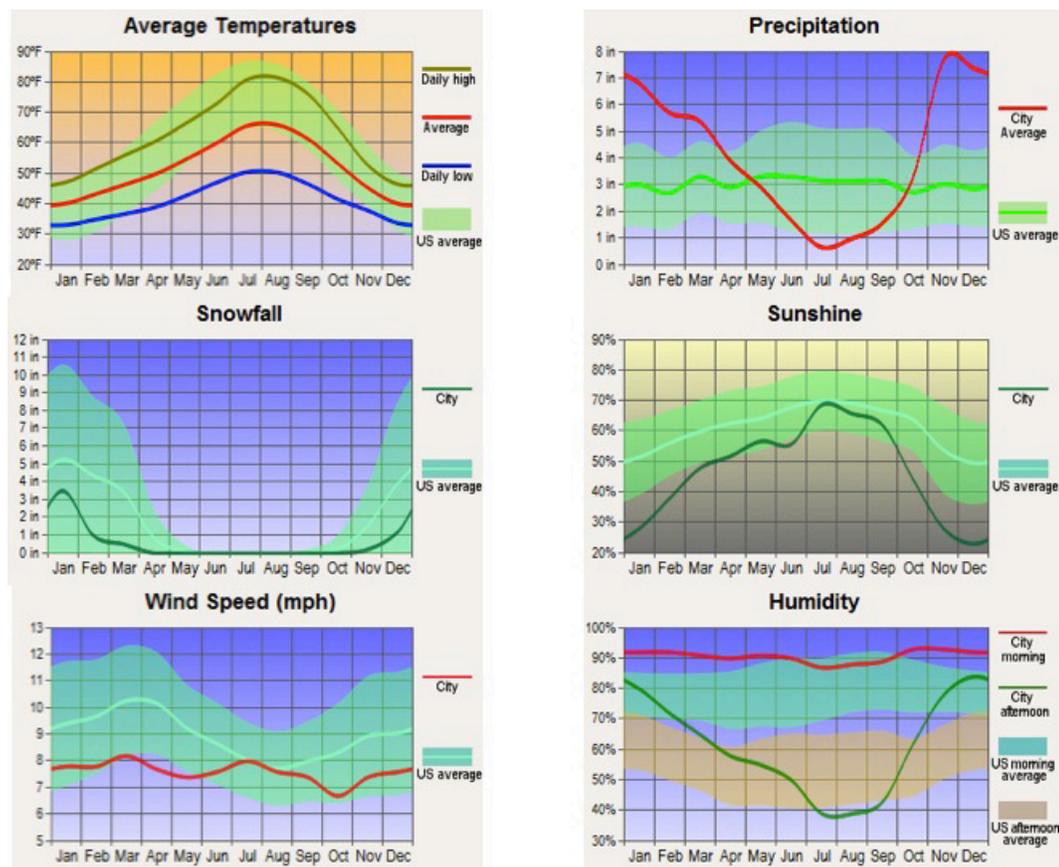


Figure 7: Climate data for the City of Springfield, Oregon (Climate of Springfield, Oregon 2013).

Precipitation

Springfield receives 46 inches of rain per year, the majority of it falling between October and April. The month with the most rainfall is November with an average of 8 inches. The month with the least amount of rainfall is July, with an average of a little more than half an inch. This rainfall is light, but falls over a long period of time. Snowfall can occur during the winter, but it rarely accumulates, and melts quickly. The average yearly snowfall is 5 inches, with a median of 0. Snowfall is most likely to occur in December or January.

Sun and Cloud Cover

Due to the amount of rainfall, the majority of days out of the year are cloudy. This is especially true fall through spring. Sunshine is mostly prominent in the summer, but does not exceed the national average for sunshine at any point.

Wind and Humidity

Wind remains relatively stable and constant throughout the year, averaging between 6.5 and 8 mph. Winds typically come from the south and southwest, and occasionally from the north. Humidity is most prevalent in the mornings with a 90% average. Afternoons are typically less humid, especially during the summer when humidity can reach 40%.

Topography and Soils

The Nicolai site is located on the USGS 7.5 minute topographic map “Eugene East Quadrangle.” The site elevation is approximately 465 feet above sea level. The topography is flat with a slope of 0-3%. Water run-off drains north of the site towards South A Street.

The soil is classified by the USDA Natural Resources Conservation Service (NRCS) as Malabon-Urban Land complex. Malabon soil consists of well draining, mixed sediment often found on floodplains. Urban Land is soil disturbed and changed by human activity.

Trees and Ground Cover

A total of 46 mature, deciduous trees line the boundary between the site and South A Street. Along the back of the site there are 19 coniferous trees of varying ages. These trees are not easily visible from the site due to their location behind the buildings near the railroad tracks. Located at the corners of the office building are four young deciduous trees. These trees are the only ones located directly on the site. Ground cover on the site is impervious asphalt pavement. The only green spaces on the site surround the four trees near the office building and are just large enough to support those trees. Behind the site, dry grasses grow over pavement.

Sensory Experience

The overall tone of the Nicolai site reflects its former and current uses related to the timber industry. Millwrights constructed the majority of the major structure ad hoc. It retains an artisan craftsmanship that has a historic feeling about it. The main structure is simple but utilitarian in design, with modest exterior improvements, mostly to the roof. The building's interior is in good shape and spacious. However, the buildings have the potential to create animosity between tenants who have non-compatible uses. Due to their large size and openness, the buildings may be difficult to divide.



Image 8: A view of the Nicolai Site from the east end, facing west. Large industrial buildings, asphalt, fences, and busy rail and street traffic on both the north and south sides characterize the site (Hammons 2013).

Pollution

Pollution remains a concern at the site due to its industrial history. The building contains many old and outdated building materials that may contain asbestos, lead, or other harmful chemicals. Other contaminants may be found if the asphalt is removed.

Site Visibility

The Nicolai site is not easily visible from South A Street or adjacent areas. The site is indistinct with an empty, industrial appearance. The exterior of the buildings do not create a strong sense of place to those driving or walking by. An aluminum, barbed wire fence and mature hardwood trees parallel South A Street along the site, making the site feel blocked off. It is difficult to view into the property. This creates a feeling of disconnection with the surrounding environment.



Figure 9: A view of the Nicolai Site from South A Street. The building comes right up to a fence, which is further hidden by large trees. Very few people notice the site when driving by (Hammons 2013).

Disruptions

The property's adjacency to South A Street and a well-used railway create concerns for possible disruptions. The major concerns are as followed:

- Freight Rail
 - High decibel and duration auditory disruptions
 - Vibrations
 - Point source pollution concerns
 - Environmental and aesthetic impact on property
- South A Street
 - Moderate decibel and duration auditory disruptions
 - Point source pollution concerns
 - Unsightly or poorly maintained streets
- Land Use at Site
 - Variable depending on tenant

Built Environment

Existing Buildings

The land area of the Nicolai site is dominated by a 206,000 square foot (4.73 acre) warehouse-style building with a heavy timber primary structure. It is approximately 818 feet long, and varies in width from 100 feet to 277 feet. Its

exact date of construction is uncertain. It was built no later than the 1930s, but may have been built as early as 1912. The building is in reasonably good condition. 9Wood, an engineered wood products manufacturer, occupies 80,000 square feet of the building.

A dry-kiln building associated with the main structure is partially demolished. On the east end of the site exists an approximate 14,000-square-foot building, which will soon be occupied by a steel salvage company, Mid Valley Steel.



Figure 10: Existing structures on the Nicolai property.(Ludington 2013).

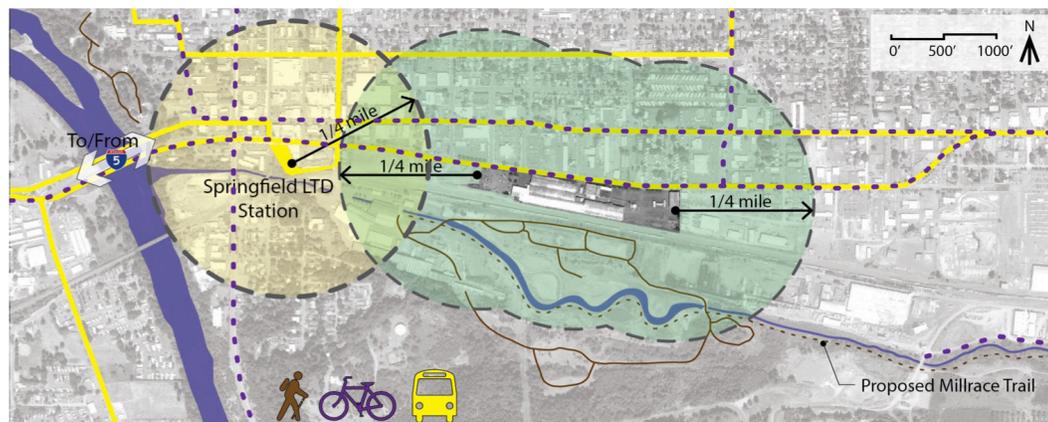


Figure 11: Transportation overview with a one-quarter-mile radius from key sites.

Transportation and Infrastructure

Vehicular

The roadway circulation connecting the Nicolai site includes two busy, one-way major arterials. South A Street handles eastbound traffic and runs from the bridge entering Springfield from Eugene to 20th Street, where it meets with its couplet, Main Street. Main Street is also Route 126 and is one block north of the site. While coupled with South A Street, east of 20th Street, Main Street handles

westbound traffic. It continues west into Eugene as Franklin Boulevard and east as Route 126 towards Bend. Traffic counts from 2004 show Main Street with 13,200 average daily trips (ADT) and South A Street with 13,300 ADT.

There is another minor arterial one block east of the site, South 14th Street. This street starts at South A Street and continues north towards Willamalane Park, the McKenzie Willamette Medical Center, the Mohawk Shopping Center, and connects to Highway 126.

Three local collector streets flow north and south from the site: 9th, 10th, and 11th Street. 12th Street terminates at Main Street and does not reach South A Street or the site.

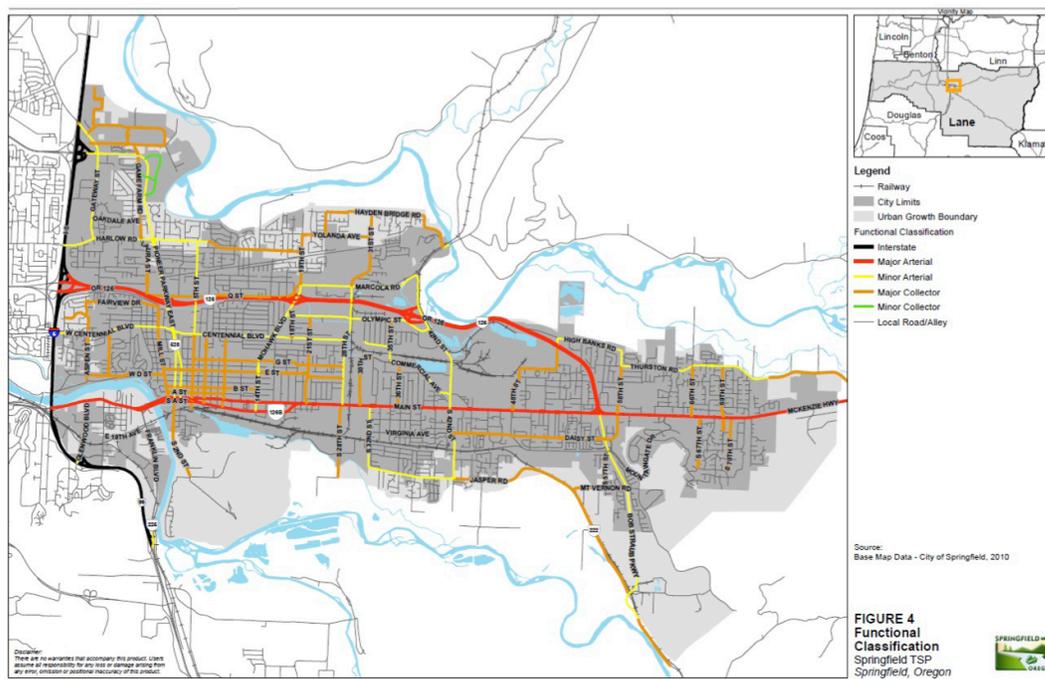


Figure 12: Road and Rail Transportation Network (Springfield TSP 2011).

Transit and Rail

Existing transit circulation includes regular bus routes along South A Street. There are two bus stops along the length of the site for east flowing bus routes. One block away on Main Street there are two additional bus stops for west flowing routes. These stops are marked by signs posted in the concrete. Distance between these stops average 250 to 350 feet and busses arrive approximately every half-hour.

The main EmX transit hub for the city is the Springfield Transit Station, 4 blocks or 580 feet west from the western edge of the site. From this station, current routes travel east to Eugene or north along Pioneer Parkway. Future plans show South A Street and Main Street as proposed EmX routes.

Though the site borders a rail track, there is no current access to it. The nearest Amtrak station using the adjacent railroad line is in downtown Eugene.

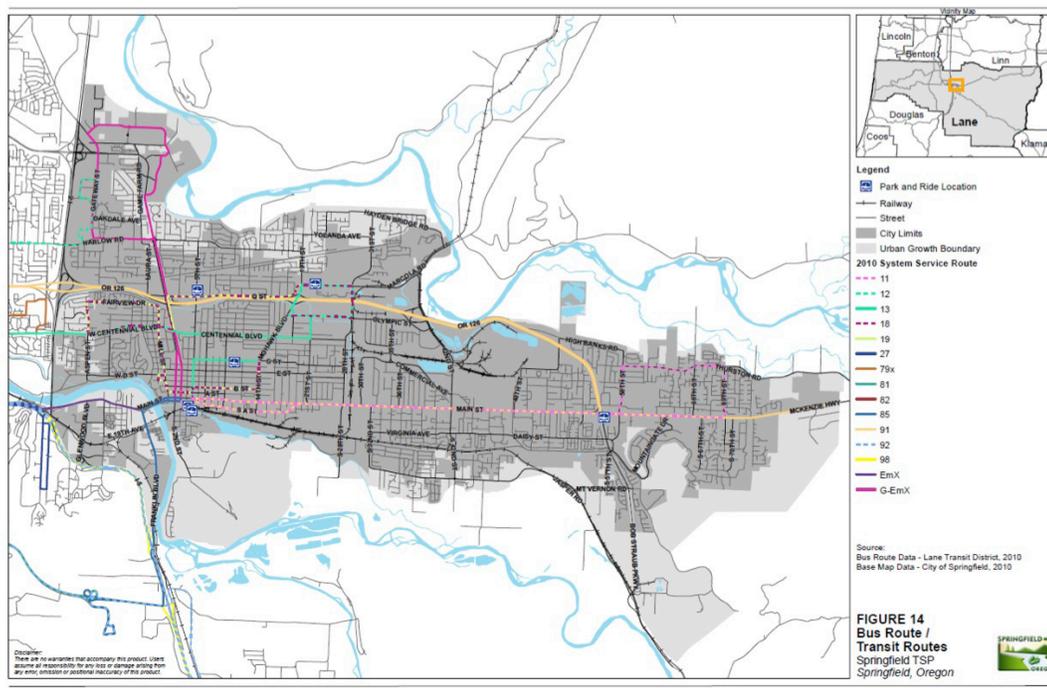


Figure 13: Bus Transportation Network (Springfield TSP 2011).

Bike and Pedestrian

There is an east flowing, 4-foot bike lane directly adjacent to the site on South A Street. Main Street's 4-foot bike lane travels west, but ends at South 10th Street. Future proposals include a multi-use path along the Mill Race south of the site across the railroad tracks.

The site is well connected to 4-6' wide sidewalks on most all streets. South A Street is difficult to cross due to its three lanes of fast-moving traffic. There is 0.67 mile without a marked crosswalk and 0.35 mile without an implied crossing or intersection. This must be improved if there is to be high-density development on the site.

Opportunities and Constraints

Opportunities

The site has several key opportunities due to its location and situation. These are discussed below.

- **Easy access to South A Street.** South A Street gives the site easy access to I-5 and Route 126, which some industries that may come to the site would require.
- **Across from future Mill Race trails and park.** The site can be used as an access point to the park and would be a more direct connection for neighborhoods north of the site than the proposed connection through the Booth Kelly site to the west.
- **Future connection with the EmX.** Because the future routes for the EmX will likely pass by the site, there is a good opportunity for increased site visibility, and more frequent public transit service provided by EmX.
- **Close to the Booth Kelly site.** The site is located just northeast of the Booth Kelly site, which the city has already spent a lot of time and money on improving.
- **Adjacent to SUB substation.** The sites location next to a substation could give businesses in high demand of power the ability to locate on the site and also allow any excess power generated by green energy to be pushed back into the grid system with minimal loss.
- **Structures on site are sound.** The buildings are well crafted and could easily stand for another 50 years with minimal improvements.
- **Profitable and growing business is located on site.** The site is home to 9Wood, which provides employment and economic stimulation for Springfield.
- **Close to city government buildings.** The site is 0.3 miles, or a 6 minute walk away from City Hall. Also located downtown are the library, the police department, jail, and the Springfield Utility Board.

Constraints

The site has several constraints affecting redevelopment. These are discussed below.

- **Busy automobile-oriented road.** South A Street is busy and traffic tends to speed over its posted 35 mph speed limit. This might deter some businesses from locating on the site, and make it difficult to create a pedestrian-oriented site, or connect the site with downtown.
- **Site separated by chain link fence.** The site is currently blocked by a chain

link fence, which should be removed to facilitate a connection to downtown.

- **Undesirable commercial businesses nearby.** At the time of this report's drafting, there were four gentlemen clubs within a mile of the site. Some businesses may not locate on the site due to the neighborhood characteristics. However, time may minimize or eliminate this constraint as these businesses relocate or close.
- **Large asphalt slab.** The site is entirely covered by asphalt, making the site visually harsh on the eyes. Developers may be wary of removing it. Because of the site's industrial history, contaminants may be contained underneath which would have to be cleaned.
- **The Railway.** The railway acts as a barrier between the site and the future Mill Race Park. The noise, vibrations, and pollution caused by the railway may deter some businesses from locating on the site.
- **Large amount of undeveloped and underutilized land.** The railway owns the 8.28 acres to the west of the site which is unused and undeveloped. This creates a visual and mental barrier between the Nicolai site, downtown, and the Booth Kelly site. Across from South A Street there are many land parcels that have empty businesses, oversized parking lots, or no development at all. This will make high-density development on the site difficult until these land parcels are converted to more productive uses.
- **On-site buildings.** The buildings on site are immense making it difficult to convert into smaller office and retail spaces. The current owner already has difficulty renting out the portion of the building not occupied by 9Wood. The building's placement and size also make on-site circulation difficult, which might be playing a role in its lack of tenants.

Vision 1

Dave Amos, AJ Bernhardt, KC McFerson, Leigh Anne Michael, and Alex Page



Figure 14: Final concept for Vision 1.

Overview

Team 1 envisioned the site as the Downtown Springfield Wellness Park (DSWP), which would be an established employment center for both Springfield and Eugene. The medical campus would be a symbol of economic prosperity and would enhance community identity, serve as a model of sustainable development, and facilitate pedestrian, cycle, and transit uses.

This approach focused on four goals for the development: (1) economic vitality, (2) community, (3) sustainability, and (4) mobility.

The estimated time for full build-out is 20 years.

Economic Vitality

This vision captures the projected growth of the health care and social assistance sector. In developing a campus-style plaza, the DSWP will provide ample office space to accommodate projected growth of this sector. As Springfield's economy continues to transition from manufacturing and timber reliance, the DSWP will aid in establishing Springfield as a medical services hub of the region.

Community

This vision stresses the importance of developing a site that builds community identity. The DSWP will attest to the site's timber and milling history through architectural design. This will ensure the preservation of both the site's and community's history, as the DSWP aides in transitioning the community into a new era. We suggest adding a mural on a west-facing building facade to connect the site to downtown Springfield and further promote Springfield's support for the arts. We recommend a connection to the Mill Race Park across the rail tracks.

Sustainability

The site's proximity to cherished natural resources and the region's reputation as being environmentally sensitive brings pertinence to ensuring a sustainable development. A bioswale and permeable parking surfaces will address issues of stormwater management and water quality while creating an aesthetically pleasing, park-like setting for patrons of the site. Using the site's optimal solar orientation (unobstructed southern sun exposure) as a source of renewable energy will ease the site's reliance on the power grid.

Mobility

The site will integrate with the future transportation system of Springfield. Vehicle access and mobility will be supported through the provision of sufficient parking and extension of the street grid into the site. Pedestrians and cyclists will be accommodated through enhancement of the streetscape, establishment of safe crossings and access points, and connection to the mill race. Finally, transit users will benefit from a well-designed EmX station that provides convenient access to the DSWP.

Elements

Buildings

Final build-out includes the complete removal of all the buildings currently located on the site. There would be 10 new medical campus buildings; seven would be oriented to South A Street, and three would be located behind these on the west end of the site. Parking is located behind buildings up against the railroad. This orientation of buildings and parking lot creates a better walking environment for pedestrians. Buildings will also frame the street in a way to create a pleasing proportion between street width and building height. Buildings will not overly shadow the street but serve to define the space.

The new buildings should be constructed using as much reclaimed material from the structures buildings as possible. The goal is that the site produce 50% of its energy needs through solar, wind, fuel cell technology, and biomass generators.

Transportation Network

The team developed six goals for pedestrian and bike infrastructure, and automotive transportation, including public transportation.

1) Construct a bike and pedestrian path that connects the Mill Race Park to downtown by 2017.

The railroad acts as a barrier hindering pedestrian and cyclist access to the mill race. A landscaped crossing above or below the railroad tracks at 9th Street will ensure safe and pleasurable pedestrian and cyclist access to the mill race.

2) Encourage city provision of pedestrian crossings across South A Street by 2032.

The establishment of a pedestrian crossing at 9th Street will ensure the safety of pedestrians accessing the site from downtown and residential neighborhoods north of the site. The provision of ample lighting, striping, and signage will ensure the crosswalk is easily identified by motorists on South A Street.

3) Continue the existing street grid into the site by 2032.

Extending the street grid into the site will convert the site from a large industrial parcel into four urban-scale city blocks. This will help knit the site into the downtown fabric.

4) Provide 587 green parking spaces to accommodate the needs of the site by 2032.

The Springfield Development Code requires one parking space for every 300 square feet of office or retail space. Given the mixed-use nature of their proposal, a reduction in the number of spaces may be obtained given the completion of a parking generation study. The parking will integrate permeable pavements with traditional grass and landscaping treatments.

5) Support the implementation of the downtown district urban design plan.

The Downtown District Urban Design Plans calls for an assessment of decoupling South A Street and Main Street with the ultimate goal of increasing economic activity in the downtown area. In decoupling these streets, Main Street is identified as a livability corridor (focused on active transportation), while South A Street is designated a mobility corridor (focused on transit and auto mobility).

6) Add an EmX Transit Station at 10th Avenue along South A Street by 2032.

Ensure appropriate landscaping to beautify the station area and promote safety.

A recessed station design off the road will ensure continuous vehicular flow while the bus is stopped.

Landscaping Elements

This team had two goals related to landscaping.

- 1) Develop a bioswale spanning the entirety of the site by 2032.

Bioswales are an excellent design choice for any site located in the Willamette Valley where near constant rainfall must be managed efficiently. The bioswale will spatially tie the site together while speaking to the natural history of the wetland-dominated region. The bioswale will be designed to carry pedestrians via a wooden plank and compacted path throughout the center of the site, serving as a therapeutic green space and mini-park on-site. Enhancing the visual aesthetic of the site and promoting self-sufficient water management is a win-win for this design.

- 2) Develop permeable onsite parking by 2032.

A permeable parking lot design allows for quick absorption of rainwater and instant filtration process of chemical leakage from parked cars, significantly improving the water quality.

Phasing

A phased approach allows for growth on the site as Springfield's economy grows and downtown Springfield continues to improve over the next 20 years.

Phase 1: 0-5 Years

The first phase minimizes the impact on the main building while the current tenant, 9Wood, remains for the next four years. Two buildings totaling 48,000 square feet will be constructed on the west end of the site while the 9Wood employee parking is moved to the east side of the site. The 9Wood office building will be demolished. A small portion of the central bioswale will be constructed.

A public easement will be negotiated with the City of Springfield to allow bicycle and pedestrian traffic to move through the site to the future underpass connecting downtown with the Mill Race Park.

Phase 2: 5-20 Years

Phase two assumes that 9Wood vacates the largest building on the site, allowing for complete overhaul of the site. The large building will be demolished and materials will be reused for the construction of four new office buildings. The bioswale will be extended down to the eastern end of the site.

By this time, Main Street and South A Street could be de-coupled or other improvements have been made to accomplish the goal of a more pedestrian-friendly corridor. South A Street might be redesigned to include one auto lane in

each direction, one bike lane in each direction, and one median turn lane in the center.

An EmX bus rapid transit spot should be built at the intersection of South A Street and 10th Street once the EmX is extended along the street. In addition, the underpass under the railroad will be constructed for bikes and pedestrians and 584 green parking spaces will be built along the south edge of the site.

The land at the northeast edge of the site will be preserved for future development.

Phase 3: 20+ Years

This phase paints a picture of the changes to the site and surrounding areas based on the developments in the first two phases. This includes the construction of three new office buildings on the northeast edge of the site, completely defining the street edge from west to east.

To do this, a parking plan that requires fewer parking spaces per employee would be negotiated with the City of Springfield.

The site would support the redevelopment of parcels between South A Street and Main Street. These developments should create an urban fabric, support life on the street, have a mix of uses, and place parking to the interior of the block.

Vision 2

Erik Forsell, Hagen Hammons, Nick Meltzer, Stacy Ludington, Dan Reid, and Peng Tang

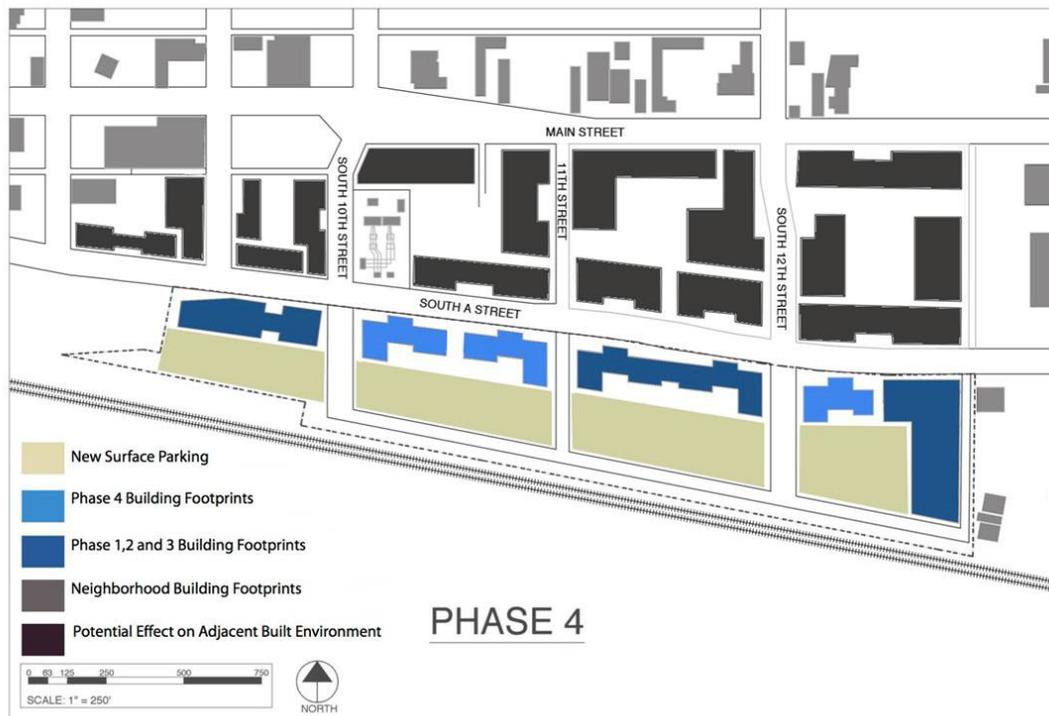


Figure 15: Final concept for Vision 2.

Overview

Team 2 developed a vision for the Nicolai site that reflected a commitment to serving the needs of Springfield residents over the next 20 years. The site will be an employment hub reflecting the transition in the regional economy. Creating a site that draws people in, the redevelopment plan will connect the site with the downtown area, but remain unique with its own supporting amenities. This plan focuses on attracting the growing industries of high technology and back-office functions, as well as public amenities.

This approach lets the existing tenant of the Nicolai Site maintain their lease while new development occurs around it. It allows 9Wood to remain as long as they like, while continuing to supply jobs. With the current development climate in Springfield, there should be a public/private partnership to create a catalyst development on the site, such as a public amenity. The construction of a new Springfield library, improvements to streets, and various tax incentives will encourage private investment and interest in the site. The current library is over-

capacity and not seismically sound. Construction of the new library on the site will help to draw people to the area and demonstrate the city's commitment to making the site an employment center.

The city's commitment will also aid in attracting private investment. We recommend adding office space incrementally around the library as businesses are attracted to the area. These offices will be designed to attract technology and back-office functions, such as software development and billing departments for hospitals. These two job sectors are identified as growing industries within Springfield. The closer these growing industries settle to the downtown area, the more opportunity they have to stimulate the economy. These growing industries on the site can support 500 stable jobs with high wages and good benefits. Supporting businesses, such as coffee shops, dry cleaners, and restaurants, would serve these businesses and the library, while also attracting other people to the site and downtown.

The site might also create an educational and recreational link between the library and downtown core with the future Mill Race Park across from the railroad tracks with a pedestrian and bike bridge over the rail track.

Complete build out of the site within a 40-year time frame is estimated.

Elements

Buildings

The team proposes the complete removal of all buildings on the site, but in stages. This is further discussed in the phasing section. Final build out includes a new Springfield Library, a data farm or other large use building, and three office buildings. All buildings are oriented so they are near the street with parking in the back. This creates a friendly and engaging walking environment and incorporates the site into the urban fabric.

The buildings on site will be constructed using sustainable design and green building standards. They will also be easily adaptable to a variety of different office uses.

Transportation Network

The team has three goals in relation to transportation and connectivity:

1) Extend the urban grid pattern into the site

Smaller block sizes create better walkability and urban form, which improves pedestrian safety as cars slow down and increases the chances of people wanting to walk. This is accomplished by extending 10th, 11th, and 12th Street into the site. The team also incorporated bike lanes, narrow travel lanes, and street trees.

2) Improve connections with public transportation

Continuing to improve public transportation options in the Eugene/Springfield metro area will increase livability, lessen greenhouse gases and improve transportation affordability. Springfield's population is forecasted to continue to grow in the future, so investment in transit should be a priority. Transit is supported at this site by providing an EmX transit pull out stop on South A Street in front of the site.

3) Allow automotive access while keeping parking to a minimum

The majority of people entering the site will be in an automobile. However, having an overabundance of parking indirectly influences people to drive more, rather than choose an alternative transportation method. Having the minimum amount of parking required will encourage using active transportation modes.

The Springfield Development Code would require 609 parking spaces on the site with a surface area of 148,470 square feet. We propose a 25% reduction for proximity to the EmX station and 25% of total parking for compact automobiles. After their projected reductions, parking is reduced to 485 spaces with a surface area of 122,370 square feet, a 17.6% reduction.

Landscaping Elements

The team had four goals related to landscaping.

1) Utilize nearby open space

Springfield has a future plan to revitalize the open space of the Mill race adjacent to the site across the railroad tracks. The team would like to make a connection to this future park by constructing a pedestrian and bike bridge from the library parking lot over the railroad tracks. This will allow the park to be easily accessed for educational and recreational purposes by the library and the businesses on site. It will also provide an easier access to the park from the downtown area.

2) Create outdoor space for communication and collaboration

Human interaction creates better community connections, which in turn increases civic pride. These spaces will facilitate outdoor library activities and improve aesthetics by incorporating green space and plazas around the library and office buildings.

3) Increase visibility of the site by improving sight lines

Focal points and sight lines are valuable urban design elements, which help to increase awareness of the site and in turn promote more business. We propose framing views with aisles of trees, controlling building placement, and creating focal points, like pieces of art.

4) Improve on-site water infiltration

Currently, there are no known or strategic permeable areas on the site. The city of Springfield has a Stormwater Management Plan, which requires new

developments to reduce the amount of storm water flowing off the site. The team proposes creating bioswales in the parking lot and along South A Street and green pavers for parking stalls.

Phasing

This development has very conservative phasing unfolding over 40 years to maintain a positive relationship with the current tenant, 9Wood. The building will be demolished as the site becomes more developed.

Phase 1: 0-8 Years

The first eight years involve rezoning the site from light/medium industrial to its own special zone, Nicolai Mixed Use Employment. Once the zoning change is complete, the eastern half of the main building will be demolished, giving sufficient land for development closer to the downtown core while allowing 9Wood to continue operations in the western half of the building. An on-site street will be constructed, lined up to be a future continuation of 12th Street. An office building will be built on the middle section of the site with a variety of leasable areas and supporting retail.

Within the new building might be a temporary, leased library for Springfield. This library will serve as a temporary expansion of the current library while funds for the new, official Springfield library are gathered. When the library is built the area will return to office space.

To increase public safety, an 8-foot wide bike and pedestrian path will be constructed along the length of South A Street on the north side of the site. In addition, an 8-foot bioswale will be constructed between this path and South A Street. This will add vegetation and treat some of the run-off from the site.

Phase 2: 8-15 Years

In phase two, the east end of the site is developed for large office space needs, such as a server farm or call center. The orientation of the building is short along South A Street and deep into the site to avoid a long, single use building along the street. Surface parking is constructed away from the street, and is landscaped with bioswales.

9Wood might decide to stay through this process, but their lease renewal could be negotiated to require them to move their operations if the back side of the building is demolished. This will allow further development of the street network by creating a road along the back side of the site along the railway. Ninth, 10th, and 11th Streets will be extended into the site. This breaks the site up into more manageable redevelopment blocks.

Phase 3: 15-30 Years

After 15 years, Springfield is anticipated to have the funds for a new, larger and seismically sound library. The library would be developed on the west end of the site, reusing some of the old growth timber from the original Nicolai buildings and green spaces should be incorporated. Surface parking will be behind the library bioswales. A pedestrian and bike bridge over the rail tracks will be constructed during this phase.

Phase 4: Full Build Out

In phase four, 9Wood has left the site, allowing for redevelopment of the remaining property. The remainder of the building will be demolished and another office building will be built with parking behind it. 12th Street will also extend to meet the site. The redevelopment of the site might lead to spill over development on nearby properties.

Vision 3

Linda Barrera, Jeffery Kernen, Matthew McCluney, Robert Morris, and Michael Varien



Figure 16: Final concept for Vision 3.

Overview

The third team envisioned the Nicolai site as the anchor for an eco-district. The two primary buildings would be an Eco-industrial Innovation Center and an Eco-emporium. As a green industry cluster, this vision has a strong focus on sustainable transportation, ecology and civic engagement as important goals.

The employment anchor for the site is the Eco-industrial Innovation Center (EIC). Eco-industrial refers to manufacturing in which businesses;

- Cooperate with other businesses and with the local community in an attempt to reduce waste and pollution;
- Efficiently share resources, such as information, materials, water, energy, infrastructure, and natural resources; and
- Help achieve sustainable development, with the intention of increasing economic gains and improving environmental quality.

As an innovation center, there would be a focus on developing new ideas or methods. This would occupy the existing large central building on the Nicolai site, using flex space ideas (discussed more in the “Build-out” Section) to increase the adaptability of the interior to meet the needs of various tenants.

The Eco-emporium would be a complementary commercial retail building constructed on the west end of the property. The Eco-emporium would also serve as a social destination with spaces designed to take advantage of the hillside views to the south of the property. The very construction of this building would support and advertise the green nature of the project.



Figure 17: Eco-Industrial Innovation Center.

The team proposes a biophilic design, which brings natural elements and patterns into the construction of the building. This type of design recognizes humanity's inherent connection to nature and optimizes the restorative benefits access to nature provides. Capitalizing on the benefits that nature provides increases worker productivity, which translates to an increase in profit for businesses.



Figure 18: Eco-Emporium.

This vision specifically calls for the development located on the Nicolai site to serve as a catalyst and leverage point for an eco-industrial green corridor linking the Nicolai site, Booth Kelly, and South A Street. From the foundation of the Nicolai site businesses a cluster would emerge.

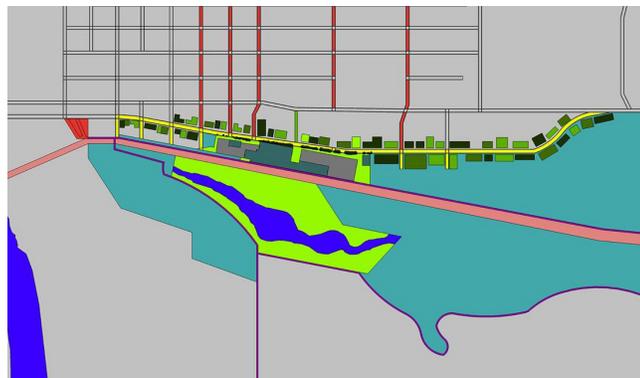


Figure 19: Eco-District.

Business clustering is a geographic concentration of similar or related firms drawing competitive advantage from their proximity to each other. The clustering enables networking and access to skilled workforce, increases bargaining power, draws competitive advantages from proximity to competitors, and creates a shared base of sophisticated knowledge about the industry (Oregon Business Plan, 2012).

To increase the site's connectivity, this vision proposes a comprehensive transportation network, increased circulation on and to the site, and the incorporation of already existing goals of the Metro, LTD, and Springfield Refinement plans. The transportation network would consider the needs of cars, bicycles, pedestrians and transit users. These modes of transportation would also be considered with on-site circulation. This plan works to interface with the proposed corridors of the Downtown Urban Renewal Plan to create a larger network.

Ecological considerations for this plan include native planting, green paving, streetscaping and stormwater management.

- Native planting follows environmentally sensitive principles and reduces the need for irrigation infrastructure.
- Green paving in parking areas provides a penetrable landscape that is friendlier to area weather patterns than asphalt or concrete.
- This vision proposes a redesign of South A Street which gives more focus to pedestrians, bicycles, transit, and the unique character of the street.
- Stormwater would be managed through a system of landscaping, bioswales, retention ponds and green roofs.

All of these elements would emphasize the green nature of the businesses while providing a more attractive environment.

Civic engagement would be achieved by inviting diverse social networks onto the site, fostering a node for green business training, bridging the Nicolai site to downtown and the surrounding neighborhoods, and preserving historic aspects of the site.

- Recreation spaces in the Eco-emporium would accommodate social activities.
- A range of zoning from Mixed-use Commercial to Mixed-use Employment would allow for training in the Eco-emporium and more industrial uses in the EIC.
- Increased activity on the property would create a connection between downtown and the surrounding neighborhoods.
- Maintenance of the Nicolai building itself creates a link to the history of the site and city.

By encompassing the entire scope of green industry, which includes any enterprise that has no negative impact on the global or local environment,

community, society, or economy, this vision provides a flexible base that can accommodate many different businesses and activities through its lifetime.

The State of Oregon recognizes green industries as a viable sector for employment growth. Springfield and the greater metro area's development plans describe an emphasis on having a responsible impact on natural resources (Krumenauer, 2011). This plan sets the Nicolai site as a model for future development for the City of Springfield and a means to bridge industry, commerce, ecology, creating a distinct community identity and sense of place.

Elements

Buildings

The three buildings in this plan are the main building, which would become the EIC, the smaller existing building on the east end of the property, and the proposed new construction, the Eco-emporium. The smaller existing building has no proposed changes, and would continue to house its current tenant of scrap metal processing as a form of green business.

Much of the historic nature of the main building would be preserved in this vision. Retrofitting and preservation would aim to keep the building in good condition while maintaining the look and materials to the greatest extent possible. The wooden beams and lengths of space are considered of particular value for their rarity.

To increase the potential uses of the EIC without major alterations, the vision proposes a flexible workspace design for the interior. Flexible workspace is a design concept that uses deconstructable walls to allow for a variety of space and size needs and changes over time through business succession.



Figure 20: Flex Space (DIIRT 2013).

The idea is that space can be manipulated to meet the needs of employers and employees. The only major external change would be the replacement of the northern wall with storefronts to increase the public's access to the property.

The Eco-emporium building would be constructed using sustainable design and green building standards. In this scenario, the ground floor consists of retail and space for social networks to gather. The design elements of the building would take into consideration the restorative benefits of natural views and connections to the Mill race.

Transportation Network

Suggested transportation enhancements are aimed at improving access for active transportation.



Figure 21: Proposed Circulation Around Nicolai.

Bicycles

The bicycle lane of South A Street would be separated from traffic by a landscaped median, with breaks at entrances to allow vehicles to turn onto the site. The 11th Street Alley would be converted to a bicycle/pedestrian corridor to increase access to the site and complete a bicycle route that loops through downtown. An additional bicycle trail would be constructed parallel to the railroad tracks along the southern edge of the property as an Eco-Industrial Bike Trail.

Pedestrians

To create a more pedestrian-friendly environment, the fencing along South A Street would be removed, and the sidewalk widened. The traffic on South A Street would be slowed and pedestrian crossings made safer with bulb-outs and enhanced textured or raised crossings for greater visibility.

Transit

The plan supports an extension of the bus rapid transit system, EmX, along South A Street, including a stop in front of the Nicolai site at 10th Street.

Automobiles

Car access would be increased to all areas of the site, and ample parking would be provided. Delivery vehicles would be restricted to two of the five entrances.

Landscaping Elements

The limited provision of open and public space, sustainable water retention practices, green-conscious buildings, and community parks within close proximity to the site informed the landscaping approach in this proposal. The parking lots would be heavily landscaped with green pavers, and native plants such as Big (Oregon) Maple, Ponderosa Pine, Oregon Grape and Oregon Iris. These plants are adapted to the local climate, and require significantly less maintenance than non-native plants. The street front would similarly be landscaped. A retention pond is also planned for stormwater management between the EIC and the Eco-emporium.

Phasing

The phasing for this development is a gradual unfolding over 20 to 30 years.



Figure 22: Final build-out of Vision 3.

Phase 1

The first 6 months would involve the zoning change from Light/Medium Industrial (LMI) to Mixed-Use Employment (MUE) and Mixed-Use Commercial (MUC). This sets the legal foundation for further development to occur.

Phase 2

Year two would be spent retrofitting the main building into the EIC.

Phase 3

Years three and four would include landscaping of the eastern parking lot and the South A street front.

Phase 4

In the following 2-5 years (the fifth through ninth years of the project), the Eco-emporium would be built, and the eastern parking lot surrounding it would be landscaped, including the stormwater retention pond.

Phase 5

As the Eco-emporium became established over 2-5 years, this time period would also focus on the redesign of South A Street, with all of its traffic calming and improvements to active transportation.

Phase 6

The final phase is anticipated to take between 10 and 20 years, and would involve the expansion of the green cluster down much of South A Street, and the development of bicycle trails to tie together the Eco-industrial area.

Over the span of this development, each element could build on previous elements to create a vision for the future of the Nicolai site that includes greater neighborhood connectivity, site beautification, and environmentally-conscious building design and business tenants as the foundation upon which the seeds of new economic activity can grow.

Vision 4

Sarah Allison, Michael Corrente, Garrett Jensen, Andrew Louw, Scarlett Philibosian, and Casey Weisinger



Figure 23: Final concept for Vision 4.

Overview

The fourth team developed a vision with two broad goals: establish an employment center and create a destination woven into the fabric of Springfield. As an employment center, the Nicolai site would be the center of a cluster focused on innovative wood products. This use would require newly constructed buildings and modifications to existing structures allowing for new uses. The vision also uses the site's historic qualities and proximity to the developing Mill Race Restoration Project to create a place of social value. The Nicolai site would become a connection point of trails for bicycles and pedestrians, public transit, and vehicular traffic.

The timber industry has been a foundation of the Oregon economy for over a century, but changing regulations and lack of competitiveness have reduced its impact, leaving a void for many communities once reliant on the industry. An innovative wood products cluster would serve as an anchor to bring renewed international competitiveness to the industry. Springfield has a concentration of Oregon timber employment and a central location making it an ideal city to base such a cluster (Lehner, 2012). Establishing this cluster would create a stronger and more diverse foundation of businesses in Springfield, establishing new relationships and partnerships between businesses in the region.

The primary tenant in this vision is a woods manufacturer using an innovative form of production that pushes the envelope for production, also benefiting from supporting businesses on site such as research and development, training, and education. One example is cross-laminated timber (CLT). CLT is a European

innovation made by laminating and pressing smaller pieces of wood together at right angles to create a solid sheet. This sheet has valuable construction properties such as;

- Strength comparable to steel or concrete;
- Resistance to fire and earthquakes;
- Sound and energy insulation; and
- A much faster installation time than standard frame construction.

Cross laminated timber (CLT) is environmentally friendly as it utilizes wood traditionally considered waste material - reclaimed, insect-infested, or other compromised wood. It can also promote the preservation of old-growth forests by allowing less mature trees to be used for load-bearing construction. The use of CLT reduces the need for steel and concrete production, which have a much greater environmental impact. The site could also use a bio-fuel co-generation plant to produce much of its own energy using waste materials from the manufacturing and the timber harvesting waste produced in the area.

A manufacturer of such a product would be innovative in two ways: 1) there are only a few such producers in the US, and 2) CLT is a product that can be further developed in terms of sourcing, process, efficiency, scale, application, and quality. This makes research and development a key part of the cluster with different employment opportunities and potential applications.

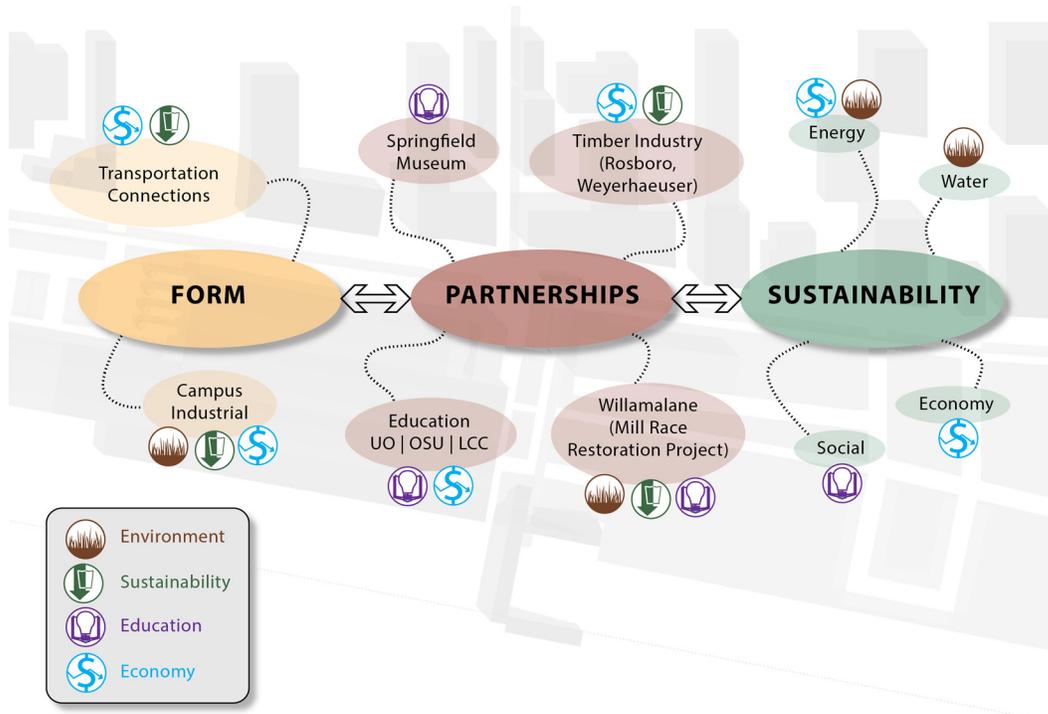


Figure 24: Partnerships for the Sustainable Timber Vision.

CLT also calls for training and education as components of the cluster. The training would be for the local workforce, giving workers the skills to operate and maintain the machinery, as well as other specific skills needed. Education would also be needed for the application end of the process. Architects, engineers, developers and construction workers would need to learn how to use the product once it becomes available.

In establishing this cluster, there are a number of local partners readily available. The manufacturer itself could come from any local woods manufacturer. The process is similar enough that CLT would simply be a new product line for someone who currently makes Glulam (another composite wood product that is produced by several local companies). Wood sourcing could come locally from timber harvesters who would be able to reduce their waste by providing material for CLT. Education and training could come from Lane Community College (workforce training), the University of Oregon (architectural courses) and Oregon State University (sustainable harvesting techniques).

In order to establish the Nicolai site as a part of the social life of Springfield, this vision also includes partnerships with Willamalane Park and Recreation District and the Springfield Museum. Willamalane, in partnership with the City of Springfield, is responsible for developing the Mill Race Restoration Project, a park located just south of the Nicolai site, built around the original waterway constructed to serve the local timber industry and other mills. Because the park has limited access, this vision proposes a bicycle/pedestrian bridge connecting the park to the residential areas to the north through the site.

To celebrate the intersection of the Mill Race and the historic Nicolai site, a partnership with the Springfield Museum was envisioned. The museum could have a new branch on the Nicolai site that looks at the Mill Race as the beginning of the timber industry in Springfield, and to the sustainable timber cluster as the future.

With multiple but connected employment opportunities, and draws for the public, this vision hopes to transform the Nicolai site into a vibrant location, serving the property owner, and the city of Springfield on multiple levels. The property owner would increase utilization and therefore profit, and develop the long-term value of the property. The city would gain a new economic driver that utilizes and draws a wide range of skills and educational levels, and a civic establishment to celebrate its history and future.

Elements

Buildings

This vision uses most of the existing buildings with a few modifications. The primary building would contain the manufacturer, and would be physically divided into two sections. The eastern third would serve as warehousing and storage of

both raw and finished materials. The western two-thirds would contain the actual manufacturing.

Between them would be open space for the path leading to the bicycle/pedestrian bridge. A corridor could connect the storage and manufacturing areas beneath that bicycle/pedestrian bridge. The western portion of the building would lose some of its frontage on South A Street to allow for a more pedestrian-friendly walking experience. Other changes would be internal and dependent on the needs of the manufacturer. The building could be expanded to the west if the producer grew to need more space.

The second large building on the far eastern section of the property would remain structurally the same, with internal adjustments as required for research and development uses. The small office spaces would be demolished. New construction would include the training/education facilities, the museum branch with some administrative offices attached, and the bio-fuel co-generation plant. The vision also includes future building space without specific uses assigned. The implication is that with an innovative cluster, new technologies and advances will create new needs and opportunities, which the site has room to accommodate. All of these new buildings could be constructed with the CLT produced on site, serving as a market, showplace, and training ground in addition to their final function.

Transportation Network

To improve access to the site, this vision addressed transportation issues around South A Street, a bicycle/pedestrian network, and parking needs.

South A Street is currently a one-way street going east. This vision adopted the Downtown Vision Plan's intention to make South A two-way, and incorporated LTD plans for an EmX expansion along South A. The vision calls for a significant expansion of the road to accommodate two lanes of traffic each way, two bike lanes, expanded sidewalks, and a center dedicated EmX lane. There would also be on-street parking on both sides of the street. The vision has an EmX station at 11th Street Alley to intersect with a proposed bicycle/pedestrian path from Main Street to the Mill Race bridge. There would be an enhanced pedestrian crossing at that point, connecting with the EmX station. These changes are intended to slow traffic, and create a safer, more pleasant experience for people using active transportation.

The bicycle/pedestrian network would include the lanes and sidewalks on South A Street, the 11th Street Alley path and its extension through the Nicolai site, and connections to other networks such as a bicycle loop through downtown. There would be paths on the Nicolai site connecting the various buildings, paths within the Mill Race Restoration Project, and other bicycle paths on city streets. There would be a particular effort to make active transportation (walking, biking and taking transit) just as convenient as car travel. This would include bike racks at the Nicolai site.

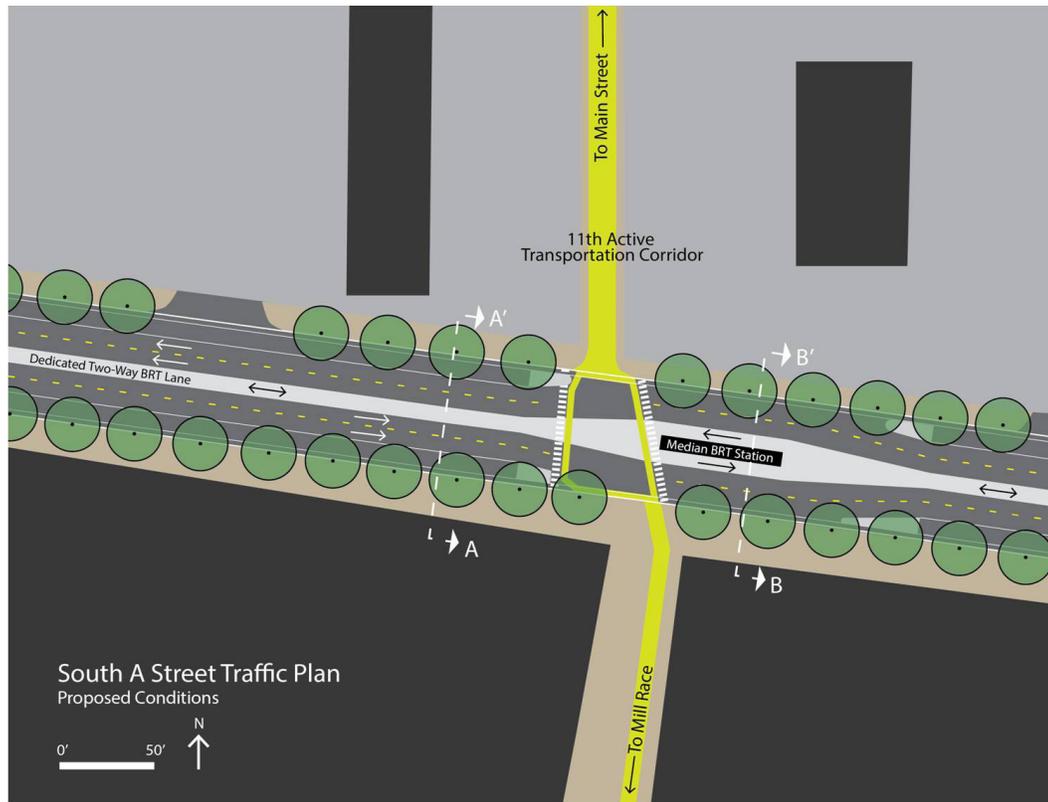


Figure 25: Transportation improvements.

Parking needs were determined based on employment projections, mitigated by ease of transit access. As the site develops over time, most parking needs could be accommodated through surface parking lots, street parking, and podium parking within new buildings. Only in the event of an expansion of the manufacturer or new buildings being developed would parking needs overtake surface availability, in which case a parking structure would be required. Parking structures are a considerable expense, but are a more efficient way to accommodate parking in a dense environment. If the cluster is doing well enough to justify expansion, the resources might be available for an investment in parking as well. This might also serve as an opportunity for a public-private partnership.

Landscaping Elements

The vision proposes a system of landscaped areas to allow water to infiltrate into the ground, primarily composed of bioswales along major paths feeding into a detention pond. All parking would be landscaped to slow runoff and filter out pollutants. The new museum building would also have a green roof, allowing some storm water to be managed before it reaches the ground. What runoff does reach the drains would be filtered with trash screens.

Phasing

The development envisions four phases – Phase 0, 1, 2 and 3.

Phase 0

Phase 0 is a year-long planning phase including:

- Citizen and local business engagement
- Establishing partners for the development
- Setting code changes
- Establishing development incentives
- Zoning change from light/medium industrial to campus industrial
- Establish public easement for bicycle/pedestrian path

Campus industrial zoning supports development by encouraging research complexes while allowing for light manufacturing, and supports the mix of public and private uses that the team wanted to promote. The public easement is intended as a form of insurance for the path. With so much future development planned around the corridor connecting the city to the park, it is important to make it non-negotiable for the property owner. The development still adds value for the owner, but with an easement, the case can be made once and finalized. By committing to this foundational work, further development would be better planned for and fewer mistakes or oversights would be made.

Phase 1

Phase 1 would include the first physical changes to the property. Over the course of approximately five years, a series of construction projects and occupations would take place.

- Division of the main building
- Initial path construction
- Bioswale and detention pond stormwater system
- Modification to the street side of the western building for wider sidewalks
- Plaza construction
- Occupation of site by manufacturer
- New R&D/training/education/administration building constructed (ideally from materials produced on-site)
- Landscaping of parking lots
- Beginning of South A Street modifications
- 11th Alley conversion into a bicycle/pedestrian corridor

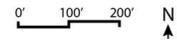
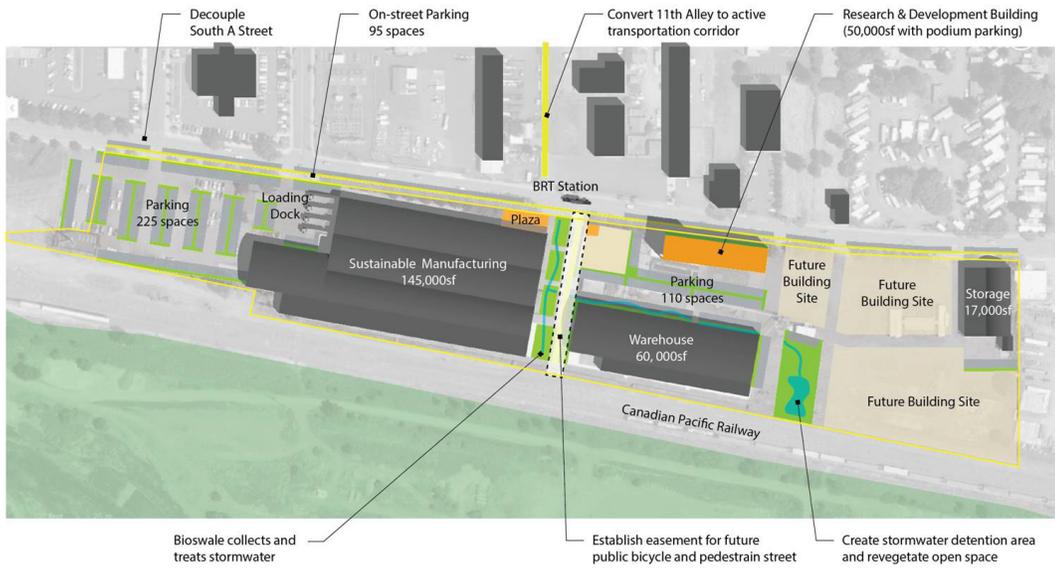


Figure 26: Phase 1.

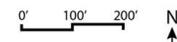
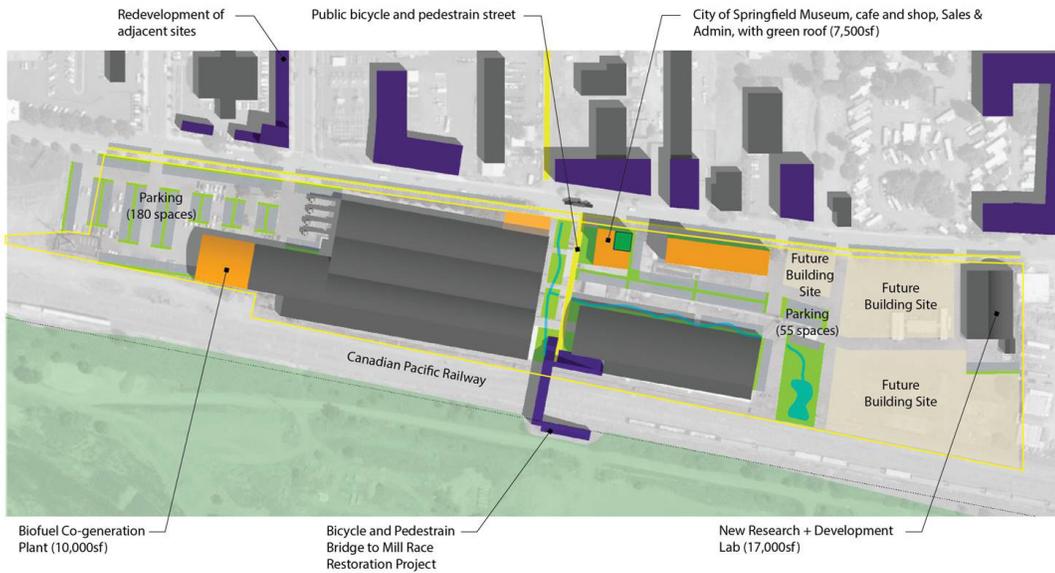


Figure 27: Phase 2.

Phase 2

Phase 2 would take place over the next five years, completing the network of on-site amenities.

- Construction of the bicycle/pedestrian bridge
- Construction of the corridor beneath the bridge to connect the two buildings
- R&D would shift intensive operations to the far eastern building
- Construction of new building to house museum, café, shop and administration
- Construction of the bio-fuel co-generation plant

Phase 3

The final phase is a statement to the nature of cluster development. Phase 3 makes room for:

- The expansion of the primary manufacturing facility, and
- Four new buildings on the eastern end of the property.

For the most part, the specific uses of these buildings are not established. Because one key element of this cluster is innovation, the assumption is needs and opportunities will arise from that innovation that cannot be identified at this point. The use currently identified is the new construction which will encompass the current surface parking. One of the new buildings would need to contain structured parking to compensate for lost surface spaces. This presumes that parking needs and requirements are roughly constant in the next 15 years or so.

Over the course of these phases, a tangential intention is the development on the Nicolai site will spur development on other sites in the area. The partnership element of the vision, as well as transportation investments, should create an environment where more activity draws more business, drawing more people, and creating an active, sustainable hub for the benefit of the city.

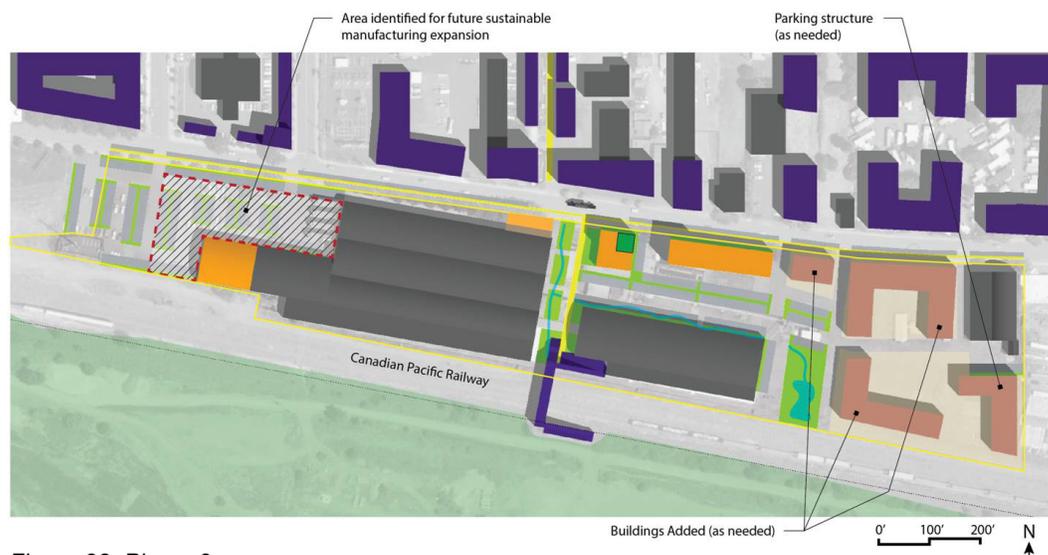


Figure 28: Phase 3.

Conclusion

The Nicolai site is a large property with a single owner in the heart of historic Springfield. It is bordered by downtown, a large historic park, a state highway and a rail line. In spite of this location, it feels removed from the city, easy to miss, and underutilized. Four different approaches have been examined to integrate the site into the city physically, economically, and socially. Different uses of the site would affect the specific development, but there were common themes throughout the approaches.

Slow down South A Street

The speed of traffic plays a large role in separating the site from the city. To get people to access the site it must feel safe to cross the street. Bringing modes of travel, other than the car, into the mix and giving them space can have a big impact on how accessible the site feels.

Connect to the street and the Mill Race

A barbed-wire fence is not inviting. Whether through widened sidewalks, plazas, storefronts, or paths, each plan offered ideas for how to bring people into the site from the street. If people can access the park through the site, it creates multiple reasons for the property to serve as a destination.

Foster innovation

The city needs sustainable employment options for businesses, employees, families and the environment. The employment uses all incorporated some kind of innovation – cutting edge businesses, training centers, and research facilities. These kinds of businesses can keep the economy moving forward rather than getting stuck in old patterns.

Support relationships

A single business can be isolated. The Nicolai site has the potential to be much more by becoming a nexus of relationships. Every plan worked with the idea of clusters – businesses existing together for mutual benefit. Public institutions were a common theme. Places for individuals to gather are another piece of the relationship puzzle. A place where people and organizations are brought together to flourish will engender local support for the community.

Honor historic legacies

The city of Springfield began with mills and a mill race. This site has so much history embedded in it, from its uses to its architecture to the park across the tracks. If that history can be honored in the development of the site, it will give the property that much more value.

The Nicolai site has tremendous potential. If any of the visions described here inspire the development of that potential, the work will be well worth it.

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