

THE CONFLUENCE

Lincoln Station Development

-University Place Hotel Reuse Plan-

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I. Executive Summary

The development process for our group began with an initial visit to University Place and Lincoln Station within the South of Market Ave. (SOMA) EcoDistrict to get inspiration. We observed the buildings and the natural environment, and walked various routes in and out of the area. We observed the flows of, and sometimes, the lack of people and activity. We interviewed various stakeholders, took pictures and asked questions. We brainstormed and created visions for a sustainably developed South Auditorium District that emphasizes connectivity, adaptive reuse strategies, responsibly captured, stored, and used water and energy, and applied green infrastructure techniques. We also envision gathering spaces and connectivity methods all within a specific place-based context.

We were guided by design principles and they serve as our methodologies and inspiration by which we arrived at our recommendations for University Place.

- Civic Ecology
- Universal Design
- Regenerative Design
- Permaculture Principles

Civic Ecology, according to [SERA Architects](#), is a framework for sustainable communities that focuses on the “integrated web of energy, nutrient, resource, financial, information, and cultural flows and interactions that are envisioned, created, and managed by citizens acting for the common good within a geographically-defined community and its city-region. It is a human ecology of place, intimately integrating both natural and socio-cultural systems. It is the ‘software’ of community.” The Civic Ecology framework is designed to promote social capital and empowers citizens to participate in the making and taking care of their community.

Communities with a strong sense of Civic Ecology share several essential qualities, which are separated into [five principles](#):

- 1. Employ a whole systems approach
- 2. Focus on place
- 3. Require a new social contract
- 4. Match needs and assets

- 5. Are dynamic



Figure 1: Applying Civic Ecology

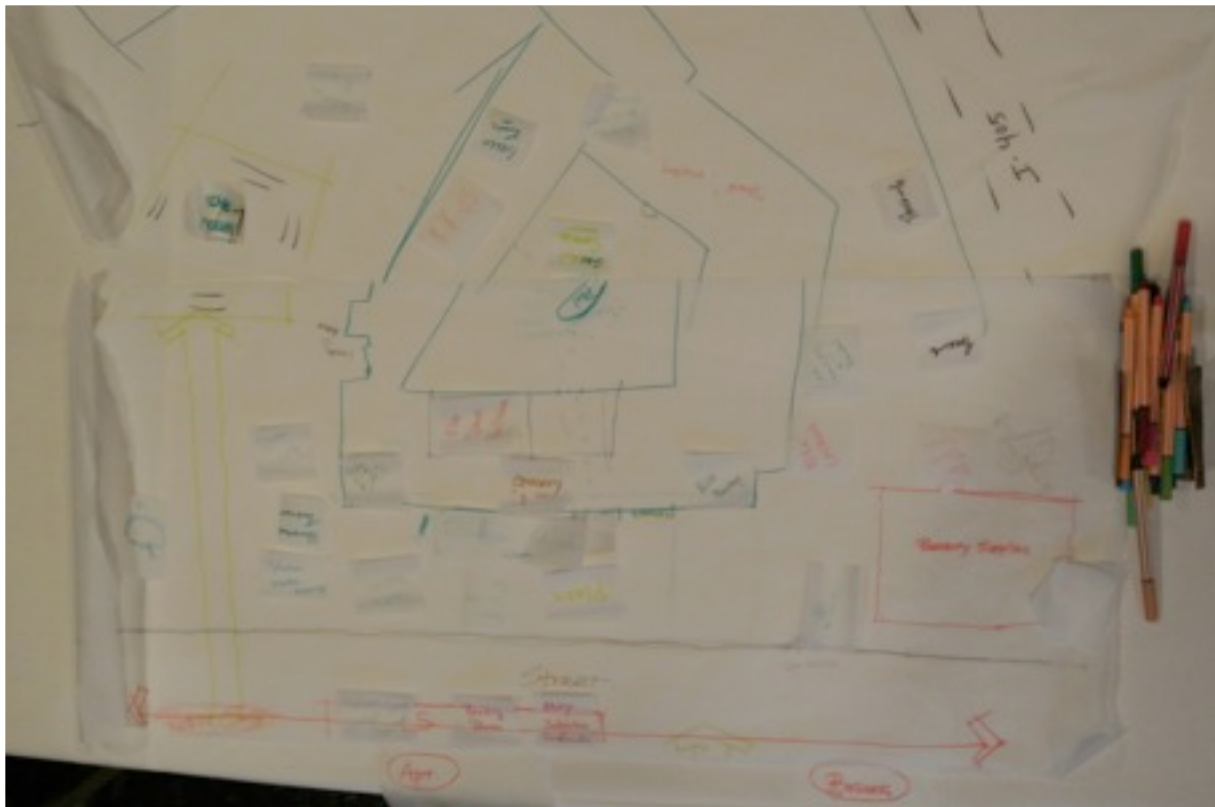


Figure 2: Civic Ecology Concept Drawing

Universal Design is a design technique intended to serve people with disabilities as well as people without disabilities, and has a lot of overlap with sustainable or green design. Universal design doesn't cost more than traditional design and isn't inconvenient to those without disabilities; in fact, universal design is seamless. It considers design needs for children to the elderly. When designing with these principles in mind access and ease of use for example, are thoughtfully taken into consideration at all levels.

Regenerative Design is based on systems theory and is a process-oriented approach to design which focuses on creating systems (social, political, economic) that restore, renew or revitalize their own sources of energy and materials. There may not be an end goal of regenerative design as it is more process-oriented in developing systems that allow for the co-evolution of the human species along with other thriving species. Regenerative design looks for ways of doing things that are mutually beneficial to sociocultural and ecological systems and aims to restore degenerative systems rather than simply minimizing negative impact or lessening ecological footprints.

Permaculture Design is a philosophy and method of design based on the ethics of care of the earth, care of people and return the surplus, and the ecological principles of: 1. *Observe and interact*: By taking time to engage with nature we can design solutions that suit the particular context. 2. *Catch and store energy*: By developing systems that collect resources at peak abundance, we can use them in times of need. 3. *Obtain a yield*: Ensure that you are getting truly useful rewards as part of the work that you are doing. 4. *Apply self-regulation and accept feedback*: We need to discourage inappropriate activity to ensure that systems can continue to function well and resiliently. 5. *Use and value renewable resources and services*: Make the best use of nature's abundance to reduce our consumptive behavior and dependence on non-renewable resources. 6. *Produce no waste*: By valuing and making use of all the resources that are available to us, nothing goes to waste. 7. *Design from patterns to details*: By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go. 8. *Integrate rather than segregate*: By putting the right things in the right place, relationships develop between those things and they work together to support each other. 9. *Use small and slow solutions*: Small and slow systems are easier to maintain than big ones, making better use of local resources and producing more sustainable outcomes. 10. *Use and value diversity*: Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides. 11. *Use edges and value the marginal*: The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system. 12. *Creatively use and respond to change*: We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.

These design principles influenced our process and plans due to their practical guidance and creative problem solving parameters. They helped our team to make actionable decisions and verify them to both whole systems design frameworks, as well as more specific, climate and eco district action plans. Our chosen principles influenced goals and objectives for our plan, but also left out overly restrictive rules that truncate adaptive management flexibility. Additionally, our

design principles added awareness of resilience management and vulnerability assessment that other frameworks do not stress. We found working with additional design strategies rigorous but overall more beneficial for setting values and mindset for approaching the project.

II. Background Information/Existing Conditions:

A. University Place Hotel

Address: 310 SW LINCOLN ST, Portland OR 97201.

University Place is a full service hotel and convention site built in 1970, 116,593 square feet (basement is 3,009 square feet), market value \$19,033,150.00. On tax roll as South Auditorium. It is located on commercial land, comprised of 3.86 acres and 168,163 square feet.



Figure 3: Map of University Place and Surrounding Area

B. History

According to the [Central City Natural Resources Inventory](#), “historically, the Willamette River in the Portland area was comprised of an extensive, interconnected system of active channels, open slack waters, emergent wetlands, riparian forests and adjacent upland forests. Today, the

Downtown District is a largely developed landscape. The predominant existing natural resource is the Willamette River, including the flood area and vegetation along the banks. Elements of the built environment also provide limited natural resource functions, including street trees, ecoroofs and vegetated landscaping.” Due to development, the South Downtown area leaves much to be desired in terms of restoring native functional habitat that brings about both social and ecological benefits.

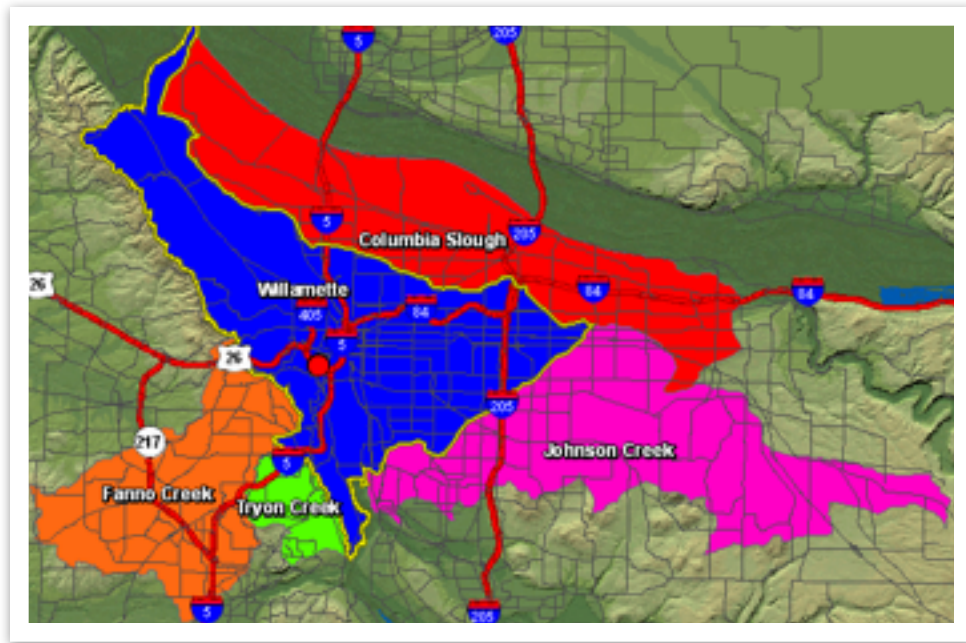


Figure 4: University Place within the Willamette Watershed



Figure 5: University Place within the Marquam Woods Area

C. Budget

The budget as per an interview with PSU's Executive Director for Auxiliary Services & Capital Finance, Don Forsythe and Rani Boyle, Associate Campus Planner, shares that the University Place Hotel has lost money from the beginning. The building and land were purchased at the height of the market for 19 million in 2004 to land bank 3.8 acres for PSU properties. PSU purchased hotel furniture and fixtures at additional cost. Additionally, it must pay higher wages because it's a state agency thus minimizing profit margin. Operating costs are about \$455,000 per year. The money lost on this venture requires that the strategy for future projects be economically viable and rewarding.

Current appraisal: Still in draft - unknown

Public and private partnerships are necessary for development for access to resources, matching needs to assets and for a profitable venture, i.e. land lease for rental housing, grocery store, and pharmacy. PSU considering selling lot to purchase land closer to core of campus i.e. Trimet lot on Lincoln and 4th. Third parties, such as Dao Architecture are evaluating highest and best use and all options are on the table.

D. Zoning Information

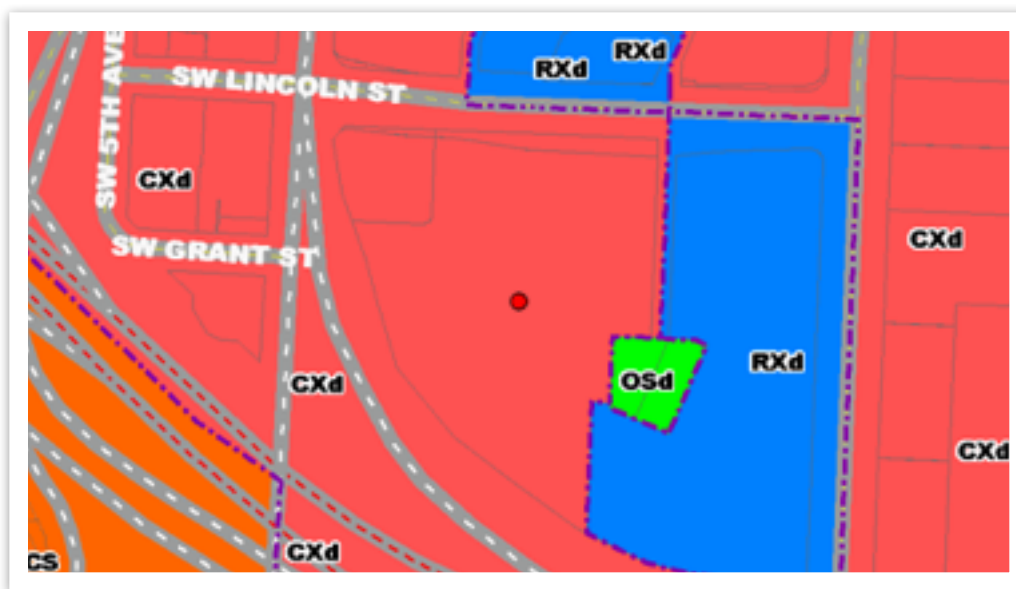


Figure 6: Zoning for University Place and Surrounding Area

University Place lies within the [North Macadam Urban Renewal Area](#). The zoning is for [CX \(Central Commercial\)](#) zone which is intended to provide for commercial development within Portland's most urban and intense areas. A broad range of uses is allowed to reflect Portland's role as a commercial, cultural and governmental center. Development is intended to be very intense with high building coverage, large buildings, and buildings placed close together.

Development is intended to be pedestrian-oriented with a strong emphasis on a safe and attractive streetscape. Land use emphasis is mixed with incentives for residential.

Central City and South Auditorium Plan Districts (CCSA): This area is an overlapping of the [Central City Plan District](#) and the [South Auditorium Plan District](#). Please see the individual sections for each plan district for regulations.

[Central City Plan District \(CC\)](#): The Central City plan district implements the Central City Plan and other plans applicable to the Central City area. These other plans include the Downtown Plan, the River District Plan, the University District Plan, and the Central City Transportation Management Plan. The Central City plan district implements portions of these plans by adding code provisions which address special circumstances existing in the Central City area.

[South Auditorium Plan District \(SA\)](#): The South Auditorium plan district protects the unique character of the former South Auditorium urban renewal district. The district is an award-winning development, with its high-rise buildings, generous setbacks and landscaping, numerous plazas and fountains, and elaborate pedestrian walkway system. Maintenance of this character is achieved by requiring additional landscaping requirements, the preservation of existing trees, screening of rooftop equipment, and additional sign regulations which limit the type, number, and size of signs.

Overlay Zone: Design (d) overlay zone: The Design Overlay Zone promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value. This is achieved through the creation of design districts and applying the Design Overlay Zone as part of community planning projects, development of design guidelines for each district, and by requiring design review or compliance with the Community Design Standards. In addition, design review or compliance with the Community Design Standards ensures that certain types of infill development will be compatible with the neighborhood and enhance the area.

E. Traffic Information

New proposed Lincoln Station lies at a critical transition point between residential and university uses. The station is located closely adjacent to the PSU owned University Place Hotel and surrounded by apartments and office buildings, creating a unique sense of live and work neighborhood in South Market(SoMa) Eco-district.

However, as one of the main gateways of downtown Portland, the University Plaza area is isolated by automobiles passing through the downtown along SW Naito Parkway and 4th Avenue daily.

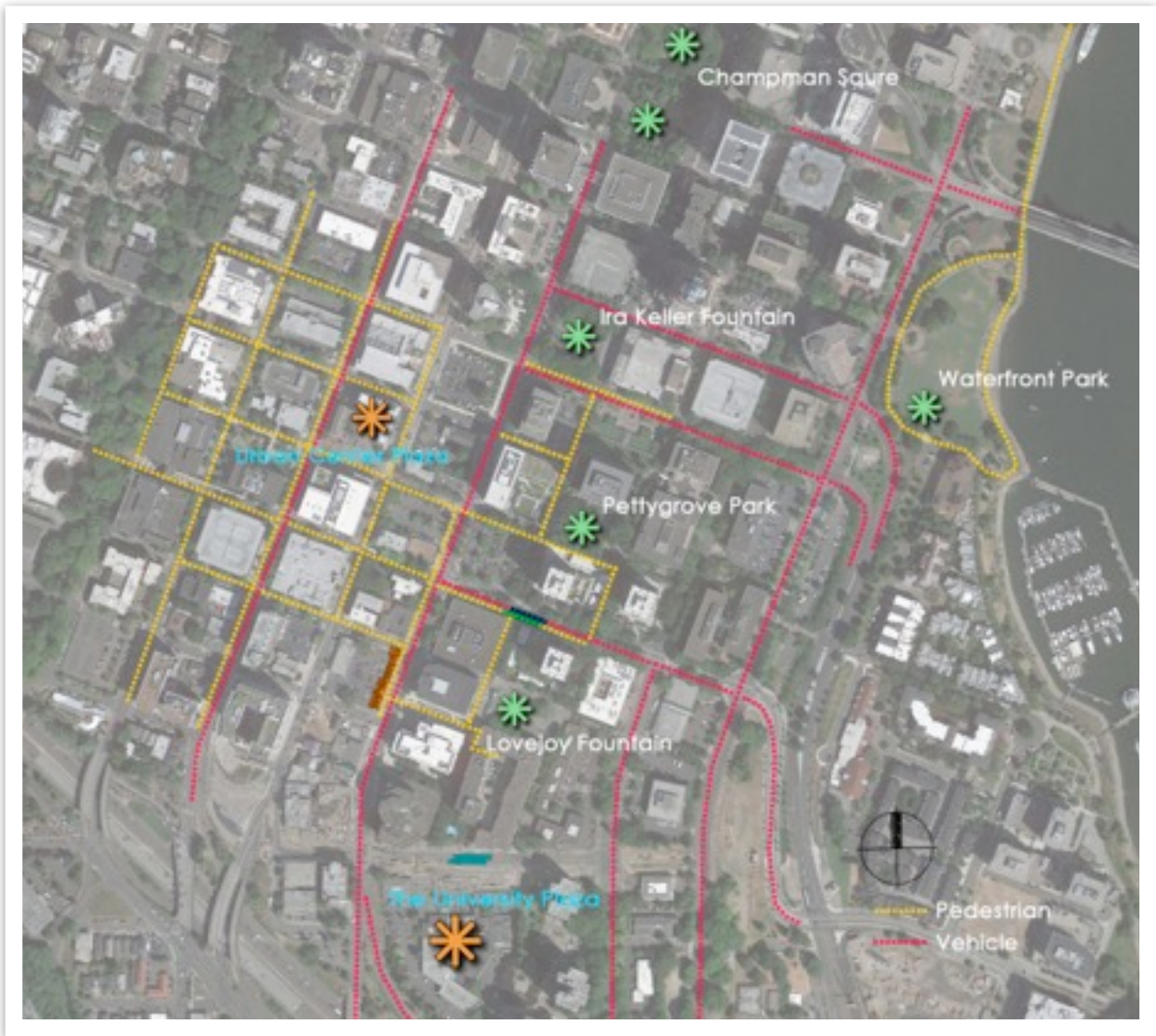


Figure 7: Traffic Analysis

Pedestrian movements normally occur only within the university area creating physical and psychological boundaries between PSU and the University Plaza. While pedestrian and bike traffic frequently occur along the Lawrence Halprin Open Space Sequence from south to north, the east-west connection of the area shows less vibrant.

Even though the focus area has a locational benefit to Waterfront Park, walkable pathways to the park are disconnected by vehicle traffic along SW Naito Parkway.

III. Efficient Management of the Built Environment

When developing a Sustainable Energy Plan for Lincoln Station, we were guided by three (3) distinct focus areas: District Utilities (the district HVAC system), the built environment (new development), and Green Infrastructure. More than 50 percent of the SOMA Ecodistrict is owned by PSU; and many of the buildings within the university structure are run off a centralized utility grid, with an expansive array of underground pipes pumping steam, hot-water, and chilled water to each building within the grid. District systems help to eliminate (or decrease) the capital costs of individual boilers in buildings and reduce staff costs for operating and maintenance by centralizing personnel. Additionally, the development of a district monitoring system, which effectively tracks utility usage and cost by streamlining business processes, will be most efficient with an interconnected system of utilities. The issue here is that not all of PSU's buildings are connected to the existing grid. SOMA's district utility strategy, set back in 2010, was to expand PSU's existing district energy system to serve additional PSU buildings, along with non-university developments. According to Noel Mingo, the Utilities Manager in the Campus Planning Office, "...there are [no] plans to expand the Steam and Chilled Water loops beyond their current footprint. The possibility exists to connect buildings that are nearby to the current location, but extending the loop to anything south of 5th Avenue is probably unlikely in the near future." When developing for sustainability, this connectivity will play an important role.

As far as development is concerned, this efficiency can be accomplished through sound ecological design. A review of possible choices and alternatives will be covered in the proceeding section. The following goals have been addressed in order to establish a framework for this discussion.

District Utility Goals:

1. Expand and upgrade PSU's existing system, connecting more buildings to the grid.
2. Consider the use of alternative fuels and renewable energy sources in order to fuel the HVAC systems more efficiently.

Built Environment Goals:

1. All new construction must be LEED silver certified (Portland Climate Action Plan)
2. Track and Prioritize high consumption building through the use of a utility management software, that links SOMA buildings into one database tracking usage and cost.
3. Consider retrofit/reuse of University Place, adding more retail and business.

Green Infrastructure Goals:

1. Integrate green infrastructure into urban design plans (I.e. green track for the Light Rail, permeable pavement, bike/pedestrian pathways, trees/vegetation, bioswales)

In order to strategize the implementation of the above goals, we must focus on Energy and Water in particular. By becoming more energy-efficient, and managing our water more ecologically, we can begin to realize a more sustainable environment.

A. Energy

For energy, we will focus on *1) District Utility Goals, and 2) Built Environment Goals* (see above). The following structure is provided to take into account when developing strategies and programs to meet these goals. In addition, we offer an alternative to generate energy from the Max Light Rail (see alternative 2).

Strategies: Reduce, Produce, Offset

Reduce energy use by 63% by 2035 (SOMA Goal); *produce* a greater percentage of the total energy used within SOMA from on-site renewable sources and clean district energy systems. (Portland Climate action Plan obj. 1); and *offset* energy use to create a balance in the system through the use of federal funding, carbon credits, etc.

At the Buildings/Infrastructure (hardware) level:

- New construction performance standard - LEED Silver Minimum on all new construction. This will not pertain to The Confluence, as most of our construction is limited to adaptive reuse and retrofit.
- Energy conservation retrofits (building) - Install more efficient HVAC, led lighting, and re-design for passive/natural lighting and airflow (by opening-up to the plaza).
- Energy conservation retrofits (smart grid) - Streamline utility usage (through the performance monitor).
- District energy - Expand the existing system.
- District renewables - Integrate alternatives within the system and tap into the cities renewables initiative (PGE wind energy).
- Property renewables - See Alternative 2 for a regenerative design proposal.

At the Community Action/Programs (software) level:

- Energy conservation challenge - Challenge the community to turn off lights, unplug appliances, etc.
- Renewables Challenge - Challenge the community to use more renewables (i.e. solar power and utilizing PGE's renewable energy initiative).
- District performance monitor - Utility tracking software utilized through PSU, or another third-party commission.

- Education campaign - Educate and advertise.
- Green Energy Offsets/Carbon Credits at the city and state level.

B. Water

For water, we will focus on *1) District Utility Goals, 2) Built Environment Goals, and 3) Green r Infrastructure Goals* (see above). The following structure is provided to take into account when developing strategies and programs to meet these demands.

Strategies: Reduce, Reuse, Reconnect, Offset

Reduce water consumption by 51% by 2035 (overall SOMA goal); capture and *Reuse* rainwater on-site; *reconnect* the water back to the system; and *offset* water use to create a balance in the system.

At the Buildings/Infrastructure (hardware) level:

- New construction performance standard - LEED Silver minimum
- Water conservation retrofits (building) - Install graywater systems, green roofs, and rainwater cisterns.
- Water conservation retrofits (right of way) - Bioswales, green track
- Stormwater retrofits (building) - Green roofs, rainwater collection cisterns, etc.
- Greenstreet retrofits (right of way) - Permeable Pavement, green track
- Property rainwater harvesting - Greywater systems and cisterns
- District rainwater harvesting - Through community action plans
- Property wastewater reuse - Graywater systems
- District wastewater reuse - Through community action plans

At the Community Action/Programs (software) level:

- Water conservation retrofits (right of way) - Encourage individuals to connect and share access to clean and reused water.
- Water conservation challenge - Challenge the community to use less.
- Stormwater challenge - Challenge the community to capture and reuse stormwater for gardening, and other non-potable uses.

- District performance monitor - Integrate a utility tracking software at PSU (the same program utilized at the energy level).
- Education campaign - Educate, advertise, around the community the importance of conservation
- Water reuse challenge - Challenge the community. Encourage individuals to capture, save and reuse their rainwater.

IV. Site Visit Findings

Bikes: Bike connectivity difficult from Hawthorne bridge bike lanes disappears on Naito Parkway and reappears on Lincoln Ave. Difficult to find a place to park bicycle at Lincoln Ave Max stop.

Cars: The 405 off ramp is close to building, most condo tenant rely on cars and own them. The hotel serves as hourly parking lot as well.

Parking: Currently used as AVIS car rental lot, university per hour car parking and hotel guests. Ample parking is available. There is also large vehicle storage and a loading zone for trucks.

Pedestrians: Walkability is accessible through Halpern corridor. Hazards in areas near 405 off ramp, max lines are present, especially with current construction activities.

Built Environment: The hotel is one large building connected to a restaurant. This gives the building two commercial kitchens. Two/three tall residential buildings stand just southeast of Lincoln Station. Large business buildings and strip malls are near. I- 405 is behind and downhill from the hotel.

Neighbors: Halprin Series Alley connects walkways from neighboring condo buildings four in total. In the condos right next to UP, there is an art park, featuring large art installation, walkways, small yard used mainly by dog walkers. Two office building are also very close, bringing lunch crowds, cars and social capital.

Ecological System: View of Willamette River mostly blocked by residential buildings. Forested West Hills visible. Small interconnected wooded areas along Halprin blocks but stops at Lincoln Ave. Access to Willamette River difficult with construction.

People Flows: There are not many people out and about, mainly people coming or going to work or out walking their dogs. Hotel used by small conference attendees, international students seeking living quarters and budget travelers. Do to the food desert found in the area, many residents drive to Safeway or walk into central downtown for cafes, restaurants and grocery items. Office building workers travel out of the immediate neighborhood as well.

Connectivity: There is no clear and easy way to connect to the Willamette River. University Place is on the edge of campus and at times feel far and out of the way. Neighbors rarely use the hotel facilities.

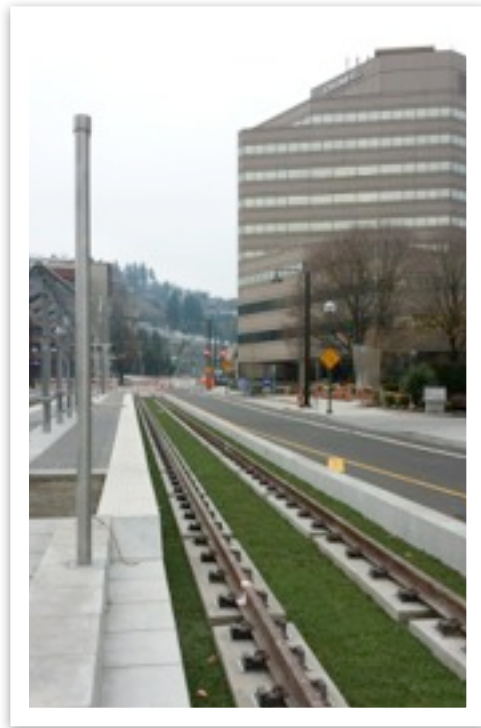


Figure 8: Green Track Installation at Lincoln Station



Figure 9: Pool and Courtyard Spaces



Figure 10: Hotel Guests Ample Parking

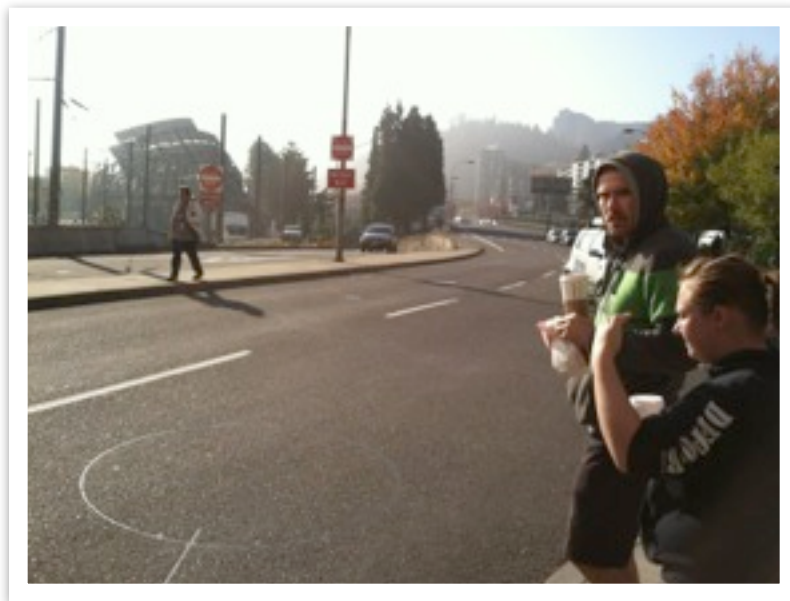


Figure 11: Walking east toward - difficulty crossing the I - 405 off ramp

A. University Place / Neighborhood Assets:

- Proximity to the Willamette River
- Nearby green space (forested West Hills, Park Blocks, Halprin park series)
- Edge between urban and educational districts
- Once referred to as the South Auditorium District (perhaps it needs a medium sized outdoor venue)
- 17 parks within one mile radius
- Business Park and area condos proximity supports retail opportunities
- New Max Station
- 1.3 acres developable space
- Two commercial kitchens
- Large and small conference rooms

B. Demographics

[According the PRIZM Market Segmentation Research](#) the demographics of the 97201 zip code neighborhood:

- Population: 16,260
- Median Age: 33.2
- Age Range Majority: 18 to 64
- Median Income: \$30,900
- Consumer Spend: \$489 MM
- Consumer Spend (\$/HH): \$56,096

Predominant segments of the population include: “65 Big City Blues” Lower mid middle age family mix, “Executive Suites” Upper mid middle age without kids, “54 Multi-Culti Mosaic” Lower mid middle age family mix, “31 Urban Achievers” Lower mid younger mostly without kids, and “59 Urban Elders” Downscale older mostly without kids.



Figure 12: Demographics for 97201 via PRIZM

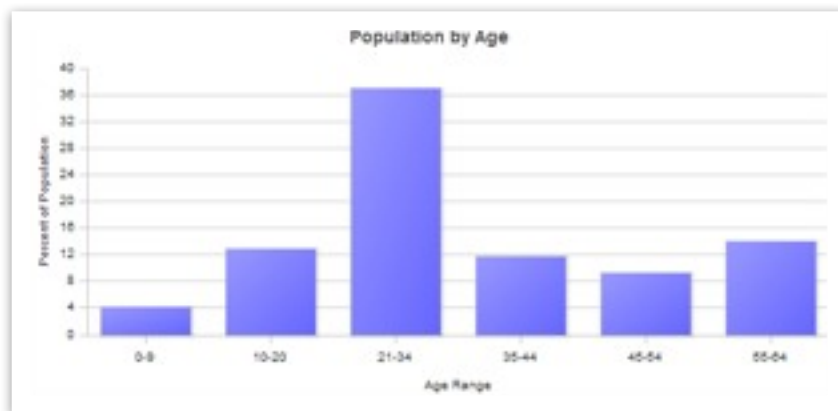


Figure 13: Population by Age

Most households consist of one or two persons without children, average income is less than \$25,000, the average age range is between 21-34 or 55-64, and are mostly white. Access to staple amenities such as a grocery store and nightlife events seem to appeal to cross market demographics based on the interviews conducted.

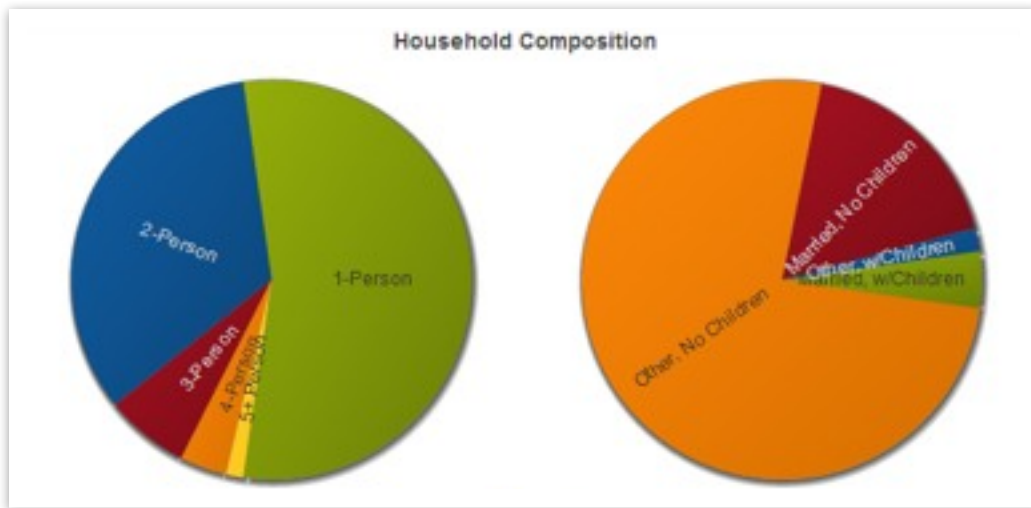


Figure 14: Household Composition



Figure 15: Households by Income

C. Interviews

Speaking to those apart of the neighborhood, hotel and project was so valuable to capture formal and informal activities, the soul of the neighborhood and the real constraints. This process helped match assets to needs and start conversations that opened doors of involvement of the social capital available and necessary for a transition. I liked the process as the “remember” stage in panarchy theory. This information from the previous stage helps guide the reorganization phase.

Interviews from 4 neighboring condo owners and 2 maintenance workers reveal specific requests for services such as: a grocery store, cafe and nightlife activities. Spaces to meet neighbors, including couples and small families moving into the units were mentioned for intergenerational connectivity and assistance to the many elderly or mobility challenged condo owners. Interviews

with Hotel's General Manager and Executive Director mentioned a need for small conference space and longer term housing, given current usage priorities. Don Forsythe also provide budget information and building history. Artist Elizabeth Connor says she is inspired by Halpern's spaces for public gatherings, movement and performance. She's created three pieces that give a nod to dance in space by creating work that catches the eye with flicker of movements and light and shadow. Specifics from the interviews as follows.

Condo residents, dog walkers, and elderly citizens:

Sam: Takes care of her husband, who can't leave the apartment. She wishes there was a cafe, grocery store and places for her to meet more of her neighbors. Traffic is a concern when she is walking or driving to Safeway for groceries. She only meets other dog walkers typically.

Helen: Loves that younger families are moving in. The culture is pretty bland, many people just going to work in offices around. Remembers a great jazz club that use to be in the neighborhood. Feels car dependent due to the location of services outside of the neighborhood.

Carol: Just moved downtown because of all the construction in Goose Hollow, likes that she can walk around town. She hopes to connect with some younger folks in her building. Maybe be more involved with PSU activities.

Neighborhood Resident

Max: The neighborhood is relatively safe and quiet given its downtown location. There are parks and plazas not used in the winter that make safe places to be.

Condo Property Management Personnel

Mario: Would like to see more live and work spaces given how Portland is growing. Great neighborhood to live in.

Luis: He would like to see more food options around.

General Manager at University Place:

Jill: General Manager at University Place. The hotel is a place for small events and a landing spot for international students, until they find another place to live. The hotel used to be an old 60 jazz club that was well known. Security is fine, plenty of parking and spaces for bikes. 235 Units for rent in the hotel, two large meeting rooms, 6 small meeting rooms. These are bargain rates between \$77 - \$ 159. There is a full commercial kitchen. Space is surrounded by office buildings, condos, ODOT Land and a small strip mall.

Executive Director for PSU Finance

Don Forsythe - Clarified the financial realities with this property and the partnership strategies so far for investigating highest and best use. The property is operating at a loss annually. Don understands the land banking strategy costing 19 million with a 4 million dollar loss due to real estate market changes. His explanation of the parking costs and the budget for capital improvements helped to direct strategy toward consistent income generating options, while creating a destination location with monthly rental options. He mentioned former nightlife activities in a jazz and dance club and the need for pharmacies, grocery stores and awareness of academic changes and needs for the next 50 years.

Artist of Trimet Installation:

Elizabeth Connor: Inspired by the collaborations of Anna and Ira Halpern, the dancer and the architect. Themes driving the design about movement through space and creating a place for people to gather. She's created three pieces that give a nod to dance in space by creating work that catches the eye with flicker of movements and light and shadow. The Oregonian Article, "Where the revolution began" features Halprin's work as an essential to democracy having places where people can gather.

V. Vision, Goals, and Objectives

Vision Statement: The vision for The Confluence is one that encompasses the creation of a sense of place that supports PSU and the community, through ecological, economic and social development principles.

Connectivity: This strategy seeks to improve social connectivity through gathering and meeting spaces; connections to and between green spaces such as parks, the river, and urban trails; connections between campus and the larger community through shared space and programs; connect PSU, organizations and businesses through a shared vision; and foster a connection to place.

- Complementary Businesses/Business Incubator: intentional retailers or service providers, with socially or environmentally sustainable practices
- Intentional Education: educational research and programming that is specific to the Pacific Northwest, uses PSU's assets, strengthens the region's potential to lead in sustainability
- Collaborative Conference Rooms: provide high tech facilities for education, businesses and nonprofit organizations

- Renewed Nightlife: Jazz Club - KMHD sponsored, cafes, restaurants, bars, brewery
- Green Space: connection of green spaces such as Halprin Parks, Park Blocks, Riverfront and nearby urban trails
- Open space plaza: for intentional or unintentional gathering
- Outdoor Classroom: for use by PSU, community members, non-profits
- Arts: outdoor performance space (medium size) for PSU and the community, as well as art installations that allow interaction and gathering
- Informational Signs: highlight urban parks, art and trail systems as natural assets

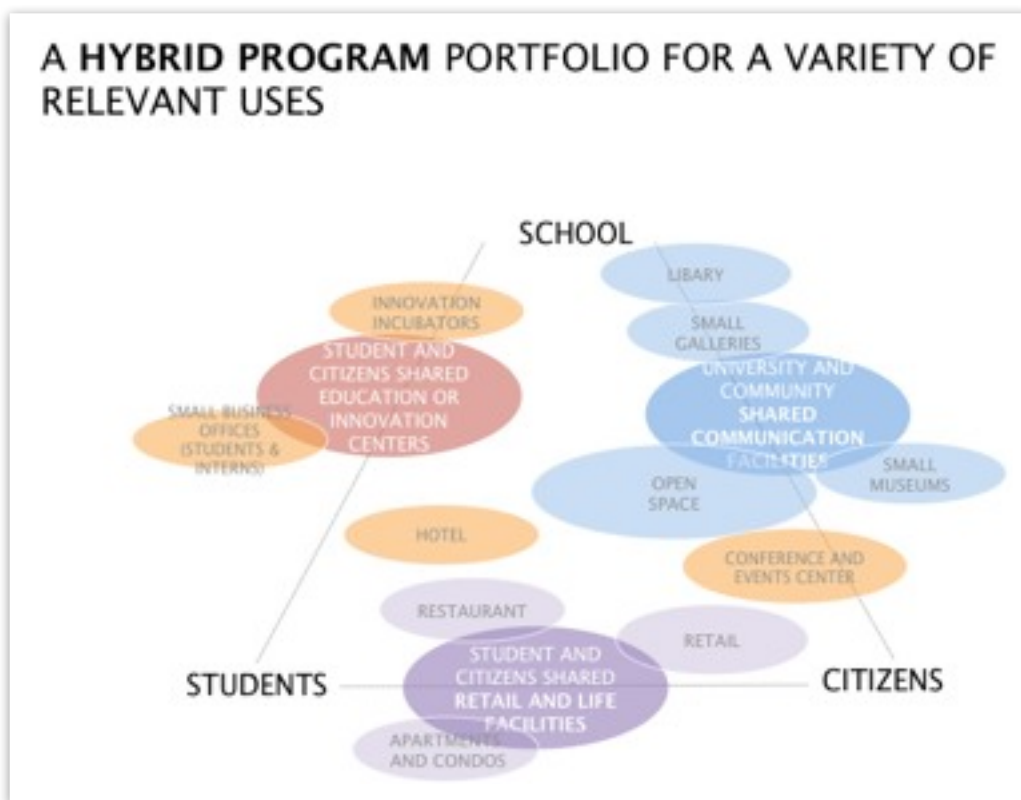


Figure 16: Early Insights for Connectivity of People and Resources

Adaptive Reuse/ Retrofit: The existing built environment is an asset that is commonly not seen or valued by developers and planners. Projects around the world have revived and reutilized old buildings and sites making them new again by adding design and function elements. Adaptive reuse of the University Place structure has the opportunity to create new housing opportunities, encourage mixed use, and stimulate economic investment. The phase's section will provide more detail about ways to adaptively reuse and retrofit the existing structure.

- Grocery Store: Village Market, New Seasons, Green Zebra, etc.

- Retail Marketplace: coffee shop, bookstore, florist, laundry, dry cleaners, pharmacy, thrift store/reuse shop
- Mixed Income Housing: International student suites to rent for weekly or monthly rates, affordable apartments for all incomes
- Parking Conversion: green, gathering and art space to occupy some previous parking spaces
- Art Space: gallery, museum, auditorium perhaps emphasizing history, the redevelopment of the area or other place-based concept
- Transportation: provide park and ride and bike locker storage

Energy & Water: Focus on energy-efficiency, generate and use energy onsite while distributing excess. Manage water ecologically onsite with proper capture, storage and usage while allowing groundwater recharge and reuse when possible.

- Renewable Energy Incubators: create research partnerships between PSU and local energy providers for research, design, experimentation of energy sources.
- Water Systems: catch, store and use rainwater; process greywater and blackwater onsite; utilize extensive water conservation measures; recharge groundwater; create rainwater arts
- Energy systems: create and use renewable energy sources on site; provide surrounding buildings with excess energy produced; follow LEED building requirements for all new construction.
- River Restoration: work with local nonprofits such as Willamette Riverkeepers to research and implement river restoration techniques for providing fish habitat, growing native vegetation
- Transportation: create a green track for light rail
- Education: involve residents, students, researchers, professors and staff in learning about sources of energy and water

Green Infrastructure: Development shall include stormwater management, climate adaptation, less heat stress, more biodiversity, food production, better air quality, sustainable energy production, clean water and healthy soils, increased quality of life through recreation and socializing, and providing habitat for flora and fauna in and around the site.

- Water Systems: green roofs, pervious pavement, bioswales, green streets
- Energy Systems: solar panels, green roofs, passive solar design, wind energy
- Food: community supported agriculture (CSA), food forest,
- Transportation: bike parking, bike lockers, park and ride,

- Landscape: native plant landscape as habitat for wildlife (insects, birds, mammals); parks, trails, plaza/gathering space
- Materials: non-toxic, local, renewable,
- Waste: composting, recycling, reusing; test-site solutions for dog waste

VI. Phasing Design

Our team recommends a phase model that slowly builds each component as funds are established and the building develops its identity and popularity. It's important to plan in succession and sequence so an adaptive management strategy can be applied as appropriate partnerships, such as the case of a grocery store, are established to negotiate lease agreements and costs for updating. The opportunity to create an identity with a new feature that serves many functions and one that leaves a strong visual impression launches this building with a plaza to complement the light rail and connect the existing Halprin series. This plaza will be a stage in the process of attracting retail vendors such as the grocery store, cafe and nightlife. First phase additions also include pay per hour bike lockers for the ridership coming from Milwaukie and neighboring residents, office employees and students. Partnering with Zip Car, and Car2Go are other possibilities for income generation while using existing parking assets. Parking spaces surround the building. If these spaces were to be maximized through design, such as additions of compact spaces we see enough space left over behind the existing building for residential buildings to be built with parking spaces under the new buildings.

Phase 1 Sense of Place: Plaza, urban trail, monthly suites, bike lockers, office space rental (2nd floor), outdoor classroom, parking design

Phase 2 Functionality: Sustainable Business Incubator, Rental Connectivity Conference Spaces business, Public Art

Phase 3 Maximize Potential: Residential buildings, alternatives 1 & 2, Energy capturing technologies, braking power

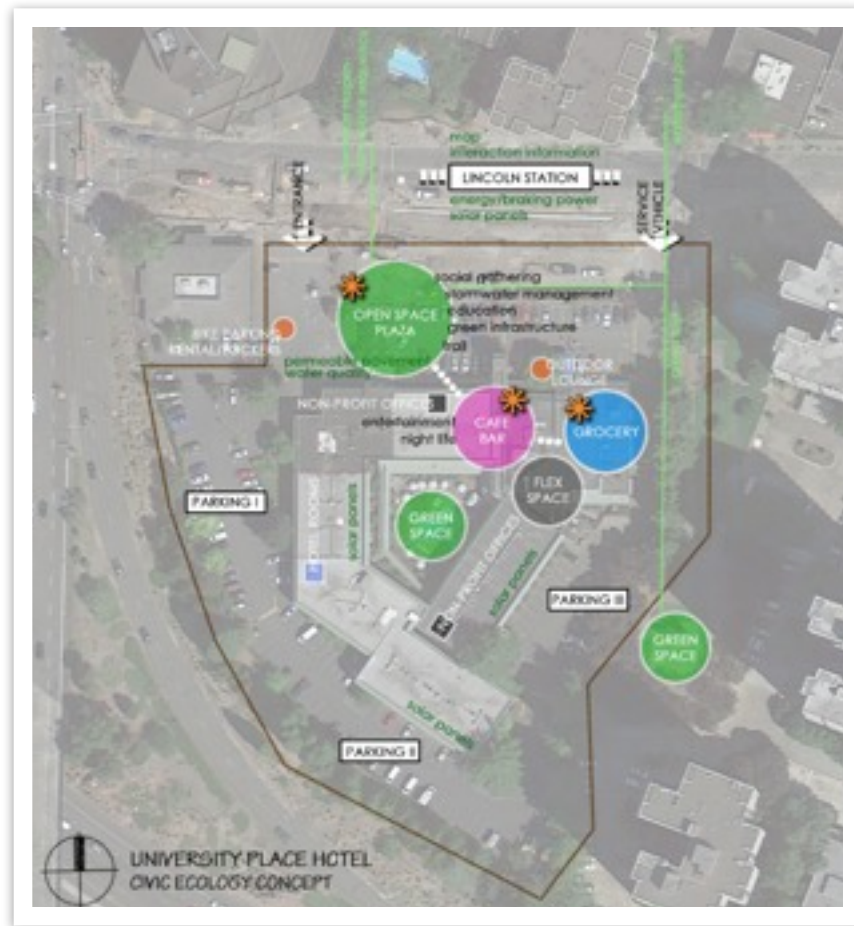


Figure 17: Civic Ecology Concept Map

It is important to realize that the process for development is just as, if not more important as, the final product of development. This is why it is suggested that implementation be done in phases of development with the following recommended goals and objectives. Each phase is intended to provide an impactful, but manageable cost transition to setup the next phase for success. Donella Meadows captures this notion with good advice to this project in general. “Physical structure is crucial in a system, but rarely a leverage point, because changing it is rarely simple, The leverage point is in proper design in the first place. After the structure is built, the leverage is in understanding its limitations and bottlenecks and refraining from fluctuations or expansions that strain its capacity” (8).

This step by step approach most importantly allows for positive and negative feedback loops to inform the progress and allow for flexibility and openness from the process to reveal potential to solve for difficulties. For example, the income generated from the monthly rentals can help cover costs of solar, further cutting costs of utilities for more money available for renovations for the conference rooms. Additionally, leasing grocery store space may provide better parking designs based on grocery store best practices. Each design challenge is also an opportunity to involve

local stakeholders that provides feedback while generating marketing buzz, for the locations new features. Academically, this process can be used for social marketing studies as well, such as does the addition of solar panels decrease energy consumption by tenants. There are many opportunities using the phase system to be careful about spending, to make small and slow changes and explore leverage points. The scenarios for the organization of building helps create negative feedback loops and involve stakeholders in various capacities. Again Donella Meadows reminds us of rules and imagining our behavior under new rules. Rules are high leverage points. In this case, entity organization informs the culture of this venture, a critical move. The rule structures is a very important decision for ensuring freedom for feedback, explorations, idea generation and community involvement. “Power over rules is real power. (Meadows, 14). Let’s see how each scenario can assist the overall goals and which arrangements might increase freedom.



Figure 18: Design Concept 1

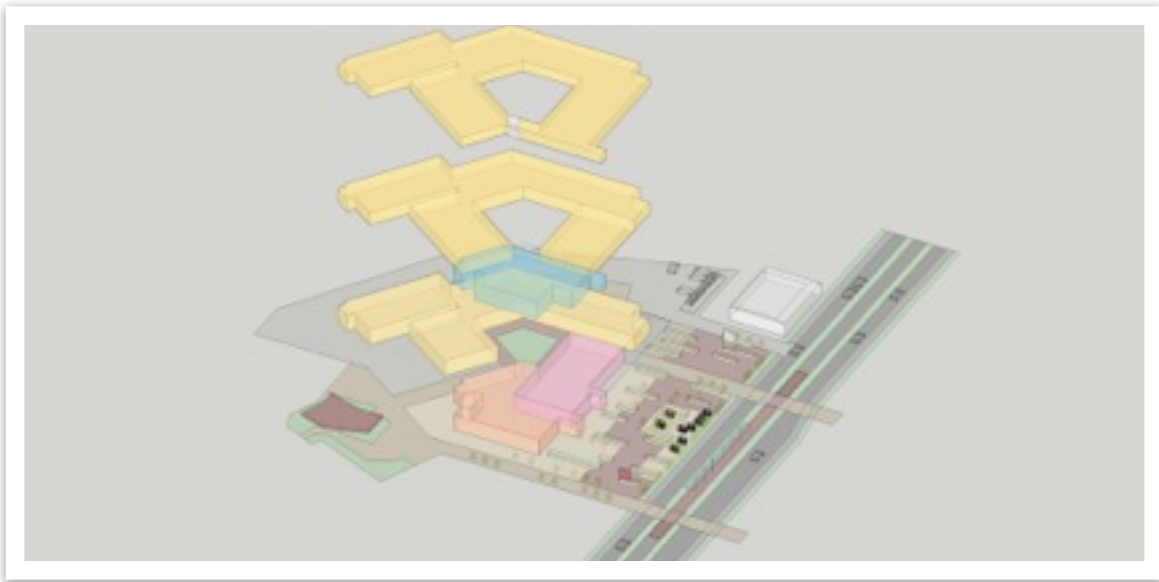


Figure 19: Design Concept 2

VII. Alternatives

A. Alternative One: Public Market Proposal

Project Description

Public markets can be an opportunity to create a destination that is unique and vibrant and to draw not only downtown residents, PSU students, but also out of town customers. Moreover, a public market can be a valuable economic development tool when it offers training, support services, and technical services to new businesses.

1. Non-Profit Ownership Model

Basic Characteristics and Requirements:

A non-profit organization creates a public market as a community development strategy. This could be a non-profit organization focusing on community development, or a non-profit solely focused on developing the marketplace. In support of community development goals, a non-profit public market may offer space and support services for neighborhoods.

- **Advantages:** A non-profit public market may be best suited to focus on the community development aspect and to provide support and assistance for low or mid income businesses. Non-profit public markets may have access to a variety of funding options.
- **Disadvantages:** This model of ownership requires constant efforts of time and resources. Non-profit ownership will generate less tax revenue.

2. Retail Incubator Model

Basic Characteristics:

A business incubator model promotes economic development by providing affordable space, strong support, and training services for start-up businesses. Once established, these businesses will relocate to larger facilities, thereby making room for new start-ups.

- Advantages: An incubator can increase the number of businesses that would eventually revitalize south downtown area.
- Disadvantages: An incubator would work if PSU or the city of Portland can demonstrate sufficient market demand. Retail incubators are much less common than other incubator types since retail produces a smaller economic multiplier effect than other industry sectors do.

3. Cooperative Model

Basic Characteristics:

Each business owner becomes a cooperative member, and members pool resources to form the public market. Each business owner pays membership fees, shares support services, and makes joint decisions regarding public market operations.

- Advantages: This arrangement allows both a for-profit and a non-profit ownership model.
- Disadvantages: This ownership model requires a non-profit willing to commit resources and time for the initial startup procedures. Also, it is possible that once cooperative public market established, a cooperative organization may still need a non-profit organization to assist with coordination.

4. For-Profit Model

Basic Characteristics:

The city works with a private developer to develop a for-profit market. A for-profit development project may not have the same social focus on community development.

- Advantages: The city could experience lower risk and investment since the developer secures project funding. A for-profit organization could generate tax revenues.
- Disadvantages: The city must find a developer willing to invest in the building and the project, which may be difficult to achieve.

Recommendations: If the city of Portland views the public market as a community and economic development tool supporting low-mid income individuals in starting new businesses, then a non-profit organization will most likely need to be involved with marketplace formation. Typically, public markets function best when it meets both economic and community development goals. While a public market can promote small business development, it also has the potential to be a vibrant community space. Therefore, in addition to providing business space, University Place Hotel could offer support services that meet community needs. In this respect successful public markets offer:

- Computer classes
- Spaces for children's activities
- Meeting spaces

- Community health information
- Art gallery
- Non-profit office space

B. Alternative Two: Energy Generation from Max Light Rail at Lincoln Station

Project Description:

Mass transit systems are full of unused energy that could be harnessed toward generating power for buildings, lighting, etc. at the site. Passenger trains create energy at an alarming rate, through many possible variables: the winds rushing over the trains; the body heat from passengers; and the braking energy of these enormous machines. There are projects seen around the world that have started, or are in the process of starting, with this particular goal in mind. Since Lincoln station is not indoor, harnessing energy from the body heat of passengers would be rather difficult. Also, the max line is not a high-speed rail, and therefore would not likely produce enough wind-energy to make our study worth-while. Therefore, the following alternative will focus on harnessing the braking power of the Max line trains focusing on two particular studies-- one of which has been successful, and one of which is still in the process of being implemented. Harnessing the braking power of trains is integral toward achieving a more sustainable and regenerative environment at Lincoln Station.

Key Features from Case Studies:

1. Philadelphia, PA - The Southeastern Pennsylvania Transportation Authority (SEPTA) teamed up with Viridity Energy to give its train's regenerative braking ability, allowing SEPTA to harness this braking energy and route it to a big battery. The project calls for Viridity Energy and SEPTA to install a large-scale battery to capture the energy along the Market-Frankford Line, which is the line with the highest ridership. The project received a \$ 900,000 grant back in 2010 to move forward, though the project is still a work in progress (see appendix 2.1, 2.2)
2. Israel - Israeli-based technology developer Innowattech has developed and patented the IPEG Piezo Electric Generators, which use the piezoelectric effect, which is essentially the ability of a material to produce electricity under mechanical stress. In December 2010, Innowattech installed a series of piezoelectric pads in the Haifa station. These pads are similar to the plastic pads that are used in most railways, placed between the ties and tracks as stabilizers for passing trains, however these pads use piezoelectric sensors to capture the energy that is created by the weight, motion and vibration of each train. This is referred to as "parasitic energy." (Popular Mechanics, see appendix 2.1, 2.3).

Funding for this project will likely take place at the capital project level. A Capital Project is defined as one that helps to maintain, or improve infrastructure. Typically, capital projects are chosen by one or more the following criteria, as defined on the portlandoregon.gov website:

- It is a new construction, expansion, renovation, or replacement project for an existing facility[s]. The project must have a total cost of at least \$10,000 over its total life. Project costs can include the cost of land, engineering, architectural planning, and contract services.
- It is a purchase of a major equipment asset (assets costing \$50,000 or more with a useful life of approximately 10 years).
- It is a major maintenance or rehabilitation project for existing facilities with a cost of \$10,000 or more and an economic life of at least 10 years.

The following list details ways in which the city of Portland might approach gathering funds for a project of this size. As seen in Pennsylvania, this city's transportation department had to tap into federal grant money, to the tune of \$900,000, in order to lay the groundwork for their capital project

Funding Sources

1. Government Funded Model: SEPTA and Viridity Energy used government funding through the use of Federal grant money to implement their program. There are funds available at the municipal, state and federal level that could help fund the project at Lincoln Station.
2. Private Funding: A massive fundraising campaign is essential for most capital planning projects. Gathering funds from a list of individuals and corporations could help fund the project, but would not likely be an end-all in a project of this scale.
3. Partnerships: Trimet could partner with other organizations, either not-for-profit, or commercial who could help share in the cost of the capital project. Partnerships typically strengthen a case for receiving grant money, providing further validity for a project in terms of scope and success. In Philadelphia's case, Viridity energy received the grant to assist SEPTA in funding the project.

Recommendations:

It is not likely in Trimet's budget to move forward with a project of this scale. It is recommended that, if seen as a viable option either now, or in the future, that Trimet partner with a third party organization, and apply for available grant money to fund this capital project.

C. Alternative Three: Sustainable Practices Business Incubator Model

In a coalition of Portland State's business, sustainability, engineering and urban planning programs, area mentors, and existing sustainable business resources, we envision a center to hatch businesses focused on sustainability practices and designs. Open to students and community members, this center is a place for experimentation, planning, product development and strategies for launching small businesses such as Benefit Corporations and potentially social entrepreneurships. This business incubator is where ideas are put into action, and people learn how to fish. Participates will develop viable products and services and launch businesses out of them. This center also is an experiment in multidisciplinary engagement to help each member improve designs, adherence to sustainability principles and processes. While it also leverages resources from Portland State University and the sustainability community in Portland.

The University Place Hotel is uniquely poised to provide the office space, access to intergenerational mentorship, and proximity to shops, labs and thought leaders to help. Additionally, the incubator will launch businesses that support the community's sustainability goals and even reach global markets if applicable. This incubator, potentially guided by the same design principles as this project, could use the building itself as a testing grounds for sustainability measures that assist in the renovation of portions of the University Place Hotel space, as successful product and services are implemented. Imagine a landscape architect trying out therapeutic gardens in the space, or a zero waste business that turns PSU's trash into energy. This incubator model needs appropriate leadership and the popularity of it will help establish the identity of the Confluence through positive reputation far better than paid advertisements.

VIII. Implementation

The adaptive management style to this project does require various people are involved. We see that the Portland State University continues to involve sustainability students, engineering, and the center for aging students and business departments. We see the work crafted so far for this project informing these student groups and their knowledge adding to the collective intelligence of proposal. Additionally, intentional relationships made through business ventures willing to sign up to be involved including grocery store coordinators, cafe and bar owners, and Portland State Auxiliary services willing to manage conference spaces and monthly rentals potentially. Additionally, hiring a part time project coordinator to work as a liaison between stakeholder and Portland State University also seems appropriate, perhaps even one of the authors of this proposal.

Each phase will present the sequence and outreach strategy for feedback needs when the overall strategy for the building is accepted. For example, using the phase strategy we see an immediate opportunity for monthly rentals and a cafe and bar, followed by a plaza redesign. Engaging stakeholders with the immediate interest in the service that also brings the social capital to the table to further engage requires selectivity and vetting for congruency with the overall vision of the place.

Resistance is predicted to come from practices garnered from existing paradigms, competing interests for PSU's resources and building strategy and stakeholders unwilling to negotiate or innovate their design strategies. This is where the coordinator comes in to serve as a liaison between conflicting interests, to research appropriate fits for the building, and to keep the various parts, inputs and sequences congruent with the mission. Presenting possibilities in a win win fashion that also shows the pathway to results is important for all parties to agree on. This project proposal is not designed to get lost in everyone's opinion. It desires to follow the critical path informed by the win win agreements with the whole system. Some resisters will simply not be brought along in this process if they are not interested in creating in a practical, collaborative, and sustainability centric way.

IX. Summary

The creative potential, combined with a practical financial, and renovation strategy, is alive in this project. For sustainable development practices to be able to practice, it's critical that we advocate for a paradigm shift and a building to reflect it - especially, within a University system teaching sustainability, in a flag waving sustainability town. We have shown options that involve stakeholders at multiple levels, produces less waste and strain on earth's resources than demolishing, and matches assets with needs, all while preserving and reviving a character filled structure.

We started this project with a clear value structure and chose design principles that reinforced these values while they guided a process for results. These principles challenged us as well, to incorporate regenerative, universal and wellness centered concepts to social, economic and environmentally integrated system. Choosing these "rules" was powerful and more creative than the existing real estate strategy or paradigm. Our involvement with this project allowed us to self-organize, incidentally, "the strongest form of system resilience". "A system that can evolve can survive almost any change, by changing itself" (Meadows 17). This adaptive strategy is our vision for this project and we believe on a physical level it starts with adaptive reuse. This paired with clear values that build trust in Portland State University to walk the sustainability talk even as soon as it exits the train station.

References

Carol, American Condos Resident, Personal Interview. 3 Nov. 2013.

[Central City 2035 West Quadrant Reader](#) which identifies current issues and potential opportunities throughout the West Quadrant, and specifically South Downtown. The document calls attention to the difficulty in defining the boundaries and identities within the area, the need to create better connections to the Willamette River, and an awareness of future activity in the district around retail, housing and transportation.

Connor, Elizabeth, Public Artist, Personal Interview. 4 Nov. 2013.

Forsythe, Don, Executive Director of Auxiliary Services, Personal Interview. 5. Nov. 2013

Helen, American Condos Resident, Personal Interview. 3 Nov. 2013.

Jill, General Manager at University Place Hotel, Personal Interview. 3 Nov. 2013.

Luis, American Condo Repairman, Personal Interview, 3 Nov. 2013.

Max, Resident of the neighborhood, homeless, Personal Interview. 3 Nov. 2013.

Mario, American Condo Repairman, Personal Interview. 3 Nov. 2013.

Meadow, Donella, Leveraging Points: Places to Intervene in a System, The Sustainability Institute, Hartland, VT, 1999

[PSU 2010 Climate Action Plan \(CAP\)](#) to neutralize carbon emissions by 2040 actions and targets have been identified in six sectors: buildings, materials, travel, commuting, research & education, and EcoDistrict Development.

Sam, American Condos Resident, Personal Interview. 3 Nov. 2013.

[SOMA EcoDistrict Roadmap 2012](#) The SoMa EcoDistrict Roadmap includes an assessment of baseline conditions, adopted performance goals, and recommended strategies to support the district's aspirations. The roadmap is intended to guide the SoMa EcoDistrict Steering Committee on meeting ambitious goals in the following performance areas: equitable development, health & wellbeing, community identity, access & mobility, energy, water, habitat & ecosystem, function, and materials management. The roadmap proposes a set of investment and partnership strategies to achieving these goals.

[University District Framework Plan](#) reflects the most recent and comprehensive efforts to consolidate past campus-area plans and define a vision for the future of Portland State and its surroundings in central Portland. The plan outlines goals and strategies towards making PSU a more sustainable, vibrant Portland institution and hub of learning excellence. The Framework Plan provides an outline for growth that emphasizes PSU's unique academic opportunities, partnerships, commitment to sustainability, and role in enriching the Portland region and Oregon. In this model, boundaries between the University and the city are blurred as partnerships and collaboration influence PSU, public, and private investment. Buildings and open spaces are permeated by public and private uses, parks abound, transit, walking, and bicycling are the preferred ways to move about, and development is integrated and mixed across blocks and into the skies.

The University District will both be distinct in its aesthetic and function and will integrate seamlessly with the city at large. Infrastructure, the natural environment, and social spaces blend together allowing people to move with ease throughout the district.

- Expansion of the University District to accommodate up to 7 million square feet of PSU and private development
- Promote flexibility and continuity in the built environment and human-scale growth
- Integration with the EcoDistrict initiative, Green Streets projects, green buildings, street-level mixed-use, and well-connected active transportation
- Development of a distinct urban character to the University
- Supportive of traditional and non-traditional students alike

The following documents are from the City of Portland's Bureau of Planning and Sustainability:

[West Quadrant Transportation Concepts](#) identifies access and connection issues for transit, pedestrians, motor vehicles, bicycles.

[West Quadrant Plan Concept Development Workbook](#) is a workbook proposing draft concept layers for the West Quadrant, including land use, street and development character, open space and green systems. The urban design principles being embraced are: strengthen places, embrace

the river, connect places, design with nature, expand housing, grow employment, extend retail core, shape the skyline.

[West Quadrant Charrette Atlas of Maps](#) shows existing conditions in the West Quadrant
[West Quadrant Issues and Opportunities Survey Results](#) is a summary document with responses from a survey conducted March 5 - May 10, 2013.

[West Quadrant Public Involvement Plan \(Draft April 2013\)](#) A guide for the approach to public involvement efforts for the West Quadrant Plan including distribution of information, seeking involvement and gaining meaningful input to ensure an open, balanced and fair process that provides community members, businesses and other interested parties convenient and meaningful opportunities to participate in the planning process.

[West Quadrant Design Charrette Maps](#) A booklet of maps showing combined ideas from the West Quadrant Charrette held on June 10-14

Appendix

Appendix 1: Adaptive reuse for hotels

- .1 [Adaptive Reuse: Recent Hotel Conversions in Downtown Philadelphia](#) - A thesis that examines the adaptive reuse projects in downtown Philadelphia that utilized the tax credit to convert historic offices buildings to hotels.
 - .2 [Adaptive Reuse: Finding opportunity in vacant structures](#) - A resource for those interested in adaptive reuse, this site showcases a number of projects from around the world that have revived and reutilized old buildings and sites.
 - .3 [5 'out-of-the-box' adaptive-reuse projects](#) - Five unique hotel projects, taking something old and making it new again by adding design elements and people who are passionate about the locale and the spirit of hospitality.
 - .4 [Adaptive reuse an alternative route to sale](#) - Hotels have “a general footprint that’s quite friendly to residential use,” said Amelia Lim, an executive VP at Jones Lang LaSalle. College dorms, assisted living facilities and condominiums all are feasible conversions.
- 1.5 [City of Los Angeles Adaptive Reuse Program](#) - Creates new housing opportunities, revitalizes neighborhoods, preserves historic architecture, encourages community development, stimulates economic investment, and facilitates mixed-use growth models.

Appendix 2: Energy Generation from Max Light Rail at Lincoln Station

- 2.1 [6 Ways to harness wasted transit energy](#) – A list of 6 projects around the world that have been successful, or are in the process of, harnessing the wasted energy generated from trains.
- 2.2 [Harvesting Energy from Braking Trains](#) – A brief of the current project underway in Philadelphia, PA
- 2.3 [A proposal for large scale electricity generation from high pressure application](#) – The proposal set forth for the implementation of energy generation at Haifa Station in Israel.