



Gateway Education Center



Bridging the Gap between Gray and Green



Index

About Gateway	
Portland's Regional Center	.02
Gateway Assets	.03
Thesis Statement	.04
Project Goals	.05
Gateway Analysis	.07
Performance Areas	.08
Site Selection	.11
Site Context	.12
Site Opportunities	.13
Programming	.15
User Profile	.16
Program Matrix	.17
Program Adjacencies	.19
Work Cites	.2



Gateway

Portland's Regional Center

Gateway sits directly east of Portland's downtown district and has been coined as Portland's Regional Center. Due to its proximity to the city and access to transportation, the majority of Portland's future growth is predicted to occur in Gateway. With two major freeways, I-84 and I-205, running past Gateway and 4 major TriMet lines, Gateway is an ideal location for transit oriented developments and future economic growth.

Before Gateway was established as a regional center, it was known for its farming. With access to the city and an abundance of sprawling rural land, Gateway became an ideal location for suburban growth after WWII. Veterans moved with their families to a place where land was cheap and lot sizes were large, beginning the trend of migration out of the city. Coined by Mr. Fred Meyer himself, "Gateway" was established to be the "gate" to the city and to eastern development in the 1950's. Today Gateway represents the tragedy of urban sprawl; large "big box" corporations, excess concrete and an automobile reliant society. Yet it possesses infrastructure that makes it possible to change the image of the district and redevelop it as a thriving regional center.

The negative effects of urban sprawl have contributed to the current issues in Gateway, **abundant impervious surfaces, lack of connectivity and absence of parks and habitat areas.** For these reasons, Gateway has been selected as one of Portland's five Ecodistrict Pilots. While these issues drive the need for green development, Gateway possesses assets that make it an ideal candidate for this sustainable development at the neighborhood scale. These include its large transit center, access to highways and its predicted expansion.



Gateway and Surrounding Neighborhoods

Why Gateway

Gateways Assets

Gateway is currently characterized by its flaws yet possess assets that make it unique from other areas in Portland. The assets are being under utilized, but with the addition of a facility that could link these characteristics together, it is possible to achieve the image of the thriving green regional center that Gateway hopes to become.

Transportation

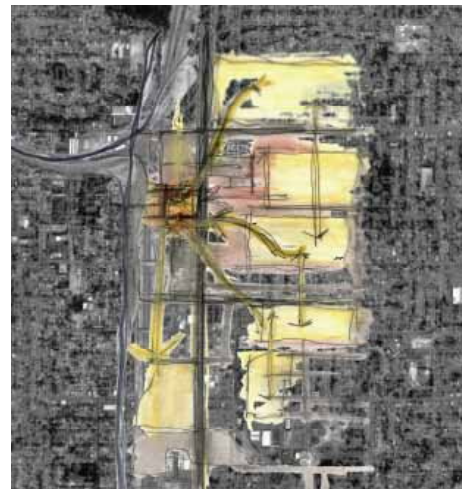
Gateway has become a hub for transportation, linking it to the city, Gresham, Clackamas and the airport. It not only has a Transit Center supporting these Max lines but it is located at the intersection of I-205 and I-84 making it just five minutes from the airport. Millions of people pass Gateway every year but have no reason to stop. This ideal access to the city can help to establish Gateway as a 20-minute community.



Max Lines

Culture

Due to Gateway's relatively inexpensive housing, large school districts and access to city, it has become an attraction for international families. Gateway's Immigrant and Refugee Community Organization (IRCO) served more than 30,000 individuals last year. Over 34 different ethnic groups have been involved in IRCO's activities and continues to involve more community members and groups. There are approximately 67 different languages spoken in the local school district. This gives Gateway a potential cultural richness that is currently lost due to the community's lack of an organizing body resulting in a poor identity, creating the district as a place to go through rather than a destination.





Thesis Statement

Transforming Gateway from Gray to Green

With an abundance of public transportation and culture, Gateway has the potential to become a bustling regional center for Portland; however, due to the district's planning, the area has become a forgotten suburb of Portland. Large block sizes, big box buildings and an automobile reliant society contribute to the lack of connectivity, green space and identity in the community. This project proposes a facility that would be the first step towards the development of a greener Gateway. The proposal speculates that by providing positive icon for the district, investors would see development opportunities in Gateway and help to contribute to the ultimate goal of Gateway; the transformation into an Ecodistrict. The project would take the form of an education center, becoming a satellite school for Park Rose School District, David Douglas School District, Mount Hood Community College, Portland State University and Warner Pacific. It would provide a means to stimulate the economy of Gateway by educating the youth in areas that have direct applicability to jobs and fields thriving in the Portland metro area. Through sustainable design and the introduction of a college campus, the education center would become a central green space for the community. In addition to the campus, the creation of a pedestrian oriented, green street would aid in connecting the neighborhoods to the campus and transit center. Together they would begin to take the form of an Ecodistrict, introducing the community to the possibilities to come.



Project Goals

Community

Establish a place that facilitates cultural interaction by providing the support and amenities needed for small business development, language translation/barriers and career path building.

Develop a walk able, green campus that encourages safe pedestrian, bicycle and non-motorized transportation, and that supports the neighborhood and community interaction. The campus will provide green outdoor space in hopes of gathering youth and promoting outdoor activity and play.

Cultural collaboration will be encouraged through the development of programs that overlap the common grounds of all cultures such as food, health and sustainability.

Spur on economic development in the area by educating the youth in a manner that has direct applicability to jobs and the working field. A strong economic community will help to sustain the neighborhood and encourage local shopping, small businesses and community development.

Site

Create an icon for the Gateway regional center by visually connecting to highways and to the neighborhoods. The icon will help to attract the attention outsiders and investors.

Allow for connections to develop in the east to west direction along pacific by expanding site to the east. Currently the primary circulation is north to south along 102nd. The development of the site will begin to connect, both physically and visually, the transit center to 102nd and beyond to the neighborhoods.

Facilitate and educate about storm water management, through the use of landscape and streetscape elements.

Provide green space to improve the number of parks and outdoor space in the district.

Sustainability

Address PoSI's 9 Ecodistrict Performance areas, community vitality, air quality and carbon, energy, access and mobility, water, habitat and ecosystem function and material management, on the site through visual representation.

Educate community about the importance of sustainability at all scales, beginning with individual sustainability to the neighborhood scale. By demonstrating the benefits of a sustainable life style, efforts to transform gateway into an Ecodistrict will be understood.

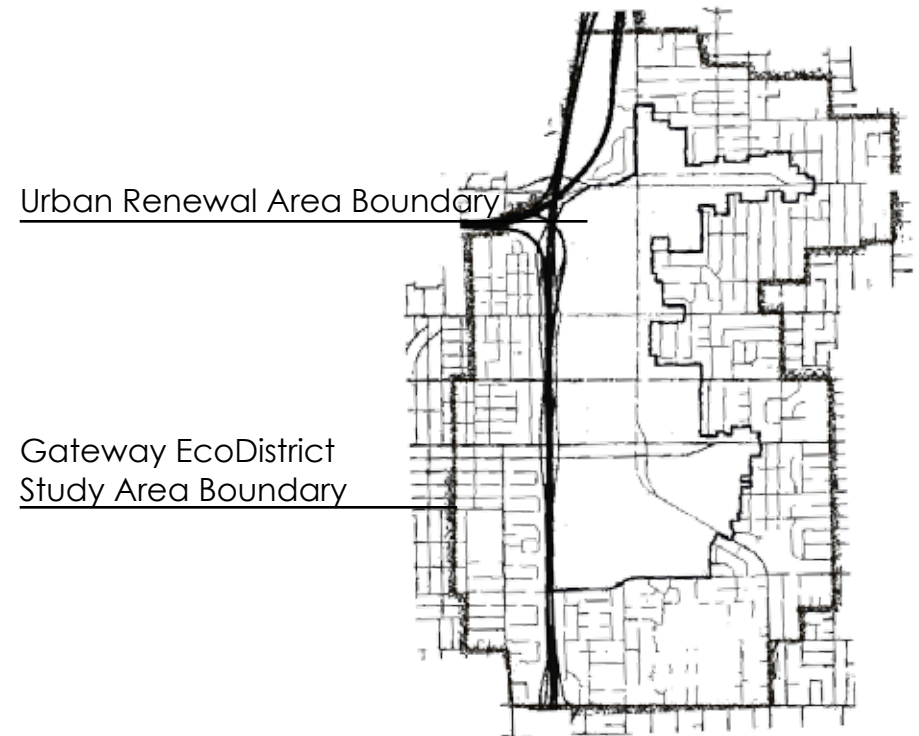
Connect education of sustainability to the community, such as wind turbans on Gateway Green, PV panels on Fred Meyer and other "big box" stores, and waste water management.



Gateway Analysis

Assessment of Current Conditions

In an effort to analyze the current conditions of Portland's five pilot Ecodistricts, Portland Institute of Sustainability (PoSI) developed 9 performance areas in which each Ecodistrict would be assessed. These performance areas included, energy, air quality, water, access and mobility, placemaking, social cohesion, habitat and ecosystem function, material management, and equitable development. In order to better understand Gateway's current condition in these areas, 7 rough diagrams have been developed to analyze the qualitative condition of each area. (Note; diagrams for material management, social cohesion and equitable development have been omitted.)



Energy

Based upon land use type, the commercial district offers the possible of creating an district energy source. It also allows for heat exchange and other shared energy.



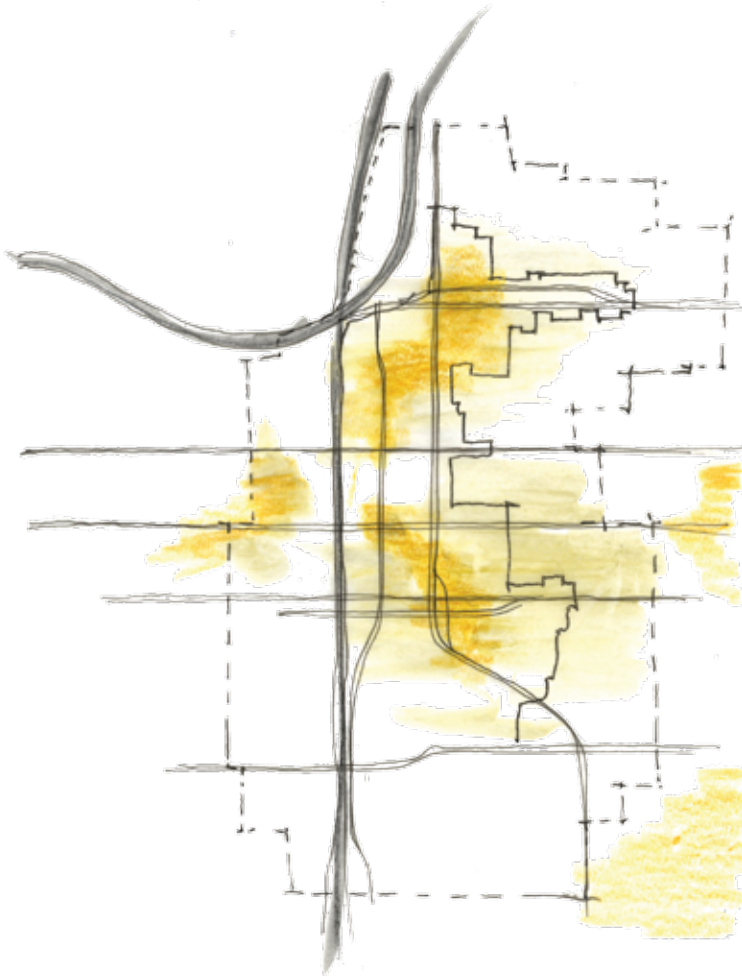
Air Quality

Gateway has a lack of canopy coverage, coinciding with the large percentage of impervious surfaces.



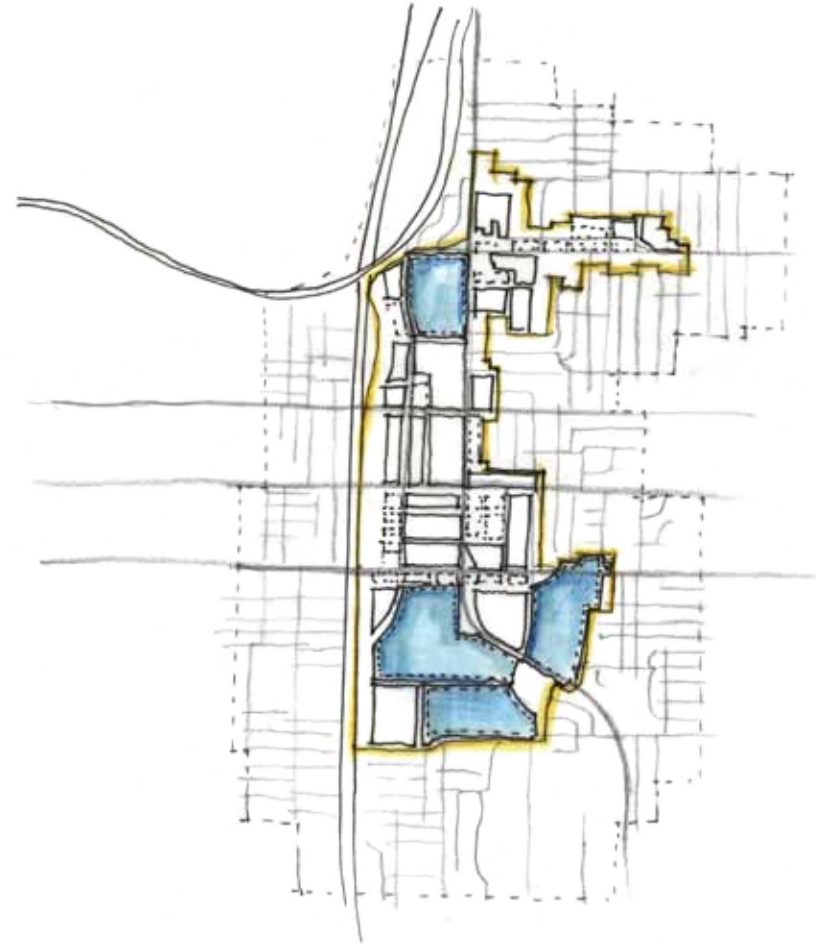
Placemaking

Ares that have easiest access, attract the most people and provide the ability to expand upon as gathering places.



Water

Gateway has some incredibly large block sizes, and while they effect mobility in the district they also provide the possibility of storm water collection



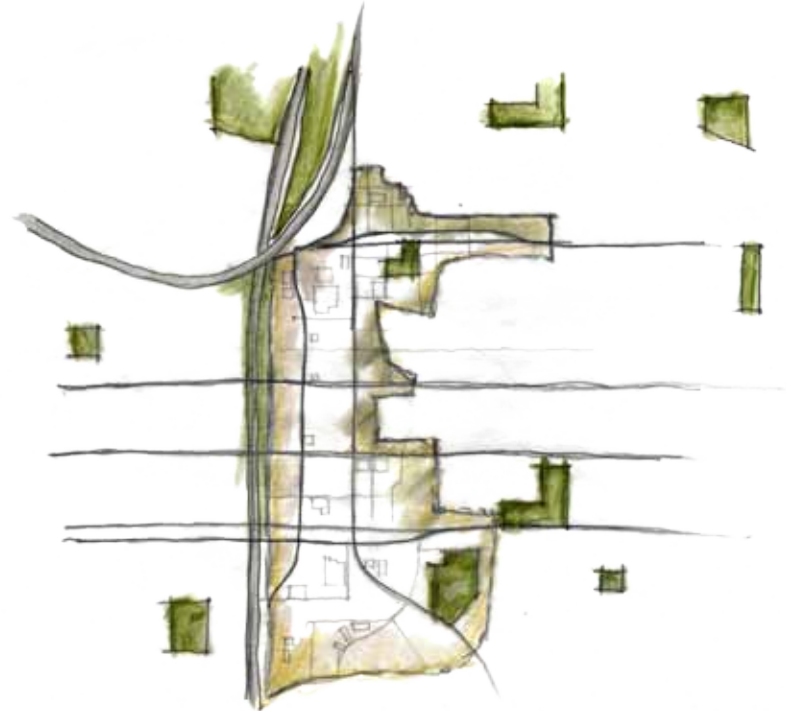
Access and Mobility

Gateway has a significant amount of sidewalks and buss stops, but is lacking in bike paths.



Habitat and Ecosystem Function

While there are several parks surrounding the Gateway Urban Renewal Area, there are only two parks that fall within the boundary.



Site Selection

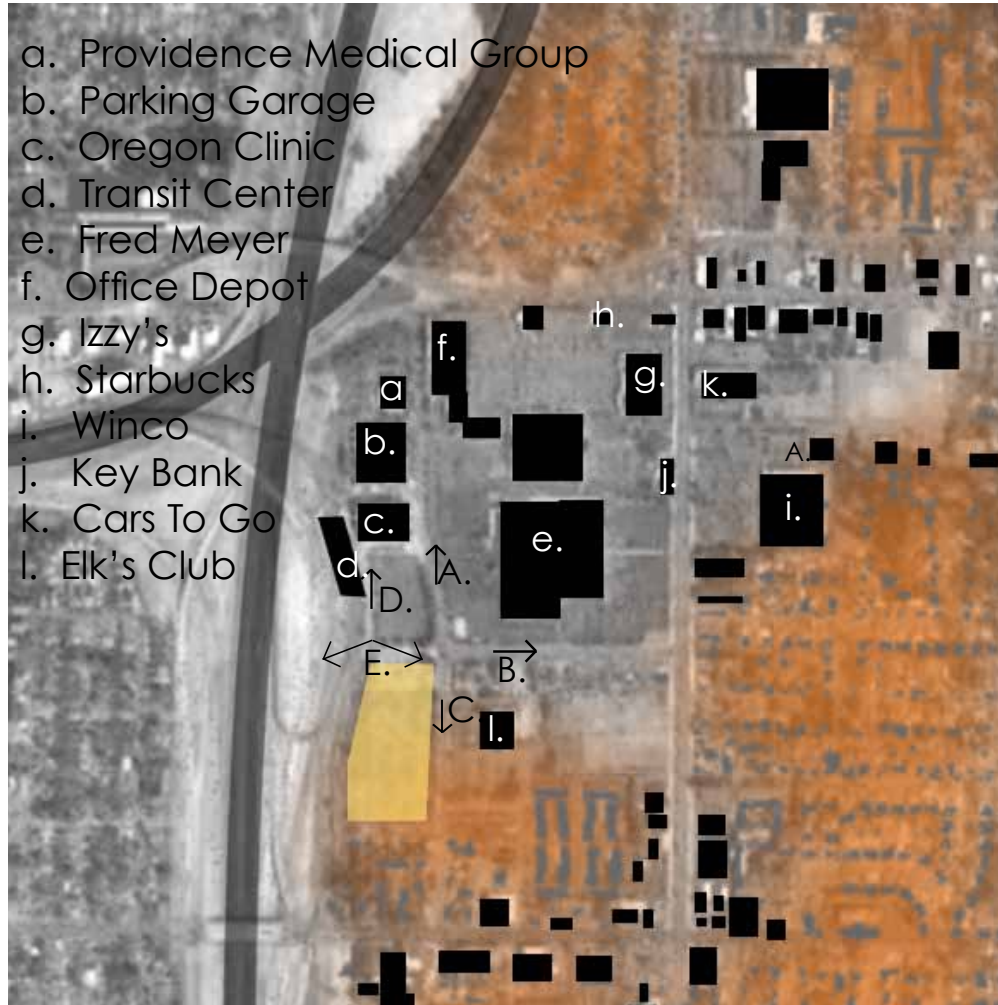
Reaction to Performance Areas



After overlaying the performance area diagrams, it became clear that there were locations that would be more suitable and successful for development. This was based on the amenities that were currently available, the opportunities surrounding the site, and the needs of the site. The site selected has access to potential district energy, water collection and bike and public transportation. There is a need for canopy coverage as well as more green space. The site allows for the potential linkage of existing green space. As well as these aspects, the site is adjacent to the freeway, giving it ideal visibility to passing automobiles. It is also adjacent to the transit center and provides an opportunity to connect the neighborhoods to the transit center.

Site Selection

Site Context



Site Selection

Site Opportunities



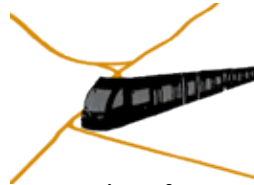
Pacific Street- *Local Connections*

Located just 2 blocks north of the site, the transit center serves multiple max lines, the Blue, running from Hillsboro to Gresham, the red line running from Beaverton to the Airport and the green line, running from Portland State University to Clackamas Town center. Public Transportation has been incredibly successful in Portland, increasing in rider numbers 22 out of the last 23 years. An average of 132,800 riders used the Max during the month of September. Being close to the transfer site will help to activate the site as well as providing a destination in close proximity to this station. It will also assist in bringing more people into the district.



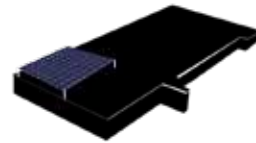
Gateway Green- *Recreational Oasis*

Close proximity to the grocery store is an ideal characteristic especially when considering student housing. While the “big box” concept is not necessarily compatible with sustainable principles, there are factors that can be incorporated into the development of the educational facility. Grocery stores exhaust heat that can be recovered and potentially used at the educational facility. Photovoltaics could be applied to the roofs of the “big box” stores and the high percentage of asphalt used for the parking lots creates an opportunity for rainwater collection.



Transit Center- Regional Connections

Running from east to west, the northern boundary of the site, Pacific Street can be transformed into a pedestrian friendly green street that connects the commercial street to the transfer station. Gateway is lacking this east to west connection, especially in the form of pedestrian and bike routes. To get to the transfer station, one must travel through the parking lot of Fred Meyer to reach the destination. Pacific Street can provide a safe and green route to the station that becomes an extension of the site.



Fred Meyer- Utilizing the “Big Box”

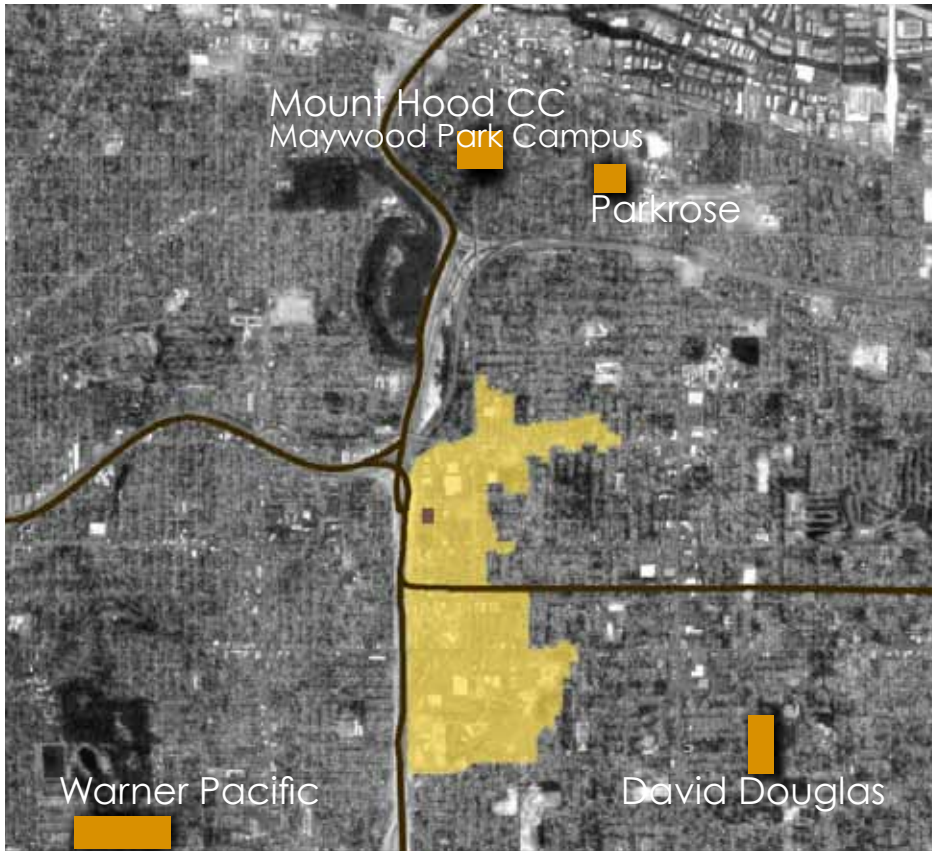
Just north of the site and transfer station, the crossing of I-205 and I-84 creates a 35 acres strip of undeveloped land. While the Multnomah County's Rocky Butte jail used to occupy the site, there has not been anything there since the 1980's. It currently functions as an island, with access only at the north and south of the site, yet it possess natural beauty and the potential for an outdoor recreation center, with bike paths, nature observation and bird watching. The site also lends itself well to the demonstration of green technologies. Currently the project is moving forward involving the community in clean ups and developing base maps for further development.

Project Program

Gateway Education Center

The Issue

One of Gateway's biggest obstacles affecting its future development is the perception that people have of the district. Gateway lacks a defining element, which, in return, discourages investment from private developers and financiers. Eco-districts are private/public ventures so it is crucial to get the support from the private sector in order to move forward with the development as an EcoDistrict. Creating a positive perception of Gateway will help to draw the eye of investors.



The Client

Gateway is composed of two school districts, Parkrose, whose southern boundary encompasses northern Gateway, and David Douglas, which has one of the largest high schools in Oregon, if not the largest. Mount Hood Community College's campus is in Gresham, OR yet it remains somewhat removed from Portland and barely visible. Warner Pacific College is a small private school that has its main campus just west of Gateway and a series of satellite campuses scattered around east Portland. Portland State University's campus is in downtown Portland. The University is hoping for significant expansion in the future that requires more educational space. They are also aiming to have fifty percent of their student population in student housing.

The Goal

Due to Gateway's position in Portland and its proximity to transportation, it lends itself well to the development of a central campus for these various schools. With the inclusion of a variety of education levels, there is also the potential to develop a 2+2+2 program, 2 years high school, 2 years community college and 2 years university. This sort of educational program is ideal for job creation as well as providing students with a non-traditional higher education path. The facility will include a large public realm, with classes open to the community. The training provided at this center will help to develop the skills necessary to operate and maintain an Eco-district. The goal is that this facility will be a catalyst for the green development in Gateway, the students will have the knowledge to help Gateway to become a green regional center.

Programming

User Profile



Student

Bored with school, “Alison” has no motivation to finish high school. None of her family has continued onto higher education and many have their GEDs. Alison plans on doing the same. The traditional classroom setting is dull and she continually struggles to get her work finished. Alison has always enjoyed to cook but plans on finding a job where ever possible. A school that would provide Alison with an alternative path would help to inspire her.



Immigrant

Having recently moved to the United States, “Sasha” has two kids and is struggling getting integrated into the community. She knows a little English but wishes to learn more typing and computer skills. Adapting to the new culture is also challenging, the norms and gender roles are different than what she is familiar with. It is important for Sasha to find work in order to support her family.



Out of Work

“Kirk” recently lost his job in the construction business. He has a wealth of knowledge in the building field, but has no desire to return back to the manual labor of construction. He is interested in the new research being done around sustainability and wishes to combine his knowledge of building with his new interests. The education center could provide the opportunity to teach what he knows, and learn about sustainability.

Administration-12,800 sq ft

Public- 21,040 sq ft

Technology- 6,000 sq ft

Lobby/Reception
400 ft² each

Lobby/Reception

Offices-
8,000 ft²

Auditorium
5,040 ft²

Library
2,000 ft²

Meeting
Space

800 ft² 780 ft² Meeting Rm.
1,500 ft²

500 ft² 300 ft²

Workshops

3,000 ft² 350 ft²

Workshop
3 @ 1,000

Labs

Computer Lab
1,800 ft²

Computer Lab
2 @ 900

600 ft²

Computer Lab
4 @ 600 ft²

Classrooms

6 @
600 ft²

Service

W/C
600 ft²

W/C
600 ft²

W/C
600 ft²

Allied Health- 15,800 sq ft

Culinary- 5,000 sq ft

Sustainability- 6,700 sq ft

Kitchen
2,400 ft²

Urban
Garden
2,000 ft²

Restaurant
1,400 ft²

ps
0 ft²

 Workshops
4 @ 1,000 ft²

 Medical Lab
5 @ 2,000 ft²

 Computer Lab
900 ft²

 Medical Lab
1,500 ft²

 7 @
600 ft²

 2 @
600 ft²

 2 @
600 ft²



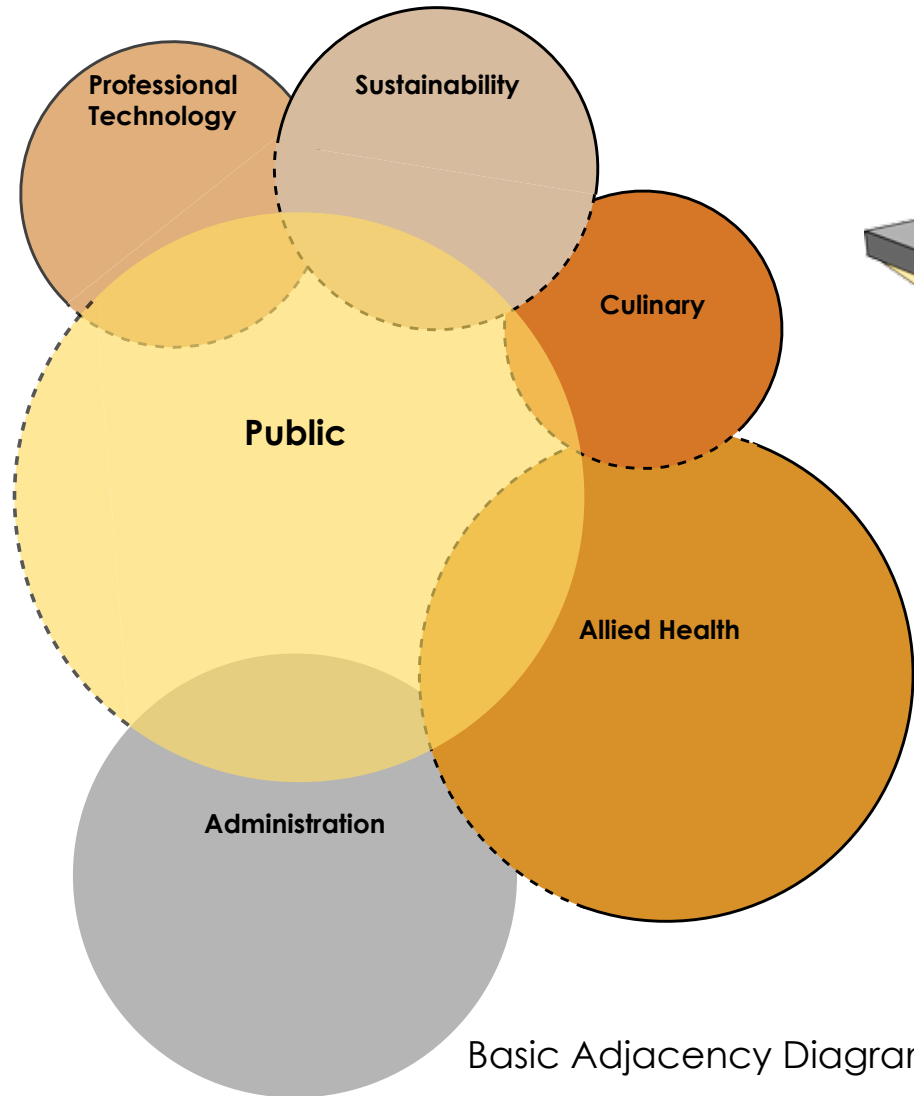
W/C
600 ft²

W/C
600 ft²

W/C
600 ft²

Programming

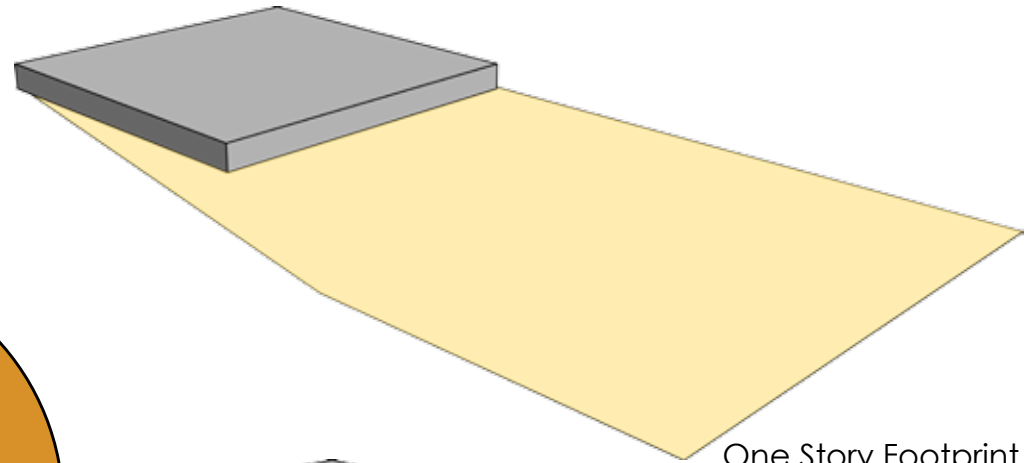
Total Square Feet 67,340



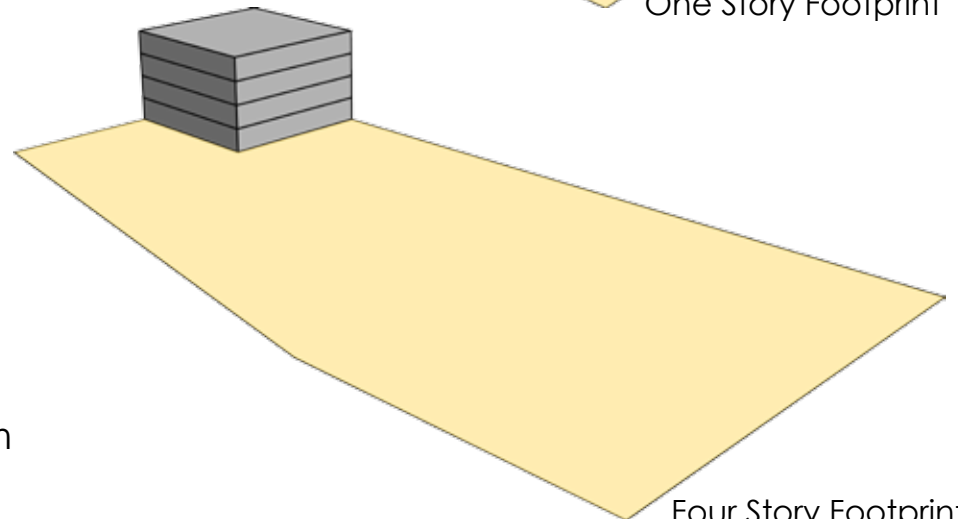
Basic Adjacency Diagram

Exploring Building Footprint

This site is significantly larger than the amount of program required for the education center. Part of the early development of the project will be exploring the site plan for the lot. There is a possibility to include housing, either student housing or apt housing.



One Story Footprint



Four Story Footprint

Works Cited

Annotated Bibliography

Bureau of Planning; City of Portland. Chapter 33.526 Gateway Plan District. 1, January 2009.

This report provides all the necessary regulations for building in the Gateway district. It recognizes that Gateway is Portland's regional center and thus it is designed to withstand a large amount of the cities' growth. Because of this predicted growth, the regulations need to be similar to those of an urban scale. The regulations have to allow for greater connectivity between the streets. The report sets out standards for Gateway in which the regulations should support. These include, compatibility between private and public, expansion to create positive places for pedestrians and those using public transportation, ensure large sites are near open space, and allow for mixed-use development around the light rail. It then gives very detailed regulations for buildings and zoning.

Burayidi, Michael A. *Urban Planning in a Multicultural Society*. Westport, CT: Praeger, 2000. Print.

Editor Michael A. Buyayidi uses the work of scholars as well as historical facts to argue that incorporating varieties of cultures into city planning is necessary for the success at the urban scale. He looks at questions regarding the inclusion of multiple cultures when the ideals may disagree and how you can be sensitive to a variety of cultures. He explores whether it is possible to achieve a unified urban development while incorporating the needs of many cultures. Michael Buayidi explores the issues of communicating across cultures, gathering information, the role of politics and many other issues that create barriers.

DistrictLab. *Gateway Ecodistrict Pilot Study*. Rep. June 2010

This article was prepared by DistrictLab for the Portland Sustainability Institute. This article is especially helpful because it addresses the needs of the community and includes outcomes of public engagement. It outlines the communities' desires and identifies the top three as increasing connectivity, creating an identity and increasing the security and appearance. With the input from the community, DistrictLab selected target areas that could be improved. With-in these areas specific improvements were highlighted and next steps set out for the areas.

Puttman Infrastructure, Brightworks and SERA Architects. *Gateway Ecodistrict Assessment*. Rep. 14 October 2011.

Neill, William J. V. *Urban Planning and Cultural Identity*. London: Routledge, 2004. Print.

William Neill examines the importance of maintaining identity in order to achieve social cohesion and not create an "us verses them" mentality. The book looks at how you can create cultural identity in a spatial realm by using 3 precedents, German national identity in Berlin, racial identity in Detroit and ethnic identity in Belfast. William Neill examines these places based on personal experience as well as looking at other scholars work.

Portland Development Commission. *Gateway Regional Center*.
<http://www.pdc.us/ura/gateway.asp>

Portland Development Commission is an important player in the development of the Gateway regional center. They have compiled large amounts of data about gateway and composed documents, maps and surveys of the neighborhood. They keep and updated calendar of events in the region and Gateway in the news.

Portland Development Commission. *Opportunity Gateway; Concept Plan and Redevelopment Strategy*. February 2000.

This article looks closely at Gateway as a district and how it can be redeveloped to further develop it as a vibrant regional center to Portland. The article addresses why Gateway has been chosen for further development. The primary reason is for its accessibility to multiple forms of public transportation, its proximity to the airport and to the intersection of I-205 and I-84. It looks at existing Gateway and the changes that need to be made to increase and maintain its activity. The article sets up a concept plan for development, setting up design philosophies and strategies. It identifies the public infrastructure that needs to be improved including, parks, transportation and civic buildings.

–Portland Sustainability Institute. Pilot Report: *Gateway EcoDistrict Development*. Rep. 2010-2011

This article was composed by Portland Sustainability institute and it looks at the steps that need to be taken to develop Gateway as an Ecodistrict. It focuses on district organization, district assessment, project feasibility, project development and district monitoring. Although it does not delve into the areas in depth, the article gives an adequate overview allowing for a clear understanding each component. It gives a rough time line for each category as well.

Smith, M. Cecil., and Thomas Pourchot. *Adult Learning and Development: Perspectives from Educational Psychology*. Mahwah, NJ: L. Erlbaum Associates, 1998. Print.

This book is a great resource because the educational center I will be designing will be targeted at young adult, high school, and above. I am curious how the psychology behind the education of adults differs from that of children and if the architecture can support those changes in learning style. The book delves into adult learning and the psychology behind it.

United States Department of Agriculture. Plants Database. 24 October 2011.
<http://plants.usda.gov/java/>

This site is helpful for finding native plants of the Northwest and specifically Portland. The site allows you to do advanced searches for specific counties, species etc. It will be especially helpful when looking further into the concept of Biomimicry. By learning what plants are native in the area and how they have adapted to the climate and changing environment it will be possible to carry the principles over to the building scale.

Image Citation

“Asian Mother and Her Children [IK-2205-00134] Stock Photos | Royalty Free | Royalty Free Photos VisualPhotos.com.” Stock Photos | Royalty Free | Royalty Free Photos VisualPhotos.com. Web. 09 Dec. 2011.

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