



Clinton Street MAX Visioning

Portland State University
Urban Design Workshop Spring 2009



Section 1 Context, Location and Features

Welcome to Portland's Next Great Place

The City of Portland takes pride in sustainable transportation projects and serves as a model for cities around the country and the world. The success of Portland's multi-modal transportation system, which includes bus, streetcar, light rail and bicycle infrastructure, is based on well-planned and interactive processes. The Portland-Milwaukie MAX extension, slated to begin operation in 2015, is in the early planning stages. This extension, Phase 2 of Tri-Met's South Corridor Project, will connect downtown Portland with north Clackamas County via inner Southeast Portland.

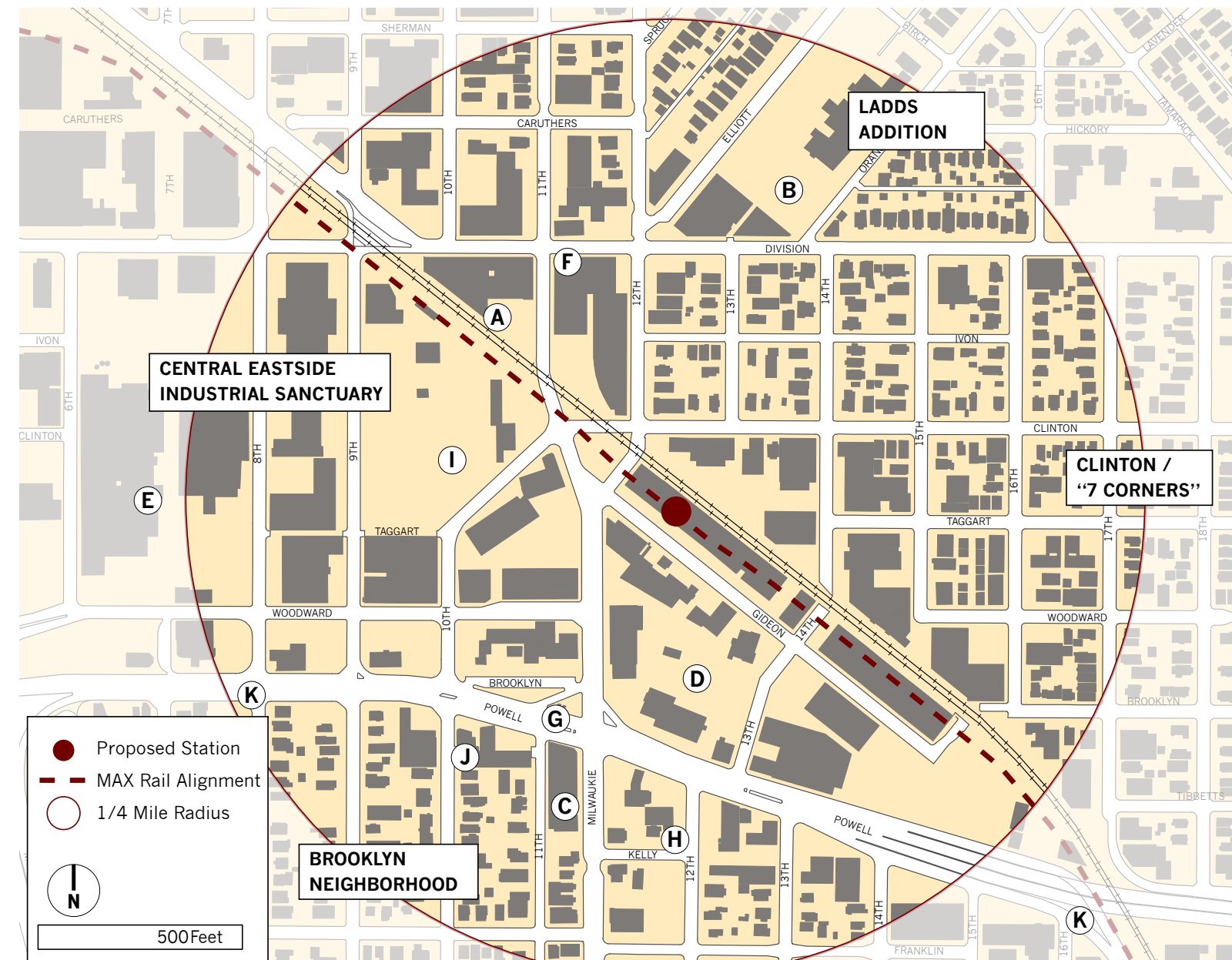
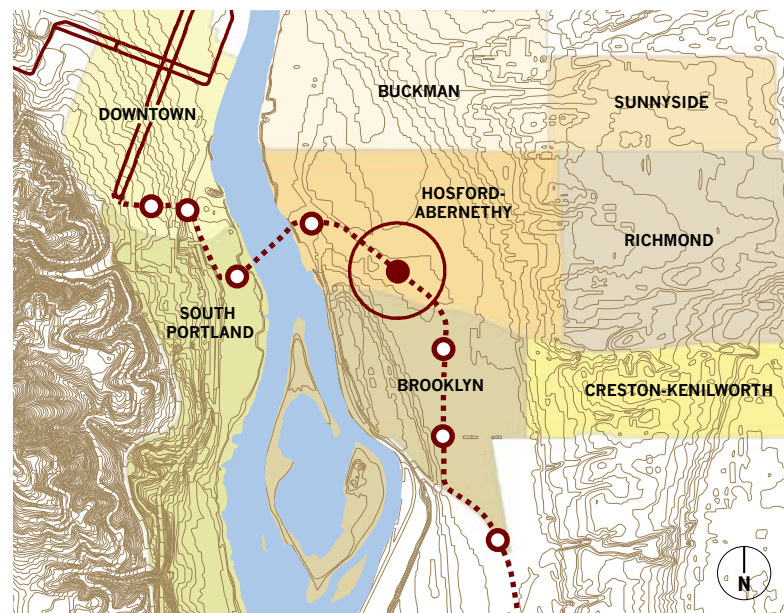
This report documents the initial analysis and visioning process performed in the area surrounding the Clinton Street Station, which is nestled between Hosford-Abernethy and Brooklyn neighborhoods and the Central Eastside Industrial District.


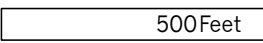
This project focuses on the future of the Clinton Street Station and how its development will impact the surrounding area over the next 50 years. This task involved acknowledging and balancing the current needs of the various stakeholders. The purpose of this report is to act as a tool for the Hosford-Abernethy Neighborhood Association (HAND) to more adequately understand the opportunities and constraints that the future station area holds.

In order to begin imagining the future of the area, a thorough understanding and analysis is presented. Following this, design principles that shape the vision for the future are described. The document concludes with next steps and implementation recommendations.

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● Proposed Station
--- MAX Rail Alignment
○ 1/4 Mile Radius



Key Features

The study area contains a diversity of orienting elements. These include places of business, distinct architectural features, residences, civic institutions, open spaces and unpleasant environments. Listed below and illustrated on the map above are just a few of these key features.

- | | |
|---------------------------------|------------------------------------|
| A Ford Building | G Powell/Milwaukie Bus Stop |
| B Abernethy School | H Edelweiss German Deli |
| C Aladdin Theatre | I Northwest Natural Gas |
| D Fire Station and Tower | J Hotcake House |
| E Darigold Facilities | K Powell Underpass |
| F Genie's Cafe | K Powell Pedestrian Bridge |



Neighborhood homes



Ford building and grassy lot adjacent Union Pacific Railway



Darigold facilities



Fire Station Tower



Existing freight bisecting the station area

Section 2 Existing Conditions Analysis

Nestled between two well-established neighborhoods, Powell Boulevard, freight tracks and an industrial sanctuary, the challenges associated with the location of the proposed Clinton Street Station relate directly to the surrounding existing land uses and infrastructure. This section explores the existing conditions of the station area, its opportunities and deficiencies, through the lens of urban design.

History and Character

In 1868, the Oregon Central Railroad broke ground on the line that runs through the present-day intersection of Division Street and SE 12th Ave. Two years later, a developer named Tibbets platted the area into 36 blocks, resulting in the creation of the Brooklyn neighborhood, originally named "Brook Land" for the many streams that ran through it towards the Willamette River.

Over time, industries, such as the Inman-Poulsen Lumber Mill, cropped up to make the area a thriving working-class immigrant neighborhood. The streetcar line ran along Milwaukie Ave, then known as County Road. The construction of Sacred Heart

Parish Church and Brooklyn School, built between 1889 and 1893, further defined the neighborhood as a cohesive community.

It was the 1926 construction of the Ross Island Bridge and the transformation of Powell Valley Road into US-26, or Powell Boulevard, that disturbed the continuity of the neighborhood. Powell Blvd. fragmented the neighborhood, which had spanned from Division to Holgate, into two separate neighborhoods - Brooklyn south of Powell and Hosford-Abernethy to the north. As heavy industry, such as the Ross Island Sand & Gravel Company, began locating in areas along the river and Powell Blvd., the

neighborhoods became further fragmented, thereby losing the community that once existed.

Today, the major transportation corridors that service the industrial district tend to define the character of Brooklyn and Hosford-Abernethy neighborhoods. Other physical characteristics, including its close proximity to downtown Portland, the Springwater Corridor and inner Southeast Portland, afford this station area with opportunities for redevelopment of outdated and auto-oriented uses.



Bridge Transfer Trolley Line (BT Line) tracks running along SE Clinton, circa 1920s.



Hawthorne Slough, 1874 (Willamette River in background)



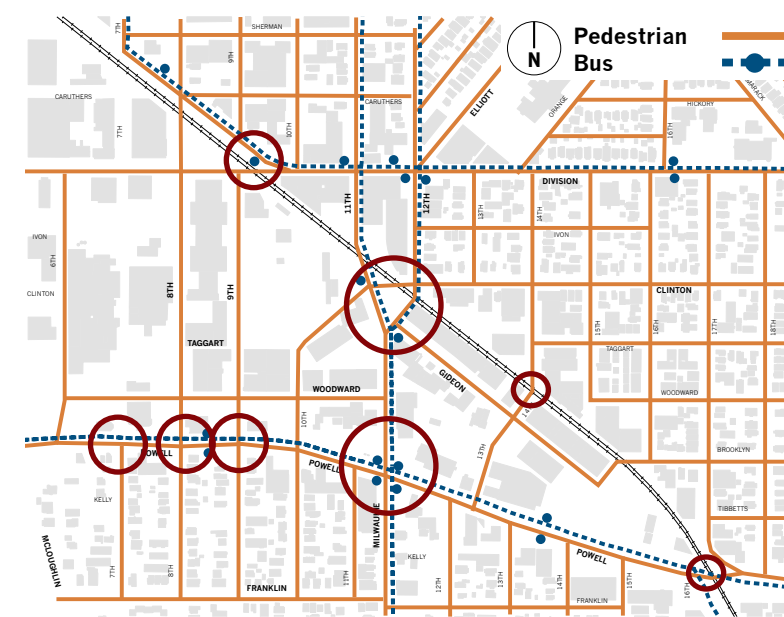
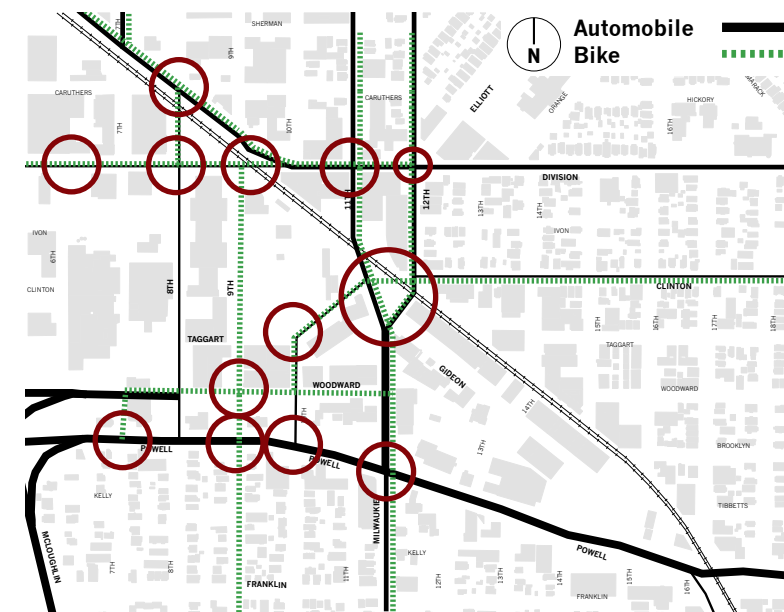
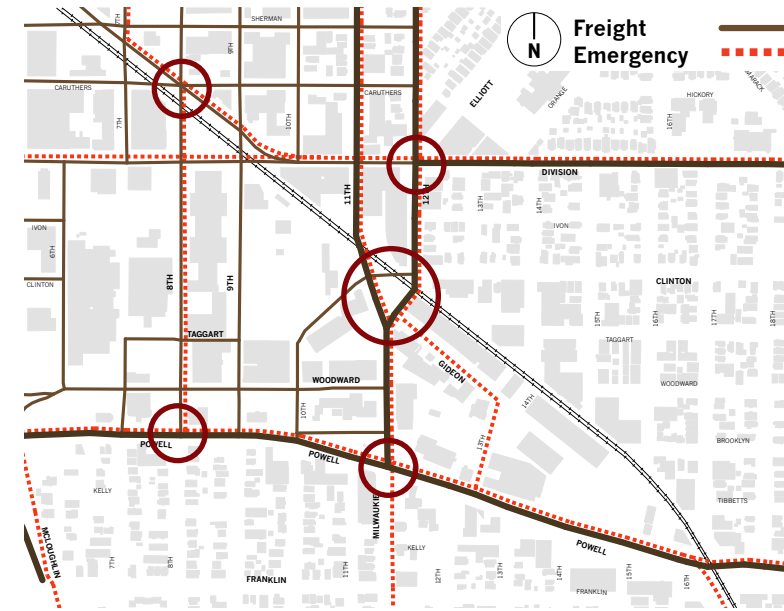
Ford Building, 1950s (Source: Bosco-Milligan (<http://visitahc.org/>))



Multiple Character Areas

The intersection of industrial, civic and residential uses in this district produced multiple areas of distinct character. For example, along Clinton Street, the industrial sanctuary bleeds into the Hosford-Abernethy neighborhood with a large scale masons supply company located across from historic bungalows. This map illustrates these multiple character areas.

- (A) Large-Block Heavy Industrial
- (B) Small-Block Heavy Industrial
- (C) Reviving Main Street
- (D) Auto-Oriented Corridor
- (E) Historic Neighborhood
- (F) Residential Area
- (G) Transitional / Mixed-Form
- (H) Open Green Space
- (I) Unique Civic-Industrial Wedge
- (J) Disorienting Intersection



Movement Systems with Conflicts

The proposed station area is host to a vast amount of roadway used by a variety of transportation modes. With autos, busses, freight trains and trucks dominating the roadway, bicyclists and pedestrians are unintended users. Consequently, their needs have been overlooked.

This area offers a crucial connection for travel throughout the region. Powell Blvd., which runs from Mount Hood to the coast, also provides connections to McLoughlin Blvd. (Hwy 99) and I-5 across the Ross Island Bridge. While these links are vital to the industrial users in the area, they cause connectivity challenges for residents. Powell Blvd., for instance, has a right-of-way that spans between 80 and 150 feet with average daily auto trips upwards of 70,000 (PBOT, Inner Powell Blvd. Streetscape Plan). These roads offer unsafe crossings for non-motorized users. Combined with a scarcity of designated crosswalks and a complete absence of bike lanes, the infrastructure on Powell offers nothing more than sidewalks for bicyclists and pedestrians. These maps illustrate the areas of conflict that exist because of the variety of users interacting in the area. The circles indicate the conflict points between the modes.



Powell Blvd during evening rush hour

Freight and emergency vehicles interact at a few key intersections. In particular, the 8-way intersection at Clinton, Gideon, 11th, 12th and the freight line is an area of particular concern due to the location of the fire station at SE 13th and Gideon. In the case of an emergency, fire vehicles are not given right-of-way to trains passing through the area.

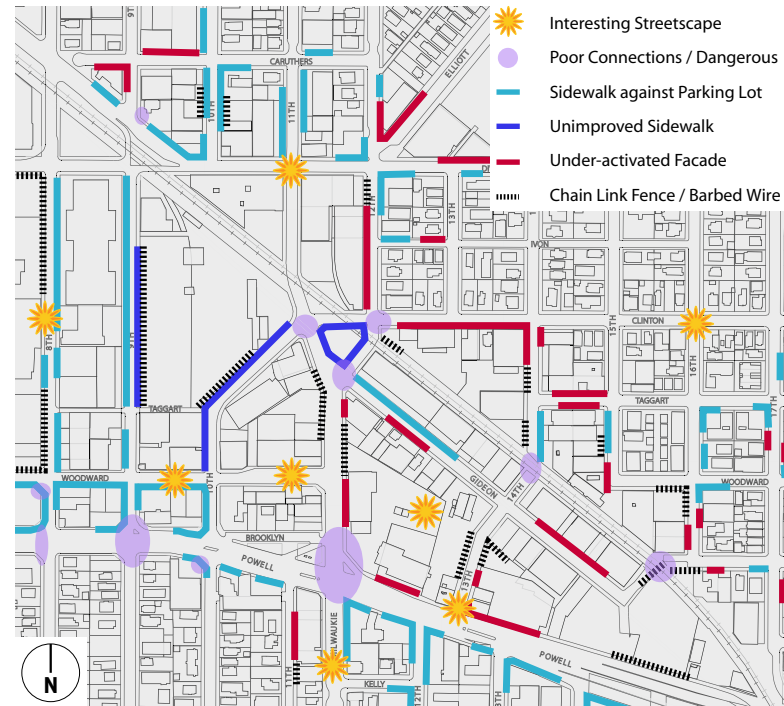
Bicyclists and motorists interact at a variety of intersections in the station area due to the absence of bike infrastructure. The Clinton Street bike boulevard passes through the 8-way intersection imposing dangerous crossing conditions on cyclists wishing to connect to the Willamette River bikeways. In addition, the limited number of lighted grade crossings along Powell Blvd. is a barrier to cyclists moving north-south.

With numerous bus lines serving the Powell and Milwaukie corridors, residents are well-connected to the rest of Portland; however, conflicts between pedestrians and busses exist particularly in the areas where there are substandard pedestrian crossings. In addition, an informal grade crossing at 14th and the railroad exists by way of a hole in the fence. Formalizing that crossing with a land bridge or at-grade crossing is a recommendation discussed in the Vision section."

Streetscape Analysis

The map below illustrates a streetscape analysis performed in April 2009. The purpose of this analysis was to graphically display the existing conditions of the streetscape. The details of this include:

- good walking conditions,
- sub-par sidewalks,
- sidewalks adjacent to windowless walls, parking lots or open space and
- sidewalks adjacent to barbed wire.



Overall, the station area leaves much to be desired when it comes to a pedestrian environment. With the roaring noise from auto, truck and bus traffic, pedestrians have little reason to walk in this area. In addition, the streetscapes in the area lack street trees, pedestrian buffers (cars or planted strips) and sidewalk furniture. The narrow or lack of sidewalks makes walking dangerous in multiple areas. To ensure greater connections to the proposed station, improvements to the pedestrian realm (such as those discussed in the Vision section) are critical.



Woodward Street looking west



Milwaukie Street looking north



Division Street looking west



Gideon Street looking east

Development Opportunities

This map illustrates a range of sites identified for new development or structural renovation. This is a very rough analysis and should be understood as an illustration tool, providing some perspective on the large amount of potential the study area provides in order to become a great, transit-oriented district.

A variety of sources helped inform the process of determining which parcels are (re)developable, including:

- a GIS-based land-to-building values analysis,
- extensive field observations and discussions,
- an analysis of ownership patterns and
- a preliminary vacant land inventory.



Urban Ecology

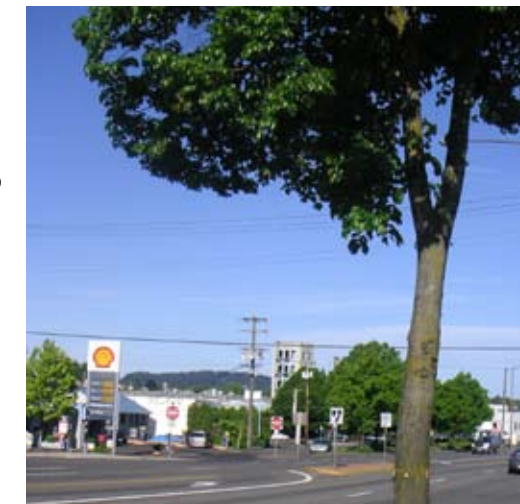
Very little of the current conditions of the station area suggest the history of its natural environment. Where the rail yards now lay, wetlands used to naturally filter the stormwater that collected during the rainy winter months. Where the Brooklyn neighborhood sits today, dense woodlands once existed. The development of the transportation corridors and residential neighborhoods described earlier in the section fragmented this ecosystem. As the area became further developed, the wetlands were paved over and the woods thinned.

While a visit to Oaks Bottom Wildlife Refuge provides a glimpse into the area's natural history, the current scene is that of natural processes struggling to function. A walk through the area presents a variety of weeds, grasses and wildflowers rising from the cracks of asphalt and railroad tracks. The tree featured top right struggles to coexist with the building from which it seems to be growing.

Today, the rain that falls on the roofs and roadways in the area flows into a combined sewer and stormwater pipe, which is routed to the City's sewage treatment plant; though, on occasion, the pipe overflows into the Willamette River further disrupting the ecosystem that struggles to survive there.



Tree emerging from a historic industrial building



Lone tree along Powell Blvd.

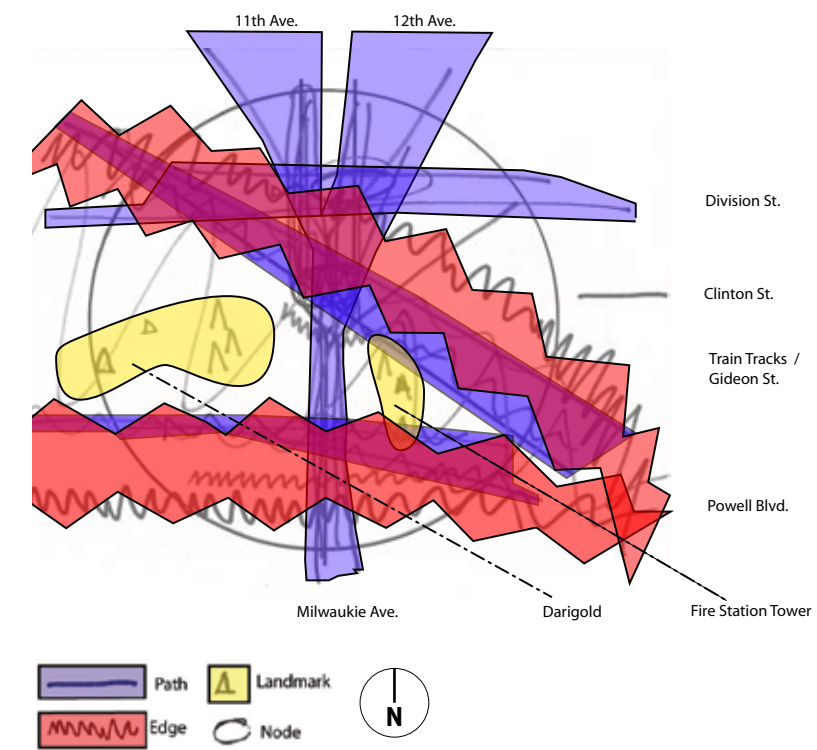


Abandoned railroad tracks at Darigold

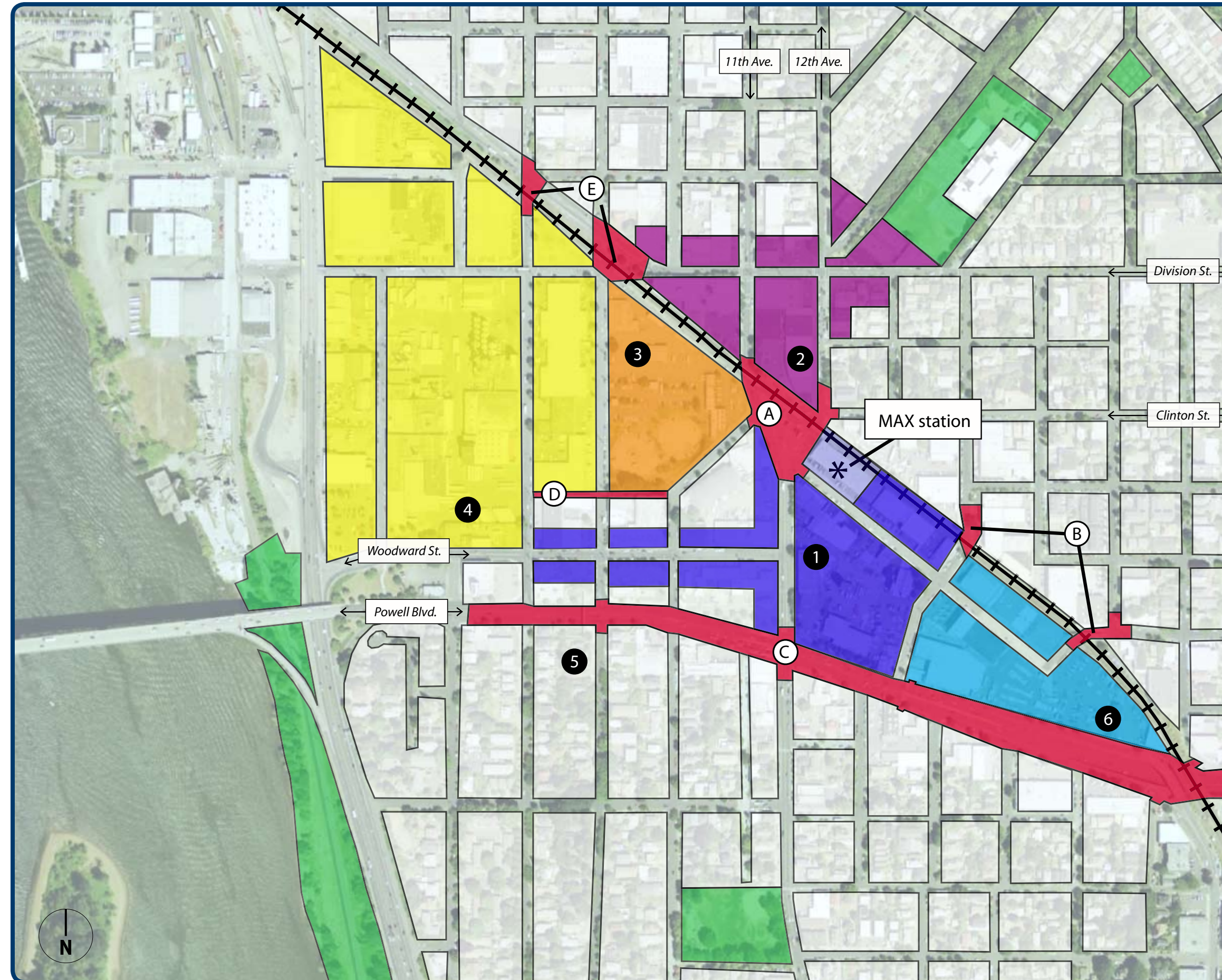
Cognitive Mapping and "Imagability"

To help understand and synthesize the analysis performed around the Clinton Street Station, the design team engaged in a cognitive mapping exercise. Using the quarter-mile radius around the proposed station as our unifying guide, each team member drew a simple map of the area from memory, showing what they perceived as primary "paths" they would follow, "edges" they would avoid crossing, "nodes" of heightened activity and "landmarks" by which they would orient themselves. These maps were then scanned and superimposed to identify commonalities.

The importance of certain streets as main paths became clear, as did the feeling of Powell Boulevard and the train tracks as perceived "edges" in the area. The wedge between these edges forms a "no-man's land" that is illuminated by two landmarks. By strengthening and augmenting useful paths, landmarks and nodes, while overcoming or avoiding perceived edges, the 'imagability', functionality and general appeal of this area can be greatly improved.



Clinton MAX Station Area: Urban Design Framework Plan



Land Use & Development

- 1 Fire Station Block / Woodward / Gideon**
These blocks could form the centerpiece of a true transit-oriented development (TOD), with pedestrian-scaled streets and plazas, and a vibrant, dense mix of civic, residential, commercial and light industrial use.
- 2 Division Street**
Just two blocks from the site of the new light rail station, this active commercial stretch may be a natural site for mixed-use development; increasing density while complementing historic structures.
- 3 NW Natural Gas Site**
This area could provide employment opportunities with street- and neighborhood-oriented office development, while also providing bicycle access along the rail alignment.
- 4 Industrial Sanctuary**
Uses less compatible with residential development benefit on these blocks from large plots and significant buffers from nearby residential areas.
- 5 Existing Neighborhoods**
These communities— often characterized by an eclectic mix of residential, commercial, and light industrial uses— can reap the rewards of greater pedestrian and bicycle infrastructure and close proximity to a TOD, without significant changes to their character or form.
- 6 Lumber Yards / Gideon**
This unique, secluded wedge may eventually lend itself to creative, programmatic & transit-oriented uses that are less feasible in more central locations.

Street & Traffic Improvement

- A 8-Way Intersection**
Resolving traffic and way-finding conflicts for all modes of transportation at this complex intersection is crucial to the light rail development.
- B Pedestrian Rail Crossings**
The crossing at 16th and Brooklyn is in need of revision, and a second crossing at 14th could greatly improve neighborhood light rail access.
- C Powell Boulevard**
Safer pedestrian-scaled crossings at strategic intersections (like Milwaukie) can help tie the Brooklyn neighborhood and its cultural amenities to Hosford-Abernethy and the new light rail station development.
- D Taggart Alley**
This alley may eventually serve as a pedestrian path, as well as an ecological and community art feature.
- E Division Street Rail Crossings**
Reconfiguring these intersections can enhance neighborhood connectivity while reducing the number of at-grade rail crossings.

Section 3 Design Principles

The analysis presented on the previous pages gave rise to the following design principles, which helped to guide development of the vision presented in the following section.



Mural on Powell Blvd. in Brooklyn neighborhood

Preserve Character of the Neighborhoods

The Hosford-Abernethy, Brooklyn and Central Eastside Industrial District all possess unique qualities that contribute to a distinctive sense of place. These qualities should be both preserved and improved upon when considering development and interventions in the urban form.



Eastbank Esplanade along the Willamette River

Improve Bicycle and Pedestrian Connectivity

Improved bike and pedestrian connectivity provides alternatives to motorized transportation, complements public transportation and are typically one-time capital investments with multi-year benefits. There are several tools that can be used to improve the safety of travel for cyclists and pedestrians. These include: curb extensions, curb cuts, bus shelters, pedestrian-scaled street fixtures, streetscaping, at-grade rail crossings, designated bike routes and pedestrian refuge islands.



Example of a Public Plaza (Source: www.ci.loveland.co.us)

Station Area should be a Destination

The station area should be a neighborhood destination in order to attract broader attention. Ideas include: incorporating a library or public community gathering space into the station, creation of attractive plazas and open space and improvements to store fronts and businesses.



Example of TOD around a light rail station (Source: http://www.transitorienteddevelopment.org/)

Promote Transit-Oriented Development

Transit-oriented development (TOD) consists of dense, mixed-used buildings that include housing, employment, commercial space and basic services clustered around public transportation stops. TOD neighborhoods are pedestrian- and bike-friendly environments and reduce auto dependence. The goal of a TOD is to be able to complete most of your basic needs in a reasonable walking distance and have easy access to transit for more specialized needs. TODs reduce energy needs and create more sustainable cities.



Example of a green roof (Source: http://greenroofs.wordpress.com)

Incorporate Ecological Infrastructure

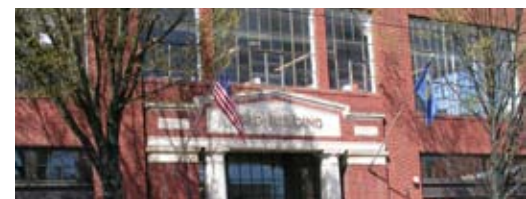
Ecological, or green, infrastructure is the mimicking of natural systems. These systems can be incorporated in such a way that they contribute to the beautification of streetscapes and open spaces. Planning for the ecological infrastructure reduces environmental impact, decreases energy inputs and leads to more sustainable cities. Ecological infrastructure that can be included throughout the site includes: green streets, stormwater swales and manufactured wetlands, green roofs and grey water irrigation systems.



A well-defined public realm (Source: http://3.bp.blogspot.com/_Ymx9e66vrGc/R7FWSkdfpEI/AAAAAAAAAAsQ/5DLDS-jJz2Q/s1600-h/igloo_Fruit_Market.jpg)

Define a Cohesive Public Realm

Public spaces and pathways should be designed to contribute to the legibility and walkability of the site. Attention should be given to wind direction, solar orientation, streetscape and pedestrian flow.



Example of flexible space: The Ford Building on 11th Ave.

Allow for Flexibility over Time

Cities are ever-changing places and plans should take this into account by allowing for a variety of uses and changes over time. Dynamic zoning laws and flexible uses allow neighborhoods to change and respond to market and style fluctuations over time while protecting the elements important to the sense of place.

Section 4 Vision

The analysis work and design principles presented in the previous pages gave rise to a variety of ideas for the future development of the station area. This section describes a preliminary vision for a few distinctive locations

Fire Station

A TOD on these blocks could take advantage of the unique shape of the fire station block, as well as build on the existing character of the surrounding streetscapes.

The interior of the fire station block could form a central pedestrian plaza, with development along its perimeter focused both outward and inward, and should include strategic entrances from surrounding streets to create a strong sense of pedestrian permeability. The fire station tower can be renovated and seismically upgraded to provide a strong central landmark in the plaza and throughout the neighborhood.

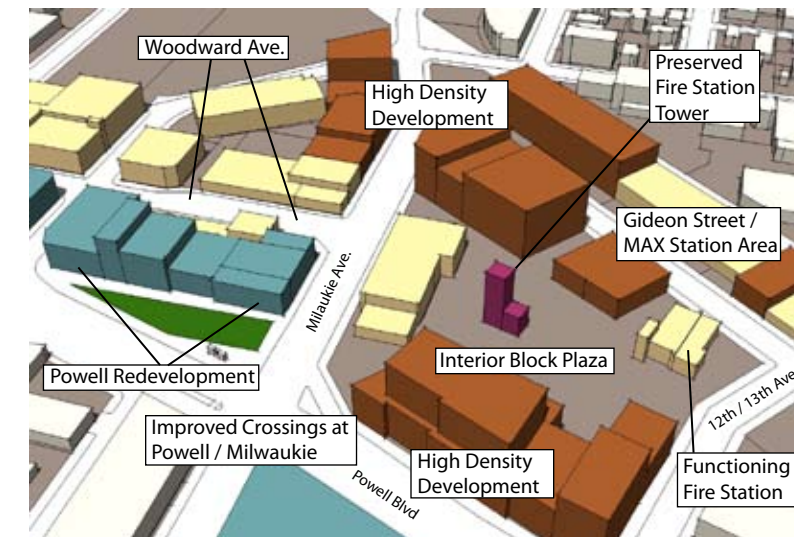


Fire Station Site

Maintaining the definition of Gideon and Woodward Streets is integral to the character of this area. Plans to eliminate frontage on the north side of Gideon Street due to light rail alignment would create a major gap in the urban grain, deterring pedestrian use, increasing noise concerns and threatening the vibrancy of redevelopment. By reconfiguring the MAX rail alignment or by innovative street design, Gideon Street can be preserved and enhanced, yielding a vibrant and unique development at the TOD's core.

8-Way Intersection

The intersections of 11th Avenue, 12th Avenue, Gideon Street, Clinton Street and the rail pose a unique connectivity and legibility dilemma. This area strives to balance rail, auto, pedestrian and bike traffic. Possible solutions for the intersection range from subtle street modifications meant to reestablish traffic hierarchy (A) to more radical street modification which redirect traffic (B) to implementing a different type of intersection, such as a traffic circle (C).



View of 8-way intersection from above



Division Street and Central Eastside Industrial District

The industrial sanctuary that lies on the west side of the station area influences the character of the area. However, industry and manufacturing processes have changed since the neighborhood was originally designed, and these changes should be accounted for when thinking about the future.

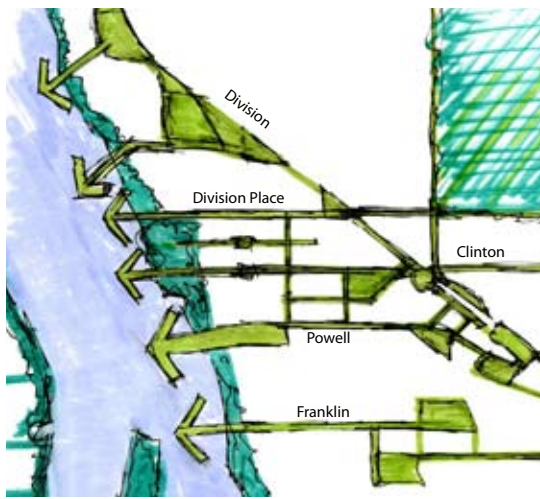
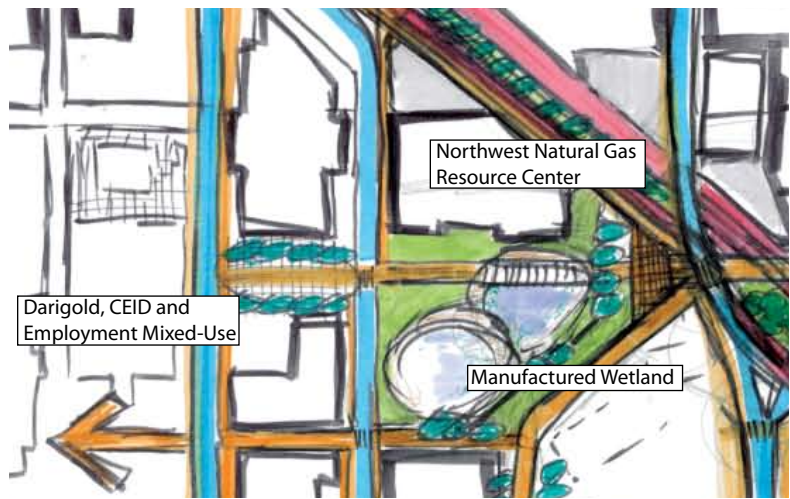
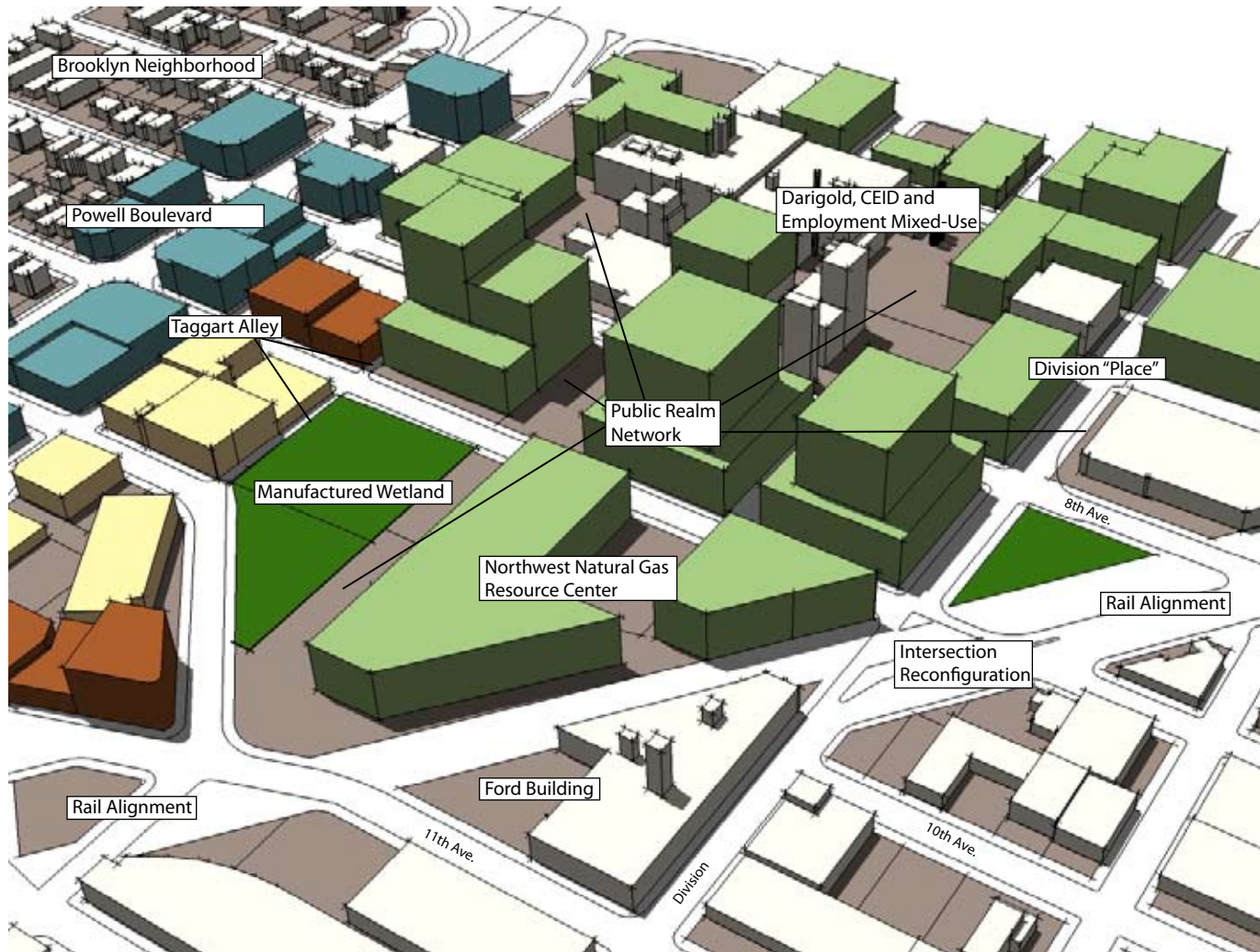
What is currently the defunct Darigold processing site can be redesigned to be an urban park. Similar to Gas Works Park in Seattle, the area can provide new green space recreation while reusing equipment from an important historic process.



Out-of-operation Darigold processing plant



Gas Works Park in Seattle, Washington
(Source: http://www.cityofseattle.net/parks/_images/parks/GasWorks/Aerial.jpg)



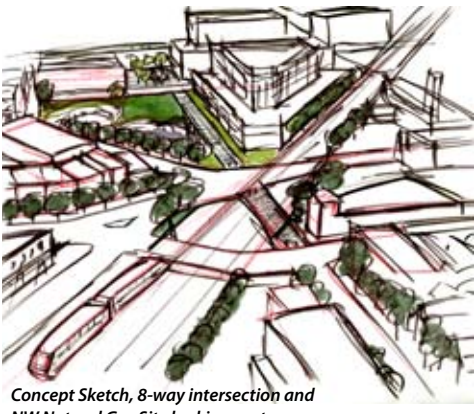
Ecological infrastructure network concept

NW Natural Gas Site and Taggart Alley

The NW Natural Gas block lies on real estate directly adjacent to the station. Redeveloping this site is crucial to reinvigorating the neighborhood and incorporating the station into the existing urban fabric. One proposal is to divide the NW Natural Gas block. This could provide space for the extension of the Clinton Street bike boulevard.

The southern half of the site contains a large amount of open space that previously housed gas tanks. This area could be used for a multiple of purposes including engineered wetlands to store rain water runoff, or the construction of a parking garage with a capped top providing space for a park.

The northern portion of the site could remain close to the form it is in now in order to provide an employment center for NW Natural Gas. This building would have a secure courtyard that contains the access point to the NW Natural Gas underground pipeline, while the frontage of the building would have shops and other businesses that would benefit the neighborhood.



Concept Sketch, 8-way intersection and NW Natural Gas Site looking east



Intersection of Division Place and 9th Ave, looking south

Lumberyards / Pedestrian Crossings

The lumberyards and the southeast stretch of Gideon Street offer unique challenges and opportunities. Noise concerns from Powell and the train tracks, as well as the physical barriers of these infrastructures, may suggest orienting a site development westward, towards the new TOD.

While this site may function as a second-phase, mixed-use TOD, it may be better suited for creative uses, capitalizing off its size and seclusion. Recreational and entertainment development unfettered by the proximity of heavy traffic may thrive at this location.

Pedestrian crossings at 14th Avenue and the intersection of 16th and Brooklyn could create a strong connection from the Hosford-Abernethy neighborhood to the new TOD, as well as to the Brooklyn neighborhood. At-grade pedestrian and bike crossings could help maintain the quiet, residential feel of the adjacent neighborhood, while increasing access and insuring active use at minimal cost. Wide, earth-covered 'land bridges,' similar to the new structure in the Vancouver, Washington Confluence Project, could provide an alternative to at-grade crossings, avoiding potential traffic conflicts while themselves acting as public art and community destinations.

Powell Boulevard

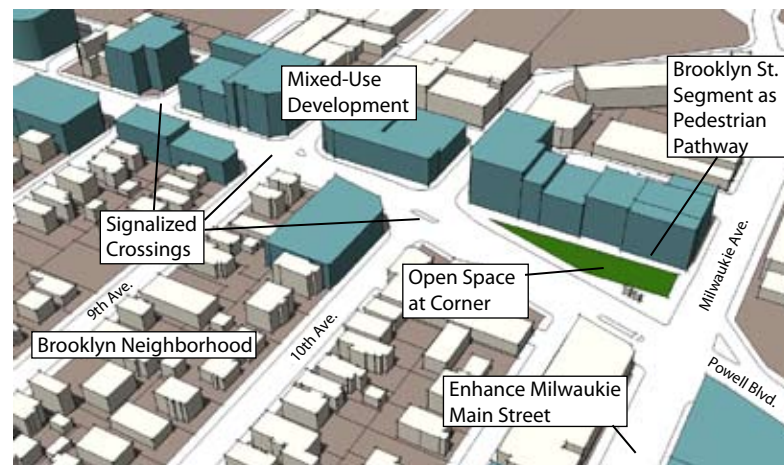
Powell Blvd. is an integral part of the transportation connections and the economic viability of the industrial economy in this area. For this reason, calming Powell Blvd. is not currently feasible but should be considered as a long-term solution to pedestrian and bike connectivity issues.

In the short-term, improving the intersections and pedestrian crossings along Powell Blvd. is a reasonable goal. In addition, there are a variety of places that could use more involved intersection re-configuration. For instance, the intersection of Powell and Milwaukie can be improved by vacating Brooklyn Street to the northwest and developing the NW, NE, and SE corners with three-six story mixed-use buildings. This will reduce the number of street crossings that pedestrians must make just to get across Powell Blvd. and create a 100% intersection that will produce a more interesting streetscape.

Other short-term improvements include installing lighted crossings intermittently along Powell Blvd. in places where pedestrians naturally want to cross. Specifically, replacing the SE 9th Street pedestrian bridge, which many pedestrians and cyclists neglect to use, with an at-grade, lighted crossing will improve the north-south connection.



Example of a well-designed pedestrian bridge (Source: unknown)



The area surrounding the proposed Clinton Street Station has a variety of opportunities for development and redevelopment as a result of existing infrastructure. The vision presented in the preceding pages is the result of efforts to understand the area and the positions of stakeholders. Through an analysis of existing conditions, conversations with stakeholders and a review of the plans that govern the area, design principles were developed and bundled into a cohesive vision for the area, but there is more work to be done.

Below is a prescription for moving forward in the process of further defining a station area vision that incorporates the ideas of all stakeholders and meets both short-term area needs while looking forward to a community of the future.

Recommendation 1: Involve the Community

Identifying stakeholders and engaging them in a visioning process is the first step to developing a unified vision to present to the City of Portland. This requires that a core group work with City officials to strategically identify individuals and organizations that should be involved in the visioning process. Involving the Brooklyn Neighborhood Association, which will likely utilize the Clinton Street Station, is recommended.

Once stakeholders are identified, a design charrette is a good way to cull on the ideas of the community in a short timeframe. A charrette is an intensive one-week process of identifying solutions to a design problem. If the charrette timeframe is not ideal for this process, design and brainstorming workshops can be held over a longer timeframe to get the same result; a shared vision that can be presented with confidence to the City.

Recommendation 2: Incorporate the Area into Central City Plan Boundary

The Central City planning boundary currently extends into the Central Eastside, which covers half of the study area but terminates at 12th Ave. Based on the vast development opportunity, high potential for a successful TOD and overall unique character and urban form of the site, the semi-industrial wedge-shaped portion of the study area should be absorbed into the Central City planning boundary. This would enable the future TOD to be governed by more intense metropolitan development guidelines, maximizing opportunity for future development to appropriately become a more urban place.

Recommendation 3: Define a New Land Use – Industrial or Employment Mixed-use

A new type of land-use, industrial or employment mixed-use, emerged during this process of defining a preliminary vision for this area. This land use allows the light-industrial uses that already exist in the area to remain but suggests that greater attention be given to activating street life through ground floor retail and commercial uses. As the manufacturing industry becomes more digital this land use may become more specifically focused on employment needs.

Recommendation 4: Identify Negotiation Points of Key Stakeholders

There are several stakeholders, including Union Pacific, Oregon Department of Transportation, NW Natural Gas and Tri-Met, that

have a heavy hand in key decisions that will affect the feasibility of the community vision. A variety of unknowns exist with respect to where there are negotiation points in the discussion of specific design solutions. For example, will Union Pacific negotiate the 50-foot buffer between the freight tracks and the light rail tracks? Are they willing to negotiate grade crossings? Knowing thresholds will help the community create a more feasible vision.

Recommendation 5: Inventory the Physical Constraints

The analysis presented in this report is a good start, but there is more work that needs to be done. Understanding the constraints of the key stakeholders (Recommendation 4) is important to knowing what is feasible from that standpoint. There are a number of infrastructure constraints that should also be identified. For example, where are the public utilities under the roads? If intersection reconfiguration is a design recommendation, it is good to know which streets are necessary and which are not.

In addition, prior to the original platting and development of the neighborhoods, the area was primarily wetland. Are there any environmental features that could stifle suggested design solutions? The City of Portland's Bureau of Environmental Services can provide well-researched information on the best places in the area to develop based on environmental factors, such as flood plains or level of groundwater.

Recommendation 6: Conduct a Traffic Study with an Enlightened Traffic Engineer

Several key changes described above require complex transportation engineering. With the construction of a new rail line running through the area, there is opportunity to change several of the intersection configurations that currently impede use for a variety of reasons including, but not limited to, 1) the intersection is dangerous from a bicycle and pedestrian standpoint, 2) it is confusing for all modes or 3) it will need to be reconfigured because of the new light rail line being installed.

Employing the expertise of a traffic engineer who is innovative in finding ways to accommodate all modes would help the community understand the traffic and engineering constraints and opportunities.

Acknowledgements

2009 PSU Urban Design Workshop Team

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Allen Davis
Hannah Dondy-Kaplan
Tammi Hawkins
Emily Rice
Kellen Smith
Ethan Berleman
Alicia Castro
Kathleen Critchlow
Brett Luttrell
Michael Noonchester

Don Stastny (Instructor)
Ed Starkie (Instructor)

Participating Community Partners

Hosford-Abernethy Neighborhood Association (HAND)
Portland State University
City of Portland, Bureau of Planning and Sustainability
Tri-Met
Northwest Natural Gas
Central Eastside Industrial Council
StastnyBrun Architects

We would especially like to thank the City of Portland for the use of various GIS data layers. As this is a student project, the City of Portland is not responsible for any mis-information or geoprocessing errors associated with the presentation of this data. The following statement is required for maps in this report employing City-provided GIS data:

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