

Seattle's Interbay: Navigating an Urban Nexus of Competing Social Equity Agendas

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This paper advocates for engaged interdisciplinary design education which exposes students to large-scale, complex and controversial urban issues, advances their research and urban design skills and immerses them in the messy fray of urban policy discourse.

OVERVIEW

The State of Washington proposes to re-develop an industrially zoned site in Seattle's Ballard Interbay Northend Manufacturing Industrial Center (BINMIC). This prompted a Built Environments (BE) Studio, an interdisciplinary urban design studio at the University of Washington (UW) College of Built Environments, to explore the myriad complexities this proposal entails including competing interests between the city and state, a misalignment between city land use policies and regional transit investment, the competing priorities of protecting high-wage industrial jobs and providing affordable housing, the transformation of industrial production and the prospect of soil liquefaction and sea level rise impacting the site.

The studio worked with city and state elected officials and staff, regional transit planners, members of the Seattle Planning, Design and Port Commissions, community-based and market rate industrial developers and the public to envision alternative futures for the site while providing a politically safe forum within which officials could convene. The pedagogical goals of the studio were threefold. First, to engage students in genuinely interdisciplinary collaboration focused on large-scale urban design. Second, to provide firsthand engagement with project stakeholders. Third, to provide a student experience that transcends issues typically addressed in the academy by revealing design's role within a complex and controversial socio-political context and its potential to influence policy impacting the equitable future of the city.

CONTEXT: PROTECTING INDUSTRY

Industry is essential to Seattle's economy. Twelve percent of the city's land base is zoned for industrial use and its industrial businesses provide 106,000 jobs, 30% of its total gross revenue and 38% of its Business and Opportunity (B&O) tax

base.¹ Industrial production diversifies Seattle's economy and industrial jobs are among the highest paid employment opportunities for those without a college education making the retention of those jobs a social equity issue.² Vacancy rates in industrial zones are traditionally low and have fallen substantially in recent years indicating strong demand for industrial land.³ The value of its industrial land base is recognized in Seattle's Comprehensive Plan which limits other uses and prohibits housing entirely in industrial zones.

However, the city's meteoric growth and resulting rise in land costs are putting increased pressure on industrial lands. The tension between the economic and employment benefits industry offers and the need to fully utilize the city's limited land base has prompted the release of eight city reports on the future of industrial lands over the past fifteen years. This has also created conflicts between industrial businesses and encroaching uses that are seen as threatening their viability. A well-publicized example of this is the controversy regarding the Burke Gilman Trail, a popular twenty mile multi-use recreational trail maintained by the Seattle Department of Parks and Recreation. The trail has a 1.4 mile long "missing link" through an industrial zone the completion of which has been promoted by parks advocates but fiercely resisted by adjacent industrial businesses for decades. This issue came to a head in 2018 when a Seattle City Councilmember was forcibly removed from a public event in his district by industrial business owners angered by his support for the trail's completion.⁴

CONTEXT: THE NEED FOR HOUSING

Seattle's steady growth since the mid-1980's has escalated in recent years ranking it as the fastest growing major U.S. city in 2019.⁵ During the past decade the growth in Seattle households has outpaced housing production by roughly 50%.⁶ As a result, Seattle lacks both market rate and affordable housing which raises rents and the costs of homeownership. Seattle/King County has an estimated deficit of 155,000 affordable housing units yielding a population of 11,751 people experiencing homelessness in 2019 – the third largest homeless population behind New York and Los Angeles.⁷

Exacerbating this crisis, roughly half of Seattle's residential land area is zoned for detached single-family dwellings at suburban densities. This has prompted the Seattle Planning Commission

to call for allowing a greater number of and variety of housing units in single-family zones.⁸ However, others are calling for a reexamination of Seattle's industrial zoning policy to allow additional uses, including housing, in industrial areas.⁹ The changing nature of industrial production is also a factor. With advances in automation, the need to separate industry from other uses is reduced as industrial processes are less noisy and polluting. Small-scale manufacturers are now being stacked in newly constructed, multi-story industrial buildings allowing the same number of industrial jobs on less land.

The number of craft breweries, distilleries and other beverage producers, most of which are located in industrial zones, has dramatically increased in recent years.¹⁰ These businesses typically include public facing commercial spaces such as tasting rooms and brewpubs that would likely benefit from the presence of nearby residents. The proximity of housing to industrial employment opportunities could reduce commuting times, traffic congestion, transportation costs and carbon emissions.

CONTEXT: EXPANDING TRANSIT

The Puget Sound Region will invest nearly sixty billion dollars in light rail transit over the next twenty years resulting in a network extending from Seattle to Everett thirty miles to the north, Tacoma thirty miles to the south, and Redmond fifteen miles to the east. Most major U.S. cities on the east coast were shaped by transit systems established in the early twentieth century. West coast cities, by contrast, were shaped primarily by the automobile and must be adapted to accommodate transit after the fact. Sound Transit, the quasi-government agency charged with building the regional light rail system is currently working within fifty different jurisdictions, each with its own planning department, zoning codes, patterns of land use, transportation networks, infrastructure, neighborhoods and building stock. Seattle is one of them.

Sound Transit's primary light rail line runs north-south through downtown Seattle with a connecting line running east that is nearing completion. An additional line will connect West Seattle, southwest of downtown, to Ballard to its northwest. This line, to be completed in 2035, will run parallel to and connect with the existing line below-grade through downtown Seattle.

Seattle is surrounded and punctuated by water and its varied topography is shaped by seven major hills with an elevation change of over 420 feet. While this provides for spectacular views it makes mobility very challenging and this is especially true for light rail which is not intended for steep inclines or descents. As a result, Sound Transit strives to reduce costs by avoiding topography where possible. This has led to a paradoxical set of conditions in which three incompatible uses— industry, golf courses and regional light rail transit - all seek the city's limited level terrain. For example, the West Seattle to Ballard alignment will include fourteen stations, six

of which are below grade in downtown Seattle. Of the remaining eight stations, seven capture industrially zoned land, golf courses, or both within the half-mile radius of the station area walkshed. With an average estimated cost of roughly \$730 million per station along the twelve mile route, many argue that there is a mandate to revise the city's land use legislation within the station area walksheds to better leverage this unprecedented public investment.¹¹

THE ARMORY SITE AT INTERBAY

In 2018, the Washington State Department of Commerce announced that the Washington State National Guard would be moving to a new location from its Armory Site in Seattle's Ballard Interbay Northend Manufacturing Industrial Center (BINMIC) The Armory Site is a thirty acre parcel at the south end of Interbay, a low lying industrial district northwest of downtown Seattle between Queen Anne Hill to the east, Magnolia Hill to the west and bounded by Elliot Bay to the south and Salmon Bay to the north (Figure 1). The Magnolia Bridge, one of three bridges connecting Magnolia to the rest of Seattle, is at the south edge of the site and in need of replacement. The Burlington Northern Santa Fe (BNSF) rail line, the primary rail freight connection between Canada, the U.S. and Mexico, runs between Interbay and Magnolia Hill adjacent to the Armory Site. Sound Transit has identified the location for its future Smith Cove light rail station just south of the site on the other side of the Magnolia Bridge. A second station will be constructed a mile to the north. The two light rail stations, coupled with nearby bus rapid transit, will make the neighborhood among the city's most transit rich locations outside of downtown when they are completed in 2035. The site consists largely of fill, putting it at risk of liquefaction in the case of a seismic event, and about half of the site is projected to be impacted by sea level rise within the next century. Despite the site's history of industrial use, preliminary testing indicates that it is free of toxins.

The Washington State Department of Commerce established the Interbay Public Development Advisory Committee to study re-development alternatives for the site to offset the cost of relocating the National Guard. The board hired a team of consultants to analyze the site itself from an environmental and real estate development perspective with no analysis of the surrounding areas. The team explored a range of uses for the site including an industrial-only alternative, a commercial/industrial alternative and a mix of industrial, commercial and residential uses. The State then conducted a six-month community engagement process to garner public input. Oddly, no elected officials or staff from Seattle were included on the advisory committee despite the fact the city controls the permitted uses on the site.

Just north of the Armory Site is a roughly 60 acre Seattle city park atop an abandoned landfill currently being used as a nine-hole golf course. The close proximity of two substantial,



Figure 1. The Armory Site viewed from the northwest. Image credit. Washington State Department of Commerce.

publicly-owned parcels within the walkshed of two future light rail stations in one of the country's fastest growing cities could offer extraordinary opportunities if the city and state were to collaborate on the area's re-development. However, this would require a significant shift from the project's current trajectory.

HYBRID HUB AT INTERBAY STUDIO

The BE Studio is explicitly interdisciplinary. It must include students and faculty from at least two departments within the college. Faculty submit proposals to the dean for consideration a year prior to the studio and, while not a requirement, most studios focus on community-based projects and engage with stakeholders in the process. An important educational model and experience for students within the college, the studio is conducted in a visible location within the college's main building. It meets three days per week for four hours for the ten week quarter and offers an informal three credit seminar that draws students from throughout the university to participate without committing to a full six credit studio.

In the fall quarter of 2019, Richard Mohler, an associate professor of architecture and co-chair of the Seattle Planning Commission and David Blum, affiliate faculty in the department of urban design and planning, with a background in public and private real estate development, taught a BE Studio focused on the Armory Site and surrounding areas.

The studio objectives were as follows:

- To research the changing nature of industrial production and the potential this might offer to combine industrial and other uses
- To explore Seattle's urgent need for housing while honoring to the city's commitment to retain industrial jobs
- To explore strategies to leverage the region's transit investment at station locations where current zoning does not support it.
- To leverage the state's ongoing community engagement effort to inform the student work.
- To explore potential synergies, such as land exchanges between the state-owned Armory Site and the city-owned golf course.
- To connect the site with the surrounding urban fabric.
- To study the implications of seismically induced liquefaction and climate induced sea level rise on the site
- To explore mobility and place making strategies to create a new and unique neighborhood within the city.
- To provide communication and a safe convening space for city and state officials to discuss the project for the first time.
- To foster a discussion of the city's industrial zoning policy against the backdrop of the student work.

Twenty-four students, graduate and undergraduate, from the departments of architecture, landscape architecture and urban design and planning participated including international students from Finland and the Netherlands. They were joined by two students enrolled in the seminar class, a master of structural engineering student who provided consultation regarding the site's liquefaction challenges and a master of transportation engineering student who provided expertise regarding emerging trends in urban freight mobility. The studio worked as a single research collaborative for the first two weeks of the quarter gathering data related to site history, geology, climate, land use and zoning, transportation, housing and industrial employment.

During the research phase the studio invited guests to discuss a range of issues relevant to the project and site (Figure 2). These included Washington State Representative Gael Tarleton, co-chair of the state's Armory Development Authority Advisory Committee and Senior Planner Geoff Wendlandt who is tasked by Seattle Mayor Jenny Durkan to reevaluate the future of Seattle's industrial land base. The consultant team hired by the state to evaluate the site's development potential, developers and architects focused on current industrial development trends, thought leaders in the future of industrial production, affordable housing advocates and developers of community-based maker space/residential hybrids also joined the studio during this phase.

Students then worked in six integrated and collaborative interdisciplinary teams of four in developing urban design visions for the site and surrounding area for the remaining eight weeks of the quarter. The scope of all six teams extended beyond the Armory Site to include the half-mile watershed surrounding the Smith Cove light rail station and several extended well beyond this boundary. Each team was expected to provide a mix of light industrial and maker spaces, commercial and retail spaces and a range of residential uses on the site. Avoiding conflicts between freight, bicycle and pedestrian mobility was a critical charge to the design teams as was employing place making strategies in the development of a new hybrid public realm that would be unlike any existing in Seattle today. The teams were encouraged to consider land exchanges between the city owned park and state owned armory to maximize to leverage the proximity of the two parcels. The teams were required to provide phasing diagrams illustrating how the development would occur over a ten to twenty year timeframe to best leverage the region's light rail transit investment while avoiding conflicts with its construction.

SELECTED STUDENT WORK

The following three projects illustrate the range of urban design strategies employed and the resulting mix of uses, infrastructure and public spaces.

Convergence The proposal organizes five distinct zones along a diagonal pedestrian and bike path that extends through the entire development connecting the future Smith Cove light rail station to a pedestrian bridge spanning the BNSF tracks to Magnolia (Figure 3). It includes 1.4 million square feet of light and flex industrial space, 1,505 market rate and affordable housing units and 552,000 square feet of commercial and office space. The south gateway into the neighborhood is provided by the 'Grand Canopy' which integrates the Smith Cove light rail station and Magnolia Bridge replacement as a single project incorporating bike and pedestrian access to the station, bike parking, commuter retail and a public market. At the opposite end of the diagonal is the 'Toy Box', a multi-story distribution logistics center combined with a public gym. The central green is the spatial and social heart of the new neighborhood and home to the 'Innovation Center' that provides a library, community center and education programs focused on emerging industrial employment opportunities. Industrial uses are adjacent to the BNSF tracks to provide a buffer to the mixed-use commercial/residential hubs to the east and north. Within this zone is the "Maker's Village" in which light industrial and maker spaces are combined with live/work units in a pedestrian friendly district designed to be a regional transit destination.

Urban Assemblage Similar to the previous proposal, the development is organized into four distinct districts – industrial, single-use residential, a high density mixed-use residential transit hub and an estuary that returns a portion of the site to its pre-industrial past while addressing sea level rise and providing a public park. It includes 1.4 million square feet of light industrial space accommodating 3,750 manufacturing jobs, 1,200 market rate and 800 affordable housing units and 670,000 square feet of commercial and retail space. The industrial district consists of a nearly continuous wall of stacked industrial spaces along the BNSF tracks with freight access between the tracks and the building. The lower-density residential district provides much needed 'missing-middle' housing types in close proximity to the city-owned park while the transit hub consists of seven mass timber, mid-rise towers with commercial and retail spaces on the lower floors. The estuary accommodates sea level rise in 2100 by re-establishing the water's edge and raising the surrounding grade for development.

Ecobay Ecobay is the most ambitious project of the three in leveraging land exchanges between the city and state to separate housing from the BNSF rail lines and address the inevitability of sea level rise. It proposes a nearly mile long public park consisting of tidelands, wetlands and undulating parklands unlike any open space in the region. Light industrial uses are contained within a single 1,500 foot long mass timber manufacturing facility adjacent to the BNSF tracks while small-scale maker spaces are integrated with ground level housing in mid-rise residential buildings on the opposite side of the park.

The North Village is a residential district with direct access to Interbay Park, the repurposed city-owned golf course. The proposal includes 500,000 square feet of industrial space, 3,400 market rate and affordable housing units, 750,000 square feet of commercial, grocery and retail spaces, a technical college focused on industrial job training and a medical clinic.

While the six proposals varied substantially, several common design strategies emerged which yielded the following recommendations to stakeholders:

- Enhance connections between south Interbay and the adjacent Queen Anne and Magnolia neighborhoods.
- Zone the site to separate industrial and residential uses.
- Develop the site and surrounding parcels as a series of 'neighborhoods within neighborhoods'.
- Employ industrial uses as a buffer between the BNSF rail line and housing.
- Provide separation between freight, pedestrian and bicycle mobility by limiting freight access to the western edge of the site.
- Combine separate infrastructure projects (such as the Smith Cove light rail station and the Magnolia Bridge replacement) as integrated projects to reduce costs and maximize the return on public investment.

- Provide safe bicycle and pedestrian access and a sense of arrival at the Smith Cove station.
- Employ place making strategies to establish a strong neighborhood identity.

OUTCOME, IMPACT AND OBSERVATIONS

The final studio review consisted of two events. First, each student team delivered an eight minute presentation to an invited audience of city and state elected officials and staff, project consultants, Seattle Planning and Design Commissioners, faculty and selected media followed by recommendations and a question and answer session. This allowed attendees with limited available time to see the range of student proposals and understand the context within which the recommendations were made. This format also provided city and state officials a "neutral" platform upon which to discuss the future of the Armory Site for the first time. The compressed format required students to distill a complex array of issues and design strategies into a concise narrative - something that will be expected of them in practice.

The presentation was followed by a public reception, exhibit of the work and informal review allowing transit planners, additional city staff and members of the public to view the work and discuss it with the student teams in a conversational

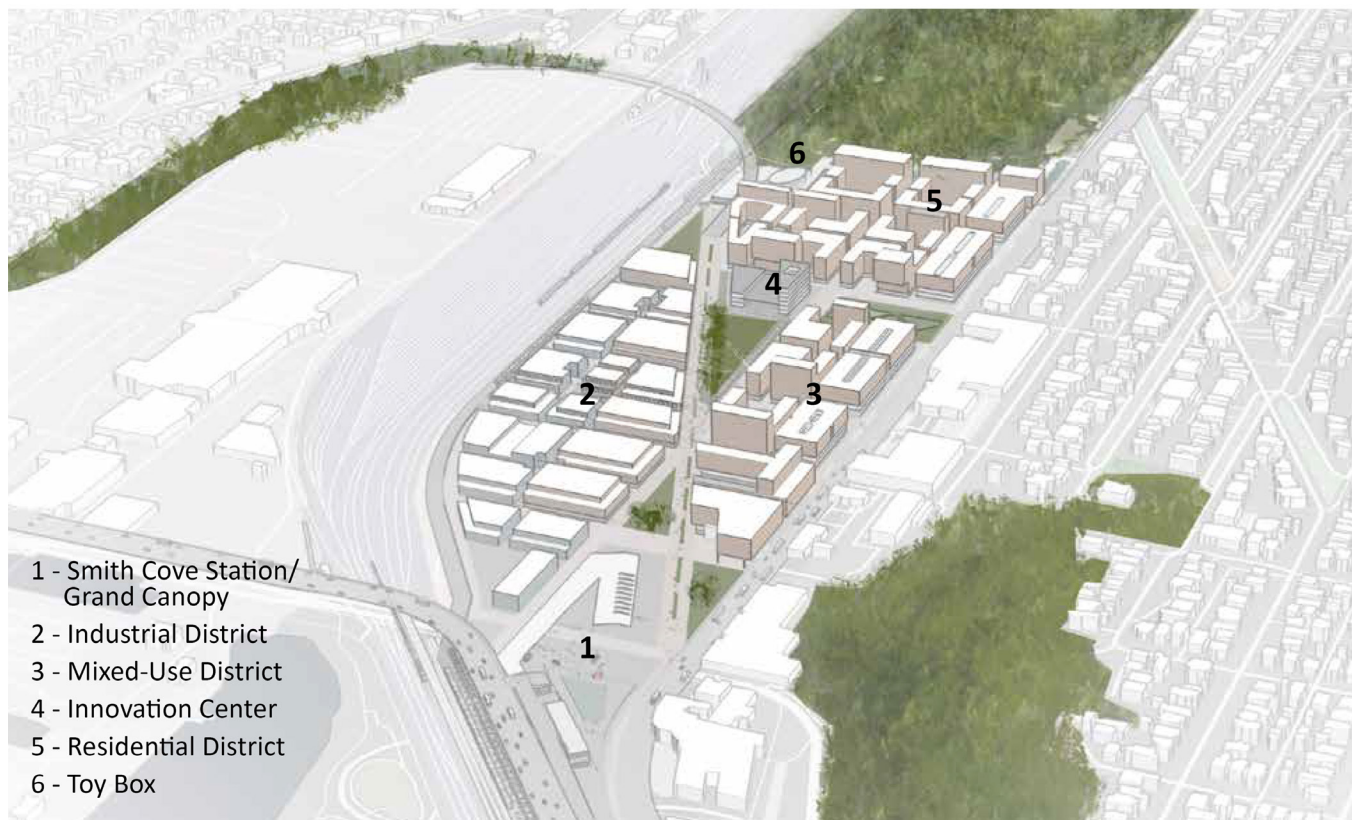


Figure 2. Team Project—*Convergence*—viewed from southeast. Image credit. Tristan Hogenstijn / Alicia Kellogg / Tera Ponce / Daniel Vu.



Figure 3. Team Project—*Urban Assemblage*—viewed from southwest. Image credit. Kasia Cassidy / Ashley Shook / Maura Witzel / Jason Yan.



Figure 4. Team Project—*Ecobay*—plan view. Image credit. Eddie Kim / Sarah Lukins / Siiri Mikola / Miggi Wu.



Figure 5. Seattle Office of Planning and Community Development director Sam Assefa, Washington State Representative Gael Tarleton and former Washington State Governor Gary Locke discuss the student work at the final review while the press documents the conversation. Image credit: Richard Mohler.

setting. The research and design work was subsequently compiled into a PDF document and distributed to stakeholders.

The studio received extensive local media coverage via radio, television and online.¹² While this was of promotional benefit to the college, the coverage focused less on city policy and the misalignment of industry, housing and transit and more on the spectacular prospect of an entirely new neighborhood rising from an unexpected location. However, the studio prompted more rigorous evaluation and dialogue in other venues. Affiliate Professor Andrew Dannenberg, with joint appointments in the UW department of urban design and planning and the school of medicine, taught a research seminar the following quarter in collaboration with Seattle city planners in which his students evaluated the studio proposals with respect to potential health outcomes. Later, the Seattle Architecture Foundation hosted an online program focused on the studio as part of its Design in Depth series during which selected students presented proposals and panelists, both supportive of and opposed to changes in Seattle's industrial land use policy, debated the implications. Later still, Gael Tarleton, co-chair of the Interbay Advisory Committee, testified before her Washington State House of Representative colleagues requesting approval for the public development authority and citing the studio work as

evidence of the value of a coordinated development strategy between the city and state.

In 2020, the Seattle Mayor's Office and the Office of Planning and Community Development (OPCD) commenced a series of convenings with industrial lands stakeholders to develop a new "Industrial and Maritime Strategy" for industrial lands. In a recent briefing to the Seattle Planning Commission, OPCD staff introduced a new industrial zoning classification being considered as part of the strategy - "Neighborhood Industrial". This zoning would combine light industry, maker spaces, housing, open spaces and pedestrian and bicycle mobility to create a strong sense of place and neighborhood identity - qualities embodied by the student design work from the BE Studio. Due to the controversial nature of the discussions, the stakeholder convenings are held behind closed doors. As a result, it is impossible to know if the studio and student work has influenced this proposal but the city staff engaged in this effort were present at the final studio presentation and review and received the final studio document.

Interdisciplinary design studios working on behalf of a single jurisdictional or non-profit 'client' are relatively common. This studio assumed a different role by focusing on design as a tool

to spark discussion, highlight jurisdictional misalignments, encourage jurisdictional collaboration and question existing policy within the messy and often controversial fray of urban political discourse. This fray is, unfortunately, an arena which design professionals tend to avoid. By demonstrating to students that they possess both agency and powerful tools with which to exercise it, the next generation of interdisciplinary urban designers might be more inclined to enter this fray and do so with greater confidence, determination and understanding of the process itself.

Note: While the author co-chairs the Seattle Planning Commission, the views outlined above are his alone and do not necessarily reflect those of the commission.

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