



Chapter 6

Appendices

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A Scoping Notice & Comment Summary

This appendix includes the main scoping report published October 2021, which contains the summary of written comments, survey responses received, and stakeholder and public meeting input. The full scoping report, including the complete compilation of comment letters, is available online at:

<https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/IndustrialMaritimeStrategy/IndustrialMaritimeStrategyEISScopingReport.pdf>.

Industrial and Maritime Strategy

SCOPING REPORT

Introduction

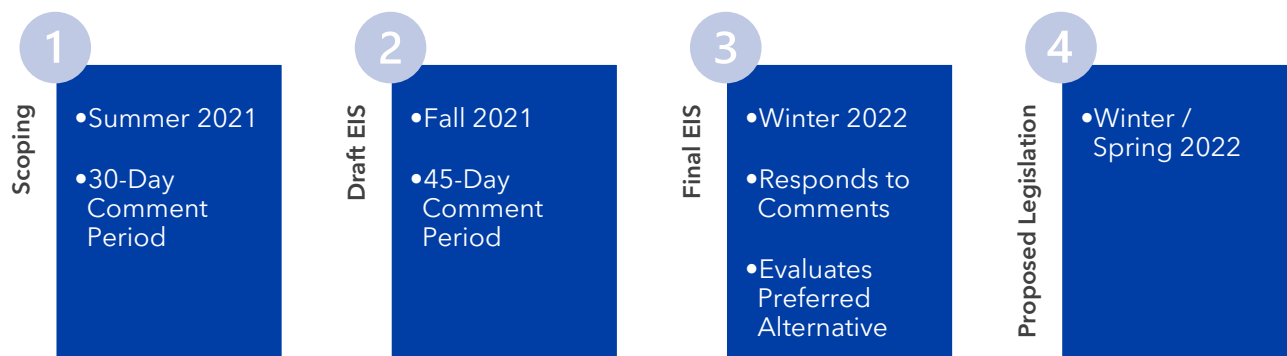
Seattle has planned for maritime and industrial land uses primarily in Seattle's Greater Duwamish Manufacturing and Industrial Center (Duwamish MIC) and Ballard Interbay North Manufacturing Industrial Center (BINMIC).

With policies that are more than 35-years old, the City of Seattle is responding to changing trends with extensive stakeholder and community engagement and by studying a proposal to update its industrial and maritime policies and industrial zoning. The City of Seattle is evaluating that proposal and alternatives in an Environmental Impact Statement (EIS). Through the EIS the City will identify potential adverse impacts and possible mitigation.

Process

The scoping period is the first step of the EIS process. This period is an opportunity for the public to tell the City what elements of the built and natural environment should be studied in the EIS and to provide feedback on the proposed alternatives for study. The Diagram below shows the steps in the EIS process from the scoping period to the issuance of the Final EIS.

Exhibit 1. EIS Process



Source: BERK, 2021.

This scoping report summarizes comments received during the scoping process and the City's response to issues raised.

To gather public and agency input into the scope of the EIS, the City issued a scoping notice on July 8, 2021. The notice was published in the Daily Journal of Commerce, the Seattle Department of Construction and Inspections Land Use Information Bulletin, emailed to agencies and interested parties, posted to the SEPA Register, and broadly disseminated through social media. City staff also held informational meetings with several stakeholder groups and organizations. OPCD requested written comments regarding the potential alternatives and elements of environment to be studied be submitted by August 9. In addition to the written comment opportunity, the City offered an online interactive story map and survey. The City also held two informational meetings in a virtual setting on July 21, 2021 at 9 am and July 26, 2021 at 6 pm.

The input received during the scoping period included:

- Written Comments: 105 commenters
- Survey: 46 participants
- Virtual meeting participants: 7 participants

Written Comments

About 105 commenters provided written scoping comments. Most commenters were individuals; some represented governmental agencies, community groups, or property and business owners. Commenters are listed by name below. A summary of comments is provided that consolidates overlapping comments into themes. Original comments are included in their entirety in an Appendix A to this scoping report.

LIST OF COMMENTERS, BY LAST NAME

Achak, Ramin Matthew	Grantham, Michele	Miller, Ashley
Anane, Layla	Greene, Marke	Murdock, Vanessa, Seattle Planning Commission
Aupperlee, Kathryn	Gryniewski, Bruce	Murphy, Colleen
Bergquist, Carl	Hackleman, Rob	Oaks, Stacy, Seattle Cruise Control
Blanchette, Alexa	Hadaway, Shelley	Ossenkop, Alicia
Bleck, Patrick	Hammerberg, Rita	Peach, Allan
Bodnar, Jenni	Hedger, Dustin	Perry, Charles
Boogie, TJ	Hedrick, Josh R.	Pfeiffer, Baily, King County Department of Natural Resources & Parks
Burton, Kimberly	Henzke, Len	Poledna, Aaron
Cannard, Matt	Herzog, Madeline, Vulcan Corporate Properties LLC: 2233 1st Avenue LLC	Quick, Natalie on behalf of NAIOP
Carow, Paul S	Herzog, Madeline, Vulcan Corporate Properties LLC: Cedarstrand Properties LLC	Richard K.
Carow, Patricia C	Hinthorn, Tim	Robinson, Kathryn
Chase, Mackenzie, Seattle Metropolitan Chamber of Commerce	Howard, Lisa Dixon, Alliance for Pioneer Square	Roy, Julie Parisio
Clawson, Jessica M.: Pier One	Johnson, Kathleen, Historic South Downtown	Scharrer, Christine
Clawson, Jessica M.: Port 106 LLC	Kartchner, Dylan	Schwartz, Steve
Corbin, Lisa, Seattle Sports Complex Foundation	Katz, Andy	Seaverns, Glenn
Creal, Case	Kelton, Megan	Shaffer, Brett
Cunningham, Elizabeth	Lau, Wayne	Stafie, Kris
Curtis, Joshua, Washington State Ballpark Public Facilities District	Lavine, Josh	Sundquist, Steve
Dagg, Steve	Le, Nam	Tim Trohimovich, Futurewise
DeBiase, Sofia	Lewis, Elizabeth	Topp, Gina
Dee, Kate	Lewis, Maggie and Bob Huppe	Tucker, Tarrance D., III
Delman, Joel	Little, Jason	Turcotte, Faye
Dickinson, Anne	Livingston, Robert, HomeStreet Bank	Turcotte, Joe
Dickinson, Corey	M <quikwithquip@XXX.com>	Turner, Mark
Dillon, Ann	M <veloslug@XXX.com>	Underwood-Bultmann, Liz, Puget Sound Regional Council
DiMartino, Janie and Nick	MacQuarrie, Irvin	Vanderburg, Julie
Dubicki, Raymond	Main, Bonnie	Vlasaty, Tina
Essa, Ameena	Marti, Miranda, 350 Seattle Maritime Solutions Team	Wakefield, Jill
Farid, M.T.E., P.E., Abdy	McCone, Andy	Weagraf, Sarah
Ffitch, Eric, Port of Seattle: Port Commission	McCray, Glenn, Sports in Schools	Wesselhoeft, Conrad
Ffitch, Eric, Port of Seattle: Stakeholders	McFarlane, Matt	Westerlind, Linnea
Fiorito, Dan	McIntosh, Jennifer	Williams, Dennis
Flanagan, Dani	McNeill, Holly	Wood, Maria
Frishholz, Christine	Menin, Andrea	Wood, Shawn
Goldman, Shana		

Summary of Written Comments

Written comments are summarized in thematic and topical areas, followed by a brief response for how the City has considered the comment theme and how it will be addressed in the EIS.

Environmental Topics

Commenters made suggestions for the environmental topics that should be included in analysis in the EIS. Topics for study that were suggested, sometimes by multiple commenters, include the following:

- **Vulnerable Communities and Equity/Environmental Justice.** Comments suggested the EIS address environmental justice, including historic and continuing environmental and health impacts to vulnerable communities, and that the EIS should include an overview of past and historic land use actions that harmed vulnerable communities or were racially unjust.
- **Greenhouse Gas/Air Quality Approach.** Some commenters suggested that an air quality and greenhouse gas analysis should be included that addresses how regional transportation and tourism, including maritime transportation, contributes to emissions.
- **Climate Change / Sea Level Rise.** Several commenters desired that the EIS thoroughly address climate change and sea level rise.
- **Transportation and Freight.** Comments suggested that the transportation analysis needs to consider all modes of travel in the study area and should also include an analysis of the role that heavy rail plays in the transportation system.

Response - Vulnerable Communities and Equity/Environmental Justice: The EIS will include a review of past plans and policies, including consideration of racial inequities and effects on indigenous peoples. The EIS scope includes an evaluation of the current and future location of land uses, housing, and jobs and the likely impacts related to air, noise, glare, and contamination. The mitigation measures section could identify actions or programs that the City could pursue to address potential impacts on vulnerable populations. The objectives of the proposal include: “Improve environmental health for people who live or work in or near industrial areas – especially at transitions to residential areas or urban villages.” Mitigation measures that further equity and environmental justice can be linked to this objective.

Response - Greenhouse Gas/Air Quality Approach: The EIS scope includes air quality and greenhouse gas emissions comparisons due to the future mix of land uses and vehicle miles traveled. Available state or regional inventories, programs, and policies (e.g. ships, freight) can be referenced and included in the analysis to the extent feasible. The City intends to include analysis on the effect of electric shore power and other fleet electrification efforts on emissions. In response to this area of comment the City will include as an integrated part of the proposal a new Comprehensive Plan text policies about electrification in one or more of the action alternatives. Additionally, the mitigation measures section could identify actions or programs that the City could pursue to address potential greenhouse gas and air quality impacts.

Response – Climate Change / Sea Level Rise: The EIS scope includes an evaluation of sea level rise and climate change potential under each of the alternatives. The EIS will include a baseline of expected changes to climate and future sea level rise and will include discussion of how these changes will affect industrial lands for each alternative.

Response - Transportation: The transportation analysis will include all known or planned transportation infrastructure changes that will occur during the EIS's time horizon. The transportation evaluation will consider changes in the study area in the context of citywide traffic trips using the citywide traffic model. Heavy rail will also be considered in the EIS.

Housing / Economics

Commenters made several suggestions related to housing and economics. Many of these suggestions were for features that commenters wished to see in the proposal. These suggestions include:

- **MIC boundaries.** Some commenters suggested industrial land / MIC boundaries should be retained, while others wished to retain the current practice of allowing MIC boundary changes through the annual amendment process.
- **Transit Oriented Development (TOD) / Housing.** Some commenters suggest the City should study traditional TOD around transit stations that would include housing. Some felt that due to housing affordability considerations or particular site considerations, the City should allow for more housing. Other commenters believe that housing is incompatible with industrial areas and expansions of housing allowances should not be studied.
- **Consistency with regional plans.** Some commenters emphasized that the proposal should ensure consistency with regional plans and policies for growth including the VISION 2050 plan and the Puget Sound Regional Council's (PSRC) MIC subarea plan requirements.
- **Industrial definitions.** Several commenters argued that the nature of industry is changing and the city should reevaluate what it considers industrial activity.
- **Employment projections.** Commenters suggested that the alternatives should include projections for the amount and type of future employment.
- **Economic feasibility or market analysis.** Some commenters expressed concerns that some of the land use concepts may not be economically feasible and the City should conduct economic feasibility analysis to ensure zoning changes are viable for development.

Response -MIC Boundaries: The City anticipates considering whether to limit MIC Boundary changes to the Comprehensive Plan Periodic Review (next in 2024) or allow it as part of its annual docket process. This policy option is part of the proposal under study. Final decisions by the Mayor and Council would decide whether to implement such a policy change. Alternatives 3 and 4 in the proposal include minor changes to MIC boundaries.

Response - Transit Oriented Development / Housing: Consistent with the PSRC criteria for designating Manufacturing Industrial Centers to focus industrial uses in the MIC, the EIS will not study allowing residential uses in majority of the study area. EIS alternatives include range of additional employment densities at existing and future light rail stations with a focus on a land use concept of transit-oriented employment or industrial TOD. To ensure consistency with PSRC Regional

Centers criteria, the focus of land uses in the study area are non-residential. Alternatives 3 and 4 considers limited additional flexibility of existing allowances for Artist/Studio Housing and Caretakers Quarters housing in the proposed Urban Industrial zone only. The amount of housing varies from 600 to 2,200 industry supportive units between Alternatives 3 and 4 and the EIS will study the impact of that housing on all elements of the environment including land use compatibility. Final calibration of standards may be informed by the EIS and related studies.

Response - Consistency with Regional Plans: The EIS will address the policy framework for MIC designation including the Growth Management Act (GMA) and PSRC Vision 2050. The land use section of the EIS will also address the role of the Container Port Element of the Comprehensive Plan. The EIS and planning effort leading to a legislative recommendation will be consistent with subarea planning guidance from PSRC. The EIS will study applicable PSRC Regional Centers Framework and its MIC standards to retain a large majority of study area land in industrial use.

Response - Address Industrial Definitions: The EIS will include study of revised zones (MMI, II, and UI). The EIS will help the City eventually develop a proposal that will identify the specific zones standards including uses.

Response - Employment Projections: The EIS and related studies are anticipated to consider accessibility to a range of job types and quantities, and this will form the basis to compare impacts between alternatives. For each alternative, the EIS will include a numerical projection for jobs by sector and subarea within the study area through 2044.

Response - Economic Feasibility or Market Analysis: SEPA does not require cost-benefit or economic analysis (WAC 197-11-448 and 450). Separate from the EIS, the City will consider economic feasibility information in preparation of any zoning change and/or Comprehensive Plan change proposal.

Property Requests

Some commenters made suggestions for zoning or comprehensive plan designation change that should be included for study for certain specific properties. Suggestions for specific sites and areas are summarized in Exhibit 2.

Exhibit 2. Property Requests

Issue	Response
About 76 comments supporting removal of land from the MIC adjacent to SW Harbor Blvd and T5 to support development of Seattle Sports Complex. Alternatively, they suggested increasing the maximum size of use limit for indoor recreation facilities.	The City will study an increase in the maximum size of use for indoor recreation uses in one of the action alternatives.
Remove more land from MICs. Locations suggested in Ballard, W. Armory Way, Pier One. Expand Seattle Mixed (SM) to more areas. Consider prior EIS for Terminal 5. Study impacts of redevelopment options other than proposed in the alternatives.	<p>The City of Seattle, as the Lead Agency, has the prerogative to define the range of alternatives it studies in the EIS.</p> <p>The EIS represents an implementation action of the recently completed Industry and Maritime Strategy and the alternatives are heavily informed by the recommendations of that strategy, including adding no significant new housing in industrial areas.</p> <p>The EIS will also include proposed Comprehensive Plan amendments that implement the Industry & Maritime strategy, including policies related to establishing new zone classifications, master planning future redevelopment of the Interbay Armory and WOSCA sites, removal of targeted areas of Georgetown and South Park from the MIC, and the timing of Comprehensive Plan amendments that removes land from MICs.</p> <p>The EIS will consider a policy to allow for MIC boundary adjustments during the periodic review or during the annual amendment process.</p> <p>The EIS may consider prior SEPA documents prepared by the City or other entities, but the EIS will focus on the programmatic implementation of the Industry and Maritime Strategy.</p>
The project overview makes assumptions about future redevelopment of T46, the Coast Guard Facility, and the Interbay Armory that are premature.	None of the EIS alternatives includes an analysis of different land uses on the referenced sites. The project overview describes potential redevelopment projects that based on current information are reasonably foreseeable. Any change in land use on these sites would be the result of processes outside the scope of this EIS. This project does include language related to master planning at the WOSCA and Armory sites, but that is simply to establish the City's role in any future discussions of land use on those sites.

Issue	Response
Armory	The proposal includes a policy change calling for collaborative master planning of the Armory site. The site is within the MIC, and the proposal is that updated MIC policies and industrial zone designations will apply to the site. Should the State and partners wish to pursue non-industrial future uses, that would have to be determined through a master planning process in partnership with the City and other entities and would be the subject of a separate environmental review.
Fiorito properties one half block located in the Ballard Interbay MIC. This block abuts the border of the BINMIC.	The properties are studied for Urban Industrial in both Alternatives 3 and 4. These alternatives including differing allowances for industry-supportive housing.
Cederstrand Properties – This property is just south of the Stadium District.	Alternative 4 extends the Urban Industrial zone south along 1st Ave. S. as far as S. Stacy St. and would abut the Industry and Innovation zone in this option.
Urban Industrial (UI) as described, is inappropriate for the Stadium District.	The comment is noted. See the discussion of the Stadium District in the proposed Industrial and Maritime Strategy.

Process

Some commenters were concerned about the timing of the DEIS issuance and comment period overlapping that of the Sound Transit West Seattle and Ballard Link Extension DEIS also anticipated to be issued in late 2021.

Response – Process: The Sound Transit EIS is a different proposal from the Industrial Maritime Strategy. City staff are coordinating information and data from Sound Transit to the greatest extent possible. City staff understand the time and challenge of preparing EIS comments. City staff are coordinating with Sound Transit and striving to avoid overlap of DEIS comment periods. In the range of alternatives, the proposed land uses are informed largely by the expected future transit stations.

Survey Responses

During the scoping period a survey was available on the project website and story map, using the platform Survey Monkey. The survey asked twelve questions. 44 people responded to the survey, and about 35 people completed the survey entirely. A brief summary of the responses is provided here and the full extent of the survey responses is included in Appendix B.

The first question asked about the environmental topics that should be included for study. The top response receiving 20 responses was Air Quality and Greenhouse Gases, followed closely by Transportation and Contamination that received 19 responses. Land and Shoreline Use received 17 responses. 11 other topics received ten or fewer responses.

Questions 2 – 5 asked responders to comment about what they liked or didn't like for each of the proposed alternatives.

For the No Action Alternative, some appreciated the current Comprehensive Plan and zoning for its maintenance of industrial and maritime uses and development standards in the MICs while others do not like retaining the No Action Alternative. Suggestions for change included allowed land uses either inside the study area or adjacent (e.g. allow more housing adjacent to the study area to live near work or changes in West Seattle), or improved environmental or development standards, alternative transportation standards, etc. Questions about the No Action Alternative addressed economics, taxes, and the usefulness of this alternative. It should be noted that the No Action Alternative is required to be studied by the State Environmental Policy Act (SEPA).

For the Future of Industry Limited (Alternative 2), some commented that the alternative is aligned with the proposed Industrial and Maritime Strategy and is more protective of the industrial uses. Some would like to see an even higher share of industrial uses and less non-industrial uses, while others would like to see more housing. Some would like to see more mitigation, e.g. past contamination. Some wanted information on feasibility.

For the Future of Industry Targeted (Alternative 3), some appreciated the rethinking of uses near transit, as well as supporting primary industrial uses and limiting housing. Some wanted more housing or mixed uses. Some were concerned about focused removals of land from the MIC. Comments also addressed the need to consider climate change, sea level rise, and trees.

For the Future of Industry Expanded (Alternative 4), some liked the expanded allowances for housing and adjustments to MIC boundaries in Georgetown and South Park. Some were still concerned about jobs/housing and commuting, and others did not like the approach to housing and less protection for industrial. Comments also addressed the need to consider contamination. Some thought the distinction between alternatives was not easy to discern.

Questions 6 – 10 asked about how the responders experience or use the study area, and demographic information about the responders.

When asked how they experience the study area:

- 78% go to shops, office, or services in one of the areas
- 44% live near an industrial area
- 30% work at a business in one of the areas
- 12% own a business in one of the areas

When asked where they lived, the highest volume of responses were from the West Seattle and Delridge areas. Aside from those, numerous other areas of the city were represented with two or less. West Seattle was also the most common work location for responders.

Nearly two thirds of the responders identified as White and about 10% as Hispanic/Latinx. 21% of responders were 35-44 years of age, 30% were 45-54 years of age, and 26% were 55-64 years of age.

Question 11 was a final open ended question allowing respondents to share anything else on the Industrial and Maritime Strategy. Some identified properties of concern, some wanted to

emphasize the need to protect industrial uses from encroachment, some identified environmental justice topics, and others reflected on availability of land for the range of industrial uses.

Stakeholder Informational Meetings

During the scoping phase City staff held virtual information meetings or telephone calls with individuals and stakeholder groups known to have an interest in topics that would be addressed in the EIS. Stakeholder meetings included an overview of the EIS process and general two-way discussion of maritime and industrial strategy topics. Some participants in these meetings later submitted written scoping comments. City staff gained an understanding of issues of interest through the stakeholder meetings. Meetings with the following groups were held:

- Burlington Northern Santa Fe (BNSF)
- Chinatown / International District Public Development Authority (SCIPDA)
- Duwamish Tribe
- Fremont Dock Company
- Futurewise
- Georgetown Community Council
- GotGreen Seattle
- Group meeting with heads of labor organizations
- Historic South Downtown
- Housing Development Consortium
- National Association of Investment and Office Properties (NAIOP)
- North Seattle Industrial Association (NSIA)
- Seattle 350 / Seattle Cruise Control
- Seattle Jobs Initiative
- Seattle Planning Commission staff
- Share the Cities / The Urbanist
- South Park Neighborhood Association / SPARC
- Union Pacific Railroad
- Vipond Group

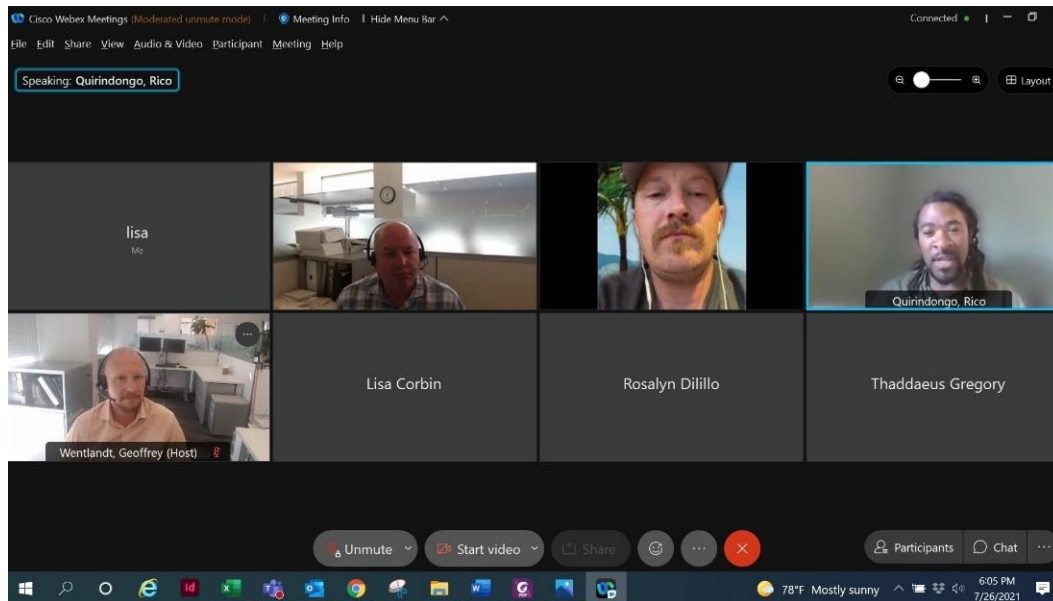
Public Meetings

Two one-hour virtual workshop sessions were scheduled on July 21 (9am) and July 26 (6 pm). There were about 7 participants beyond city staff and consultants. The primary purpose of the meetings was to share the Industrial and Maritime Strategy, the EIS Scoping process and how to comment, and to allow for participant questions.

Comments and Questions:

- A commenter asked if the City was aware of where employees in industrial areas reside, and if commutes to work would be considered. The commenter suggested that employees in the study area should be engaged in the process.
 - *Response – Engagement:* There are multiple opportunities for engagement in the EIS process and subsequent decision making processes. The City is committed to proactive outreach to those who may be affected, or are traditionally excluded from government processes. Outreach will occur through numerous methods including social media, one on one meetings, community meetings as requested, and targeted contacts with stakeholders including labor organizations and others. There will be a formal public comment period and public hearing following release of the Draft EIS. There will be additional engagement, including comment periods for any future land use or policy changes resulting from this study.
- A commenter asked staff whether different future land uses could be considered for the Harbor Boulevard Site in West Seattle. The commenter and members of her group would like to see land use regulations that would allow for a larger sized athletic / tennis center at the property.
 - *Response – Harbor Blvd. Site:* In response to the comments about the Harbor Boulevard Site, Alternative 4 will study modification of the maximum size of use limit for sport and recreation uses to allow larger sized sports and recreation facilities.

Exhibit 3. Screenshot of July 26, 2021 Virtual Meeting



Source: City of Seattle, BERK 2021.

B Industrial & Maritime Strategy Council Report

Also available online at:

<https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/IndustrialMaritimeStrategy/IndustrialMaritimeStrategyReport2021.pdf>



INDUSTRIAL AND MARITIME STRATEGY COUNCIL RECOMMENDATIONS

June 2021



City of Seattle

ACKNOWLEDGEMENTS

Seattle is on the land of the Coast Salish peoples, including land of the Duwamish, Suquamish, Muckleshoot, and Snoqualmie Tribes. For thousands of years, Native people and their ancestors have called Seattle and the Puget Sound (Salish Sea) region home, and they continue to live here today. We are honored to be on Coast Salish territories, it is by virtue of their protection and careful stewardship, that Seattle is one of the most resource-rich coastal cities in the country.

This report was informed by over a year of engagement with the City's Industrial and Maritime Strategy Council, which was created by Mayor Durkan in November 2019. Made up of a broad range of stakeholders, the Council was formed with a citywide council and four neighborhood councils. Participants are listed below. Three co-chairs stewarded the councils and members of neighborhood councils who also served on the citywide council are indicated.

Citywide Council

Sally Clark, University of Washington (co-chair)

Nicole Grant, MLK Labor (co-chair)

Brian Surratt, Alexandria Real Estate Equities (co-chair)

Dan Strauss, Seattle City Council, Land Use & Neighborhoods Committee Chair

Commissioner Stephanie Bowman, Port of Seattle

Erin Adams, Seattle Made

Sam Farrazaino, Equinox Studios (*Georgetown/South Park*)

Dave Gering, Manufacturing Industrial Council of Seattle

Erin Goodman, SODO Business Improvement Area (*SODO*)

Johan Hellman, BNSF (*Interbay*)

Alex Hudson, Transportation Choices Coalition

Rick Kolpa, Prologis

Marie Kurose, Workforce Development Council of Seattle-King County

Terri Mast, Inland Boatman's Union (*Interbay*)

Fred Mendoza, Public Stadium Authority (*SODO*)

Barbara Nabors-Glass, Seattle Goodwill

Peter Nitze, Nitze-Stagen

John Persak, International Longshore and Warehouse Union (*SODO*)

Fred Rivera, Seattle Mariners (*SODO*)

Charles Royer, Public Facilities District

Jordan Royer, Pacific Merchant Shipping Association

Chad See, Freezer Longline Coalition (*Interbay*)

Greg Smith, Urban Visions

Rob Stack, Stack Industrial Properties

Mike Stewart, Ballard Alliance Business Improvement Area (*Ballard*)

Georgetown / South Park Council

Roger Bialous, Georgetown Brewing

Johnny Bianchi, Industry Space

Clint Burquist, Georgetown Community Council

Sam Farrazaino, Equinox Studios (*Citywide*)

Jon Holden, Machinists Union 751

Kevin Kelly, Recology

Elena Lamont, Pioneer Human Services

Paulina Lopez, Duwamish River Cleanup Coalition

Maria Ramirez, Duwamish Valley Housing Coalition

Veronica Wade, Workforce Dean, South Seattle College

Ballard Council

Warren Aakervik, Ballard Oil

Brad Benson, Stoup Brewing

Danny Blanchard, Seattle Maritime Academy

Suzie Burke, Fremont Dock Company

Angela Gerrald, Ballard District Council

Haley Keller, Peddler Brewing

Brent Lackey, Ballard District Council

Eric Nelson, Nordic Heritage Museum

Russel Shrewsberry, Western Towboat

Mike Stewart, Ballard Alliance Business Improvement Area (*Citywide*)

Interbay Council

Charles Costanzo, American Waterway Operators

Nathan Hartman, Kerf Design

Johan Hellman, BNSF Railway (*Citywide*)

Terri Mast, Inlandboatman's Union (*Citywide*)

Chad See, Freezer Longline Coalition (*Citywide*)

Jeff Thompson, Freehold Group

SODO Council

Alex Cooley, Solstice Grown

Kristal Fiser, UPS

Erin Goodman, SODO Business Improvement Area (*Citywide*)

Lisa Howard, Alliance for Pioneer Square

Ron Judd, WSDOT

Henry Liebman, American Life

Brian Mannelly, SSA Marine

Fred Mendoza, Public Stadium Authority (*Citywide*)

Mark Miller, MacMillan-Piper

John Persak, International Longshore and Warehouse Union (*Citywide*)

Fred Rivera, Seattle Mariners (*Citywide*)

Charley Royer, Public Facilities District (*Citywide*)

Jessa Timmer, Alliance for Pioneer Square

Maiko Winkler Chin, Seattle Chinatown International District Preservation & Development Authority

Black Indigenous and Persons of Color (BIPOC) Youth Engagement Partners

This strategy was informed by direct engagement with over one hundred BIPOC youth to hear their suggestions and listen to their direct experiences with exposure to careers in maritime / industrial sectors. The following leaders in youth-serving organizations partnered to co-create this engagement.

Magdalena Angel-Cano, Duwamish River Cleanup Coalition

Jake Bookwalter, Georgetown Youth Council

Veasna Hoy, Youth Maritime Collaborative, Maritime Blue

LeAsia Johnson, Seattle Goodwill
Robert Jones, Urban League of Metropolitan Seattle
Carmen Martinez, Duwamish Valley Youth Corps Manager
Rosario-Maria Medina, Friends of Georgetown History and Industry
Nico Onada-McGuire, Seattle Good Business Network

City Staff and Consultants

Adrienne Thompson, Policy Director, Mayor's Office
Chase Kitchen, Policy Advisor, Mayor's Office
Pamela Banks, Director, Seattle Office of Economic Development
Bobby Lee, former Director, Seattle Office of Economic Development
Sarah Scherer, Seattle Office of Economic Development
Rico Quirindongo, Director, Seattle Office of Planning and Community Development
Sam Assefa, former Director, Seattle Office of Planning and Community Development
Geoff Wentlandt, Seattle Office of Planning and Community Development
Jim Holmes, Seattle Office of Planning and Community Development
Andres Mantilla, Director, Seattle Department of Neighborhoods
Jackie Mena, Seattle Department of Neighborhoods
Diane Wiatr, Seattle Department of Transportation
Anne Grodnik-Nagle, Seattle Public Utilities
Michelle Caulfield, Director, Seattle Office of Sustainability and Environment
Brian D. Scott, BDS Planning and Urban Design
Gabriel Silberblatt, BDS Planning and Urban Design
Ishmael Nuñez, BDS Planning and Urban Design
Dori Krupanics, BDS Planning and Urban Design
Aarti Mehta, BDS Planning and Urban Design
Chris Mefford, Community Attributes Inc.
Michaela Jellicoe, Community Attributes Inc.
Madalina Calen, Community Attributes Inc.
Bryan Lobel, Community Attributes Inc.
Elliot Weiss, Community Attributes Inc.

INTRODUCTION

In November of 2019, Mayor Durkan assembled this Industrial and Maritime Strategy Council (Strategy Council) to develop an Industrial and Maritime Strategy that is future-orientated and centers opportunities for working people, especially Black, Indigenous, People of Color (BIPOC), youth, and women. The Strategy Council was directed to develop a holistic and comprehensive approach to supporting the industrial and maritime sectors and identified five issue areas to focus their efforts on: workforce development, environmental justice, transportation, public safety, and land use. Despite the challenges encountered in 2020 from the COVID-19 pandemic that caused a temporary pause of the process, the Strategy Council was able to reach strong consensus on a set of recommended strategies. This report contains the consensus recommended strategies to support the future of Seattle's industrial and maritime sectors.

These recommendations aim to reflect the BIPOC voices and point towards more equitable outcomes. During this process all Strategy Council members were invited to participate in a discussion of restorative economics, and the City believes we must continue to take additional actions to address structural change that would advance a restorative economic system and systemic racism. This project included direct dialogue with over a hundred BIPOC youth and the policy choices recommended can lead to benefits for these young members of the Seattle community and others like them.

BACKGROUND

Most industrial land in Seattle is located within two Manufacturing Industrial Centers (MIC). Seattle's Greater Duwamish Manufacturing and Industrial Center (MIC) and the Ballard Interbay North Manufacturing Industrial Center (BINMIC) contain about 12 percent of Seattle's total land area. MICs are regional designations and are defined in the City's Comprehensive Plan as home to the city's thriving industrial businesses. There are only 11 MICs in the Puget Sound region and they are important resources for retaining and attracting jobs and for a diversified economy. There are a few small areas of industrial zoning outside of MICs.

Seattle industrial areas employment is about 100,000, representing roughly 15% of total employment in the City. Historically, Seattle's industrial lands have captured about 6-11% of the city's employment growth. Although narratives suggest declines in industrial jobs, Seattle's industrial area employment grew at a compound annual rate of about 1.6% between 2010 and 2018. Some sectors like food-and-beverage production grew even faster, while maritime and logistics had slow and steady growth, and only aerospace and manufacturing sectors saw minor declines. (Seattle Maritime and Industrial Employment Trends. Community Attributes Inc., 2020).

Industrial and maritime jobs provide pathways to stable careers that are accessible to a broad swath of community members. Nearly two thirds of all jobs in industrial sectors are accessible without a traditional four-year college degree, and more than half of all jobs in the maritime sector are available with no formal education. Wages are competitive, with average annual earnings exceeding 70% of the Area Median Income for salaries in the construction, aerospace/aviation, and logistics sectors. A high number of jobs in logistics, maritime and manufacturing sectors remain unionized and provide high quality benefits. (Industrial Lands Employment Analysis Technical Memo. Community Attributes Inc., 2020).

Both the accessibility and access to competitive wages and benefits provides an opportunity for BIPOC community, women, and youth. While there is a lack of data to fully demonstrate the demographics of the industrial and maritime workforce, the available data does show that the largest geographic concentration for Seattle residents of workers on industrial lands are in southwest Seattle with an overall distribution across the region. To supplement the limited data, the City directly consulted over 116 BIPOC youth to share their lived experiences about exposure to industrial and maritime sectors. The take-aways from the youth engagement include the youth describing a general lack of awareness of industrial and maritime careers and were surprised by the diversity and number of careers and the higher wages

within the maritime, manufacturing, and logistics sectors. We also heard that a clear stigma against career and technical education exists and that career decisions of youth are most influenced by their parents, as opposed to their teachers and counselors. Finally, we heard youth emphasize that environmentally friendly employers are important to their career decisions. The Strategy Council strongly recommends specific and proactive measures to ensure access and opportunities to a higher proportion of BIPOC and women than it has ever had before.

GUIDING PRINCIPLES

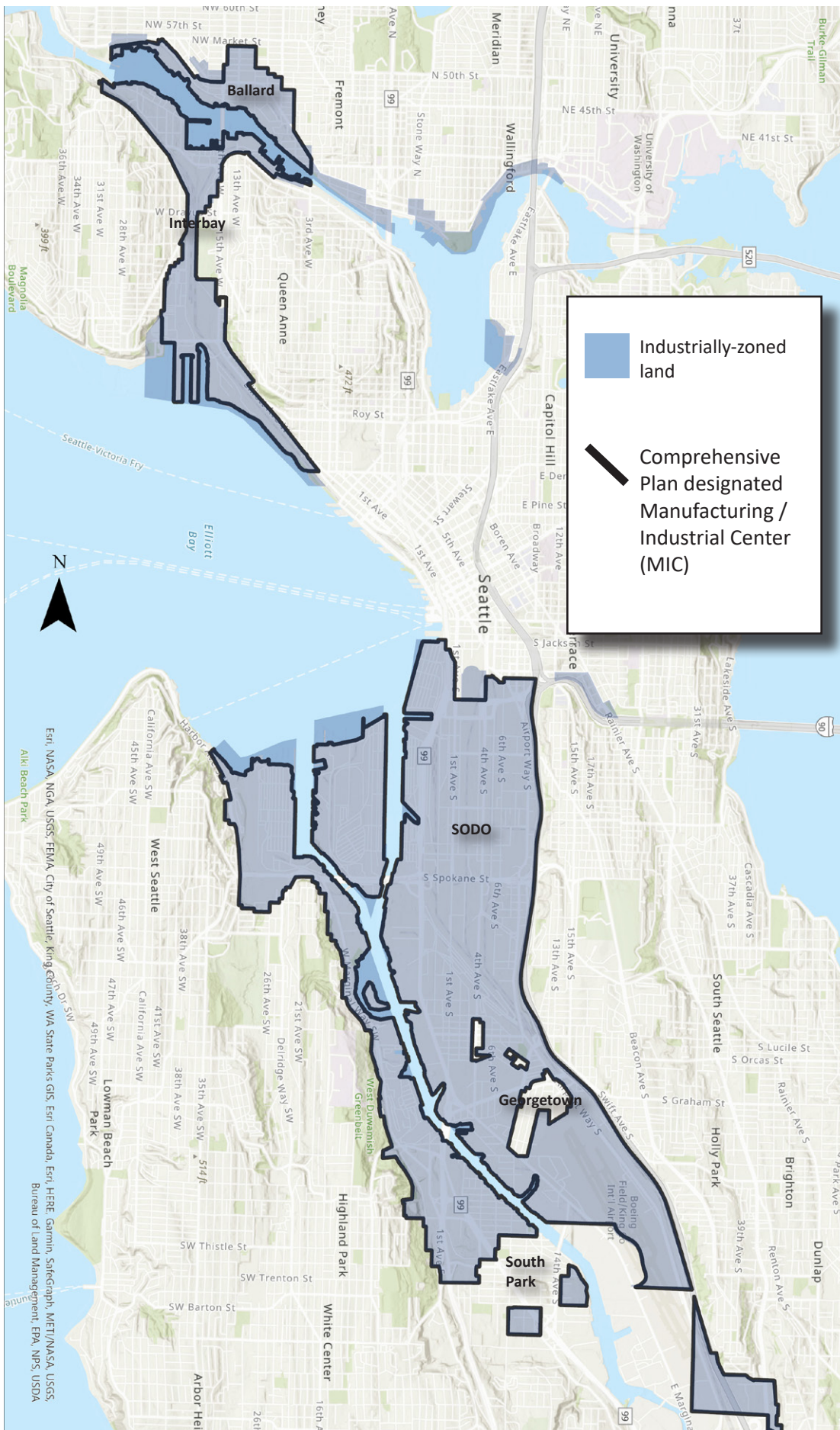
Mayor Durkan laid out the following principles to guide the work of the citywide and neighborhood members of the Strategy Council. The Strategy Council reviewed and concurred with the principles at the start of the process. After the murder of George Floyd in Minneapolis, and the COVID-19 pandemic, the Strategy Council focused on additional actions to strengthen racial equity and recovery.

- Use the power of local workers and companies to chart a blueprint for the future using the principles of restorative economics to support the cultural, economic, and political power of communities most impacted by economic and racial inequities
- Strengthen and grow Seattle's industrial and maritime sectors so communities that have been excluded from the prosperity of our region can benefit from our future growth
- Promote equitable access to high quality, family-wage jobs and entrepreneurship for Black, Indigenous, and People of Color through an inclusive industrial economy and ladders of economic opportunity
- Improve the movement of people and goods to and within industrial zones and increases safety for all travel modes
- Align Seattle's industrial and maritime strategy with key climate and environmental protection goals
- Develop a proactive land use policy agenda that harnesses growth and economic opportunities to ensure innovation and industrial jobs are a robust part of our future economy that is inclusive of emerging industries and supportive of diverse entrepreneurship.

A Holistic Strategy

The Strategy Council was structured with an overall citywide council and four neighborhood-based councils for Ballard, Interbay, Georgetown/South Park, and SODO. While each geographic area is unique, they share common issues, challenges, and opportunities. The recommended strategies respond to specific topics identified by the Strategy Council and applies an overall principled approach to Seattle's industrial and maritime sectors as a whole.

Industrial Areas Map





Strategy Council members emphasized that many businesses in Seattle's industrial and maritime sectors rely on irreplaceable infrastructure including access to Seattle's Ports, waterways and other major infrastructure.

(See strategy #5)



Strategy Council members communicated that public safety is a critical need for operation of a business, and that some industrial areas seem to be experiencing public safety challenges unique to industrial lands. Strategy Council members called for improved public safety partnerships.

(See strategy #2)



Strategy Council members discussed the possibility for dense employment that could be compatible with industrial areas especially near high capacity transit. With Sound Transit expansion, five new or enhanced stations will be located in Seattle's industrial areas.

(See strategy #6)



Strategy Council members discussed a need among startups, creatives and makers for relatively affordable spaces to locate and grow a business, and that transitional areas near neighborhoods are especially good places for this activity.

(See strategy #7)

RECOMMENDED STRATEGIES

After extensive deliberation the Strategy Council was able to reach consensus on eleven strategy recommendations. The recommended strategies are robust, substantive statements that can chart a course for meaningful action by the City and its partners. Additional resources considered by the participants are found in the appendices.

Investment Strategies

1. Workforce Investments to Support Access to Opportunity for BIPOC, Youth, and Women: Create, expand, and support initiatives that increase access to opportunity and economic prosperity for Black, Indigenous, and People of Color, youth, and women through manufacturing, maritime, and logistics careers.

2. Public Safety Partnership to Support Maritime and Industrial Areas: Work closely with local business and community organizations to develop and implement a proactive public safety response to elevated levels of crime within maritime and industrial lands.

3. Transportation Priorities to Improve the Movement of People and Goods: Improve the movement of people and goods and make transit and freight networks work for industrial and maritime users with better service and facilities; improved last mile connections for active transportation, transit, and freight, including large truck access to shoreline and railroad uses; and advocating for a tunnel alignment for Ballard and Interbay future light rail.

4. Environmental Justice and Climate Action: Address environmental inequities and protect industrial-adjacent communities from environmental harms, transition to a climate pollution free freight network, and prepare for a changing climate.

Land Use Strategies

5. Stronger Protections for Industrially Zoned Land: Strengthen protections for industrially zoned lands within Seattle by establishing higher thresholds to remove industrial land designations and closing loopholes that have allowed significant non-industrial development within industrially zoned lands.

6. High Density Industrial Development: Encourage modern industrial development that supports high-density employment near transit stations and near existing industrial-commercial areas by creating density bonuses for employment uses (i.e., office, R&D, etc.) if coupled with industrial uses in the same project.

7. Healthy Transitional Areas near Urban Villages: Foster increased employment and entrepreneurship opportunities with a vibrant mix of affordable, small-scale places for light industry, makers, and creative arts, as well as industry supporting ancillary retail.

8. No New Residential Uses: No new residential uses on industrial and maritime lands. Limited adjustments to existing allowances in transitional zones to support industry and arts entrepreneurship opportunities. Any limited adjustments to existing allowances in transitional zones would be determined after additional study of potential impacts, including an Environmental Impact Statement (EIS).

9. Georgetown and South Park Neighborhood Goals: Remove a few small, focused locations from industrial zoning in Georgetown and South Park and convert them to mixed use zoning to achieve neighborhood goals.

Action Strategies

10. Master Planning for WOSCA and Armory Sites: Recognizing the time limitations of this process and the specialized nature of these sites, partner with agencies of the State of Washington, Department of Transportation (WOSCA), and Department of Commerce (Armory), or future owners on a master planning process for industrial redevelopment specifically designed for each site based on the guiding principles of this workgroup.

11. Ongoing Stewardship Entities to Champion this Vision: Identify and grow ongoing stewardship entities with a complete range of stakeholders to champion the vision of the Industrial and Maritime Strategy, ensure its long-term implementation, and develop appropriate assessment metrics to help guide future policy decisions. In different neighborhoods, this could be an existing organization with a modified charter and/or a new organization.

SUMMARY OF THE STAKEHOLDER TIMELINE

The Industrial and Maritime Strategy Council process lasted more than a year and a half and included various phases and levels of dialogue. The timeline below summarizes major steps in process. At each stage, these major steps were supplemented with individual outreach and dialogue between members of the strategy council, city staff, and the facilitator.

November, 2019	Project kickoff by Mayor Durkan
December, 2019	Guiding principles
February, 2020	Discuss policy alternatives and background data
March - May 2020	Break due to COVID-19
June, 2020	Reconvene with a focus on a greater emphasis on equity and recovery
Fall, 2020	Restorative economics training, BIPOC youth engagement
November, 2020	Listening session
December, 2020	Discuss detailed policy tables, written comments
March, 2021	Regroup and strategy framework
April / May, 2021	Strategy workshops and straw poll voting
May 27, 2021	Final consensus recommended strategies

NEIGHBORHOOD STATEMENTS

During the winter of 2020 neighborhood stakeholder groups identified their top issues and points for a 20-year vision for industrial areas in or adjacent to their neighborhood. Although the discussion was extensive, top issues and vision statements can be distilled to key themes.

Georgetown / South Park	
Top Issues	Vision
Environmental equity and pollution mitigation	A healthy environment in industrial areas and the communities next to them
Affordable workforce housing, and protections against displacement	A sustainable, industrial, living economy with clean and green tech.
Pathways for training into industrial jobs especially for nearby residents and underrepresented groups	A skilled industrial / maritime workforce with racial and gender diversity
	Options for industrial / maritime workers to live locally in South Park and Georgetown
	A dense and vibrant community

SODO	
Top Issues	Vision
Public safety challenges that affect employees and businesses	A thriving manufacturing, maritime, and logistics center
Transit access within SODO	A protected working waterfront
Cargo movement within SODO and to other industrial areas like Ballard, Kent etc.	An intentional transition between industrial employment in SODO and mixed-use communities to the north
Pedestrian safety	Convenient transit connections throughout SODO

Interbay	
Top Issues	Vision
Protection of land with water adjacency for industrial use	A place for maritime and industrial innovation
Clarify the future land use vision for the area north of Dravus St.	A protected, modernized working waterfront
Impacts of Sound Transit alignment	Dynamic inland areas: ecosystem of maritime and industrial jobs coexist with opportunities for housing and services for workers
Need for small business and maker incubator businesses spaces	

Ballard	
Top Issues	Vision
Impacts of a potential Sound Transit alignment through the MIC	An area that celebrates the value and heritage of industrial and maritime work
Conflicts arising from growth pressure (RVs and tent camping)	A diversifying mix of maritime, production and knowledge businesses that complement and sustain each other
Need for strong zoning protections within the MIC	Light rail is successfully integrated without hurting industrial users, which for many means a station location at or west of 15 th Ave NW
Need for apprenticeship programs to create a worker pipeline	

Location Specific Issues

Many locations have unique conditions even more localized than the neighborhood subgroups. Future zoning changes to implement land use recommendations (strategies #5-9) should accommodate unique local issues that are finer grained than the broad strategy recommendations. Examples to address include, but are not limited to:

- Area of SODO north of I-90 and east of the heavy rail tracks.** The area is adjacent to downtown and is already zoned for a denser version of the Industrial Commercial (IC) zone with an existing incentive for participation in the City's Mandatory Housing Affordable (MHA) program. Any study of implementing the Dense Industrial Development (Strategy #6) in this area should consider adding further incentives for providing additional industrial development and avoid decreasing existing development rights or MHA participation.

- **Stadium District.** An existing Stadium Transition Overlay District (STAOD) zone was established in 1990 immediately around the professional sports stadiums. The overlay modifies underlying industrial zoning with specific standards to require design review, grant more allowed floor area, and prohibit certain uses, including lodging, which are allowed in other industrial areas. Any study of implementing the Healthy Transitional Area concept (Strategy #7) or Dense Industrial Development concept (Strategy #6) in this area should consider scenarios for preserving and updating the STAOD for current thinking, including allowing lodging and maintaining somewhat larger size of use limits for office and retail uses compared to other transitional areas.
- **Shoreline Master Program (SMP) Areas.** Lands within 200' of the shoreline are subject to the City's Shoreline Master Program regulations in addition to existing or proposed industrial zones. Any study of implementing any of the land use recommendations should consider the interplay between the SMP and new zones, with a close eye to preserving freight access to shoreline industrial uses.
- **Future Sound Transit Station Locations.** The West Seattle and Ballard Link Extension (WSBLE) will include six station locations in or nearby the City's designated MICs. Maximizing the benefit of the transit investments will require complex station area planning with unique factors impacting each station location. While more precise recommendations will require more information that will only be available as WSBLE planning progresses, future station area planning should consider ways to minimize negative impacts on industrial and maritime users. Any study of implementing any of the land use recommendations should consider tunnel alignment for the Ballard and Interbay station connections (Strategy #3), and other Strategy Council-identified location-specific priorities like a new SODO station that avoids reductions in capacity to the E3 busway and Ballard station locations at or west of 15th Ave NW.

APPENDICES

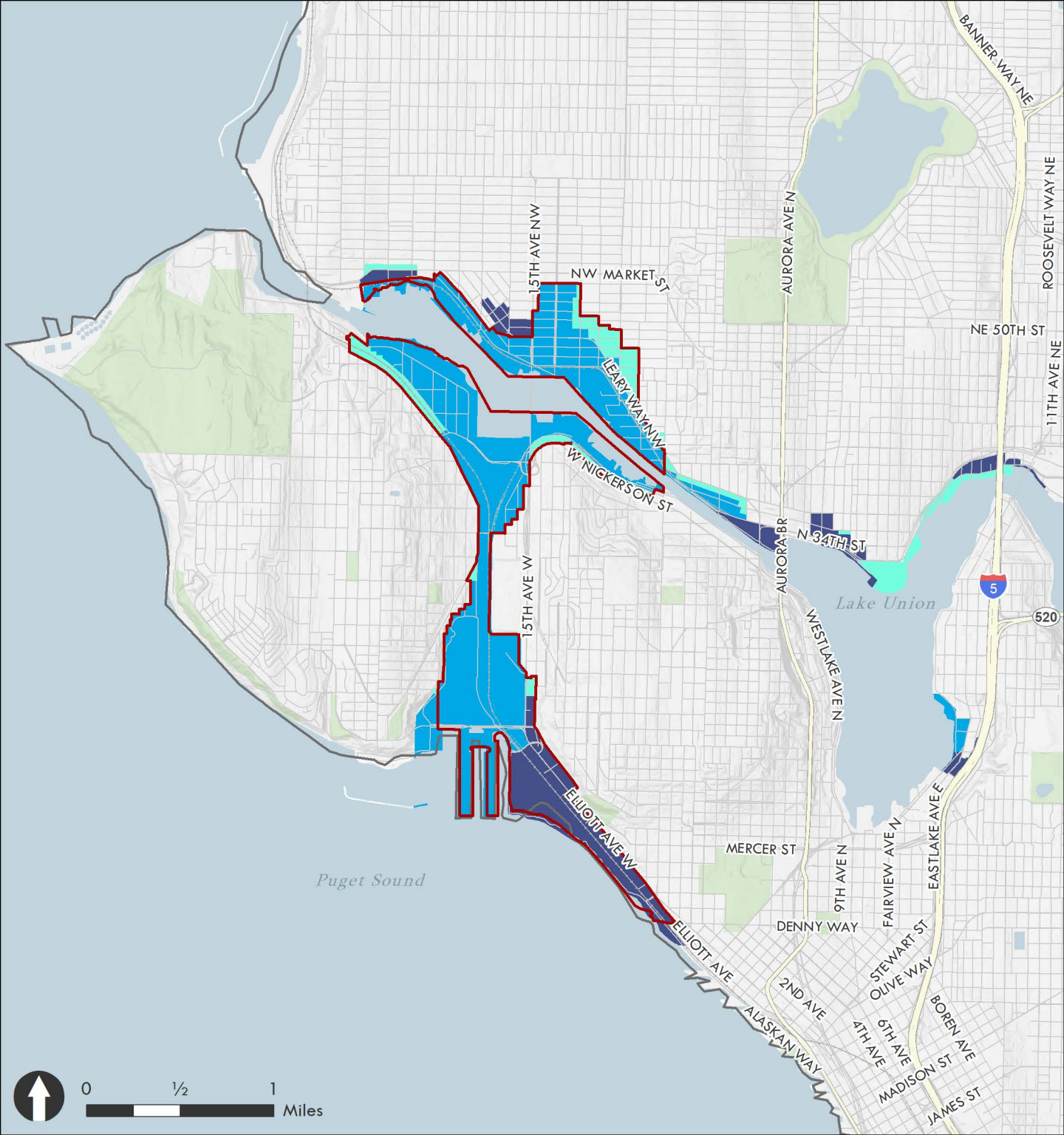
Appendix A: Informational Memos

A series of informational memos were provided by City staff to Strategy Council members in April 2021 to inform the discussion. The memos are provided as background, and their content is not a part of the formal consensus strategy recommendations.

Appendix B: Detailed Policy Tables

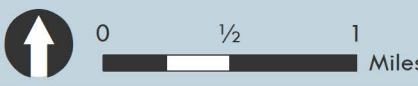
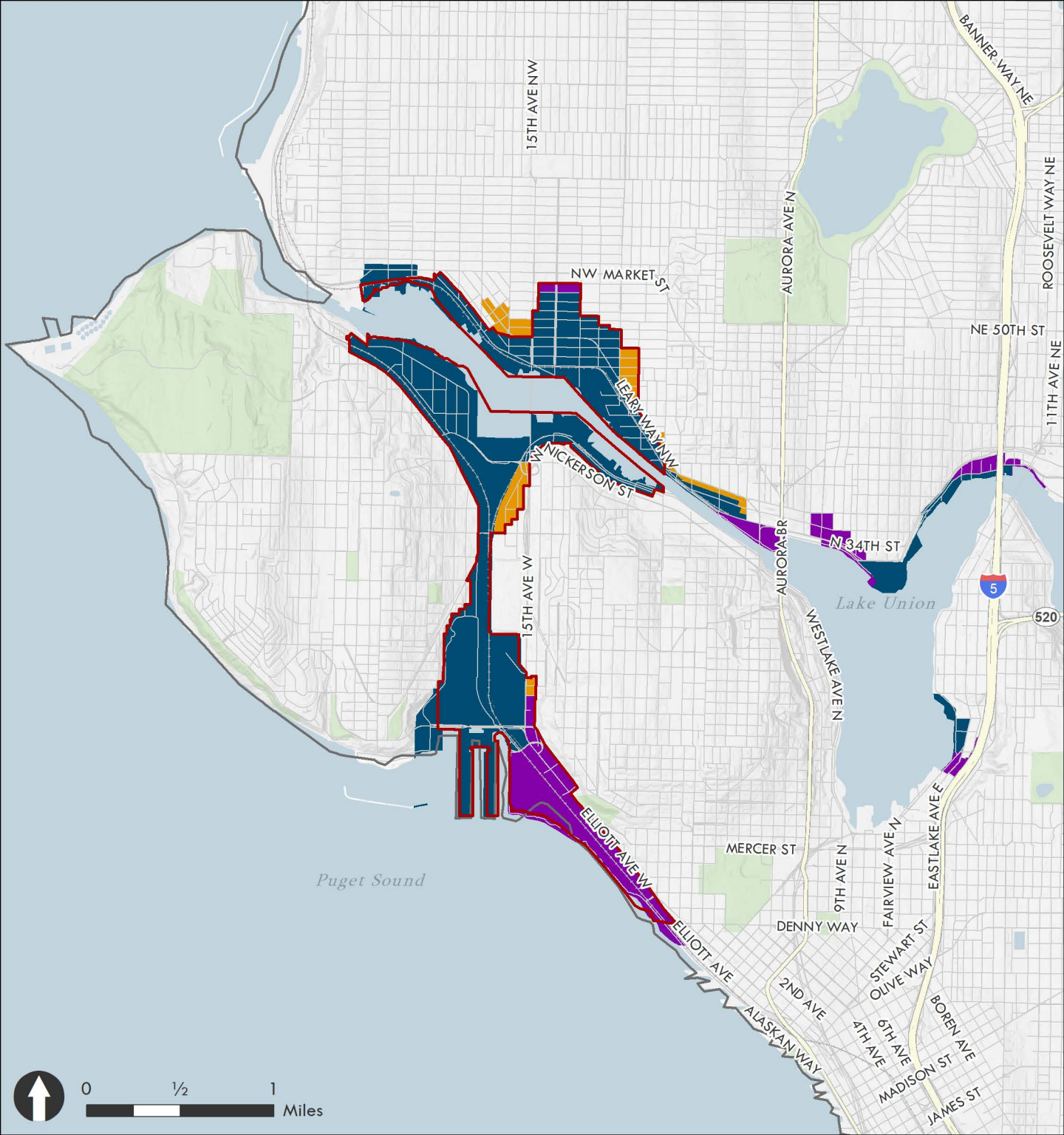
The Strategy Council discussed detailed potential policies and actions in four topic areas during winter of 2020. The detailed policy tables are provided as background, and their content is not a part of the formal consensus strategy recommendations.

C Alternative Future Land Use Zoning Maps



- City of Seattle
- UGAs
- Public Lands
- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
- Duwamish MIC

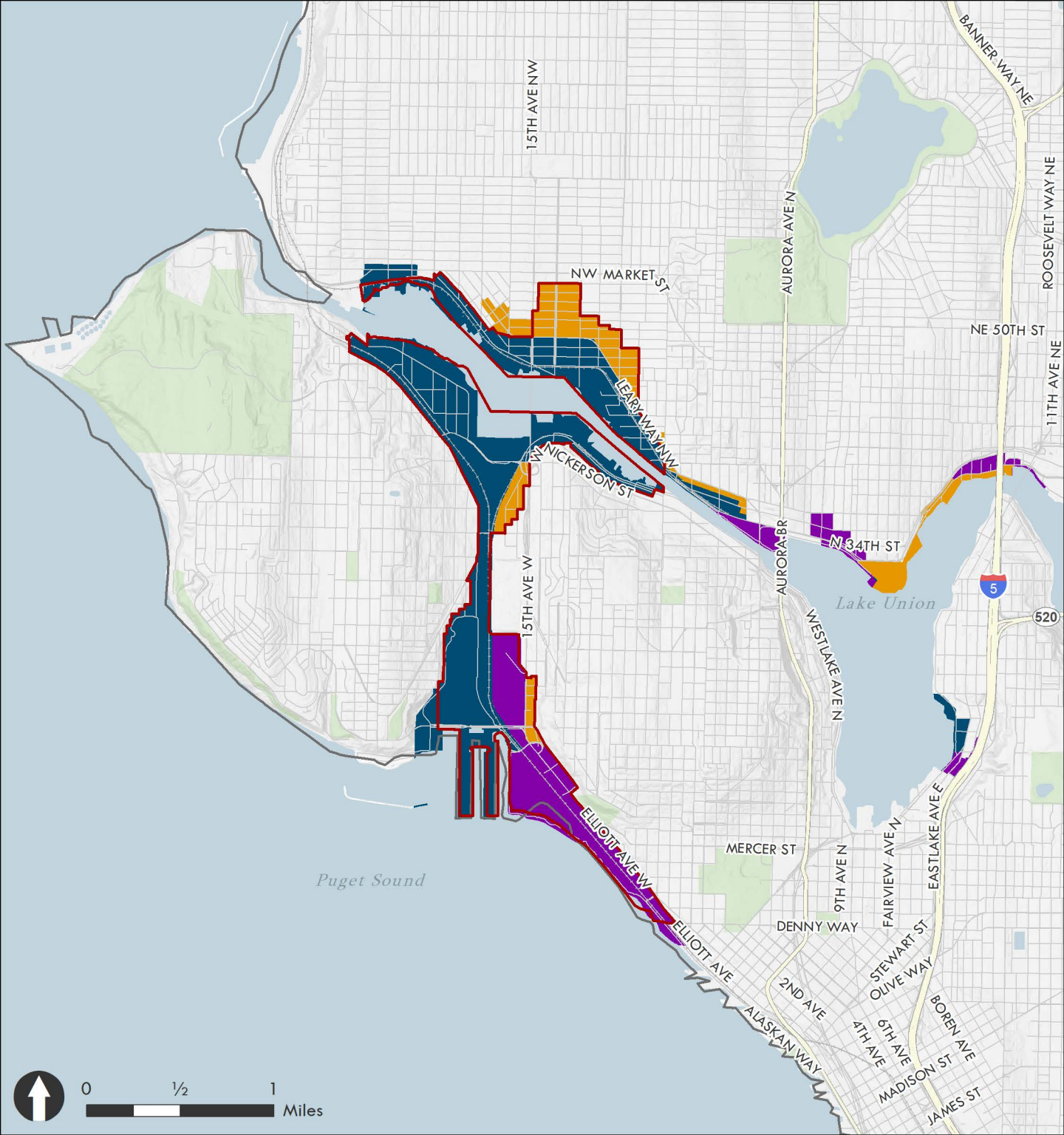
- Alternative 1 - No Action**
- Industrial Buffer
- Industrial Commercial
- Industrial General



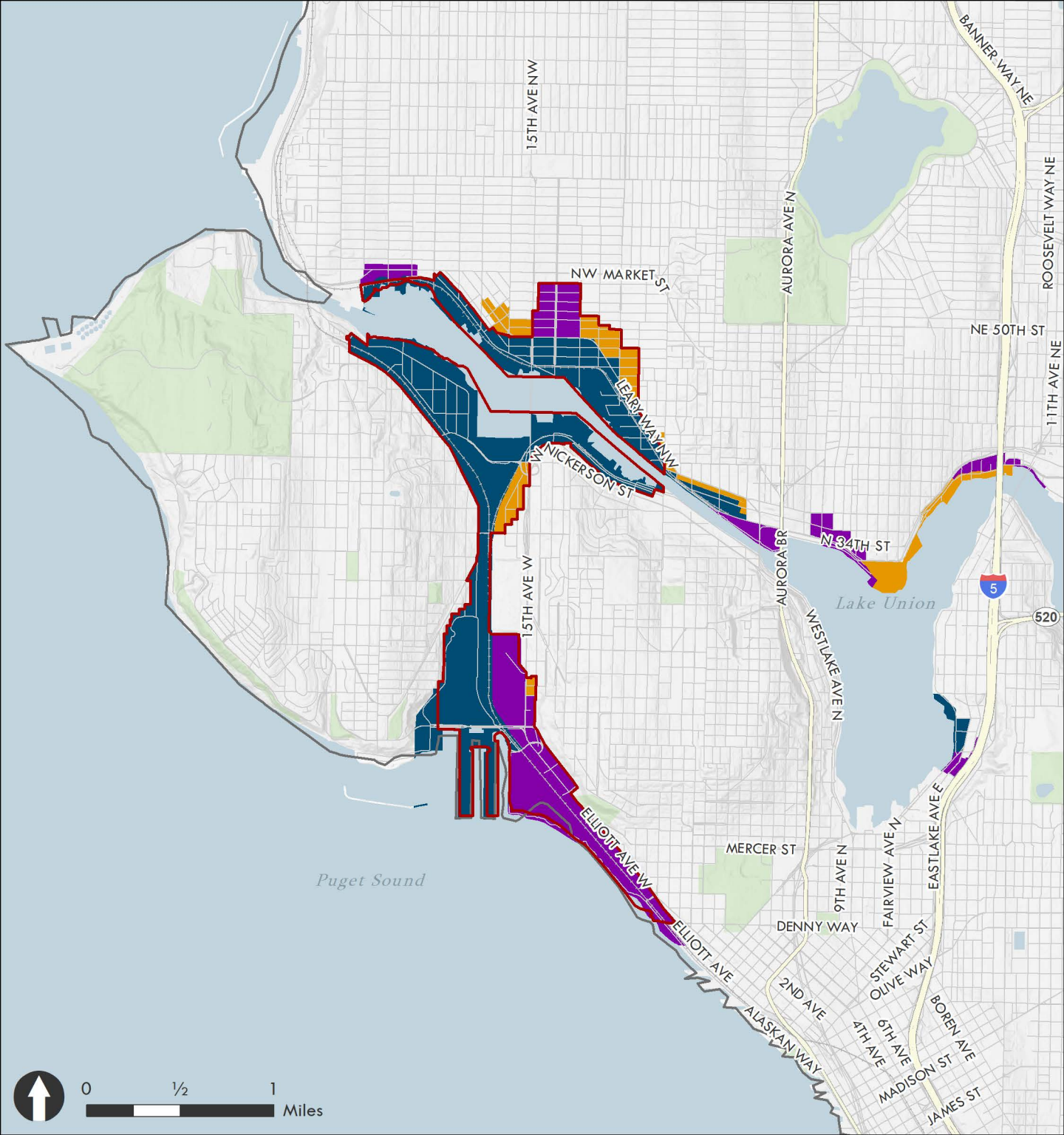
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Map Date: November 2021



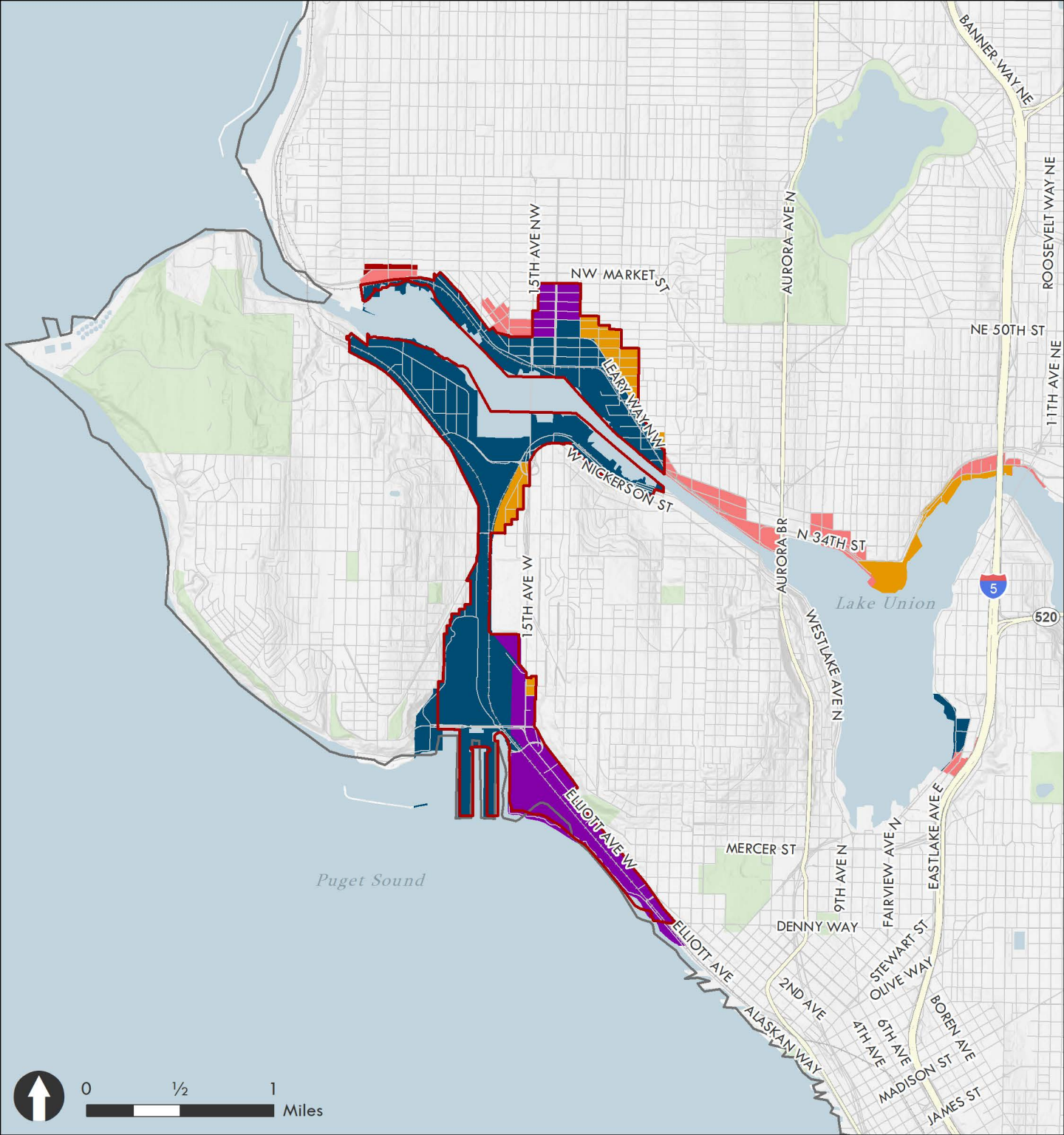
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|---|-------------------------------------|
| City of Seattle | Alternative 3 - Targeted |
| UGAs | Industry & Innovation |
| Public Lands | Urban Industrial |
| Manufacturing Industrial Centers | Maritime, Manufacturing & Logistics |
| Ballard-Interbay MIC | Seattle Mixed |
| Duwamish MIC | |



- City of Seattle
- UGAs
- Public Lands

- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
 - Duwamish MIC

- Alternative 4 - Expanded**
- Industry & Innovation
 - Urban Industrial
 - Maritime, Manufacturing & Logistics
 - Seattle Mixed



- City of Seattle
- UGAs
- Public Lands

Manufacturing Industrial Centers

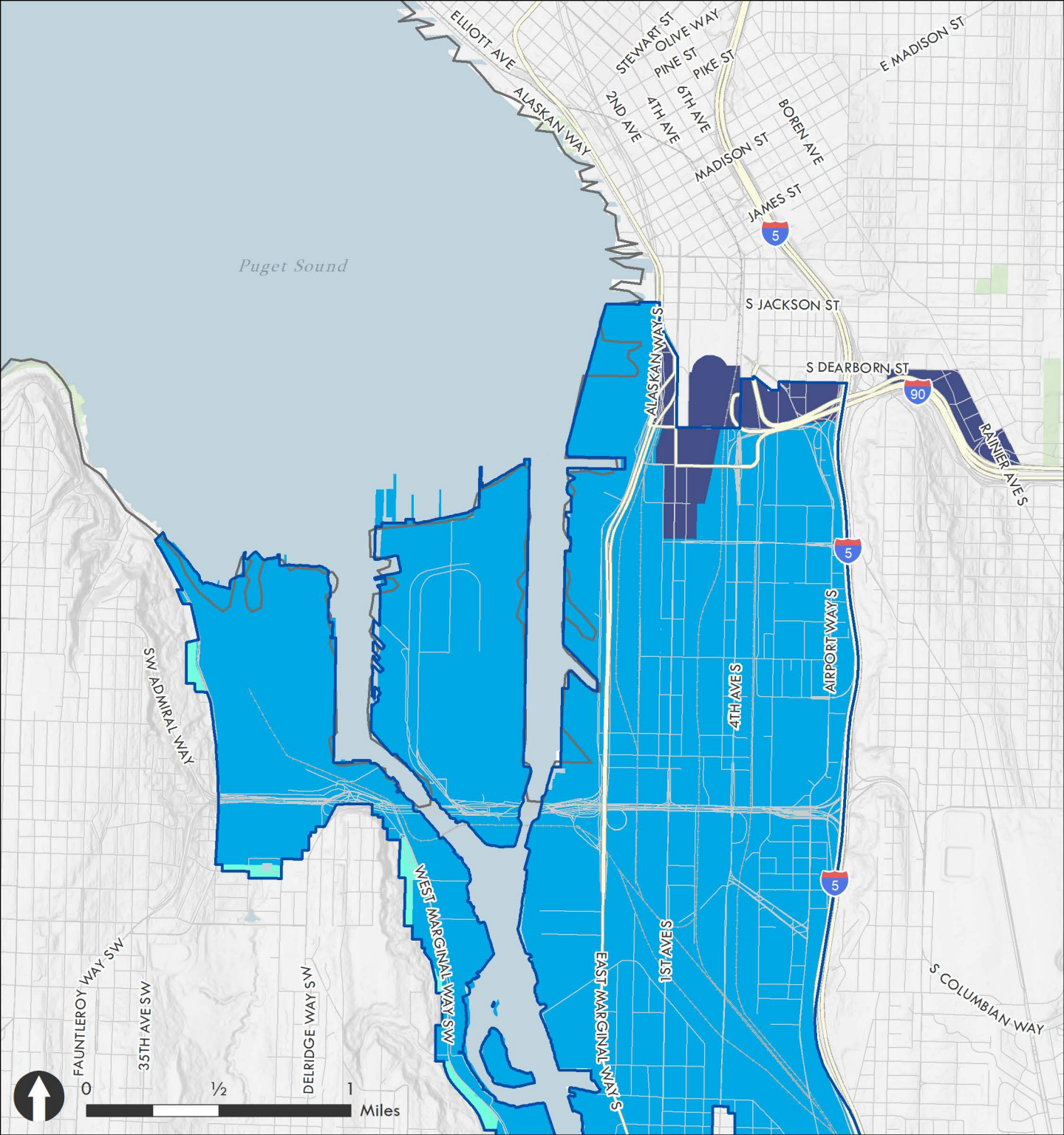
- Ballard-Interbay MIC
- Duwamish MIC

Preferred Alternative

- Industrial Commercial
- Industry & Innovation
- Urban Industrial
- Maritime, Manufacturing & Logistics
- Mixed Use



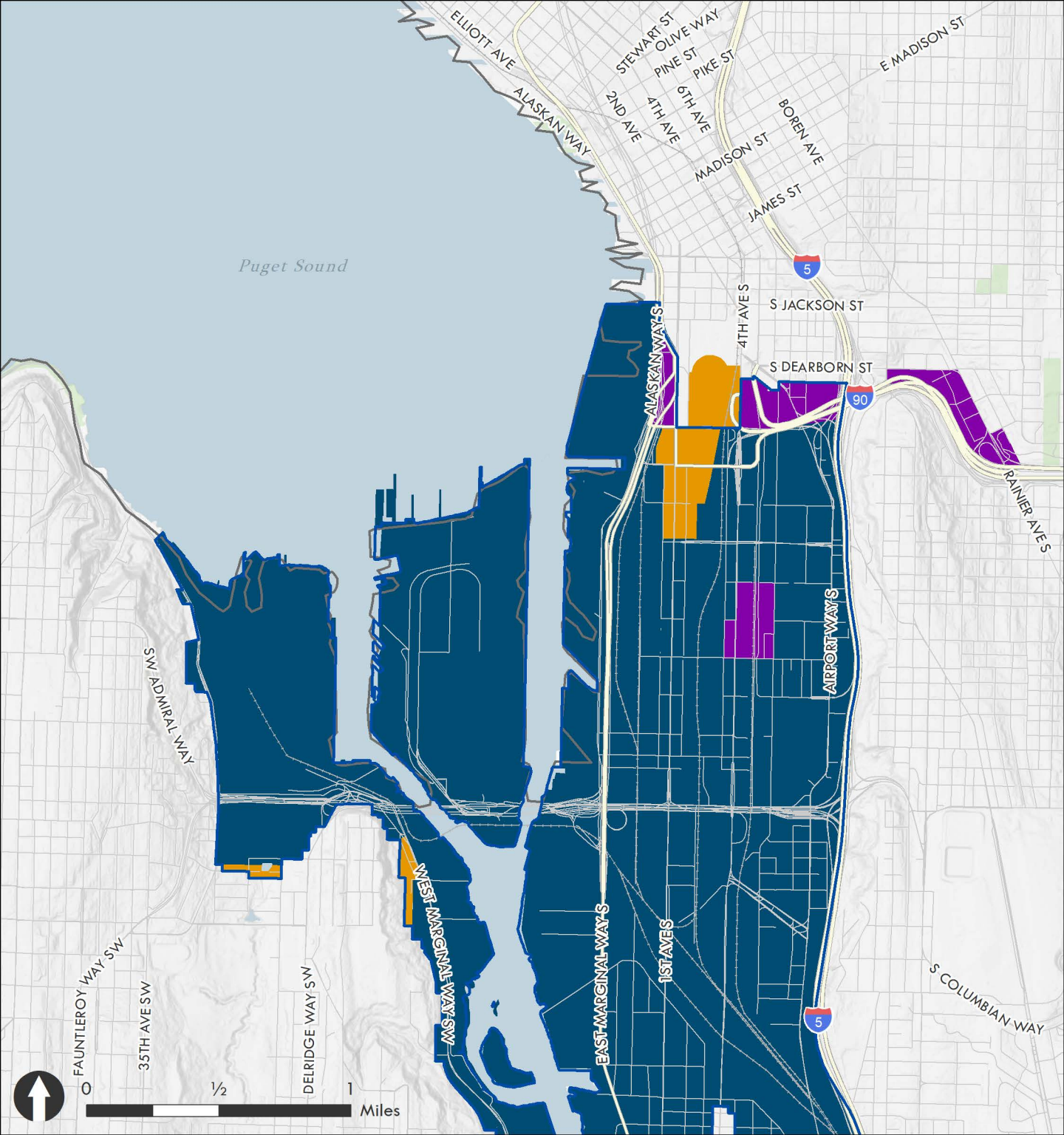
Map Date: September 2022



- City of Seattle
- UGAs
- Public Lands

- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
 - Duwamish MIC

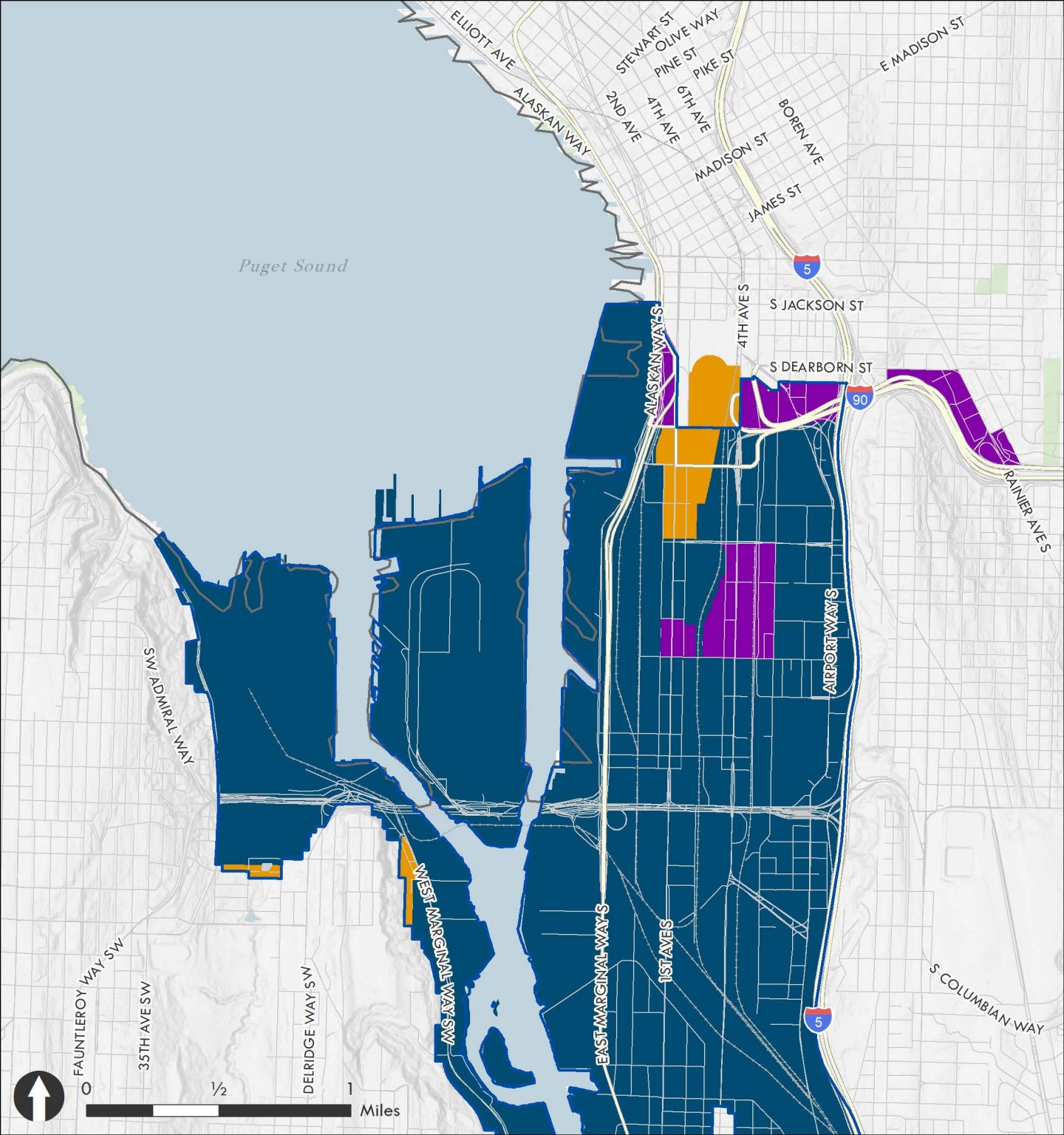
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- Industrial Buffer
 - Industrial Commercial
 - Industrial General



- City of Seattle
- UGAs
- Public Lands

- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
 - Duwamish MIC

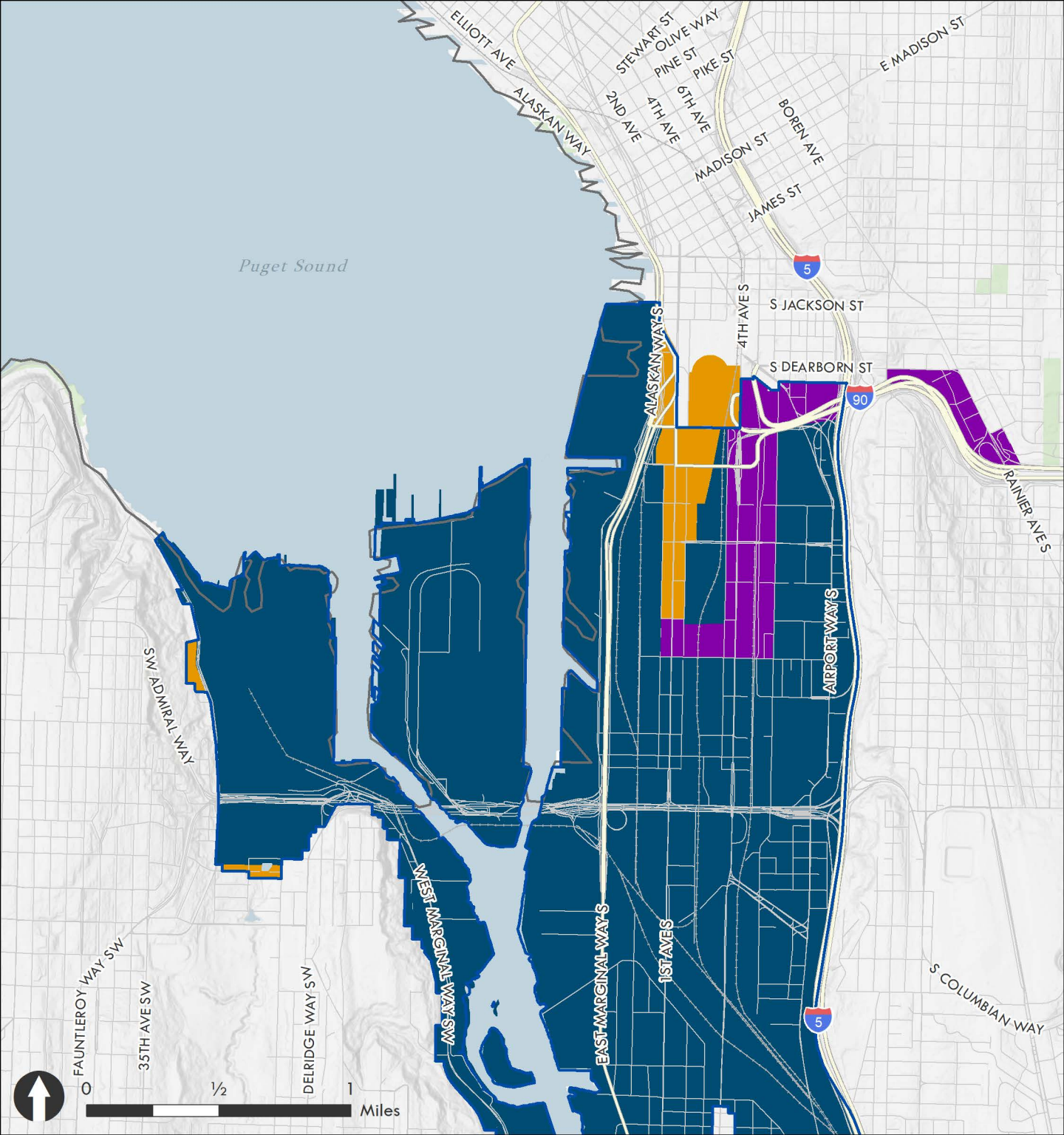
- Alternative 2 - Limited**
- Industry & Innovation
 - Urban Industrial
 - Maritime, Manufacturing & Logistics



- City of Seattle
- UGAs
- Public Lands

- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
 - Duwamish MIC

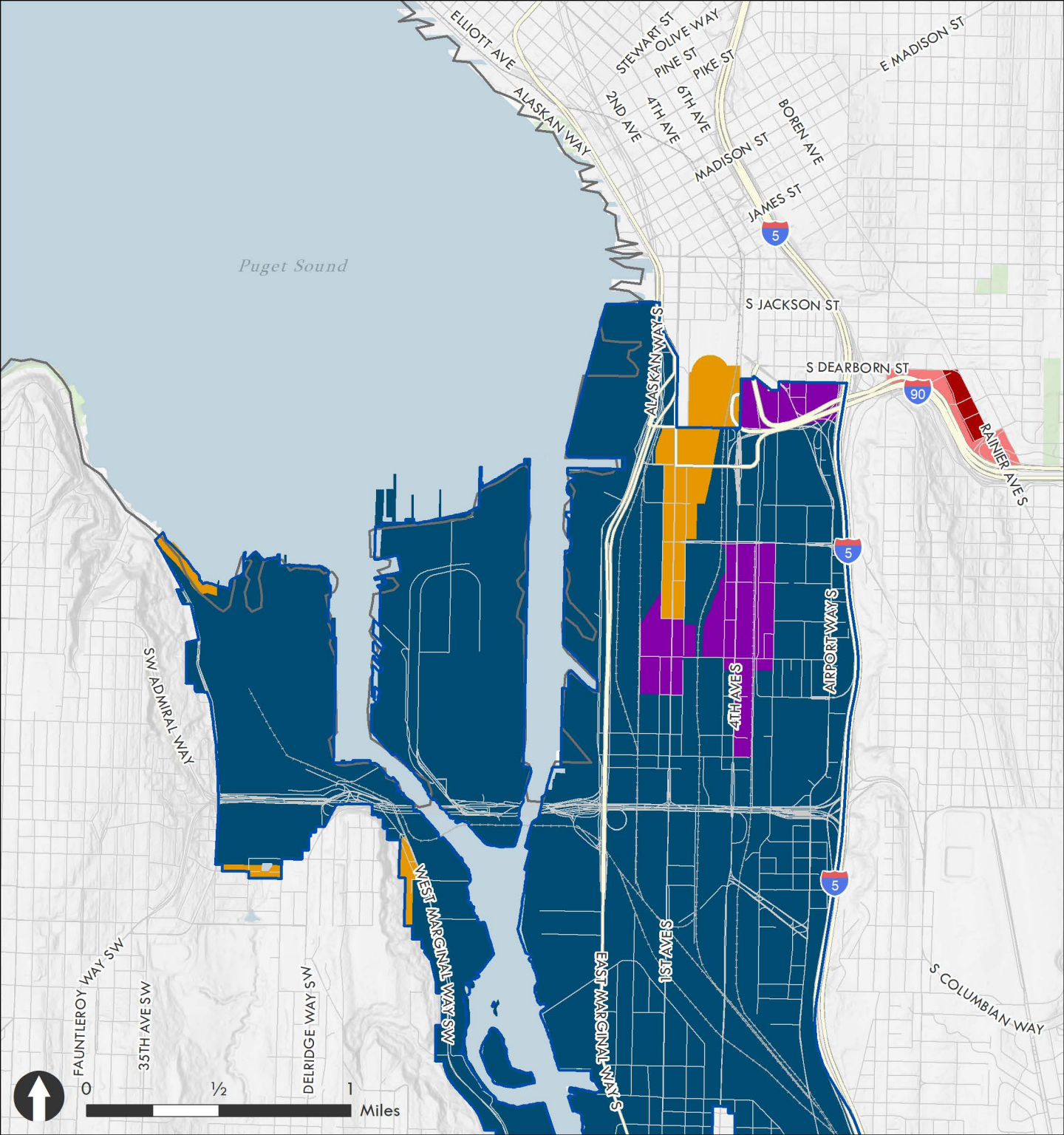
- Alternative 3 - Targeted**
- Industry & Innovation
 - Urban Industrial
 - Maritime, Manufacturing & Logistics
 - Seattle Mixed



- City of Seattle
- UGAs
- Public Lands

- Manufacturing Industrial Centers**
- Ballard-Interbay MIC
 - Duwamish MIC

- Alternative 4 - Expanded**
- Industry & Innovation
 - Urban Industrial
 - Maritime, Manufacturing & Logistics
 - Seattle Mixed



- City of Seattle
- UGAs
- Public Lands

Manufacturing Industrial Centers

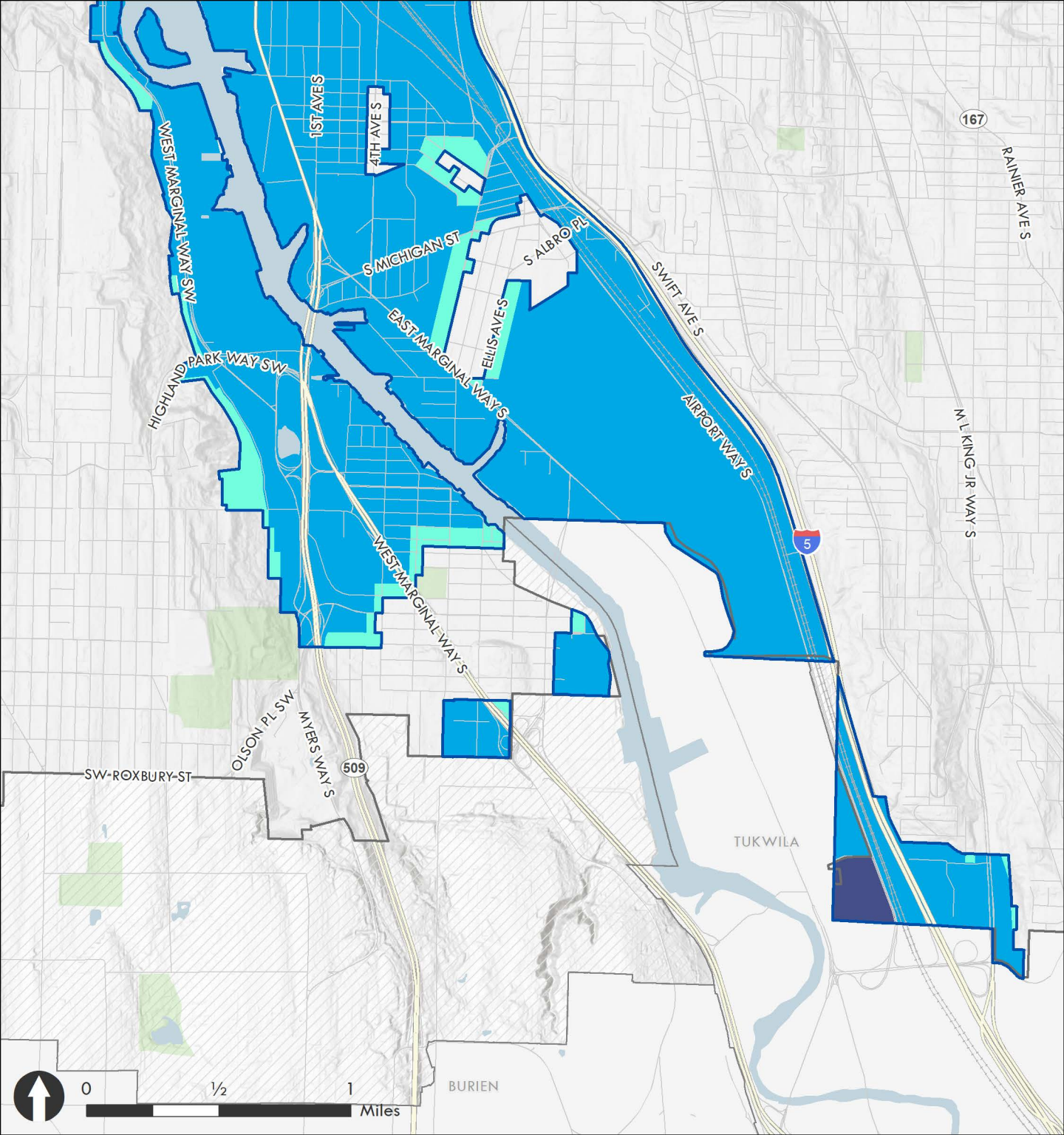
- Ballard-Interbay MIC
- Duwamish MIC

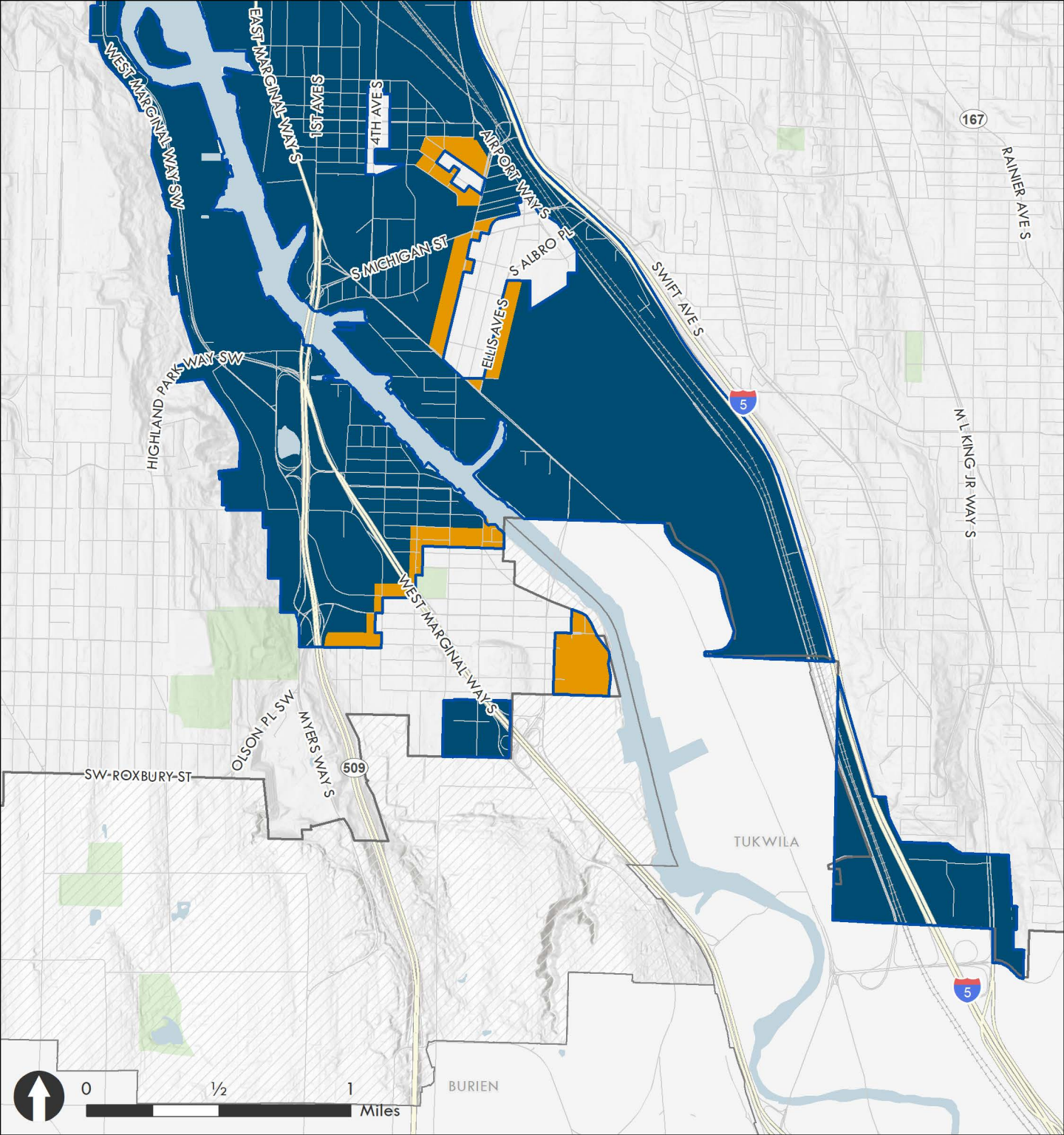
Preferred Alternative

- Industrial Commercial
- Industry & Innovation
- Urban Industrial
- Maritime, Manufacturing & Logistics
- Mixed Use



Map Date: September 2022





- City of Seattle
- UGAs
- Public Lands

Manufacturing Industrial Centers

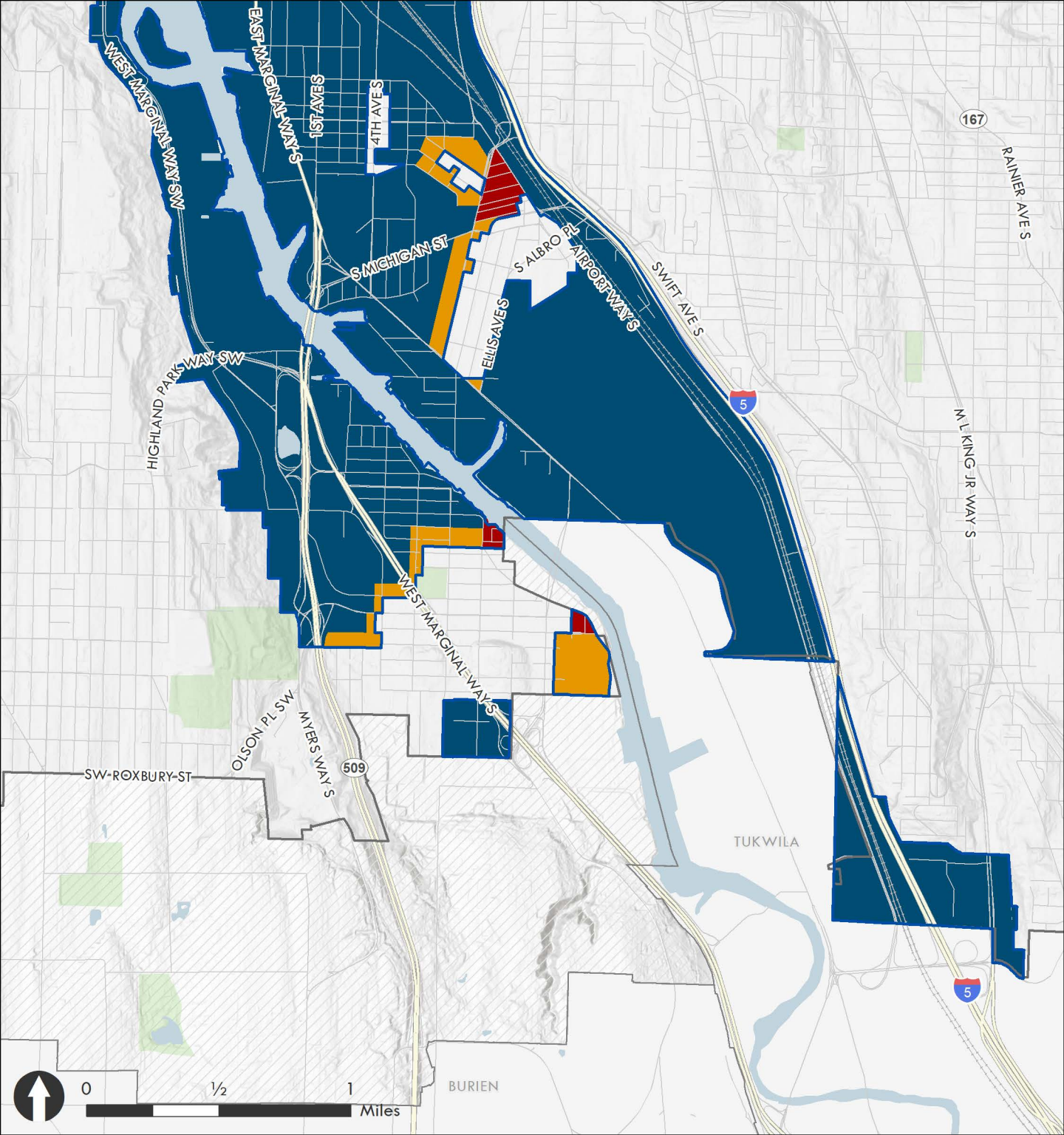
- Ballard-Interbay MIC
- Duwamish MIC

Alternative 2 - Limited

- Industry & Innovation
- Urban Industrial
- Maritime, Manufacturing & Logistics



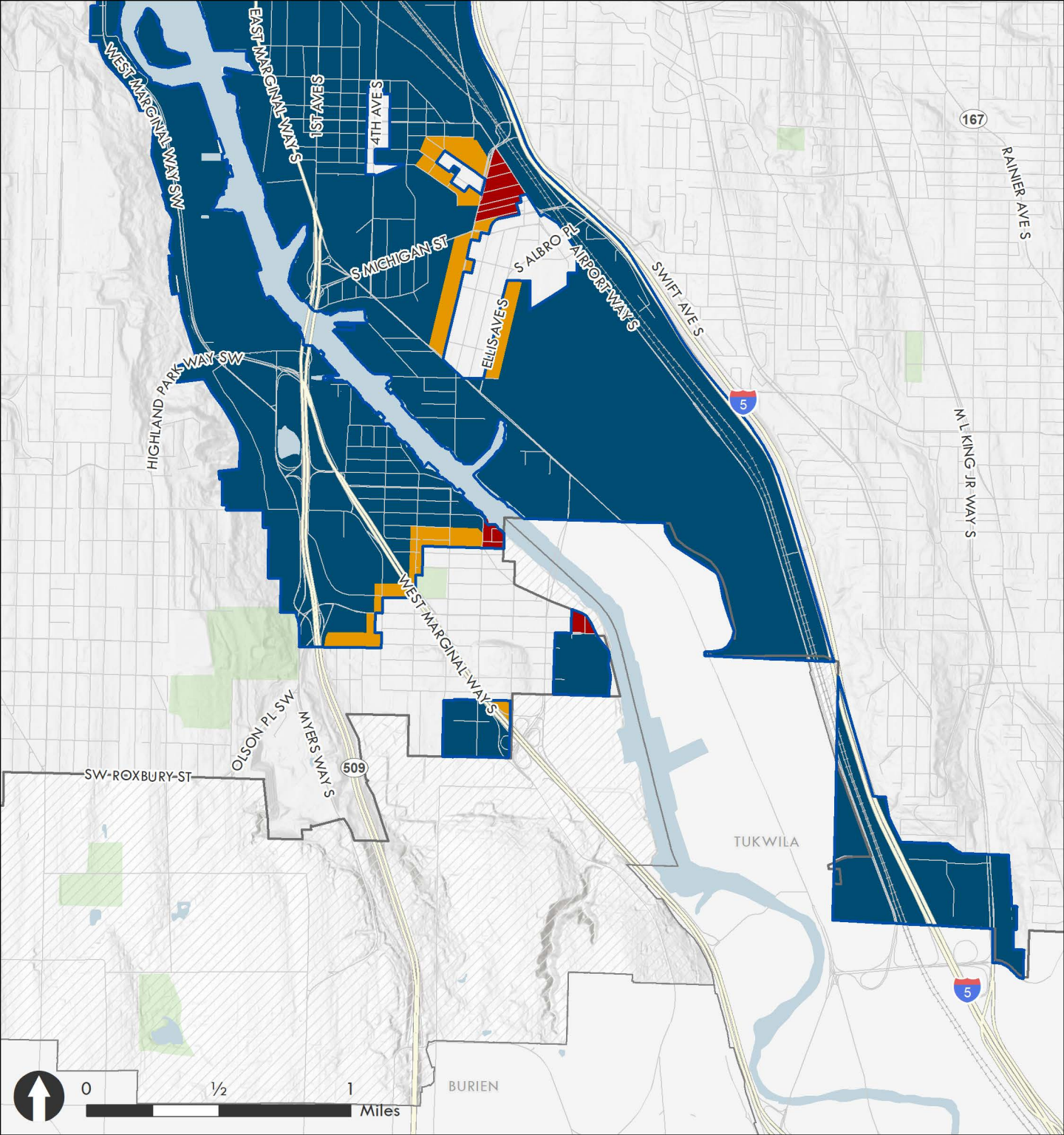
Map Date: November 2021



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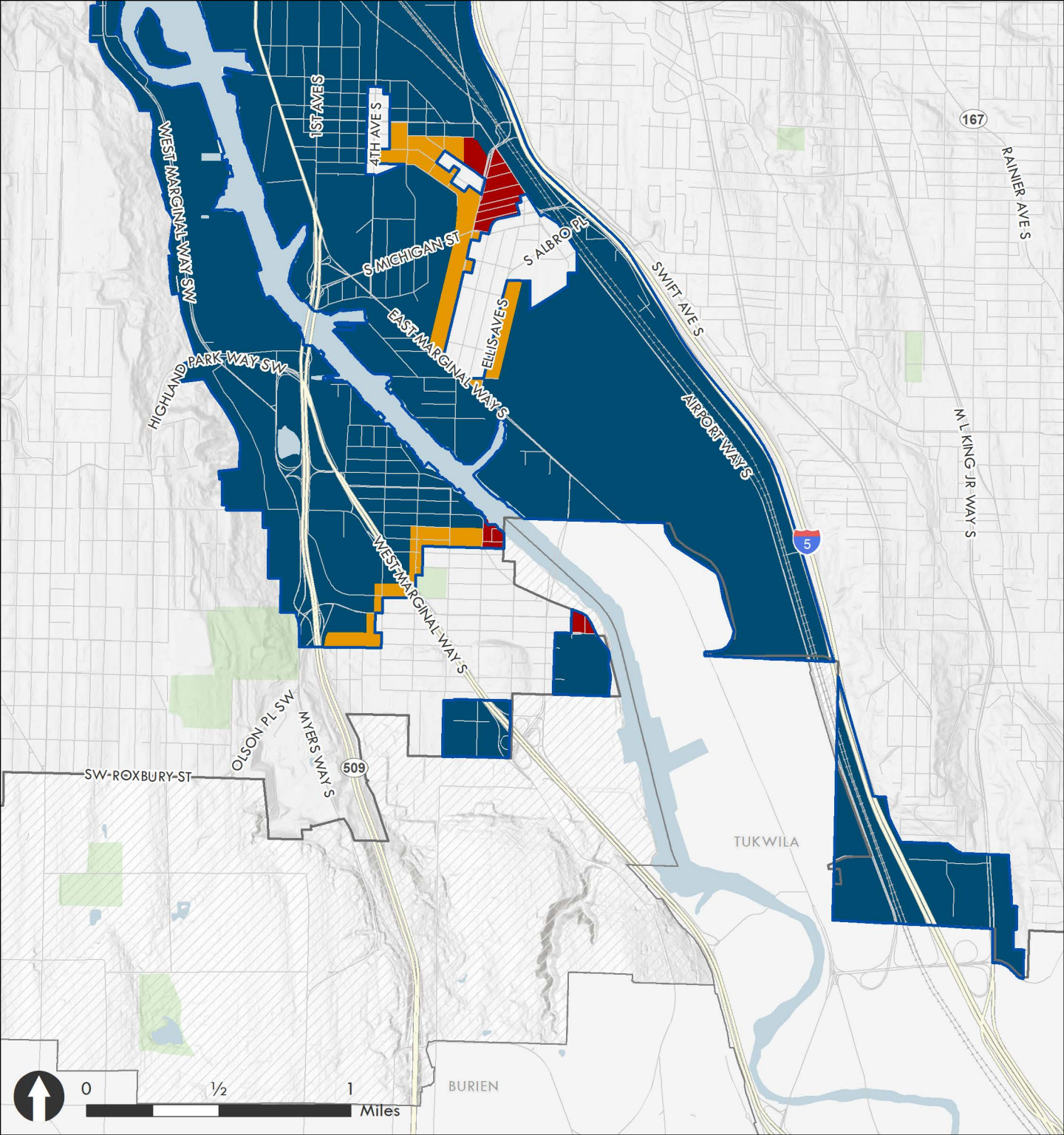
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 - Maritime, Manufacturing & Logistics
 - Mixed Use

D Draft Comprehensive Plan Goal & Policy Language

Seattle Comprehensive Plan Policy Amendments

The land use policies, below, include both the existing policy framework and the proposed amendments to the Comprehensive Plan that are a part of this proposal. The proposed amendments are indicated with underlined, and deletions are in ~~striketrough~~. Changes to the Draft EIS amendments are also highlighted grey.

Land Use Element

Goals

LU G10 *Provide sufficient land with the necessary characteristics to allow industrial activity to thrive in Seattle and protect the preferred industrial function of these areas from activities that could disrupt or displace them.*

LU G11 *Support employment-dense emerging industries that require greater flexibility in the range of on-site uses and activities.*

LU G12 *Develop transitions between industrial areas and adjacent neighborhoods that support healthy communities, reduce adverse environmental impacts, and minimize land use conflicts.*

Policies

LU 10.1 *Designate industrial zones generally where*

- 1. the primary functions are industrial activity and industrial-related commercial functions,*
- 2. the basic infrastructure needed to support industrial uses already exists, areas are large enough to allow a full range of industrial activities to function successfully, and*
- 3. sufficient separation or special conditions exist to reduce the possibility of conflicts with development in adjacent less intensive areas.*

LU 10.2 *Preserve industrial land for industrial uses, especially where industrial land is near rail- or water-transportation facilities, in order to allow marine- and rail-related industries that rely on that transportation infrastructure to continue to function in the city.*

LU 10.3 *Ensure predictability and permanence for industrial activities in industrial areas by limiting changes in industrial land use designation. There should be no reclassification of industrial land to a non-industrial land use category or amendments to the boundaries of manufacturing industrial centers except as part of a City-initiated comprehensive study and review of industrial land use policies or as part of a major update to the Comprehensive Plan.*

LU 10.34 *Accommodate the expansion of current industrial businesses and promote opportunities for new industrial businesses and emerging industries within Seattle to strengthen the city's existing industrial economy.*

LU 10.45 *Restrict to appropriate locations within industrial areas those activities that—by the nature of materials involved or processes employed—are potentially dangerous or very noxious.*

LU 10.56 *Provide a range of industrial zones that address varying conditions and priorities in different industrial areas. Those priorities include maintaining industrial areas that have critical supporting infrastructure, leveraging investments in high-capacity transit service, providing transitions between industrial areas and less intensive areas, and promoting high-quality environments attractive to business expansion or to new industrial activities.*

LU 10.7 *Transition to the following zones for industrial lands in Seattle:*

- *Maritime, Manufacturing and Logistics: This designation would be intended to support the city's maritime, manufacturing, logistics and other industrial clusters. Areas that have significant industrial activity, accessibility to major industrial infrastructure investments, or locational needs (Port facilities, shipyards, freight rail, and shoreline access) may be considered for the maritime, manufacturing, and logistics designation.*
- *Industry and Innovation: This designation would be intended to promote emerging industries and leverage investments in high-capacity transit. These industrial transit-oriented districts may be characterized by emerging industries and high-density industrial employment that combine a greater mix of production, research and design, and offices uses found in multi-story buildings. Areas in MICs and are generally within one quarter and one-half mile of high-capacity transit stations may be considered for the industry and innovation designation.*
- *Urban Industrial: This designation would be intended to encourage a vibrant mix of uses and relatively affordable, small-scale industrial, makers and arts spaces. Areas located at transitions from industrial to commercial and residential areas traditionally zoned for buffer purposes may be considered for the Urban industrial designation.*

- Industrial Commercial: This designation is for industrial land located outside of Manufacturing Industrial Centers and is intended to permit a range of activities such as light industrial uses, research and development uses, and offices.

LU 10.68 Prohibit new residential development in industrial zones, except for certain types of dwellings, such as caretaker units or, potentially in urban industrial zones, dwellings targeted to workers that are related to the industrial area and that would not restrict or disrupt industrial activity.

LU 10.79 Use the general industrial or maritime, manufacturing, and logistics zones to promote a full range of industrial activities and related support uses.

LU 10.810 Apply the general industrial zones or the maritime, manufacturing, and logistics zone mostly within the designated manufacturing/industrial centers, where impacts from industrial activity are less likely to affect residential or commercial uses. Outside of manufacturing/industrial centers, general industrial or the maritime, manufacturing, and logistics zones may be appropriate along waterways used for maritime uses. Consider applying the maritime, manufacturing, and logistics zone mostly within the designated manufacturing/industrial centers.

LU 10.911 Avoid placing industrial zones within urban centers or urban villages. However, in locations where a center or village borders a manufacturing/industrial center, use of the industrial commercial zone within the center or village where it abuts the manufacturing/industrial center may provide an appropriate transition to help separate residential uses from heavier industrial activities. Consider using the urban industrial zone in locations within or outside urban centers or villages that borders a manufacturing/industrial center to help provide an appropriate transition and promote complimentary land use patterns between industrial and non-industrial activities.

LU 10.1012 Limit the density of development for nonindustrial uses in the manufacturing/industrial centers to reduce competition from nonindustrial activities that are better suited to other locations in the city, particularly urban centers and urban villages, where this Plan encourages most new residential and commercial development. Permit a limited amount of stand-alone commercial uses in industrial areas as workforce amenities. or only if they reinforce the industrial character, and Strictly limit the size of office and retail uses not associated with industrial uses, in order to preserve these areas for industrial development. except for areas eligible for the Industry and Innovation zone.

LU 10.1113 Recognize the unique working character of industrial areas by keeping landscaping and street standards to a minimum in the maritime, manufacturing and logistics zone to allow flexibility for industrial activities, except along selected arterials where installing street trees and providing screening and landscaping can offset impacts of new industrial development in highly visible locations.

LU 10.1214 Set parking and loading requirements in industrial zones to provide adequate parking and loading facilities to support business activity, promote air quality, encourage efficient use of the land in industrial areas, discourage underused parking

facilities, and maintain adequate traffic safety and circulation. Allow some on-street loading and occasional spillover parking. Consider limiting parking in the industry and innovation zone located in the vicinity of high-capacity transit stations.

LU 10.1315 Maintain standards for the size and location of vehicle curb cuts and driveways in industrial zones in order to balance the need to provide adequate maneuvering and loading areas with availability of on-street parking and safe pedestrian, bike, and transit access.

LU 10.1416 Permit noise levels in industrial areas, except buffer areas, that would not be allowed in other parts of the city, in recognition of the importance and special nature of industrial activities.

LU 10.1517 Classify certain industrial activities as conditional uses in industrial zones in order to accommodate these uses while making sure they are compatible with the zone's primary industrial function and to protect public safety and welfare on nearby sites. Require mitigation of impacts on industrial activity and on the immediate surroundings, especially nearby less intensive zones.

LU 10.1618 Prohibit uses that attract large numbers of people to the industrial area for nonindustrial purposes, in order to keep the focus on industrial activity and to minimize potential conflicts from the noise, nighttime activity, and truck movement that accompanies industrial activity. Consider allowing such uses in the urban industrial zone only.

LU 10.19 In the industry and innovation zone, consider development regulations that are compatible with employment-dense transit-oriented development. Seek to establish development standards that ensure employment density at a level necessary to leverage transit investments.

LU 10.20 In the Industry and Innovation zone, consider development standards that promotes development that meets the needs of industrial businesses including load-bearing floors, freight elevators, and adequate freight facilities.

LU 10.21 In the industry and innovation zone, consider an incentive system whereby non-industrial floor area may be included in a development as a bonus if new bona-fide industrial space is included.

LU 10.1722 Establish the industrial buffer. Consider using the urban industrial or industrial buffer zones to provide an appropriate transition between industrial areas and adjacent residential or pedestrian-oriented commercial zones.

LU 10.23 In the urban industrial zone, consider allowing a range of ancillary non-industrial uses. Recognize that industrial businesses in this zone have a greater need for a limited amount of space for such uses as tasting rooms and retail facilities that directly support the industrial activity of the business.

LU 10.24 *In the urban industrial zone, consider establishing buffer standards to ease the transition from industrial areas to urban villages and other non-industrial parts of Seattle.*

LU 10.25 *Recognize the unique development opportunities that the Washington National Guard Armory in the BINMIC and the WOSCA (Washington Oregon Shippers Cooperative Association) represents. Work with the State of Washington or other future owners of this site to develop a comprehensive industrial development plan. This plan should include green infrastructure, consolidated waste management programs, and workforce equity commitments.*

LU 10.1826 *Allow the widest possible range of manufacturing uses and related industrial and commercial activities within the industrial buffer zone, while ensuring compatibility the activity and physical character of neighboring less intensive zones.*

LU 10.1927 *Include development standards or performance standards for the industrial buffer zone that protect the livability of neighboring areas, promote visual quality, and maintain a compatible scale of development along zone edges. Apply these standards only in places where existing conditions do not adequately separate industrial activity from less intensive zones.*

LU 10.2028 *Limit the height of structures on the borders of industrial buffer zones where streets along the zone edge do not provide sufficient separation for a reasonable transition in scale between industrial areas and less intensive neighboring zones, taking into consideration the permitted height in the abutting less intensive zone.*

LU 10.2129 *Allow a wide mix of employment activities in the industrial commercial zones, such as light manufacturing and research and development.*

LU 10.2230 *Limit development density in industrial commercial and maritime, manufacturing, and logistics zones in order to reflect transportation and other infrastructure constraints, while taking into account other features of an area.*

LU 10.2331 *Include development standards in the industrial commercial zone designed to create environments that are attractive to new technology businesses and that support a pedestrian-oriented environment, while controlling structure height and scale to limit impacts on nearby neighborhoods.*

LU 10.2432 *Provide a range of maximum building height limits in the industrial commercial zones in order to protect the distinctive features that attract new technology businesses to the area—such as views of water, shoreline access, and the neighborhood scale and character—to make sure that these features will continue to be enjoyed, both within the zone and from the surrounding area.*

LU 10.2633 *Assign height limits independently of the industrial zoning designation to provide flexibility in zoning-specific areas and to allow different areas within a zone to be assigned different height limits according to the rezone criteria.*

LU 10.2634 Restrict or prohibit uses that may negatively affect the availability of land for industrial activity, or that conflict with the character and function of industrial areas.

LU 10.2735 Consider high value-added, living wage industrial activities to be a high priority.

LU 10.2836 Permit commercial uses in industrial areas to the extent that they reinforce the industrial character, and limit specified non-industrial uses, including office and retail development, in order to preserve these areas for industrial development.

Container Port Element Land Use Policies (from Seattle 2035)

The container port element contains land use, transportation, economic development, and environmental policies to guide and support container port activities in Seattle. The land use policies emphasize ensuring adequate land area needs for port expansion, avoiding land use conflicts. These policies focus more specifically on the maritime industry than the land use policies, above. Container Port Element land use policies are below:

CP 1.1 Help preserve cargo container activities by retaining industrial designations on land that supports marine and rail- related industries including industrial land adjacent to rail or water-dependent transportation facilities.

CP 1.2 Continue to monitor the land area needs, including for expansion, of cargo container related activities and take action to prevent the loss of needed land that can serve these activities.

CP 1.3 Discourage non-industrial land uses, such as stand-alone retail and residential, in industrially zoned areas to minimize conflicts between uses and to prevent conversion of industrial land in the vicinity of cargo container terminals or their support facilities.

CP 1.4 Consider how zoning designations may affect the definition of highest and best use, with the goal of maintaining the jobs and revenue that cargo container activities generate and to protect scarce industrial land supply for cargo container industries, such as marine and rail-related industries.

CP 1.5 Consider the value of transition areas at the edges of general industrial and maritime manufacturing and logistics zones which allow a wider range of uses while not creating conflicts with preferred cargo container activities and uses. In this context, zoning provisions such as locational criteria and development standards are among the tools for defining such edge areas.

Shoreline Areas Element (from Seattle 2035)

As part of the Shoreline Master Program (discussed below), the shoreline areas element contains land use policies for industrial land adjacent to Seattle's shorelines. These policies are implemented through the Shoreline Master Program which designates which shorelines are industrial in use and establishes development regulations for those uses within 200-feet of the shoreline.

SA P37 *Support the retention and expansion of existing conforming water-dependent and water-related businesses and anticipate the creation of new water-dependent and water-related development in areas now dedicated to such use.*

SA P38 *Identify and designate appropriate land adjacent to deep water for industrial and commercial uses that require such condition.*

SA P39 *Provide regulatory and nonregulatory incentives for property owners to include public amenities and ecological enhancements on private property.*

SA P40 *Identify and designate appropriate land for water-dependent business and industrial uses as follows:*

- 1. Cargo-handling facilities*
- 2. Tug and barge facilities*
- 3. Shipbuilding, boatbuilding, and repairs*
- 4. Moorage*
- 5. Recreational boating*
- 6. Passenger terminals*
- 7. Fishing industry*

(See Seattle 2035 for Detailed policy guidance provided for each)

SA P41 *Allow multiuse developments including uses that are not water dependent or water related where the demand for water-dependent and water-related uses is less than the land available or if the use that is not water dependent is limited in size, provides a benefit to existing water-dependent and water-related uses in the area, or is necessary for the viability of the water-dependent uses. Such multiuse development shall provide shoreline ecological restoration, which is preferred, and/or additional public access to the shoreline to achieve other Shoreline Master Program goals.*

E Industrial Development Regulations

Seattle Municipal Code 23.50

The Seattle Municipal Code establishes four industrial zone designations, whose major features and characteristics are summarized below.

Industrial General 1 (IG1)	
<p>Function. An area that provides opportunities for manufacturing and industrial uses and related activity, where these activities are already established and viable, and their accessibility by rail and/or waterway make them a specialized and limited land resource.</p>	
<p>Locational Criteria (summary).</p> <p>Directly related to the industrial shoreline.</p> <p>Directly related to major rail lines serving industrial businesses.</p> <p>Containing mostly industrial uses, including manufacturing, heavy commercial, warehousing, transportation, utilities, and similar activities.</p> <p>Generally flat topography.</p> <p>Platted into large parcels of land.</p>	
Uses	Aquaculture, urban farm, animal shelter, eating and drinking establishment, food processing, laboratories and R&D, medical services, lodging (except Duwamish MIC), medical services offices, auto sales and services, sales and services, high impact uses by conditional use permit, childcare, hospitals, vocational schools, manufacturing (light, general, and heavy) mini-warehouse (except Duwamish MIC), outdoor storage, warehouses, transportation facilities, utilities.
Floor Area Ratio	2.5
Max. Size of Use Limits	<ul style="list-style-type: none"> • The maximum size of use limit is 10,000 square feet for animal shelters, entertainment, lodging, medical services, office, retail, sales and services. • The maximum size of use for drinking establishments is 3,000 square feet. • The maximum size of use for restaurants is 5,000 square feet.
Height Limits	<ul style="list-style-type: none"> • There is no height limit for industrial uses in the IB zone. The height limit for commercial uses, except spectator sports facilities, food process, or commercial craft uses is 30-feet, 45-feet, 65-feet or 85-feet depending on location.

Industrial General 2 (IG2)

Function. An area with existing industrial uses, that provides space for new industrial development and accommodates a broad mix of activity, including additional commercial development, when such activity improves employment opportunities and the physical conditions of the area without conflicting with industrial activity

Locational Criteria (summary).

Developed with industrial activity or a mix of industrial activity and commercial uses.

Nearby facilities have established a more commercial character for the surroundings.

Additional trips generated by increased commercial densities can be accommodated without conflicting with the access and circulation needs of industrial activity.

Reuse of small sites and existing buildings no longer suited to current industrial need.

Isolation from a larger industrial area due to separation by another type of zone or major physical barrier, such as an arterial or waterway.

Generally flat topography.

Platted into large parcels of land.

Uses	Aquaculture, urban farm, animal shelter, eating and drinking establishment, food processing, laboratories and R&D, medical services, lodging, medial services offices, auto sales and services, sales and services, high impact uses by conditional use permit, childcare, hospitals, vocational schools, manufacturing (light, general, and heavy) mini-warehouse , outdoor storage, warehouses, transportation facilities, utilities.
Floor Area Ratio	2.5
Max. Size of Use Limits	<ul style="list-style-type: none">• The maximum size of use limit is 10,000 square feet for animal shelters, entertainment, lodging, medical services, office, retail, sales and services.• The maximum size of use for drinking establishments is 3,000 square feet.• The maximum size of use for restaurants is 5,000 square feet.
Height Limits	<ul style="list-style-type: none">• There is no height limit for industrial uses in the IB zone. The height limit for commercial uses, except spectator sports facilities, food process, or commercial craft uses is 30-feet, 45-feet, 65-feet or 85-feet depending on location.

Industrial Buffer (IB)	
<p>Function. An area that provides an appropriate transition between industrial areas and adjacent residential zones, or commercial zones having a residential orientation and/or pedestrian character.</p>	
<p>Locational Criteria (summary).</p> <p>Mix of industrial activity and a wide range of commercial uses which are located on the edge of a larger industrial area.</p> <p>Transition is needed to protect a less-intensive zone from potential negative impacts of industrial activity when the area directly abuts a residential or commercial zone or an area with substantial amount of residential development and/or pedestrian character.</p>	
Uses	Manufacturing (except heavy), Food Processing, Offices, Sales and Service, Sports and Recreation Facilities (except in the Duwamish MIC), Mini-Warehouses, Parking, Transportation Facilities, Caretakes Quarters and Artists Dwelling Units, Eating and Drinking Establishments, Medical Services, Vocational Training Facilities, Parks, Child Care, Animal Shelters, Theaters and Spectator Sports Facilities, Power Plants.
Floor Area Ratio	2.5
Max. Size of Use Limits	<ul style="list-style-type: none"> • In the IB zone the maximum size of use limit is 75,000 square feet for animal shelters, entertainment, lodging, medical services. • The maximum size of use limit is 30,000 square feet for retail sales – major durables, sales, and services general. The maximum size of use limit for offices is 100,000.
Height Limits	<ul style="list-style-type: none"> • There is no height limit for industrial uses in the IB zone. The height limit for commercial uses, except spectator sports facilities, food process, or commercial craft uses is 30-feet, 45-feet, 65-feet, or 85-feet depending on location. • Additional height limits apply for parcels abutting residential zones.
Setbacks	<ul style="list-style-type: none"> • A 5-foot setback for all uses across a right of way of 80 feet or less from SF, or LR 1, LR2, or LR3 zone. • A 5-foot setback of 5 feet is required for any lot abutting any residentially zoned lot or across an alley from a residential lot for surface parking with more than 5 spaces, a parking structure unless enclosed with a wall, outdoor storage, loading berths, or outdoor recycling collection stations, or drive in facilities.

Industrial Commercial (IC)	
<p>Function. Intended to promote development of businesses which incorporate a mix of industrial and commercial activities, including light manufacturing and research and development, while accommodating a wide range of other employment activities.</p>	
<p>Locational Criteria (summary).</p> <p>Amenities could provide an attraction for new businesses, particularly new technology-oriented and research and development activities.</p> <p>Close proximity to major institutions capable of providing support for new technology-oriented and research and development businesses.</p> <p>Places in transition to predominantly commercial or mixed commercial and industrial activity.</p> <p>Where there is an existing concentration of technology-oriented and research and development uses.</p> <p>Could provide the type of campus-like environment attractive for new technology-oriented industrial and commercial development.</p>	
Uses	Manufacturing, Food Processing, Offices, Sales and Service, Sports and Recreation Facilities, Mini-Warehouses, Parking, Transportation Facilities, Caretakers Quarters and Artists Dwelling Units, Eating and Drinking Establishments, Medical Services, Vocational Training Facilities, Parks, Child Care, Animal Shelters, Theaters and Spectator Sports Facilities.
Floor Area Ratio	<ul style="list-style-type: none"> • Most IC Zones: 2.75 • IC-65 and IC-85 Zones: 3.25 • IC 85-175 Zone: Base of 2.5 FAR for all permitted uses, except that the combined chargeable floor area of the following uses is limited to 1 FAR or 50,000 square feet, whichever is greater: entertainment uses; lodging uses; medical services; office; restaurant; major durables retail sales; automotive sales and services; religious facilities; and general sales and services. • In the IC 85-175, extra FAR up to a maximum of 4.0 can be achieved through incentive zoning except that, if the total chargeable floor area of uses identified in the base FAR column is greater than 4.0 FAR, that amount of floor area, not to exceed 50,000 square feet, is the maximum FAR.
Max. Size of Use Limits	<ul style="list-style-type: none"> • Within the Duwamish MIC no size of use limits except the IC 85-160 zone. In the IC 85-160 zone the maximum size of use limit is 75,000 square feet for animal shelters, entertainment, lodging, medical

	<p>services. The maximum size of use limit is 30,000 square feet for retail sales – major durables, sales, and services general.</p> <ul style="list-style-type: none"> • Outside the Duwamish MIC the size of use limit is 75,000 square feet for animal shelters, entertainment, lodging, medical services retail sales – major durables, sales, and services general.
Height Limits	<p>Structure height limit for industrial uses is unlimited for industrial uses. For non-industrial uses height limits of 45-feet, 65-feet, 85-feet, and 175-feet depending on the location of the zone.</p>
Setbacks	<p>Setbacks are required for portions of a lot that abut residentially zoned land, is separated by an alley from residentially zoned areas, and from lot lines abutting streets with street trees.</p>

F Shoreline Master Program Development Regulations

Seattle Municipal Code 23.60A

The tables below highlight key development standards for the UI and UM environments:

Urban Industrial (UI)	
<p>Function. Provide for efficient use of industrial shorelines by major cargo facilities and other water-dependent and water-related industrial uses, and to allow for warehouse uses that are not water-dependent or water-related where they currently exist; Provide public access on public lands or in conformance with an area-wide Public Access Plan; Accommodate ecological restoration and enhancement where reasonable; and Allow limited nonwater-oriented uses and development where they would not displace water-oriented uses and, if located on waterfront lots, where they achieve another goal of the Shoreline Management Act, such as protection or improvement of ecological functions or public access.</p>	
<p>Locational Criteria (summary).</p> <ul style="list-style-type: none"> • Areas zoned Industrial; • Areas adjacent to or part of major industrial centers that provide support services for water-dependent and other industrial uses; or • Areas where predominant uses are water-dependent or water-related manufacturing, warehousing, major port cargo facilities, or other similar uses. 	
Uses – Must be water dependent or water related.	<ul style="list-style-type: none"> • Light, General, and Heavy Manufacturing (except extractive industries). • Food processing. • Offices as part of a water dependent use. • Laboratories and R&D. • Storage (except mini-storage in the Duwamish MIC). • Heavy sales and services.
Lot Coverage	<ul style="list-style-type: none"> • Setback for ordinary high-water mark of 15 feet for water dependent uses. • Setback from ordinary high-water mark of 60 feet for water related uses.
View Corridor	<ul style="list-style-type: none"> • A view corridor equal to 35% of the width of the lot.
Height Limit	<ul style="list-style-type: none"> • 35 feet.
Specific to Water Related uses	<ul style="list-style-type: none"> • Water-related uses shall be designed and located on the shoreline to encourage efficient use of the shoreline

Urban Maritime (UM)	
<p>Function. Provide for efficient use of industrial and commercial shorelines by water-dependent and water-related uses. Provide public access mainly on public lands or in conformance with an area-wide Public Access Plan. Accommodate ecological restoration and enhancement where reasonable. Allow limited nonwater-oriented uses and development where they would not displace water-oriented uses and, if located on waterfront lots, where they achieve another goal of the Shoreline Management Act, such as protection or improvement of ecological functions or public access.</p>	
<p>Locational Criteria (summary).</p> <ul style="list-style-type: none"> • Areas zoned Industrial or Commercial 2 with sufficient dry land for industrial uses but generally in smaller parcels than in the UI Environment. • Areas developed predominantly with water-related manufacturing or commercial uses or a combination of manufacturing-commercial and recreational water-dependent uses. • Areas with concentrations of state waterways for use by commerce and navigation. • Areas near, but not necessarily adjacent to, residential or Neighborhood Commercial zones that require protection from the impacts of heavy industrialization and are therefore inappropriate for a UI Environment designation. 	
Uses – Must be water dependent or water related.	Commercial uses, manufacturing uses, parks and open space, research uses, storage uses, commercial marinas, dry boat storage, tugboat services railroads, utility lines.
Lot Coverage	75% of the dry land portion of the lot. 50% of the submerged portion of the lot.
View Corridor	<ul style="list-style-type: none"> • A view corridor equal to 35% of the width of the lot.
Height Limit	<ul style="list-style-type: none"> • 35 feet.
Specific to Water Related uses	<ul style="list-style-type: none"> • Water-related uses shall be designed and located on the shoreline to encourage efficient use of the shoreline

G Preferred Alternative Preliminary Regulations

Development Standards Appendix

The development standards summarized below describe the overall intent of the zone and how it would work. Specific code language would be drafted at the time of a future legislative proposal, and much of it would mirror what is included here. Minor modifications or adjustments at the time of code drafting are expected and would not materially alter the impact assessment in this EIS. The summary table is also included in EIS Chapter 2. Below the table, this appendix provides more detail than what is in the table and in Chapter 2. It is not practical or necessary to provide every proposed code detail within this appendix. Sufficient detail to understand the key elements and features of the proposed zoning code are included. In some cases technical and nuanced code standards are included in this appendix to a level of detail beyond what is necessary for environmental review purposes.

Development Standards by Land Use Concept

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
Locational Criteria	Within a M/IC Large parcel sizes Proximate to water and port facilities Proximate to rail or other freight infrastructure Buffered from urban villages and residential zones	Within ¼–½ mile walkshed of an existing or planned high capacity transit station Within a M/IC or land previously in an industrial zone outside a M/IC.	Within a designated M/IC, or an area with existing industrial/manufacturing/maritime uses Proximate to an urban village, or an existing agglomeration of residential uses
Height Limit	None	85–160 feet (with exemptions for industrial equipment, antennas etc.)	Variable with tiers at 45', 60', and 75', and 85' in the STAOD (see overlay for additional detail)
Floor Area Ratio (FAR) The FAR limit is for all uses in total in a development	2.5 Maximum FAR total. 0.4 Maximum for non-industrial uses.	Base and Bonus Limits: Development of floor area up to the base amount must be built and dedicated for industrial uses. Development	3.0 for 45' heights; 4.0 for 60' heights, and 4.5 for 75' height, and 85' in the STAOD

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
(whether office, manufacturing etc.)		<p>exceeding the base is allowed through a ratio whereby 3-5 square feet of non-industrial use space may be built for each additional square foot of dedicated industrial space that is built. There is a total Maximum FAR limit on all development.</p> <p>Mixed Development with Bonus: 3 (5 Preferred Alt.) sq. ft. of bonus floor area for non-industrial space for each 1 sq. ft. of industrial space above a base FAR 0.5 of industrial development.</p> <p>Total maximum FAR Limit: 4.0 - 6.5 (depends on location)</p> <p>Industrial-only development: Development that only includes industrial uses with no bonus development have a max FAR of 2.5.</p> <p>Configuration: Industrial development must be in the same building (i.e., first two floors), or in a separate building on the same site as bonus development or another site in the same MIC in the Preferred Alt. A close-to-maximum development would be about 1/3 industrial, and 2/3 non-industrial (1/6, and 5/6 Preferred Alt.)</p>	
Permitted Principal Uses <i>The list is a general summary to describe the overall intent and is not exhaustive.</i>	Industrial Uses Permitted outright with no maximum size of use limits or additional restrictions. A broad range of heavy and light Manufacturing uses. A broad range of warehousing / distribution, marine and logistics Transportation uses A broad range of Utility uses Outdoor Storage and Warehouse Uses (but mini-	Industrial Uses—Base Same permitted as for the MML zone, except ICT allowed in the Preferred Alternative Non-Industrial Uses—Bonus Only allowed as bonus development. (2–5 sq. ft. allowed per each additional sq. ft. of industrial use space above the base FAR of 0.5 of industrial use space.)	Industrial Uses—Base Permitted outright with no maximum size of use limits or additional restrictions, but the heaviest / most impactful industrial uses are not allowed. Light Manufacturing uses. Warehousing / distribution, marine and logistics Transportation uses Some lower-impact utility uses

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
	<p>Storage Warehouses are prohibited)</p> <p>Laboratory, and research and development with physical processes</p> <p>Food processing and craft work</p> <p>Automotive uses</p> <p>Non-Industrial Uses</p> <p>Permitted as a principal use only when subject to strict maximum size of use limits and FAR sub-limit.</p> <p>Commercial sales and services</p> <p>Office</p> <p>Institutional Uses</p> <p>Lodging</p> <p>Entertainment Uses</p> <p>Information Computer Technology (ICT)</p>		<p>Outdoor Storage and Warehouse Uses (but mini-Storage Warehouses are prohibited)</p> <p>Laboratory, and research and development with physical processes</p> <p>Food processing and craft work</p> <p>Automotive uses</p> <p>Non-Industrial Uses</p> <p>Permitted subject to strict maximum size of use limits. (Note—greater flexibility for ancillary uses below).</p> <p>Commercial sales and services</p> <p>Office</p> <p>Institutional Uses</p> <p>Entertainment Uses (1)</p> <p>Information Computer Technology (ICT)</p>
<p>Prohibited Uses</p> <p><i>This is not a comprehensive list.</i></p>	<p>Mini storage</p> <p>Principal use parking</p>	<p>Mini storage</p> <p>Principal use parking</p>	<p>Mini storage</p> <p>Principal use parking</p> <p>Heavy manufacturing</p> <p>Some intensive utility uses</p> <p>Some intensive transportation uses</p>
<p>Ancillary Uses</p> <p><i>Ancillary uses are functions associated with or related to the principal permitted use. Rules concerning ancillary uses would be clarified.</i></p>	<p>Non-Industrial activities that are ancillary to an Industrial Use are limited to 30% of the floor area or activity area of the use.</p>	<p>Non-Industrial activities that are ancillary to an Industrial Use are limited to 30% of the floor area or activity area of the use, or else the use would be classified as Non-Industrial / Bonus development.</p>	<p>Non-Industrial activities that are ancillary to an Industrial Use may occupy up to 80% of the floor area, with 20% of floor area in the industrial use. The intent is to allow large spaces for activities such as tasting rooms, retail and office when associated with a bona-fide on-site or nearby industrial use.</p>
<p>Maximum Size of Use Limits</p> <p><i>Limits pressure from non-industrial uses, and provides services intended to support workforce in the same building or general</i></p>	<p><u>10,000 sq. ft.</u></p> <p>Major durables sales, service</p> <p>Office</p> <p>Lodging (#)</p> <p>Medical services</p> <p>Entertainment (#)</p> <p><u>7,500 sq. ft.</u></p>	<p>None. Principal non-industrial uses are allowed without a size limit, subject to the incentive bonus system.</p>	<p>Maximum size of use limits are for stand-alone principal non-industrial uses. Note increased flexibility for ancillary uses, which could allow larger-sized spaces if combined with an industrial use.</p> <p><u>25,000 sq. ft.</u></p>

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
<i>area as a principally allowed industrial uses.</i>	General retail sales and service <u>3,000 sq. ft.</u> Restaurants / Bars		Lodging Medical services Entertainment <u>15,000 sq. ft.</u> Major durables sales, service Office <u>7,500 sq. ft.</u> General retail sales and service <u>3,000 sq. ft.</u> Restaurants / Bars
Residential Uses	No change to existing, narrow allowances for caretakers' quarters (1 per business); and artist/studio housing (existing structures only, 800 sq. ft. max.)	No change to existing, narrow allowances for caretakers' quarters (1 per business); and artist/studio housing (existing structures only, 800 sq. ft. max.)	<p><u>Alternative 3:</u> increased allowance for industry supportive housing: Up to 2 caretakers'/workers' quarters per on-site industrial business. Artist/studio/maker housing allowed in new buildings, no max. unit size. Maximum density of 25 dwelling units / acre. Residential may not exceed 40% total floor area.</p> <p><u>Alternative 4:</u> increased allowance for industry supportive housing: Up to 3 caretakers'/workers' quarters per on-site industrial business. Artist/studio/maker housing allowed in new buildings, no max. unit size. Maximum density of 50 dwelling units / acre. Residential may not exceed 60% total floor area. Additional conditions apply. (See Housing and Land & Shoreline Use sections). Preferred: By conditional use permit with criteria (See development standards appendix). Density limit same as Alt. 4.</p>

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
Parking Requirements	No Minimum Parking	No minimum parking Maximum parking: 1 per 1,000 sq. ft. (Parking maximum is provided to minimize SOV trips. Other Transportation Demand Management requirements may be explored to minimize SOV trips.)	No minimum
Setbacks			If abutting a residential zone 10' ground level setback from abutting property line. If abutting a residential zone, an additional 5' upper-level setbacks at 30' of building height.
Frontage and Landscaping and Design Requirements	Street improvements No design review required	Multi-modal frontage improvements (sidewalks, pedestrian lighting, street trees etc.) No design review required	Multi-modal frontage improvements (sidewalks, pedestrian lighting, street trees etc.) See Development Standards Appendix. Green Factor of 0.2 required No design review required
Indoor Sports and Recreation (An entertainment use)	<u>Alt. 4 only</u> Increase max size of use for indoor sports and recreation uses to 50,000 sq. ft. subject to locational criteria near edges of MIC, and away from shorelines.	<u>Alt. 4 only</u> Increase max size of use for indoor sports and recreation uses to 50,000 sq. ft. subject to locational criteria near edges of MIC, and away from shorelines.	<u>Alt. 4 and Preferred Alt. only</u> Increase max size of use for indoor sports and recreation uses to 50,000 sq. ft. subject to locational criteria near edges of MIC, and away from shorelines.
Stadium Transition Area Overlay District <i>STAOD would be retained, and unique allowances and requirements would modify the underlying UI zone in that area in action alts. Including changes from existing STAOD standards.</i>	Not Applicable	Not Applicable	Amend STAOD so lodging is a permitted use, and no design review is required. Increased maximum size of use limits: Office: 75,000 Restaurants/bars: No Limit Lodging: 75,000 General retail sales: 20,000 Maximum size of use limits do not apply if 0.4 FAR or more industrial space is provided on site.

Development Standard	Maritime Manufacturing and Logistics (MML)	Industry and Innovation (II)	Urban Industrial (UI)
Non-Conforming Uses and Structures		Additional flexibility for non-conforming uses added for all zones in the Industrial land use code chapter. (See Development Standards Appendix.)	

Permitted and Prohibited Uses & Uses that Qualify as Industrial

Concurrent with implementation of the proposed zones, the City would clarify uses that are “industrial” or “non-industrial” for the purposes of implementing the zone concepts. Land uses would still be categorized in specific use categories similar to the existing SMC, and allowed or prohibited in the new zones. A new column would indicate whether each use qualifies as industrial for the purposes of base (industrial) and bonus (non-industrial) development in the Industry and Innovation zone, and for other purposes. The table below is a draft of the allowable uses table, that could be refined throughout the code development process.

For brevity this table does not include a series of footnotes that are in the existing Chapter 23.50 allowable uses table and address many issue-specific or location-specific topics. Many of those footnotes would be maintained and brought forward in the new allowable uses table for the appropriate zone.

KEY

CU = Administrative conditional use

CCU = Council conditional use

EB = Permitted only in a building existing on October 7, 1987.

EB/CU = Administrative conditional use permitted only in a building existing on October 7, 1987.

P = Permitted

X = Prohibited

Permitted and Prohibited Uses in Industrial Zones				
Use	Qualifies as Industrial	Permitted and Prohibited by Zone		
		Maritime Manufacturing & Logistics (MML)	Industry & Innovation (II)	Urban Industrial (UI)
AGRICULTURAL USES				
Animal husbandry		X	X	X
Aquaculture	Yes	P	P	P
Community garden	Yes	P	P	P

Permitted and Prohibited Uses in Industrial Zones				
Use	Qualifies as Industrial	Permitted and Prohibited by Zone		
		Maritime Manufacturing & Logistics (MML)	Industry & Innovation (II)	Urban Industrial (UI)
Horticulture		X	X	X
Urban farm (1)	Yes	P	P	P
CEMETERIES				
Cemeteries	No.	X	X	X
COMMERCIAL USES				
Animal shelters & kennels	Yes	P	P	P
Computer, Information Technology. (Newly defined use, see below)	Only in II zone.	P	P	P
Eating and drinking establishments	No	P	P	P
Food processing and craft work	Yes	P	P	p
Laboratories, Research and development	Yes	P	P	P
Lodging uses	No	X	P	P
Medical services	No	P	P	P
Offices	No	P	P	P
Sales and services, automotive	Yes	P	P	P
Sales and services, general	No	P	P	P
Sales and services, heavy	Yes	P	P	P
Sales and services, marine	Yes	P	P	P
Entertainment Uses				
Cabarets, adult	No	X	P	P
Motion picture theaters, adult	No	X	X	X
Panoram, adult	No	X	X	X
Sports and recreation, indoor	No	P	P	P
Sports and recreation, outdoor	No	P	P	X
Theatres and spectator sports facilities	No	X	P	P
HIGH IMPACT USES				
High impact uses	Yes	X	X	CU
INSTITUTIONS				
Adult care centers	No	X	X	X
Child care centers	No	X	P	P
Colleges	No	EB	EB	P
Community and Family support centers	No	P	P	P
Community clubs	No	P	P	P
Hospitals	No	P	P	P
Institutes for advanced study	No	P	P	P
Libraries	-	X	X	X

Permitted and Prohibited Uses in Industrial Zones				
Use	Qualifies as Industrial	Permitted and Prohibited by Zone		
		Maritime Manufacturing & Logistics (MML)	Industry & Innovation (II)	Urban Industrial (UI)
Major institutions subject to the provisions of Chapter 23.69	No	EB	EB	EB
Museums	No	EB	P	P
Private clubs	No	EB	P	P
Religious facilities	No	P	P	P
Schools, elementary or secondary	No	X	P	P
Vocational or fine arts schools	No	P	P	P
MANUFACTURING USES				
Manufacturing, light	Yes	P	P	P
Manufacturing, general	Yes	P	P	P
Manufacturing, heavy	Yes	P	CU	CU
PARKS AND OPEN SPACE				
PUBLIC FACILITIES				
Jails	-	X	X	X
Work-release centers	-	X	X	X
Other public facilities	No	CCU	CCU	CCU
RESIDENTIAL USES				
Residential uses not listed below	No	X	X	CU (Pref. Alt.) X (Alts. 2-4)
Artist's studio/dwellings	No	EB/CU	X	CU (Pref. Alt.) P (Alts. 2-4)
Caretaker's quarters	No	P	P	CU (Pref. Alt.) P (Alts. 2-4)
LIVE WORK UNITS				
	No	X	X	CU (Pref. Alt.) P(Alts 3-4) X (Alt. 2)
STORAGE USES				
Mini-warehouses	No	X	X	X
Storage, outdoor	Yes	P	P	P
Warehouses	Yes	P	P	P
TRANSPORTATION FACILITIES				
Cargo terminals	Yes	P	P	P
Parking and moorage				
- Boat moorage	Yes	P	P	P
- Dry boat storage	Yes	P	P	P
- Parking, flex use	No	P	P	P
- Park and ride facilities	No	P	P	P
- Towing services	Yes	P	P	P
Passenger terminals	Yes	P	P	P
Rail transit facilities	Yes	P	P	P

Permitted and Prohibited Uses in Industrial Zones				
Use	Qualifies as Industrial	Permitted and Prohibited by Zone		
		Maritime Manufacturing & Logistics (MML)	Industry & Innovation (II)	Urban Industrial (UI)
Transportation facilities, air				
- Airports (land based)	Yes	CCU	CCU	X
- Airports (water based)	Yes	CCU	CCU	X
- Heliports	Yes	CCU	CCU	X
- Helistops	Yes	CCU	CCU	CCU
Vehicle storage and maintenance				
- Bus bases	Yes	P	CU	CU
- Railroad switchyards	Yes	P	CU	CU
- Railroad switchyards with a mechanized hump	Yes	P	CU	CU
- Transportation services, personal	Yes	P	P	P
UTILITY USES				
Communications utilities, major	Yes	CU	CU	CU
Communications utilities, minor	Yes	P	P	P
Power plants	Yes	P	P	CCU
Recycling	Yes	P	P	P
Sewage treatment plants	Yes	CCU	CCU	X
Solid Waste Management				
- Salvage yards	Yes	P	X	X
- Solid waste transfer station	Yes	CU	CU	CU
- Solid waste incineration facilities	Yes	CCU	CCU	CCU
- Solid waste landfills	-	No	No	No
Utility services uses	Yes	P	P	P

New Use Definition for Information Computer Technology (ICT)

A new use definition would be created and added to SMC Chapter 23.84A definitions. The new definition is intended to distinguish a subset of uses from within the broad office category that would isolate knowledge creation and innovation activities that are related to technology and computing. Uses in this new category are expected to provide a high proportion of basic economic activity according to economic base theory. The new definition distinguishes Computer Information and Technology uses from other office uses that are in service of the local economy such as accounting offices, law offices, real estate

offices, etc., that are expected to have a high proportion of non-basic employment. For the purposes of the base and bonus development structure in the Industry and Innovation zone, Computer Information and Technology use would be considered an industrial use and eligible for the industrial (non-bonus) portion of the development. A draft definition is provided below:

Information Computer Technology (ICT). A use primarily focused on computing, computer coding, or digital information technology, leading to the development of new products, knowledge creation and innovation. This use may include computer hardware or software development and includes research, new development, prototyping and engineering, activities that result in technology and computer products or applications.

Central Georgetown Proposed Development Standards

In Alternative 3 and 4, the new mixed use zone in the triangle area of Georgetown would be in the Neighborhood Commercial zone with a 75 foot height limit. (NC3-75). A Mandatory Housing Affordability (M1) suffix would be applied to the zone.

Under the Preferred Alternative Neighborhood Commercial development standards specific to Georgetown are included that would incentivize the retention, restoration, and reuse of historic character structures, and arts spaces. Under the Preferred Alternative a Neighborhood Commercial zone with a 55' height limit would be applied. Floor area that is retained in a historic character structure, or floor area provided for an arts organization or studio would be exempt from FAR limits. The amount of the exempted floor area could be allocated to development on the same site or development on an adjacent parcel. For any development that includes a retained historic character structure or provides space for arts organization or arts studios, the height limit can be increased to from 55 to 65 feet. A Mandatory Housing Affordability (M1) suffix would be applied to the zone.

Other New Mixed Use Zoned Areas

Under some of the action alternatives new mixed-use zones would be applied in several areas. The specific mixed-use zones that would be applied are as follows:

- Judkins Park: The area generally bounded by I-90 on the south and west, S. Dearborn Street to the north, and Rainier Ave S. to the west would be rezoned from Industrial Commercial to Neighborhood Commercial 3 with a height of 75 feet and an MHA suffix of M1 (NC3-75 (M1)).
- West Ballard Area: The area generally bounded by NW Market Street on the south, the alley between NW 56th Street and NW Market Street to the north, 30th Ave NW to the west and approximately 26th Ave NW to the east will be rezoned from Industrial

Buffer to Neighborhood Commercial 3 with a 65-foot height limit and an MHA suffix of M1 (NC3-65 (M1)).

- South Park, areas: Two areas in South Park are proposed for removal from the MIC and placed in a mixed use zone under Alternatives 3,4 and the Preferred Alternative. These are proposed for the Neighborhood Commercial 3 zone with a height limit of 65-feet, and an MHA suffix of M1 ((NC3-65 (M1))).

Industry and Innovation Development Standards Details

The Industry and Innovation zone is intended to incentivize new development with dense employment uses and innovative types of businesses near transit stations, that also includes bona fide light industrial space. To accomplish these goals a system of bonus development is needed.

Under some action alternatives some land proposed for the new II zone would be rezoned from an exiting IC zone, and some would be rezoned from the existing IG zone. These differences are factored into the FAR limits and bonus structure such that development capacity under the existing IC or IG is not reduced.

Height limits in the II zone would be tiered, with different maximum height limits at 85', 125', 160' and zone and a variable 85-175 zone height limit that mirrors the existing IC 85-175 zone. In all cases there is no maximum height limit for industrial-only development.

To accommodate a bonus development structure the code would provide one maximum FAR table for development not electing to use the Industry and Innovation zone structure, and a separate Allowed FAR table for development opting to use the bonus development option. Note that FAR allowances for development not using the II bonus option are equivalent to allowed maximum under the existing code's Industrial Commercial or Industrial General zones.

Development Not Using the Industry and Innovation Bonus Option

Zone	FAR Maximum
II 85	2.75
II 125	2.5
II 160	2.5
II 85-175	2.5 - 4.0 (1)

- (1) Base of 2.5 FAR for all permitted uses, except that the combined chargeable floor area of the following uses is limited to 1 FAR or 50,000 square feet, whichever is greater:

entertainment uses; lodging uses; medical services; office; restaurant; major durables retail sales; automotive sales and services; religious facilities; and general sales and services. All floor area above 2.5 FAR, up to 4.0, must be achieved through the provisions of the Mandatory Housing Affordability program.

Development Using the Industry and Innovation Bonus Option

Zone	Minimum Industrial Use FAR	Base FAR Maximum	Maximum FAR with Bonus - Tier I	Maximum FAR with Bonus - Tier II
II 85	NA	2.75	4.5	NA
II 125	.5	NA	5.25	5.75
II 160	.5	NA	6	6.5
II 85-175	NA	4*	6	NA

Minimum Industrial Use FAR – Developments in the II-125 and II-160 zone would be required to provide the first 0.5 FAR as bona fide industrial space meeting the criteria below, and limited to industrial uses.

Maximum Base FAR – Developments in the II 85 and II 85-175 would have a maximum base FAR that is not limited to industrial uses or required to be constructed to industrial space standards. This base FAR amount is equal to the maximum FAR for developments not using the bonus structure.

Minimum FAR With Bonus Tier I – Developments could include floor area exceeding the Minimum Industrial Use FAR (II 125, and II-160 zones) or the Base FAR maximum (II 85 and II 85-175 zones) if the development includes bona-fide industrial space reserved for industrial uses. For every one square foot of bona fide industrial space provided the development could include 5 square feet of bonus space up to the Tier I FAR maximum. The minimum industrial use FAR is eligible to generate bonus FAR (I.e. 2.5 FAR of bonus space would be allowed from the 0.5 FAR of minimum industrial use FAR). Tier I bonus space may be occupied by any use (industrial or non-industrial) that is allowed in the zone with no maximum size of use limit.

Minimum FAR With Bonus Tier II – Developments can qualify for additional floor area exceeding the Tier I Maximum if the development includes one or more of the following features. Tier II bonus space may be occupied by any use (industrial or non-industrial) that is allowed in the zone with no maximum size of use limit.

- **Mass Timber Construction.** At least 50% of floor area in the total development is constructed using mass timber or Cross Laminated Timber (CLT) construction methods.

- **Unreinforced Masonry Structure Upgrade.** An unreinforced masonry structure on the same site, or another site in the same Manufacturing Industrial Center as the development is upgraded to meet current seismic standards. The upgraded URM structure must contain floor area at least equal to the amount of floor area gained via the Tier II bonus. The upgrade must be concurrent with the proposed development or completed within 18 months prior to a complete application for the proposed development.

Bona Fide Industrial Space Standards – Portions of a building qualifying as base industrial development to achieve bonus FAR must be built to a minimum standard for industrial space, including the following:

- Serviced by a large sized heavy duty freight elevator
- Load bearing floors with 250 lbs per sq ft minimum capacity
- High floor-to ceiling clearance of at least 20'
- Light industrial grade electrical service

Additionally, qualifying spaces can only be occupied by industrial uses. Under the Preferred Alternative, Information and Computer Technology (ICT) uses are a qualifying industrial use. However ICT uses qualify for bonus floor area at a ratio of 4 FAR for each FAR of ICT use, instead of 5.

Offsite Performance for Bon Fide Industrial Space – Off site development of bona fide industrial space can qualify for Tier I bonus space if it meets the standards above and is newly constructed within the same Manufacturing Industrial Center as the proposed development. Floor area from an off-site development may qualify for Tier I bonus FAR that is used in more than one development in an II zone. The off site bona fide industrial space must be built concurrent with the proposed development or completed within 18 months prior to a complete application for the proposed development.

Other FAR Exemptions in the II zone. Floor area occupied by one of the following uses in the II zone is exempt from the calculation of any FAR limit.

- *Workforce Training.* Space occupied by a vocational, educational or training institution for activities related to industrial uses. Examples include trades, fabrication, or maritime activities. Union halls or gathering space is included. Workforce training space also is an eligible occupancy for bona fide industrial space.
- *Childcare.*

Urban Industrial Development Standards

The proposed height limits and Maximum allowed Floor Area Ratios in the UI zone are summarized in the table below.

Zone	Maximum Height	FAR
UI 45	45'	3.0
UI 60	60'	4.0
UI 75	75'	4.5

Ancillary Use Provisions in the UI Zone

Ancillary use provisions in the UI zone are intended to encourage a variety of small-scale spaces for makers, arts and light industry. To encourage such spaces the zone is structured to allow for relatively large-sized non-industrial spaces only if they are associated or combined with an on-site industrial use. Examples of non-industrial uses that could commonly be combined with an on-site industrial use include retail showrooms, tasting rooms, or office spaces for an industrial company. Ancillary non-industrial spaces are not subject to the maximum size of use limits that would be applied to stand-alone non-industrial use. The UI zone would specify that ancillary use spaces may occupy up to 80% of the floor area for any given use if it is associated or combined with an industrial use. The ancillary use could be on a different portion of the building or a different floor than the industrial use. Tasting rooms or restaurants or bars that are ancillary to a brewery or distillery operation may be offsite provided they are within 1,350 linear feet of the brewing or distilling function.

Maximum Size of Use Limits – Stand-Alone Non-Industrial Uses

Use subject to size limits	Maximum Size of Use Limit
Lodging	75,000 sq ft
Medical Services	25,000 sq ft
Entertainment Uses	25,000 sq ft
Retail sales, major durables	15,000 sq ft
Office	15,000 sq ft
Sales and services, general	7,500 sq ft
Restaurants	3,000 sq ft
Drinking Establishments	3,000 sq ft

Maximum size of use limits can be exceeded if the use is ancillary to an industrial use on the site subject to the ancillary use provisions described above.

Industry Supportive Housing in the UI Zone

Under Alternatives 3, 4 and the Preferred Alternative some new flexibility to allow industry supportive housing is included in the UI zone to varying degree depending on the alternative.

Limits on Occupancy. Under Alternative 3 and 4 the industry supportive dwelling units would be limited to either caretakers' quarters, or makers' live/work studios. Caretakers units would be required to be occupied by an employee or owner of a business on-site. Up to 3 caretakers' quarters per on-site business would be allowed. Live/work studios would need to be occupied by a resident with a business license for a making use (art or industry) located in the same physical space as the dwelling unit.

Under the Preferred Alternative industry-supportive housing could either be provided to occupancies as described above for Alternatives 3 or 4; or 50% of the units could be provided as workforce affordable housing units provided at an income-restricted level that is affordable to households with incomes at 90% of Area Median (AMI).

Density Limits. Under Alternative 3 there would be a maximum density limit on residential uses of 25 dwelling units / acre. Under Alternative 4 and the Preferred Alternative the density limit would be 50 dwelling units / acre. Under all alternatives residential uses would not be allowed to occupy more than 60% of the total floor area of any development.

Conditional Use Approval for Residential Uses. Under the Preferred Alternative any residential uses in the UI zone would only be permitted as an administrative conditional use. Conditional use criteria would include the following:

- Must be artists or caretakers units; or 50% of the units are workforce housing affordable to households with incomes at 90% of AMI or below
- Not located within 500' of a shoreline
- Not located within 200' of a designated major truck street
- Must have sound-insulating windows sufficient to maintain interior sound levels of existing environmental noise at 70dB or below
- Must be located, designed and configured in a manner to reduce potential conflict with any adjacent existing industrial business operation

Maritime, Manufacturing and Logistics Development Standards

Development standards and height limits will remain consistent with existing IG1 and IG2 zoning. Mini-Storage will be a prohibited uses and new maximum size of use limits (in the summary table above) will apply. Minor updates to maximum Floor Area Ratio could be included in code development, and a potential slight increase in allowed FAR would not be expected to cause additional environmental impact because uses would continue to be predominantly industrial in the zone.

Non-Conforming Use Provisions

Currently and under the no action alternative, nonconforming uses are permitted to continue subject to provisions of the Seattle Land Use Code. Under existing regulations, a

nonconforming use that has been discontinued for more than 12 consecutive months shall not be reestablished or recommenced (SMC 23.42.104(B)) and would need to adhere to the underlying zoning regulations if redeveloped. Under existing regulations, expansions of nonconforming uses are limited (23.42.106).

As a part of the action alternatives the City will add flexibility for nonconforming uses in all new industrial zones (MML, II and UI). Special accommodation will be given to uses that do not adhere to allowable uses in the new zone at the time of adoption to reestablish or recommence without a time limit. Additional flexibility would be granted so that uses that exceed maximum size of use limits could continue indefinitely and could reestablish at the size exceeding maximum size of use limits without a time limit. Additional flexibility will also be provided to allow for commercial office, retail sales and services uses, or Information Computer Technology (ICT) uses that existed before establishment of the new zone to expand beyond maximum size of use limits. The added flexibility mitigates the potential for unintended land use impacts of industrial or maritime businesses displacement because of difficulty expanding. The general intent is to provide considerable flexibility for uses and activities that exist in industrial areas at the time of adoption of new zones to continue operating, while requiring major new developments adhere to standards of the proposed new zones.

Stadium Transition Area Overlay District (STAOD)

Under the action alternatives the Stadium Transition Area Overlay District (STAOD) would include modified development standards conveying additional development flexibility within the overlay to address unique conditions in the stadium area. The following features would apply within the STAOD.

Maximum size of use limits. Within the STAOD maximum size of use limits would be increased compared to other areas of UI zoning as shown in the table below. In the STAOD only, if a development provides at least 0.4 FAR as bona-fide industrial space the development would be exempt from all maximum size of use limits.

Use subject to size limits	Maximum Size of Use Limit
Lodging	No Limit
Medical Services	75,000 sq ft
Entertainment Uses	25,000 sq ft
Retail sales, major durables	20,000 sq ft
Office	75,000 sq ft
Sales and services, general	20,000 sq ft
Restaurants	No Limit
Drinking Establishments	No Limit

Height Limit. The height limit in UI zones in the STAOD would be increased to 85', with the exception of the block bounded by Colorado Ave. S., S. Royal Brougham Way, Dave Niehaus Way S., and S. Atlantic St., which would retain a height limit of 65'. The 65' height limit for the aforementioned block could be increased to 85' after additional site-specific studies and stakeholder coordination, without causing greater environmental impacts than are evaluated for the Preferred Alternative, since a height limit of 85' is evaluated for environmental review purposes. The FAR limit of 4.5 applies to both height limits.

Conditional Use Criteria for Residential Uses. Within the STAOD and for the area zoned UI extending south from the STAOD along 1st Ave to S. Stacy St. the conditional use criterion limiting residential uses from within 200' of a major truck street would not apply. (Preferred Alternative only).

Maintain Spectator Sports Facility Allowance. The overlay would clarify that spectator sports facilities would be an allowed use with no maximum size limit in the STAOD.

No Design Review Required. Existing STAOD regulations would be changed to delete the requirement for design review of development within the overlay.

Affordable Housing Requirement Considerations

Multi-family Housing Tax Exemption (MFTE). The City's existing MFTE program would apply to the Urban Industrial zone, under alternatives where new flexibilities add potential for some limited industry-supportive multifamily housing. Multifamily housing development in the UI zone would be eligible for MFTE under the existing program rules of SMC Chapter 5.73. It is expected that affirmative marketing efforts under existing MFTE program guidelines would include a focus on making housing available to area workforce in the Manufacturing Industrial Center.

Mandatory Housing Affordability (MHA). Under the action alternatives any areas outside of the MICs that are rezoned to mixed use zones (I.e. West Ballard and Judkins Park) the MHA program would be applied as discussed in Chapter 2. Under the Preferred Alternative MHA would also be applied to areas outside of MICs where Industrial Commercial zoning is retained.

City decisionmakers would have the option of applying the MHA program or not to the Industry and Innovation (II) zone in areas within the MIC. In this EIS, impacts of the alternatives without application of the MHA program to II zones are analyzed and application of the MHA program to the II zones is considered a mitigation measure. The MHA-commercial program, whereby development generally pays into a fund for affordable housing at a specific program level per SMC 23.58.B, would be applied to II zones. Areas proposed for II zoning would be considered medium cost areas.

The option to apply MHA-commercial to proposed II areas would have tradeoffs. Newly zoned II areas have relatively high needs for infrastructure upgrades and pedestrian and bicycle safety improvements. Some sites in the area will require environmental cleanup and remediation. The proposed II zone bonus structure is intended to spur the creation of new bona-fide industrial space as a beneficial feature that maintains and expands industrial job opportunities in the MIC. Infrastructure and safety upgrades and the cost of new industry space are costs that would be borne by development. Applying MHA would add additional costs. Layering of costs and requirements could affect the pace of investment and development in the proposed zone. Decisionmakers may consider these factors when deciding whether to apply MHA, or when calibrating the specific MHA requirement.

MHA is not proposed to apply in the MML or UI zones and is not recommended as a mitigation measure in those zones.

Street Improvement Standards

Section 23.53.015 - Improvement requirements for existing streets in industrial zones – of the Seattle Municipal Code would be updated under all action alternative to reflect the proposed new industrial zones. Standards would be calibrated to ensure that new developments in industrial zones, especially the II and UI zones, are required to make street improvements including pedestrian improvements, landscaping and street trees, and dedication requirements where necessary. Robust pedestrian and access circulation requirements would be added to section 23.53.015 and in a modified section 23.53.006.

Additionally, the Right of Way Improvements Manual (Streets Illustrated) would be updated under leadership by SDOT, the Seattle Freight Advisory Board, and other stakeholders to integrate with land use code changes. The Industrial Access and Minor Industrial Access street typologies in the manual would be updated. The update could occur after initial zoning implementation of the proposed new zones. An update to the manual could consider whether a new street typology for streets in areas upzoned to the II zone near future light rail stations is necessary.

SEPA Transportation Mitigation Option

For the SODO area where new II and UI zoning is proposed, the City could provide a transportation mitigation payments option. This is considered an EIS mitigation measure. The program would be similar to existing programs for South Lake Union and Northgate. Developers would have the option to directly provide mitigation required by permit conditions imposed pursuant to SMC 23.52.008 or the State Environmental Policy Act (SEPA) as part of environmental review conducted in the master use permit process.

Payments are based on the cost of transportation improvements identified in a City of Seattle prepared area-wide transportation study. Payments are calculated by general land use categories and amount of floor area or number of dwelling units in a proposed development. The payments would be applied to a comprehensive set of transportation improvements identified in a future more detailed transportation study for the SODO area. It is expected that the transportation projects would have a focus on safety improvements for pedestrian and bicycle circulation, and on improvements intended to improve efficiency of freight movement and access. The project list could be developed in partnership between the City and stakeholders and Port of Seattle during or after legislation to implement the new zones.

H Air Quality and Noise Technical Memo

TECHNICAL MEMORANDUM

Project Number **1690023247**

To **Geoffrey Wentlandt, City of Seattle**
Phil Coughlan, Herrera Environmental Consultants

From **Kevin Warner, Doug Herlocker**

REVIEW DRAFT

SUMMARY OF AIR QUALITY AND NOISE MONITORING RESULTS AT 8 LOCATIONS WITHIN THE CITY OF SEATTLE

Date: October 18, 2021

1. Background

Ramboll US Consulting Inc. (Ramboll) has prepared the following technical memorandum for the City of Seattle, Department of Planning and Community Development (City of Seattle) and Herrera Environmental Consultants (Herrera) to complete the tabulation and analysis of results from air quality and noise monitoring assessments at eight (8) selected locations within the City of Seattle, Washington. Monitoring was completed at all locations over continuous 24-hour periods between August 23 and August 27, 2021.

Ramboll understands that results of air quality and noise monitoring will be used to support a programmatic Environmental Impact Statement (EIS) that will evaluate suitability of zoning amendments to allow for sensitive uses within historically industrial or light industrial zones.

The following describes the monitoring locations, schedule, methodology, and results of our study.

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2. Monitoring Locations and Schedule

Table 1 (following page) summarizes the locations for each site selected by Ramboll for air quality and noise monitoring, as well as the monitoring schedule. Site locations were selected based on proximity to key areas identified by the City. Further, locations were selected to avoid obstacles or structures that would impact air quality or noise monitoring results. Figure 1 (Attachment A) illustrates the location of each monitoring site, labeled as Locations 1 through 8. Figures 2 through 9 are photographs taken of each measurement location.

Following Table 1 is a description of each monitoring location including placement of equipment, weather conditions, sources of noise, and other observations.

TABLE 1: Monitoring Locations and Schedule

Location	Dates	Community	Address	Business Name
Location 1	8/23 – 8/24	Ballard	5007 14th Ave NW, Seattle, WA	Metro Painting
Location 2	8/23 – 8/24	Interbay	3425 16th Ave W, Seattle, WA	Pioneer Plumbing & Sewer
Location 3	8/24 – 8/25	Interbay	1561 W Armory Way, Seattle, WA	Interbay Storage
Location 4	8/24 – 8/25	Sodo	1730 1st Ave S, Seattle, WA	Efeste Wines
Location 5	8/25 – 8/26	Georgetown	5707 Airport Way S, Seattle, WA	Ellenos Real Greek Yogurt
Location 6	8/25 – 8/26	South Park	8620 16th Ave S, Seattle, WA	Caffe Umbria Roasting Facility
Location 7	8/26 – 8/27	Sodo	2437 6th Ave S, Seattle, WA	Repair Revolution
Location 8	8/27 – 8/27	South Park	8100 8th Ave S, Seattle, WA	Solid Ground Transit

The monitoring schedule was designed to collect air samples and noise measurement data at all eight (8) locations within a single week (Monday through Friday). To facilitate this schedule, Ramboll utilized two sets of identical equipment to collect air samples and noise measurement data. The setup and retrieval schedule was as follows:

- Day 1: Setup at Location 1 and Location 2
- Day 2: Move equipment from Location 1 to Location 4, move equipment from Location 2 to Location 3
- Day 3: Move equipment from Location 4 to Location 5, move equipment from Location 3 to Location 6
- Day 4: Move equipment from Location 5 to Location 8, move equipment from Location 6 to Location 7
- Day 5: Remove equipment from Location 7 and Location 8

2.1

Location 1 - Ballard

Monitoring at location 1, Metro Painting, was initiated on August 23rd, 2021. See Attachment A, Figure 2. Daytime weather conditions on August 23rd included temperatures around 70 degrees Fahrenheit (°F), relative humidity (REH) between 43 to 72 percent (%), and light winds up to 9 miles per hour (mph). Overnight temperatures and wind conditions were lower than during daytime hours.

The sound level meter at Location 1 was placed inside the southeast corner of the secured fenced lot of the Metro Painting property, near the intersection of 14th Avenue NW and NW 50th Street. The air sampling equipment was placed further north along 14th Avenue NW inside the eastern fence line. Noise blankets were used to shield noise from the air sampling equipment so that it did not affect noise measurement data. The noise environment at Location 1 was dominated by traffic on 14th Avenue NW. Other sources of noise included overhead aircraft and miscellaneous community activity.

2.2 Location 2 - Interbay

Monitoring at Location 2, Pioneer Plumbing, was initiated on August 23rd, 2021. See Attachment A, Figure 3. Weather conditions during daytime and nighttime hours were identical to those identified for Location 1.

The sound level meter at Location 2 was positioned on the north side of the Pioneer Plumbing & Sewer building at the facility's parking area west of Thorndyke Avenue W. The air sampling equipment was placed south of the sound level meter, adjacent to the Pioneer Plumbing building. Noise blankets were used to shield noise from the air sampling equipment. Major sources of noise at Location 2 included local traffic, nearby industrial noises, overhead aircraft, and construction.

2.3 Location 3 - Interbay

Monitoring at Location 3, Interbay Storage, was initiated on August 24th, 2021. See Attachment A, Figure 4. Weather conditions included temperatures between 67 and 78°F, REH 31 to 52%, and light winds with gusts up to 13 mph. Overnight temperatures and wind speeds were generally lower than during daytime hours.

The sound level meter was placed at the northwest corner of the secured fenced storage area located on the north side of the Interbay Storage facility. Air sampling equipment was placed at the southeast corner of the secured fenced area. Noise blankets were not required due to sufficient distance between air and noise monitoring equipment. Major sources of ambient noise included overhead aircraft and traffic.

2.4 Location 4 - Sodo

Monitoring at Location 4, Efeste Wines, was initiated on August 24th, 2021. See Attachment A, Figure 5. Weather conditions during daytime and nighttime hours were identical to those identified for Location 3.

The sound level meter was positioned inside the fenced area the Efeste Wines property located on the east side of 1st Avenue S. The air sampling equipment was located nearby in the same fenced area. Due to limited space within which to place equipment, a noise blanket was used to shield noise from the air monitoring equipment. The existing noise environment was dominated by traffic on 1st Avenue S. Other observed noises included overhead aircraft.

2.5 Location 5 - Georgetown

Monitoring at Location 5, Ellenos Real Greek Yogurt, was initiated on August 25th, 2021. See Attachment A, Figure 6. Weather conditions included temperatures between 68 to 74°F, REH 41 to 50%, and light winds with gusts up to 13 mph. Overnight temperatures and wind speeds were generally lower than during daytime hours.

Location 5 is on the west side of Airport Way S. The sound level meter was placed at the southeast corner of a secured fenced area adjacent to the intersection of Airport Way S and S Homer Street. The air sampling equipment was placed at the northeast corner of this secured fenced location. The major sources of noise at this location included traffic on Airport Way S, frequent overhead aircraft, and train horns.

2.6 Location 6 - South Park

Monitoring at Location 6, Caffè Umbria Roasting Facility, was initiated on August 25th, 2021. See Attachment A, Figure 7. Weather conditions during daytime and nighttime hours were identical to those identified for Location 5.

The sound level meter was positioned on the east side of the facility in a secured fenced area near the intersection of S Donovan Street and 17th Avenue S. The air sampling equipment was positioned north of

the sound level meter. Sources of noise at this location included construction equipment, some operational noise from the roasting facility, and overhead aircraft.

2.7 **Location 7 – Sodo**

Monitoring at Location 7, Auto Repair Revolution, was initiated on August 26th, 2021. See Attachment A, Figure 8. Weather conditions included temperatures between 54 and 62°F, REH 57 to 90%, and light winds with gusts up to 14 mph. Overnight weather conditions included light rain, temperatures generally lower than during daytime hours, and winds similar to daytime hours

The sound level meter was placed within a secured fenced parking lot immediately south of the Auto Repair Revolution garage on the west side of 6th Avenue S. The meter was located just inside the secured fenced area. The air sampling equipment was placed immediately south of the noise monitor and required the use of noise blankets to shield noise from the air monitoring equipment.

Major sources of noise at this location included nearby rail activity (crossing signals and train horns), traffic on 6th Avenue S, and overheard aircraft. In addition, it was observed during review of recorded audio files that a generator (or similar type equipment) operated in the vicinity of the noise monitoring equipment continuously between the hours of 7 a.m. and 2 p.m. August 27th. The generator was not present during equipment setup or removal. Ramboll notes that noise from this equipment, which heavily influenced measured sound level data during this period, is likely not representative of typical background noises in the vicinity of Location 7, but instead was a localized and isolated occurrence.

2.8 **Location 8 – South Park**

Monitoring at Location 8, Solid Ground Transit, was initiated on August 26th, 2021. See Attachment A, Figure 9. Weather conditions during daytime and nighttime hours were identical to those identified for Location 7.

The sound level meter was located along the western fence line of Solid Ground Transit, south of the northwest corner of the facility and adjacent to 8th Avenue S. The air sampling equipment was located north of the noise meter near 8th Avenue S and S Monroe Street. Sources of noise observed at this location included buses within the Solid Ground Transit facility (engine noises, backup alarms), overhead aircraft, and light traffic on 8th Avenue S.

3. **Methodology**

3.1 **Air Quality**

The sampling configuration for each location consisted of one (1) Met One E-FRM particulate matter less than 10 microns (PM₁₀) filter-based sampler (FRM), and one (1) 6-liter (L) evacuated Summa canister. The FRM sampler utilized a digitally controlled pump and mass flow controller to draw in air through a specially designed inlet at a flow rate of 16.7 liters per minute (LPM) and deposit particulate matter on a pre-weighed 47-mm Teflon filter media. The FRM collected samples for PM₁₀ and particulate metals analysis using US Environmental Protection Agency (EPA) Compendium Methods. The FRM samplers were programmed for a 24-hr sample period and the units started and stopped each sample automatically. For the purposes of this sampling program, the FRM samplers were programmed to start each sample approximately 10 minutes after all setup procedures were completed, continuing for exactly 24.0 hours after which the FRM sampler automatically stopped the sample. Prior to sample collection, the FRM units were fully calibrated with a National Institute of Standards and Testing (NIST)-certified flow, temperature, and barometric pressure transfer standard device.

The Summa canisters were equipped with integrated 24-hr flow controllers and utilized internal vacuum pressure to draw into the can for subsequent analysis for volatile organic compounds (VOCs).

Chester LabNet (<https://chesterlab.net/>) provided 9 separated conditioned and pre-weighed Teflon filters for each sample. PM₁₀ samples were housed in a clean plastic anti-static sleeve. After the sampling effort was completed all 8 filters were shipped to the Chester LabNet under appropriate Chain of Custody (COC) documentation for analysis of PM₁₀ and particulate metals using EPA Compendium Method IO-3.3 *Determination of Metals in Particulate Matter Using X-Ray Fluorescence (XRF) Spectroscopy* (<https://www.epa.gov/sites/default/files/2019-11/documents/mthd-3-3.pdf>). In addition to the 8 field samples collected, one field blank sample was collected during the field deployment and was used to affirm appropriate sampling handling procedures and verify that sample contamination did not occur during the sample handling and filter shipment to the laboratory.

Eurofins Air Toxics (<https://www.eurofinsus.com/environment-testing/testing-services/air-and-vapor/ambient-air-monitoring/>) provided 9 Summa canisters, flow controllers, and sampling canes. Each Summa canister was pressurized to approximately 30 inches of negative vacuum pressure and provided lab-certified flow controllers set for a 24-hr sample. During setup of each Summa canister, the flow controllers were connected the canisters and when ready to begin sampling, the valve was manually opened at the same time the FRM sampler started. Upon return to each site, the field team closed the Summa canister valve and recorded the stop time.

Summa canisters are made of thick-walled stainless steel and valve openings were capped with cleaned Swagelok® caps before and after sampling. All Summa canister samples were shipped to Eurofins Air Toxics I under appropriate COC documentation for analysis of VOCs using EPA Compendium Method TO-15 *Determination of Volatile Organic Compounds (VOCs) In Air Collected in Specially-Prepared Canister and Analyzed By Gas Chromatography/Mass Spectroscopy (GC/MS)*. (<https://www3.epa.gov/ttnamti1/files/ambient/airtox/to-15r.pdf>). In addition to the 8 field samples, one duplicate sample was collected during the field deployment and was used to affirm appropriate sampling handling and laboratory analysis procedures and also verify that sample contamination did not occur during the Summa canister handling and shipment to the laboratory.

All sample collection procedures, dates and times, and other noteworthy observations were recorded in field logbooks. Additionally, site photos were taken at each of the 8 sites to document site conditions and sampling setups (see Attachment A, Figures 2 through 9).

A summary of all sampling methods and procedures are summarized in **Table 2**

TABLE 2: Air Sample Collection and Analysis Information

Sampling/Analytical Method	Sample Media	Chemical(s) of Interest	Method Sample Flow Rate (liters/minute)
EPA Compendium Methods IO 3.1 and 3.3	47-mm Teflon Filter Media	PM ₁₀ , 38 metal compounds	16.7
EPA Compendium Method TO-15	Cleaned and Evacuated 6-L Summa Canister with 24-Hr Flow Controller	51 Volatile Organic Compounds	0.003- 0.004

Sample locations, dates and times, sample identification numbers, and sample collection parameters, are summarized in **Table 2** and sample collection locations are shown in **Figure 1**.

TABLE 3: Air Sample Locations and Sample Collection Information

Location	Sample Collection Start Date/Time	Sample Collection End Date/Time	Species Sampled	Sample ID	Sample Flow Rate (Liter/Minute)	Canister Begin/End Pressure (in Hg)	Total Sample Volume (Liters)	Filter/Summa Canister ID
Location 1	8/23/21 8:55AM	8/24/21 8:55AM	PM ₁₀ /Metals	SEA1-082421	16.7	N/A	24	1T2808
			VOCs	SEA1-082421	0.0004	28/8	5.7	N2854
Location 2	8/23/21 11:00AM	8/24/21 11:00AM	PM ₁₀ /Metals	SEA2-082421	16.7	N/A	24	1T2809
			VOCs	SEA2-082421	0.0004	30/7.5	5.7	N4632
Location 3	8/24/21 12:25PM	8/25/21 12:25PM	PM ₁₀ /Metals	SEA3-082521	16.7	N/A	24	1T2810
			VOCs	SEA3-082521	0.0004	29/5	5.7	6L0692
			VOCs	SEA3D-082521	0.0004	29/6	5.7	00301
Location 4	8/24/21 10:40AM	8/25/21 10:40AM	PM ₁₀ /Metals	SEA4-082521	16.7	N/A	24	1T2811
			PM ₁₀ /Metals	SEA4B-082521	0 (blank)	N/A	0	1T2812
			VOCs	SEA4-082521	0.0004	30/6	5.7	N1823
Location 5	8/25/21 11:55AM	8/26/21 11:55AM	PM ₁₀ /Metals	SEA5-082621	16.7	N/A	24	1T2813
			VOCs	SEA5-082621	0.0004	30/7	5.7	N4414
Location 6	8/25/21 2:10PM	8/26/21 2:10PM	PM ₁₀ /Metals	SEA6-082621	16.7	N/A	24	1T2814
			VOCs	SEA6-082621	0.0004	29/7	5.7	NS437
Location 7	8/26/21 3:20PM	8/27/21 3:20PM	PM ₁₀ /Metals	SEA7-082721	16.7	N/A	24	1T2816
			VOCs	SEA7-082721	0.0004	30/7	5.7	N2803
Location 8	8/26/21 1:15PM	8/27/21 1:15PM	PM ₁₀ /Metals	SEA8-082721	16.7	N/A	24	1T2815
			VOCs	SEA8-082721	0.0004	27/6	5.7	N4229

3.2 Noise

Noise monitoring was completed using Brüel & Kjær model 2250 ANSI Class 1 certified sound level meters. The meters were calibrated within the previous twelve (12) months and field calibrated immediately prior to use (see Calibration records in Appendix C). The microphones of the meters were attached to tripods and placed approximately 5 feet above ground inside acoustically-neutral wind screens. The meters were placed inside locked pelican cases and secured to nearby fence posts or other immovable objects. The sound level meters were programmed to record 1-second and hourly LAeq data including both broadband and 1/3 center octave spectral data. In addition, the meters were programmed to record audio for post-processing source identification.

At the conclusion of measurements sound level data were downloaded and tabulated by Ramboll staff. Audio files were reviewed to determine sources of ambient noise and whether atypical interferences occurred during the monitoring event (e.g., generator operating near Location 7).

4. Results

4.1 Air Quality

A summary of results for samples are listed below. All samples were collected as proposed and no samples were invalidated or considered suspect. Copies of the complete Chester LabNet and Eurofins Air Toxics laboratory data reports are provided in Attachment B.

PM₁₀

PM₁₀ was detected in all 24-hr samples and ranged from 7.1 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 20.2 $\mu\text{g}/\text{m}^3$. For reference and comparison, the US 24-hr National Ambient Air Quality Standard (NAAQS) for PM₁₀ is 150 $\mu\text{g}/\text{m}^3$. A complete list of PM₁₀ results is provided in the Chester LabNet report (see Attachment B)

Metals

38 metal compounds were analyzed for each sample. 26 metals were detected in at least one or more samples. However, the overwhelming majority of detections were just above the detection limit. Several of the key metals that have low risk-based screening levels were Lead, Arsenic, Chromium (total), and Nickel. Lead was detected in 4 of the 8 samples (4 were below the detection limit) and ranged from 0.0015 to 0.0033 $\mu\text{g}/\text{m}^3$. Arsenic was not detected in any of the 8 samples. Chromium was detected in 6 of the 8 samples and ranged from 0.0021 to 0.0032 $\mu\text{g}/\text{m}^3$. Nickel was detected in 3 of the 8 samples and ranged from 0.0009 to 0.0018 $\mu\text{g}/\text{m}^3$. Overall, metals concentrations detected during this sampling effort were low to very low and generally in the normal range that would be expected in an urban environment such as communities within the City of Seattle.

For reference and comparison of the Lead results, the Lead NAAQS of 0.15 $\mu\text{g}/\text{m}^3$ was used. This standard is based on a rolling 3-month average. As previously discussed, the samples were collected over a 24-hr period but can provide an indication of possible lead exposure extrapolating for a 3-month exposure scenario. The highest lead concentration of 0.033 detected at location SEA4 was two orders of magnitude below the NAAQS.

As discussed above, Arsenic was not detected in any of the 8 samples. It should be noted that the XRF detection limit (DL) is 0.001 $\mu\text{g}/\text{m}^3$. No definitive air quality standards currently exist for Arsenic so the

DL was compared to applicable risk criteria established in the US EPA Region 9 Regional Screening Levels (RSLs). The non-carcinogenic RSL (target hazard quotient of 0.1) for Arsenic is 0.002 µg/m³ which is above the detection limit for these samples.

Chromium was detected in 6 of the 8 samples. Similar to Arsenic, no definitive air quality standards currently exist for Chromium so the results were compared to applicable risk criteria established in the US EPA Region 9 Regional Screening Levels (RSLs). The RSL does not have established criteria for Chromium.

VOCs

51 VOCs were analyzed for each sample. VOCs were detected in 6 of the 8 samples. A summary of detected compounds is listed below. A complete list of VOC results is provided in the Eurofins Air Toxics report (see Attachment B). Overall, VOC concentrations detected during this sampling effort were very low and mostly below the method detection limits. The detected VOCs were generally in the normal range that would be expected in the urban environment such as the downtown Seattle area.

- Ethanol – detected in 5 samples with highest concentration of 20 parts per billion (ppb). No health-based screening criteria exist for Ethanol.
- 2-Propanol (Isopropanol/Isopropyl alcohol)- detected in 5 samples with highest concentration of 2.8 ppb or 6.6 µg/m³. The non-carcinogenic RSL (target hazard quotient of 0.1) for 2-Propanol is 20.1 µg/m³.
- Toluene – detected in 2 samples with the highest concentration of 0.71 ppb or 2.7 µg/m³. The non-carcinogenic RSL (target hazard quotient of 0.1) for Toluene is 520 µg/m³.
- Heptane – detected in 1 sample with a concentration of 0.71 ppb or 2.9 µg/m³. The non-carcinogenic RSL (target hazard quotient of 0.1) for Heptane is 42 µg/m³.

Quality Assurance Results

Quality assurance procedures were implemented to ensure sample integrity and validate sample results. The quality assurance parameters used for this project consisted of two main procedures: 1) sampler accuracy and 2) sample collection, sample handling, and laboratory integrity.

Sampler accuracy was ensured with a NIST-certified device to ensure accurate flow rates on the FRM samplers. Sample integrity was ensured through the collection of a field blank Teflon sample for PM₁₀ and metals and a duplicate Summa canister sample for the VOCs.

The results for the blank samples demonstrated adequate sample handling and confirmed that contamination of the sample did not occur during sample shipment or laboratory analysis. The PM mass of 6 µg was within the laboratory quality control level of +/- 10 µg and no metals were detected on the filter.

A duplicate VOC sample was collected a location SEA3 with two identical Summa canisters (each with dedicated flow controllers) situated within 2 feet of each other and allowed to run the exact same timeframe. Both the primary and duplicate samples demonstrated excellent comparability. Bot with both samples. Ethanol was detected in both samples (primary = 8.6 ppb, duplicate = 7.6 ppb). 2

Propanol was also detected in both samples(primary = 9.8 ppb, duplicate = 4.6 ppb). No other VOCs were detected in the primary or duplicate VOC samples.

4.2

Noise

Sound level data have been summarized in both tabular and graphical formats and are presented Attachment C. Table 4 (following page) provides a summary of sound level data for each location including the 24-hour day-night sound level (Ldn), as well as ranges in daytime (7 a.m. – 10 p.m.) and nighttime (10 p.m. – 7 a.m.) hourly Leq values.

The Ldn or day-night sound is a 24-hour metric that level applies a 10-dB penalty to sound levels between 10 p.m. and 7 a.m. Although the Ldn is not referenced in Seattle's noise ordinance (Chapter 25.08), it is often considered a useful metric to evaluate community response to noise (i.e., US Housing and Urban Development, 24CFR51.103). Sound levels 65 dBA Ldn or lower generally are considered compatible for residential use provided that residential building construction materials and central air conditioning allow for a building envelope that is sealed and provides at least a 20-dBA reduction to exterior sounds. An interior sound level of 45 dBA Ldn generally is considered compatible for most interior uses, although some jurisdictions have established even lower interior standards for sleeping areas (i.e., bedrooms).

As presented in Table 4, and further in Attachment C, at three locations the existing ambient 24-hour sound levels exceeded 65 dBA Ldn (Locations 4, 5, and 7). At location 4 (along 1st Avenue in Sodo) and location 5 (along Airport Way S in Georgetown) noise from traffic dominated the ambient environment during day and nighttime hours and was the primary contributor to elevated noise levels. Additionally, frequent aircraft noise was noted at location 5 (aircraft accessing Boeing Field).

At Location 7 (6th Avenue S, Sodo), the existing ambient noise environment was dominated by traffic. However, as noted earlier in this memo, between approximately 7 a.m. and 2 p.m. interference from a generator operating near the meter heavily influence the measurement data. The generator was not present during sound level meter setup or removal and was noted only during playback of recorded audio files. Ramboll concludes that the measured Ldn value at location 7 is likely higher than would be typically representative of this area. Although it is not possible adjust these data remove the influence of the generator, an estimate of an Ldn without interference was completed by assuming typical daytime average sound levels would be similar to the actual interfered hours (i.e., assuming the average daytime sound levels between 2 p.m. and approximately 6 p.m. are similar to actual un-interfered ambient levels between 7 a.m. and 2 p.m.). The resulting estimated Ldn value is closer to 65 dBA, approximately 3 dBA lower than measured levels with interference from the generator.

The lowest ambient sound levels were measured at both Interbay locations (Locations 2 and 3) as well as in South Park Location 8.

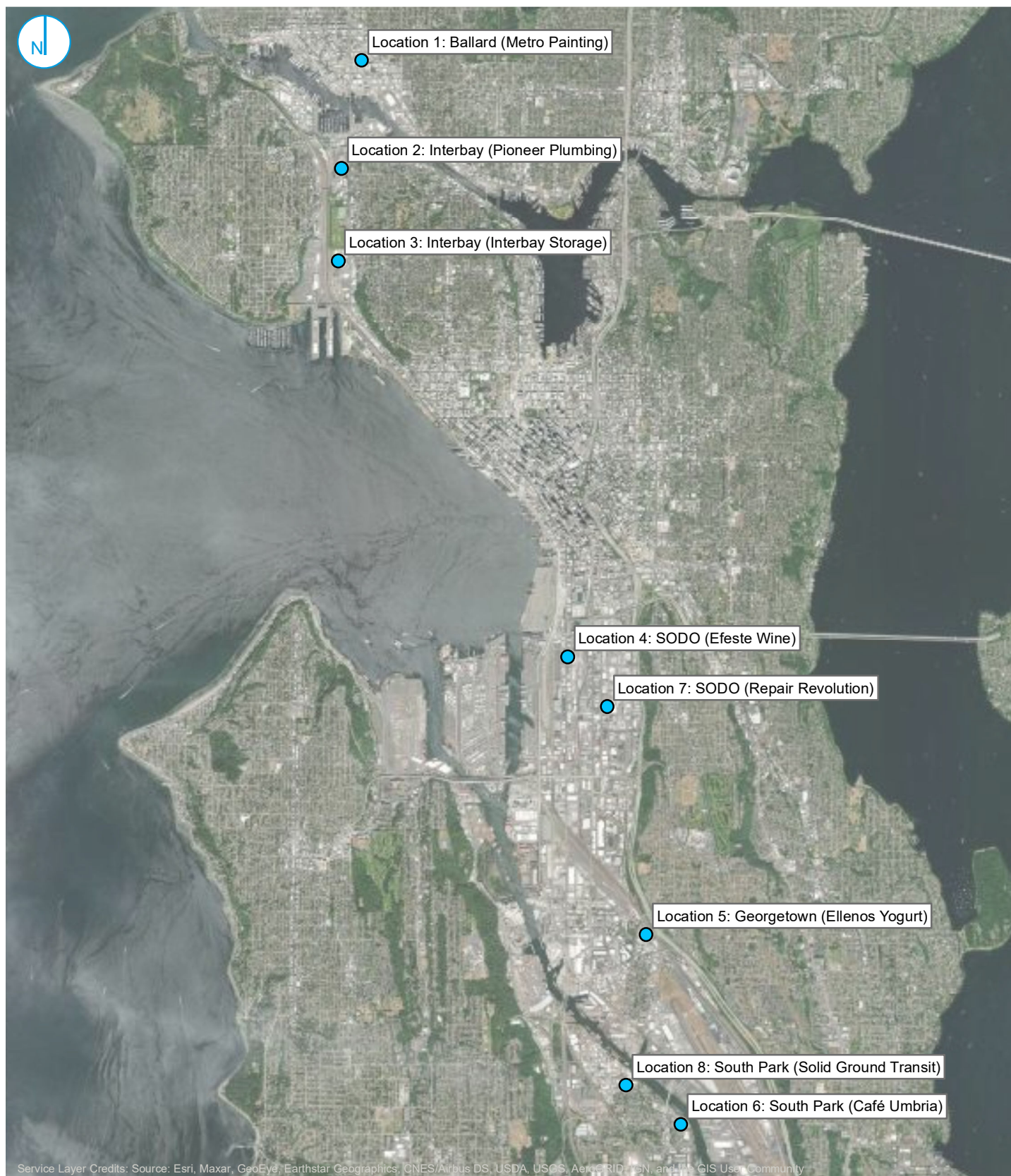
TABLE 4: Sound Level Measurement Data Summary

Location	24-Hour Day-Night Ldn (dBA)	Hourly Leq Range Daytime Hours (dBA)	Hourly Leq Range Nighttime Hours (dBA)
Location 1	62.5	55.6 - 66.7	47.4 - 60.2
Location 2	58.8	51.6 - 57.1	50.4 - 53.6
Location 3	58.5	52.1 - 56.7	50.6 - 52.3
Location 4	69.2	61.5 - 69.0	55.7 - 68.0
Location 5	68.1	62.8 - 67.6	55.2 - 66.0
Location 6	60.5	53.9 - 59.9	51.0 - 56.3
Location 7	67.8 ^(a)	57.4 - 72.2 ^(a)	53.1 - 61.2
Location 8	59.5	53.9 - 63.7	44.5 - 54.1
<p>Notes:</p> <p>All measurements collected between August 23 and August 27, 2021</p> <p>^(a) At location 7, sound levels during daytime hours between 7 a.m. and 2 p.m. were influenced by interference of a generator operating nearby. As estimate of the 24-hour Ldn sound level during this time period is approximately 65 dBA, approximately 3 dBA lower than presented in this table.</p>			

APPENDIX A

FIGURES

DATED: 10/18/2021 | DESIGNER: SBURR



● Monitoring Locations

AIR QUALITY AND NOISE MONITORING LOCATIONS SEATTLE, WA

FIGURE 1

0 0.5 1
Miles

RAMBOLL US CONSULTING, INC
A RAMBOLL COMPANY

RAMBOLL



**LOCATION 1: METRO PAINTING
BALLARD**

FIGURE 2

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



**LOCATION 2: PIONEER PLUMBING
INTERBAY**

FIGURE 3

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



LOCATION 3: INTERBAY STORAGE
INTERBAY

FIGURE 4

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



**LOCATION 4: EFESTE WINE
SODO**

FIGURE 5

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



**LOCATION 5: ELLENOS YOGURT
GEORGETOWN**

FIGURE 6

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



**LOCATION 6: CAFÉ UMBRIA
SOUTH PARK**

FIGURE 7

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



LOCATION 7: REPAIR REVOLUTION
SODO

FIGURE 8

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



**LOCATION 8: SOLID GROUND TRANSIT
SOUTH PARK**

FIGURE 9

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

APPENDIX B

LABORATORY REPORTS

RAMBOLL

CLIENT # R020
REPORT # 21-400

SUBMITTED BY:

CHESTER LabNet

12242 S.W. GARDEN PLACE

TIGARD, OR 97223

(503)624-2183/FAX (503)624-2653

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CHESTER LabNet

12242 SW Garden Place ❖ Tigard, OR 97223-8246 ❖ USA
Telephone 503-624-2183 ❖ Fax 503-624-2653 ❖ www.chesterlab.net

Case Narrative

Date: September 13, 2021

General Information

Client: Ramboll
Client Number: R020
Report Number: 21-400
Sample Description: 47mm Teflon filters
Sample Numbers: 21-T2808 – 21-T2816

Analysis

Analytes: Particulate Mass, XRF Metals (Na – Pb)


Analytical Protocols: Gravimetry: 40 CFR 50 Appendix J (8/7/87 version)
X-Ray Fluorescence: EPA IO-3.3 (June 1999 version)

Analytical Notes: No problems were encountered during the analyses. Results have **not** been blank corrected.

QA/QC Review: All of the data have been reviewed by the analysts performing the analyses and the project manager. All of the quality control and sample-specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.

Comments: If you have any questions or concerns regarding this analysis, please feel free to contact the project manager.

Disclaimer: This report shall not be reproduced, except in full, without the written approval of the laboratory. The results only represent that of the samples as received into the laboratory. All data are reported to the detection limit. Results <5x DL must be considered to have a higher degree of uncertainty associated with them. Due to the statistical process of detection limit determination, data in this report should not be used for statistical analysis as the data has been censored in such a manner as to bias statistical analyses high.

 9/13/21
Project Manager Date
Paul Duda

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2808
Filter ID: P7326492
Client ID: SEA1-082421
Site: SEA1
Sample Date: 8/23/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	414.		17.25	
XRF				
Na	14.09	3.800	0.5871	0.1610
Mg	3.432	0.9458	0.1430	0.0401
Al	6.242	1.092	0.2601	0.0473
Si	19.68	3.109	0.8202	0.1359
P	0.4407	0.1186	0.0184	0.0050
S	14.27	2.241	0.5947	0.0980
Cl	5.690	0.8746	0.2371	0.0383
K	2.550	0.3898	0.1063	0.0171
Ca	6.448	0.9763	0.2687	0.0428
Ti	0.6147	0.1017	0.0256	0.0044
V	< DL	0.0339	< DL	0.0014
Cr	0.0497	0.0475	0.0021	0.0020
Mn	0.1876	0.0475	0.0078	0.0020
Fe	8.672	1.302	0.3613	0.0572
Co	< DL	0.0610	< DL	0.0025
Ni	< DL	0.0203	< DL	0.0008
Cu	0.1401	0.0339	0.0058	0.0014
Zn	0.3910	0.0610	0.0163	0.0027
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	0.0848	0.0271	0.0035	0.0011
Rb	< DL	0.0136	< DL	0.0006
Sr	0.0418	0.0305	0.0017	0.0013
Y	< DL	0.0373	< DL	0.0016
Zr	0.0622	0.0508	0.0026	0.0021
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.1085	< DL	0.0045
Cd	< DL	0.0814	< DL	0.0034
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	0.4034	0.1661	0.0168	0.0070
La	< DL	0.0983	< DL	0.0041
Hg	< DL	0.0373	< DL	0.0016
Pb	< DL	0.0339	< DL	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2809
Filter ID: P7326493
Client ID: SEA2-082421
Site: SEA2
Sample Date: 8/23/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	395.		16.46	
XRF				
Na	12.57	3.539	0.5236	0.1498
Mg	3.036	0.8916	0.1265	0.0377
Al	5.791	1.010	0.2413	0.0438
Si	19.36	3.048	0.8065	0.1332
P	0.2531	0.1017	0.0105	0.0043
S	12.45	1.953	0.5189	0.0854
Cl	3.506	0.5424	0.1461	0.0238
K	2.152	0.3288	0.0896	0.0144
Ca	4.178	0.6339	0.1741	0.0278
Ti	0.5322	0.0881	0.0222	0.0038
V	0.0384	0.0339	0.0016	0.0014
Cr	< DL	0.0475	< DL	0.0020
Mn	0.2011	0.0475	0.0084	0.0020
Fe	7.579	1.139	0.3158	0.0500
Co	< DL	0.0576	< DL	0.0024
Ni	< DL	0.0203	< DL	0.0008
Cu	0.0599	0.0271	0.0025	0.0011
Zn	0.2712	0.0441	0.0113	0.0019
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	0.0701	0.0271	0.0029	0.0011
Rb	< DL	0.0136	< DL	0.0006
Sr	0.0282	0.0271	0.0012	0.0011
Y	< DL	0.0373	< DL	0.0016
Zr	< DL	0.0475	< DL	0.0020
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.0780	< DL	0.0032
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2814	< DL	0.0117
Ba	0.2848	0.1559	0.0119	0.0065
La	< DL	0.0949	< DL	0.0040
Hg	< DL	0.0305	< DL	0.0013
Pb	< DL	0.0339	< DL	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2810
Filter ID: P7326494
Client ID: SEA3-082521
Site: SEA3
Sample Date: 8/24/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	466.		19.42	
XRF				
Na	7.992	3.183	0.3330	0.1337
Mg	2.935	0.9153	0.1223	0.0386
Al	10.43	1.756	0.4347	0.0763
Si	32.30	5.129	1.346	0.2241
P	0.2927	0.1085	0.0122	0.0046
S	8.887	1.414	0.3703	0.0617
Cl	2.220	0.3593	0.0925	0.0157
K	3.257	0.4983	0.1357	0.0218
Ca	6.811	1.034	0.2838	0.0454
Ti	0.8588	0.1356	0.0358	0.0059
V	0.0689	0.0373	0.0029	0.0016
Cr	0.0599	0.0475	0.0025	0.0020
Mn	0.2814	0.0576	0.0117	0.0025
Fe	13.72	2.058	0.5716	0.0904
Co	< DL	0.0814	< DL	0.0034
Ni	0.0441	0.0237	0.0018	0.0010
Cu	0.0734	0.0271	0.0031	0.0011
Zn	0.2531	0.0441	0.0105	0.0019
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	0.0622	0.0271	0.0026	0.0011
Rb	< DL	0.0136	< DL	0.0006
Sr	0.0757	0.0305	0.0032	0.0013
Y	< DL	0.0373	< DL	0.0016
Zr	0.0531	0.0508	0.0022	0.0021
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.0780	< DL	0.0033
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	0.3627	0.1797	0.0151	0.0075
La	< DL	0.1085	< DL	0.0045
Hg	< DL	0.0373	< DL	0.0016
Pb	< DL	0.0339	< DL	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2811
Filter ID: P7326495
Client ID: SEA4-082521
Site: SEA4
Sample Date: 8/24/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	484.		20.17	
XRF				
Na	10.76	3.526	0.4483	0.1486
Mg	3.104	0.9424	0.1293	0.0398
Al	6.426	1.129	0.2678	0.0489
Si	19.35	3.071	0.8061	0.1342
P	0.4249	0.1220	0.0177	0.0052
S	11.50	1.814	0.4793	0.0793
Cl	8.943	1.373	0.3726	0.0602
K	2.559	0.3966	0.1066	0.0174
Ca	11.57	1.753	0.4821	0.0769
Ti	0.6147	0.1051	0.0256	0.0046
V	0.0599	0.0373	0.0025	0.0016
Cr	0.0757	0.0475	0.0032	0.0020
Mn	0.2780	0.0576	0.0116	0.0025
Fe	12.62	1.895	0.5259	0.0832
Co	< DL	0.0780	< DL	0.0032
Ni	0.0249	0.0203	0.0010	0.0008
Cu	0.2271	0.0441	0.0095	0.0019
Zn	0.4430	0.0678	0.0185	0.0030
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	0.1141	0.0305	0.0048	0.0013
Rb	< DL	0.0203	< DL	0.0008
Sr	0.0983	0.0305	0.0041	0.0013
Y	< DL	0.0407	< DL	0.0017
Zr	0.0848	0.0508	0.0035	0.0021
Mo	< DL	0.0881	< DL	0.0037
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.1085	< DL	0.0045
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	0.1605	0.1458	0.0067	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	0.7243	0.1898	0.0302	0.0081
La	0.1650	0.1017	0.0069	0.0043
Hg	< DL	0.0373	< DL	0.0016
Pb	0.0791	0.0339	0.0033	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2812
Filter ID: P7326496
Client ID: SEA4B-082521
Site: SEA4B
Sample Date: 8/24/21
Deposit Area: 11.3 cm²
Size Fraction: PM10
Comments: Blank

Analyte	µg/filter Conc.	DL
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Gravimetry
Net Mass 6.

XRF

Na	< DL	2.109
Mg	< DL	0.6204
Al	< DL	0.2339
Si	< DL	0.1017
P	< DL	0.0712
S	< DL	0.0678
Cl	< DL	0.1153
K	< DL	0.0576
Ca	< DL	0.0373
Ti	< DL	0.0305
V	< DL	0.0271
Cr	< DL	0.0475
Mn	< DL	0.0373
Fe	< DL	0.0373
Co	< DL	0.0271
Ni	< DL	0.0203
Cu	< DL	0.0271
Zn	< DL	0.0203
Ga	< DL	0.0170
Ge	< DL	0.0170
As	< DL	0.0271
Se	< DL	0.0136
Br	< DL	0.0237
Rb	< DL	0.0136
Sr	< DL	0.0271
Y	< DL	0.0373
Zr	< DL	0.0475
Mo	< DL	0.0848
Pd	< DL	0.0780
Ag	< DL	0.0780
Cd	< DL	0.1085
In	< DL	0.1322
Sn	< DL	0.1458
Sb	< DL	0.2780
Ba	< DL	0.1051
La	< DL	0.0712
Hg	< DL	0.0373
Pb	< DL	0.0339

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2813
Filter ID: P7326497
Client ID: SEA5-082621
Site: SEA5
Sample Date: 8/25/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	359.		14.96	
XRF				
Na	7.463	3.041	0.3109	0.1277
Mg	2.641	0.8577	0.1100	0.0362
Al	7.043	1.200	0.2935	0.0521
Si	20.54	3.220	0.8560	0.1408
P	0.5311	0.1254	0.0221	0.0053
S	9.655	1.515	0.4023	0.0663
Cl	2.922	0.4610	0.1218	0.0202
K	2.088	0.3220	0.0870	0.0141
Ca	7.104	1.075	0.2960	0.0472
Ti	0.7797	0.1254	0.0325	0.0055
V	< DL	0.0373	< DL	0.0016
Cr	0.0633	0.0475	0.0026	0.0020
Mn	0.1593	0.0441	0.0066	0.0019
Fe	9.703	1.458	0.4043	0.0640
Co	< DL	0.0678	< DL	0.0028
Ni	< DL	0.0203	< DL	0.0008
Cu	0.1107	0.0305	0.0046	0.0013
Zn	0.5130	0.0780	0.0214	0.0034
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0203	< DL	0.0008
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	0.0475	0.0237	0.0020	0.0010
Rb	< DL	0.0203	< DL	0.0008
Sr	0.0622	0.0305	0.0026	0.0013
Y	< DL	0.0373	< DL	0.0016
Zr	< DL	0.0508	< DL	0.0021
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.0780	< DL	0.0032
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	0.3774	0.1729	0.0157	0.0072
La	< DL	0.1017	< DL	0.0042
Hg	< DL	0.0373	< DL	0.0016
Pb	0.0441	0.0339	0.0018	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2814
Filter ID: P7326498
Client ID: SEA6-082621
Site: SEA6
Sample Date: 8/25/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	214.		8.917	
XRF				
Na	6.095	2.705	0.2540	0.1134
Mg	1.466	0.7356	0.0611	0.0308
Al	3.305	0.6204	0.1377	0.0268
Si	9.454	1.461	0.3939	0.0640
P	0.4667	0.1119	0.0194	0.0048
S	9.663	1.495	0.4026	0.0655
Cl	2.717	0.4204	0.1132	0.0184
K	1.698	0.2644	0.0708	0.0116
Ca	3.239	0.4916	0.1349	0.0216
Ti	0.4023	0.0678	0.0168	0.0029
V	< DL	0.0339	< DL	0.0014
Cr	< DL	0.0475	< DL	0.0020
Mn	0.1186	0.0407	0.0049	0.0017
Fe	4.077	0.6136	0.1699	0.0269
Co	< DL	0.0441	< DL	0.0018
Ni	< DL	0.0203	< DL	0.0008
Cu	0.0429	0.0271	0.0018	0.0011
Zn	0.2023	0.0373	0.0084	0.0016
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0136	< DL	0.0006
Br	0.0362	0.0237	0.0015	0.0010
Rb	< DL	0.0136	< DL	0.0006
Sr	0.0282	0.0271	0.0012	0.0011
Y	< DL	0.0373	< DL	0.0016
Zr	< DL	0.0475	< DL	0.0020
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.0780	< DL	0.0032
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	< DL	0.1424	< DL	0.0059
La	< DL	0.0881	< DL	0.0037
Hg	< DL	0.0373	< DL	0.0016
Pb	0.0328	0.0271	0.0014	0.0011

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2816
Filter ID: P7326500
Client ID: SEA7-082721
Site: SEA7
Sample Date: 8/26/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	200.		8.333	
XRF				
Na	6.018	2.746	0.2508	0.1151
Mg	1.127	0.7424	0.0469	0.0310
Al	2.236	0.4814	0.0932	0.0206
Si	7.750	1.200	0.3229	0.0525
P	0.2486	0.0983	0.0104	0.0041
S	11.35	1.753	0.4727	0.0768
Cl	4.079	0.6238	0.1700	0.0273
K	1.024	0.1695	0.0427	0.0074
Ca	4.395	0.6644	0.1831	0.0292
Ti	0.5028	0.0848	0.0210	0.0037
V	< DL	0.0339	< DL	0.0014
Cr	0.0531	0.0475	0.0022	0.0020
Mn	0.1559	0.0441	0.0065	0.0019
Fe	6.008	0.9017	0.2503	0.0396
Co	< DL	0.0508	< DL	0.0021
Ni	< DL	0.0203	< DL	0.0008
Cu	0.1119	0.0305	0.0047	0.0013
Zn	0.2475	0.0407	0.0103	0.0018
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	< DL	0.0170	< DL	0.0007
Br	< DL	0.0237	< DL	0.0010
Rb	< DL	0.0136	< DL	0.0006
Sr	0.0407	0.0305	0.0017	0.0013
Y	< DL	0.0373	< DL	0.0016
Zr	< DL	0.0475	< DL	0.0020
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.1085	< DL	0.0045
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2780	< DL	0.0116
Ba	0.3921	0.1559	0.0163	0.0065
La	< DL	0.0915	< DL	0.0038
Hg	< DL	0.0373	< DL	0.0016
Pb	0.0362	0.0339	0.0015	0.0014

Client: R020 - Ramboll
Report Number: 21-400

Lab ID: 21-T2815
Filter ID: P7326499
Client ID: SEA8-082721
Site: SEA8
Sample Date: 8/26/21
Volume: 24.00 m³
Deposit Area: 11.3 cm²
Size Fraction: PM10

Analyte	µg/filter		µg/m ³	
	Conc.	DL	Conc.	DL
Gravimetry				
Net Mass	170.		7.083	
XRF				
Na	3.631	2.512	0.1513	0.1049
Mg	0.7763	0.6983	0.0323	0.0291
Al	1.776	0.4170	0.0740	0.0178
Si	5.492	0.8475	0.2288	0.0371
P	< DL	0.0881	< DL	0.0037
S	8.715	1.346	0.3631	0.0589
Cl	2.730	0.4238	0.1138	0.0185
K	0.8046	0.1356	0.0335	0.0059
Ca	2.338	0.3560	0.0974	0.0156
Ti	0.2237	0.0475	0.0093	0.0020
V	< DL	0.0305	< DL	0.0013
Cr	0.0565	0.0475	0.0024	0.0020
Mn	0.0576	0.0373	0.0024	0.0016
Fe	2.860	0.4305	0.1192	0.0189
Co	< DL	0.0373	< DL	0.0016
Ni	0.0215	0.0203	0.0009	0.0008
Cu	0.0531	0.0271	0.0022	0.0011
Zn	0.2011	0.0373	0.0084	0.0016
Ga	< DL	0.0170	< DL	0.0007
Ge	< DL	0.0170	< DL	0.0007
As	< DL	0.0271	< DL	0.0011
Se	0.0147	0.0136	0.0006	0.0006
Br	< DL	0.0237	< DL	0.0010
Rb	< DL	0.0136	< DL	0.0006
Sr	< DL	0.0271	< DL	0.0011
Y	< DL	0.0373	< DL	0.0016
Zr	0.0475	0.0475	0.0020	0.0020
Mo	< DL	0.0848	< DL	0.0035
Pd	< DL	0.0780	< DL	0.0032
Ag	< DL	0.0814	< DL	0.0034
Cd	< DL	0.1085	< DL	0.0045
In	< DL	0.1322	< DL	0.0055
Sn	< DL	0.1458	< DL	0.0061
Sb	< DL	0.2814	< DL	0.0117
Ba	0.2305	0.1322	0.0096	0.0055
La	< DL	0.0814	< DL	0.0034
Hg	< DL	0.0373	< DL	0.0016
Pb	< DL	0.0339	< DL	0.0014

CHESTER LabNet

Quant'X 1020 XRF Analytical Quality Assurance Report

Client: Ramboll

Report: 21-400

Analysis Period: September 9, 2021

Number of Samples: 9

1. Precision Data

Micromatter Multi-elemental Quality Control Standard: 34103

QC Standard Results

Analyte	n	micrograms per square centimeter			c.v.	%E
		Calib.	Meas.	S.D.		
Si	1	7.91	7.70	na	na	-2.65
Ti	1	10.84	10.59	na	na	-2.37
Fe	1	11.22	11.04	na	na	-1.59
Se	1	5.19	5.20	na	na	0.10
Cd	1	6.87	6.95	na	na	1.16
Pb	1	12.57	12.14	na	na	-3.38

2. Accuracy Data

NIST Standard Reference Materials: SRM 2783

Analyte/ SRM	n	Certified Value(μg/cm²)	Measured Value (μg/cm²)				% Rec.
			High	Low	Average		
K 2783	4	0.5301	0.4627	0.4488	0.4545	+/- 0.0053	85.7
Ca 2783	4	1.3253	1.1159	1.0786	1.0933	+/- 0.0148	82.5
Ti 2783	4	0.1496	0.1381	0.1318	0.1340	+/- 0.0024	89.6
Fe 2783	4	2.6606	2.5045	2.4595	2.4863	+/- 0.0189	93.4
Cu 2783	4	0.0406	0.0343	0.0325	0.0335	+/- 0.0007	82.5
Zn 2783	4	0.1797	0.2119	0.2065	0.2096	+/- 0.0020	116.6
Pb 2783	4	0.0318	0.0370	0.0278	0.0315	+/- 0.0034	99.1

3. Addendum

Micromatter Certified Reference Materials

CRM	Analytes	Certified Value($\mu\text{g}/\text{cm}^2$)	Measured Value($\mu\text{g}/\text{cm}^2$)	% Rec.
39149	Cr	53.7	51.7	96.3
39150	Cu	49.4	46.3	93.7
39151	Zn, Te	49.8	47.7	95.7
39152	Ga, As	50.9	49.9	98.0
39153	Se, Cd	47.1	46.7	99.1
39154	Pb	47.9	45.8	95.5

NIST: National Institute of Standards and Technology

% Rec: Percent Recovery = (Experimental/Given) x 100

n: Number of Observations

S.D.: Standard Deviation

c.v.: Coefficient of Variation = (S.D./Measured) x 100

% E: Percent Error = [(Measured-Calibrated)/Calibrated] x 100

QUANT'X 1020 REPLICATE REPORT

2.91

Original ID: 21T2811

Replicate ID: RT2811

Element	Original ug/cm2			Replicate ug/cm2			Difference ug/cm2			RPD			
Na	0.9521	+-	0.1040	0.7887	+-	0.1021	0.1633	+-	0.1457	0	18.8	+-	16.7
Mg	0.2747	+-	0.0278	0.2177	+-	0.0264	0.0570	+-	0.0384	0	23.2	+-	15.6
Al	0.5687	+-	0.0333	0.5746	+-	0.0336	-0.0058	+-	0.0473	+	-1.0	+-	8.3
Si	1.7118	+-	0.0906	1.7045	+-	0.0901	0.0073	+-	0.1278	+	0.4	+-	7.5
P	0.0376	+-	0.0036	0.0377	+-	0.0036	-0.0001	+-	0.0051	+	-0.3	+-	13.4
S	1.0176	+-	0.0535	1.0080	+-	0.0530	0.0096	+-	0.0753	+	0.9	+-	7.4
Cl	0.7914	+-	0.0405	0.7609	+-	0.0389	0.0305	+-	0.0561	+	3.9	+-	7.2
K	0.2265	+-	0.0117	0.2201	+-	0.0113	0.0064	+-	0.0163	+	2.9	+-	7.3
Ca	1.0237	+-	0.0517	1.0246	+-	0.0517	-0.0009	+-	0.0732	+	-0.1	+-	7.1
Ti	0.0544	+-	0.0031	0.0568	+-	0.0031	-0.0024	+-	0.0044	+	-4.3	+-	7.9
V	0.0053	+-	0.0011	0.0048	+-	0.0011	0.0005	+-	0.0016	+	9.9	+-	31.2
Cr	0.0067	+-	0.0014	0.0061	+-	0.0014	0.0006	+-	0.0020	+	9.4	+-	31.8
Mn	0.0246	+-	0.0017	0.0262	+-	0.0019	-0.0016	+-	0.0025	+	-6.3	+-	10.0
Fe	1.1172	+-	0.0559	1.1314	+-	0.0566	-0.0142	+-	0.0795	+	-1.3	+-	7.1
Co	0.0017	+-	0.0023	0.0019	+-	0.0023	-0.0002	+-	0.0032				
Ni	0.0022	+-	0.0006	0.0028	+-	0.0006	-0.0006	+-	0.0009	+	-23.9	+-	37.1
Cu	0.0201	+-	0.0013	0.0185	+-	0.0012	0.0016	+-	0.0017	+	8.0	+-	9.0
Zn	0.0392	+-	0.0020	0.0357	+-	0.0019	0.0035	+-	0.0028	0	9.3	+-	7.4
Ga	0.0000	+-	0.0005	0.0002	+-	0.0005	-0.0002	+-	0.0007				
Ge	0.0013	+-	0.0005	0.0000	+-	0.0006	0.0013	+-	0.0008				
As	0.0000	+-	0.0008	0.0000	+-	0.0008	0.0000	+-	0.0011				
Se	0.0000	+-	0.0005	0.0000	+-	0.0005	0.0000	+-	0.0007				
Br	0.0101	+-	0.0009	0.0095	+-	0.0009	0.0006	+-	0.0012	+	6.5	+-	12.5
Rb	0.0013	+-	0.0006	0.0000	+-	0.0006	0.0013	+-	0.0008				
Sr	0.0087	+-	0.0009	0.0067	+-	0.0009	0.0020	+-	0.0013	0	25.9	+-	16.8
Y	0.0000	+-	0.0012	0.0000	+-	0.0012	0.0000	+-	0.0016				
Zr	0.0075	+-	0.0015	0.0083	+-	0.0015	-0.0008	+-	0.0021	+	-10.2	+-	27.2
Mo	0.0000	+-	0.0026	0.0000	+-	0.0026	0.0000	+-	0.0036				
Pd	0.0035	+-	0.0023	0.0000	+-	0.0023	0.0035	+-	0.0033				
Ag	0.0000	+-	0.0032	0.0000	+-	0.0032	0.0000	+-	0.0045				
Cd	0.0012	+-	0.0032	0.0019	+-	0.0032	-0.0007	+-	0.0045				
In	0.0000	+-	0.0039	0.0000	+-	0.0039	0.0000	+-	0.0054				
Sn	0.0142	+-	0.0043	0.0112	+-	0.0043	0.0030	+-	0.0061	+	23.7	+-	48.0
Sb	0.0060	+-	0.0082	0.0000	+-	0.0082	0.0060	+-	0.0116				
Ba	0.0641	+-	0.0056	0.0574	+-	0.0054	0.0067	+-	0.0078	+	11.0	+-	12.8
La	0.0146	+-	0.0030	0.0119	+-	0.0031	0.0027	+-	0.0043	+	20.3	+-	32.3
Hg	0.0000	+-	0.0011	0.0000	+-	0.0011	0.0000	+-	0.0015				
Pb	0.0070	+-	0.0010	0.0046	+-	0.0010	0.0024	+-	0.0014	0	41.2	+-	24.4

RPD: Relative Percent Difference $(X1-X2)/[(X1+X2)/2]*100$. RPD is calculated when original value is greater than three times its uncertainty.

CHAIN-OF-CUSTODY RECORD

For use by Lab: **Report #:** 21-400

CLIENT INFORMATION	
Company Name: Ramboll US Corporation	
Contact: Doug Herlocker	Email: dherlocker@ramboll.com
Cell: 208-484-9436	Office:
Report To: Doug Herlocker, Ramboll	Billing Address: 19020 33rd Avenue West, Suite 580 Lynnwood, WA 98036

Project Name: _____ PO#: _____

LabNet ID	Field Sample ID	Site	Sample Date	Volume (m³)	Particle Size
21T2808	SEA1-082421	SEA1	8/23/2021	24.00	PM10
21T2809	SEA2-082421	SEA2	8/23/2021	24.00	PM10
21T2810	SEA3-082521	SEA3	8/24/2021	24.00	PM10
21T2811	SEA4-082521	SEA4	8/24/2021	24.00	PM10
21T2812	SEA4B-082521	SEA4B	8/24/2021	24.00	PM10
21T2813	SEA5-082621	SEA5	8/25/2021	24.00	PM10
21T2814	SEA6-082621	SEA6	8/25/2021	24.00	PM10
21T2816	SEA7-082721	SEA7	8/26/2021	24.00	PM10
21T2815	SEA8-082721	SEA8	8/26/2021	24.00	PM10

Analysis Requested							Page 1 of 1 COC
Gravimetry	XRF	IC	ICP	OC/EC	Hexavalent Chromium		Turn Around Time Requested
X	X						<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify) _____
X	X						Sample Specific Notes:
X	X						
X	X						
X	X						
X	X						
X	X						Blank
X	X						
X	X						
X	X						
X	X						

Do the samples pose any potential hazards?
If yes

Are samples for compliance?	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Special Instructions/QC Requirements & Comments:

Relinquished by: <i>John Wassman</i>	Date/Time: <i>9/1/2024 13:00</i>	Received By: <i>[Signature]</i>	Date/Time/Temp: <i>9/2/21 10:52</i>
Relinquished by: <i>[Signature]</i>	Date/Time:	Received By:	Date/Time/Temp:

Laboratory Receipt Comments:

RAW DATA

Available upon request

9/13/2021

Mr. Doug Herlocker

Ramboll

19020 33rd Avenue

Suite 310

Lynnwood WA 98036

Project Name: Herrera: Seattle AQ Sampling

Project #: 1690022822

Workorder #: 2109099

Dear Mr. Doug Herlocker

The following report includes the data for the above referenced project for sample(s) received on 9/3/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner

Project Manager

WORK ORDER #: 2109099

Work Order Summary

CLIENT: Mr. Doug Herlocker
Ramboll
19020 33rd Avenue
Suite 310
Lynnwood, WA 98036

BILL TO: Accounts Payable - Denver
Ramboll
1680 Blake Street
Suite 560
Denver, CO 80202

PHONE: 425-412-1800

P.O. #

FAX: 425-412-1840

PROJECT # 1690022822 Herrera: Seattle AQ

DATE RECEIVED: 09/03/2021

CONTACT: Sampling
Kelly Buettner

DATE COMPLETED: 09/13/2021

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SEA1-082421	TO-15	7.5 "Hg	2 psi
02A	SEA2-082421	TO-15	5.5 "Hg	2 psi
03A	SEA3-082521	TO-15	5.0 "Hg	2 psi
04A	SEA4-082521	TO-15	6.0 "Hg	2 psi
05A	SEA3D-082521	TO-15	5.0 "Hg	2 psi
06A	SEA5-082621	TO-15	5.0 "Hg	2 psi
07A	SEA6-082621	TO-15	6.0 "Hg	2 psi
08A	SEA7-082721	TO-15	6.0 "Hg	2 psi
09A	SEA8-082721	TO-15	6.0 "Hg	2 psi
10A	Lab Blank	TO-15	NA	NA
11A	CCV	TO-15	NA	NA
12A	LCS	TO-15	NA	NA
12AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 09/13/21

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
Ramboll
Workorder# 2109099

Nine 6 Liter Summa Canister (Ambient) samples were received on September 03, 2021. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

Sample identification for samples SEA1-082421, SEA2-082421, SEA3-082521, SEA4-082521, SEA3D-082521, SEA5-082621, SEA6-082621, SEA7-082721 and SEA8-082721 were not provided on the sample tags. Therefore the information on the Chain of Custody was used to process and report the samples.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SEA1-082421

Lab ID#: 2109099-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	7.6	8.1	14	15

Client Sample ID: SEA2-082421

Lab ID#: 2109099-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.70	0.71	2.6	2.7

Client Sample ID: SEA3-082521

Lab ID#: 2109099-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	6.8	8.6	13	16
2-Propanol	2.7	9.8	6.7	24

Client Sample ID: SEA4-082521

Lab ID#: 2109099-04A

No Detections Were Found.

Client Sample ID: SEA3D-082521

Lab ID#: 2109099-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	6.8	7.6	13	14
2-Propanol	2.7	4.6	6.7	11

Client Sample ID: SEA5-082621

Lab ID#: 2109099-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	6.8	6.8	13	13
2-Propanol	2.7	14	6.7	36

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SEA6-082621

Lab ID#: 2109099-07A

No Detections Were Found.

Client Sample ID: SEA7-082721

Lab ID#: 2109099-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	7.1	20	13	38
2-Propanol	2.8	3.5	7.0	8.5
Heptane	0.71	0.85	2.9	3.5
Toluene	0.71	0.99	2.7	3.7

Client Sample ID: SEA8-082721

Lab ID#: 2109099-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	2.8	4.2	7.0	10

Client Sample ID: SEA1-082421

Lab ID#: 2109099-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090819	Date of Collection:	8/24/21 8:55:00 AM
Dil. Factor:	1.51	Date of Analysis:	9/8/21 10:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.76	Not Detected	3.7	Not Detected
Freon 114	0.76	Not Detected	5.3	Not Detected
Chloromethane	7.6	Not Detected	16	Not Detected
Vinyl Chloride	0.76	Not Detected	1.9	Not Detected
1,3-Butadiene	0.76	Not Detected	1.7	Not Detected
Bromomethane	7.6	Not Detected	29	Not Detected
Chloroethane	3.0	Not Detected	8.0	Not Detected
Freon 11	0.76	Not Detected	4.2	Not Detected
Ethanol	7.6	8.1	14	15
Freon 113	0.76	Not Detected	5.8	Not Detected
1,1-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Acetone	7.6	Not Detected	18	Not Detected
2-Propanol	3.0	Not Detected	7.4	Not Detected
Carbon Disulfide	3.0	Not Detected	9.4	Not Detected
3-Chloropropene	3.0	Not Detected	9.4	Not Detected
Methylene Chloride	7.6	Not Detected	26	Not Detected
Methyl tert-butyl ether	3.0	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Hexane	0.76	Not Detected	2.7	Not Detected
1,1-Dichloroethane	0.76	Not Detected	3.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.0	Not Detected	8.9	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Tetrahydrofuran	0.76	Not Detected	2.2	Not Detected
Chloroform	0.76	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.76	Not Detected	4.1	Not Detected
Cyclohexane	0.76	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.76	Not Detected	4.8	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.5	Not Detected
Benzene	0.76	Not Detected	2.4	Not Detected
1,2-Dichloroethane	0.76	Not Detected	3.0	Not Detected
Heptane	0.76	Not Detected	3.1	Not Detected
Trichloroethene	0.76	Not Detected	4.0	Not Detected
1,2-Dichloropropane	0.76	Not Detected	3.5	Not Detected
1,4-Dioxane	3.0	Not Detected	11	Not Detected
Bromodichloromethane	0.76	Not Detected	5.0	Not Detected
cis-1,3-Dichloropropene	0.76	Not Detected	3.4	Not Detected
4-Methyl-2-pentanone	0.76	Not Detected	3.1	Not Detected
Toluene	0.76	Not Detected	2.8	Not Detected
trans-1,3-Dichloropropene	0.76	Not Detected	3.4	Not Detected
1,1,2-Trichloroethane	0.76	Not Detected	4.1	Not Detected
Tetrachloroethene	0.76	Not Detected	5.1	Not Detected
2-Hexanone	3.0	Not Detected	12	Not Detected

Client Sample ID: SEA1-082421

Lab ID#: 2109099-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090819	Date of Collection:	8/24/21 8:55:00 AM
Dil. Factor:	1.51	Date of Analysis:	9/8/21 10:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.76	Not Detected	6.4	Not Detected
1,2-Dibromoethane (EDB)	0.76	Not Detected	5.8	Not Detected
Chlorobenzene	0.76	Not Detected	3.5	Not Detected
Ethyl Benzene	0.76	Not Detected	3.3	Not Detected
m,p-Xylene	0.76	Not Detected	3.3	Not Detected
o-Xylene	0.76	Not Detected	3.3	Not Detected
Styrene	0.76	Not Detected	3.2	Not Detected
Bromoform	0.76	Not Detected	7.8	Not Detected
Cumene	0.76	Not Detected	3.7	Not Detected
1,1,2,2-Tetrachloroethane	0.76	Not Detected	5.2	Not Detected
Propylbenzene	0.76	Not Detected	3.7	Not Detected
4-Ethyltoluene	0.76	Not Detected	3.7	Not Detected
1,3,5-Trimethylbenzene	0.76	Not Detected	3.7	Not Detected
1,2,4-Trimethylbenzene	0.76	Not Detected	3.7	Not Detected
1,3-Dichlorobenzene	0.76	Not Detected	4.5	Not Detected
1,4-Dichlorobenzene	0.76	Not Detected	4.5	Not Detected
alpha-Chlorotoluene	0.76	Not Detected	3.9	Not Detected
1,2-Dichlorobenzene	0.76	Not Detected	4.5	Not Detected
1,2,4-Trichlorobenzene	3.0	Not Detected	22	Not Detected
Hexachlorobutadiene	3.0	Not Detected	32	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SEA2-082421

Lab ID#: 2109099-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090820	Date of Collection:	8/24/21 11:00:00 AM
Dil. Factor:	1.39	Date of Analysis:	9/8/21 10:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.70	Not Detected	3.4	Not Detected
Freon 114	0.70	Not Detected	4.8	Not Detected
Chloromethane	7.0	Not Detected	14	Not Detected
Vinyl Chloride	0.70	Not Detected	1.8	Not Detected
1,3-Butadiene	0.70	Not Detected	1.5	Not Detected
Bromomethane	7.0	Not Detected	27	Not Detected
Chloroethane	2.8	Not Detected	7.3	Not Detected
Freon 11	0.70	Not Detected	3.9	Not Detected
Ethanol	7.0	Not Detected	13	Not Detected
Freon 113	0.70	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.70	Not Detected	2.8	Not Detected
Acetone	7.0	Not Detected	16	Not Detected
2-Propanol	2.8	Not Detected	6.8	Not Detected
Carbon Disulfide	2.8	Not Detected	8.6	Not Detected
3-Chloropropene	2.8	Not Detected	8.7	Not Detected
Methylene Chloride	7.0	Not Detected	24	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.70	Not Detected	2.8	Not Detected
Hexane	0.70	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.70	Not Detected	2.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.2	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.70	Not Detected	2.0	Not Detected
Chloroform	0.70	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected	3.8	Not Detected
Cyclohexane	0.70	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.70	Not Detected	4.4	Not Detected
2,2,4-Trimethylpentane	0.70	Not Detected	3.2	Not Detected
Benzene	0.70	Not Detected	2.2	Not Detected
1,2-Dichloroethane	0.70	Not Detected	2.8	Not Detected
Heptane	0.70	Not Detected	2.8	Not Detected
Trichloroethene	0.70	Not Detected	3.7	Not Detected
1,2-Dichloropropane	0.70	Not Detected	3.2	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.70	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.70	Not Detected	2.8	Not Detected
Toluene	0.70	0.71	2.6	2.7
trans-1,3-Dichloropropene	0.70	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected	3.8	Not Detected
Tetrachloroethene	0.70	Not Detected	4.7	Not Detected
2-Hexanone	2.8	Not Detected	11	Not Detected

Client Sample ID: SEA2-082421

Lab ID#: 2109099-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090820	Date of Collection: 8/24/21 11:00:00 AM
Dil. Factor:	1.39	Date of Analysis: 9/8/21 10:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.70	Not Detected	5.9	Not Detected
1,2-Dibromoethane (EDB)	0.70	Not Detected	5.3	Not Detected
Chlorobenzene	0.70	Not Detected	3.2	Not Detected
Ethyl Benzene	0.70	Not Detected	3.0	Not Detected
m,p-Xylene	0.70	Not Detected	3.0	Not Detected
o-Xylene	0.70	Not Detected	3.0	Not Detected
Styrene	0.70	Not Detected	3.0	Not Detected
Bromoform	0.70	Not Detected	7.2	Not Detected
Cumene	0.70	Not Detected	3.4	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected	4.8	Not Detected
Propylbenzene	0.70	Not Detected	3.4	Not Detected
4-Ethyltoluene	0.70	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected	3.4	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected	3.4	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected	4.2	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected	4.2	Not Detected
alpha-Chlorotoluene	0.70	Not Detected	3.6	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected	4.2	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: SEA3-082521

Lab ID#: 2109099-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090821	Date of Collection:	8/25/21 12:25:00 PM
Dil. Factor:	1.36	Date of Analysis:	9/8/21 11:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	Not Detected	3.4	Not Detected
Freon 114	0.68	Not Detected	4.8	Not Detected
Chloromethane	6.8	Not Detected	14	Not Detected
Vinyl Chloride	0.68	Not Detected	1.7	Not Detected
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	6.8	Not Detected	26	Not Detected
Chloroethane	2.7	Not Detected	7.2	Not Detected
Freon 11	0.68	Not Detected	3.8	Not Detected
Ethanol	6.8	8.6	13	16
Freon 113	0.68	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Acetone	6.8	Not Detected	16	Not Detected
2-Propanol	2.7	9.8	6.7	24
Carbon Disulfide	2.7	Not Detected	8.5	Not Detected
3-Chloropropene	2.7	Not Detected	8.5	Not Detected
Methylene Chloride	6.8	Not Detected	24	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.8	Not Detected
trans-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Hexane	0.68	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.68	Not Detected	2.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.68	Not Detected	4.3	Not Detected
2,2,4-Trimethylpentane	0.68	Not Detected	3.2	Not Detected
Benzene	0.68	Not Detected	2.2	Not Detected
1,2-Dichloroethane	0.68	Not Detected	2.8	Not Detected
Heptane	0.68	Not Detected	2.8	Not Detected
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.8	Not Detected
Bromodichloromethane	0.68	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	0.68	Not Detected	2.6	Not Detected
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

Client Sample ID: SEA3-082521

Lab ID#: 2109099-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090821	Date of Collection: 8/25/21 12:25:00 PM
Dil. Factor:	1.36	Date of Analysis: 9/8/21 11:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	Not Detected	3.1	Not Detected
Ethyl Benzene	0.68	Not Detected	3.0	Not Detected
m,p-Xylene	0.68	Not Detected	3.0	Not Detected
o-Xylene	0.68	Not Detected	3.0	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.7	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,4-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SEA4-082521

Lab ID#: 2109099-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090822	Date of Collection:	8/25/21 10:40:00 AM
Dil. Factor:	1.42	Date of Analysis:	9/8/21 11:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	Not Detected	3.5	Not Detected
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	7.1	Not Detected	13	Not Detected
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	Not Detected	17	Not Detected
2-Propanol	2.8	Not Detected	7.0	Not Detected
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.71	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	Not Detected	2.3	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	Not Detected	2.9	Not Detected
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	Not Detected	2.7	Not Detected
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected

Client Sample ID: SEA4-082521

Lab ID#: 2109099-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090822	Date of Collection: 8/25/21 10:40:00 AM
Dil. Factor:	1.42	Date of Analysis: 9/8/21 11:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	Not Detected	3.1	Not Detected
m,p-Xylene	0.71	Not Detected	3.1	Not Detected
o-Xylene	0.71	Not Detected	3.1	Not Detected
Styrene	0.71	Not Detected	3.0	Not Detected
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	118	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: SEA3D-082521

Lab ID#: 2109099-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090823	Date of Collection:	8/25/21 12:25:00 PM
Dil. Factor:	1.36	Date of Analysis:	9/9/21 12:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	Not Detected	3.4	Not Detected
Freon 114	0.68	Not Detected	4.8	Not Detected
Chloromethane	6.8	Not Detected	14	Not Detected
Vinyl Chloride	0.68	Not Detected	1.7	Not Detected
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	6.8	Not Detected	26	Not Detected
Chloroethane	2.7	Not Detected	7.2	Not Detected
Freon 11	0.68	Not Detected	3.8	Not Detected
Ethanol	6.8	7.6	13	14
Freon 113	0.68	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Acetone	6.8	Not Detected	16	Not Detected
2-Propanol	2.7	4.6	6.7	11
Carbon Disulfide	2.7	Not Detected	8.5	Not Detected
3-Chloropropene	2.7	Not Detected	8.5	Not Detected
Methylene Chloride	6.8	Not Detected	24	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.8	Not Detected
trans-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Hexane	0.68	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.68	Not Detected	2.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.68	Not Detected	4.3	Not Detected
2,2,4-Trimethylpentane	0.68	Not Detected	3.2	Not Detected
Benzene	0.68	Not Detected	2.2	Not Detected
1,2-Dichloroethane	0.68	Not Detected	2.8	Not Detected
Heptane	0.68	Not Detected	2.8	Not Detected
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.8	Not Detected
Bromodichloromethane	0.68	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	0.68	Not Detected	2.6	Not Detected
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

Client Sample ID: SEA3D-082521

Lab ID#: 2109099-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090823	Date of Collection:	8/25/21 12:25:00 PM
Dil. Factor:	1.36	Date of Analysis:	9/9/21 12:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	Not Detected	3.1	Not Detected
Ethyl Benzene	0.68	Not Detected	3.0	Not Detected
m,p-Xylene	0.68	Not Detected	3.0	Not Detected
o-Xylene	0.68	Not Detected	3.0	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.7	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,4-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	117	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: SEA5-082621

Lab ID#: 2109099-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090824	Date of Collection:	8/26/21 11:55:00 AM
Dil. Factor:	1.36	Date of Analysis:	9/9/21 12:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	Not Detected	3.4	Not Detected
Freon 114	0.68	Not Detected	4.8	Not Detected
Chloromethane	6.8	Not Detected	14	Not Detected
Vinyl Chloride	0.68	Not Detected	1.7	Not Detected
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	6.8	Not Detected	26	Not Detected
Chloroethane	2.7	Not Detected	7.2	Not Detected
Freon 11	0.68	Not Detected	3.8	Not Detected
Ethanol	6.8	6.8	13	13
Freon 113	0.68	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Acetone	6.8	Not Detected	16	Not Detected
2-Propanol	2.7	14	6.7	36
Carbon Disulfide	2.7	Not Detected	8.5	Not Detected
3-Chloropropene	2.7	Not Detected	8.5	Not Detected
Methylene Chloride	6.8	Not Detected	24	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.8	Not Detected
trans-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Hexane	0.68	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.68	Not Detected	2.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.68	Not Detected	4.3	Not Detected
2,2,4-Trimethylpentane	0.68	Not Detected	3.2	Not Detected
Benzene	0.68	Not Detected	2.2	Not Detected
1,2-Dichloroethane	0.68	Not Detected	2.8	Not Detected
Heptane	0.68	Not Detected	2.8	Not Detected
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.8	Not Detected
Bromodichloromethane	0.68	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	0.68	Not Detected	2.6	Not Detected
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

Client Sample ID: SEA5-082621

Lab ID#: 2109099-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090824	Date of Collection: 8/26/21 11:55:00 AM
Dil. Factor:	1.36	Date of Analysis: 9/9/21 12:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	Not Detected	3.1	Not Detected
Ethyl Benzene	0.68	Not Detected	3.0	Not Detected
m,p-Xylene	0.68	Not Detected	3.0	Not Detected
o-Xylene	0.68	Not Detected	3.0	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.7	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,4-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: SEA6-082621

Lab ID#: 2109099-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090825	Date of Collection:	8/26/21 2:10:00 PM
Dil. Factor:	1.42	Date of Analysis:	9/9/21 01:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	Not Detected	3.5	Not Detected
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	7.1	Not Detected	13	Not Detected
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	Not Detected	17	Not Detected
2-Propanol	2.8	Not Detected	7.0	Not Detected
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.71	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	Not Detected	2.3	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	Not Detected	2.9	Not Detected
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	Not Detected	2.7	Not Detected
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected

Client Sample ID: SEA6-082621

Lab ID#: 2109099-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090825	Date of Collection: 8/26/21 2:10:00 PM
Dil. Factor:	1.42	Date of Analysis: 9/9/21 01:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	Not Detected	3.1	Not Detected
m,p-Xylene	0.71	Not Detected	3.1	Not Detected
o-Xylene	0.71	Not Detected	3.1	Not Detected
Styrene	0.71	Not Detected	3.0	Not Detected
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: SEA7-082721

Lab ID#: 2109099-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090826	Date of Collection:	8/27/21 3:20:00 PM
Dil. Factor:	1.42	Date of Analysis:	9/9/21 01:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	Not Detected	3.5	Not Detected
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	7.1	20	13	38
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	Not Detected	17	Not Detected
2-Propanol	2.8	3.5	7.0	8.5
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.71	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	Not Detected	2.3	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	0.85	2.9	3.5
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	0.99	2.7	3.7
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected

Client Sample ID: SEA7-082721

Lab ID#: 2109099-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090826	Date of Collection:	8/27/21 3:20:00 PM
Dil. Factor:	1.42	Date of Analysis:	9/9/21 01:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	Not Detected	3.1	Not Detected
m,p-Xylene	0.71	Not Detected	3.1	Not Detected
o-Xylene	0.71	Not Detected	3.1	Not Detected
Styrene	0.71	Not Detected	3.0	Not Detected
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SEA8-082721

Lab ID#: 2109099-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090827	Date of Collection:	8/27/21 1:15:00 PM
Dil. Factor:	1.42	Date of Analysis:	9/9/21 02:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	Not Detected	3.5	Not Detected
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	7.1	Not Detected	13	Not Detected
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	Not Detected	17	Not Detected
2-Propanol	2.8	4.2	7.0	10
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.71	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	Not Detected	2.3	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	Not Detected	2.9	Not Detected
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	Not Detected	2.7	Not Detected
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected

Client Sample ID: SEA8-082721

Lab ID#: 2109099-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090827	Date of Collection:	8/27/21 1:15:00 PM
Dil. Factor:	1.42	Date of Analysis:	9/9/21 02:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	Not Detected	3.1	Not Detected
m,p-Xylene	0.71	Not Detected	3.1	Not Detected
o-Xylene	0.71	Not Detected	3.1	Not Detected
Styrene	0.71	Not Detected	3.0	Not Detected
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister (Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: Lab Blank

Lab ID#: 2109099-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 12:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2109099-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 12:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: CCV

Lab ID#: 2109099-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 09:23 AM

Compound	%Recovery
Freon 12	114
Freon 114	102
Chloromethane	135 Q
Vinyl Chloride	86
1,3-Butadiene	117
Bromomethane	88
Chloroethane	86
Freon 11	119
Ethanol	107
Freon 113	99
1,1-Dichloroethene	83
Acetone	96
2-Propanol	113
Carbon Disulfide	81
3-Chloropropene	78
Methylene Chloride	127
Methyl tert-butyl ether	85
trans-1,2-Dichloroethene	88
Hexane	96
1,1-Dichloroethane	98
2-Butanone (Methyl Ethyl Ketone)	80
cis-1,2-Dichloroethene	89
Tetrahydrofuran	119
Chloroform	103
1,1,1-Trichloroethane	107
Cyclohexane	81
Carbon Tetrachloride	123
2,2,4-Trimethylpentane	101
Benzene	92
1,2-Dichloroethane	135 Q
Heptane	88
Trichloroethene	103
1,2-Dichloropropane	99
1,4-Dioxane	92
Bromodichloromethane	115
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	105
Toluene	98
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	106
Tetrachloroethene	112
2-Hexanone	111

Client Sample ID: CCV

Lab ID#: 2109099-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 09:23 AM

Compound	%Recovery
Dibromochloromethane	118
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	101
m,p-Xylene	102
o-Xylene	100
Styrene	98
Bromoform	118
Cumene	103
1,1,2,2-Tetrachloroethane	101
Propylbenzene	107
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	108
1,3-Dichlorobenzene	118
1,4-Dichlorobenzene	116
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	116
1,2,4-Trichlorobenzene	101
Hexachlorobutadiene	108

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: LCS

Lab ID#: 2109099-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 10:13 AM

Compound	%Recovery	Method Limits
Freon 12	118	70-130
Freon 114	108	70-130
Chloromethane	127	70-130
Vinyl Chloride	95	70-130
1,3-Butadiene	124	70-130
Bromomethane	90	70-130
Chloroethane	88	70-130
Freon 11	122	70-130
Ethanol	97	70-130
Freon 113	102	70-130
1,1-Dichloroethene	90	70-130
Acetone	101	70-130
2-Propanol	119	70-130
Carbon Disulfide	84	70-130
3-Chloropropene	79	70-130
Methylene Chloride	125	70-130
Methyl tert-butyl ether	87	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	98	70-130
1,1-Dichloroethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	81	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	122	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	107	70-130
Cyclohexane	86	70-130
Carbon Tetrachloride	124	70-130
2,2,4-Trimethylpentane	101	70-130
Benzene	92	70-130
1,2-Dichloroethane	130	70-130
Heptane	86	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	90	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	95	70-130
4-Methyl-2-pentanone	103	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	107	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	113	70-130
2-Hexanone	109	70-130

Client Sample ID: LCS

Lab ID#: 2109099-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 10:13 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	118	70-130
1,2-Dibromoethane (EDB)	109	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	100	70-130
o-Xylene	98	70-130
Styrene	98	70-130
Bromoform	118	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	107	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	107	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	114	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	112	70-130
1,2,4-Trichlorobenzene	111	70-130
Hexachlorobutadiene	120	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCSD

Lab ID#: 2109099-12AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p090804
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 9/8/21 10:42 AM

Compound	%Recovery	Method Limits
Freon 12	118	70-130
Freon 114	109	70-130
Chloromethane	125	70-130
Vinyl Chloride	91	70-130
1,3-Butadiene	120	70-130
Bromomethane	87	70-130
Chloroethane	90	70-130
Freon 11	122	70-130
Ethanol	94	70-130
Freon 113	103	70-130
1,1-Dichloroethene	90	70-130
Acetone	100	70-130
2-Propanol	120	70-130
Carbon Disulfide	86	70-130
3-Chloropropene	80	70-130
Methylene Chloride	125	70-130
Methyl tert-butyl ether	90	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	100	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	84	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	121	70-130
Chloroform	107	70-130
1,1,1-Trichloroethane	111	70-130
Cyclohexane	86	70-130
Carbon Tetrachloride	126	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	94	70-130
1,2-Dichloroethane	132 Q	70-130
Heptane	88	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	92	70-130
Bromodichloromethane	116	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	110	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	114	70-130
2-Hexanone	112	70-130

Client Sample ID: LCSD

Lab ID#: 2109099-12AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/21 10:42 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	120	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	102	70-130
o-Xylene	100	70-130
Styrene	99	70-130
Bromoform	120	70-130
Cumene	102	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	109	70-130
1,2,4-Trimethylbenzene	109	70-130
1,3-Dichlorobenzene	116	70-130
1,4-Dichlorobenzene	117	70-130
alpha-Chlorotoluene	108	70-130
1,2-Dichlorobenzene	115	70-130
1,2,4-Trichlorobenzene	136 Q	70-130
Hexachlorobutadiene	143 Q	70-130

Q = Exceeds Quality Control limits.

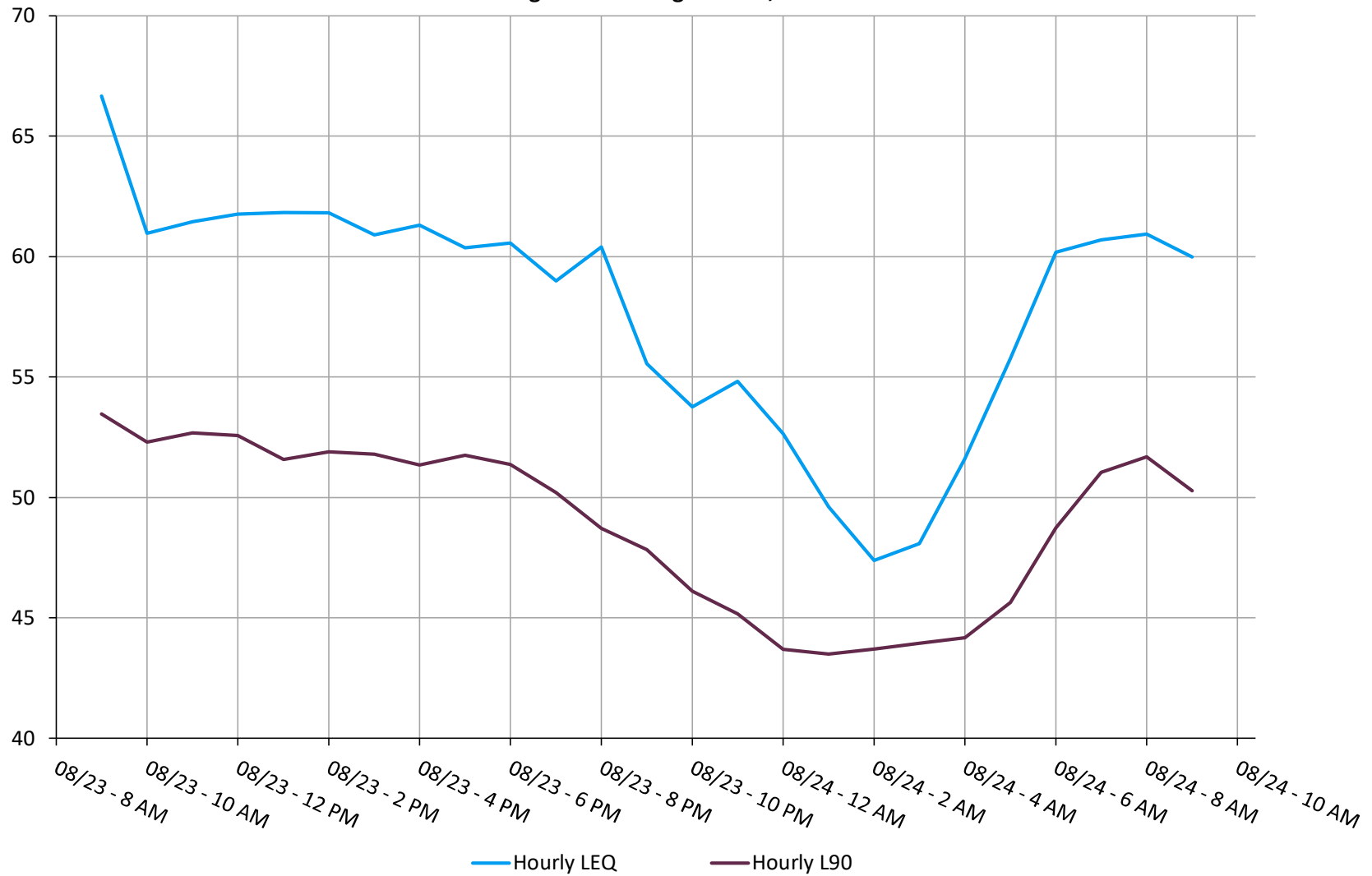
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	111	70-130

APPENDIX C

SOUND LEVEL DATA AND CALIBRATION RECORDS

City of Seattle Sound Level Measurement Data Summary
Site 1: Metro Painting, North Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 23rd - August 24th, 2021



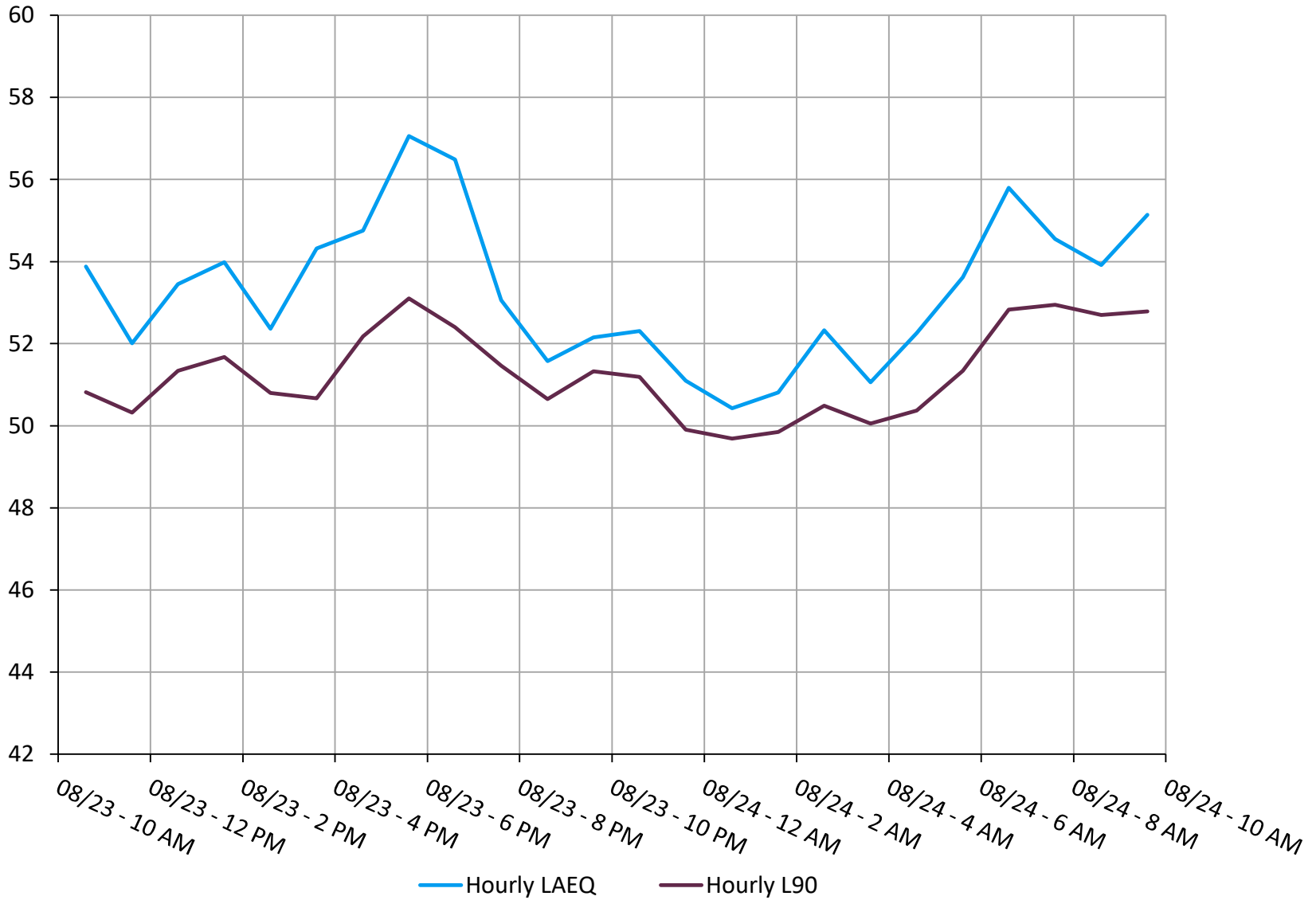
City of Seattle - Herrera Noise Monitoring Project

Site Name: **Metro Painting** Site Address: **5007 14th Ave NW
Seattle, WA 98107**

Site #: **1** Dates: **8/23 - 8/24, 2021**

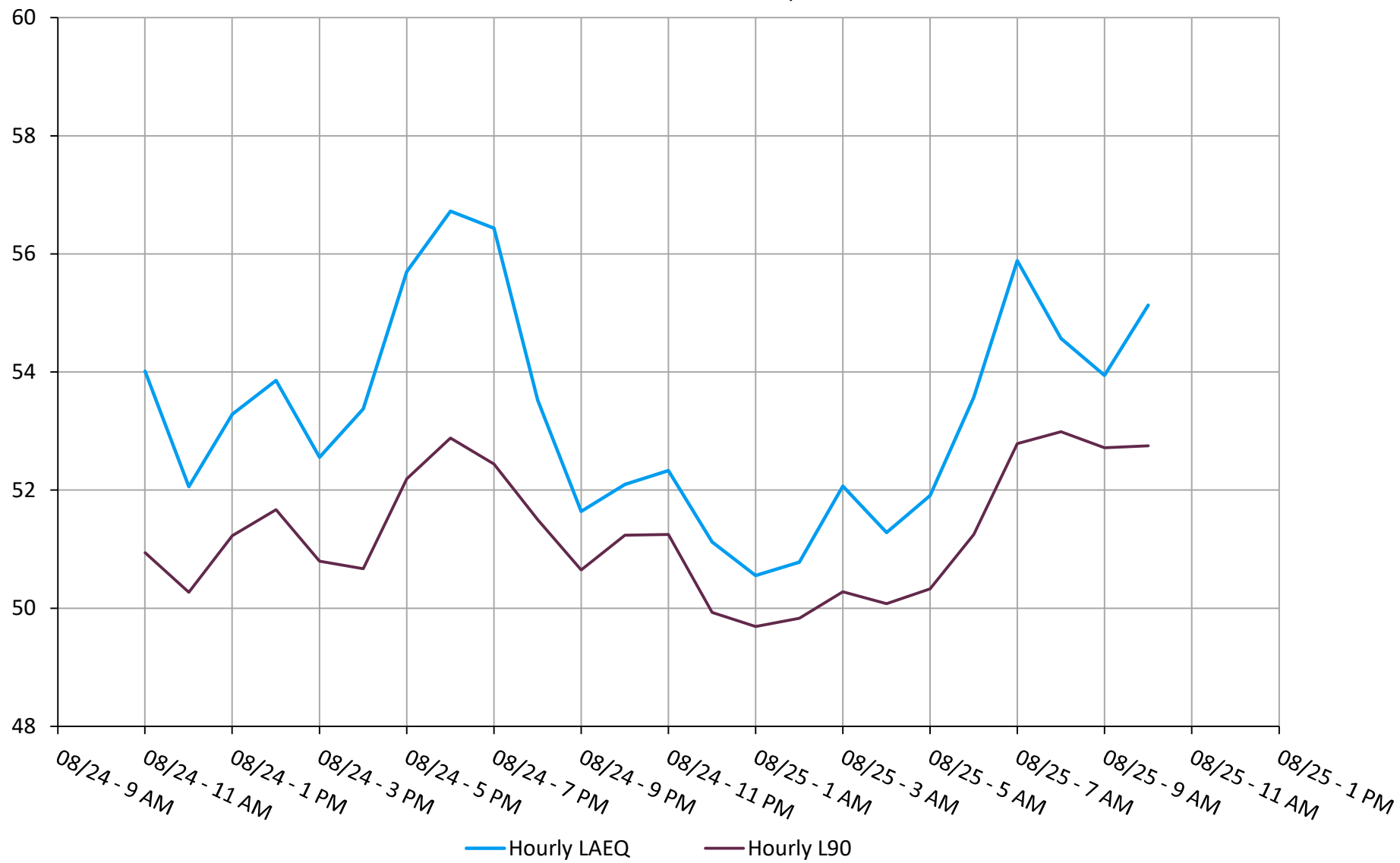
Start mm/dd - h:mm	Duration Min	Hourly L _{EQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/23 - 9:00 AM	60	66.7	53.5	79.6
08/23 - 10:00 AM	60	61.0	52.3	77.4
08/23 - 11:00 AM	60	61.4	52.7	80.7
08/23 - 12:00 PM	60	61.8	52.6	82.9
08/23 - 1:00 PM	60	61.8	51.6	82.2
08/23 - 2:00 PM	60	61.8	51.9	80.6
08/23 - 3:00 PM	60	60.9	51.8	79.7
08/23 - 4:00 PM	60	61.3	51.4	86.7
08/23 - 5:00 PM	60	60.4	51.8	76.3
08/23 - 6:00 PM	60	60.6	51.4	78.1
08/23 - 7:00 PM	60	59.0	50.2	78.5
08/23 - 8:00 PM	60	60.4	48.7	89.2
08/23 - 9:00 PM	60	55.6	47.8	73.6
08/23 - 10:00 PM	60	53.8	46.1	73.0
08/23 - 11:00 PM	60	54.8	45.2	82.1
08/24 - 12:00 AM	60	52.6	43.7	76.1
08/24 - 1:00 AM	60	49.6	43.5	71.7
08/24 - 2:00 AM	60	47.4	43.7	68.6
08/24 - 3:00 AM	60	48.1	44.0	69.0
08/24 - 4:00 AM	60	51.6	44.2	72.0
08/24 - 5:00 AM	60	55.8	45.6	75.3
08/24 - 6:00 AM	60	60.2	48.7	83.6
08/24 - 7:00 AM	60	60.7	51.0	72.4
08/24 - 8:00 AM	60	60.9	51.7	76.2
08/24 - 9:00 AM	19	60.0	50.3	72.7
08/24 - 9:19 AM	-	-	-	-

City of Seattle Sound Level Measurement Data Summary
Site 2: Pioneer Plumbing, North Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 23rd - August 24th, 2021



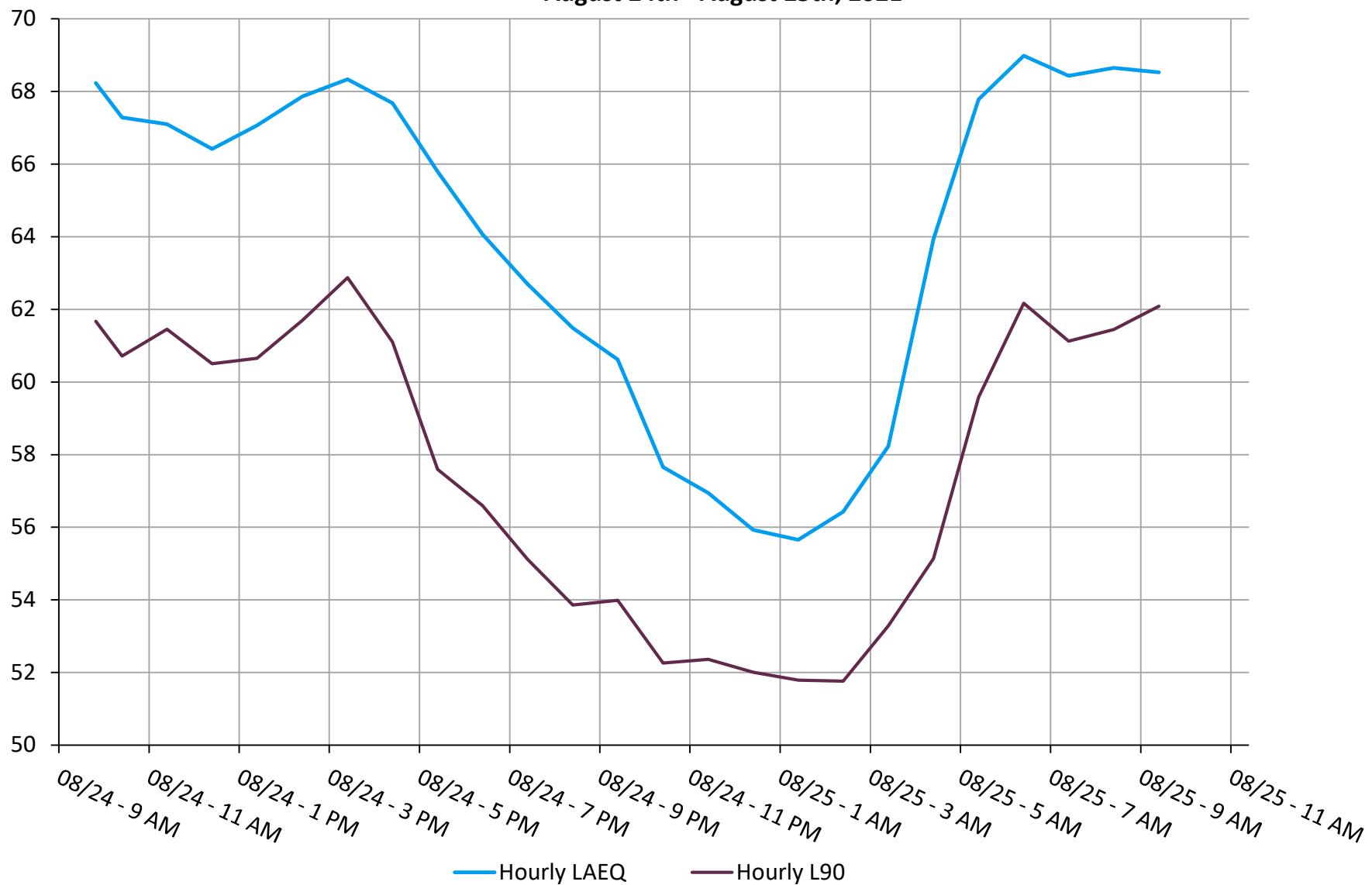
City of Seattle - Herrera Noise Mointoirng Project				
Site Name:	Pioneer Plumbing & Sewer	Site Address:	3425 16th Ave W Seattle, WA 98119	
Site #:	2	Dates:	8/23 - 8/24, 2021	
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/23 - 11:00 AM	60	53.9	50.8	74.6
08/23 - 12:00 PM	60	52.0	50.3	69.8
08/23 - 1:00 PM	60	53.4	51.3	81.1
08/23 - 2:00 PM	60	54.0	51.7	74.1
08/23 - 3:00 PM	60	52.4	50.8	70.5
08/23 - 4:00 PM	60	54.3	50.7	73.4
08/23 - 5:00 PM	60	54.8	52.2	88.7
08/23 - 6:00 PM	60	57.1	53.1	69.3
08/23 - 7:00 PM	60	56.5	52.4	69.6
08/23 - 8:00 PM	60	53.1	51.5	69.1
08/23 - 9:00 PM	60	51.6	50.7	59.8
08/23 - 10:00 PM	60	52.2	51.3	65.7
08/23 - 11:00 PM	60	52.3	51.2	73.1
08/24 - 12:00 AM	60	51.1	49.9	65.5
08/24 - 1:00 AM	60	50.4	49.7	56.7
08/24 - 2:00 AM	60	50.8	49.9	63.9
08/24 - 3:00 AM	60	52.3	50.5	74.3
08/24 - 4:00 AM	60	51.1	50.1	59.9
08/24 - 5:00 AM	60	52.3	50.4	71.5
08/24 - 6:00 AM	60	53.6	51.3	76.9
08/24 - 7:00 AM	60	55.8	52.8	97.5
08/24 - 8:00 AM	60	54.5	53.0	71.0
08/24 - 9:00 AM	60	53.9	52.7	74.0
08/24 - 10:00 AM	60	55.1	52.8	81.5
08/24 - 11:00 AM	-	-	-	-

City of Seattle Sound Level Measurement Data Summary
Site 4: Interbay Storage, North Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})



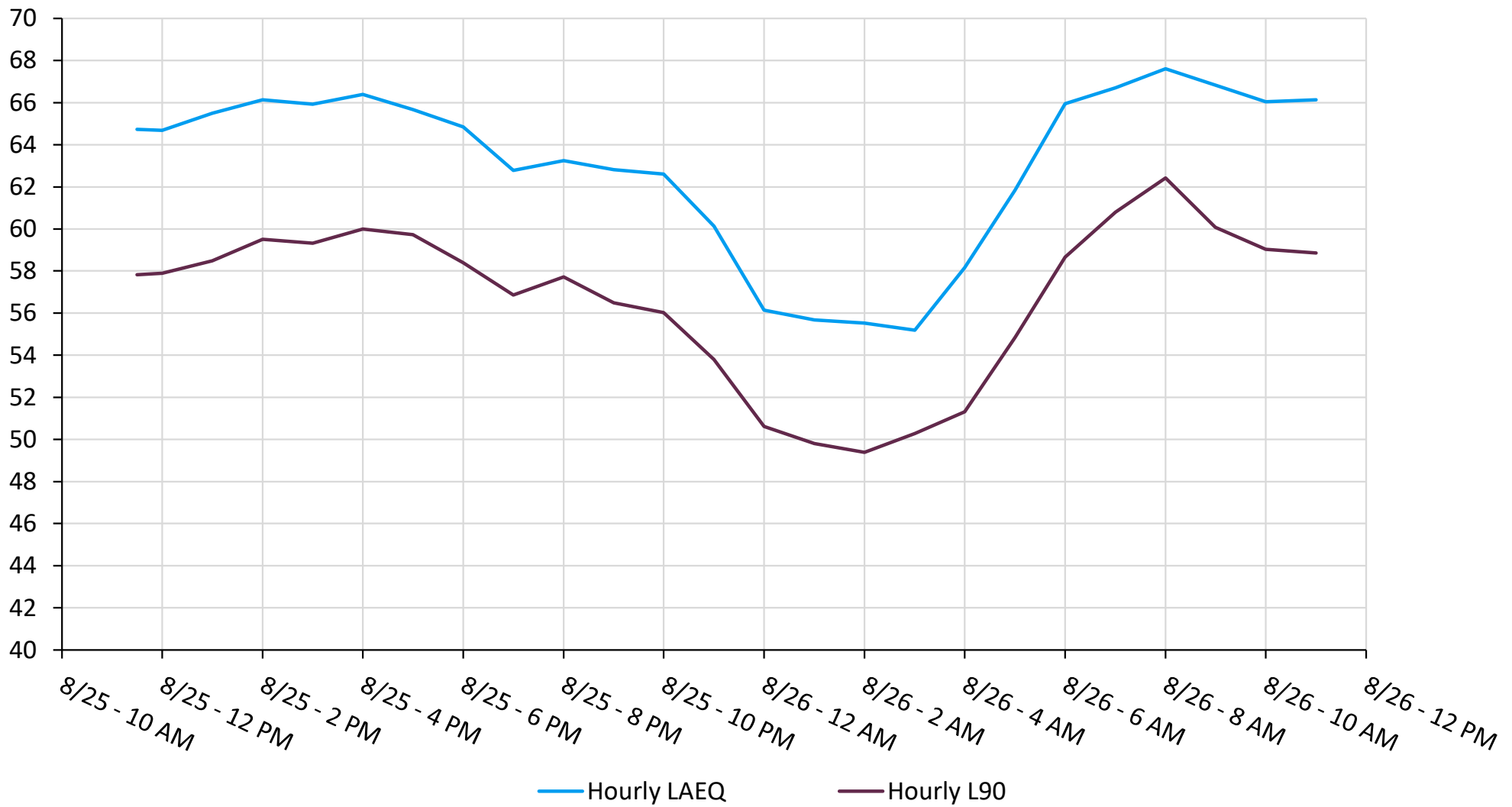
City of Seattle - Herrera Noise Mointoirng Project					
Site Name: Interbay Storage		Site Address: 1561 W Armory Way Seattle, WA 98119			
Site #: 3		Dates: 8/24-8/25, 2021			
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB	
08/24 - 12:00 PM	55	54.0	50.9	74.6	
08/24 - 1:00 PM	60	52.1	50.3	69.8	
08/24 - 2:00 PM	60	53.3	51.2	81.1	
08/24 - 3:00 PM	60	53.9	51.7	74.1	
08/24 - 4:00 PM	60	52.6	50.8	70.5	
08/24 - 5:00 PM	60	53.4	50.7	73.4	
08/24 - 6:00 PM	60	55.7	52.2	88.7	
08/24 - 7:00 PM	60	56.7	52.9	69.3	
08/24 - 8:00 PM	60	56.4	52.4	69.1	
08/24 - 9:00 PM	60	53.5	51.5	69.6	
08/24 - 10:00 PM	60	51.6	50.7	59.8	
08/24 - 11:00 PM	60	52.1	51.2	65.7	
08/25 - 12:00 AM	60	52.3	51.3	73.1	
08/25 - 1:00 AM	60	51.1	49.9	65.5	
08/25 - 2:00 AM	60	50.6	49.7	63.2	
08/25 - 3:00 AM	60	50.8	49.8	63.9	
08/25 - 4:00 AM	60	52.1	50.3	74.3	
08/25 - 5:00 AM	60	51.3	50.1	59.9	
08/25 - 6:00 AM	60	51.9	50.3	68.7	
08/25 - 7:00 AM	60	53.6	51.3	76.9	
08/25 - 8:00 AM	60	55.9	52.8	97.5	
08/25 - 9:00 AM	60	54.6	53.0	71.0	
08/25 - 10:00 AM	60	53.9	52.7	74.0	
08/25 - 11:00 AM	60	55.1	52.8	81.5	
08/25 - 12:00 PM	-	-	-	-	

City of Seattle Sound Level Measurement Data Summary
Site 4: Efeste Wines, South Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 24th - August 25th, 2021



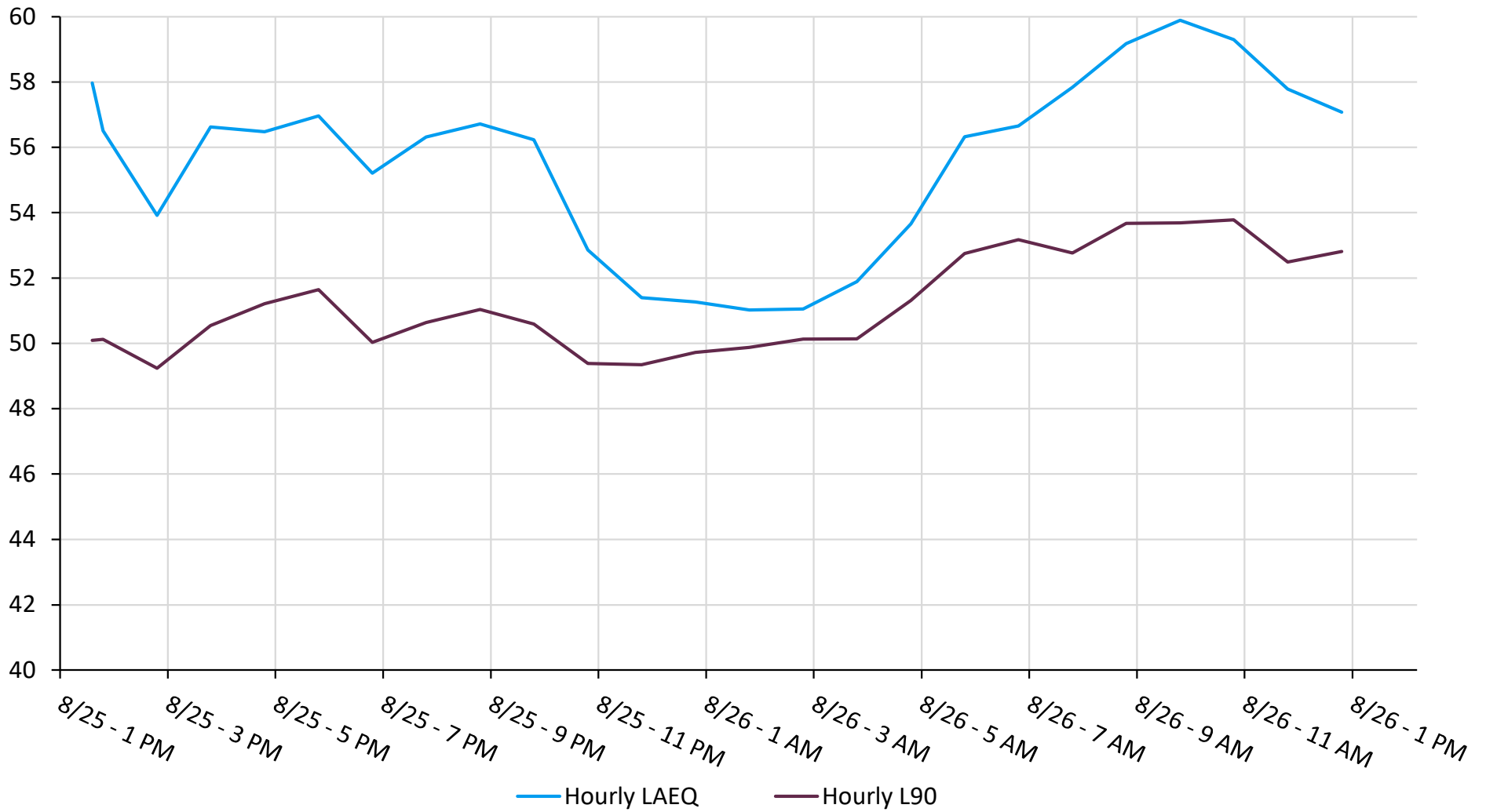
City of Seattle - Herrera Noise Mointoirng Project				
Site Name:	Efeste Wines - Sodo	Site Address:	1730 1st Ave S Seattle, WA 98134	
Site #:	4	Dates:	8/24 - 8/25, 2021	
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/24 - 10:25 AM	35	68.2	61.7	83.8
08/24 - 11:00 AM	60	67.3	60.7	84.8
08/24 - 12:00 PM	60	67.1	61.4	79.4
08/24 - 1:00 PM	60	66.4	60.5	86.2
08/24 - 2:00 PM	60	67.1	60.7	83.8
08/24 - 3:00 PM	60	67.9	61.7	82.2
08/24 - 4:00 PM	60	68.3	62.9	91.4
08/24 - 5:00 PM	60	67.7	61.1	92.4
08/24 - 6:00 PM	60	65.8	57.6	86.9
08/24 - 7:00 PM	60	64.1	56.6	80.8
08/24 - 8:00 PM	60	62.7	55.1	90.9
08/24 - 9:00 PM	60	61.5	53.9	79.9
08/24 - 10:00 PM	60	60.6	54.0	81.7
08/24 - 11:00 PM	60	57.7	52.3	78.5
08/25 - 12:00 AM	60	56.9	52.4	79.0
08/25 - 1:00 AM	60	55.9	52.0	77.4
08/25 - 2:00 AM	60	55.7	51.8	81.5
08/25 - 3:00 AM	60	56.4	51.8	79.6
08/25 - 4:00 AM	60	58.2	53.3	76.7
08/25 - 5:00 AM	60	63.9	55.1	79.5
08/25 - 6:00 AM	60	67.8	59.6	84.6
08/25 - 7:00 AM	60	69.0	62.2	84.6
08/25 - 8:00 AM	60	68.4	61.1	80.9
08/25 - 9:00 AM	60	68.7	61.4	83.9
08/25 - 10:00 AM	25	68.5	62.1	88.3
08/25 - 10:25 AM	-	-	-	-

City of Seattle Sound Level Measurement Data Summary
Site 5: Ellenos Real Greek Yogurt, South Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 25th - August 26th, 2021



City of Seattle - Herrera Noise Mointoring Project					
Site Name: Ellenos Real Greek Yogurt		Site Address: 5707 Airport Way S Seattle, WA 98108			
Site #: 5		Dates: 8/25-8/26, 2021			
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB	
08/25 - 11:30 AM	29	64.7	57.8	85.0	
08/25 - 12:00 PM	60	64.7	57.9	83.4	
08/25 - 1:00 PM	60	65.5	58.5	86.3	
08/25 - 2:00 PM	60	66.1	59.5	91.0	
08/25 - 3:00 PM	60	65.9	59.3	92.6	
08/25 - 4:00 PM	60	66.4	60.0	93.7	
08/25 - 5:00 PM	60	65.7	59.7	83.6	
08/25 - 6:00 PM	60	64.9	58.4	88.5	
08/25 - 7:00 PM	60	62.8	56.9	88.3	
08/25 - 8:00 PM	60	63.2	57.7	83.9	
08/25 - 9:00 PM	60	62.8	56.5	93.4	
08/25 - 10:00 PM	60	62.6	56.0	90.3	
08/25 - 11:00 PM	60	60.1	53.8	82.7	
08/26 - 12:00 AM	60	56.2	50.6	76.6	
08/26 - 1:00 AM	60	55.7	49.8	84.0	
08/26 - 2:00 AM	60	55.5	49.4	80.3	
08/26 - 3:00 AM	60	55.2	50.3	88.3	
08/26 - 4:00 AM	60	58.2	51.3	92.7	
08/26 - 5:00 AM	60	61.8	54.8	87.8	
08/26 - 6:00 AM	60	66.0	58.7	88.4	
08/26 - 7:00 AM	60	66.7	60.8	82.5	
08/26 - 8:00 AM	60	67.6	62.4	85.8	
08/26 - 9:00 AM	60	66.8	60.1	83.2	
08/26 - 10:00 AM	60	66.0	59.0	86.0	
08/26 - 11:00 AM	31	66.1	58.9	86.1	
08/26 - 11:30 AM	-	-	-	-	

City of Seattle Sound Level Measurement Data Summary
Site 6: Cafe Umbria, South Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 25th - August 26th, 2021



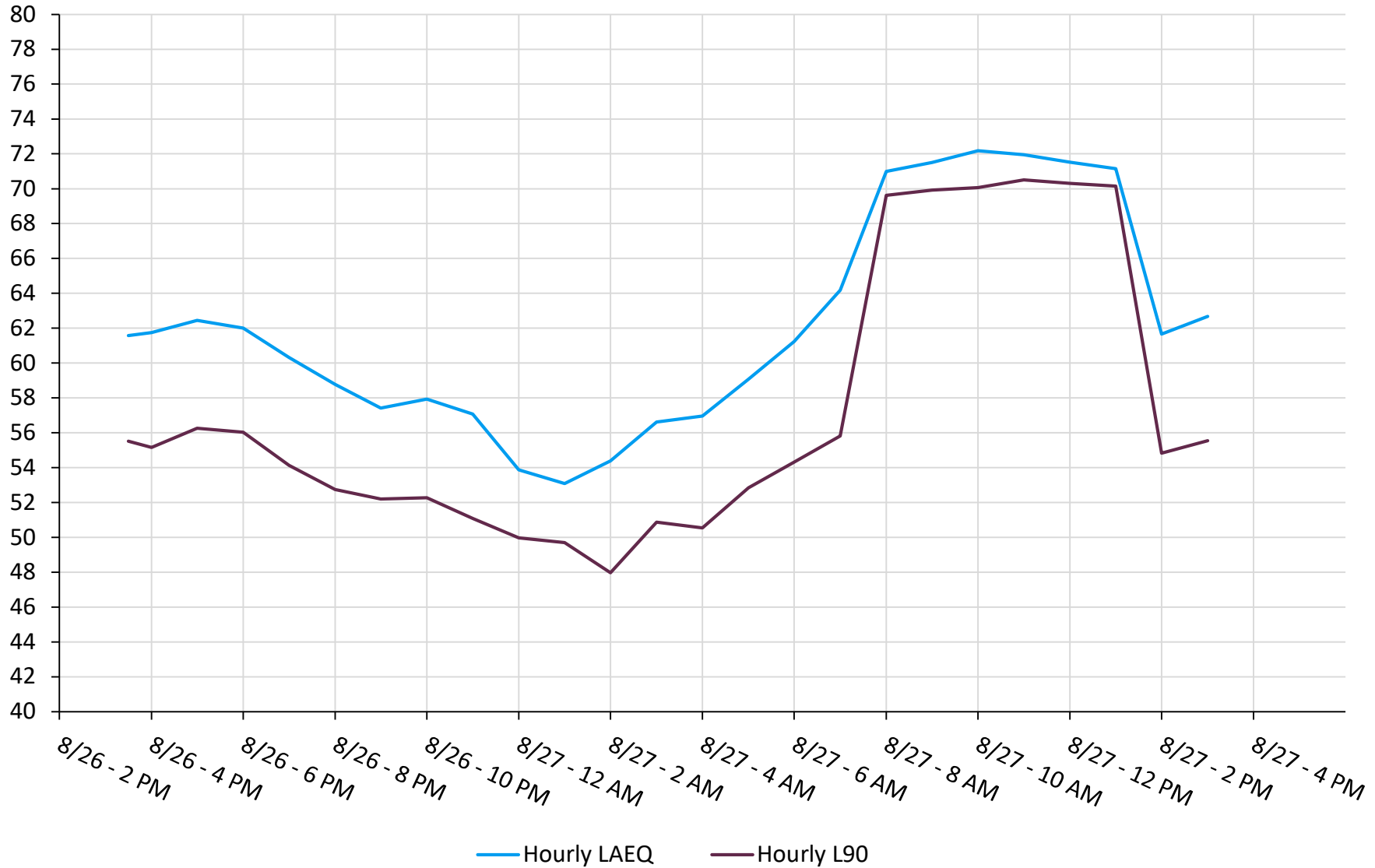
City of Seattle - Herrera Noise Mointoring Project				
Site Name:	Caffe Umbira - Roasting Facility	Site Address:	8620 16th Ave S Seattle, WA 98108	
Site #:	6	Dates:	8/25-8/26, 2021	
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/25 - 1:48 PM	12	58.0	50.1	77.1
08/25 - 2:00 PM	60	56.5	50.1	72.9
08/25 - 3:00 PM	60	53.9	49.2	76.7
08/25 - 4:00 PM	60	56.6	50.6	80.1
08/25 - 5:00 PM	60	56.5	51.2	88.2
08/25 - 6:00 PM	60	57.0	51.6	79.3
08/25 - 7:00 PM	60	55.2	50.0	75.9
08/25 - 8:00 PM	60	56.3	50.6	75.2
08/25 - 9:00 PM	60	56.7	51.0	82.3
08/25 - 10:00 PM	60	56.2	50.6	75.7
08/25 - 11:00 PM	60	52.9	49.4	73.9
08/26 - 12:00 AM	60	51.4	49.4	75.6
08/26 - 1:00 AM	60	51.3	49.7	72.9
08/26 - 2:00 AM	60	51.0	49.9	73.9
08/26 - 3:00 AM	60	51.1	50.1	58.5
08/26 - 4:00 AM	60	51.9	50.1	75.8
08/26 - 5:00 AM	60	53.7	51.3	74.9
08/26 - 6:00 AM	60	56.3	52.8	76.2
08/26 - 7:00 AM	60	56.7	53.2	77.0
08/26 - 8:00 AM	60	57.8	52.8	74.4
08/26 - 9:00 AM	60	59.2	53.7	86.6
08/26 - 10:00 AM	60	59.9	53.7	86.3
08/26 - 11:00 AM	60	59.3	53.8	86.4
08/26 - 12:00 PM	60	57.8	52.5	74.8
08/26 - 1:00 PM	35	57.1	52.8	74.6
08/26 - 1:35 PM	-	-	-	-

City of Seattle Sound Level Measurement Data Summary

Site 7: Repair Revolution, West Seattle

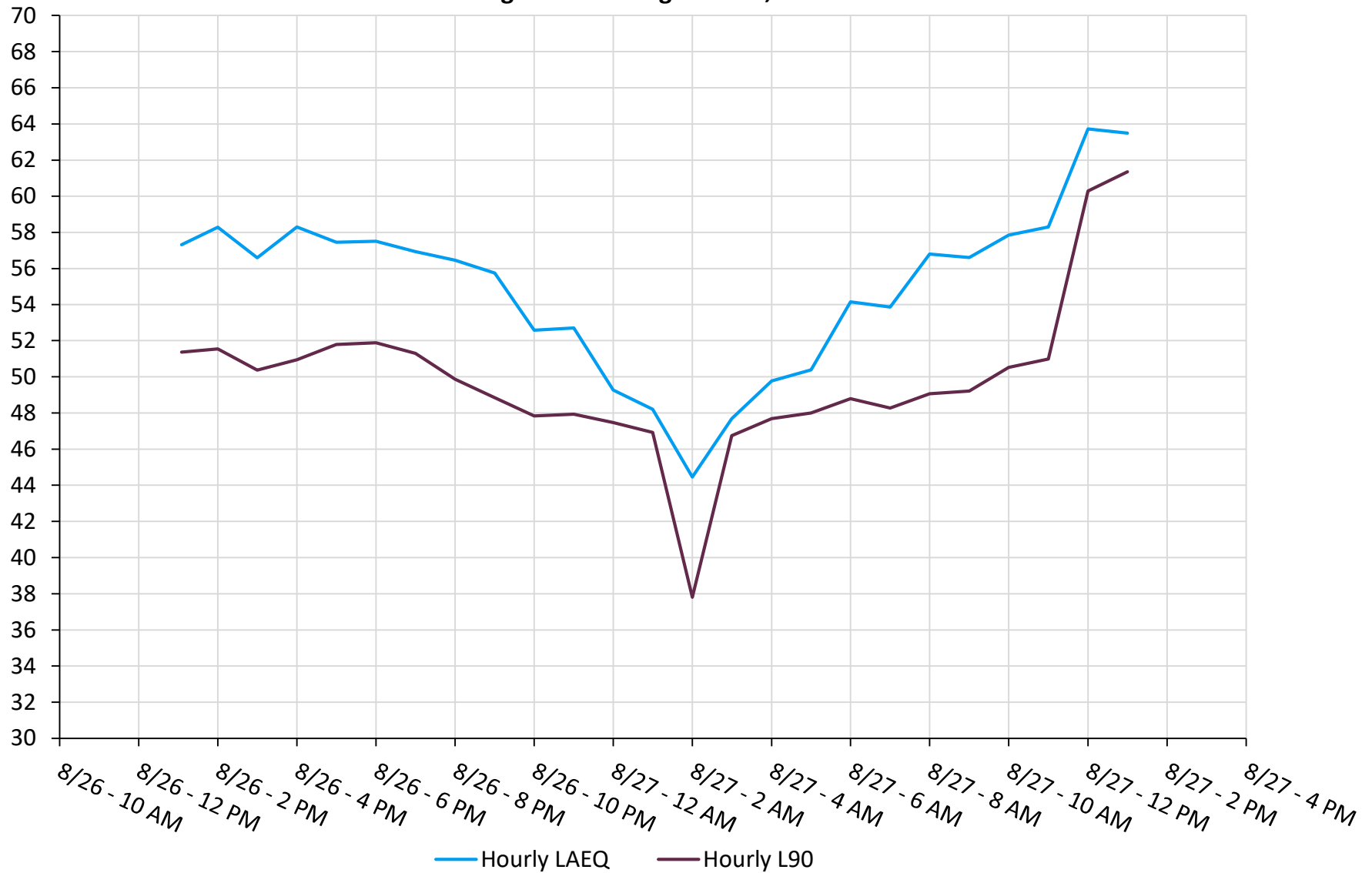
Hourly Sound Levels (L_{Aeq} , L_{90})

August 26th - August 27th, 2021



City of Seattle - Herrera Noise Monitoring Project				
Site Name:	Repair Revolution	Site Address:	2437 6th Ave S Seattle, WA 98134	
Site #:	7	Dates:	8/26-8/27, 2021	
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/26 - 3:30 PM	34	61.6	55.5	78.5
08/26 - 4:00 PM	60	61.7	55.2	81.6
08/26 - 5:00 PM	60	62.5	56.3	91.9
08/26 - 6:00 PM	60	62.0	56.0	86.3
08/26 - 7:00 PM	60	60.3	54.1	91.9
08/26 - 8:00 PM	60	58.8	52.7	82.8
08/26 - 9:00 PM	60	57.4	52.2	91.6
08/26 - 10:00 PM	60	57.9	52.3	75.3
08/26 - 11:00 PM	60	57.1	51.1	75.9
08/27 - 12:00 AM	60	53.9	50.0	79.0
08/27 - 1:00 AM	60	53.1	49.7	84.4
08/27 - 2:00 AM	60	54.4	48.0	83.3
08/27 - 3:00 AM	60	56.6	50.9	78.7
08/27 - 4:00 AM	60	57.0	50.5	81.0
08/27 - 5:00 AM	60	59.1	52.8	77.6
08/27 - 6:00 AM	60	61.2	54.3	78.7
08/27 - 7:00 AM	60	64.2	55.8	79.8
08/27 - 8:00 AM	60	71.0	69.6	79.4
08/27 - 9:00 AM	60	71.5	69.9	82.4
08/27 - 10:00 AM	60	72.2	70.1	82.6
08/27 - 11:00 AM	60	71.9	70.5	80.6
08/27 - 12:00 PM	60	71.5	70.3	82.5
08/27 - 1:00 PM	60	71.2	70.1	79.2
08/27 - 2:00 PM	60	61.7	54.8	83.6
08/27 - 3:00 PM	26	62.7	55.6	78.1
08/27 - 3:30 PM	-	-	-	-

City of Seattle Sound Level Measurement Data Summary
Site 8: Solid Ground Transit, West Seattle
Hourly Sound Levels (L_{Aeq} , L_{90})
August 26th - August 27th, 2021



City of Seattle - Herrera Noise Mointoring Project				
Site Name:	Solid Ground Transit	Site Address:	8100 8th Ave S Seattle, WA 98108	
Site #:	8	Dates:	8/26-8/27, 2021	
Start mm/dd - h:mm	Duration Min	Hourly L _{AEQ} dB	Hourly L ₉₀ dB	Hourly L _{MAX} dB
08/26 - 1:05 PM	55	57.3	51.4	80.4
08/26 - 2:00 PM	60	58.3	51.5	81.9
08/26 - 3:00 PM	60	56.6	50.4	79.5
08/26 - 4:00 PM	60	58.3	50.9	93.0
08/26 - 5:00 PM	60	57.5	51.8	78.0
08/26 - 6:00 PM	60	57.5	51.9	74.9
08/26 - 7:00 PM	60	56.9	51.3	79.7
08/26 - 8:00 PM	60	56.5	49.9	76.3
08/26 - 9:00 PM	60	55.7	48.9	76.4
08/26 - 10:00 PM	60	52.6	47.8	76.2
08/26 - 11:00 PM	60	52.7	47.9	74.7
08/27 - 12:00 AM	60	49.3	47.5	70.6
08/27 - 1:00 AM	60	48.2	46.9	68.4
08/27 - 2:00 AM	60	44.5	37.8	72.8
08/27 - 3:00 AM	60	47.7	46.8	70.2
08/27 - 4:00 AM	60	49.8	47.7	72.6
08/27 - 5:00 AM	60	50.4	48.0	72.4
08/27 - 6:00 AM	60	54.1	48.8	72.8
08/27 - 7:00 AM	60	53.9	48.3	86.4
08/27 - 8:00 AM	60	56.8	49.1	74.2
08/27 - 9:00 AM	60	56.6	49.2	73.9
08/27 - 10:00 AM	60	57.8	50.5	74.0
08/27 - 11:00 AM	60	58.3	51.0	75.6
08/27 - 12:00 PM	60	63.7	60.3	80.5
08/27 - 1:00 PM	5	63.5	61.4	71.9
08/27 - 1:05 PM	-	-	-	-

The Hottinger Bruel & Kjaer Calibration Laboratory
3079 Premiere Parkway Suite 120
Duluth, GA 30097
Telephone: 770/209-6907
Fax: 770/447-4033
Web site address: <http://www.hbkworld.com>

CERTIFICATE OF CALIBRATION

Certificate No: CAS-509107-S4C9H8-301

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CALIBRATION OF:

Sound Level Meter:	Brüel & Kjær	2250	Serial No: 3003474
Microphone:	Brüel & Kjær	4189	Serial No: 2866509
Preamplifier:	Brüel & Kjær	ZC-0032	Serial No: 18984
Software version:	BZ7222 Version 4.7.6		

CLIENT:

Ramboll U.S. Consulting Inc.
11 West Mercer Street #311
Seattle, WA 98119

CALIBRATION CONDITIONS:

Preconditioning: 4 hours at 23 ± 3 °C
Environment conditions See actual values in Environmental Condition sections

SPECIFICATIONS:

This document certifies that the instrument as listed under "Model/Serial Number" has been calibrated and unless otherwise indicated under "Final Data", meets acceptance criteria as prescribed by the referenced Procedure. The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95%. Statements of compliance, where applicable, are based on calibration results falling within specified criteria with no reduction by the uncertainty of the measurement. The calibration of the listed instrumentation, was accomplished using a test system which conforms with the requirements of ISO/IEC 17025, ANSI/NCSL Z540-1, and ISO 10012-1. For "as received" and/or "final" data, see the attached page(s). Items marked with one asterisk (*) are not covered by the scope of the current A2LA accreditation. This Certificate and attached data pages shall not be reproduced, except in full, without the written approval of the Hottinger Brüel & Kjær Calibration Laboratory-Duluth, GA. Results relate only to the items tested. This instrument has been calibrated using Measurement Standards with values traceable to the National Institute of Standards and Technology, National Measurement Institutes or derived from natural physical constants.

PROCEDURE:

Hottinger Brüel & Kjær Model 3630 Sound Level Meter Calibration System Software 7763 Version 8.1 - DB: 8.10 Test Collection 2250-4189.

RESULTS:

As Received Condition	As Received Data	Final Data
<input checked="" type="checkbox"/> Received in good condition	<input checked="" type="checkbox"/> Within acceptance criteria	<input checked="" type="checkbox"/> Within acceptance criteria
<input type="checkbox"/> Damaged - See attached report	<input type="checkbox"/> Outside acceptance criteria	<input type="checkbox"/> Limited test - See attached details
	<input type="checkbox"/> Inoperative	
	<input type="checkbox"/> Data not taken	

Date of Calibration: 10 May, 2021

Certificate issued: 10 May, 2021

Kyle Chancey

Calibration Technician

John Avitabile
Quality Representative

CERTIFICATE OF CALIBRATION

Certificate No: CAS-489684-C6J4T7-301

Page 1 of 9

The Hottinger Brüel & Kjær Calibration Laboratory
3079 Premiere Parkway Suite 120
Duluth, GA 30097
Telephone: 770/209-6907
Fax: 770/447-4033
Web site address: <http://www.hbkworld.com>

CALIBRATION OF:

Sound Level Meter:	Brüel & Kjær	2250	Serial No: 2765010
Microphone:	Brüel & Kjær	4189	Serial No: 3099818
Preamplifier:	Brüel & Kjær	ZC-0032	Serial No: 8447
Supplied Calibrator:	Brüel & Kjær	4231	Serial No: 3017450
Software version:	BZ7222 Version 4.7.5		

CLIENT:

Ramboll US Consulting Inc.
19020 33rd Avenue West Suite 310
Lynnwood, WA 98036

CALIBRATION CONDITIONS:

Preconditioning: 4 hours at 23 ± 3 °C
Environment conditions See actual values in Environmental Condition sections

SPECIFICATIONS:

This document certifies that the instrument as listed under "Model/Serial Number" has been calibrated and unless otherwise indicated under "Final Data", meets acceptance criteria as prescribed by the referenced Procedure. The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95%. Statements of compliance, where applicable, are based on calibration results falling within specified criteria with no reduction by the uncertainty of the measurement. The calibration of the listed instrumentation, was accomplished using a test system which conforms with the requirements of ISO/IEC 17025, ANSI/NCSL Z540-1, and ISO 10012-1. For "as received" and/or "final" data, see the attached page(s). Items marked with one asterisk (*) are not covered by the scope of the current A2LA accreditation. This Certificate and attached data pages shall not be reproduced, except in full, without the written approval of the Hottinger Brüel & Kjær Calibration Laboratory-Duluth, GA. Results relate only to the items tested. This instrument has been calibrated using Measurement Standards with values traceable to the National Institute of Standards and Technology, National Measurement Institutes or derived from natural physical constants.

PROCEDURE:

Hottinger Brüel & Kjær Model 3630 Sound Level Meter Calibration System Software 7763 Version 8.1 - DB: 8.10 Test Collection 2250-4189.

RESULTS:


As Received Condition	As Received Data	Final Data
<input checked="" type="checkbox"/> Received in good condition	<input checked="" type="checkbox"/> Within acceptance criteria	<input checked="" type="checkbox"/> Within acceptance criteria
<input type="checkbox"/> Damaged - See attached report	<input type="checkbox"/> Outside acceptance criteria	<input type="checkbox"/> Limited test - See attached details
	<input type="checkbox"/> Inoperative	
	<input type="checkbox"/> Data not taken	

Date of Calibration: 11 Jan. 2021

Certificate issued: 11 Jan. 2021

Kyle Chancey

Calibration Technician



John Avitabile
Quality Representative

I Transportation Screenline Information

Screenline Number	Screenline Location	Capacity		2019				2040 No Action Model				2040 Alt 2				2040 Alt 3				2040 Alt 4				2040 Pref Alt			
				PM Peak Volume		V/C Ratio		Forecasted Volumes		Forecasted V/C Ratio		Forecasted Volumes		Forecasted V/C Ratio		Forecasted Volumes		Forecasted V/C Ratio		Forecasted Volumes		Forecasted V/C Ratio		Forecasted Volumes		Forecasted V/C Ratio	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
2	Magnolia	3,850	4,620	1,976	2,482	0.51	0.54	1,980	2,509	0.51	0.54	1,996	2,499	0.52	0.54	2,109	2,529	0.55	0.55	2,128	2,532	0.55	0.55	2,052	2,504	0.53	0.54
	Magnolia Br																										
	W Dravus St, w/o 20th Ave W																										
	W Emerson Pl, s/o 21st Ave W																										
3.11	Duwamish River - W Seattle Fwy and Spokane St	7,150	6,150	4,050	3,243	0.57	0.53	4,050	3,243	0.57	0.53	4,050	3,243	0.57	0.53	4,053	3,243	0.57	0.53	4,054	3,243	0.57	0.53	4,050	3,243	0.57	0.53
	SW Spokane Br																										
	EB West Seattle Bridge																										
	WB West Seattle Bridge																										
3.12	Duwamish River - 1st Ave S and 16th Ave S	9,760	9,760	5,308	4,941	0.54	0.51	5,194	5,037	0.53	0.52	5,214	5,043	0.53	0.52	5,295	5,042	0.54	0.52	5,315	5,098	0.54	0.52	5,214	5,060	0.53	0.52
	SB 1st Ave S Br																										
	NB 1st Ave S Br																										
	16th Ave S, N/O 16th Ave S Br																										
4.13	South City Limit - SR 99 to Airport Wy S	8,050	8,050	3,181	3,593	0.40	0.45	3,760	4,003	0.47	0.50	3,792	4,201	0.47	0.52	3,863	4,496	0.48	0.56	3,887	4,501	0.48	0.56	3,798	4,097	0.47	0.51
	SR 99 s/o Cloverdale St																										
	8th Ave S, s/o Director St																										
	East Marginal Way S, s/o Boeing Dr																										
	14th Ave S, n/o Director St																										
	Airport Way S, n/o S Norfolk St																										
5.11	Ship Canal Ballard Bridge	2,210	2,210	2,240	1,654	1.01	0.75	2,451	1,718	1.11	0.78	2,500	1,701	1.13	0.77	2,536	1,703	1.15	0.77	2,552	1,709	1.15	0.77	2,491	1,731	1.13	0.78
	Ballard Br																										
5.12	Ship Canal Fremont Bridge	2,210	2,210	1,300	1,450	0.59	0.66	1,506	1,511	0.68	0.68	1,524	1,499	0.69	0.68	1,527	1,528	0.69	0.69	1,535	1,532	0.69	0.69	1,517	1,520	0.69	0.69
	Fremont Bridge																										
5.13	Ship Canal Aurora Ave N	5,380	5,380	1,638	1,828	0.30	0.34	1,874	1,879	0.35	0.35	1,884	1,883	0.35	0.35	1,866	1,905	0.35	0.35	1,870	1,908	0.35	0.35	1,863	1,898	0.35	0.35
	Aurora Br																										
7.11	West of Aurora Ave - Fremont Pl N to N 65th St	5,790	5,790	3,110	3,605	0.54	0.62	3,164	3,694	0.55	0.64	3,163	3,698	0.55	0.64	3,157	3,713	0.55	0.64	3,166	3,725	0.55	0.64	3,159	3,711	0.55	0.64
	Fremont Pl N, n/o Fremont Ave N																										
	N 39th St, w/o Fremont Ave N																										
	N 46th St, w/o Phinney Ave N.																										
	N 50th St, w/o Fremont Ave N																										
	N 65th St, w/o Linden Ave N																										
8	South of Lake Union	6,150	6,150	3,832	4,266	0.62	0.69	2,616	3,155	0.43	0.51	2,624	3,150	0.43	0.51	2,640	3,172	0.43	0.52	2,642	3,162	0.43	0.51	2,629	3,158	0.43	0.51
	Valley St, w/o Fairview Ave N																										
	WB Mercer St, w/o Westlake																										
	EB Mercer St, w/o Westlake																										
	Republican St, w/o Eastlake Ave																										
	Denny Way, e/o Minor Ave																										
9.12	South of Spokane St - E Marginal Way S to Airport Way S	12,400	12,800	5,791	6,201	0.47	0.48	6,273	6,261	0.51	0.49	6,327	6,271	0.51	0.49	6,394	6,347	0.52	0.50	6,434	6,360	0.52	0.50	6,337	6,279	0.51	0.49
	E Marginal Way SW, s/o Duwamish Ave																										
	Alaskan Wy, n/o East Marginal Way S																										
	1st Ave S, s/o S Spokane SR St																										
	4th Ave S, s/o S Spokane SR St																										
	6th Ave S, s/o S Forest St																										
	Airport Way S, n/o S Spokane St																										
10.11	South of S Jackson St - Alaskan Way S to 4th Ave S	11,610	10,230	6,754	6,788	0.58	0.66	7,516	6,971	0.65	0.68	7,534	6,958	0.65	0.68	7,596	6,962	0.65	0.68	7,608	6,974	0.66	0.68	7,560	6,998	0.65	0.68
	Alaskan Wy S, N of S King St																										
	SR 99 Tunnel																										
	1st Ave S, n/o S King St																										
	2nd Ave S, n/o S King St																										
	4th Ave S, s/o 2nd Ave ET S																										

J EIS Mitigation Measures List

EIS Mitigation Measures List

The EIS identifies possible mitigation measures that will reduce or eliminate adverse environmental impacts of one or more alternatives. These mitigation measures are detailed by topic in Chapter 3. Mitigation measures highlighted features of the Industrial and Maritime Strategy, and the potential policy and code amendments, that function to reduce impacts, as well as regulations and commitments in place. This appendix lists the other potential mitigation measures that the City can consider implementing through further development of the policy, code, or program proposals to reduce impacts to the natural or built environment. They are listed and summarized by environmental topic. Full details are located in Chapter 3.

Soils/Geology

Geotechnical investigations are required as part of the design phase for new development, especially for those buildings with greater heights or in close proximity to artificially created slopes. Prior to commencing site-specific subsurface investigations of soils, the Duwamish tribe should be notified to ensure that an archaeologist can observe the work. Standard archaeological techniques should be used during excavation and drilling for the potential discovery and preservation of cultural and historical artifacts related to the indigenous tribes. Any evidence gathered should be presented and turned over to the Duwamish Tribe at the Duwamish Longhouse & Cultural Center.

Specific recommendations for liquefaction mitigation, subgrade preparation, roadway embankment, cut and fill, slope stability, foundation design, retaining structures, and dewatering measures would be prepared prior to construction. Appropriate waste sites for unsuitable excavated soils would be identified prior to construction.

Potential impacts of soil liquefaction could be mitigated by removing and replacing the loose materials with compacted fill materials, by densifying or reinforcing the in-situ soils, or by supporting the proposed facilities on deep foundations or piles. The need for liquefaction mitigation would be evaluated on a case-by-case basis for the individual structural elements potentially impacted.

Potential impacts of vapor intrusion from historical landfills within the study area would be investigated by performing site-specific vapor intrusion assessments and/or by installing

passive or active methane mitigation systems in structures developed on historical landfills, or within the 1,000-foot methane buffer.

Air Quality & GHG

Air Quality

Mitigation strategies are not required due to a lack of significant adverse impacts, however potential for exposure of existing and new employees, residents, and visitors to potential air emissions in areas around arterials, along industrial buffers, and near port operations should be considered in future planning.

The Seattle Comprehensive Plan and MIC Subarea Plans could:

- Include policy guidance that recommends that residences and other sensitive land uses (i.e., schools, day care) be separated from freeways, railways, and port facilities, and new MML, II, and UI zones by a buffer area of no less than 500 feet, and possibly as much as 1,000 feet, depending on the height of the source, to reduce the potential exposure of sensitive populations to air toxics. (US Department of Transportation 2015)
- Include policy guidance that recommends and funds support for the electrification of industrial and maritime activities that currently rely on fossil fuels, including the transportation related assets that are an integral part of those land uses.
- Incorporate new development standards that include requirements that recommend that residences and other sensitive land uses (i.e., schools, day care) include enhanced air filtering and circulation to address pollutant transportation generated particulates. Specifically, U.S. EPA identifies that mechanical ventilation/filtration systems with a Minimum Efficiency Reporting Value (MERV) of 9 through 12 are adequate for removing 25 to 80% of automobile emission particles (U.S. EPA 2009a).
- Consider locations for schools, daycares, and residential uses that increases buffers from high-volume roadways or other measures to reduce exposure to criteria pollutant emissions.
- Assure design standards for parks in proximity to high-volume roadways and industrial areas incorporate landscaping with full bottom to top of canopy coverage, higher canopy heights, and multiple rows of vegetation types, including denser tree canopies, that help reduce exposure to criteria pollutant emissions.
- Add a denser tree canopy near high-volume roadways and industrial areas.
- Incorporate standards for more frequent street sweeping to reduce roadway dust and prevent emissions of PM_{2.5} in fugitive dust associated with increased vehicle miles traveled.
- Consider inclusion of a City-owned and operated air monitoring station in Ballard-Interbay and the Duwamish Valley to provide the public with access to daily air monitoring data.

- Where the City has authority to do so, consider designating truck routes serving industrial and manufacturing areas away from residential areas, particularly those residential areas with vulnerable populations.

Greenhouse Gases & Climate Change

- **Subarea Plan Policies:** As part of Subarea Plan development, the City could establish policies that:
 - Incentivize use of electrical infrastructure to serve industrial process needs, industrial, commercial, and residential space heating needs, rather than natural gas.
 - Strengthen climate resiliency requirements and City support for business engagement and continuity planning for developments throughout the MICs.
 - Expand City-sponsored development and training pathways for workers in resilient industries who locate in the MICs.
 - Incentivize industries focused on clean technologies or processes to locate within the MICs.
- **Green Building Standards:** To lower the GHG contribution from industrial and commercial uses, policies that encourage or mandate new construction projects in the study area to:
 - Achieve one of the following green building standards: LEED In Motion: Industrial Facilities, Built Green, the Living Building Challenge, or the Evergreen Sustainable Development Criteria.
 - Use low-embodied carbon construction material types, such as low-carbon concrete mixes.
 - Limit carbon-intensive materials or incentivize use of lower carbon alternatives such as a wood structure instead of steel and concrete, or agricultural products that sequester carbon.
 - Salvage materials like brick, metals, broken concrete, or wood.
 - Use high-recycled content materials.
 - Prioritize adaptive reuse for existing buildings to avoid additional embodied carbon emissions.
 - Include embodied carbon goals in building codes (AIA, 2021).
- **Building Demolition Waste Reduction:** The City could consider programs to require or encourage building deconstruction rather than bulk demolition for older industrial buildings demolished in the study area.
- **Puget Sound Energy (PSE):** Seattle is served by PSE for natural gas service. PSE has established a target to reach net zero carbon emissions for natural gas used in customer homes and businesses by 2045, with an interim target of a 30% emissions reduction by 2030. The City could promote or incentivize PSE and/or study area employers to integrate greater volumes of renewable natural gas into their systems or processes. Coordination with King County Wastewater Treatment Division and with SPU' Solid Waste Division could enhance efforts.

- **Electric Vehicles:** The City could adopt regulations for the study area that support the placement of infrastructure for charging of electric vehicles (including commercial and industrial vehicles) in applicable new developments. Seattle Public Utilities is exploring the creation of a city-owned electrical vehicle charging facility in the Duwamish MIC intended for drayage trucks.
- **Trees:** The City could adopt regulations/incentives for the study area that preserve and/or replace on-site trees and encourage planting of more trees. Trees and shrubs can provide shade and lower temperatures in urban areas and can assist with GHG reductions.
- **Expand electrification of marine terminals:** The City, Port of Seattle and private partners could accelerate the extension of shore power to terminals and docks throughout the Seattle waterfront, including at Coleman Dock and Terminals 5, 18, 30, 46, and 66, and where appropriate for US Coast Guard vessels, and other research vessel berths. Consider commitment of public funding for the infrastructure investment. Consider regulations requiring vessels to connect to shore power if it is present.
- Where the City of Seattle has authority, consider imposing restrictions on maritime air emissions for ocean-going vessels while underway.
- Consider commitment of public funding for the necessary infrastructure to expand availability of shore power, and electrify cargo and passenger handling equipment to include those areas and ships not covered by the Port of Seattle's existing plans.
- The City and partner agencies could improve coordination and improve the user experience for community members registering complaints or requesting information about enforcement related to emissions from sites or businesses.

Water Resources

Alternatives 3 and 4, and the Preferred Alternative, result in the greatest increase in housing in portions of the Ballard and SODO/Stadium Subareas, which could create a larger concentration of pets and associated animal waste and a potential to impact local surface water quality. An increased emphasis on pet waste management through education and outreach and increased pet waste disposal stations should be implemented in areas surrounding these housing developments to prevent negative impacts on water quality.

All alternatives, including the No Action Alternative, would increase the concentration of people in SODO/Stadium and Georgetown/South Park Subareas, which have large geographic areas that are vulnerable to sea level rise impacts. The City of Seattle Office of Sustainability and Environment (2017) has identified the following adaptation strategies that should be prioritized by the City and partner agencies as a means of reducing vulnerability to sea level rise in the Study Area:

- Explore further opportunities to incentivize or require existing building upgrades to improve preparedness for future climate conditions, including consideration of regulations that require design of buildings, structures, and industrial and manufacturing sites to consider the sea level rise projected to occur during the life of the facility.

- Develop mechanisms to incorporate climate preparedness and passive survivability into the planning and development processes for new development.
- Consider the disproportionate impacts of climate change on communities of color and lower income communities in planning, policies, and programs, and prioritize programs and incentives that mitigate those impacts.
- To reduce flood risk and reduce flood insurance rates, evaluate the benefits and costs of participating in the National Flood Insurance Community Rating System program.
- Evaluate the requirements of the Floodplain Development Ordinance to identify additional opportunities to reduce food hazards, including the base flood elevation threshold, the definition of a substantial improvement, and the regulation of footbridges and other potential obstructions to stream flow.
- Regularly update flood prone area maps to incorporate the latest data near creeks, shorelines, and other emerging urban flooding areas.
- Conduct a detailed coastal study of the Duwamish River to better delineate the current and increasing risk of flooding and identify a range of mitigation strategies to pursue.
- Assess the benefits of incorporating rolling easements into the next update of the Shoreline Master Plan.
- Continue to incorporate Green Stormwater Infrastructure (GSI) into development regulations.
- The City should also evaluate vulnerability of underground infrastructure to higher groundwater levels.

Plants & Animals

- Mitigation measures would be developed on a case-by-case basis related to specific projects to comply with applicable federal, state, and City permitting requirements.
- Additional stormwater treatment would be integrated into new development or redevelopment as feasible including but not limited to green roofs, enhanced BMPs, and pervious pavement alternatives.
- New development or redevelopment could plant vegetation adjacent to streams and lakes to provide shade and organic inputs.

Contamination

During construction, the following measures would minimize potential impacts of accidental releases of hazardous material:

- Preparing a comprehensive contingency and hazardous substances management plan, a worker health and safety plan, a spill prevention control and countermeasures plan, and a Construction Stormwater Pollution Prevention Plan.

- Managing and disposing of hazardous or contaminated materials in accordance with applicable laws and regulations.
- Prior to commencing site-specific subsurface investigations of soils, the Duwamish tribe should be notified to ensure that an archaeologist can observe the work. Standard archaeological techniques should be used during excavation and drilling for the potential discovery and preservation of cultural and historical artifacts related to the indigenous tribes. Any evidence gathered should be presented and turned over to the Duwamish Tribe at the Duwamish Longhouse & Cultural Center.
- The City and partner agencies could improve coordination and improve the user experience for community members registering complaints or requesting information about enforcement related to contamination from sites or businesses.

Noise

Zoning land use criteria or boundaries could be established, while meeting other planning goals, to limit the proximity of new residential development to known or anticipated sources of high noise levels.

To limit the impacts of temporary construction noise, in addition to restrictions on the hours of construction other mitigation that could be applied includes:

- installing barriers to shield noise sensitive receptors and enclosing stationary work
- selecting haul routes to avoid noise sensitive areas
- using alternative methods to pile-driving (e.g., hydraulic or vibration pile insertion or auguring/drilling holes for piles)
- using fully baffled compressors, or preferably electric compressors
- using fully mufflered construction equipment

Under alternatives 3 and 4 and the Preferred Alternative, which would allow the development of new residential, the City could impose greater noise reduction standards in residential buildings where exterior noise levels greater than 65 dBA are likely to occur or where other uses occupying the same structure would likely contribute to excessive noise levels (above 45 dBA) within residences. These standards could include:

- installation of acoustically rated windows and doors that include high quality elastomeric caulking, multiple sashes, multiple panes, increased glass thickness, and increased airspace between glass panes
- installation of additional wall and attic/roof insulation
- installation of dampers and baffles on exterior vents, flues, and chimneys

Noise from tire-pavement interactions is the dominant contributor to roadway noise. A long-term mitigation program to reduce noise in noise-sensitive areas within the study area would

be to install noise reducing pavement on major arterials and roadways that experience relatively high traffic volumes and speeds.

The City and partner agencies could also improve coordination and improve the user experience for community members registering complaints or requesting information about enforcement related to noise from sites or businesses.

Light & Glare

Consider implementation of additional development standards to address maximum height of exterior illumination. The II land use concept would allow buildings up to 160 feet in height, and the MML land use concept does not impose a maximum height, only a maximum Floor Area Ratio (FAR). These standards should address placement, light output, direction, and shielding of any exterior illumination above a given height to reduce light and glare emissions to adjacent non-industrial areas.

Land & Shoreline Use

Though no significant adverse land use impacts are identified, it would be possible to further mitigate the identified moderate and minor land use impacts with the following actions. Incorporation of these actions would reduce the likelihood that any of the impacts could potentially become significant.

- **Apply maximum size of use limits to industrial zones in Alternative 1.** If Alternative 1—No Action is selected, expected use incompatibility impacts and policy conflict impacts could be reduced by incorporating maximum size of use reductions for office and retail uses (similar to the MML zone) into the existing Industrial General zones. This could be stand-alone legislation. The maximum size of use limits could be applied to areas only within designated MICs in order to provide continued flexibility for IG zoned areas outside of MICs.
- **Limit the geography of industry-supportive housing and monitor.** Incompatibility, transition, and policy inconsistency impacts could be mitigated to a lower level if the proposed industry supportive housing allowances are initially limited to a smaller geography. Limits could test the concept in a pilot area, or the proposed UI zone could include versions with and without the expanded housing allowances. The City and partners could monitor the initial effects of the expanded housing allowances for an initial test period of 3–5 years, then consider applying to more areas. Stakeholders in industrial areas such as community organizations, Business Improvement Areas (BIAs) and trade groups could be involved in the monitoring process through formation of a stewardship group.
- **Update zoning at edge areas outside of the study area in the future.** Changes include limiting significant housing development in adjacent mixed-use zones to reduce potential

impacts related to inadequate transitions from industrial to nonindustrial areas, particularly where core industrial zones are located close to these transitions. Changes could include application of the proposed Urban Industrial zone to more areas outside of industrial areas, including in some urban villages.

- **Contributions towards equitable development.** There have been historic impacts from industrial activities on populations including indigenous communities that preceded this proposal. It is plausible that continuation of land uses according to City and regional policies could perpetuate past harms according to some populations including indigenous peoples. As a voluntary measure unrelated to impacts of any of the proposal's alternatives, current owners of land could support equitable development for indigenous groups by developing a broad-based system of contributions to community building and resilience. The contributions could take forms such as donations to ongoing community development initiatives identified in the Duwamish Valley Action Plan, or participation in the Duwamish's Real Rent program. As infrastructure investments are made in the study area, promote equitable phasing and locations to reduce historic impacts with input from affected community members. Examples include improving parks and streetscapes to reduce heat island effects, improving existing transitions to residential areas, improving noise attenuation to residential areas, and reducing existing risks of sea level rise.
- **Design Guidance for development in the UI and II zones when abutting nonindustrial areas.** Non-codified design guidance to address impacts associated with height, bulk, scale, and aesthetics, and design treatments appropriate for the edges of industrial areas could be a resource for developers and community members alike in developing projects that abut nonindustrial areas.
 - **Amend Substantial Alteration Thresholds.** The City could review and amend its practice of determining when the threshold for a building substantial alteration is exceeded in industrial zones, especially the UI zone. When a substantial alteration threshold is exceeded construction must upgrade to current energy and seismic code standards. This can potentially disincentivize the adaptive reuse of older warehouse style structures that were common in industrial areas. To allow for adaptive reuse more often to achieve the intent of the Urban Industrial (UI) zone, the City could consider more forgiving determinations of substantial alteration.

Housing

Impacts of anticipated residential growth under the alternatives are not significant based on the thresholds identified in the EIS.

Comprehensive Plan Update

The City will plan for the citywide amount of housing growth in the Comprehensive Plan EIS on a citywide scale. As part of this ongoing commitment, the City could consider

- Adding additional capacity for housing in urban villages and residential areas in locations that will have fast access to the new II zones to help address the shifts in demand for housing in response to employment growth in industrial areas. The II zones are in the closest locations to light rail (1/4–1/2 mile), and light rail will provide good access to these areas.
- Adding additional capacity for housing in urban village and residential areas in locations adjacent to new UI zones to address the shifts in demand for housing in response to employment growth in the industrial areas.

Mandatory Housing Affordability

Given the potential for employment growth to shift demand for housing, the City could consider the following mitigation measures:

- Apply MHA regulations to the to the proposed new Industry and Innovation zone. Increases in employment growth envisioned under the alternatives could shift some of the overall expected citywide employment growth into industrial areas. This could have an impact on housing, especially if additional new employment were added to industrial areas not subject to the MHA regulations. Applying MHA to the proposed new Industry and Innovation zone can mitigate this shift in demand.
- The City can also mitigate negative impacts of industrial development on nearby residents as follows (see [Section 3.2 Air Quality & GHG](#) and [Section 3.6 Noise](#) for details):
 - Include policy guidance that recommends that residences and other sensitive land uses be separated 500 feet or appropriate distance from freeways, railways, and port facilities.
 - Add a denser tree canopy near high-volume roadways and industrial areas.
 - Impose greater noise reduction standards in residential buildings where exterior noise levels greater than 65 dBA are likely to occur.
 - Install noise reducing pavement on major arterials and roadways that experience relatively high traffic volumes and speeds.

Transportation

Location-specific mitigation measures are discussed for the following two travel time corridor and transit screenline impacts:

- 15th Avenue W between Magnolia Bridge and NW Leary Way
- W Dravus Street between 15th Avenue W and 20th Avenue W

Travel Time Impact: 15th Avenue W between Magnolia Bridge and NW Leary Way

A travel time impact is expected along 15th Avenue W between Magnolia Bridge and NW Leary Way under both alternatives 3 and 4. The BIRT Study analyzed the 15th Avenue NW corridor in detail and outlines potential investments, some of which would mitigate the travel time

impacts. The scale of each project's potential efficacy in improving the transportation system is evaluated as either transformative or small. These include:

- Intersection operations refinements along 15th Avenue W at W Armory Way, Gilman Drive W and W Howe Street (transformative). This would include improvements such as turning radii adjustments to better accommodate frequent freight turning movements and signal phasing adjustments to shorten the amount of time needed for traffic flow crossing the 15th Avenue W corridor.
- Installation of an adaptive signal system along the corridor (transformative). Adaptive signal control is a coordinated traffic signal system that gathers real-time vehicle demand data and dynamically adjusts signal timing to optimize traffic flow.
- Joint-use of the existing bus-only lanes by both transit and freight on 15th Avenue W between Denny Way and Market Street (small). The City is currently planning a pilot project for Freight and Bus Lanes on Westlake Avenue which will provide information about benefits and implementation elsewhere, such as the 15th Avenue NW corridor.
- Replacement of the Ballard Bridge to improve northbound traffic flow (transformative). There are currently two options under consideration: a mid-level and a low-level replacement. The mid-level bridge would reduce the frequency of bridge span openings making travel times across the bridge more reliable and shorter on average while the low-level option would provide an easier grade for people walking and biking. Both options would include a Single Point Urban Interchange (SPUI) at W Nickerson Street/W Emerson Street which would improve travel time reliability for trucks entering and exiting the BINMIC.

Travel Time Impact: W Dravus Street between 15th Avenue W and 20th Avenue W

A travel time impact is expected along W Dravus Street between 15th Avenue W and 20th Avenue W under alternatives 2, 3, and 4. The BIRT Study outlines potential investments along the W Dravus Street corridor, some of which would mitigate the travel time impacts. These include:

- Signal operations improvements and ITS strategies (small). This could include optimizing traffic signal timing along W Dravus Street to support both general purpose traffic and freight reliability to and from the Terminal 91 North Gate if it reopens. Signal timing and hardware improvements at the 15th Avenue W and W Dravus Street ramps could also ensure vehicle queues on the bridge have cleared to give trucks adequate space to turn, minimizing the delays currently experienced at this location.
- Roadway striping/channelization modifications to remove geometric constraints for large trucks (small). This would include improving the turn radii at 15th Avenue W and W Dravus Street so trucks could more easily make the turn to and from the ramps, minimizing the delays currently experienced at this location.
- Access management enhancements at frequent and busy driveway access points (small).
- Replacement and/or widening of the W Dravus Street bridges (transformative). Options could include roadway rechannelization, conversion to a roundabout at 17th Avenue W, and/or widening the Dravus Street bridge west of 17th Avenue W.

Travel Time Impact: I-5 between Madison Street and SR 599 and SR 509 between SR 99 and SR 518

A travel time impact is expected along I-5 between Madison Street and SR 599 (stretching along the east side of the Greater Duwamish MIC) and SR 509 between SR 99 and SR 518 under alternatives 3 and 4. While the City of Seattle works closely with WSDOT regarding facilities running through the city limits, I-5 and SR 509 are owned and operated by the State. In 2019, WSDOT and the City of Seattle jointly applied for a federal grant to move planning efforts for the I-5 system forward; however, the project was not awarded any funding at that time. Both agencies continue to work toward securing funding for I-5 improvements, as well as coordinate with the PSRC on potential approaches to address congestion on regional highways. However, for the purposes of this EIS, no location-specific capital improvement-based mitigation measures are assumed that would address travel time impacts along I-5 or SR 509.

Regarding land use mix and trips, under alternatives 3 and 4, the City could consider the balance of employment uses and plan for greater industrial jobs, and a smaller share of non-industrial jobs (e.g., retail, services, office) in the Greater Duwamish MIC to reduce trips. The Preferred Alternative (developed based on feedback regarding potential impacts of the Draft EIS alternatives) would have less employment density than alternatives 3 and 4. The land uses proposed under the Preferred Alternative were analyzed using the regional travel demand model, which suggests there would be no significant travel time impacts to either I-5 or SR 509 under the Preferred Alternative.

Historic, Archaeological, & Cultural Resources

When elimination, minimization, or avoidance of impacts to historic, archaeological, and cultural resources is impossible, appropriate and meaningful mitigation should be developed in accordance with DAHP Mitigation Options and Documentation Standards and in coordination with the area's Tribes, the lead agency, and all other consulting parties. Developing a mitigation plan should be an iterative and collaborative process using a diversity of lenses, which results in mitigation that improves the public's understanding and enriches technical knowledge of the impacted resource(s) (Douglass and Manney 2020).

Some examples of mitigation for impacts for architectural resources, might include:

- Preparing DAHP Level I (Historic American Building Survey/Historic American Engineering Record [HABS/HAER]) Documentation.
- Preparing DAHP Level II Documentation.
- Funding to DAHP for improvements to WISAARD to improve mapping of resources.
- Funding City-initiated proactive landmark nominations for properties and potential historic districts identified in new neighborhood surveys.

- Prioritizing City funding for retrofitting Unreinforced Masonry (URM) buildings to those properties that meet eligibility requirements for designation as a landmark or for listing in the National Register of Historic Places.
- Developing of cultural landscape contexts, including within historically marginalized communities.
- Preparing histories of the area including Indigenous perspectives. The City could work with tribes and others to develop context statements. A context statement focused on Historical Planning and Land Use Decisions is drafted in [Section Error! Reference source not found. Error! Reference source not found.](#)
- Funding City-led thematic historic context inventories that focus on marginalized or underrepresented immigrant communities and preparing thematic context statements relating to those resources.
- Conducting neighborhood survey and inventory projects within underrepresented or marginalized communities
- Considering potential impacts to historic resources during development review specifically that are associated with marginalized or underrepresented immigrant communities as part of project level SEPA review, or during the design review process.
- Including development incentives for preservation of architectural resources including adaptive reuse projects in the proposed Urban Industrial zone, such as an exemption from the floor area ration calculation, or flexibility for allowable uses within the structure. Such adaptive reuse projects could follow the *Secretary of the Interior Standards for Rehabilitation* or the City could develop new rehabilitation guidelines for adaptive reuse.
- For alternatives 3 and 4, exploring or studying the possible addition of a new Seattle Landmark District for the mixed-use area of Georgetown.
- Establishing new conservation districts to encourage preservation of older structures (referred to in SMC as “character structures”). Establishing Transfer of Development Rights (TDR) programs within new conservation districts to provide incentives for property owners to keep existing character structures.
- Adding regulatory authority to identify resource-specific mitigation before demolition occurs.
- Requiring project proponents to nominate buildings for landmark review when demolition of properties that are over 50 years old is proposed, regardless of City permitting requirements, by modifying the SEPA exemptions thresholds in the Seattle Municipal Code at Table A for section 25.05.800, and Table B for section 25.05.800.

Mitigation for adverse impacts to archaeological or cultural resources, could include:

- Prior to commencing site-specific subsurface investigations of soils, notifying the Duwamish tribe so an archaeologist can observe the work.
- Employ standard archaeological techniques such as archaeological testing, excavation and data recovery/collection of artifacts, documentation, analysis, sharing evidence with the Duwamish Tribe, and archiving, possibly in a repository for future research.

- Public education and outreach, including interpretive signage and/or a museum exhibit.
- Interpretive signage and educational programs for the National Maritime Heritage Area.
- Development of digital and other media content, including film, to share holistic stories of the impacted resource(s).

Open Space & Recreation

While parks are a great source of open space, the combination of existing uses and new land use concepts within the alternatives may present challenges that may not be resolved with new parks. Other potential mitigation measures the City could explore outside of creating new parks include creating linear parks and trails, increasing frequency of maintenance to offset an increase in park usage, and building resilient parks. The City could also explore transportation to and from parks and potentially increase connectivity between parks. Finally, the City might explore the use of community gardens (permitted on some rooftops in individual zones) as a way to provide open space and an urban agricultural use.

Public Services

Fire & Emergency Medical Services

- Ongoing City operational and capital facilities planning efforts are anticipated to address incremental increases and other changes in demand for fire services.
- A portion of the tax revenue generated from potential redevelopment in the study area would accrue to the City of Seattle and could be used to help fund fire services.
- The City is considering an option to replace the Magnolia Bridge with a new bridge along Armory Way connecting to Thorndyke Avenue W at W Halladay Street. Replacing the bridge could improve emergency vehicle access to the study area and potentially lower response times.

Police

- A portion of the tax revenue generated from potential redevelopment in the study area would accrue to the City of Seattle and could be used to help fund police services.
- To reduce criminal activity and calls for service, site design principles can be employed such as orienting buildings towards the street, providing public connections between buildings, and providing adequate lighting and visibility.

Schools & Libraries

- The Seattle Public Library has a strategic plan and operations plan that guide the provisions of library services.

- The II and UI zones include potential changes to streetscape standards and could enhance walking routes to schools in areas with added housing.

Utilities

Wastewater & Combined Sewer

- **Water Conservation Measures:** Redevelopments may reduce per-capita water demand (and therefore, wastewater service demand) by using newer, low- or no-flow plumbing fixtures and equipment.

Stormwater

- No additional mitigation is proposed.

Electrical Power

- Future service system needs could be identified and evaluated through collaborative planning between Seattle's Office of Planning & Community Development and Seattle City Light.
- Installation of photovoltaic and other local generating technologies would reduce the demand on the public generating and distribution facilities.
- Construction and operation of LEED compliant (or similar ranking system) buildings would reduce the level of increase required in power systems.
- The use of passive systems, such as building design which utilizes layout and materials for transfer of heat rather than electrical systems, and modern power saving units would reduce the use of power in building heating and cooling. This could include, but is not limited to upgraded levels of insulation, reduced air infiltration, and selection of energy-efficient appliances.

K Presentation Slides from the Draft EIS Public Hearings

Industrial and Maritime Strategy Draft Environmental Impact Statement (EIS)

January 2022



City of Seattle

Today's Presentation

1. Planning process to date
2. Proposed land use concepts and Draft EIS alternatives
3. Topics studied in the Draft EIS
4. EIS scope and submitting a scoping comment.

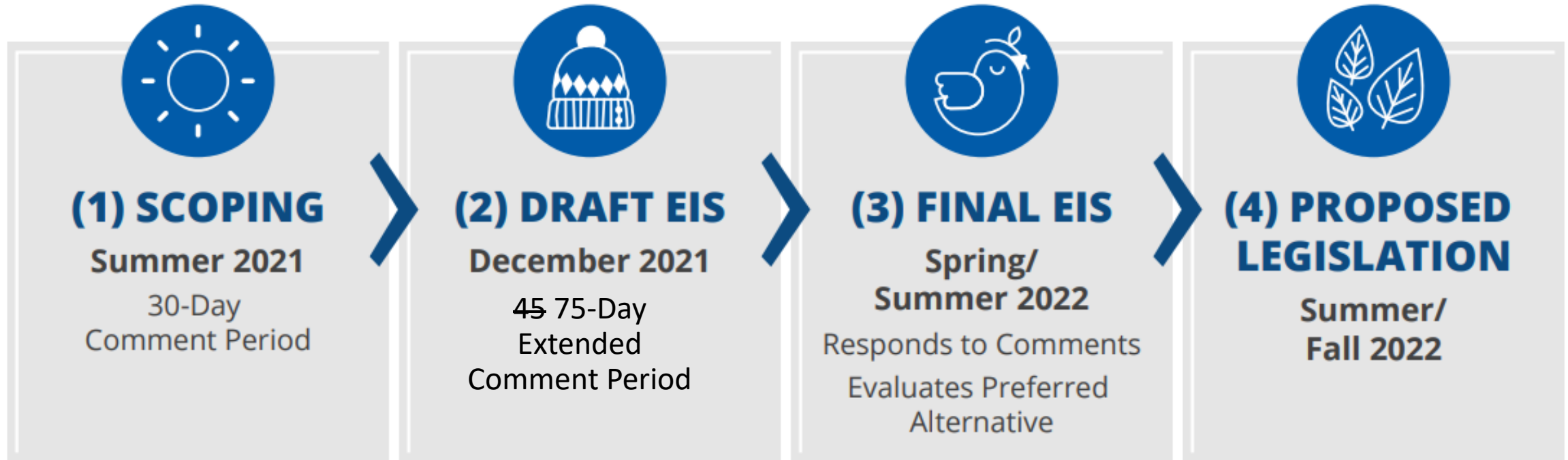


Planning Process to Date

- **Advisory Council Process:** Convened November, 2019 – May, 2021. Developed 11 strategies addressing land use, transportation, environment, public safety, and workforce development that comprise the Industrial Maritime Strategy
- **Additional Engagement:** BIPOC youth outreach, interested organizations and groups, businesses profile videos.
- **2022 Budget Process:** Implemented, green infras., workforce
- **Environmental Impact Statement (EIS):** Evaluates land use changes.



Environmental Impact Statement (EIS) Process



The City is extending the Draft EIS comment period an additional 30 days to March 2.



Proposed New Land Use Concepts

MARITIME + MANUFACTURING + LOGISTICS

Strengthen established economic clusters to protect economic diversity and opportunity

INDUSTRY + INNOVATION

Support modern industrial innovation and capitalize on major transit investments

URBAN INDUSTRIAL

Foster vibrant districts that support local manufacturing and entrepreneurship

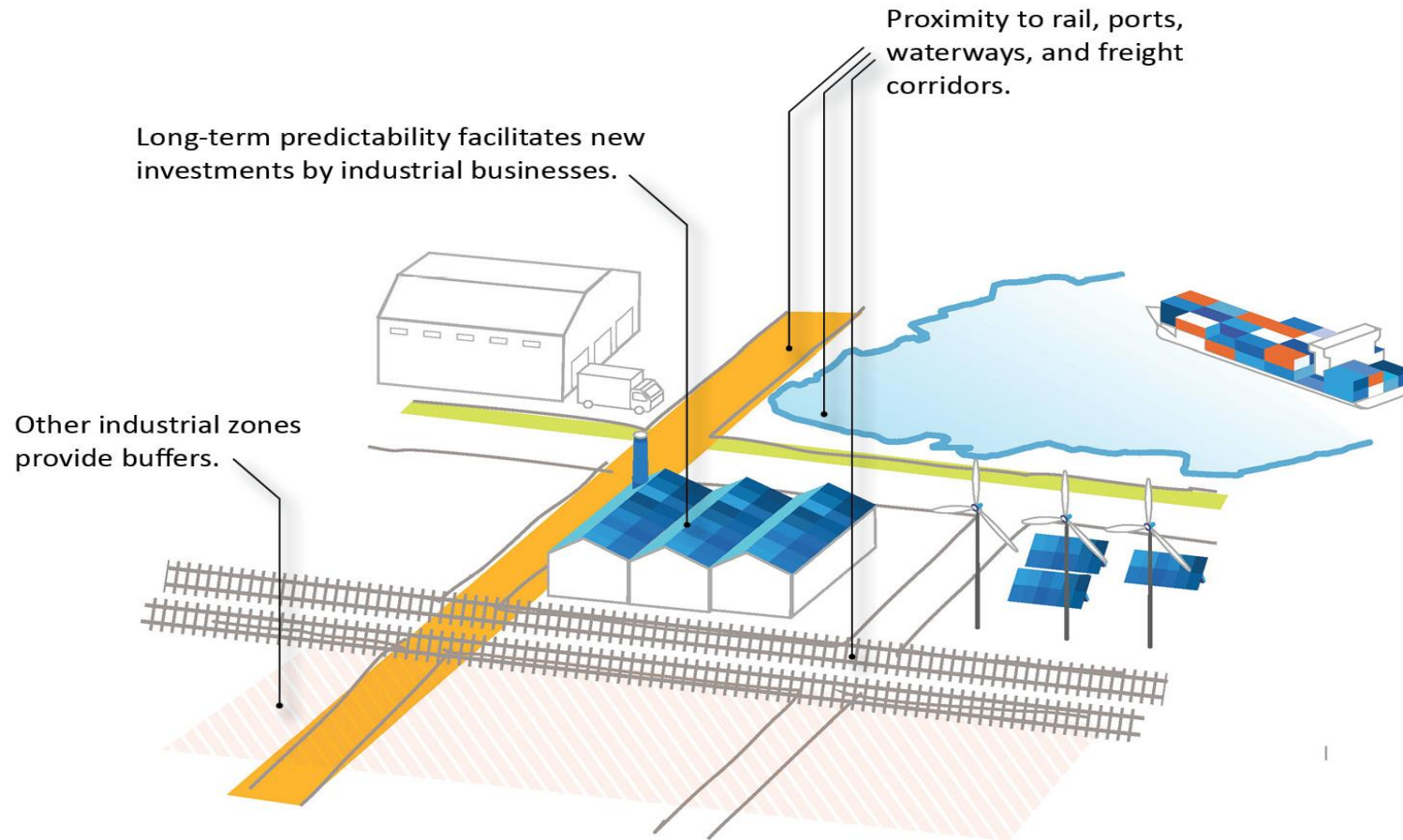
Proposal:

The City's Comprehensive Plan would be amended to include and describe these land use concepts.

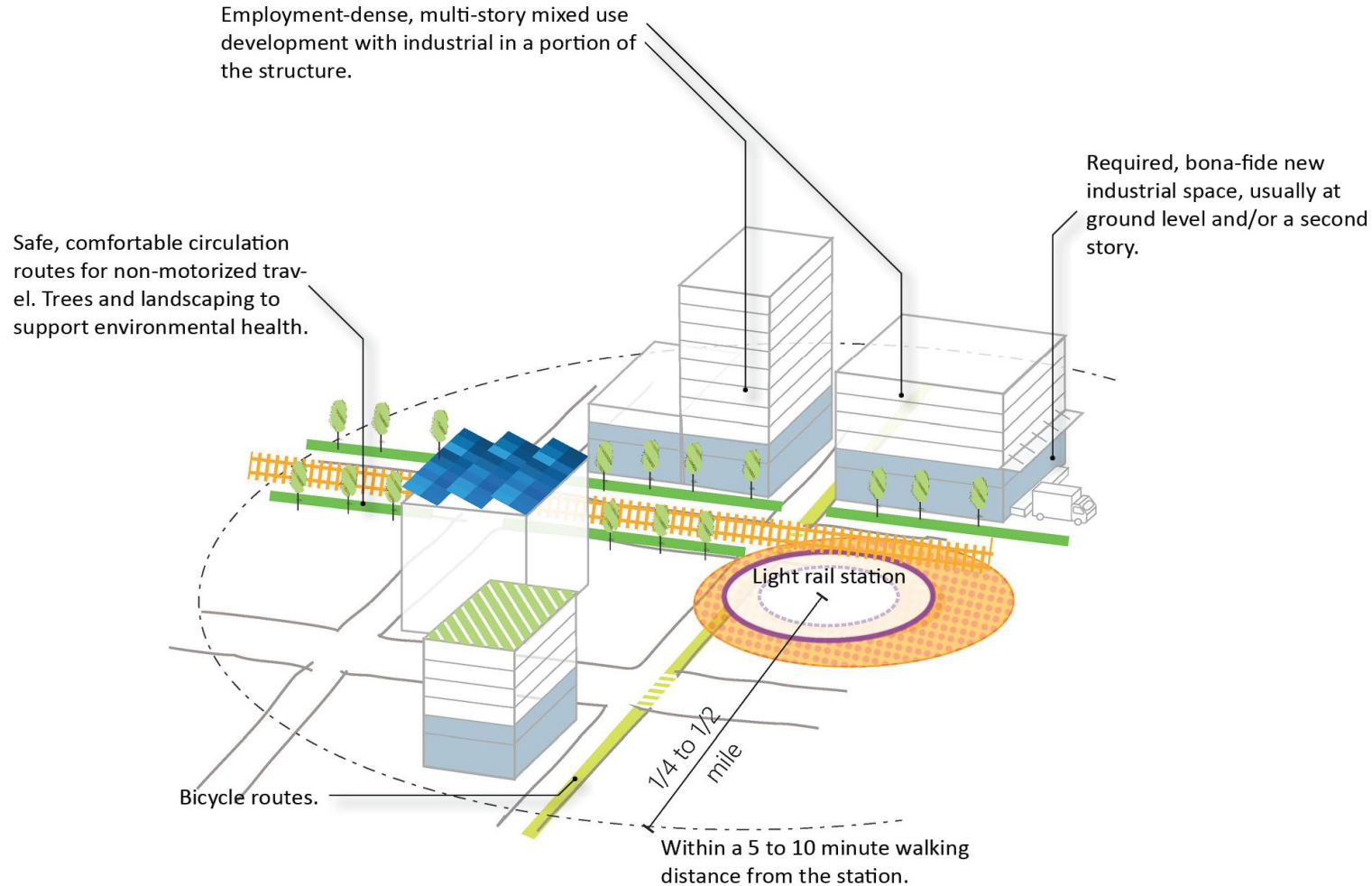
The zoning code would be amended to replace Seattle's existing industrial zones with new zones to match these land use concepts.



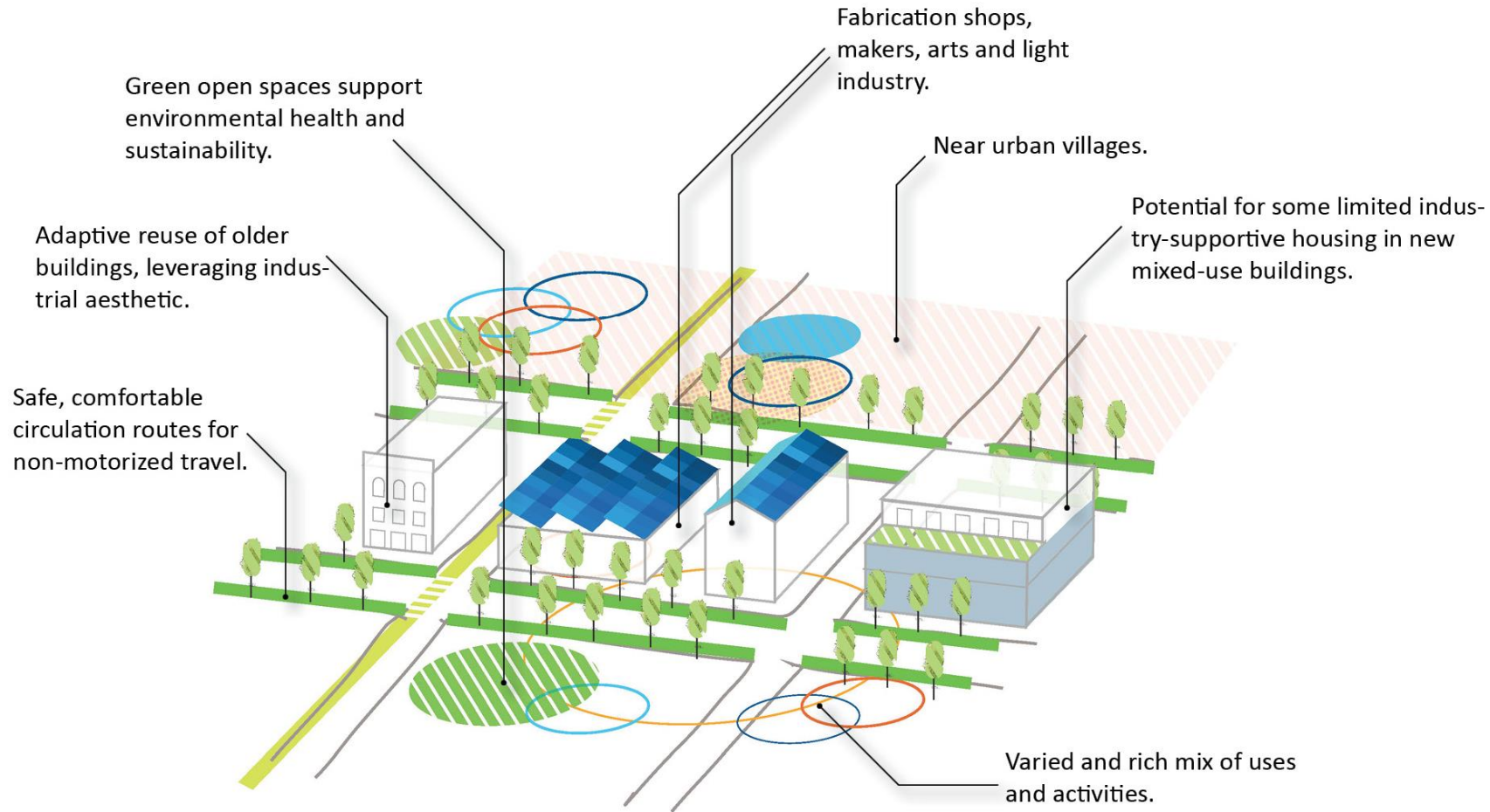
Maritime, Manufacturing and Logistics (MML) - Concept Diagram



Industry and Innovation (II) - Concept Diagram



Concept Diagram – Urban Industrial (UI)



Environmental Impact Statement (EIS) Alternatives

An EIS studies a range of alternatives in order to:

- Identify potential adverse impacts on the built and natural environment.
- Learn how impacts differ and identify trade-offs of policy choices.
- Compare action alternatives to a no-action alternative.
- The subjects studied in the EIS are determined as part of the scoping process.



Alternative 1 – No Action



Industrial General: 90 %



Industrial Commercial: 5%



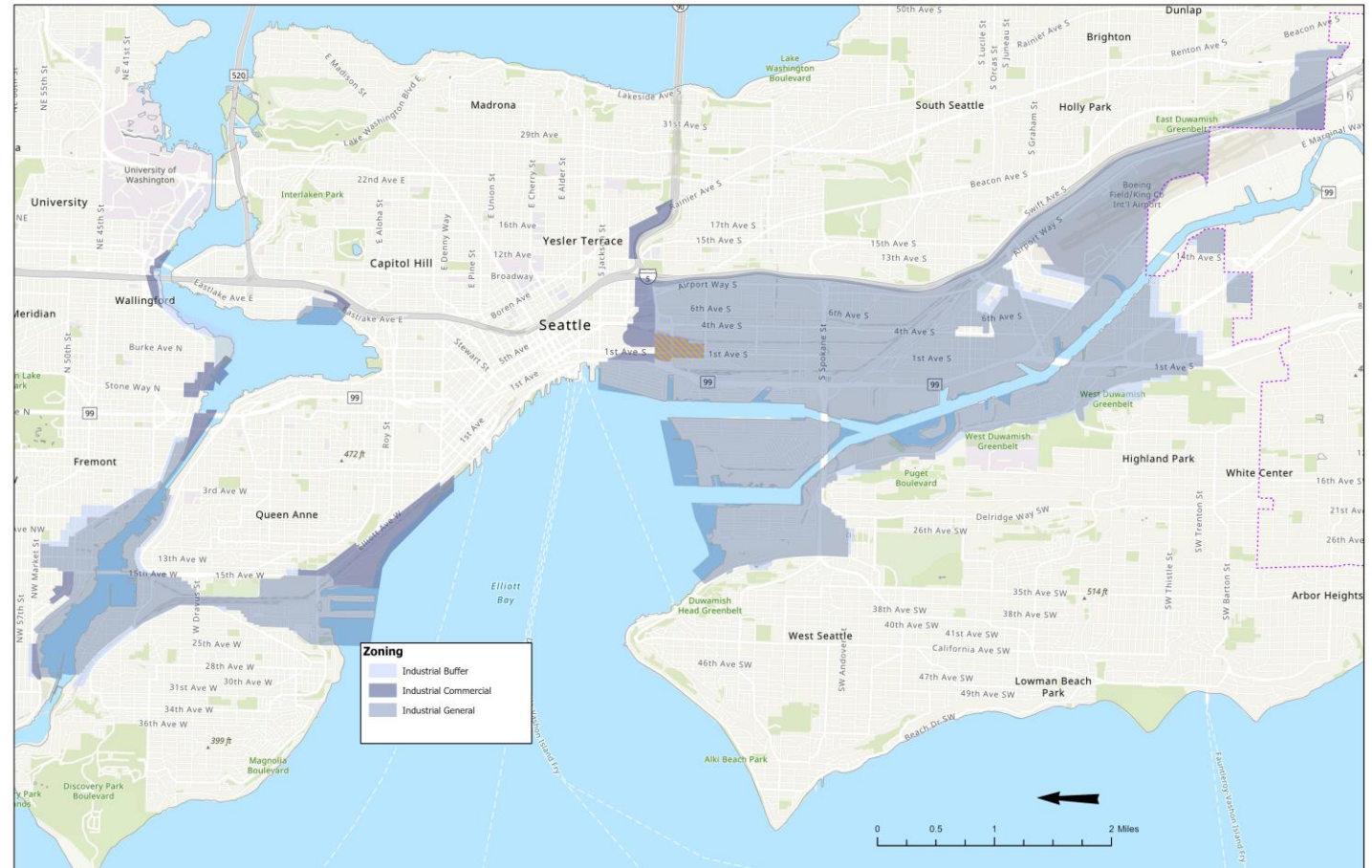
Industrial Buffer 5%

Provide baseline to compare impacts of 3 action alternatives.

Relies on existing zoning and land use policies.




No new residential uses are permitted other than existing provisions for Caretakers/Artists Studios

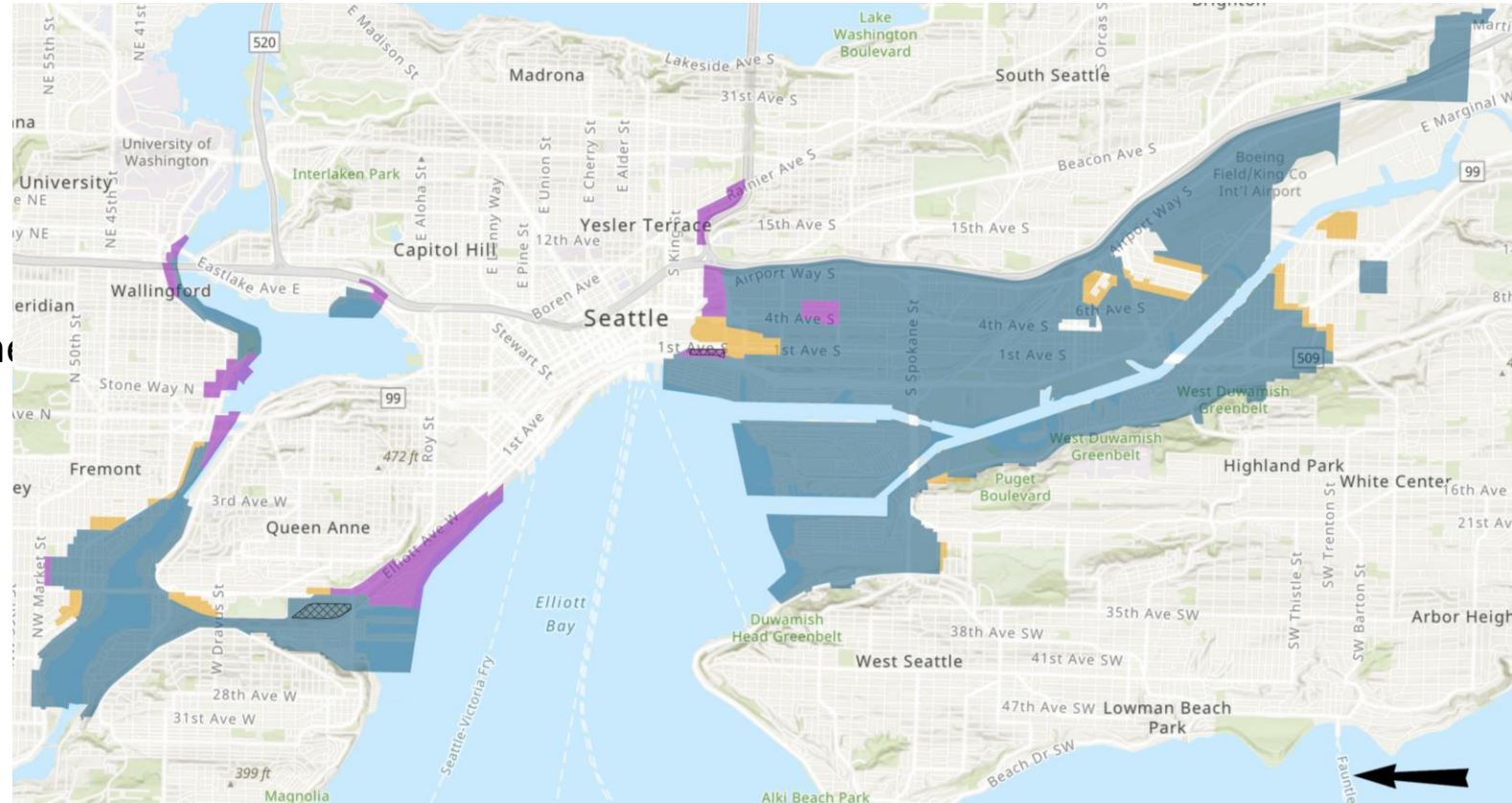
Lodging continues to be prohibited in Stadium District Overlay.





City of Seattle

Alternative 2 – Limited - Future of Industry

-  **Maritime, Manufacturing and Logistics zones: 89%**
-  **Industry / Innovation zone: 5%**
¼ mile radius from light rail stations
and current Industrial Commercial zone
-  **Urban Industrial zone: 6%.**
No expansion of what is allowed for
housing.
No lodging in Stadium District

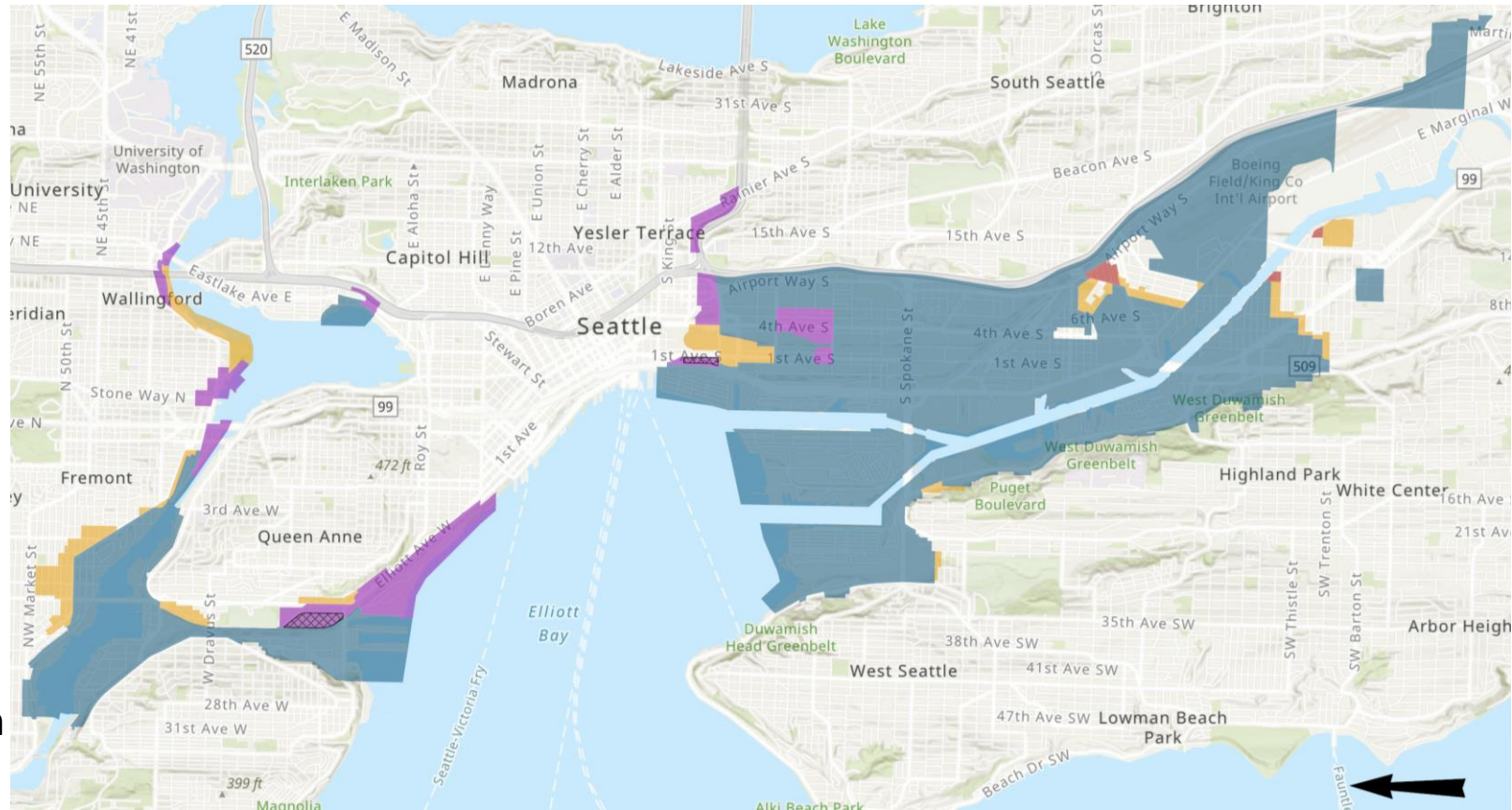


Alternative 3 – Targeted - Future of Industry

-  **Maritime, Manufacturing and Logistics zone: 86%**
-  **Industry / Innovation zone: 7%**
½ mile radius from light rail stations and current Industrial Commercial areas
-  **Urban Industrial: 7%**
Includes expanded caretakers provisions with a potential for ~600 units.

Removes focused land in Georgetown and South Park from the MIC.

Permits lodging in the Stadium Transition Area Overlay District.

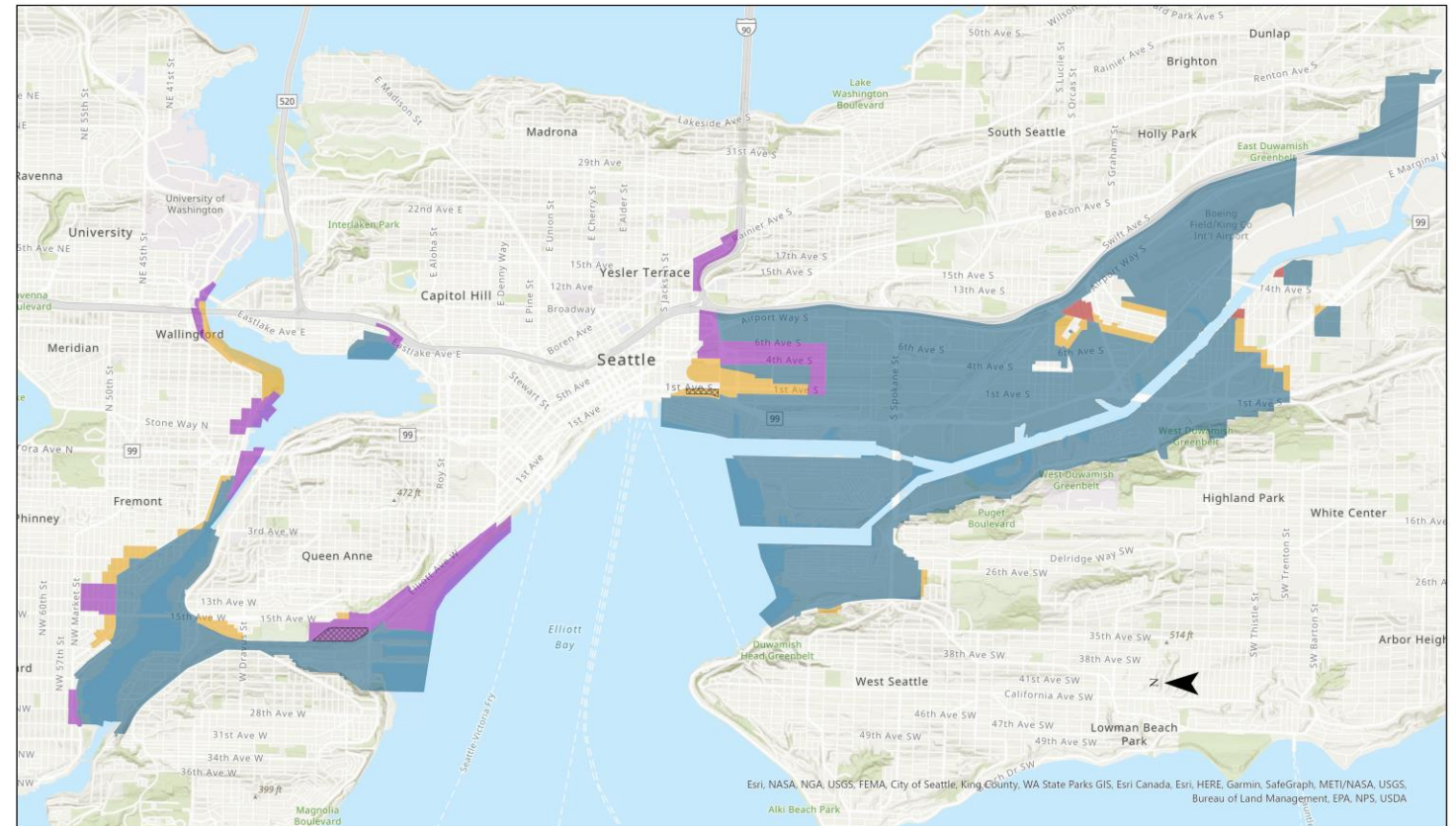


Alternative 4 – Expanded - Future of Industry

-  **Maritime, Manufacturing and Logistics zone: 86%**
-  **Industry/Innovation zone: 8%**
Greater than ½ mile radius from light rail stations and current Industrial Commercial areas.
-  **Urban Industrial zone: 6%**
Includes expanded industry-supportive housing with potential for ~2,000 units.

Removes focused land in Georgetown and South Park from the MIC.

Permits lodging in the Stadium Transition Area Overlay District

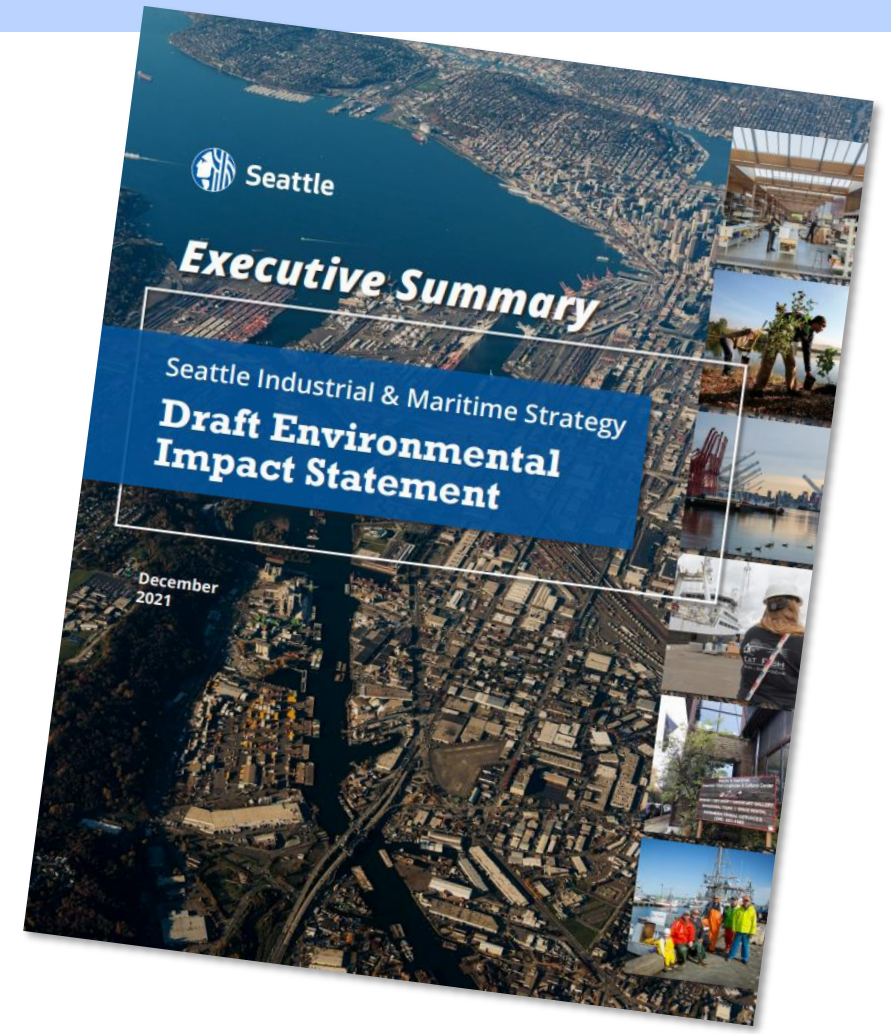


Summary of Alternatives



Elements Studied in the Draft EIS

- Soils/Geology
- Air Quality/Greenhouse Gas Emissions
- Water Resources
- Plants and Animals
- Contamination
- Noise
- Light and Glare
- Land and Shoreline Use
- Housing
- Transportation
- Historic, Archeological, and Cultural Resources
- Open Space and Recreation
- Public Services
- Utilities



Draft EIS Contents

Chapter 1 – Summary

Chapter 2 – Proposal & Alternatives

Chapter 3 – Environment, Impacts, and Mitigation Measures

- Identifies thresholds of significant impact
- Equity analysis for each element

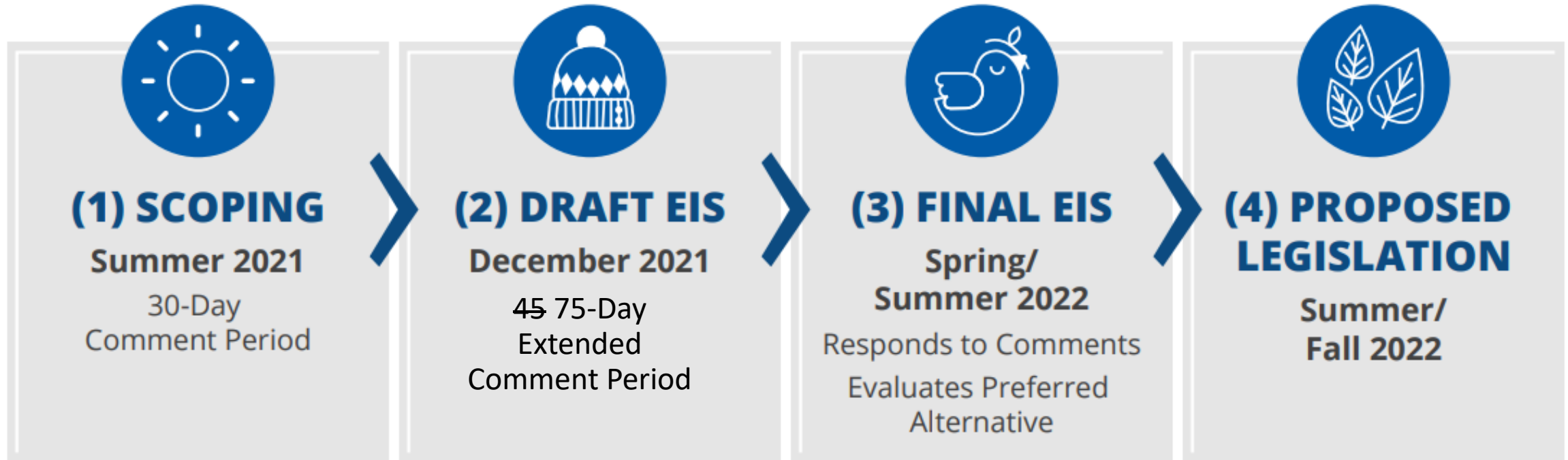
Chapter 4 – Acronyms & References

Chapter 5 - Appendices



City of Seattle

Environmental Impact Statement (EIS) Process



The City is extending the Draft EIS comment period an additional 30 days to March 2.



Effective Draft EIS Comments

Comment About:

- Where additional analysis is needed
- If information is incomplete or needs correction
- How alternatives can be modified or improved
- Potential mitigation strategies



To review the entire Draft EIS, supporting materials, and submit a comment:

- [Industrial and Maritime Strategy - OPCD | seattle.gov](#)



MIC Criteria	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	BINMIC	Duwamish MIC	BINMIC	Duwamish Mic	BINMIC	Duwamish MIC	BINMIC	Duwamish MIC
Planned Jobs: 20,000 minimum	36,500	85,500	39,900	93,000	51,500	104,400	52,900	104,800
Minimum 50% Industrial Employment	55.34%	54.03%	60.90%	59.24%	53.79%	53.45%	52.74%	52.86%
Availability of existing or planned frequent, local, express, or flexible transit service.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Presence of irreplaceable industrial infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
At least 75% of land area zoned for core industrial uses								
Industrial Zones	100%		100%		100%		100%	
IG and MML Zones Only	90.4%		90.1%		86%		87%	

