



Cully Park

Improving health through community partnerships

Overview

This summary describes the results of a collaborative process involving the Oregon Health Authority (OHA), the Oregon Department of Environmental Quality (DEQ), Verde, the Let Us Build Cully Park! (LUBCP!) Coalition, and Cully neighborhood residents. The document was created in response to requests from community members who were involved in the process. The document summarizes the need for a park in Cully, the history and current conditions of the park property, the methods and processes for soil and air sampling, and the risk assessment findings, which show that the concentrations of all contaminants tested for are too low to cause harm to people's health. At the end, we share some community reflections and the next steps in the park's development.

Community need

All over the country, communities are looking to create more greenspaces, parks and community gathering places, especially in urban areas where land is less available. Where there was once a landfill, a gas station or an abandoned building, community members come together to open a coffee shop, design a park or build a community center. This type of redevelopment can improve the health and vitality of a community by increasing opportunities for healthy activities such as growing fresh foods, exercising and social gathering. This is the case in northeast Portland where a coalition of local residents and community-based organizations are redeveloping a former landfill into a park.

The Cully neighborhood is considered the most "parks-deficient" neighborhood in Portland. The regional average for residents living within a quarter-mile of a park is 40 percent. In Cully, it is 24 percent. Cully also encompasses the most racially and ethnically diverse census tract in the state, with almost 45 percent of its residents being people of color. The regional average is just over 20 percent. Also, almost 23 percent of Cully neighborhood children live in poverty, as compared to just over 12 percent regionally.¹

¹ 2007 *Regional Equity Atlas, Appendix A, Portland State University and the Coalition for a Livable Future* accessed online at <http://www.equityatlas.org/chapters/EquityAtlas.pdf>



History of the park property

Cully Park is located on land that holds historic and cultural significance for many Cully residents, community-based organizations and tribal communities. Before European arrival, the nearby Neerchokikoo Indian Village thrived in the Columbia Slough area. A rich trade economy flourished along the Columbia River, which attracted thousands of Native American tribal members from across America. Some of the first maps of the village were drawn by Lewis and Clark in 1804–1805 and make reference to the Skil-lute Nation and “Sh-ha-las” people, a Chinook band.

From 1805 onward, the area was used by Oregon pioneers for travel, settling and trade. By 1936 the land was developed mainly for agricultural use. At this time houses and roads were also built in the area and the northwest corner of the future Cully Park property was developed into a rock quarry.

From 1948 to 1978 the majority of the property was mined for sand and gravel. When mining operations ended, a large pit was left behind which made the property an ideal landfill site. The pit was covered on the bottom and the sides with a liner to prepare it for use as a landfill. This was the first fully lined landfill in Oregon.

From 1981 to 1990, Reidel Waste Disposal Systems operated the Killingsworth Fast Disposal (KFD) landfill. The landfill accepted mostly construction and demolition waste. In 1990 the landfill stopped receiving waste and was covered with a thick plastic-like liner over the top. Two feet of soil was brought in and grass was planted. A limited landfill gas collection system also was installed at this time.

In 1993 underground fires in the landfill led to growing concerns about landfill gas moving off site into neighboring buildings. DEQ made repairs to the landfill cover where fires burned through, and replaced and upgraded the landfill gas collection system.

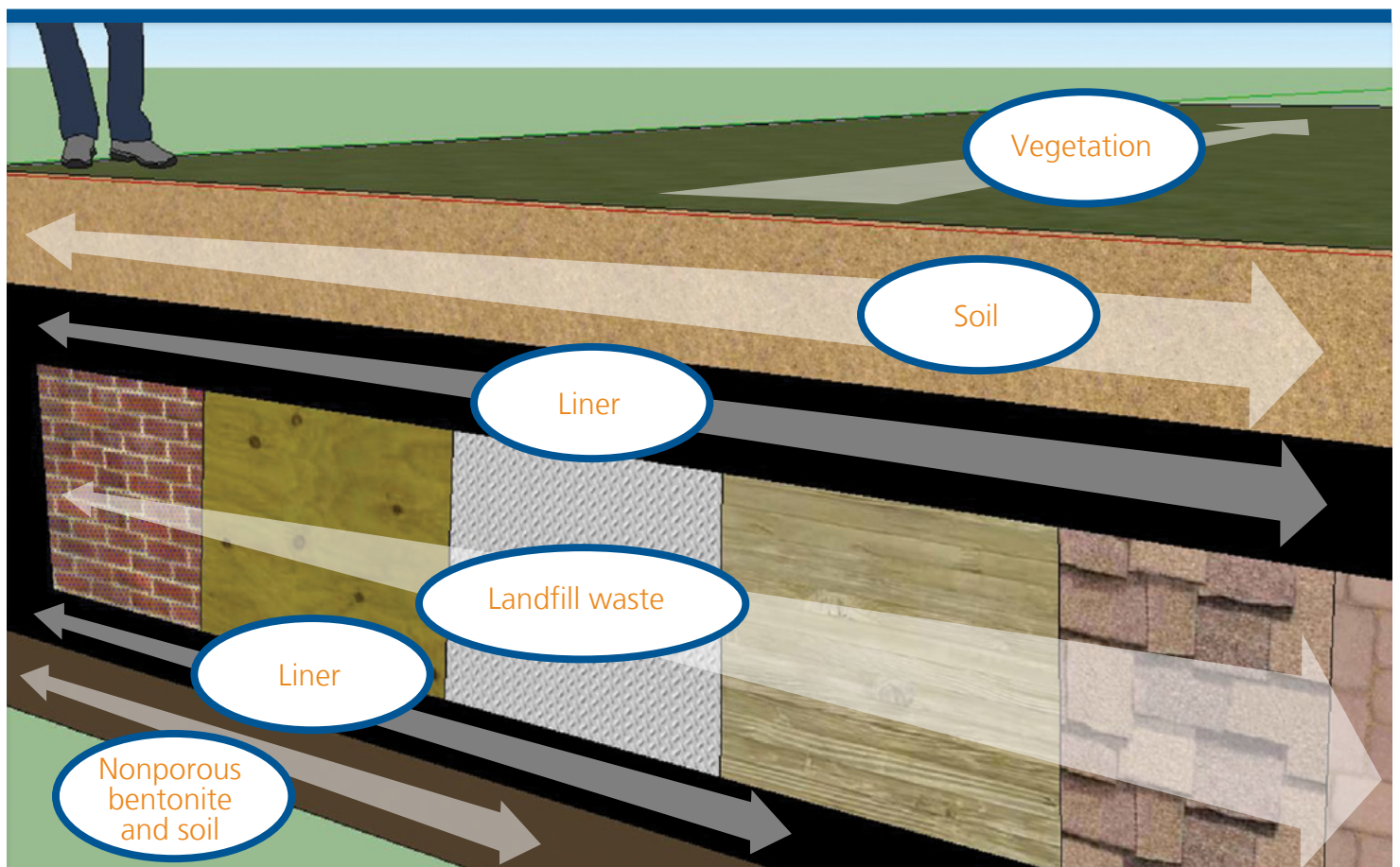
In 2000, Portland Parks & Recreation became the owner of the site and Metro took on the responsibility of monitoring the landfill gasses, grounds maintenance and security of the site. Since 2002, Metro has monitored for methane and other contaminants. During this time, the Cully neighborhood advocated for development of the site as a park and in 2006 the master plan for the park was initiated. The Cully Park master plan was completed in 2008 with a great deal of input from Cully residents.

Current conditions at the park

In its current state, the Cully Park site is a 25-acre grassy field positioned above the surrounding industry, railroad lines, streets and homes. The park property is bounded by Northeast Columbia Boulevard to the north, Northeast Killingsworth Street to the south, and extends from approximately Northeast 72nd to Northeast 78th avenues to the west and east, respectively. The site offers sweeping views of Mount Hood, Mount St. Helens, the Colwood golf course, the Columbia Slough and the surrounding Cully neighborhood.

Landfill features

There are several safety features built into the site to monitor the landfill. Many of the features are visible above ground (for example, monitoring well heads and a flare), and will be in place for as long as it takes the buried material to break down and decompose. Since the landfill primarily accepted construction waste (materials such as concrete, wood and metal) it will take many decades, even centuries for it to completely decompose. As materials decompose, methane gas and leachate — the liquid produced as material breaks down — is created. The landfill has four main safety features to contain the gas and liquid produced. These features include a: landfill liner, landfill gas management system, leachate collection system, and flare. The following is a description of each.



Landfill liner: The landfill is lined on the bottom, sides and top with a thick plastic-like material. This liner keeps the buried material contained and serves as a barrier so that gas, liquid and other materials do not move into the air, water, or surrounding soil.

Landfill gas management system: This system includes 29 gas extraction wells that are between 26 and 70 feet below the surface. These wells contain and direct the gas generated by the material in the landfill through an underground piping system. Above ground, 29 yellow well monitoring heads can be seen around the edges of the site.

Leachate collection system: Liquid, known as “leachate,” produced by the landfill is collected and channeled through a series of underground pipes at the bottom of the landfill that slope toward the center of the property where a sump pump is located. The sump is approximately 96 feet deep, and actively pumps the leachate into the city sewer for treatment. After being treated, liquid is discharged into the Columbia and Willamette rivers.

Flare: A structure that contains the landfill flare, the blower and the compressor, is located on a securely fenced-in cement pad near Northeast 75th Avenue and Killingsworth Street. The flare is used to burn off methane gas when it reaches a certain level. Currently the system operates for about two hours each day and is monitored regularly by Metro. Use of the methane gas as a source of energy to power some of the proposed park features was considered. However, the landfill does not produce enough gas to make the investment in infrastructure worth the effort to harness the energy produced.



Monitoring well head



Landfill flare

Can a landfill really be a park?

Yes! Cully Park is not the only example of a park built over a landfill. Nationwide there are many examples,² and as land for parks, green space, wildlife and recreation is more difficult to acquire in urban areas, more will be converted. Public health involvement at sites with contamination or hazard concerns ensures safe reuse of the site through evaluating health risks and understanding and addressing the concerns of the people who live near the site.

In 2010, the Let Us Build Cully Park! (LUBCP!) Coalition was formed. This coalition brought together Cully residents, community-based organizations, environmental professionals, and government agencies to design and conduct environmental and human health risk assessments. The first assessment was conducted on the area of land proposed for use as a community garden. The garden is located on the old landfill property, but not on top of the area where the waste is buried. The community garden risk assessment was provided through a community partnership with the Portland Brownfields Program. Information on the results for this assessment is found at the end of this document. The second assessment examined the full site, where the landfill waste is buried and contained, described in this document.

² <http://webecoist.momtastic.com/2009/05/10/garbage-to-green-10-landfills-turned-into-nature-preserves/>



Map provided by GeoEngineers Environmental Consulting Firm

Air and soil sampling of the park

Using Incremental Sampling Methodology (ISM), the full site was divided into 10 “decision units,” each with an equal area. The boundaries for the decision units were drawn according to what is known about previous use of the land and activities on the site. For example, “Decision Unit 3” was established along the property line that is shared with the railroad tracks because of known pesticide use along the railroad. “Decision Unit 1” was created because most of the topsoil in this area contains dredged material brought in from the Laurelhurst pond. The map on page 5 shows how the site was divided into decision units, as well as the air sampling locations, Laurelhurst dredge placement, and liner repair areas.

More than 300 samples were collected, 30 from each of the 10 decision units. Additional samples were collected for quality control purposes. All samples were taken from surface soil, between 1 inch and 6 inches below the grass. This soil depth was selected because people are most likely to come into contact with surface soil, especially toddlers and young children, once the site is a park.

When the soil and air samples were collected, people living in the Cully neighborhood actively participated in the sampling event by: using handheld air monitors to measure landfill gasses; placing stakes in the ground to identify sampling locations; and documenting observations (such as the presence or absence of wind, odors, etc.). A professional environmental consulting firm was hired to collect the samples, and community members observed this process. Individual samples were placed in a stainless steel bowl and then poured into a large glass jar and sent to a laboratory. The results reported from the laboratory conform to the most current laboratory standards for maintaining quality assurance.



Risk assessment findings

The community garden and the Cully Park site were assessed in two separate processes.

Community garden site

LUBCP! worked with community members and the [Portland Brownfields Program](#)³ to examine the environmental conditions at the community garden site. The assessments for the community garden site took place in two phases:

- **Phase I:** A historical records review that examined past uses of the site.
- **Phase II:** Sampling and analysis of the site's soil to assess its suitability for a community garden. **The laboratory testing found that all levels of contaminants in the garden soil were far below levels established for health concern.**

Cully Park site

Together the community garden and the Cully Park site was designated as a brownfield by [DEQ](#).⁴ This designation made funding available for sampling and assessment from [DEQ's](#) Brownfield Program. Verde, Cully neighbors, DEQ and OHA worked together to conduct a human health risk assessment of the full site. Assessments for the park site took place in two phases:

- **Phase I:** A historical records review that examined past uses of the site, including interviews with community members.
- **Phase II:** Examined the air and soil quality. A Community Involvement Committee (CIC) comprised of Cully residents and community-serving organizations participated in the Phase II assessment. The Full Site Phase II was completed in July 2012 and the [OHA Health Consultation report](#)⁵ was released for public comment in January 2013. **All findings indicate that the levels of contaminants tested are too low to harm the health of people recreating at the park.**

See page 11 of this document for information on where to find these reports.

3 <http://www.portlandonline.com/bes/index.cfm?c=35008>

4 <http://www.deq.state.or.us/lq/cu/brownfields/index.htm>

5 <http://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/EnvironmentalHealthAssessment/Pages/Brownfields.aspx>



Community involvement

A door-to-door survey of the neighborhood, conducted by Portland Community Reinvestment Initiatives (PCRI) guided community involvement strategies that engaged the Cully neighborhood in the risk assessment process for the site. Verde, a community-serving non-profit organization based in the Cully neighborhood, formed a Community Involvement Committee (CIC) to maintain the community's presence with municipal, environmental and public health agencies through the redevelopment process for the site. Members of the CIC served as connections to communities living near the park, including youth, Latinos, Somalis, low-income people, low-income housing providers, tribal people, longtime neighborhood residents, and newcomers to the neighborhood.

For the first time in Portland, local residents were involved during the actual sampling of soil at a brownfield site. This level of community participation created several positive outcomes. First, community members were able to trust and understand the risk assessment process firsthand. Second, community members ensured that the process was understood by their neighbors and the larger Cully community. Third, agencies involved likely will consider a deeper level of community involvement in their future work.

State agency risk assessment and health education professionals from DEQ and OHA engaged Cully residents at monthly meetings through a variety of activities, in ways that were culturally relevant. Cully residents learned about landfill features, brownfields, risk assessment, air and soil sampling, and laboratory analysis. They shared their concerns about the site, and agency staff ensured that those concerns were reflected and addressed either in the sampling plan or in recommendations for park development. Residents participated in the sampling event and visited an environmental testing laboratory to learn how samples are analyzed.



Community reflections

“Thanks for everything that I learned at the meetings.” – Claudia

“First, I was very impressed with Verde’s professional and cordial mentoring of our group. Second, I greatly appreciated the enthusiasm and commitment of folks on the committee and how they made me and my husband feel comfortable and welcome. Third, I was gratified by the attention the committee received from governmental staff — mostly, I think due to Verde’s fine advocacy and organizational skills.” – Laura

“Families need to know that the turf they run on, the trails they walk, and the air they breathe is safe when they are enjoying Cully Park. The CIC created an environment of conviviality — agency officials and community members addressed the impacts of building an equitable, community-led park on top of landfill by jointly testing the environmental and human health concerns in real-time, first-person group meetings in Scott School and on the park site. While the community members learned about testing equipment, the parameters of safe and unsafe results, and how results could be remediated if necessary, DEQ and the OHA were able to collect the data they needed to approve the next phases of Cully Park. It was a win-win! This was an exciting process for participants who had not performed any of the tests before, and an important process as it not only demonstrated the power of community-led projects, it also proved that the Cully Park site will be a safe park for everyone in the community.” – Julie

Next steps

Park development

Cully Park is now entering a three-year development process to open the park by fall 2015. As with the risk assessment process, community members remain deeply involved in all aspects of park development, including: conceptualization, design, construction

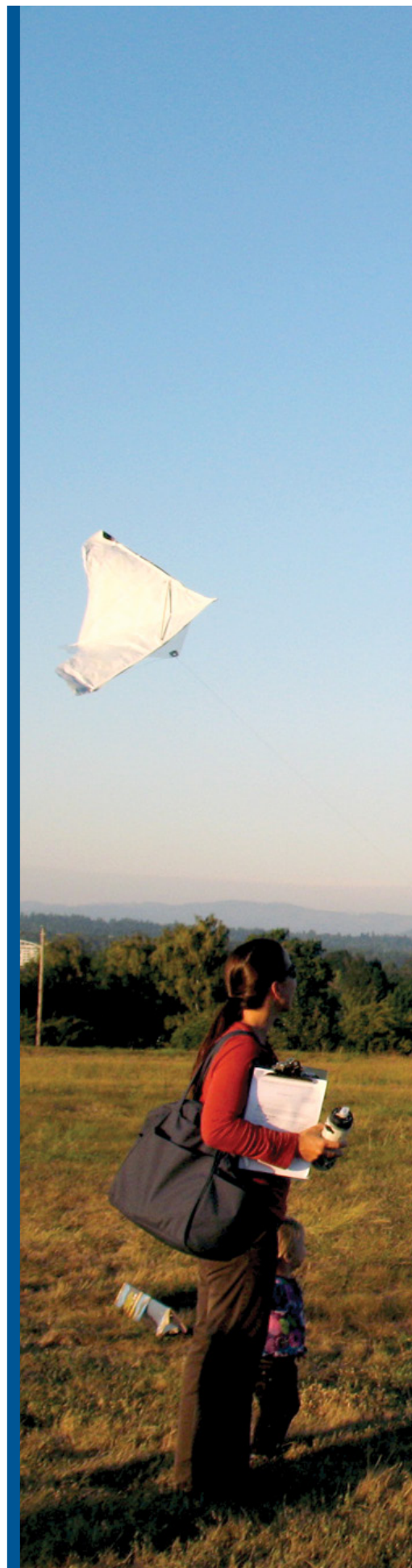


and use. From July 1, 2012, through June 30, 2013, Verde will lead the design of a habitat restoration area, a temporary onsite plant nursery, a play area, a network of trails and a tribal plant gathering area. This area has long supported traditional lifeways of Oregon Indians and today the Cully neighborhood continues to celebrate rich and diverse cultures, traditions and histories. Through the opportunities created at Cully Park, this neighborhood can acknowledge the important contributions of the diverse communities who make the Cully neighborhood their home. The park features listed above will be constructed starting in fall 2012 and completed by fall 2013. Plans for the park construction include using local businesses and local labor, to benefit local minority and low-income residents.

Understanding the health benefits of Cully Park

An ongoing effort, involving OHA, Verde, housing and health-related service providers in the Cully neighborhood, Cully residents, and other equity and health-focused organizations, is taking place to understand the health-related benefits of developing a park in Cully. Overall improvements in community health have been seen in neighborhoods that are similar to Cully.

Understanding the health benefits of developing parks in underserved areas helps to make the case for redeveloping brownfields in other communities that need safe spaces to recreate and play; access to fresh produce; and places for community gatherings. Some of the potential health benefits of redeveloping this landfill into a park include: increased opportunity for physical activity, increased access to healthy food, a decrease in obesity and obesity-related conditions, improved feelings of safety and connectedness among the community, and an opportunity to restore cultural identity through the restoration of native habitat and the use of native plants significant to tribal practices. Cully Park has the potential to become a hub for community building, cultural identity and environmental stewardship.



Resources

The following reports can be accessed at <http://verdenw.org/about-us/verde-news/184-lubcp-convenes-hhra-community-involvement-committee>.

Cully Park Community Garden Site

- Phase I Executive Summary and Report
- Phase II Results

Cully Park Site

- Cully Park Master Plan
- Full Site Phase I Summary and Report
- Full Site Phase II
- Oregon Health Authority Health Consultation

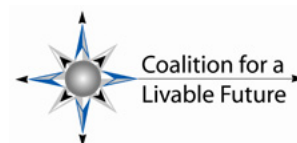


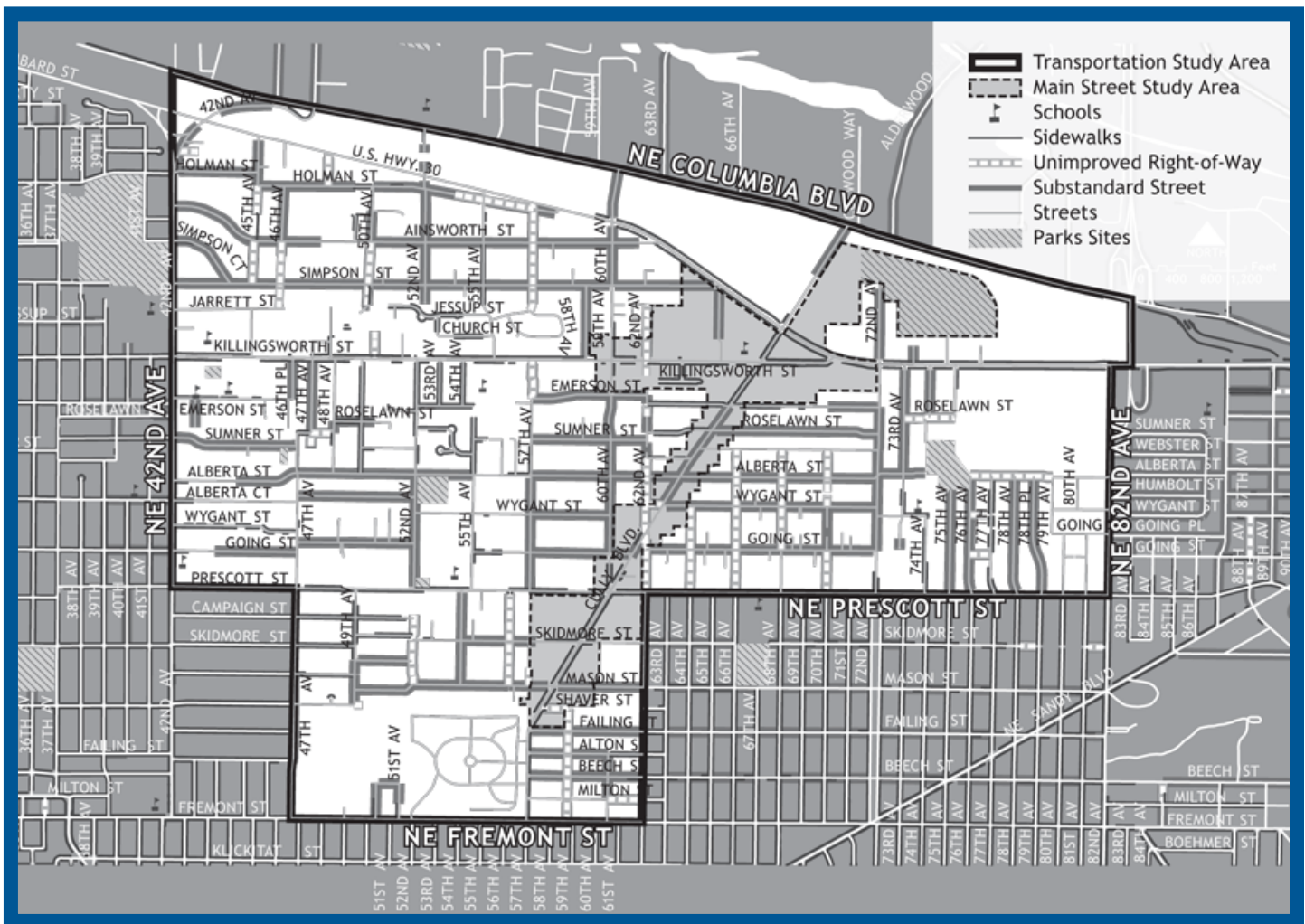
Acknowledgments

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LatinoNetwork





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