

Portland Streetcar Montgomery Park Extension

PREFERRED ALIGNMENT OVERVIEW

UPDATED APRIL 12, 2024

OVERVIEW

This document describes the development and selection of the preferred alignment for the Portland Streetcar Montgomery Park Extension. It also compares the preferred alignment to alternatives considered during various stages of the Montgomery Park to Hollywood (MP2H) planning process.

For more than five years, the MP2H project team explored alignment options for the project area. They considered community input, local policy, and feasibility. [Federal Transit Administration \(FTA\) Small Starts Project Evaluation Criteria](#) were also considered.

While this document illustrates the project team's evaluation of options, it is not a formal alternatives analysis. Further evaluation will be completed as part of the anticipated environmental review process and will be conducted in accordance with federal requirements.

More information about the Portland Streetcar Montgomery Park Extension, as well as related plans and studies, are available at the project webpage: <http://portland.gov/MPStreetcar>

PROJECT BACKGROUND

The City of Portland and Portland Streetcar, Inc. have been exploring various ways to connect the existing streetcar network to Montgomery Park for many years. Planning documents dating to the 1970s envisioned a streetcar connection to the large office building, and the 2009 [Portland Streetcar System Concept Plan](#) identified Montgomery Park as a key destination for future extension. The [2035 Portland Transportation System Plan](#) and [2035 Comprehensive Plan](#) prioritized this extension for planning and implementation. However, none of these documents identified an alignment.

In 2018, Portland City Council funded a preliminary [Northwest Public Streetcar Extension and Land Use Alternatives Analysis](#) to study an extension of streetcar to Montgomery Park. In 2019, the [Montgomery Park to Hollywood Land Use and Development Study \(MP2H\)](#) was funded through a grant from the FTA. In Northwest Portland, MP2H focused on short-term potential transit investment and land use changes in the area.

Over the next two and a half years, the Portland Bureau of Transportation (PBOT) worked with the Bureau of Planning and Sustainability (BPS) to develop the [Draft Montgomery Park Area Transportation Plan](#) and the [Northwest Plan \(MP2H-NW\) Discussion Draft](#). Through community engagement and study, various land use scenarios, transit modes, and alignments were explored for their potential to support local and regional transportation needs and to facilitate mixed-use and equitable development.



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FORMER ESCO SITE IN NORTHWEST PORTLAND

WHY NOW?

The industrial areas of inner Northwest Portland are undergoing a major transformation. Since the 2000s, major industries have been leaving the area. This phenomena is reflected in the loss of major industrial tenants including Con-way and ESCO. This shift has created an opportunity to reimagine the role these large sites play in providing for future housing and jobs in a growing region.

Over the past decade, the land that was once used for Con-way’s logistics operations has given way to a sustainable new urban area in Slabtown. The ESCO site now sits largely vacant and has the potential to become a place of living, work, and play for thousands of community members. The ESCO site, taken in context with investment potential in Montgomery Park, presents a unique opportunity for large-scale housing and employment development near Portland’s Central City.

The City of Portland has the ability to leverage land use and transportation decisions to shape a vibrant new district west of Highway 30 between NW Nicolai and Vaughn streets. A key strategy to spur development is to make a high-quality, high-capacity transit investment paired with focused land use changes in this area. A framework to promote equitable development is also being proposed, in order to ensure the provision of middle-wage jobs, affordable housing, affordable commercial space, and climate-friendly features through development.

WHY STREETCAR?

For more than 20 years, the Portland Streetcar has been one of the City’s tools for equitable and sustainable development. With its proven track record of spurring the creation of dense, walkable, and rollable neighborhoods, the streetcar helps Portland achieve its climate goals and address the city’s housing shortage.

The streetcar functions as a high-capacity, sustainable transit mode that helps people meet their daily needs without a personal automobile. It presents many of the same benefits of light rail at a much lower cost, so streetcar offers a more cost effective route toward transit-oriented urban living.

The Portland Streetcar also helps the City achieve its equity goals. It supports the development of centrally-located affordable housing while improving access to critical destinations for its diverse riders. It also provides opportunity for economic development and job creation in areas with permanent access to affordable, climate-friendly transit.

SINCE 2001 IN PORTLAND,
40 PERCENT OF ALL NEW REGULATED AFFORDABLE HOUSING AND 50 PERCENT OF ALL NEW HOUSING HAS BEEN BUILT WITHIN ONE QUARTER MILE OF A STREETCAR LINE.



PORTLAND STREETCAR IN THE PEARL DISTRICT



MONTGOMERY PARK STREETCAR EXTENSION PREFERRED ALIGNMENT OVERVIEW | 3

PORTLAND STREETCAR RIDERS ARE MORE DIVERSE AND TRANSIT-DEPENDENT THAN PORTLANDERS AS A WHOLE...

- 35% EARN LESS THAN \$30,000 PER YEAR
- 32% IDENTIFY AS PEOPLE OF COLOR AND/OR HISPANIC/LATINÉ
- 26% USE TRIMET’S HONORED CITIZEN FARE
- 76% RIDE DAILY



CONSIDERING TRANSIT ALTERNATIVES

Different transit modes suit different land uses and intensities of development. Lower capacity transit types like traditional buses or microshuttles are better suited to low-density uses like single-dwelling residential or industrial. Higher capacity transit types including streetcar and enhanced buses are more appropriate for higher-density mixed land uses.

With this in mind, the MP2H project team evaluated the four most feasible transit alternatives to develop a more comprehensive understanding of the costs, benefits, and suitability of each mode to serve various land use scenarios and growth potential being explored for the area. The study assessed standard bus, enhanced bus like the TriMet Frequent Express (FX), streetcar, and microshuttle service.

Criteria in the study were both qualitative and quantitative. They included land use suitability, support of development, improved access, costs, potential ridership, improved connectivity, construction and funding feasibility, pollution impacts, and equity impacts.

When a preferred land use scenario was developed and selected for MP2H with high-density mixed land uses in part of the study area, the project team considered the results of the transit alternatives assessment along with additional deliberation about funding and project feasibility.

Streetcar was chosen as the preferred transit alternative because of its suitability to support the most dense development potential for the area. Streetcar offers the highest capacity of any of the alternatives and draws high ridership, with a proven background of spurring dense development including affordable housing. It also has the ability to leverage various funding sources toward its construction, and streetcar has the potential to generate additional community benefits through binding agreements with property owners near Montgomery Park.



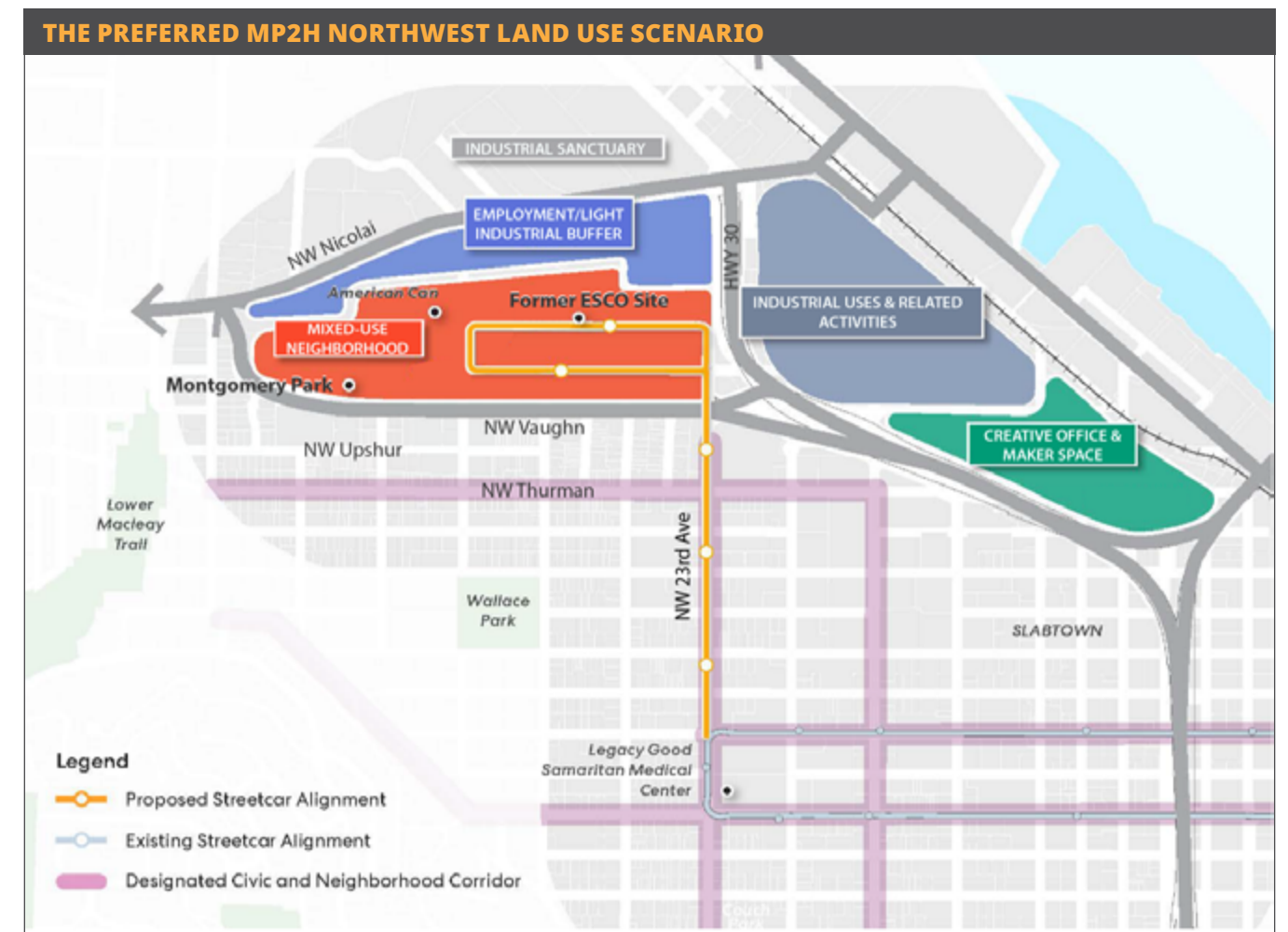
DEVELOPING THE PREFERRED ALIGNMENT

The preferred alignment was developed through research, community engagement, and analysis during the MP2H process. The project team analyzed various land use scenarios to understand which changes would have the best potential to facilitate the development of an equitable mixed-use neighborhood, including affordable housing and jobs.

When it became clear that the most expected growth in the area would be concentrated on and around the former ESCO site, a new land use scenario was developed to focus changes in the area of greatest impact. This scenario responds to community support for balance between more housing and retaining industrial character and jobs. It retains industrial uses east of Highway 30, maintaining a significant amount of existing prime industrial land.

Further analysis of potential streetcar alignments revealed that a route on NW 23rd Avenue, connecting from the existing streetcar line at NW Northrup Street, would be most feasible and cost effective. It would strategically serve the area of greatest expected change while directing the streetcar down NW 23rd Avenue, a street designated as both a Neighborhood Main Street and a Major Transit Priority Street in the City's Transportation System Plan.

The project team then considered three different routes where the streetcar would connect from NW 23rd Avenue to Montgomery Park. The preferred alignment was selected from these three alternatives. In this document, those options are the Preferred Alignment, Alignment D, and Alignment E.





PEOPLE WAITING FOR STREETCAR ALONG NW 23RD AVENUE

THE PREFERRED ALIGNMENT

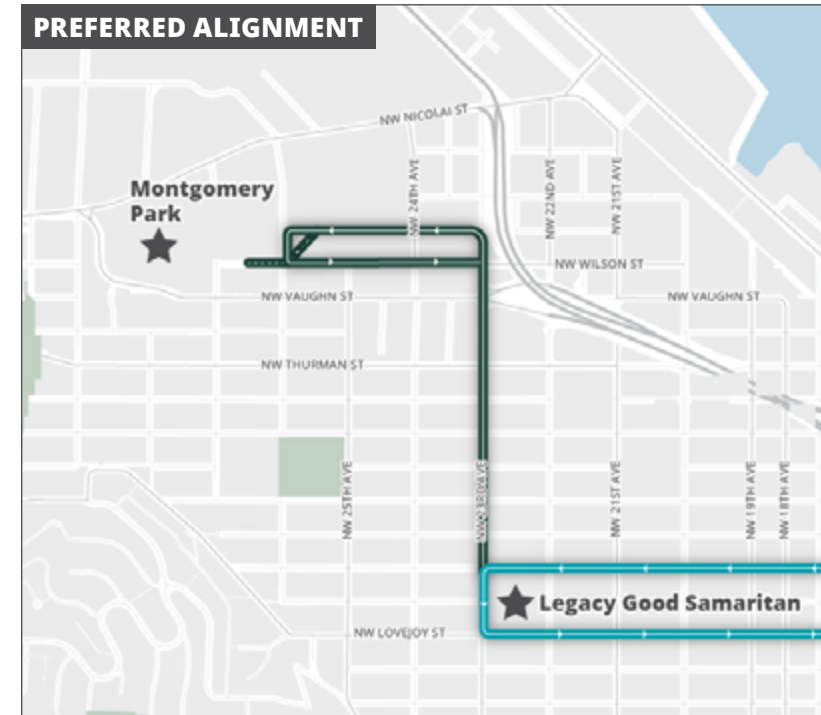
The preferred alignment is a short, direct route to Montgomery Park through an extension of the existing Portland Streetcar North-South (NS) Line along NW 23rd Avenue to a new one-way couplet along NW Roosevelt and NW Wilson streets. This alignment would efficiently serve expected development around Montgomery Park as well as one of Northwest Portland’s most vibrant Main Streets, NW 23rd Avenue.

NW 23rd Avenue was chosen as the preferred route for the streetcar extension for several reasons. Current and future demand along the bustling corridor would be supported by mass transit. The street is designated in City policy to prioritize frequent transit and high-volume pedestrian movement, and its designation as a Neighborhood Main Street means it should effectively serve the surrounding neighborhood while its design emphasizes multimodal access and movement.

Additionally, NW 23rd Avenue is in disrepair and is in desperate need of reconstruction. Community members have called for improvements on this street for years. Combining the two projects would provide

the opportunity to address NW 23rd Avenue’s current deficiencies between NW Lovejoy and NW Vaughn streets, including accessibility, utilities, and stormwater management. Folding the two otherwise separate major construction efforts into one would reduce construction impacts in the area and use public funds more efficiently.

The preferred alignment was refined from previous alternatives using NW 23rd Avenue. Those alternatives include Alignments C, D, and E in this report. When compared with those alignments, the Preferred Alignment is the most feasible for a number of reasons, including being free of fatal flaws in traffic analysis, supporting traffic demands now and in the future, being cost competitive due to its length, and supporting phased development in the area of proposed land use changes along and near the new proposed couplet.



ALIGNMENT DESCRIPTION:

The preferred alignment is an extension of the NS Line, connecting to Montgomery Park using **NW 23rd Avenue** and tying into a one-block parallel one-way couplet on **NW Roosevelt and NW Wilson streets**.

This alignment would include the construction of new complete streets to connect both NW Roosevelt and NW Wilson streets through the former ESCO site.

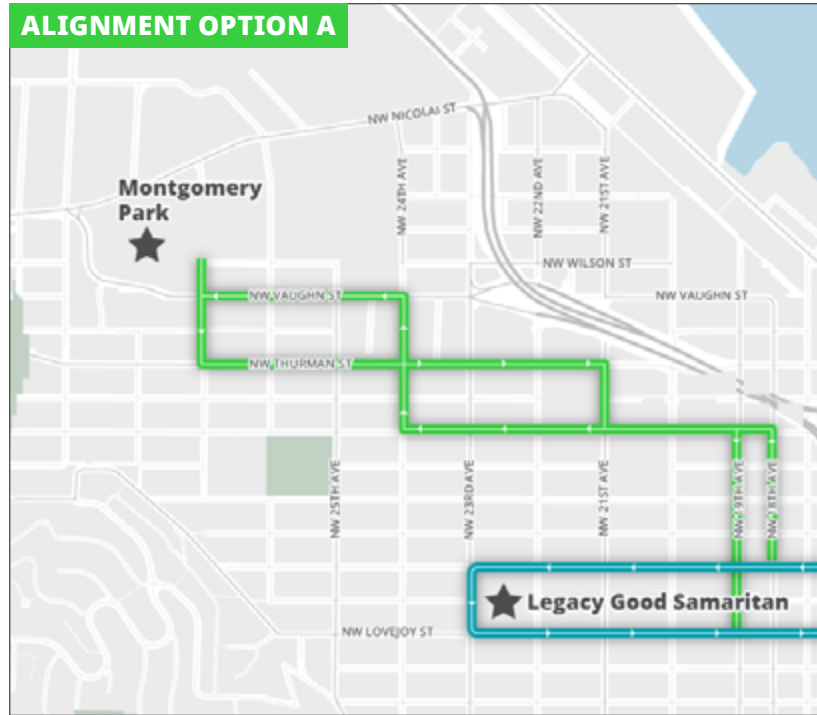
The extension’s terminus is proposed to be located near NW 26th Avenue and NW Wilson Street and include a new transit hub.

1.3 miles of new track and two new streetcars would be required.

CRITERION	SCORE	CONSIDERATION FOR PREFERRED ALTERNATIVE
CAPITAL COST AND FEASIBILITY	●	Length makes this alignment cost competitive, with one-block couplet supporting internal circulation and phased land development
OPERATING COST	●	Minimal increases in operating cost compared to other alternatives, due to direct route and length of alignment
RIDERSHIP POTENTIAL	●	Would serve the area of most development potential directly, while serving the vibrant Main Street of NW 23rd Avenue
COMPATIBILITY WITH EXISTING TRANSIT	●	Utilizes streets prioritized for transit while tying efficiently into existing streetcar system; would share stations with buses
TRAFFIC AND OPERATIONS	◐	Transportation modeling analyses indicate that impacts are minimal overall, and any issues can be mitigated effectively
MOBILITY IMPROVEMENTS	◐	Would include multimodal improvements on new streets with connections to broader network, while creating a couplet through area with existing limited access; one-block couplet easily accessible
CONSISTENCY WITH ADOPTED PLANS AND POLICY	●	Supports preservation of prime industrial land east of Highway 30 and utilizes a Main Street prioritized for transit operations and access
NEW HOUSING OPPORTUNITY	●	Creates a direct route to/through area of highest development potential while preserving development options north of NW Roosevelt Street
NEW JOBS OPPORTUNITY	●	Creates a direct route to/through area of highest development potential while preserving development options north of NW Roosevelt Street
FUNDING POTENTIAL	●	Requires lower capital costs and limited LID participation compared to alternatives; federal funding can help pay for NW 23rd Avenue



EXHIBIT B



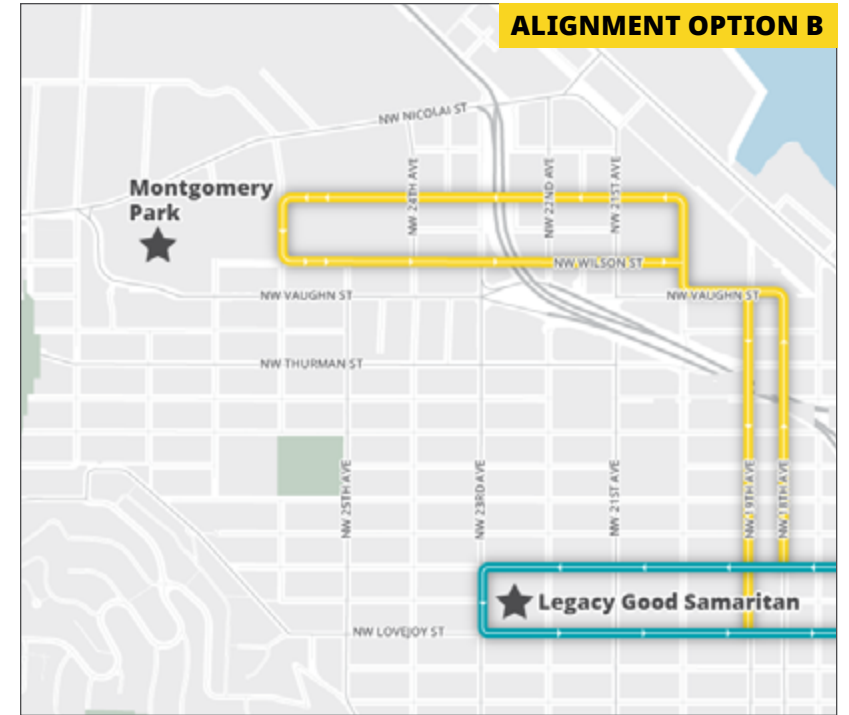
ALIGNMENT A DESCRIPTION:

New line connecting to Montgomery Park via a combination of **NW Raleigh, Thurman, and Vaughn Streets** as well as **NW 18th, 19th, 21st, and 24th avenues**.

The alignment's terminus would be a station on NW 27th Avenue between NW Wilson and NW Vaughn streets.

This route would be slow and circuitous to its final destination on narrow streets using tight turns and requiring significant right-of-way acquisition.

2.7 miles of new track construction and six new streetcars would be required.



ALIGNMENT B DESCRIPTION:

New line heading north along **NW 18th and 19th avenues**, connecting to Montgomery Park via **NW York and Wilson streets**.

This alignment was used for much of MP2H's earlier analysis process, prior to the development of a land use scenario intended to preserve prime industrial land east of Highway 30.

3.5 miles of new track construction and six new streetcars would be required.

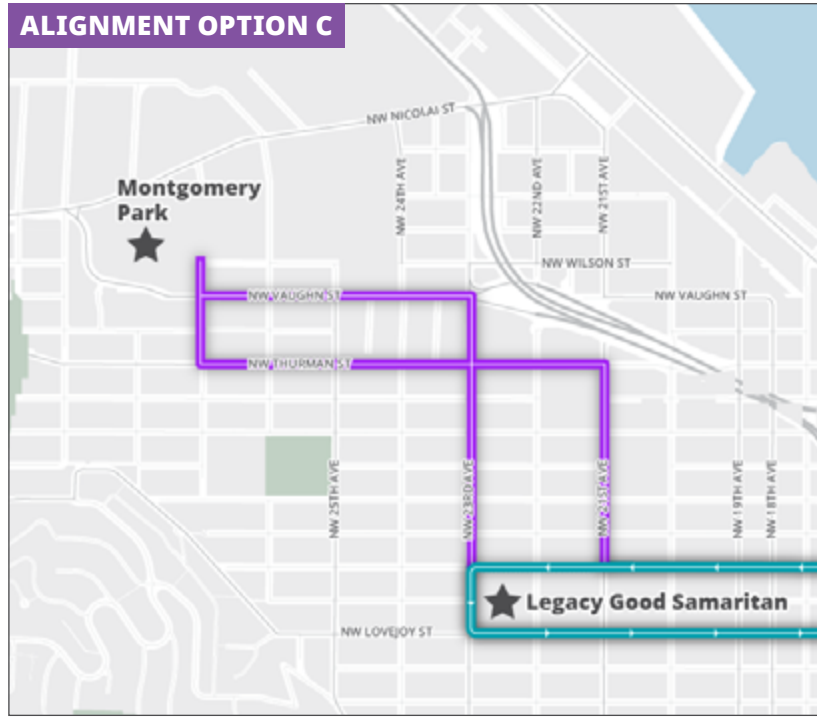
CRITERION	SCORE	CONSIDERATION FOR ALIGNMENT OPTION A
CAPITAL COST AND FEASIBILITY	○	Length, alignment, and right-of-way acquisition requirements would make this alignment expensive and challenging to construct
OPERATING COST	🕒	New line would require six new streetcars, and length would require more operators and significant maintenance costs
RIDERSHIP POTENTIAL	🟢	Alignment serves existing and new housing and retail in Slabtown and more intense uses planned on Montgomery Park and ESCO site
COMPATIBILITY WITH EXISTING TRANSIT	🟡	Much of the alignment is within a quarter mile of existing streetcar service
TRAFFIC AND OPERATIONS	🕒	Alignment uses narrow streets with tight turns and would likely require significant parking removal and potential ROW acquisition near corners
MOBILITY IMPROVEMENTS	🕒	Slow, circuitous route to final destination with limited space between curbs for streetcar movement or other multimodal improvements
CONSISTENCY WITH ADOPTED PLANS AND POLICY	🟢	Compatible with Streetcar Concept Plan, Conway Master Plan, and Northwest District Plan, but utilizes streets with limited transit priority
NEW HOUSING OPPORTUNITY	🟡	Portions of the alignment run through historic areas with low planned densities for future housing
NEW JOBS OPPORTUNITY	🕒	Most of the alignment runs through areas with low planned densities for future jobs
FUNDING POTENTIAL	🕒	Scale of extension would require significant LID participation, including areas of limited growth potential



CRITERION	SCORE	CONSIDERATION FOR ALIGNMENT OPTION B
CAPITAL COST AND FEASIBILITY	🕒	Length of extension would make this alignment the most expensive, and much of the extension would traverse prime preserved industrial land
OPERATING COST	🕒	New line would require six new streetcars, and length would require more operators and significant maintenance costs
RIDERSHIP POTENTIAL	🟢	Alignment serves existing and new housing as well as areas of growth potential, with limited opportunity in industrial area
COMPATIBILITY WITH EXISTING TRANSIT	🟢	Would add transit service to underserved areas and use streets prioritized for transit
TRAFFIC AND OPERATIONS	🟢	Alignment utilizes overpasses on Highway 30 and avoids high-traffic streets
MOBILITY IMPROVEMENTS	🕒	Relatively direct route to final destination and expands transit benefits; conflicts with freight district with wayfinding challenges
CONSISTENCY WITH ADOPTED PLANS AND POLICY	○	Alignment traverses through low-density industrial land which could eventually pressure land use changes in industrial preserve; potential conflicts with large section of freight district
NEW HOUSING OPPORTUNITY	🕒	Potential for housing along some of the alignment, with limited opportunity east/northeast of Highway 30 without land use changes
NEW JOBS OPPORTUNITY	🕒	Significant potential for jobs along some of the alignment, but supportive land use changes would result in loss of industrial jobs
FUNDING POTENTIAL	🕒	The length and location of this extension would make this alignment the most expensive, with LID support challenging in industrial preserve



EXHIBIT B



ALIGNMENT C DESCRIPTION:

Extension of existing NS Line, connecting to Montgomery Park via **NW 21st and 23rd avenues, as well as NW Thurman and Vaughn streets.**

This alignment would face significant challenges due to required turning movements and ROW width in some areas and would require closure of stops near the hospital.

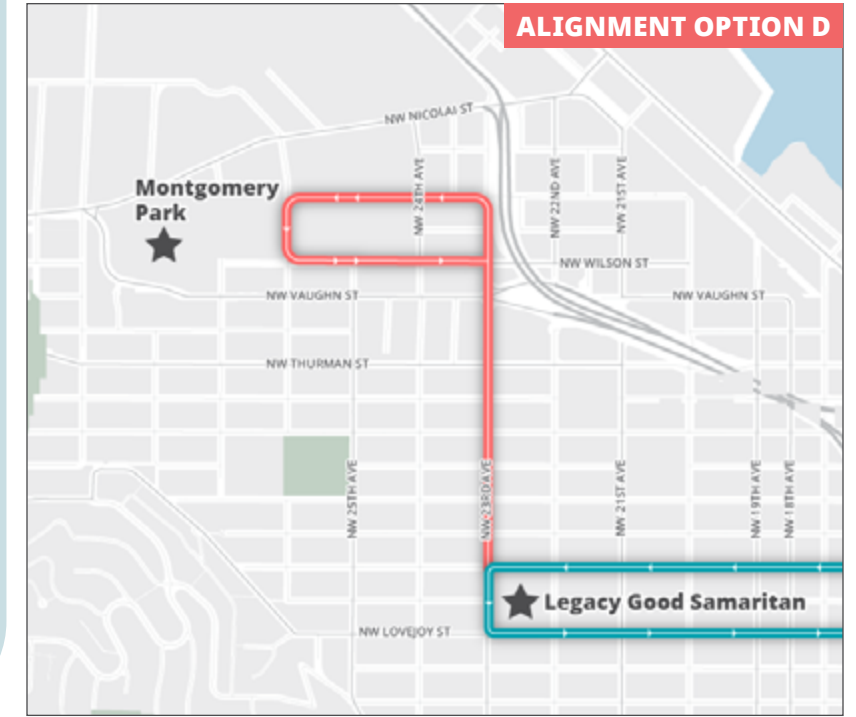
2 miles of new track construction and two new streetcars would be required.

ALIGNMENT D DESCRIPTION:

Extension of existing NS Line, connecting to Montgomery Park along **NW 23rd Avenue** and tying into a two-block parallel one-way couplet along **NW York and Wilson streets.**

While this alignment would provide many of the same benefits of the preferred alignment, the couplet width would limit large-scale development flexibility and would be more challenging for wayfinding and transit access.

1.7 miles of new track construction and two new streetcars would be required.



CRITERION	SCORE	CONSIDERATION FOR ALIGNMENT OPTION C
CAPITAL COST AND FEASIBILITY	🟡	Challenges on NW Thurman Street and at key intersections on NW Vaughn Street make this route challenging to construct
OPERATING COST	🟡	Length of alignment versus other alternatives puts this operating cost in the mid-range compared to others
RIDERSHIP POTENTIAL	🟢	Would serve two Main Streets and could capture ridership of recently developed neighborhoods with high density
COMPATIBILITY WITH EXISTING TRANSIT	🟢	Much of alignment would use streets prioritized for transit, with impacts to existing NS line users near hospital
TRAFFIC AND OPERATIONS	🟡	A challenging turning movement from NW Vaughn Street to NW 23rd Avenue would likely cause significant issues, as would conflicts between Streetcar and higher-volume auto traffic
MOBILITY IMPROVEMENTS	🟡	Requires closure of stops near hospital; couplet width and directionality challenging for access; tight right-of-way on NW 27th Avenue
CONSISTENCY WITH ADOPTED PLANS AND POLICY	🟢	Supports preservation of industrial land and utilizes streets prioritized for transit operations, except NW 27th Avenue
NEW HOUSING OPPORTUNITY	🟡	Limited value capture opportunity due to service through areas with limited development potential
NEW JOBS OPPORTUNITY	🟡	Limited value capture opportunity due to service through areas with limited development potential
FUNDING POTENTIAL	🟡	Alignment would require larger area of LID participation than preferred alignment and large-share participants may have limited access

CRITERION	SCORE	CONSIDERATION FOR ALIGNMENT OPTION D
CAPITAL COST AND FEASIBILITY	🟢	Direct route and length make it cost-competitive, but two-block couplet would likely serve area large enough to take many years to fully develop
OPERATING COST	🟢	Minimal increases in operating cost compared to other alternatives, due to direct route and length of alignment; not the best
RIDERSHIP POTENTIAL	🟢	Would serve the area of most development potential directly, while serving one of Northwest Portland's most vibrant Main Streets
COMPATIBILITY WITH EXISTING TRANSIT	🟢	Utilizes new streets and streets prioritized for transit
TRAFFIC AND OPERATIONS	🟢	Careful planning required at NW Vaughn Street and NW 23rd Avenue and a tight turn from NW Northrup Street onto NW 23rd Avenue
MOBILITY IMPROVEMENTS	🟢	Would include multimodal improvements on new streets with easy long-term connections, but access and wayfinding would be more challenging
CONSISTENCY WITH ADOPTED PLANS AND POLICY	🟢	Supports preservation of industrial land east of Highway 30 and utilizes a Main Street prioritized for transit operations and access
NEW HOUSING OPPORTUNITY	🟢	Creates a direct route to/through area of highest development potential, but limits development flexibility north of NW Roosevelt Street
NEW JOBS OPPORTUNITY	🟢	Creates a direct route to/through area of highest development potential, but limits development flexibility north of NW Roosevelt Street
FUNDING POTENTIAL	🟡	Requires limited LID participation, but couplet size creates development challenges for large-share participants





ALIGNMENT E DESCRIPTION:

Extension of existing NS Line, connecting to Montgomery Park via **NW 23rd Avenue** and two-way movement on **NW Wilson Street**.

This alignment has critical flaws in its design, both in required right-of-way acquisition for two-way turning movement at NW 23rd Avenue and NW Wilson Street as well as unacceptable traffic queues backing up onto Highway 30.

1.2 miles of new track construction and two new streetcars would be required.

CRITERION	SCORE	CONSIDERATION FOR ALIGNMENT OPTION E
CAPITAL COST AND FEASIBILITY	2	Shortest alignment makes this option cost-competitive, but critical design flaws and right-of-way acquisition impacts limit feasibility
OPERATING COST	4	Shortest track length makes this alignment's operating cost low
RIDERSHIP POTENTIAL	4	Would serve the area of most development potential directly, while serving one of Northwest Portland's most vibrant Main Streets
COMPATIBILITY WITH EXISTING TRANSIT	4	Utilizes new and reconstructed streets and streets prioritized for transit
TRAFFIC AND OPERATIONS	1	Traffic backups are a critical flaw, with auto traffic backing up onto Highway 30
MOBILITY IMPROVEMENTS	2	While this alignment provides opportunity for Main Street design on NW Wilson Street, right-of-way limitations would impact potential for dedicated bike lanes and cause unacceptable impacts to auto traffic
CONSISTENCY WITH ADOPTED PLANS AND POLICY	4	Supports preservation of industrial land and utilizes a Main Street prioritized for transit operations and access
NEW HOUSING OPPORTUNITY	4	Creates a direct route to/through area of highest development potential
NEW JOBS OPPORTUNITY	4	Creates a direct route to/through area of highest development potential
FUNDING POTENTIAL	4	Least amount of new streets and alignment lower capital costs and minimize area of LID participation

COMPARISON OF ALTERNATIVES

ALIGNMENT OPTION	CAPITAL COST AND FEASIBILITY	OPERATING COST	RIDERSHIP POTENTIAL	COMPATIBILITY WITH EXISTING TRANSIT	TRAFFIC AND OPERATIONS	MOBILITY IMPROVEMENTS	CONSISTENCY WITH ADOPTED PLANS AND POLICY	NEW HOUSING OPPORTUNITY	NEW JOBS OPPORTUNITY	FUNDING POTENTIAL	TOTAL SCORE*
PREFERRED ALIGNMENT: Extension via NW 23rd Avenue with NW Roosevelt Street and NW Wilson Street couplet	4	4	4	4	2	2	4	4	4	4	38
OPTION A: New line via NW Raleigh, NW Thurman, and NW Vaughn streets	1	2	3	2	2	2	3	2	2	2	15
OPTION B: New line via NW 18th and NW 19th avenues as well as NW York and NW Wilson streets	2	2	3	4	4	2	1	2	2	2	20
OPTION C: Extension via NW 21st and NW 23rd avenues, and NW Thurman and NW Vaughn streets	2	2	4	3	2	2	4	2	2	2	23
OPTION D: Extension via NW 23rd Avenue with NW York Street and NW Wilson Street couplet	3	3	4	4	2	2	4	3	3	2	32
OPTION E: Extension via NW 23rd Avenue with two-way on NW Wilson Street	2	4	4	4	1	2	4	4	4	4	30



*This score is based upon project team interpretation of both qualitative and quantitative "criteria" as listed. For each criterion considered, a score of 0-4 was assigned based upon the scale to the left (where "BEST" = 4 and "WORST" = 0).



EXHIBIT B

WHAT'S NEXT?

In August 2023, The Portland Bureau of Transportation (PBOT) worked with the Bureau of Planning and Sustainability (BPS) to finalize the FTA grant that funded the Montgomery Park to Hollywood (MP2H) Study.

The project team is also working to integrate community feedback and additional refinements into current drafts of the Montgomery Park Area Transportation Plan and the MP2H Northwest Plan. City staff will propose final proposed draft versions of these plans for consideration and adoption in 2024.

PBOT staff recently completed Summer-Fall 2023 community engagement. The project team is also working on preliminary engineering and cost estimation for the proposed alignment. As a funding strategy is explored for the proposed streetcar extension, a Locally Preferred Alternative (LPA) is expected to be presented to City Council in 2024. The project team may seek federal funding in 2024, as well.

The extension of the streetcar to Montgomery Park and reconstruction of NW 23rd Avenue between NW Lovejoy and NW Vaughn streets could be under construction by 2026, including new stormwater and accessibility upgrades. The project may be completed and in service by 2028.

LEARN MORE AND SIGN UP FOR EMAIL UPDATES AT THE PROJECT WEBPAGE:

<http://portland.gov/MPstreetcar>

QUESTIONS OR COMMENTS? EMAIL THE PROJECT TEAM AT:

MPStreetcar@portlandoregon.gov



PBOT
PORTLAND BUREAU OF TRANSPORTATION


THE BUREAU OF **PLANNING**
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