

Steering Committee meeting June 1, 2016

Where we are, decisions and next steps

On March 28, 2016, the committee:

- Discussed constraints on inner Powell and 82nd Avenue.
- Reviewed potential concepts to deliver a near-term bus rapid transit (BRT) project.

Today, the committee will:

- Discuss the path to get to a locally preferred alternative (LPA) for a near-term BRT project.
- Review BRT characteristics for this project.
- Review the technical feasibility of an inner Division alignment and public engagement findings.

This summer, the committee will:

- Learn about community input and technical information related to route options.
- Seek consensus on routing for the BRT.



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Project goals and outcomes

The Steering Committee adopted the following goals and outcomes on June 23, 2014.

Project outcomes

1. Create a vision and development strategy for key places that promotes community driven and supported economic development and identifies tools and strategies that mitigate the impacts of market pressures that cause involuntary displacement.
2. Identify a preferred near-term high capacity transit solution for the corridor that safely and efficiently serves high ridership demand, improves access to transit, is coordinated with related transportation investments, and recognizes limited capital and operational funding. The solution will include mode, alignment and station locations with supporting transportation improvements.

Project goals

- **Transportation:** People have safe and convenient transportation options – including efficient and frequent high capacity transit service that enhances current local transit service – that get them where they want to go and improves the existing system.
- **Well-being:** Future development and transit improvements create safe, healthy neighborhoods and improve access to social, educational, environmental and economic opportunities.
- **Equity:** Future development and transit improvements reduce existing disparities, benefit current residents and businesses and enhance our diverse neighborhoods. There is a commitment to prevent market-driven involuntary displacement of residents and businesses and to equitably distribute the benefits and burdens of change.
- **Efficiency:** A high capacity transit project is efficiently implemented and operated.

Locally Preferred Alternative (LPA) decisions

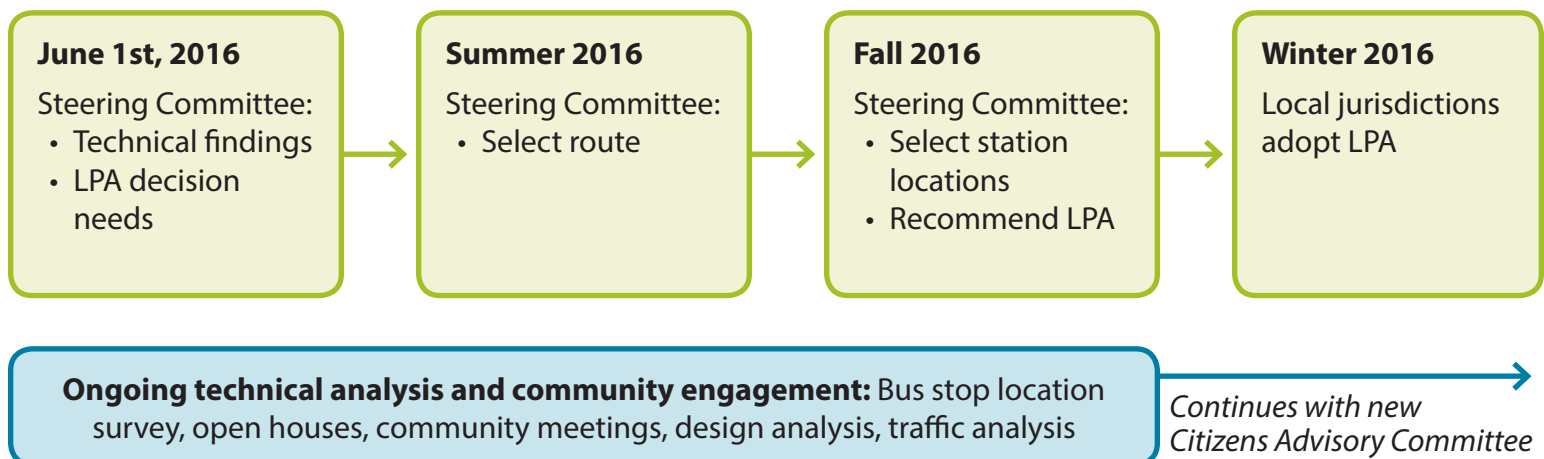
The Steering Committee is charged with making a recommendation on the locally preferred alternative for the transit project that determines the mode of transportation, the route, and the station locations.

Mode	Route	Stations
<input checked="" type="checkbox"/> Bus rapid transit (BRT)	<input type="checkbox"/> Downtown Portland <input type="checkbox"/> Willamette crossing <input type="checkbox"/> Inner Portland <input checked="" type="checkbox"/> Outer Division <input type="checkbox"/> Gresham TC to MHCC	<input type="checkbox"/> General station locations
Transit mode description: pages 4-5	Overview map of route information for LPA decisions: pages 6-7 Inner Division findings: <ul style="list-style-type: none"> • Feasibility and Willamette crossing comparison: pages 8-9 • Today compared to future with new service: pages 10-11 	Proposed station locations with inner Division: pages 12-13

✓ Decision made ☐ Decision pending

LPA timeline

The path forward involves the Steering Committee meeting 2-3 more times to make the remaining LPA decisions. The project team will continue gathering community input and performing technical analysis to inform the Steering Committee recommendations.



LPA mode selected: Bus rapid transit (BRT) - a new kind of service

The project Steering Committee selected BRT because it will deliver a faster trip and an improved transit experience in one of the region's busiest transit corridors in the **near term** while minimizing impacts to the communities it would serve.

By stopping less often, allowing customers to board faster and stopping at fewer red lights, buses in the corridor are expected to make a trip 15-20 percent faster than current Line 4-Division transit service, getting people where they need to go faster and putting more jobs and other opportunities within a reasonable travel time.

Project stations will have a coordinated, unique look and feel. A standard, recognizable station design will be developed that can be modified to fit the character of the neighborhood and the constraints of each station location.

Because the project will introduce a new type of transit vehicle to the TriMet system, buses will have their own identity to “brand” the service. The project fleet will include 60-foot articulated buses that have wider doors to make boarding and alighting faster and more comfortable, on-board announcements and display, and a different paint scheme than regular TriMet buses. To ease boarding and decrease the time that a bus is at a station, all doors will open on the buses so riders can enter or exit the bus at any door.



Example visualizations of a 60-foot articulated BRT bus on inner Division.



Visualization of potential BRT station on outer Division

BRT is a proven solution

Bus rapid transit includes a spectrum of treatments that have been shown to improve transit travel times and reliability in congested urban corridors. The Federal Transit Administration defines BRT to include the five improvements listed below. The project will include those five treatments, plus other elements that will enhance the transit experience.

BRT must include:

- ✓ Transit signal priority
- ✓ Low-floor buses or platform-level boarding
- ✓ Separate and consistent brand identity for stations and vehicles
- ✓ Substantial stations (weather protection and information on schedules and routes)
- ✓ Frequent service seven days a week

Other components for this project:

- Multiple doors for entering and exiting
- New high capacity vehicles
- Queue jumps at some intersections
- Faster fare collection system
- Bike and pedestrian access improvements
- Station designs with community input
- Secure bike parking at some stations
- Secure stations accessible only with fare payment
- Improved lighting
- Potential additional capacity for passengers with mobility devices
- Potential additional capacity for bikes

While some BRT lines use their own travel lanes, this project would operate in mixed traffic. Similar BRT systems that operate in mixed traffic with intersection treatments and robust stations have been used successfully to improve transit service throughout the country in:

- Seattle
- Oakland
- Boston
- New York City
- Kansas City
- Las Vegas
- Los Angeles
- Cleveland

Powell-Division Transit and Development Project:

Portland Downtown

Portland Transit Mall (more promising):

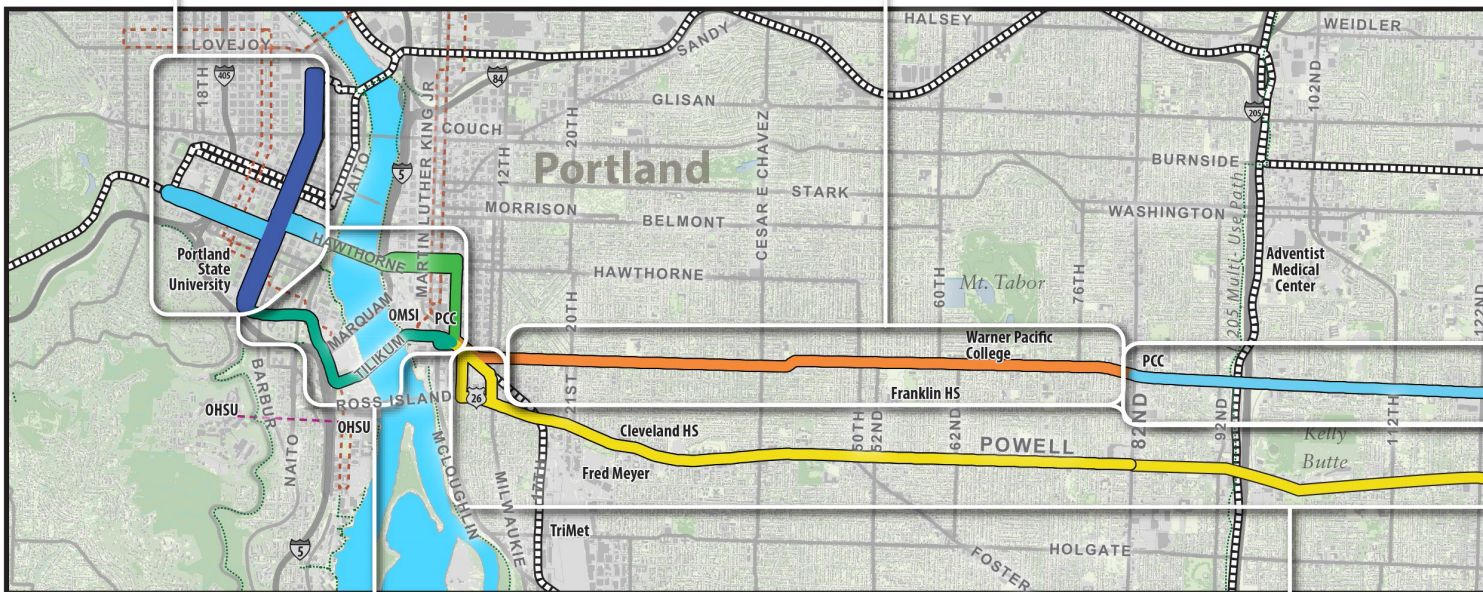
- BRT would stop at existing stations on Portland Transit Mall with many transit connections.
- Union Station area would be the likely terminus and provide connection to Amtrak.

Columbia/Jefferson (less promising):

- Fewer connections
- Design constraints (e.g. Collins Circle)

Inner Division Street

- For findings, see pages 8-9.
- Analysis and design are ongoing.
- Upcoming public engagement planned.



River Crossing for Inner Division Alignment

The Hawthorne Bridge (more promising):

- Faster and more reliable even with disruption from bridge lifts which are in the off-peak only.
- Route would be the same as today's Line 4-Division route to Downtown Portland, and would not directly serve South Waterfront.
- Riders heading to PSU, OHSU, OMSI, or South Waterfront can transfer to MAX Orange Line at SE 12th.
- Model data show higher demand to connect to Downtown Portland than to South Waterfront and PSU area.

Tilikum Crossing (less promising):

- Between Division St and Tillikum Crossing, railroad and MAX crossings would severely impact BRT travel times and reliability without a new overcrossing structure.

Powell Boulevard

- Inner Powell Blvd routing does not achieve desired travel times savings for bus riders.
- Jurisdictions and agencies are coordinating to keep priorities for Powell moving forward.
- Partners are working on improvements to Powell Boulevard in the form of a TIGER grant (<http://outerpowellsafety.org/tiger/>) and ODOT/PBOT projects.
- Recommended actions will be shared with the Steering Committee this summer and fall.

Route Information for LPA Decisions

5/24/2016

Outer Division Street

- The Steering Committee selected an alignment along outer Division from 82nd Avenue to the Gresham Transit Center for further study on September 29, 2014.
- Analysis and design are context sensitive and ongoing.

Gresham Transit Center to Mt Hood Community College

Coordination with Mt Hood Comm. College for siting a terminus is ongoing.

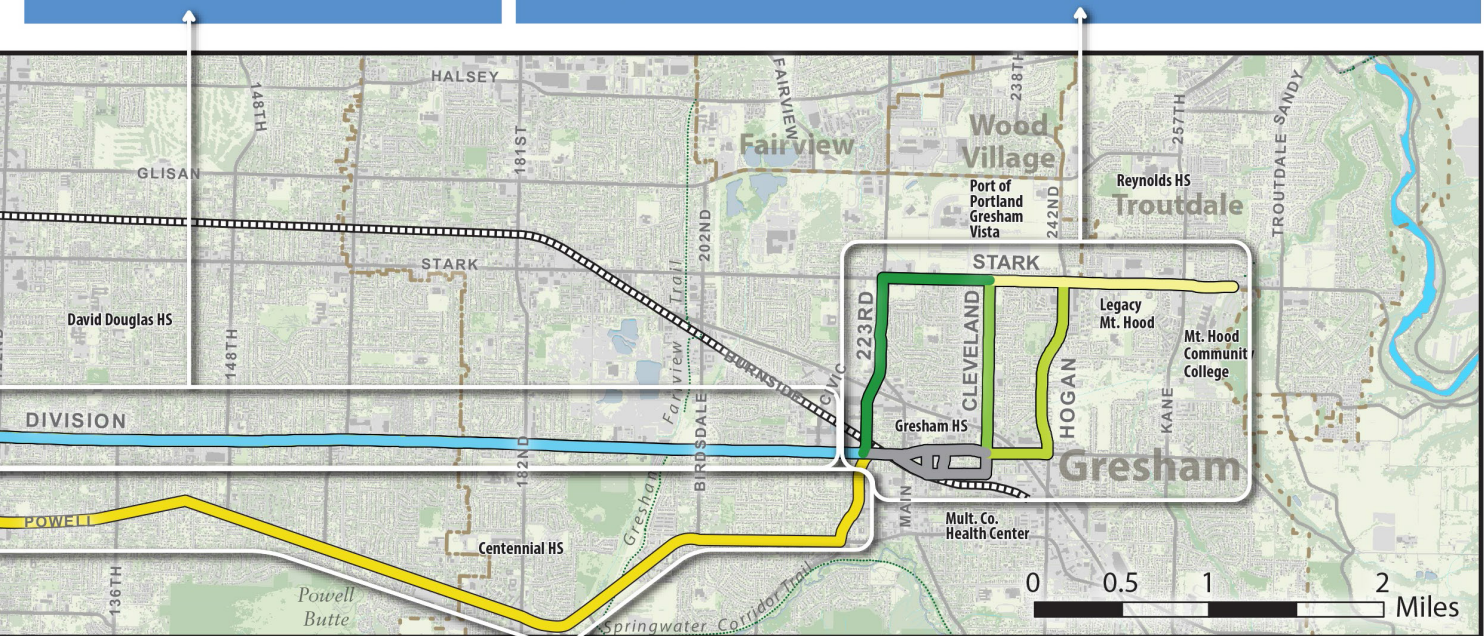
Hogan Drive (more promising):

- In public outreach from September-October 2015 plus a previous web survey, Hogan Drive was preferred for bus rapid transit by a majority of respondents.

- Provides new transit service on Hogan Drive.

Cleveland and Eastman/223rd (less promising):

- Eastman/223rd requires out-of-direction travel from Gresham Transit Center, resulting in longer travel times.
- Cleveland does not serve as many community resources, has limited right of way, and is a residential street.



Key Features of Bus Rapid Transit



Larger buses that carry more passengers



Larger stations with amenities like weather protection and ADA accessible platforms



Buses and stations designed for faster boarding



Service at least every 15 minutes, with more frequent service during the peak commute hours

Existing Transit

Light Rail

Streetcar

Aerial Tram ---●---

The Steering Committee will seek consensus on the route elements at their summer meeting.

Inner Division technical feasibility

Inner Division can improve project travel times

A trip on BRT between 82nd Avenue and 8th Ave would be around 15-20% faster than current service. BRT would make only 11 stops (compared to 26 stops for the Line 4-Division today) and stop for shorter periods of time at each station, resulting in an estimated 30% reduction in dwell time. Transit signal priority would hold the light green longer for approaching buses to speed up the BRT. These travel time improvements would also reduce the amount of time drivers spend behind stopped buses.

Inner Division alignment still serves high concentrations of communities of concern.

While fewer minority, low income, and limited English proficiency populations are located along an inner/outer Division alignment when compared to an inner Powell/82nd Ave/ outer Division alignment, a Division-only alignment would still serve high concentrations of communities of concern.

	Communities of concern (Residents and % of total population)						
Inner Southeast Portland	Minority		Low income		LEP		Total pop.
Inner Division: Hawthorne Br to 82nd Ave	7,572	21.6%	11,382	32.4%	2,064	5.9%	35,082
Inner Powell: Tilikum Crossing to 82nd Ave	10,905	27.8%	16,189	41.2%	3,522	9.0%	39,273
Willamette River to MHCC	Minority		Low income		LEP		Total pop.
Hawthorne Br / Division / MHCC	30,575	31.7%	43,070	44.7%	12,244	12.7%	96,373
Tilikum Crossing / inner Powell / 82nd Ave / outer Division / MHCC	33,886	33.3%	48,354	47.6%	13,564	13.3%	101,655

Notes: Geographies within ½ mile of alignment, Data Source 2008-2012 American Community Survey, LEP = Limited English Proficiency

Inner Division design within community context is promising

Early conceptual design on inner Division indicates that BRT should be able to operate mostly within the existing street width and be faster than the Line 4-Division is today. The design team is working to protect the recent inner Division streetscape improvements while improving travel times through wider stop spacing, faster bus boarding, and traffic signal priority. However, design is still underway and the project footprint and potential impacts are still being determined.

Inner Division project costs are promising

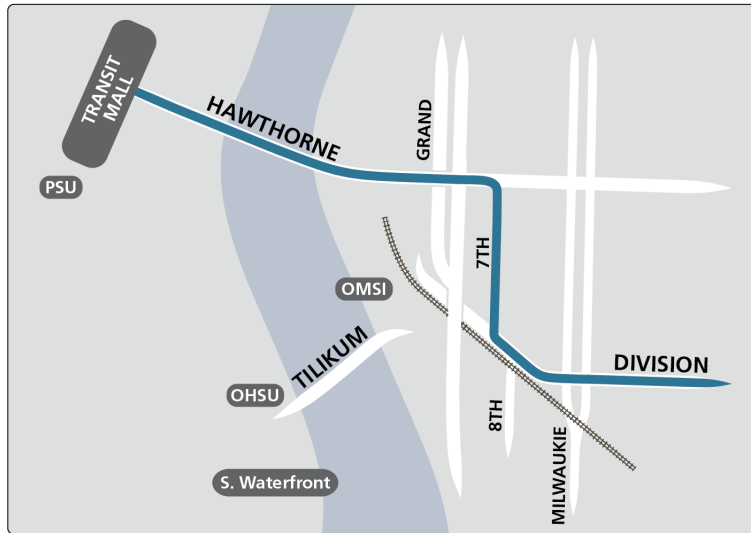
An inner Division alignment should cost less than an alignment on 82nd Ave and inner Powell Blvd, which would require many expensive transit priority treatments (bus lanes and chamfers) and many building and property impacts to reduce travel times. The inner Division alignment would allow the project to focus investments in areas lacking infrastructure along outer Division. (Actual project cost estimates are dependent upon the design, which has not yet been completed.)

Inner Division ridership is promising

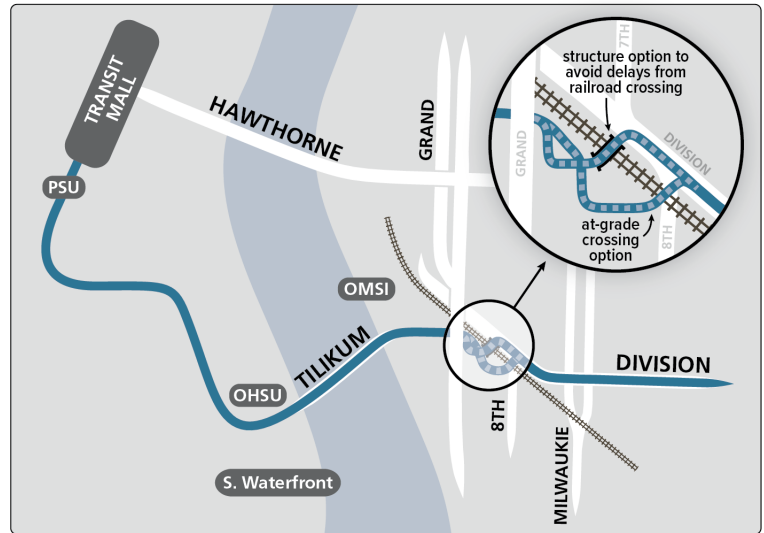
An inner Division alignment would have substantial ridership because the Line 4-Division is serving many riders now, and the new service would extend the route to Mount Hood Community College, improve reliability and travel times, and provide new buses and amenities. A more accurate ridership forecast will be determined through modeling after the station locations and routing are recommended by the Steering Committee.

Willamette River Crossing options show reliability and cost differences

Hawthorne Bridge option



Tilikum Crossing option



Both river crossing options would contend with disruptions that reduce the reliability of the BRT. Disruption of travel times from the Union Pacific Railroad/Amtrak and MAX Orange Line train crossings make the Tilikum Crossing option less reliable than the Hawthorne Bridge option without building a new bridge for the BRT over the railroad tracks.

The Hawthorne Bridge route would be more reliable despite daily bridge lifts, with fewer disruptions throughout the day and no bridge lifts permitted during the peak periods. The Hawthorne Bridge route would follow the same route as today's Line 4 to Downtown Portland, but would not directly serve OMSI, South Waterfront, OHSU and PSU.

	Train crossings or bridge lifts		
	Average per day	Average during peak periods: AM / PM	Duration: average / longest minutes:seconds
Tilikum Crossing route			
Union Pacific Railroad / Amtrak	21	3 / 3	2:47 / 45:40
MAX Orange Line	112	18 / 19	0:33 / 3:36
Hawthorne Bridge route			
Hawthorne Bridge lifts (off-peak only)	4	None	7:47 / 15:00

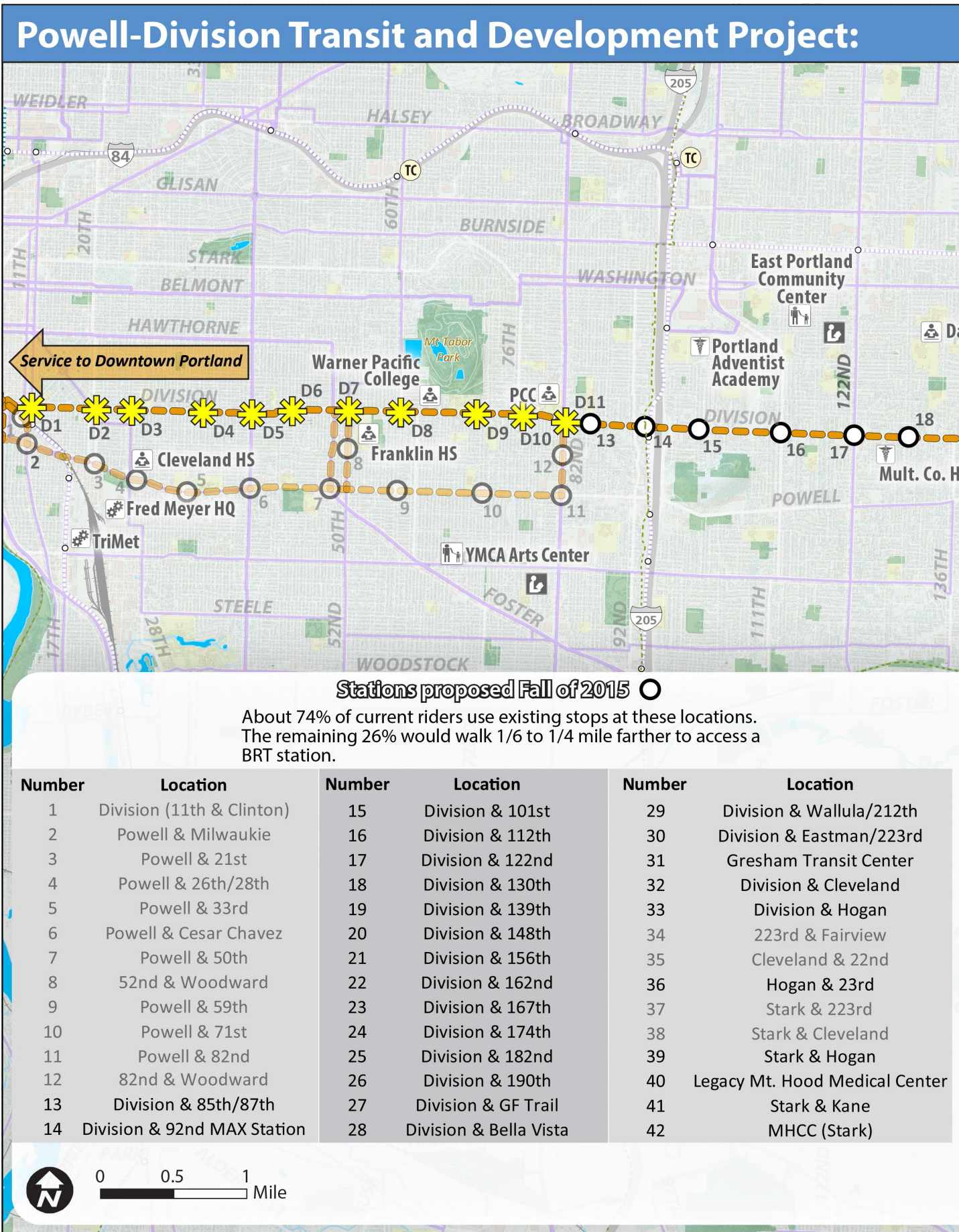
Data sources: City of Portland Automated Rail Grade Crossing Summaries, October 2015 to January 2016, and Multnomah County Hawthorne Bridge Daily Record of Draw Openings, June 2015 to October 2015

Inner Division comparison: Today and with the new transit project

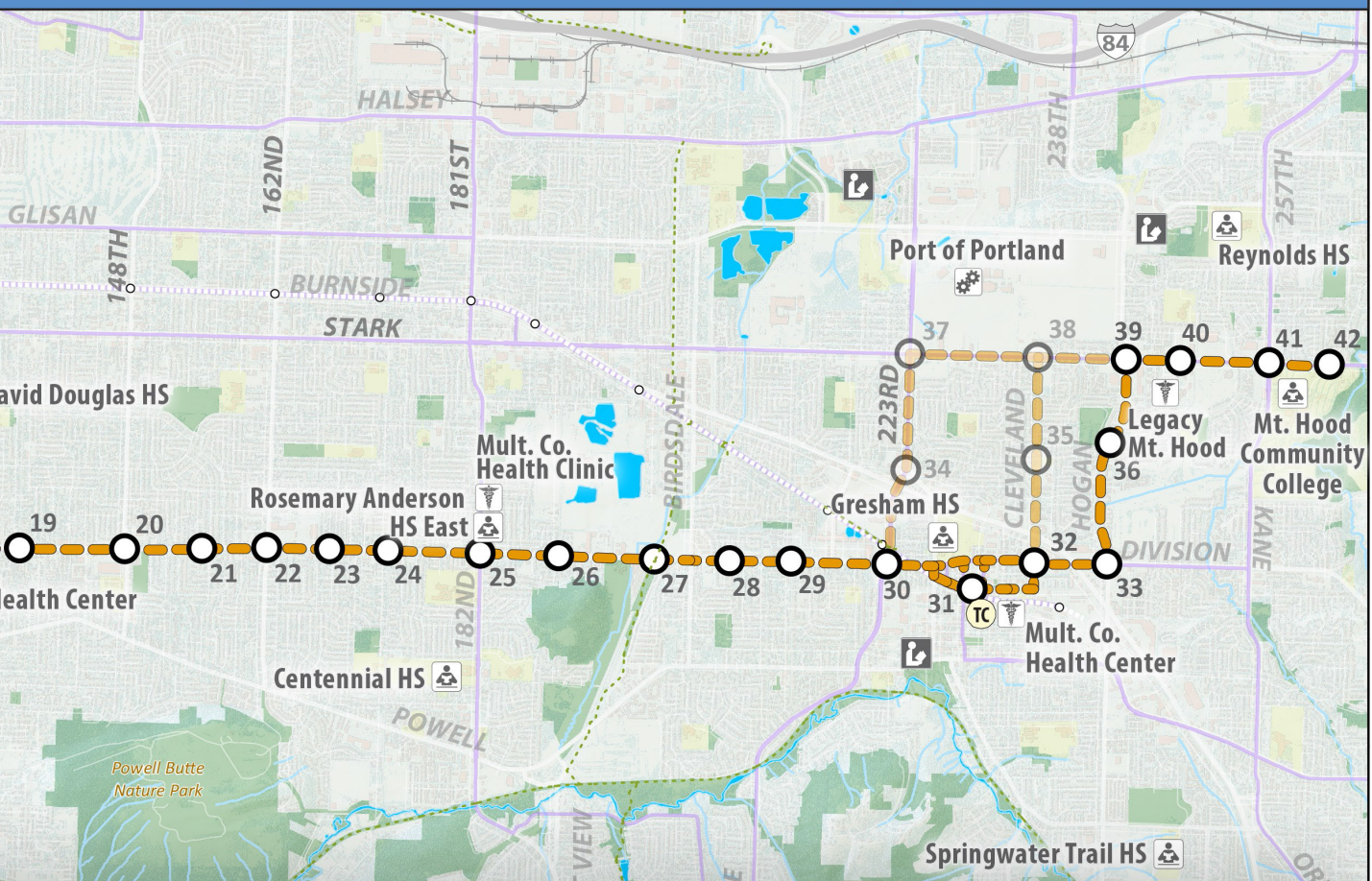
The transit project is being designed to fit the varying street character along the corridor while also achieving faster travel times. On inner Division Street, the design assumes the current streetscape (curb extensions, stormwater swales, and wide sidewalks) would remain with new buses that are longer but no wider than the current buses used by the 4-Division. The following table discusses the differences with the project compared to today.

Division St between 11th and 82nd Aves	Today	Future with new service
Number of stops and time at stops	26 stops All passengers board through the front door	11 stations All door (2-3) boarding means a shorter dwell time at stations
How long does a bus ride take? Between 11th and 82nd, the bus travels 3.8 miles	Scheduled to take approximately 22 minutes	~15-20% faster
Frequency of the bus	15 minutes or better More often during the peak	15 minutes or better More often during the peak
Size of the bus A new bus would be the same width as today's bus, but carry more people	Carries about 50 people 8.5 feet wide 40 feet long	Carries about 80 people 8.5 feet wide 60 feet long
Features of the bus	Standard bus	Potentially more space for people with bikes and mobility devices
Pass ups Sometimes the bus is too full for people to get on	Some buses are too full and waiting passengers get passed up	Longer buses can carry 60% more people
On-time arrivals	Less than half of trips are on time in during evening rush hour	Fewer stops, faster boarding and transit signal priority will improve reliability

Division St between 11th and 82nd Aves	Today	Future with new service
Bus stops	Bus stops about every 2-3 blocks	Bus stops about every 7 blocks 74% of riders would get on at the same stop, others would walk 1-4 blocks further Quicker trip because bus stops less often
Waiting for the bus	Some shelters	Better station amenities, including weather protection at every stop
Getting on and off the bus	Front door entry only 4.3 seconds per person	2-3 door entry 1.3 seconds person
Connections to destinations west of SE 12th Ave	Downtown Portland	Could follow the existing Line 4 route or connect to OMSI/South Waterfront/OHSU/PSU on the way to Downtown Portland
Emissions	Biodiesel	Newer bus technology
Branded service	TriMet Frequent Service	New bus and stations would have a distinct visual identity
Traffic	Same as today; cars often get stuck behind bus with frequent stops	Fewer cars get stuck behind buses which stop less often and for shorter times
New technology for traffic signals The new buses can communicate with the signals to hold green lights longer	Standard traffic signals	Transit signal priority will save transit travel time



Draft Proposed Station Locations (April 2016)



Inner Division stations proposed April of 2016 *

About 74% of current riders use existing stops at these locations. The remaining 26% would walk 1/6 to 1/4 mile farther to access a BRT station.

Number	Location
D1	Division & 12th
D2	Division & 20th
D3	Division & 26th
D4	Division & 34th
D5	Division & Cesar Chavez
D6	Division & 45th
D7	Division & 51st
D8	Division & 60th
D9	Division & 68th
D10	Division & 76th
D11	Division & 82nd

Alignments to be determined ————
 Existing Light Rail ————
 Existing Bus Service ————
 Existing Regional Trail ————

Key Destinations / Services

School
 Key Retail
 Community Center
 Employment
 Hospital
 Library

April 20, 2016

Public engagement findings

Portland route options

Conversations this spring with Southeast Portland community leaders and organizations indicate a **willingness to consider a route that includes inner Division Street**. Community leaders and the general public understand the constraints on inner Powell Boulevard make it unfeasible in the near-term, and potential property impacts on 82nd Avenue are untenable for the Jade District. The property impacts likely under the minimum-build scenario on 82nd Avenue would be significantly greater than what was shared in January 2016. In order to safely accommodate left turns, additional widening would be needed at intersections, which would result in far more property impacts than initially thought. People have also stressed the **importance of biking and walking improvements to Powell Boulevard** should the BRT run on Division Street.

Gresham route options

A public engagement effort solicited community preferences among three Gresham route options: Main Avenue/223rd Avenue, Cleveland Avenue and Hogan Drive. Input was specifically sought from people who live, work or own property along the route options. Findings show that **more people prefer Hogan as the BRT route**. People who prefer Main/223rd believe that it holds greater potential for economic development. More people specifically oppose a route using Cleveland than support it.

Proposed BRT station locations

The majority of bus riders who participated in the online survey and focus groups felt that **the proposed station locations would meet their travel needs**. Most people said they were likely to use a BRT station. People who felt unlikely to use a BRT station said the station was too far or there were no safe crossings and/or sidewalks.

People were divided about the importance of underlying service in addition to BRT. Some favored keeping Line 4-Division service with the BRT to maintain closely-spaced bus stops in East Portland where many people rely on transit and the pedestrian network is less safe and accessible. Those who favor BRT service without underlying service preferred to reinvest service hours from Line 4-Division into connecting streets that have less or no transit service.



Next steps

June - September	Project team continues community engagement to understand station location preferences and other community desires and concerns. Project team continues technical analysis on transit performance and station locations. Steering Committee seeks consensus on route.
Fall 2016	Steering Committee reviews public input and technical analysis and seeks consensus on remaining route decisions and station locations (1-2 meetings). LPA recommendation.
Beyond	TriMet designs project in further detail. Community input from new Community Advisory Committee and ongoing public engagement throughout design and construction.

Upcoming outreach

In addition to the information gathered about other parts of the corridor, this summer, transit riders and neighbors will be invited to take a survey about potential changes on Inner Division, including proposed station locations. The online survey will be promoted via email, social media and in person at high-ridership bus stops, community events and other busy places. Project staff will also continue to gather feedback from community groups at open houses and events.

Local action plans

Portland and Gresham Action Plans are complementary components of the Powell-Division project that support transit and the types of changes desired by communities.

Gresham Action Plan

The Gresham Action Plan includes strategies that support new development, including a review of city codes and station area improvements including pedestrian and bicycle enhancements near stations. Gresham City Council accepted the Powell-Division Transit and Development Project Gresham Action Plan on November 17, 2015.

Portland Action Plan

The Portland Action Plan includes updates to address affordable housing, including inclusionary housing and construction excise taxes, and addresses the evolution of the route. The Plan will go to City Council on July 27 at 2 p.m. for adoption.

Revised project timeline

REVISED TIMELINE	2014	2015	2016	2017	2018	2019	2020	2021
PLANNING								
Winter and spring 2014 Establish a common understanding of the needs and opportunities for transit and development in the corridor	■							
Summer through fall 2014 Look at the kinds of transit that that are feasible and desirable in the corridor, hear ideas about where it should go and identify places that would make safe and active station areas	■							
Winter 2015 through fall 2016 Take the elements that are most supported and feasible, and craft a recommendation on the type of transit, route and strategies for development at station areas		■	■	■				
Fall/winter 2016 Refine the recommendation and present it to local and regional elected councils for consideration and endorsement			■					
DESIGN								
2015 to 2018 Create detailed design of the new transit line and station areas, and complete environmental review and permitting		■	■	■	■	■		
CONSTRUCTION								
2019 to 2021 Build the transit line and station areas and start new service (Year of service start not yet determined)						■	■	■



The Powell-Division Transit and Development Project is a partnership of the cities of Portland and Gresham, Multnomah County, the Oregon Department of Transportation, TriMet and Metro.

www.oregonmetro.gov/powelldivision