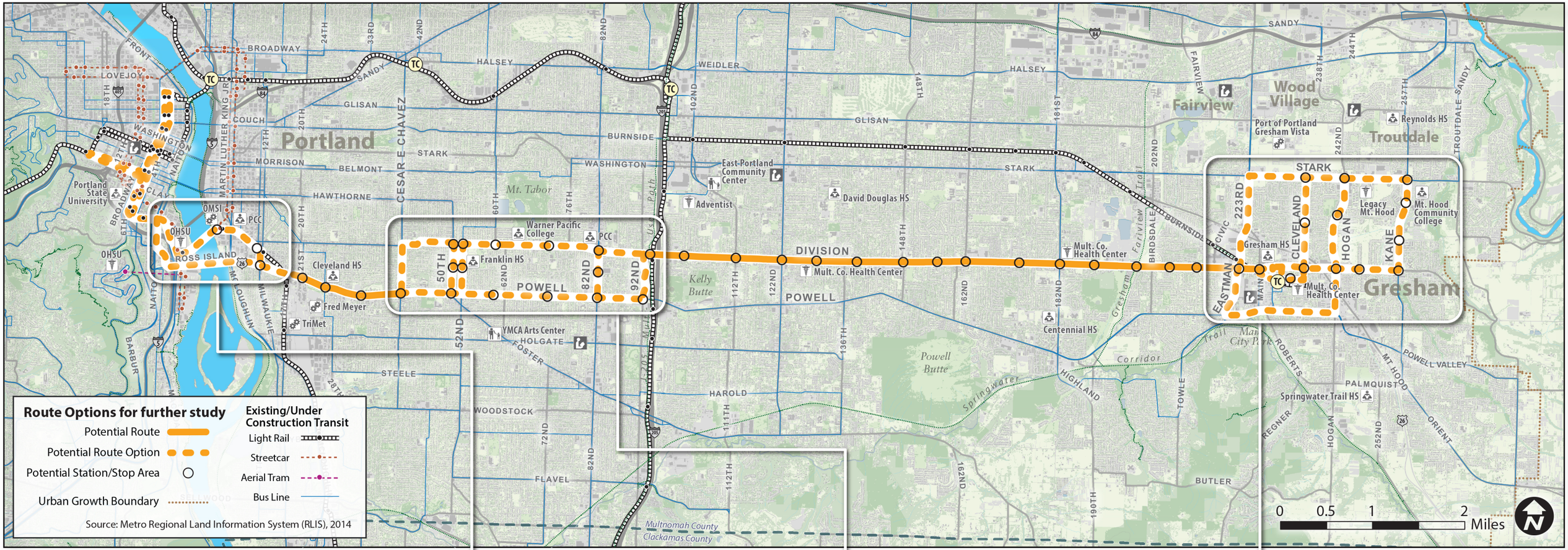
Powell-Division Transit and Development Project: Route Options

Metro



The Powell-Division Transit and Development project will bring improvements that save riders time and provide a higher quality service beyond today's Frequent Service. We are studying a range of bus options, routes that connect Gresham and Portland, and ways to improve walking and biking access along the route.

Key Features of Bus Rapid Transit

- Larger buses that carry more passengers
- Larger stations with amenities like real-time travel information, ticket machines, security features, ADA accessible platforms and art
- Buses and stations designed for faster boarding
- Service at least every 15 minutes, with more frequent service during the peak commute hours

River Crossing

The new line could use the Tilikum Crossing or the Ross Island Bridge. The Tilikum Crossing, with more than a mile of existing dedicated busway and a quicker trip, is the more promising option.

Portland North/South Crossover Options

The new line could transition between Powell and Division in Southeast Portland using one of the following:

- Cesar E Chavez Blvd. is the least promising option because of unreliable travel times.
- 50th or 52nd avenues are similar to each other, connecting destinations along Division but missing the burgeoning Jade District along 82nd Ave.
- 82nd Ave. would connect the busy transit stops on both Powell and Division and connect to PCC and the Jade District.
- 92nd Ave. is the quickest route, but misses destinations on Division including PCC and the Jade District on 82nd Ave.

Gresham North/South Options

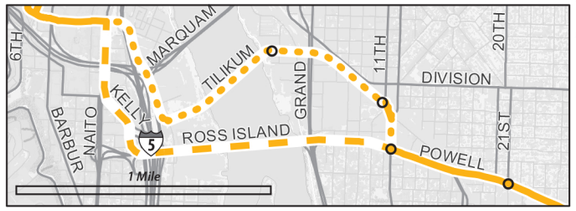
The new line could connect Downtown Gresham, the Transit Center and Mt Hood Community College using one of the following:

- Eastman Pkwy to Stark St. is a less promising option because of out of direction travel from the Transit Center.
- Cleveland Ave. is residential and would connect to destinations on Stark St.
- Hogan Rd. also connects to destinations on Stark St.
- A route on Division and Kane Dr. would miss destinations on Stark St.
- A route south of Downtown Gresham on Powell is a least promising option because of out of direction travel from the Transit Center.

2/10/2015

Powell-Division Transit and Development Project: Detailed Route Options

River Crossing Options



Tilikum Crossing

Most Promising

- Dedicated transitway and faster travel time
- Connects to high planned population growth and key destinations

Ross Island Bridge

Less Promising

- Poor travel time reliability based on existing and future traffic
- Does not serve current or future employment or key destinations

Portland North/South Crossover Options

Cesar Chavez

Less Promising

- Least travel time reliability of the options
- Expected future traffic volumes and congestion could delay buses in traffic
- Does not connect to the Jade District on 82nd

50th Ave

Pros

- Connects to:
  - future employment growth
  - key destinations including PCC and the Jade District on Division
  - community resources
  - more commercial and multifamily zoning than 52nd

Cons

- Does not serve as well:
  - communities of concern (low income and people of color)
  - affordable housing
  - central Jade District on 82nd
  - areas with high development potential, commercial and multifamily zoning

52nd Ave

Pros

- Connects to:
  - future employment growth
  - key destinations including PCC and the Jade District on Division
  - existing transit on 52nd

Cons

- Does not serve as well:
  - communities of concern
  - affordable housing
  - central Jade District on 82nd
  - areas with high development potential
  - businesses and commercial zoning

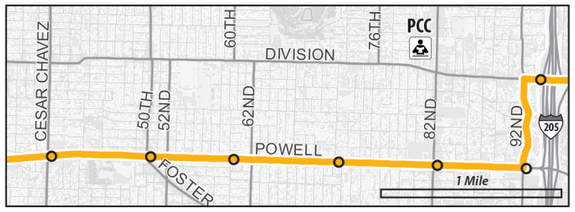
82nd Ave

Pros

- Connects to:
  - future population growth
  - communities of concern
  - affordable housing
  - highest existing transit ridership
  - central Jade District and PCC
  - areas with highest development potential

Cons

- Day to day traffic variation could reduce transit reliability if the bus travels in mixed traffic
- Expected future traffic volumes and congestion could delay buses in traffic

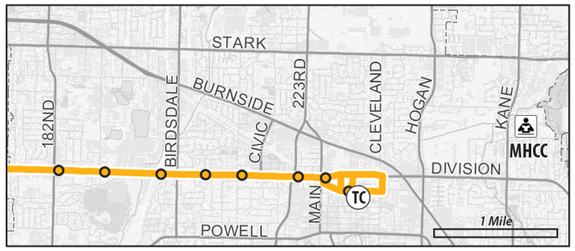


92nd Ave

Less Promising

- Does not serve as many people as other Portland options
- Does not serve current riders of 4-Division and 9-Powell as well as other Portland options
- Does not connect to PCC and the central Jade District on 82nd

Gresham North/South Options



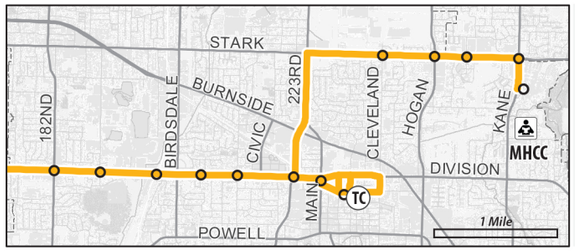
Gresham Transit Center

Pros

- Transit center is where 4 - Division and 9 - Powell finish
- Lower cost than other Gresham options

Cons

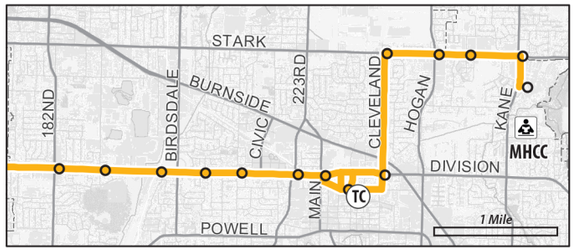
- Does not serve as well:
  - as many people as other Gresham options
  - communities of concern
  - affordable housing
  - Mt Hood Community College and other key destinations
  - areas with development potential and developable commercial properties



223rd/Eastman

Less Promising

- Requires out-of-direction travel from the Gresham Transit Center to connect to other destinations
- Longer travel times than the other Gresham options



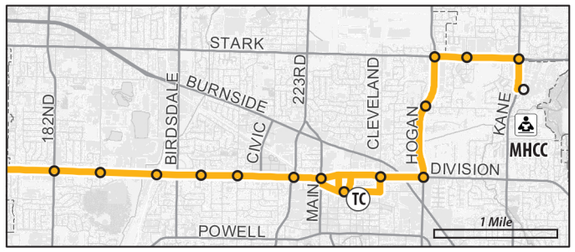
Cleveland

Pros

- Connects to:
  - future employment growth at Gresham Vista Business Park and Legacy Mount Hood Medical Center.
  - more than 10,000 households

Cons

- Does not serve as many community resources
- More limited right-of-way than Hogan and Kane
- Half-mile longer route than Kane
- City policy and plans do not identify it as a transit route



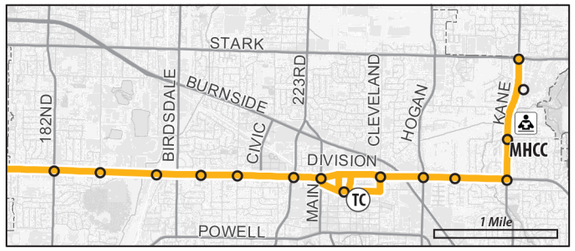
Hogan

Pros

- Connects to:
  - future employment growth at Gresham Vista Business Park and Legacy Mount Hood Medical Center
  - commercial business district
  - areas with highest development potential
  - more than 10,000 households
- Provides transit service to Hogan, which does not currently have transit

Cons

- Half-mile longer route than Kane
- Expected future traffic volumes and congestion could delay buses in traffic



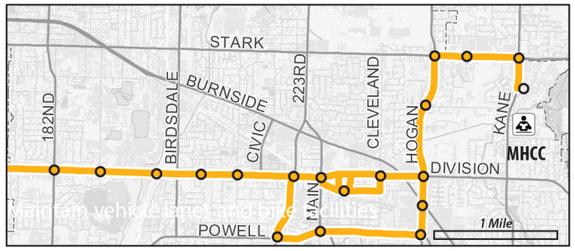
Kane

Pros

- Connects to more than 10,200 households
- Shortest route to Mt Hood Community College

Cons

- Does not serve as well:
  - communities of concern
  - fewer jobs than Hogan
  - key destinations including Gresham Vista Business Park and Legacy Mt Hood Medical Center
  - areas with high development potential



Powell

Less Promising

- Requires out-of-direction travel from the Gresham Transit Center to connect to other destinations
- Longer travel times than the other Gresham options

Powell-Division Transit and Development Project: Traffic Conditions

Metro

Priorities:

- -Serve current ridership
- -Serve future ridership
- -Provide fast, frequent transit service
- -Maintain motor vehicle mobility
- -Distribute benefits equitibly

Needs:

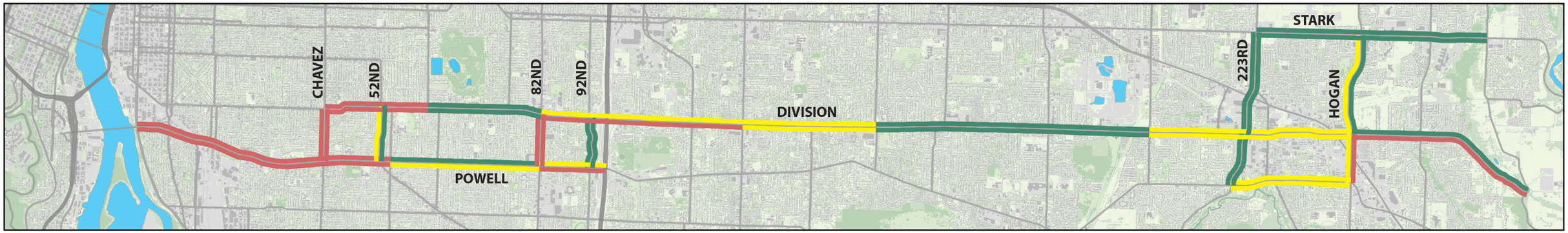
- -Demand for transit service is increasing in corridor
- -Transit can be slow and unreliable
- -Transportation options to major destinations are limited

Opportunities:

- -Improve access to transit in communities of concern
- -Increase ability of people to move in and through the corridor
- -Make best transit investment to address congestion and lack of mobility

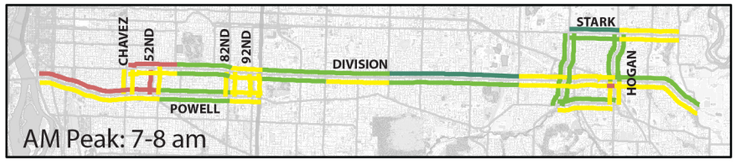
Traffic Summary

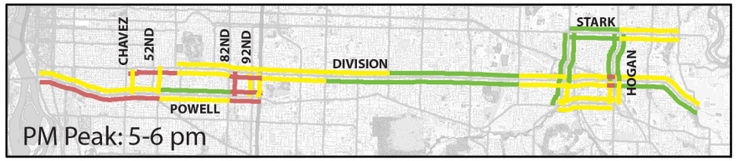
Low Medium High



Average Traffic Speed (mph)

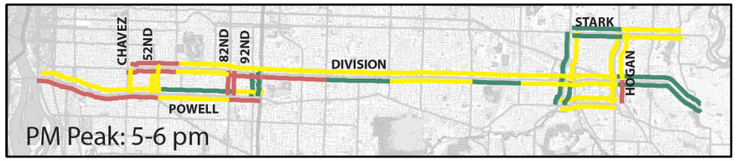
20 25 30 35 40





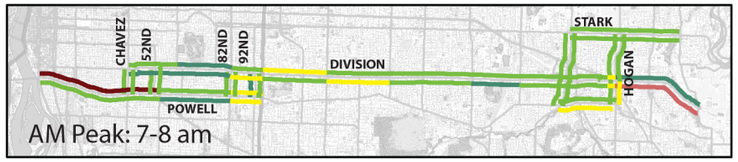
Traffic Congestion

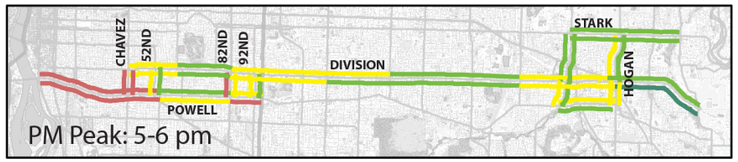
Peak Hour Speed / Freeflow Speed (%) 70 80 90 100



Traffic Reliability

Buffer Index (%) 0 10 25 50 100 120





About these maps:

To summarize the traffic conditions into a single measure, the individual road segments were evaluated for 'traffic impedance' based on a compilation of congestion and reliability for both the AM and PM peaks. Segments with either a congestion level below 80% or a buffer index above 50% (colored red on the maps) for either peak were assigned a 'high' traffic impedance rating. Remaining segments with both a congestion level below 90% and a buffer index above 25% (colored yellow on the maps) for either peak were assigned a 'medium' traffic impedance rating. All other segments were assigned a 'low' traffic impedance rating.

Source Data: INRIX 2013, Metro RLIS 2015

2/10/2015

Powell-Division Transit and Development Project: Transit Design Concepts

2/10/2015

River Crossing Options

Tilikum Crossing

- Provides over one mile of dedicated transit lane
- Considering in-street and dedicated lanes for Powell to 26th
- Powell to 26th is a challenging section with congestion, narrow right-of-way, and other design challenges

Ross Island Bridge:

- Less promising - the Ross Island Bridge result in poor travel time reliability or major modifications to the bridge and does not connect to South Waterfront or OMSI

Portland North/South Crossover Options

Cesar Chavez

- Less promising - limited right-of-way and expected future volumes limit transit travel time reliability

50th / 52nd:

- Considering mixed-traffic improvements
- Limited right-of-way would require Impacts adjacent homes and businesses for transit lanes

82nd:

- Considering potential for dedicated transit lanes and mixed-traffic improvements such as intersection improvements and queue jumps
- Maintain number of vehicle lanes on Powell and 82nd

92nd:

- Less promising -connects to less people; does not connect to Jade District
- Right-of-way could potentially allow for dedicated transit lanes and mixed-traffic improvements

Gresham North/South Options

Eastman/223rd:

- Less promising - out of direction travel and longer travel times

Cleveland:

- Considering bus to operate along current lanes - Cleveland is 2-lane street near residential neighborhoods
- Maintain vehicle lanes and bike facilities

Powell:

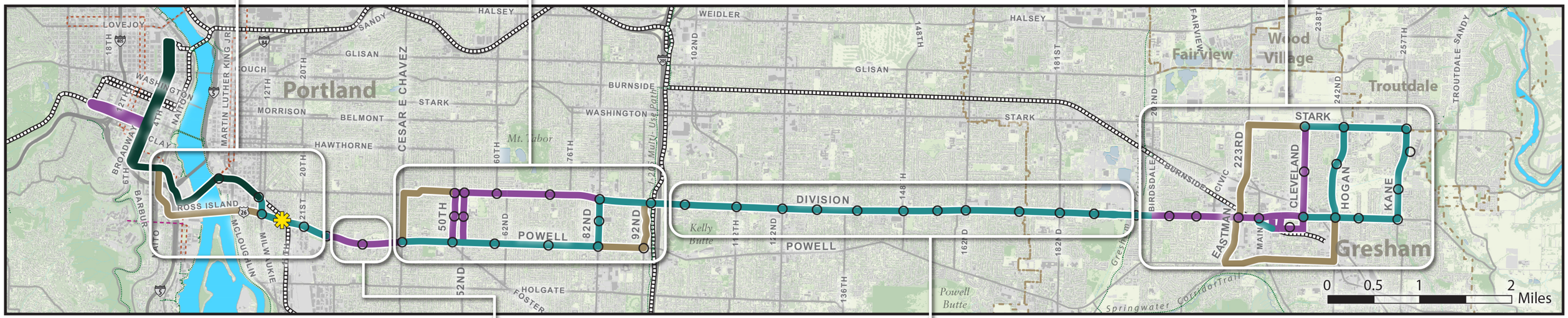
- Less promising - out of direction travel

Hogan:

- Considering potential for dedicated transit lanes and mixed-traffic improvements such as intersection improvements and queue jumps
- Maintain vehicle lanes and bike facilities

Kane:

- Considering potential for dedicated transit lanes and mixed-traffic improvements such as intersection improvements and queue jumps
- Maintain vehicle lanes and bike facilities



This map shows the assumptions for the project entering into concept design. It shows where there may be the potential for dedicated transit lanes, locations where the project may run primarily in mixed traffic, and where the project is considering both.

Based on project goals, these assumptions include:

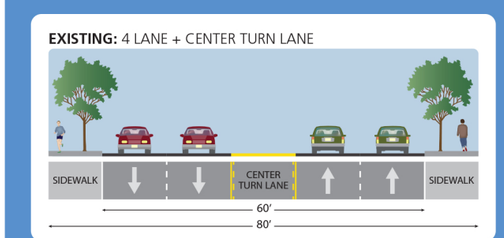
- Make the most of existing public right-of-way
- Maintain the current number of motor-vehicle lanes
- Maintain or improve biking and walking facilities

The transit project will save people time by making the trip faster and more reliable and will make bus stops more comfortable.

Powell: 26th to Cesar Chavez

- 80′ existing right-of-way
- Considering mixed-traffic improvements, including intersection improvements and queue jumps

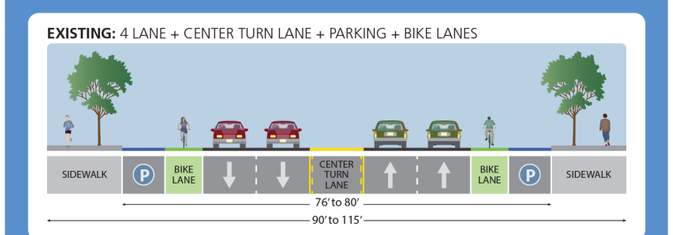
EXISTING: 4 LANE + CENTER TURN LANE



Division: 92nd to Gresham-Fairview Trail

- 90 to 115′ existing right-of-way
- Considering potential for dedicated transit lanes and mixed-traffic improvements such as intersection improvements and queue jumps
- Maintain vehicle lanes and bike facilities

EXISTING: 4 LANE + CENTER TURN LANE + PARKING + BIKE LANES



Alternatives for further study

- Existing dedicated transit lane *(September 2015)*
- Proposed potential dedicated lanes and mixed-traffic improvements considered
- No dedicated lanes; mixed-traffic improvements considered
- Less promising alternative
- High capital cost for dedicated lanes

Existing/under construction transit

- Light Rail
- Aerial Tram
- Streetcar

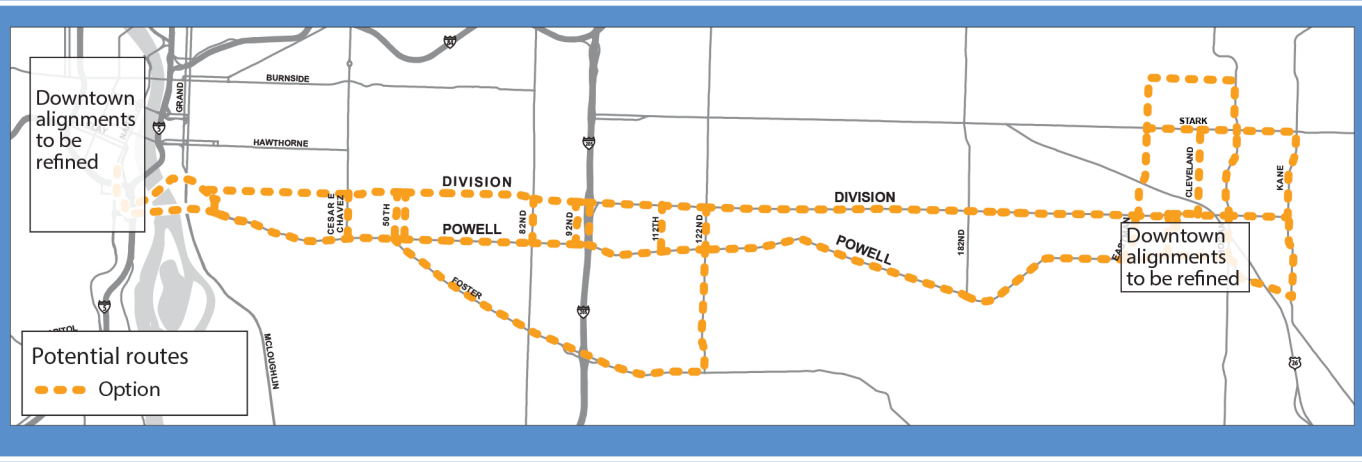
Source: Metro Regional Land Information System (RLIS), 2014

Narrowing of Powell-Division Transit Route Options

Spring 2014

Range of alternatives

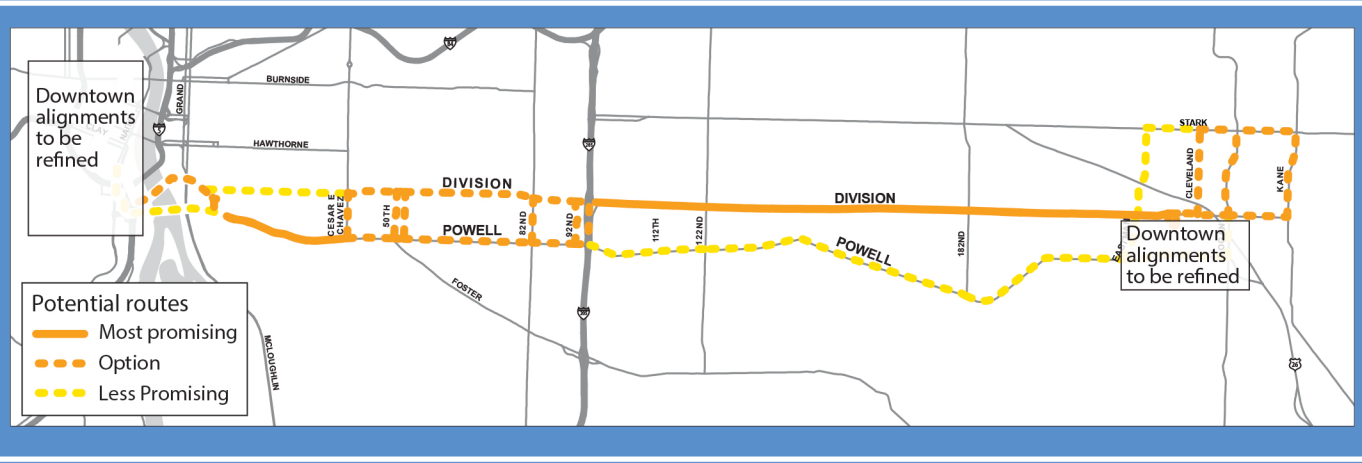
A wide range of potential transit alignments were suggested by project partners and the public.



Summer 2014

Screening

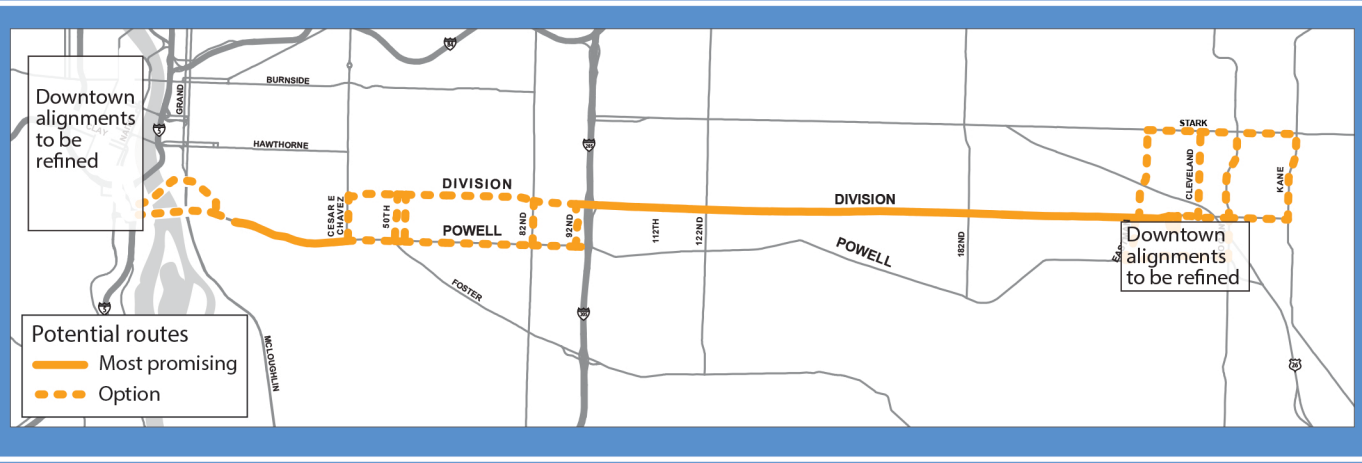
A narrower range of transit alternatives was developed and screened through public engagement and technical analysis.



September 2014

Steering Committee

On September 29, the steering committee reached concensus on advancing the general route of inner Powell Boulevard transitioning to Division Street.



Winter 2014/2015

Evaluation of options

A set of route options in Gresham and Portland were screened through public engagement and technical analysis.

2/9/2015