Federal Way Transit Extension

Alternatives Analysis Summary

June 2013

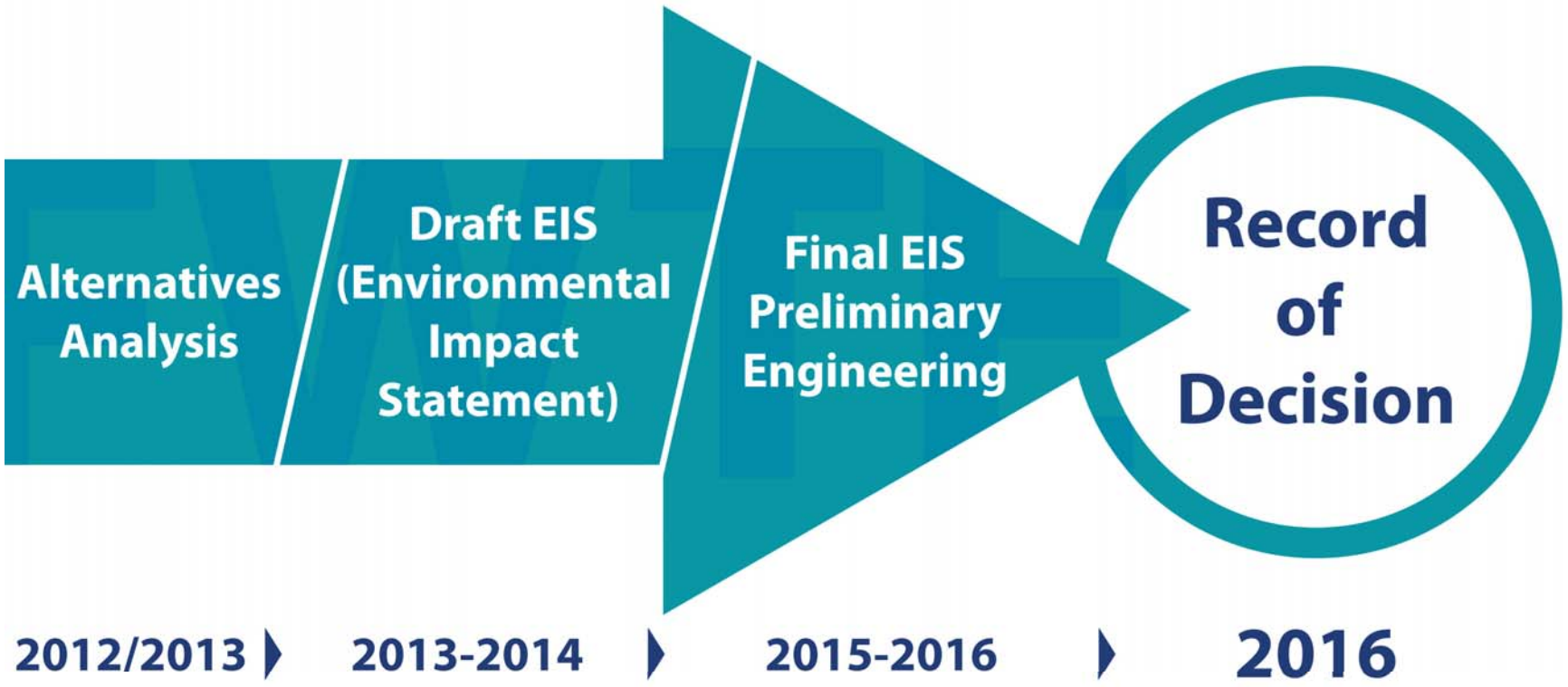
Sound Transit is evaluating alternatives to extend high capacity transit from the future Angle Lake light rail station on South 200th Street in SeaTac to the Federal Way Transit Center.

Federal Way Transit Extension

Alternatives Analysis Summary

Schedule

SoundTransit
RIDE THE WAVE

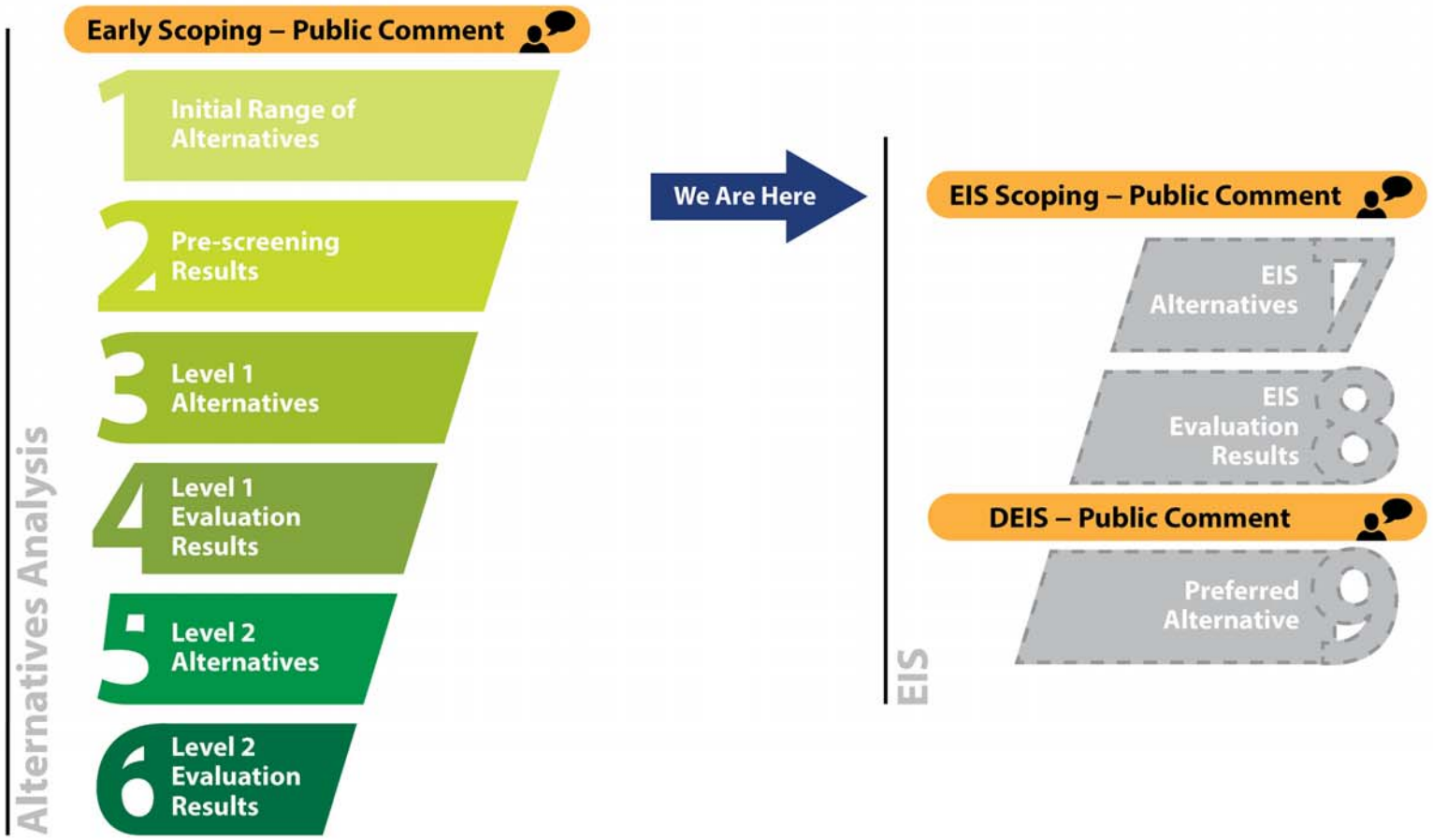


The Alternatives Analysis (AA) phase is almost done. It will be followed by a Draft Environmental Impact Statement (EIS) phase through 2014, and a Final EIS phase through mid-2016. The environmental review process will conclude with a Record of Decision from the Federal Transit Administration in late 2016.

Federal Way Transit Extension
Alternatives Analysis Summary

Alternatives Analysis Process

SOUNDTRANSIT RIDE THE WAVE



Sound Transit began the AA phase with an Early Scoping public comment period in October 2012. The results of the AA are now available and will be presented to the public during the EIS Scoping period in June 2013.

Federal Way Transit Extension
Alternatives Analysis Summary

Initial Range of Alternative Corridors

SOUNDTRANSIT
RIDE THE WAVE

Legend

- I-5 Corridor
- SR 99 Corridor
- 30th Avenue S. Corridor
- 24th Avenue S. Corridor
- Station
- Half Mile Radius from Station
- ST2 Authorized for Construction
- Currently Funded for Construction

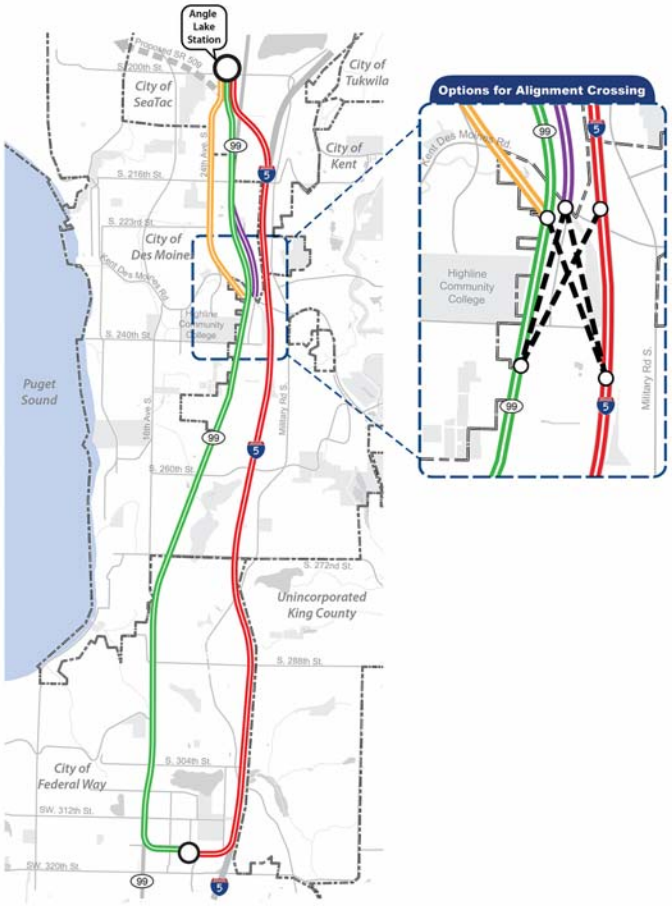
4

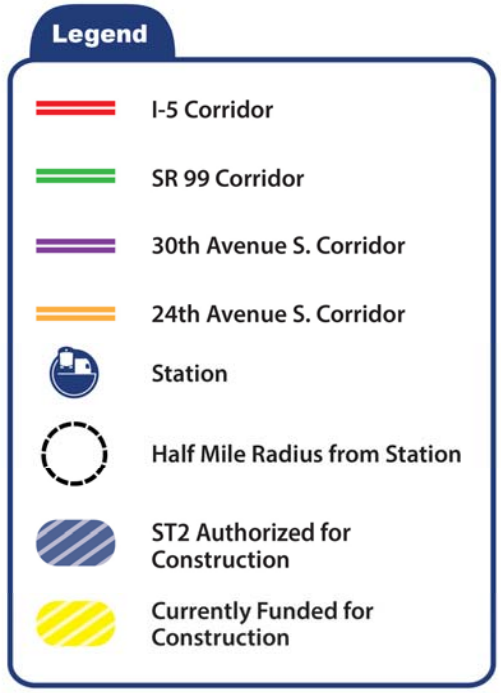
Based on public input during the Early Scoping public comment period, Sound Transit studied alternatives along the I-5 Corridor, SR 99 Corridor, as well as along 24th Avenue South and 30th Avenue South in the City of Des Moines.

Federal Way Transit Extension
Alternatives Analysis Summary

Initial Range of Alternative Corridors

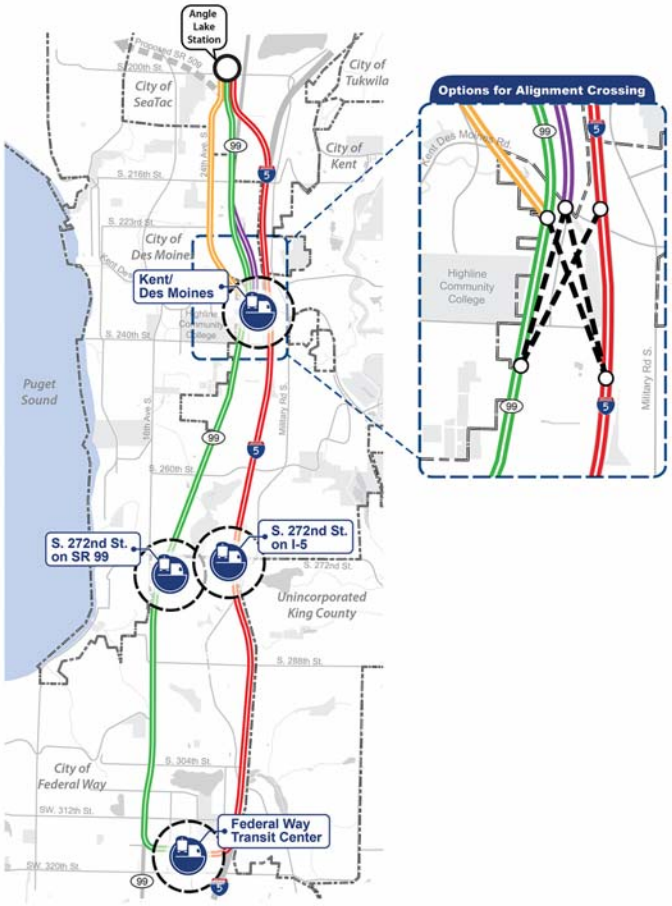
SoundTransit
RIDE THE WAVE

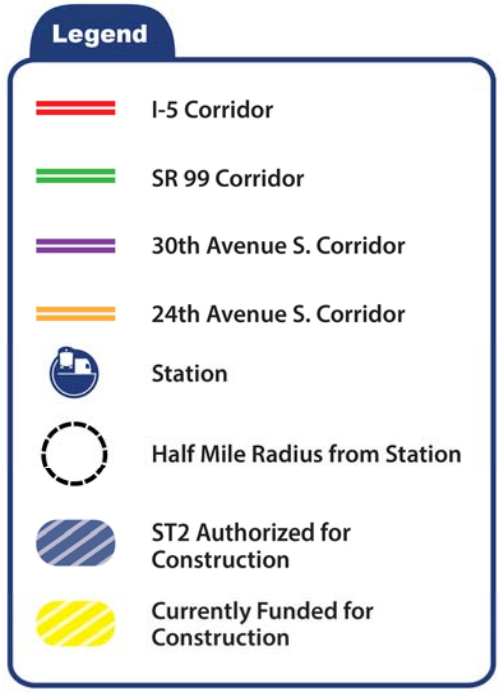




In the Kent/Des Moines area, the alignment could potentially transition from one corridor to another. The enlarged box shows potential crossing options.

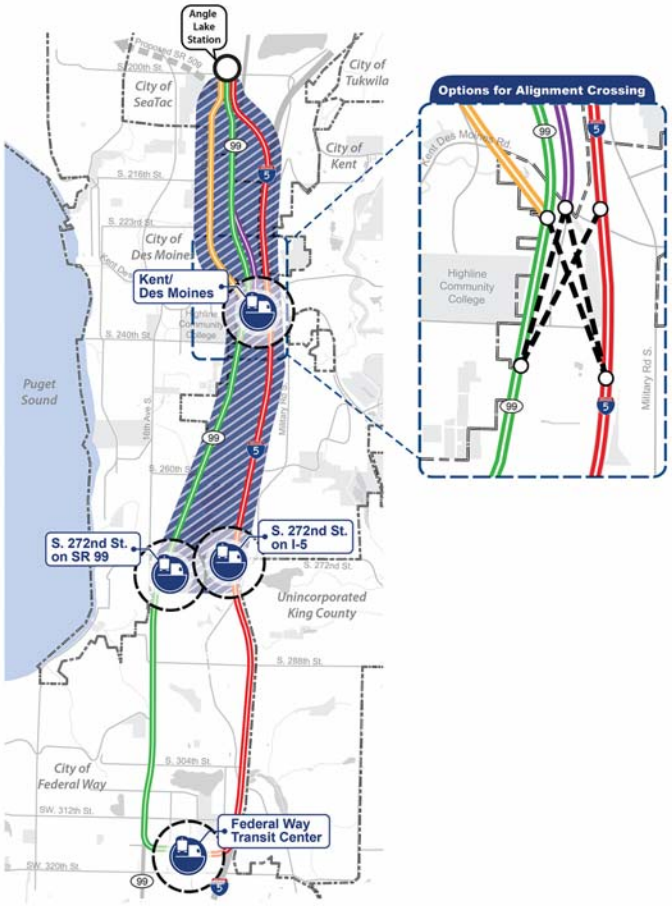
Initial Range of Alternative Corridors

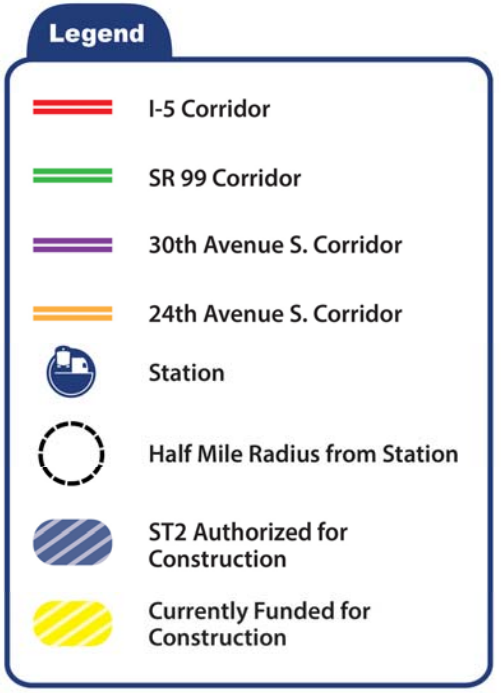




Previous planning identified potential station locations at Kent/Des Moines (in the vicinity of Highline Community College), South 272nd Street (Redondo or Star Lake park-and-rides), and the Federal Way Transit Center.

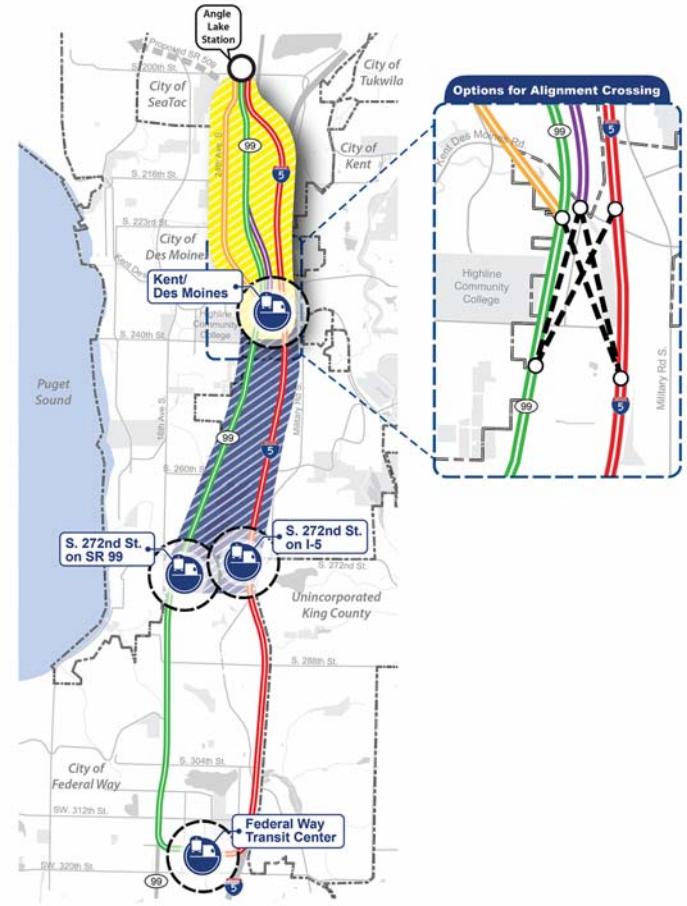
Initial Range of Alternative Corridors





The Sound Transit 2 Plan, which was approved by the voters in 2008, included funding to build light rail as far as South 272nd Street on the border of Federal Way.

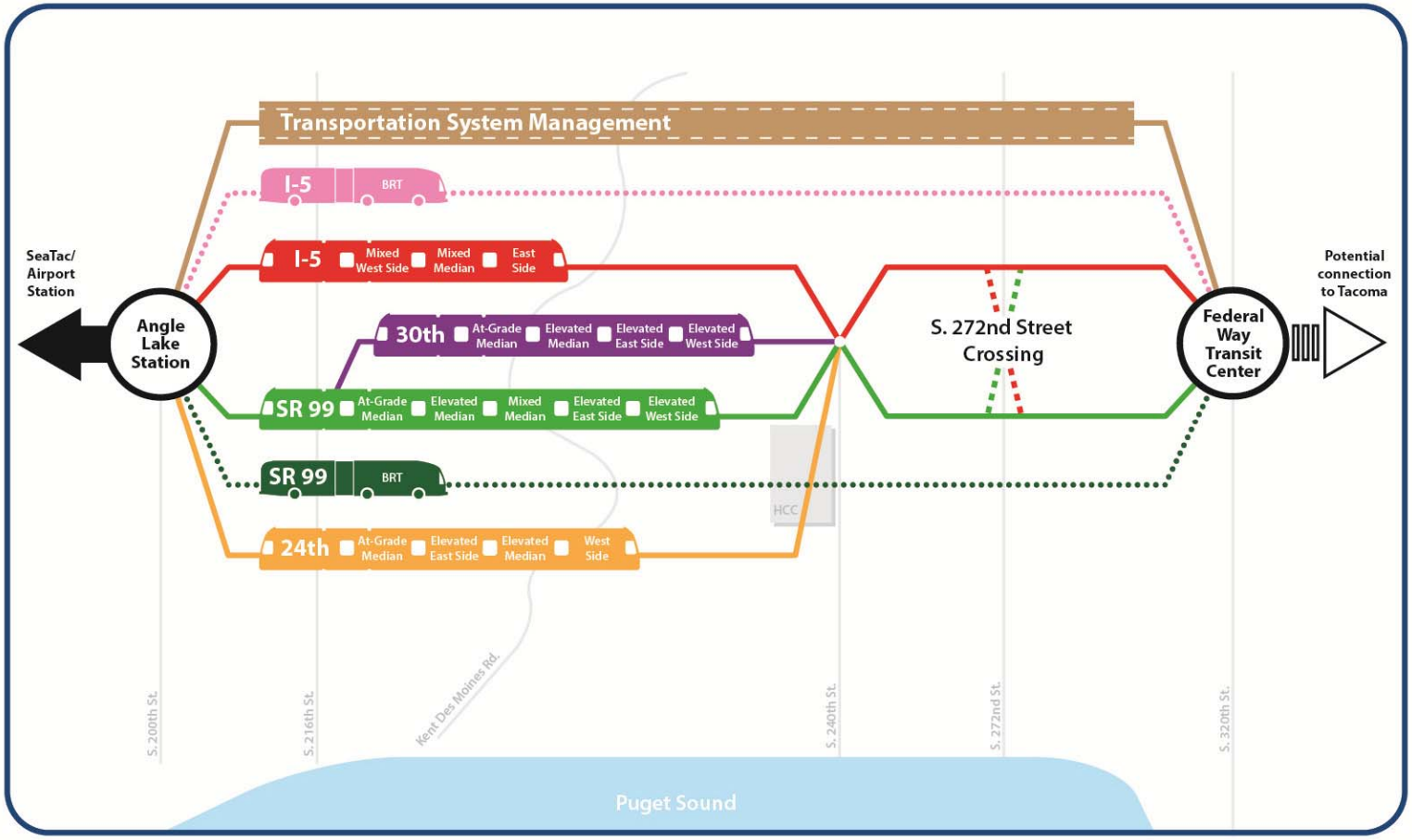
Initial Range of Alternative Corridors



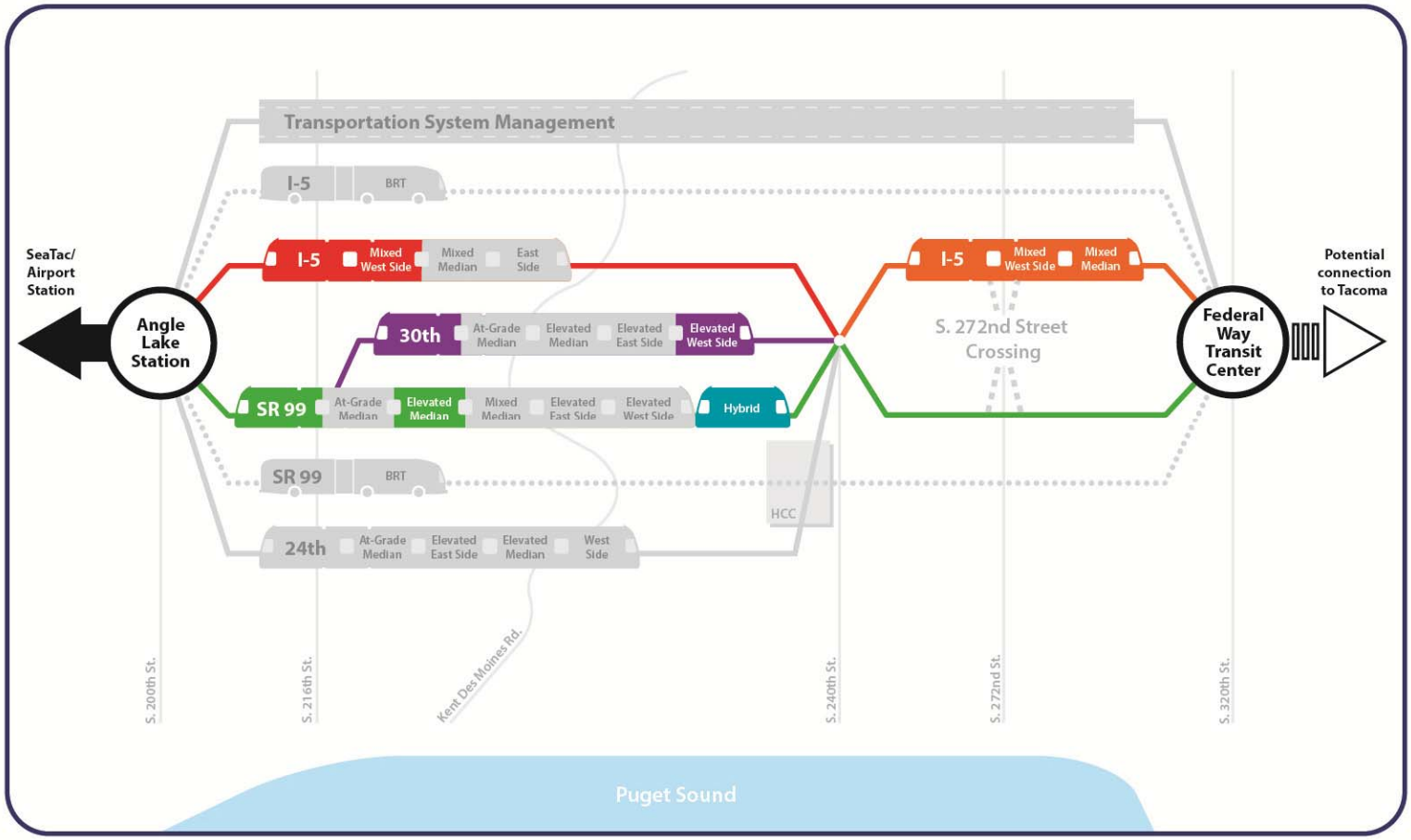
Legend

- I-5 Corridor
- SR 99 Corridor
- 30th Avenue S. Corridor
- 24th Avenue S. Corridor
- Station
- Half Mile Radius from Station
- ST2 Authorized for Construction
- Currently Funded for Construction

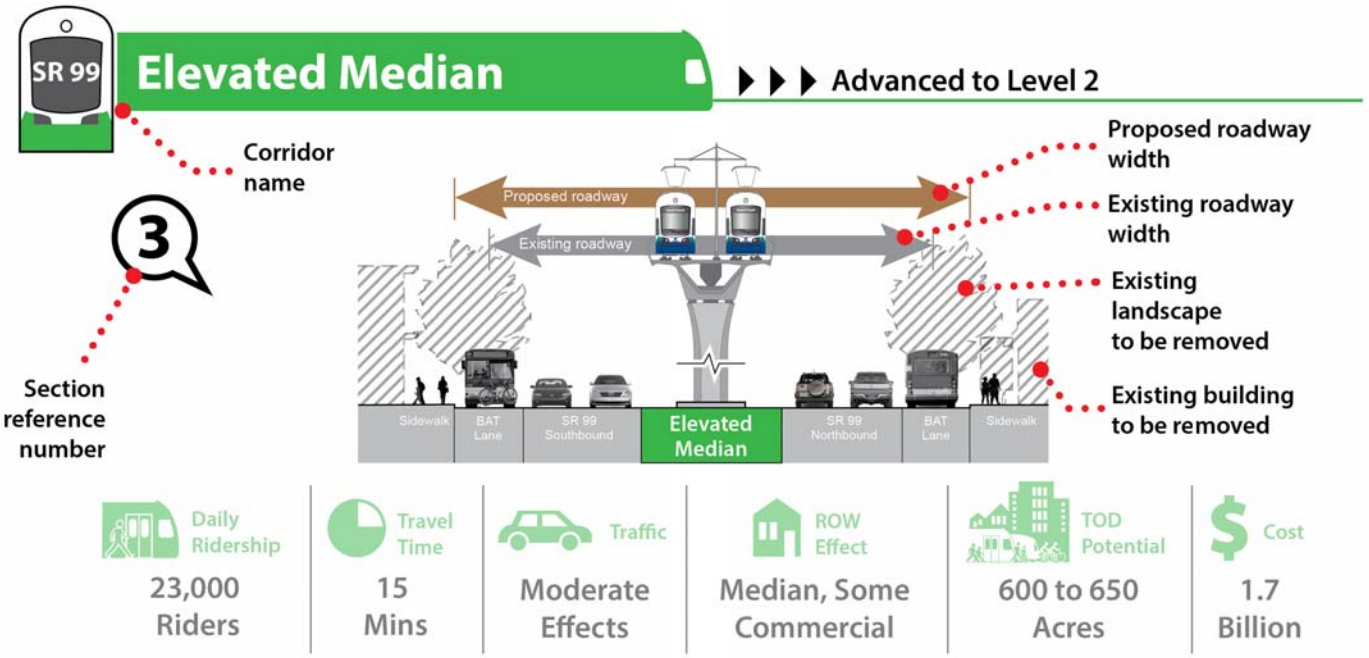
Based on current revenue forecasts, Sound Transit has enough funding to build light rail to Kent/Des Moines and is working to ensure that the segment to the Federal Way Transit Center is ready for construction once funding is secured.



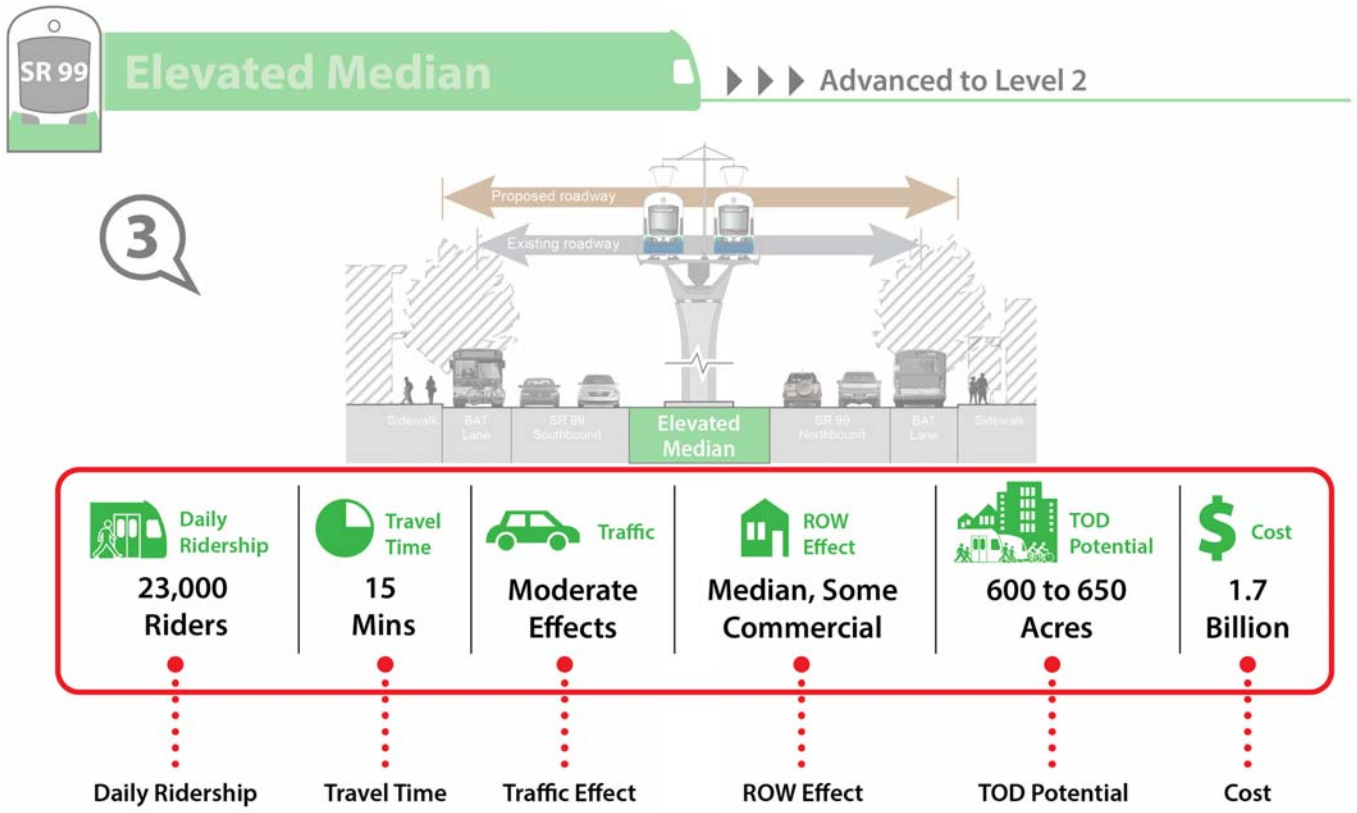
Alternatives suggested during the Early Scoping public comment period included light rail alignments on I-5, SR 99, 24th Avenue South and 30th Avenue South, as well as Bus Rapid Transit (BRT) on I-5 and SR 99, and improvements to the existing transportation system (TSM).



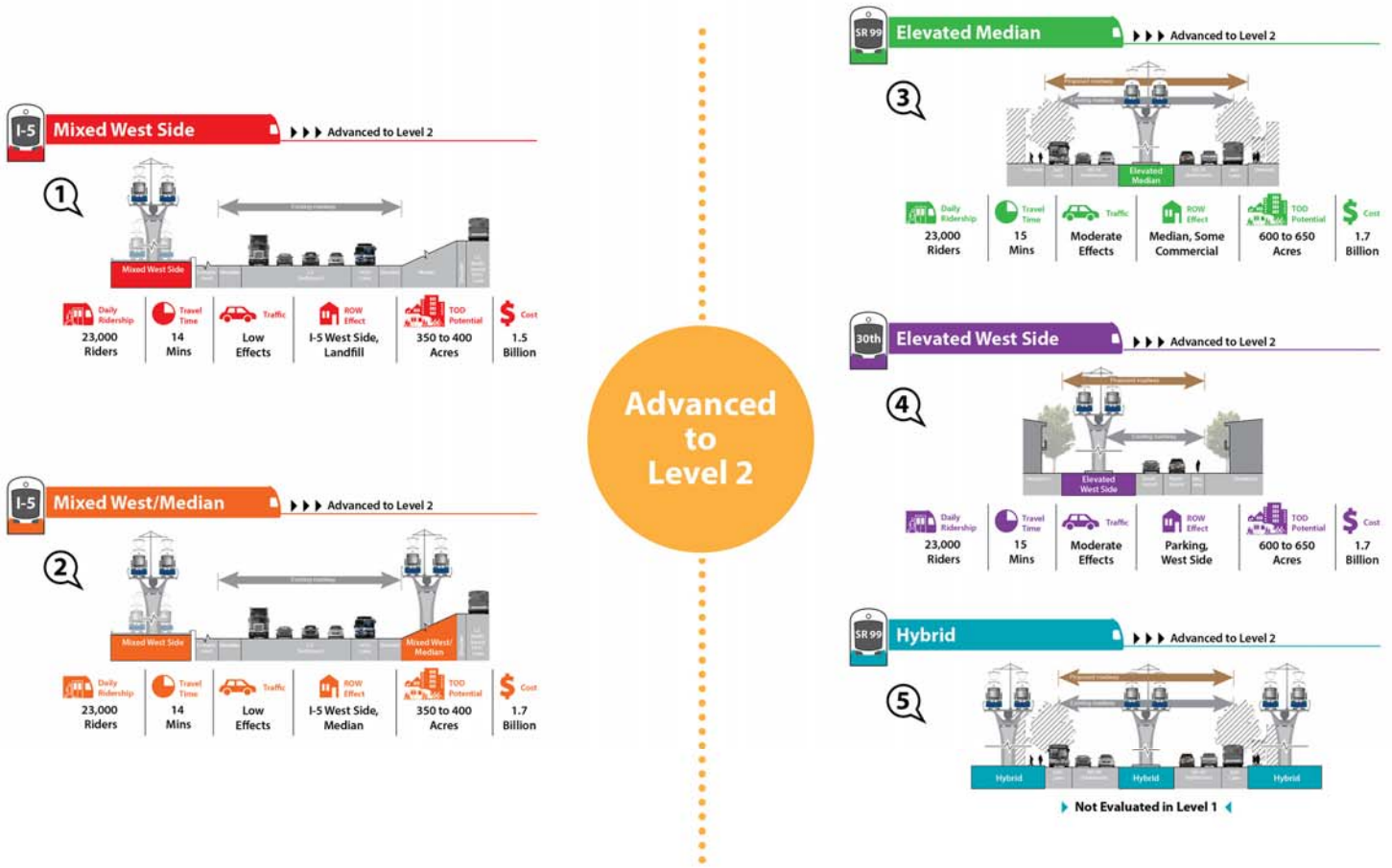
Following pre-screening of the alternatives, and a Level 1 evaluation, five light rail alignment alternatives were advanced for further evaluation in the Level 2 analysis. Previous planning in the corridor, such as the Regional Transit Long Range Plan, evaluated several transit modes and recommended light rail. Bus and BRT alternatives were considered again but not advanced because they would have a slower travel time, less ridership capacity, and would not as effectively accommodate future population growth and transit demand in the corridor.



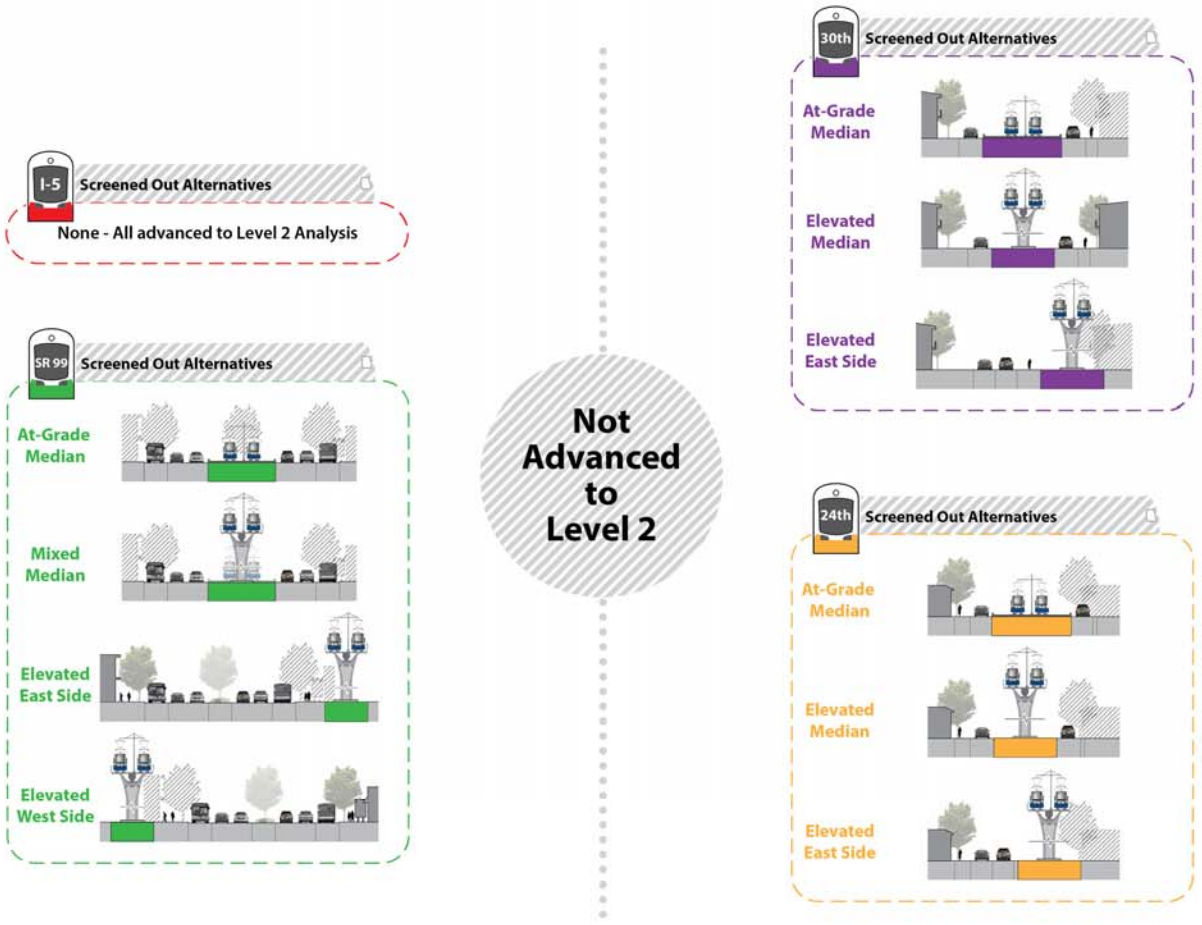
Representative cross sections are shown for each of the five alternatives that advanced to Level 2. Each cross section provides a schematic representation of how the light rail alignment would affect existing roadway widths, existing landscaping, and adjacent buildings.



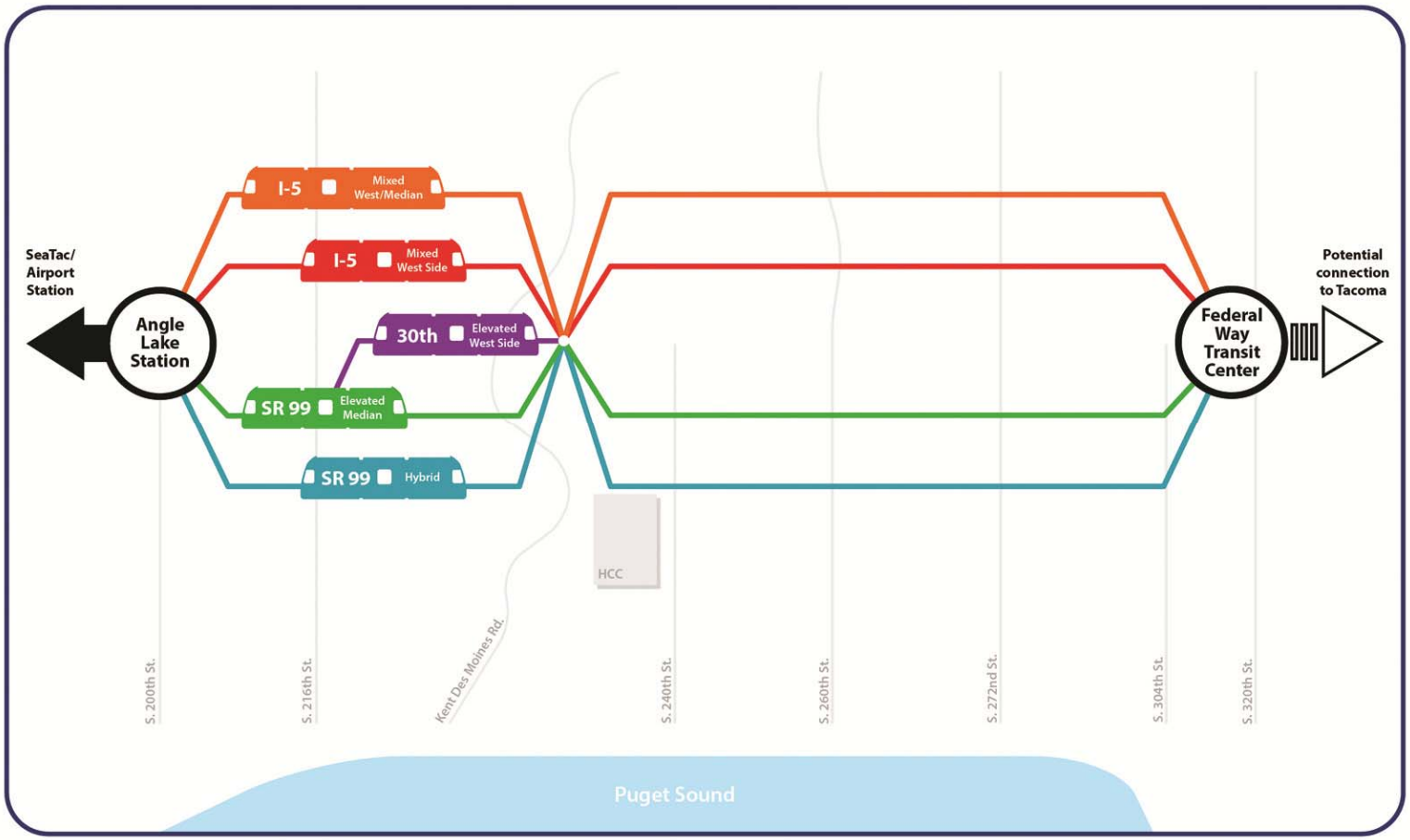
The key measures that differentiated the five remaining alignment alternatives are shown below each cross section.



The five cross sections shown represent the alternatives that were proposed for further study in the Level 2 analysis, based on the key findings, the project's purpose and need, and the Level 1 evaluation criteria. All of the alternatives would have similar ridership and travel time. The SR 99 Hybrid alternative was a new alternative that was developed based on information learned during the Level 1 analysis.

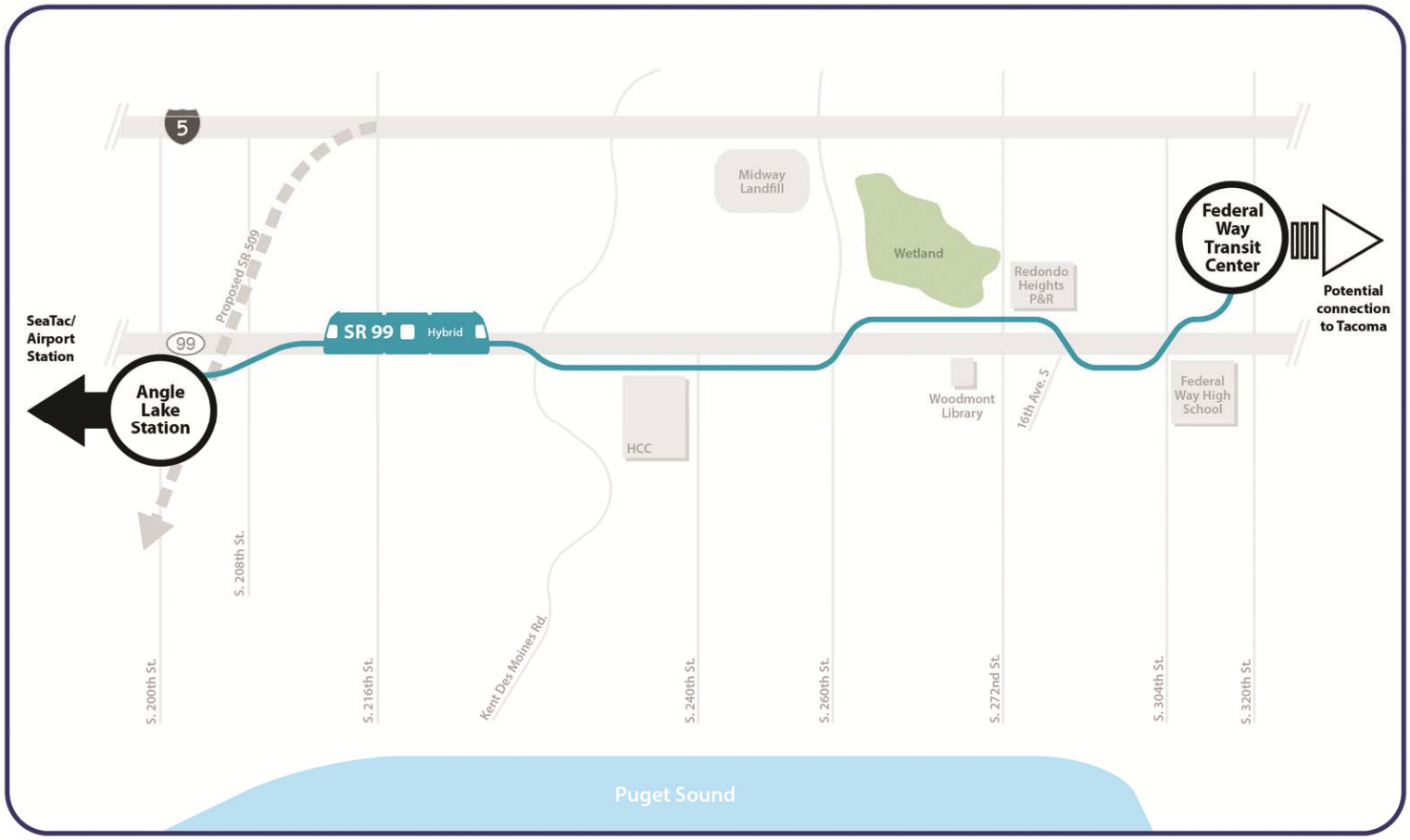


These cross sections represent the light rail alternatives that were not proposed for further study in the Level 2 analysis, based on the key findings, the project's purpose and need, and the evaluation criteria. In general, alternatives were not advanced if they had less ridership, a longer travel time, or had greater right-of-way effects.



The five alternatives that were further defined and evaluated in the Level 2 evaluation included two alternatives along I-5, one alternative on 30th Avenue South and two alternatives, (including a new hybrid alignment), along SR 99.

SR 99 Hybrid Alternative



The Level 1 analysis showed that several standalone alternatives along SR 99 had flaws, but that different segments of the various SR 99 alternatives could work better if combined together into a new 'hybrid' alternative. The hybrid was designed to avoid impacts to key intersections and community facilities, and was informed by considerations such as topography and convenient access to existing park-and-ride lots.

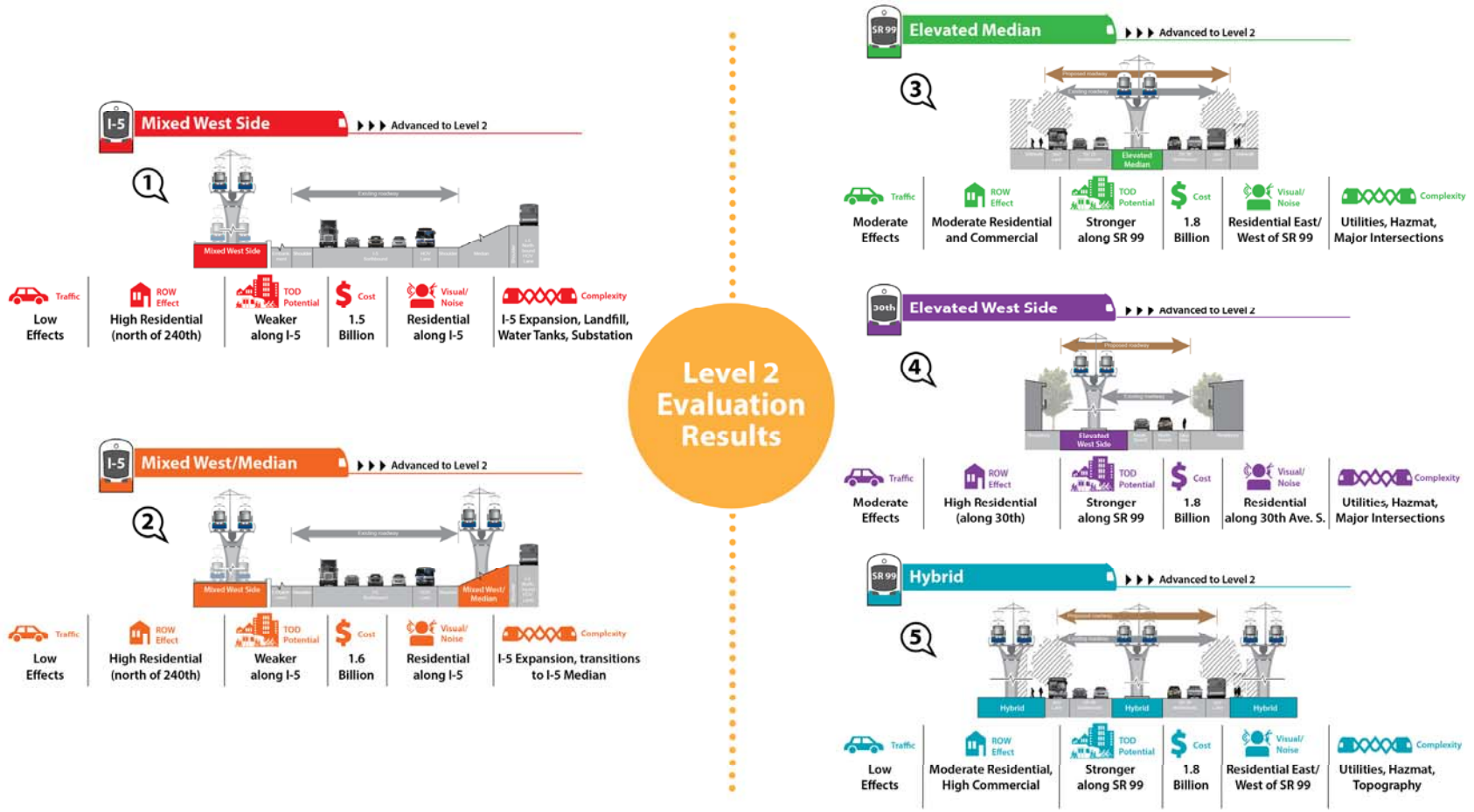
Over thirty different measures were evaluated to help distinguish the pros and cons of the Level 2 alternatives. A number of the measures yielded results that were common to all the Level 2 alternatives.

Daily ridership and travel time are expected to be about the same for all five of the Level 2 alternatives. The number of people, jobs, and households currently located within a half mile of each alignment are also similar for each alternative.

Federal Way Transit Extension
Alternatives Analysis Summary

Level 2 Evaluation Results

SOUNDTRANSIT RIDE THE WAVE



Some of the key distinguishers between the Level 2 alternatives are illustrated in this graphic.

Federal Way Transit Extension
Alternatives Analysis Summary

Level 2 Evaluation Results

SOUNDTRANSIT RIDE THE WAVE

1 Mixed West Side — Advanced to Level 2

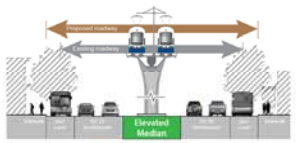
Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.5 Billion	Residential along I-5	I-5 Expansion, Landfill, Water Tanks, Substation

2 Mixed West/Median — Advanced to Level 2

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.6 Billion	Residential along I-5	I-5 Expansion, transitions to I-5 Median

Level 2 Evaluation Results

3 Elevated Median — Advanced to Level 2

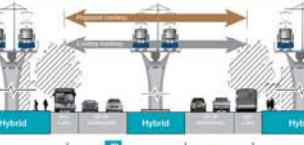


Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	Moderate Residential and Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Major Intersections

4 Elevated West Side — Advanced to Level 2

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	High Residential (along 30th)	Stronger along SR 99	1.8 Billion	Residential along 30th Ave. S.	Utilities, Hazmat, Major Intersections

5 Hybrid — Advanced to Level 2



Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	Moderate Residential, High Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Topography

The I-5 Mixed West Side alternative would likely have high residential effects north of South 240th Street and would have weaker transit oriented development (TOD) potential. Engineering challenges could include the Midway landfill south of South 240th Street, and proximity to the Highline Water District storage tanks, and a PSE substation.

Federal Way Transit Extension
Alternatives Analysis Summary

Level 2 Evaluation Results

SOUNDTRANSIT RIDE THE WAVE

I-5 Mixed West Side — Advanced to Level 2

1

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.5 Billion	Residential along I-5	I-5 Expansion, Landfill, Water Tanks, Substation

I-5 Mixed West/Median — Advanced to Level 2

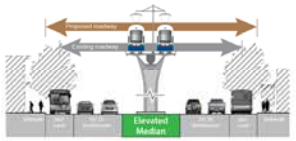
2

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.6 Billion	Residential along I-5	I-5 Expansion, transitions to I-5 Median

Level 2 Evaluation Results

SR 99 Elevated Median — Advanced to Level 2

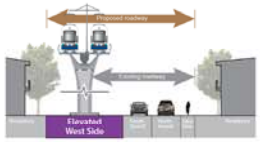
3



Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	Moderate Residential and Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Major Intersections

30th Elevated West Side — Advanced to Level 2

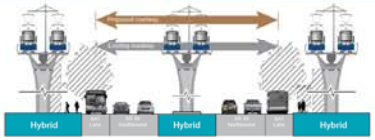
4



Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	High Residential (along 30th)	Stronger along SR 99	1.8 Billion	Residential along 30th Ave. S.	Utilities, Hazmat, Major Intersections

SR 99 Hybrid — Advanced to Level 2

5



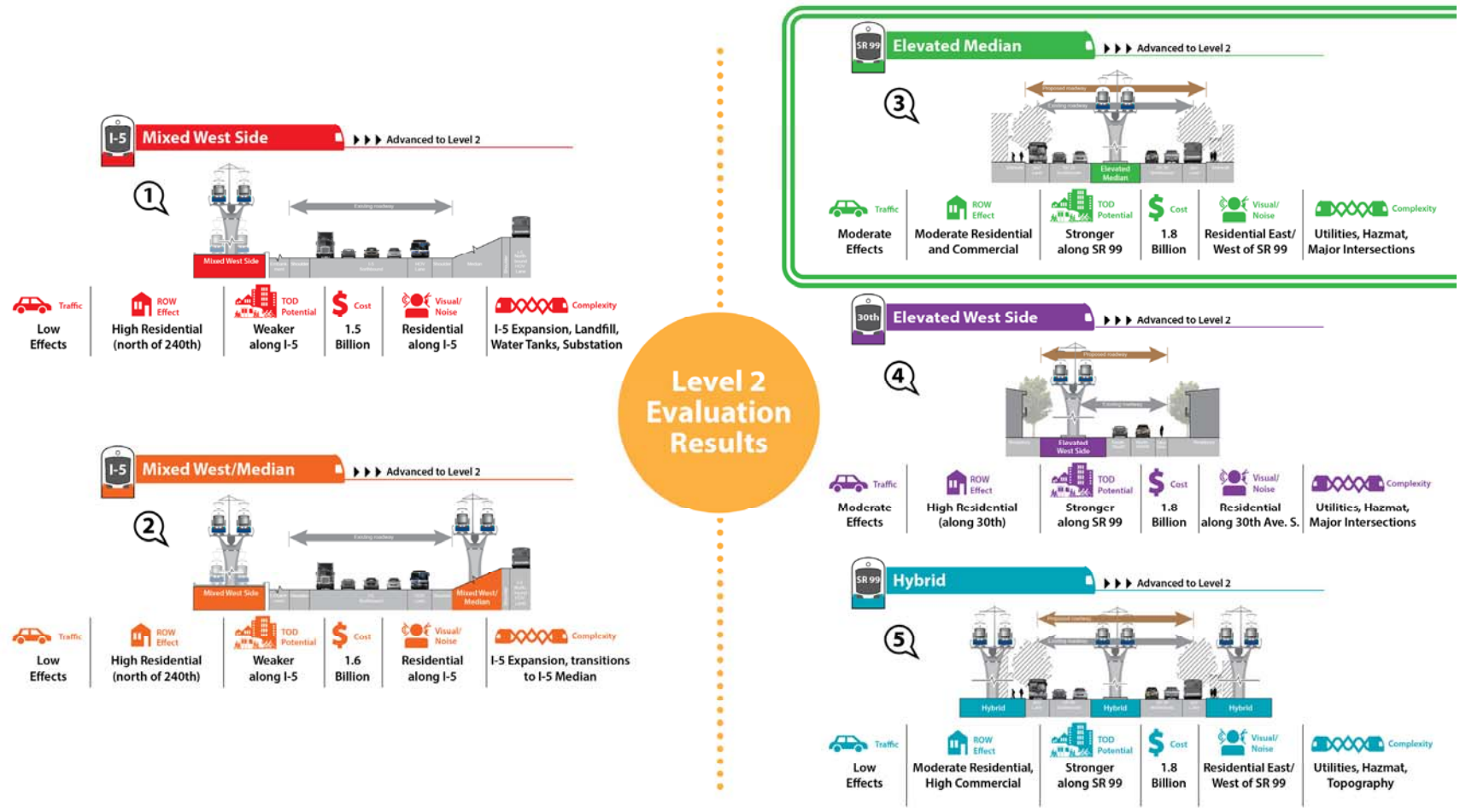
Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	Moderate Residential, High Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Topography

The I-5 Mixed West/Median alternative would also likely have high residential effects north of South 240th Street and weaker TOD potential. It would avoid the Midway landfill but would require large structures to transition to the I-5 median (south of South 240th Street) and then back to the west side at South 272nd Street and the Federal Way Transit Center.

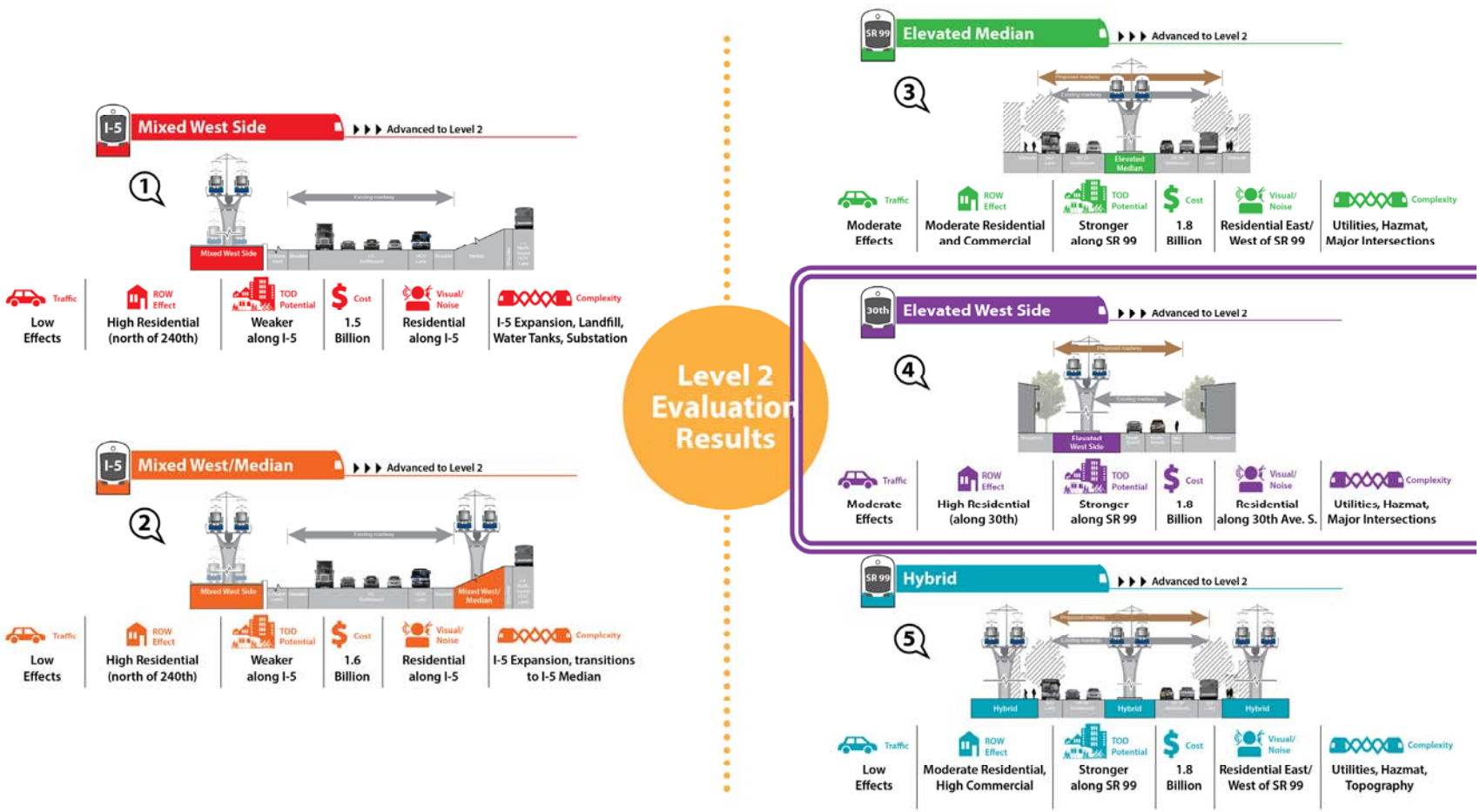
Federal Way Transit Extension
Alternatives Analysis Summary

Level 2 Evaluation Results

SOUNDTRANSIT RIDE THE WAVE



The SR 99 Elevated Median alternative would be located within the median of SR 99. It would have less effect to the roadway and adjacent buildings than other alternatives along SR 99 but would require major construction to cross key intersections along the alignment.



The 30th Avenue South Elevated West Side alternative would transition from SR 99 at about South 220th Street and then continue within the existing parking setback along 30th Avenue South. This alternative would affect commercial and residential properties at the transition point and could have noise and visual effects to properties along 30th Avenue South.

Level 2 Evaluation Results

I-5 Mixed West Side — Advanced to Level 2

1

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.5 Billion	Residential along I-5	I-5 Expansion, Landfill, Water Tanks, Substation

I-5 Mixed West/Median — Advanced to Level 2

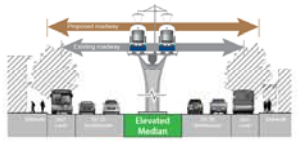
2

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	High Residential (north of 240th)	Weaker along I-5	1.6 Billion	Residential along I-5	I-5 Expansion, transitions to I-5 Median

Level 2 Evaluation Results

SR 99 Elevated Median — Advanced to Level 2

3



Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	Moderate Residential and Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Major Intersections

30th Elevated West Side — Advanced to Level 2

4

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Moderate Effects	High Residential (along 30th)	Stronger along SR 99	1.8 Billion	Residential along 30th Ave. S.	Utilities, Hazmat, Major Intersections

SR 99 Hybrid — Advanced to Level 2

5

Traffic	ROW Effect	TOD Potential	Cost	Visual/ Noise	Complexity
Low Effects	Moderate Residential, High Commercial	Stronger along SR 99	1.8 Billion	Residential East/ West of SR 99	Utilities, Hazmat, Topography

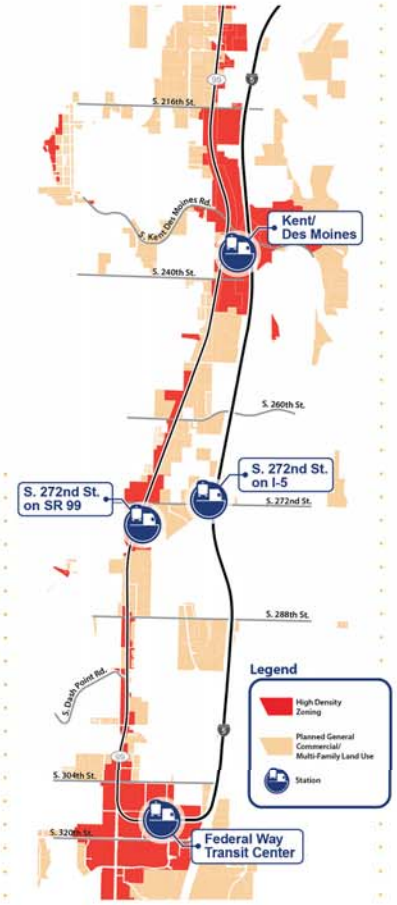
The SR 99 Hybrid alternative would affect commercial and residential properties at various locations along SR 99 but would avoid major effects to key intersections or community facilities.

TOD Potential

- Population
- Households
- Employment
- Activity Centers
- Existing/Planned Land Use
- Existing Vacant/Underutilized Parcels
- Existing/Planned Bus Access
- Existing/Planned Ped/Bike Access
- Potential Development Plans

As part of the alternatives analysis, Sound Transit analyzed the transit oriented development (TOD) potential of the various alternatives. This analysis was conducted in accordance with Sound Transit's TOD policy. The assessment of TOD potential considered a range of issues. Both alignment alternatives and station location alternatives were assessed.

TOD Potential - Alignments

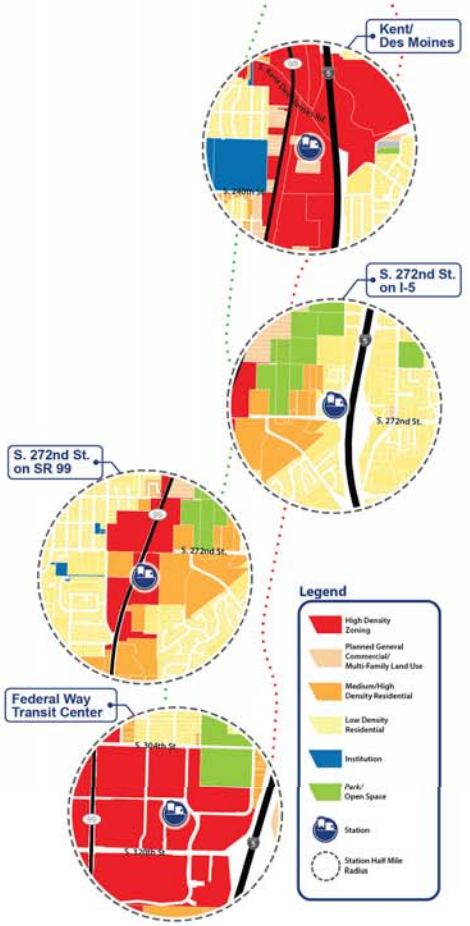


The graphic on the right illustrates the high density zoning and the planned commercial and multi-family land uses within ¼ mile of the alignment alternatives. TOD potential is generally higher along the SR 99 alignment alternatives.

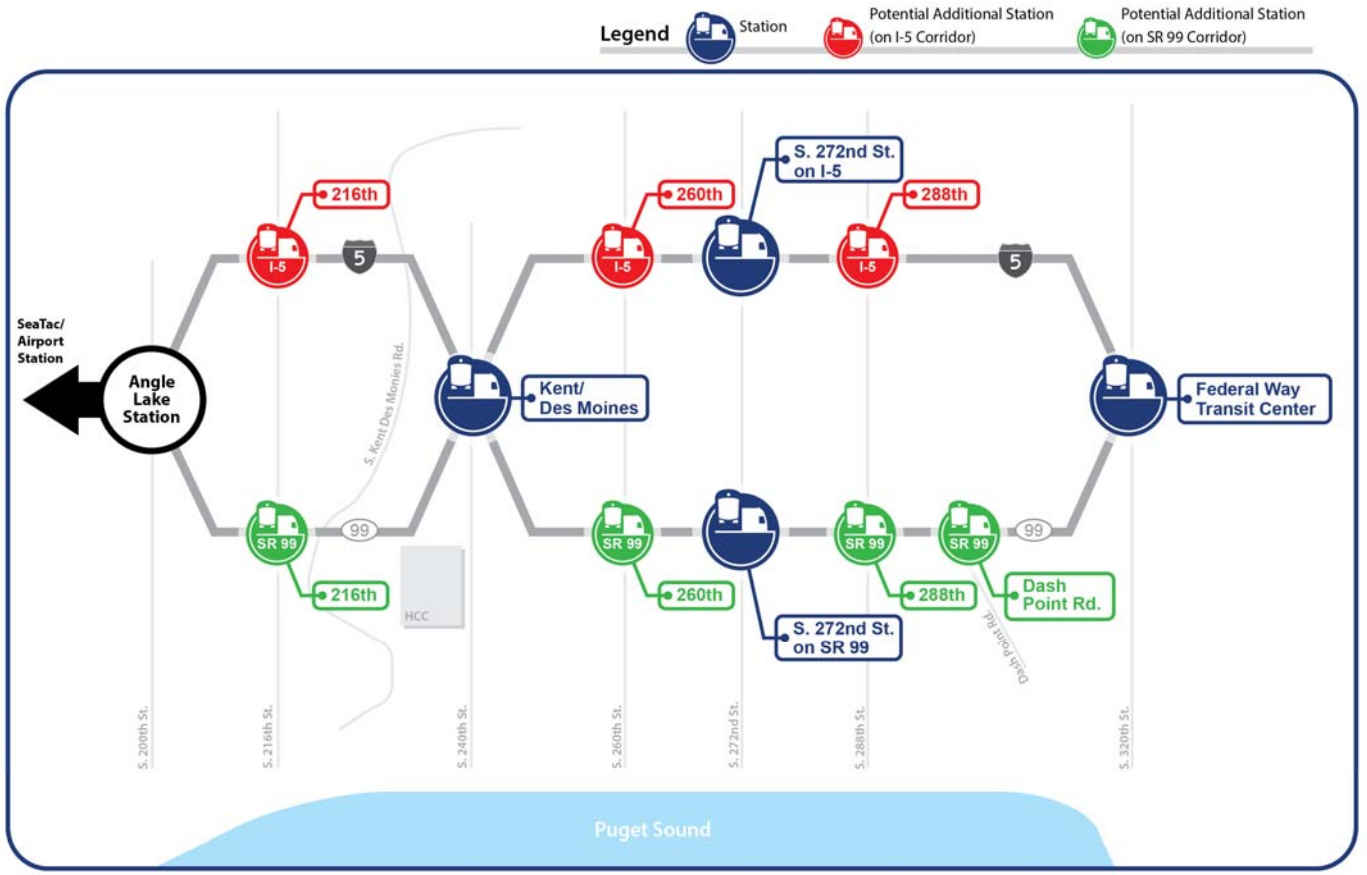
TOD Potential - Stations

How did we measure TOD Potential?

- Population
- Households
- Employment
- Activity Centers
- Existing/Planned Land Use
- Existing Vacant/ Underutilized Parcels
- Existing/Planned Bus Access
- Existing/Planned Ped/Bike Access
- Potential Development Plans



The analysis of TOD potential for stations generally looked at the area within ½ mile of the station locations. The stations at Kent/Des Moines and the Federal Way Transit Center would generally be in the same location for all alternatives, but the South 272nd Street station would be in different locations for the SR 99 and I-5 alternatives. The South 272nd Street station on SR 99 would have higher TOD potential.



*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

During the Early Scoping public comment period a number of potential additional station locations were suggested. Some were screened out because they were outside the study area, or in close proximity to existing locations. Seven locations were then evaluated in more detail (four along SR 99 and three along I-5).

How did we measure TOD Potential?

- Population
- Households
- Employment
- Activity Centers
- Existing/Planned Land Use
- Existing Vacant Parcels
- Existing Underutilized Parcels
- Potential Development Plans

How did we measure Access?

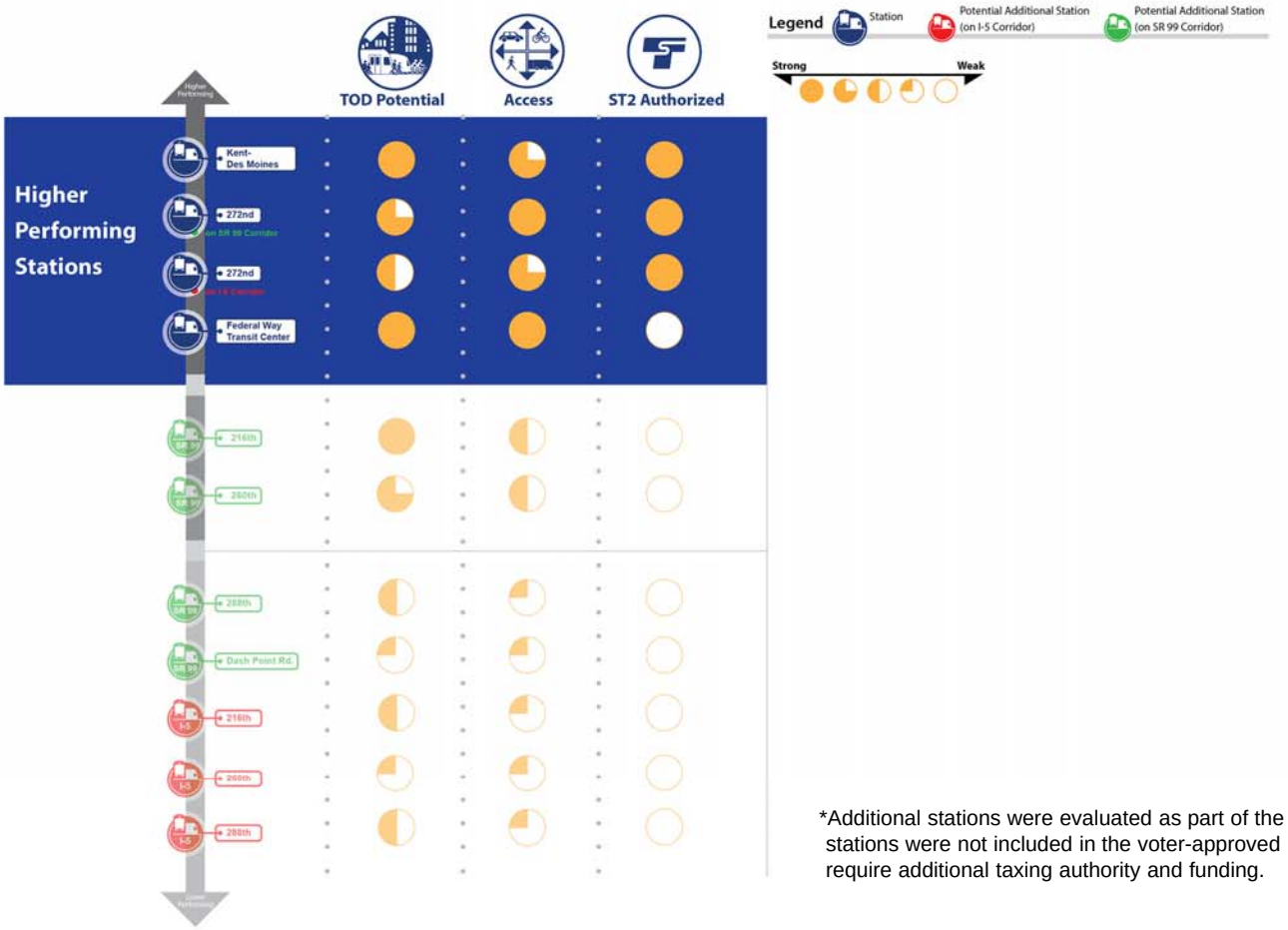
- Bus Access
- Ped/Bike Access
- East - West Auto Access
- North - South Auto Access
- Existing Park-and-Ride Capacity

*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

The station evaluation examined both TOD potential and multimodal access.

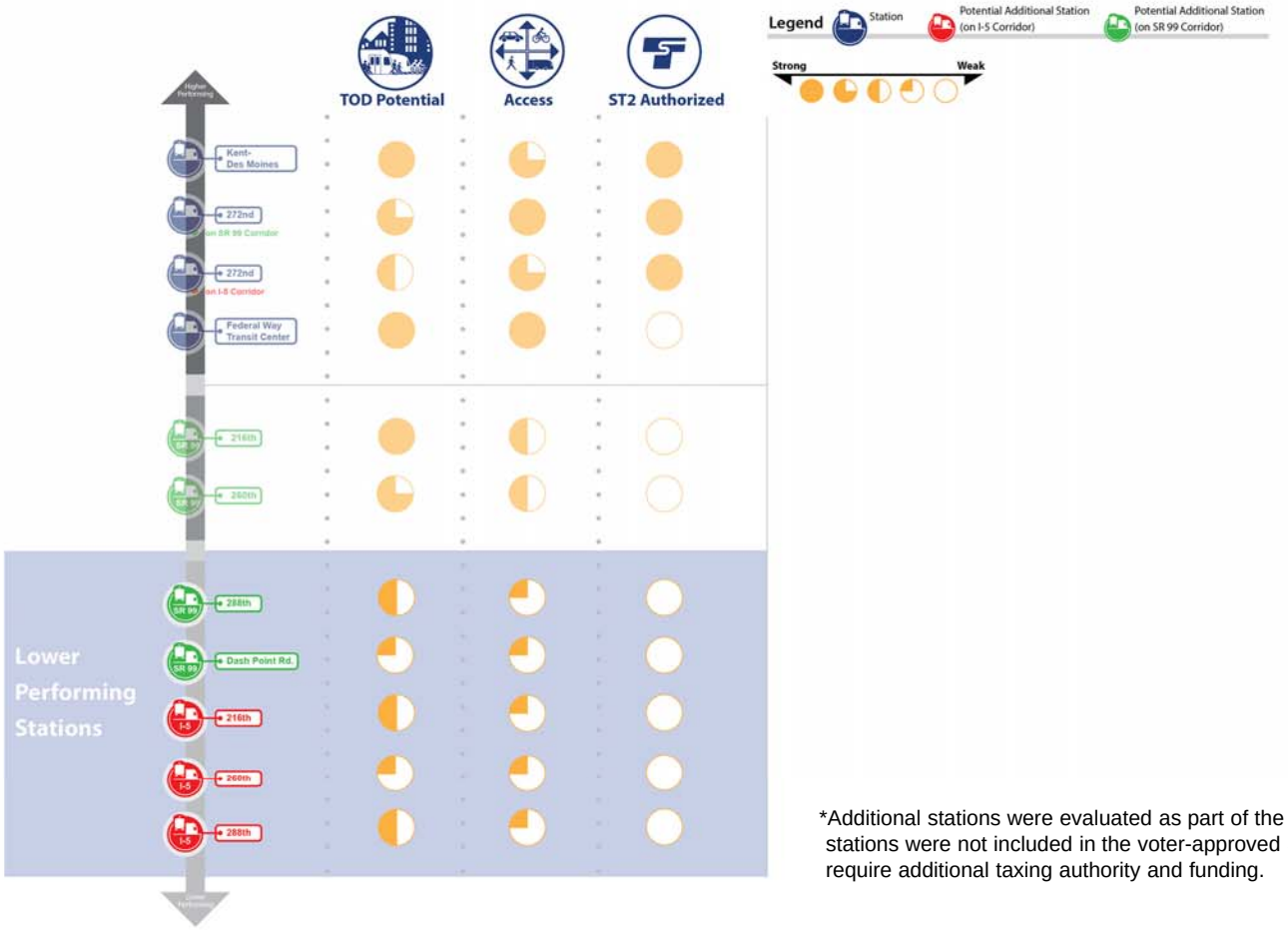
*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

The four station locations identified in previous studies were evaluated along with the seven potential additional station locations that were suggested during the Early Scoping public comment period.



*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

The station locations at Kent/Des Moines, South 272nd Street and the Federal Way Transit Center have good TOD potential and good access.



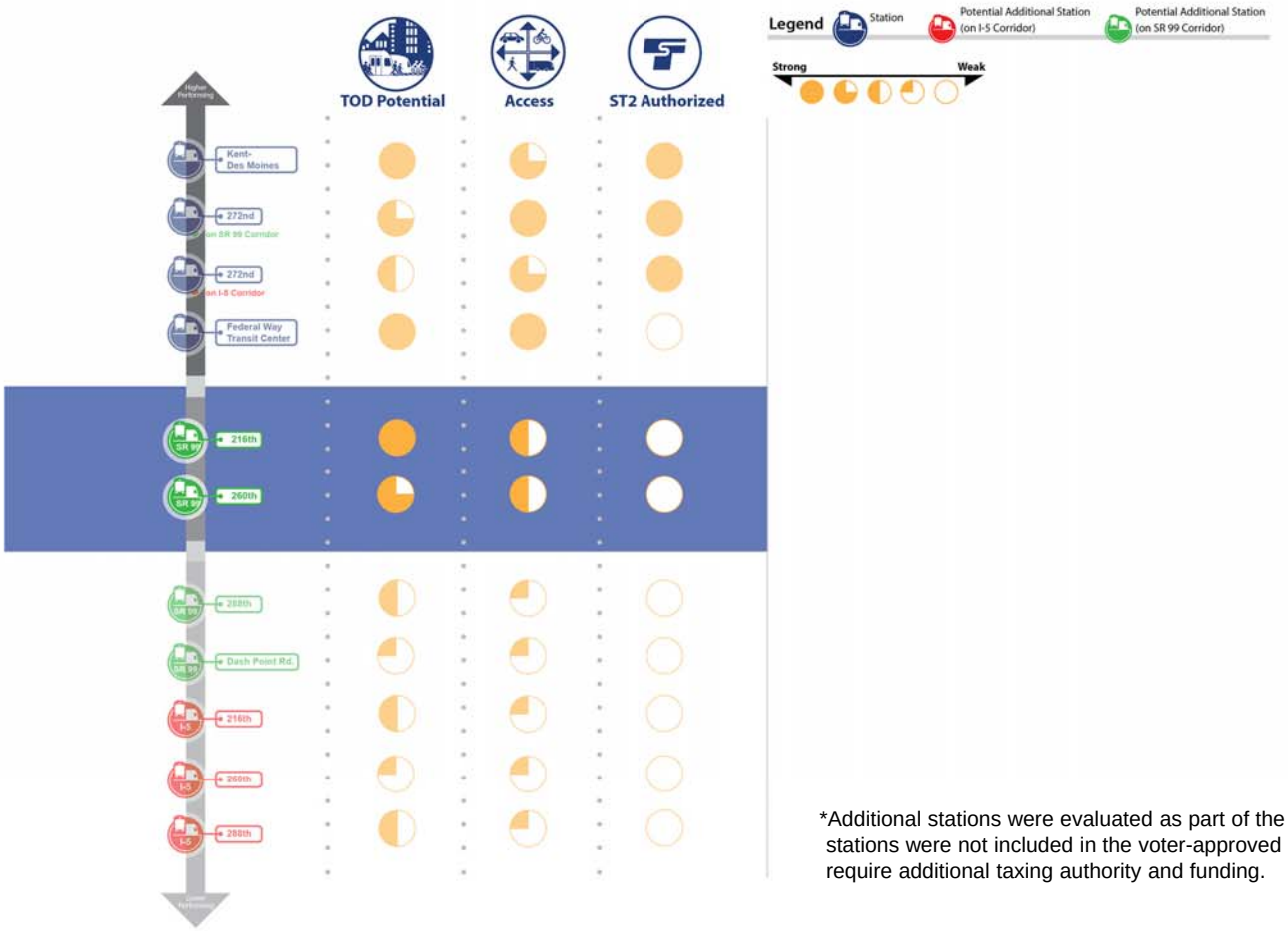
*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

A number of the suggested additional station locations do not perform well. Generally, these locations have low density residential development around the station area and do not have good auto, bus, or pedestrian access.

Federal Way Transit Extension
Alternatives Analysis Summary

Station Evaluation Results

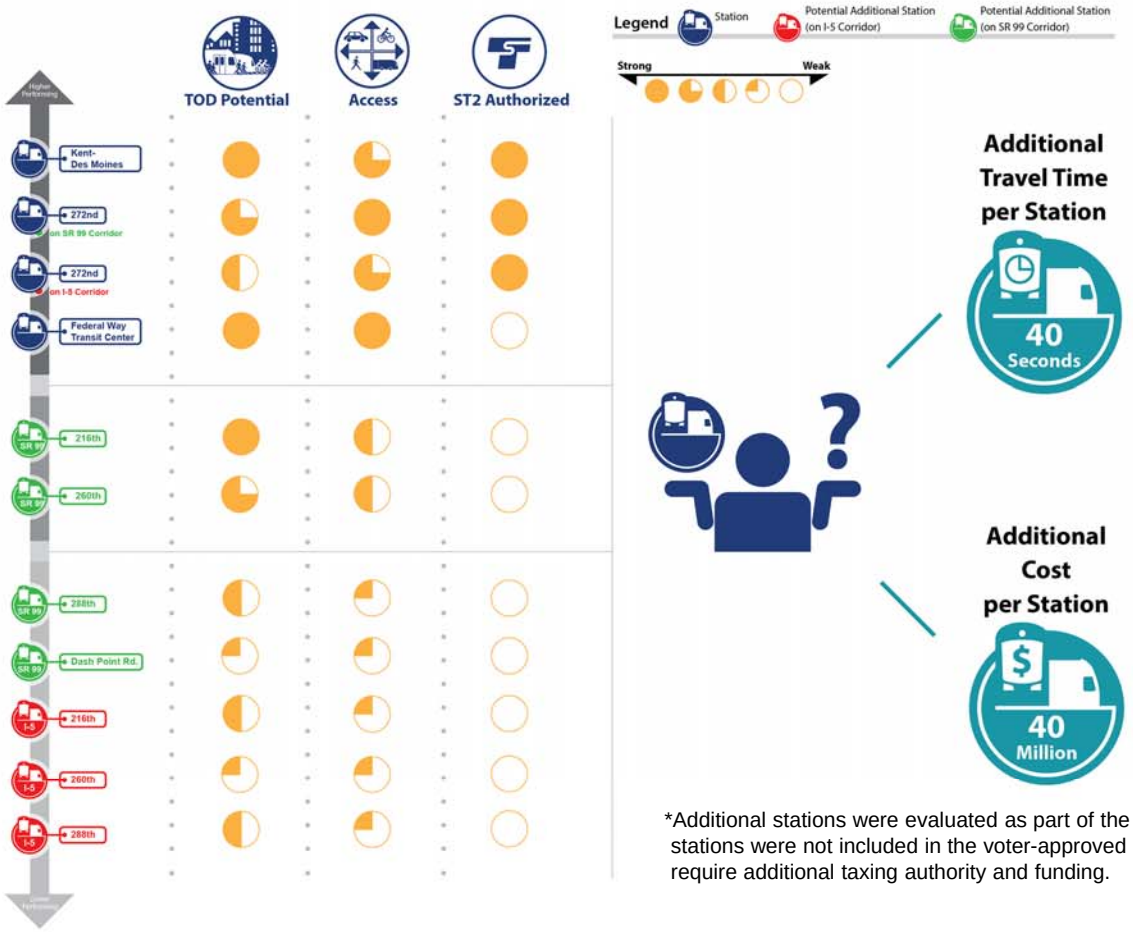
SOUNDTRANSIT
RIDE THE WAVE



*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

Two of the suggested additional locations do perform well in terms of TOD potential (along SR 99 at South 216th Street and South 260th Street). They do not have as good access as the baseline locations.

Station Evaluation Results



*Additional stations were evaluated as part of the alternatives analysis process; these stations were not included in the voter-approved ST2 Plan and, if approved, would require additional taxing authority and funding.

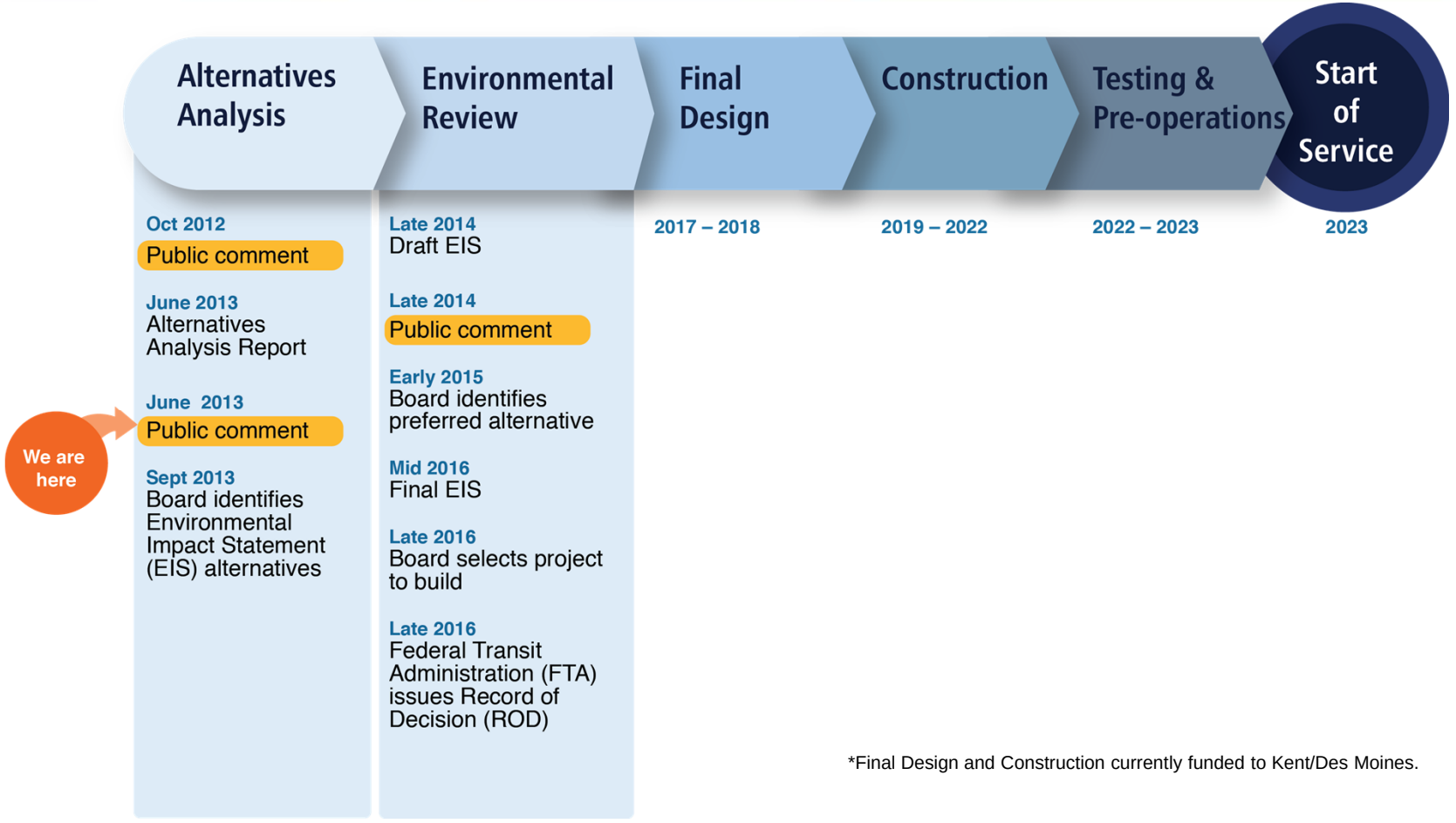
Each additional station would increase the end-to-end travel time by about 40 seconds. The cost of constructing an additional station is about $40 million.

Federal Way Transit Extension

Alternatives Analysis Summary

Timeline/Process

SOUNDTRANSIT RIDE THE WAVE



*Final Design and Construction currently funded to Kent/Des Moines.

The results of the AA will be presented to the public during the EIS Scoping period in June 2013. Based on input received during scoping, the Sound Transit Board will then identify which alternatives should be studied in more detail in the Draft EIS. The Draft EIS will be available for public comment in late 2014. A final decision on which alternative should be built will be made after publication of a Final EIS in 2016.

Scoping Period:
June 14 - July 15, 2013

June 19, 2013
3 p.m. – 6 p.m.

Federal Way Transit Center Plaza
31621 23rd Ave S.
Federal Way, 98003

June 26, 2013
5 p.m. – 7 p.m.

Parkside Elementary cafeteria
2104 S. 247th St.
Des Moines, 98198

The EIS Scoping public comment period will last until July 15, 2013. Public meetings will be held at the locations and times noted above.

Send us your comments by July 15, 2013

Mail:
Kent Hale
Sound Transit, 401 S Jackson St., Seattle, WA 98104

Email:
FWTE@soundtransit.org

Online:
Complete a scoping comment form at
www.soundtransit.org/FWextension

Attend a public meeting
and fill out a comment form

Comments regarding the AA and which alternatives should be studied further in the Draft EIS should be submitted by one of the methods above by July 15, 2013.

Additional information regarding the Federal Way Transit Extension is available on the project website at **www.soundtransit.org/FWextension**. To view the Level 1 and Level 2 Alternatives Screening reports, click on "Federal Way document archive" in the bottom right corner of the project home page.