Let’s have a great meeting.

Everyone is muted by default.

We will monitor the chat function.

Submit questions using the “Q&A” feature.

We will pause for questions after each topic.

Click the “Interpretation” button below to listen to this presentation in Spanish.

Presione el botón de “Interpretation” abajo para escuchar esta presentación en español.
Goals for this Open House

- Share corridor alignment options
- Present key findings from online survey
- Summarize corridor evaluation results
- Confirm results make sense to the community
WHAT IS STREAM?

- Pierce Transit’s brand for Bus Rapid Transit (BRT).
- More frequent, reliable bus service.
- Improved passenger amenities and comfort.
- Distinct brand to differentiate from local bus service.

- Frequent: Every 10-15 minutes
- Fast: Transit priority streets
- Accessible: Larger buses & better wheelchair access
- Easy: Raised station platforms & multiple doors
- Connected: Stations at key locations
- Reliable: Real-time information
Stream 1

- Will be the first BRT service in Pierce County.
- 14.4-mile corridor between Downtown Tacoma and Spanaway.
- Construction begins Fall 2024.
- Service begins in 2027.
STREAM SYSTEM EXPANSION STUDY (SSES)

- The SSES uses a data-driven approach to evaluate and prioritize four candidate Bus Rapid Transit corridors identified in *Destination 2040 Update* (Pierce Transit’s Long-Range Plan).
SSES CORRIDORS

Four candidate BRT corridors.

- **Corridor A:** Downtown Tacoma to Lakewood (current Route 2).
- **Corridor B:** Downtown Tacoma to Lakewood (current Route 3).
- **Corridor C:** Puyallup to Sunrise (part of current Route 402).
- **Corridor D:** Lakewood to Pierce College (current Route 4).
AVERAGE DAILY RIDERSHIP BY ROUTE

- Based on Fall 2019 data:
  - Corridor A (Route 2) has the highest daily ridership.
  - Corridor C (Route 402) and D (Route 4) have lower ridership.
- Transit centers have the highest average daily ridership.
Corridor A

- **A**: Downtown Tacoma to Lakewood.
- **A1**: Extension to Lakewood Sounder.
- **A2**: Shorter route from Tacoma Community College to Lakewood.
Corridor B

- **B**: Downtown Tacoma to Lakewood.
- **B1**: Via S. 38th Street.
- **B2**: Via S. 48th Street.
Corridor C

- **C**: Puyallup to Sunrise neighborhood.
- **C1**: Edgewood to Sunrise neighborhood.
Corridor D

- **D**: Lakewood Transit Center to Pierce College.
- **D1**: Lakewood Transit Center to South Hill Mall.
- **D2**: Lakewood Transit Center and Lakewood Sounder Station to Pierce College.
ONLINE SURVEY

• Online Survey: Social Pinpoint; online community engagement tool.

• Survey was open for five weeks (January 25-March 1, 2022).

• 418 unique responses.

• 472 map comments.

• 14 people emailed comments.

• 72% of respondents live in Tacoma.
**WHAT WE HEARD**

**Pedestrian Safety:** Additional pedestrian crossings or signals are needed.

**Routing and Stations:** Improve routing access or connections.

**Congestion and Delay:** Transit speed and reliability improvements are needed in congested and high delay areas (e.g., Meridian).
Equity Index

Serving Priority Populations

Equity Index Score
Weighted sum of priority populations:
- Non-White or Hispanic (40% weight)
- Low-income households (30%)
- Foreign-born population (10%)
- Limited English-speaking households (10%)
- People with disabilities (10%)

Outcome
SSES prioritization criteria are organized in five accounts that were used to evaluate the potential performance of the four corridors.

- **ENHANCE**: Provide BRT service to Pierce County’s highest demand, highest need corridors.
- **CONNECT**: Connect residents with jobs, services, and other daily activities.
- **GROW & PROSPER**: Provide BRT services to areas with transit supportive land use, areas of growth, and locations that support local businesses.
- **SUSTAIN**: Reduce carbon emissions and promote sustainable travel.
- **DELIVER**: Develop BRT projects that are fundable, effective, and implementable.
# Evaluation Results

**Equally-Weighted Criteria**

<table>
<thead>
<tr>
<th>Account</th>
<th>A</th>
<th>A1</th>
<th>A2</th>
<th>B</th>
<th>B1</th>
<th>B2</th>
<th>C</th>
<th>C1</th>
<th>D</th>
<th>D1</th>
<th>D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance</td>
<td>3.3</td>
<td>3.3</td>
<td>2.3</td>
<td>4.0</td>
<td>4.0</td>
<td>4.7</td>
<td>1.3</td>
<td>1.3</td>
<td>2.7</td>
<td>2.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Connect</td>
<td>3.2</td>
<td>3.8</td>
<td>2.2</td>
<td>4.2</td>
<td>4.0</td>
<td>4.3</td>
<td>2.8</td>
<td>2.3</td>
<td>1.3</td>
<td>1.3</td>
<td>2.5</td>
</tr>
<tr>
<td>Grow &amp; Prosper</td>
<td>2.5</td>
<td>2.5</td>
<td>1.8</td>
<td>3.3</td>
<td>3.1</td>
<td>3.2</td>
<td>1.3</td>
<td>1.2</td>
<td>0.7</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Sustain</td>
<td>3.7</td>
<td>3.3</td>
<td>2.3</td>
<td>4.0</td>
<td>4.3</td>
<td>5.0</td>
<td>1.7</td>
<td>2.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Deliver</td>
<td>2.7</td>
<td>2.0</td>
<td>1.3</td>
<td>2.7</td>
<td>2.5</td>
<td>2.3</td>
<td>1.5</td>
<td>1.3</td>
<td>1.5</td>
<td>2.8</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15.3</td>
<td>15.0</td>
<td>10.0</td>
<td>18.1</td>
<td>17.9</td>
<td>19.5</td>
<td>8.6</td>
<td>8.2</td>
<td>7.2</td>
<td>8.6</td>
<td>8.0</td>
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</table>

**Scoring**

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<tr>
<th>Category</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Categories are based on natural breaks for each criterion</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rank - Overall**

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>2</th>
<th>3</th>
<th>1</th>
<th>7</th>
<th>9</th>
<th>11</th>
<th>7</th>
<th>10</th>
</tr>
</thead>
</table>

**Rank - by Corridor**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>2</th>
<th>3</th>
<th>1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
</table>
ENHANCE

Future Daily Boardings in 2040 with Stream.

Future Additional Daily Boardings – Increase in boardings compared to future without Stream.

Future Daily Boardings in Equity Locations – Share of future (2040) boardings in equity areas.
### CONNECT

**Population & Employment Density** – Current (2019) density within ½ mile of each corridor, adjusted for corridor length.


**Connectivity with Regional Services** – Number of daily Sounder commuter rail trips in 2040 accessible from corridor.

<table>
<thead>
<tr>
<th>Account</th>
<th>Criteria</th>
<th>Description</th>
<th>Lakewood - Tacoma (Bridgeport/19th)</th>
<th>Lakewood - Tacoma (B. Tacoma Way and/or 38th/48th)</th>
<th>South Hill - Puyallup and/or Edgewood (Meridian)</th>
<th>Lakewood - Puyallup (112th)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>Population and Employment Density</td>
<td>Current (2019) households within ½ mile of each corridor, per corridor mile</td>
<td>A: 2,100</td>
<td>B: 2,100</td>
<td>C: 1,200</td>
<td>D: 1,100</td>
</tr>
<tr>
<td></td>
<td>Current (2019) jobs within ½ mile of each corridor, per corridor mile</td>
<td></td>
<td>A1: 2,000</td>
<td>B1: 4,800</td>
<td>C1: 1,200</td>
<td>D1: 1,100</td>
</tr>
<tr>
<td></td>
<td>Density of current (2019) weighted jobs and low-income jobs, per corridor mile</td>
<td></td>
<td>B: 1,800</td>
<td>C: 1,300</td>
<td>D: 1,300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connectivity with Regional Transit Services</td>
<td></td>
<td>D: 1,600</td>
<td>C: 1,500</td>
<td>D: 1,500</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Future (2040) transit connections available on regional transit lines (e.g., Sounder). No direct connections to Link at Tacoma Dome Station.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GROW & PROSPER

Population and Employment Growth – Future (2040) households and jobs within ½ mile of corridors, adjusted for corridor length.

Centers of Regional and Local Importance – Number of Pierce County centers served.

<table>
<thead>
<tr>
<th>Account</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population and Employment Growth</td>
<td>Future (2040) households within 1/2 mile of each corridor, per corridor mile</td>
<td>Lakewood - Tacoma (3 Bridgeport/19th)</td>
</tr>
<tr>
<td></td>
<td>Percentage change in households within 1/2 mile of each corridor, 2019 to 2040</td>
<td>Lakewood - Tacoma (3 Bridgeport/19th) and/or 38th/48th</td>
</tr>
<tr>
<td></td>
<td>Future (2040) jobs within 1/2 mile of each corridor, per corridor mile</td>
<td>South Hill - Puyallup (Meridian)</td>
</tr>
<tr>
<td></td>
<td>Percentage change in jobs within 1/2 mile of each corridor, 2019 to 2040</td>
<td>Lakewood - Puyallup (112th)</td>
</tr>
<tr>
<td>Grow &amp; Prosper</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Population and Employment Growth</td>
<td>Future (2040) households within 1/2 mile of each corridor, per corridor mile</td>
<td>4,300</td>
</tr>
<tr>
<td></td>
<td>Percentage change in households within 1/2 mile of each corridor, 2019 to 2040</td>
<td>107%</td>
</tr>
<tr>
<td>Centers of Regional and Local Importance Served</td>
<td>Number of identified Regional Growth Centers and Centers of Local Importance within 1/2 mile of conceptual station locations. Regional Centers weighted higher than County-wide Centers and Centers of Local Importance.</td>
<td>63%</td>
</tr>
</tbody>
</table>
SUSTAIN


Quality of Walking/Bicycle Network – Density of street connections, as an indicator of better opportunities for walking and biking access.

Increase Transit Mode Share in Corridor – Increase in mode share at busiest point along the corridor.

### Table: Percentage Increase in Transit Mode Share

<table>
<thead>
<tr>
<th>Account</th>
<th>Criteria</th>
<th>Description</th>
<th>Lakewood - Tacoma (Bridgeport/19th)</th>
<th>Lakewood - Tacoma (G. Tacoma Way and/or 38th/48th)</th>
<th>South Hill - Puyallup and/or Edgewood (Meridian)</th>
<th>Lakewood - Puyallup (112th)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td>A1</td>
<td>A2</td>
<td>B</td>
</tr>
<tr>
<td>Sustain</td>
<td>Reduce Greenhouse Gas Emissions</td>
<td>Total kg of daily greenhouse gas emissions reduced based on future transit trips, average trip length, and average speed at a screenline location (where transit passenger load is highest)</td>
<td>1,000</td>
<td>1,000</td>
<td>700</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>Quality of Walking/Bicycling Network</td>
<td>Intersection density of local street network within 1/2 mile of each corridor</td>
<td>120</td>
<td>117</td>
<td>109</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>Increase transit mode share in corridor</td>
<td>Potential increase in transit mode share at a screenline location (where transit passenger load is highest)</td>
<td>12%</td>
<td>13%</td>
<td>8%</td>
<td>18%</td>
</tr>
</tbody>
</table>
DELIVER

Cost Effectiveness – Capital and operating costs per passenger.

Passenger Travel Times – Potential travel time reductions compared with current service.

<table>
<thead>
<tr>
<th>Account</th>
<th>Criteria</th>
<th>Description</th>
<th>Lakewood - Tacoma (Bridgeport/19th)</th>
<th>Lakewood - Tacoma (S. Tacoma Way and/or 38th/48th)</th>
<th>South Hill - Puyallup (and/or Edgewood (Meridian))</th>
<th>Lakewood - Puyallup (112th)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td>A1</td>
<td>A2</td>
<td>B</td>
</tr>
<tr>
<td>Deliver</td>
<td>Cost Effectiveness</td>
<td>Total capital cost (2022 $) per annual rider</td>
<td>$65.80</td>
<td>$71.80</td>
<td>$75.10</td>
<td>$39.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total annualized capital cost plus net annual operating cost (2022 $) per annual rider</td>
<td>$9.60</td>
<td>$11.90</td>
<td>$11.50</td>
<td>$6.30</td>
</tr>
<tr>
<td></td>
<td>Passenger Travel Times</td>
<td>Reduction in travel time from transit signal priority, all-door boarding, and stop consolidation, as a share of existing travel time</td>
<td>-9%</td>
<td>-8%</td>
<td>-7%</td>
<td>-9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduction in travel time from transit signal priority, all-door boarding, stop consolidation, and other running way treatments, as a share of existing travel time</td>
<td>-12%</td>
<td>-11%</td>
<td>-9%</td>
<td>-11%</td>
</tr>
</tbody>
</table>
- Top corridor: B2 (via S. 48th St)
- 2nd-highest corridor: A (to Lakewood Transit Center)
Getting to Implementation

Next Steps

FTA\(^1\) Funding Potential Assessment

Assessment of agency interest and commitment (Summer/Fall)

Pierce Transit Board approves corridor priority (September)

Grant application to fund planning work on priority corridor (October)

SSES Final Report (December)

FTA Project Development (2023/2024)

Stream 1 Pacific Ave/SR-7 construction to begin in 2024

Stream 2 enters project development 2023/2024

1 – FTA: Federal Transit Administration
QUESTIONS?
THANK YOU

Please share additional questions or comments by July 15:
brt@piercetransit.org