DATE: January 13, 2020

SUBJECT

Receive Redwood City Transit Center Redesign and Broadway Streetcar Feasibility Studies and incorporate findings in the Central Redwood City Visioning Initiative and the Development of the Sequoia Station Transit District Plan

RECOMMENDATION

Receive the Redwood City Transit Center Redesign and Broadway Streetcar Feasibility Studies and direct staff to:

1. Incorporate findings in the Central Redwood City Visioning Initiative and development of the Sequoia Station Transit District Plan; and
2. Explore grant funding and support from Caltrain and the San Mateo County Transit District to implement relatively short-term improvements to the Transit Center.

STRATEGIC INITIATIVE

Transportation

BACKGROUND

Redwood City’s General Plan highlights the importance of quality transit service and providing safe, accessible, and multimodal connections to that service. The Circulation Element identified a streetcar network connecting local employment centers and key destinations to downtown Redwood City and the Caltrain Station. The network includes the Broadway and Middlefield corridors because they connect existing and future high-density neighborhoods, activity centers, and the Caltrain Station. The Seaport corridor was selected to connect the proposed ferry and employment centers along Seaport Boulevard and the Port to downtown and the Caltrain Station.
The 2011 Downtown Precise Plan recognizes the importance of the Redwood City Transit Center as a major community hub in the city and encourages the integration of the transit center into the downtown, El Camino Real, surrounding neighborhoods and potentially adjacent districts via a modern streetcar system (Goal 1.2.1.H).

Following the recommendation of the General and the Downtown Precise plans, staff initiated two studies in 2016 when the City received funding through the Priority Development Area (PDA) Planning Grant.

The first study was to evaluate the feasibility of a streetcar system that connects the Redwood City core to employment centers and neighborhoods south of downtown and Woodside Road, around the Stanford University and Stanford Medical Center campuses.

The second study was to develop recommendations to redesign the transit center. Two focused objectives were identified for these studies:

- Test the feasibility of implementing a streetcar or urban circulator (shuttle) along Broadway in the core of Redwood City, and
- Investigate ways of making the city’s transit center more efficient and better connected.

The City engaged CDM Smith to develop the two studies, helping with the analyses, planning and community outreach.

In 2018, the City Council adopted RWCmoves, the Citywide Transportation Plan. The Plan’s vision is to “Promote the best travel experience possible for everyone in Redwood City by creating and maintaining a safe, multimodal, and accessible transportation network.” These two studies promote the RWCmoves vision by furthering the following goals:

- **Goal 3** Provide seamless connections and improved street access to all areas within the City
- **Goal 5** Reach over 50% of all trips being by non-driving modes by 2040
- **Goal 6** Invest in projects that support a resilient, equitable, and sustainable transportation system

RWCmoves included over 100 specific projects and programs that were ranked according to the community’s priorities established through surveys and outreach events.

- **Redwood City Transit Center: Implement Short to Medium Term Improvements** was the top scoring Signature Project (score of 69) in the Plan and was listed as one of the top four signature projects (31 of 96 votes) in the draft plan survey
- **Broadway Street Streetcar Project: Phase II** was the second-highest scoring Signature Project (score of 66), was listed as one of the top four signature projects (23 of 96 votes), but was also the mostly commonly cited project that should not be a signature project (19 of 40 votes)

The studies were completed in summer 2019. They were presented to the Transportation Advisory Committee June 11, 2019 and to downtown interest groups that summer as well. Staff plan to utilize the findings and analyses in the upcoming extensive community outreach and planning efforts to develop a Sequoia Station Transit District Plan and to conduct the Central Redwood City visioning process recommended at the November 4, 2019 City Council meeting. In advance of that engagement effort, staff wanted to be sure that the City Council also had the opportunity to review the studies, prompting this
agenda item. The studies support the City Council’s Strategic Plan and its strategic priority of transportation by improving access to transit and improving transit as a viable transportation option for the community.

ANALYSIS

**Transit Center Redesign Study**

The Redwood City Transit Center has an average of 4,200 Caltrain and 2,200 bus passengers on weekdays. The Redwood City Caltrain Station has the fifth-highest ridership and fifth-highest bicycle usage in the Caltrain system. The bus station is served by 12 SamTrans routes and about 20% of the current SamTrans passengers go through the Redwood City Transit Center. Attachment A is the summary report for the Transit Center Redesign Study. The complete report is available on the project [webpage](#).

**Existing Conditions Evaluation:** As part of this study, CDM Smith, the project consultant, evaluated the existing access to and functionality of the transit center, pedestrian, bicycle, and traffic circulation, parking use, station amenities, wayfinding features, and linkages to the downtown and adjacent open and public spaces. A summary of the deficiencies are listed below:

- Conflicts between pedestrians and buses with the existing configuration of bus bays
- Inconvenient at-grade crossings at the ends of the Caltrain platform
- Poor relationship between the transit center and the surrounding buildings; all buildings turn their back to the Caltrain and bus stations
- Underutilized parking - parking spaces at the underground parking garage and in the Perry Street lot are significantly underutilized; the peak weekday occupancy of these parking facilities is about 60%
- Inadequate access and wayfinding from El Camino Real to the transit center
- Difficult access to the platform from Winslow Street due to the platform fence
- Conflicts between vehicles entering and exiting the underground garage with bicyclists and pedestrians
- Insufficient long-term, secure bicycle parking

**Community Outreach:** During the planning process, City staff conducted public and stakeholder outreach in conjunction with other planning projects (RWCmoves and El Camino Real Corridor Plan) and the Broadway Streetcar Study. Staff also used a survey to get information on how people currently access the transit center and what changes they would like to see. Most respondents stated they get to the station by driving (32%) or walking (26%). In terms of suggested improvements, top responses were better bus connections to more destinations, better sheltered waiting area, clear information about schedules and transfers, and improved pedestrian crossings.

**Design Alternatives:** For this study, three improvement concepts are developed that include short-term and long-term improvements. Below is a summary of the design concepts:

- **Short-term:** The short-term improvement concept suggests creating a counter-clockwise circulation loop for buses and changing the existing bus bays to saw tooth bays. This would improve passenger loading and unloading activities, reduce conflicts between buses and
pedestrians, and create space for a central open/green area. This alternative would remove the fence along the Winslow Street side of the Caltrain platform. While this alternative would remove 50 parking spaces in the bus station’s surface parking lot, these cars could be accommodated in the underground garage or in the Perry Street parking lot.

- **Long-term, station remains at the existing site:** This alternative assumes that two sets of train tracks continue to run through downtown and that Sequoia Station is redeveloped, allowing for changes to the street grid, station access, and transit circulation. The scenario recommends enlarging the loop in the above short-term scenario to increase capacity for buses. This would create a larger central open space and improve access and circulation on James Street and to the surrounding businesses. This scenario removes the truck loading areas on James Street and the 90 parking spaces in the bus station’s surface parking lot. Transit riders could use a new parking structure that is considered for the Perry Street lot or underground parking included with new development.

- **Long-term, station relocates to the Perry Street site:** This scenario is developed with the understanding that more space is needed to accommodate future rail expansion in Redwood City (Caltrain service expansion and/or Dumbarton Rail Corridor). This alternative recommends shifting the Caltrain station and the transit center north to Perry Street. Perry Street is used for bus circulation (closed to personal vehicles) and there are changes to the street grid to improve access and circulation to the transit center. A linear bus station would improve connectivity between the Caltrain platforms and the bus loading/unloading area. This alternative has the advantage of using Arguello Street as the Transportation Network Company (‘Uber/Lyft’) and shuttle pick-up/drop-off location.

Shifting the location would allow redevelopment of the existing transit center. Due to the four sets of railroad tracks, this alternative would require street closures and/or grade separations. The schematic drawings show Broadway being closed at the tracks and Brewster Avenue going under the tracks, but the actual design/approach will be developed in future phases. In the event of any roadway closures, undercrossings would provide connectivity across the tracks for people walking and biking. This alternative requires the removal of all 135 parking spaces at the Perry Street parking lot. Transit passengers who drive to the station would park in a new parking structure built when the existing transit center site is redeveloped.

**Study Outcomes and Next Steps:** The study identified all three alternatives as feasible from a physical site planning and transit operations standpoint. These findings and analyses will inform the upcoming planning work for the Transit District and Central Redwood City visioning process. Those efforts would also evaluate any impacts on traffic circulation due to the proposed changes. Outreach during these planning efforts is needed to gauge the interest in, and support for, the long-term alternatives.

While engaging the community about its vision for the transit center and Central Redwood City, staff recommend seeking grant funding and support from Caltrain and San Mateo County Transit District (SamTrans) to implement relatively short-term improvements. Examples include replacing the fence on the Winslow Street side of the Caltrain platform with stairs to increase the ease of accessing the train platform, adding shelters, or improving the quality and quantity of bicycle lockers at the transit center.
Such efforts would likely begin in FY 2020-21 as staff are fully committed for the remainder of this fiscal year.

More information about the Transit Center Redesign Study is available on the project webpage.

**Broadway Streetcar/Urban Circulator Study**

The Broadway Streetcar/Urban Circulator Study was initiated to address the first-last mile connection between the transit center and areas beyond walking distance. The study evaluated potential alignments, transit and shuttle connections, ridership, capital and operation costs, and social, environmental, and economic benefits of a new transit service that connects downtown to employment centers and neighborhoods south of Woodside Road. Attachment B is the summary report and the complete report is available on the project webpage.

**Community Outreach:** During the planning process, City staff engaged the public, the Transportation Advisory Committee, major employers as well as downtown interest groups. Comments received during these meetings, such as comments on the service frequency and interaction with other modes, helped define the proposed alternatives.

**Mode and Alignment Alternatives:**

Two transit modes were evaluated for this study:

1. Streetcar which runs on a fixed route, and
2. Urban circulator\(^1\) (shuttle) which could have a flexible route.

All proposed alignments for the segment south of Maple Street are on Broadway. Various alignments are evaluated for the segment north of Maple Street: streetcar on Broadway, streetcar on Broadway-Marshall, and urban circulator on Broadway-Main-Middlefield-Winslow-Bradford (flexible). Attachment B includes maps of the three alignment alternatives. All three alternatives were evaluated and scored based on their estimated ridership, capital and operating costs and average travel time. Both the streetcar and the urban circulator offer a similar operating speed (15-25 mph) and service frequency (at least every 15 minutes) due to the fact that they are sharing travel lanes with private vehicles.

The table below compares these three alternatives:

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\(^1\) Examples of urban circulators include Oakland’s Broadway shuttle, Walnut Creek’s downtown shuttle, and Emeryville’s Emery Go-Round.
### Alternative Costs and Performance

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Cost to serve the existing transit center*</th>
<th>Cost to serve a new transit center north of Broadway*</th>
<th>Annual operating cost*</th>
<th>Daily ridership</th>
<th>One-way travel time between the transit center and Broadway/2nd Ave (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetcar on Broadway</td>
<td>$152 M</td>
<td>$156 M</td>
<td>$1.9 M</td>
<td>2,200-3,900</td>
<td>13</td>
</tr>
<tr>
<td>Streetcar on Broadway-Marshall</td>
<td>$158 M</td>
<td>$155 M</td>
<td>$1.9 M</td>
<td>2,200-3,900</td>
<td>13</td>
</tr>
<tr>
<td>Urban Circulator (shuttle)</td>
<td>$14 M</td>
<td>$22 M</td>
<td>$1.2 M</td>
<td>1,900-3,400</td>
<td>18</td>
</tr>
</tbody>
</table>

*Costs are in millions of dollars.*

The relative performance of each alternative is similar, with the exception that the urban circulator would be significantly (approximately 85-90%) less expensive and would likely have somewhat lower ridership (approximately 14%) than a streetcar. While no one alternative is identified as the preferred alternative, of the streetcar alignments, the Broadway – Marshall alignment was generally recommended because it avoids the regular street closures that occur by Courthouse Square. A downside of this alternative is that it passes by Fire Station 9 and would conflict with redevelopment plans that propose potentially closing Spring Street. A benefit of the urban circulator alignment is that it could provide the opportunity to test the ridership demand on the corridor and to showcase new technologies such as all-electric buses, autonomous vehicles features, and dynamic routing strategies.

Since a streetcar would be a new transit system, key elements of project implementation are identifying the governing body, funding source(s), owner and operator of the system. Nationwide, most streetcar systems are owned by cities however, cities generally do not have the expertise to operate a streetcar. The study identified entities such as SamTrans, Caltrain, non-profit organizations (business or transportation management association), private sector and the City as the potential owner and/or operator of a streetcar. Implementation of an urban circulator would be simpler as there are multiple local entities that could operate the service (e.g. SamTrans, Commute.org). A business improvement district including properties that directly benefit from the project, like the Redwood City Improvement Association (RCIA), could be a source of private funding for both capital and operating costs.

As new development occurs along the Broadway corridor, staff is mindful of how a future streetcar might interact with individual projects when reviewing off-site improvements and assessing their transportation demand management (TDM) plans. As part of its development agreement, Stanford University provided $75,000 towards the cost of the feasibility study. Stanford also has an extensive TDM program outlined in the Stanford in Redwood City Precise Plan. A key element of the TDM program is that they implement or participate in publically-accessible shuttle service between the Caltrain station and the campus. Should an urban circulator or streetcar be implemented, property owners such as Stanford or Sobrato (Broadway Plaza) might consider contributing to the cost of operating the new transit service rather than operating their own shuttles.
For context, today:

- Commute.org shuttles provide peak-hour service between the transit center and Stanford Redwood City campus and have over 300 average daily riders.
- Stanford averages over 160 passengers per day on Marguerite shuttles that run during the morning commute (augmenting the Commute.org service) and midday.

As new development occurs along the Broadway corridor (e.g. Stanford University, Stanford Medical, Broadway Plaza, the demand for first-last mile connections to the transit center will increase.

**Economic Benefits:** The study evaluates and summarizes the economic benefits of the streetcar and urban circulator. The full Economic Benefits Memorandum is available on the project [webpage](http://www.redwoodcity.org). A summary of findings is listed below:

- A streetcar/urban circulator can potentially increase housing and commercial development, as well as additional quantifiable economic benefits. Transit has been shown to encourage both residential and commercial developments as the area served becomes more convenient and attractive for residents and workers.
- Existing properties may experience a one-time increase in property value once the transit line is introduced as the location (land) becomes more valuable.
- Businesses in the study area may see increases to their annual sales as a result of the added foot-traffic brought by the streetcar/urban circulator.
- The combined effect of increased development, property appreciation, and business activity can have an appreciable impact on Redwood City’s General Fund revenues.
- A streetcar/urban circulator could also provide a range of benefits stemming from improved pedestrian accessibility, urban design, placemaking and related considerations that, although difficult to quantify in economic terms, are nevertheless significant.

The table below shows the quantified economic benefits of a Redwood City streetcar/urban circulator in 2018 dollars:

<table>
<thead>
<tr>
<th>Areas of Economic Benefit</th>
<th>Existing</th>
<th>Baseline/No Build Scenario² (includes projects in development pipeline)</th>
<th>Estimated Growth with Streetcar / Urban Circulator (Low-High)</th>
<th>Estimated Increase</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential development/units</td>
<td>1,477</td>
<td>4,150</td>
<td>4,360 - 4,570</td>
<td>210-420 units</td>
<td>5%-10%</td>
</tr>
<tr>
<td>Commercial development/Sq.Ft.</td>
<td>5,861,174</td>
<td>7,343,124</td>
<td>7,710,300 - 8,077,400</td>
<td>367,200-734,300 Sq. Ft.</td>
<td>5%-10%</td>
</tr>
<tr>
<td>Property value $</td>
<td>$2,799,900,000</td>
<td>$4,862,830,000</td>
<td>$4,993,721,500 - $5,176,968,600</td>
<td>$130,891,500-314,138,600</td>
<td>3%-6%</td>
</tr>
<tr>
<td>Annual hotel revenues</td>
<td>$1,151,000</td>
<td>$1,151,000</td>
<td>$1,209,000 - $1,266,000</td>
<td>$58,000-$115,000</td>
<td>5%-10%</td>
</tr>
<tr>
<td>Annual retail sales</td>
<td>$129,743,000</td>
<td>$219,547,000</td>
<td>$230,080,000 - $240,970,000</td>
<td>$10,533,000-$21,423,000</td>
<td>5%-10%</td>
</tr>
</tbody>
</table>

² Projections for the Baseline/No Build scenario are based on the Existing Conditions Study (October 2016) which account for residential and commercial development already in the development pipeline.
<table>
<thead>
<tr>
<th>Areas of Economic Benefit</th>
<th>Existing</th>
<th>Baseline/No Build Scenario$ (includes projects in development pipeline)</th>
<th>Estimated Growth with Streetcar / Urban Circulator (Low-High)</th>
<th>Estimated Increase</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual revenues to the City</td>
<td>$6,431,000</td>
<td>$11,024,000</td>
<td>$11,359,000 - $11,795,000</td>
<td>$335,000-$771,000</td>
<td>3%-7%</td>
</tr>
<tr>
<td>Property tax</td>
<td>$5,320,000</td>
<td>$9,239,000</td>
<td>$9,488,000 - $9,836,000</td>
<td>$249,000-$597,000</td>
<td>3%-6%</td>
</tr>
<tr>
<td>Transient occupancy tax</td>
<td>$138,000</td>
<td>$138,000</td>
<td>$145,000 - $152,000</td>
<td>$7,000-$14,000</td>
<td>5%-10%</td>
</tr>
<tr>
<td>Sales tax</td>
<td>$973,000</td>
<td>$1,647,000</td>
<td>$1,726,000- $1,807,000</td>
<td>$79,000-$160,000</td>
<td>5%-10%</td>
</tr>
</tbody>
</table>

It should be noted that an urban circular would have less impact than a streetcar on the real estate market, property values, retail sales, and tax revenues. The main reason for this is that real estate investors and businesses are more likely to be willing to commit their funds when they view the transportation investments in the area to be permanent and long term in nature, which would be characteristic of a streetcar, but not as much for an urban circulator.

**Study Outcomes and Next Steps:** Overall, the study determined that a streetcar system or an urban circulator are technically viable options to enhance mobility and access along the Broadway corridor and between the transit center and areas outside the downtown core. Implementation of the streetcar or urban circulator would potentially reduce Vehicle Miles Traveled (VMT) in Redwood City by about 1% of total VMT, addressing the City’s transportation goals, and it could also encourage additional housing development, addressing the City’s housing goals.

Tax revenue to the City could also increase, however, the estimated revenue increase (upwards of $700,000 annually) would only cover 40-60 percent of the ongoing operating costs for either a streetcar or an urban circulator.

On the capital side, the cost to develop a streetcar system is more than 10 times the cost to develop an urban circulator system. With either approach, multiple funding sources would be sought, but obtaining funding for a streetcar system naturally is a much more significant challenge given the higher cost. Given the expense of implementing a streetcar system, uncertainty about who the governing body would be, and what funding sources could support both capital and operating costs, an urban circulator may be more attainable than a streetcar system.

Staff will continue to monitor development along the Broadway corridor and the performance of the existing shuttles (Commute.org and Marguerite). While these services provide some of the benefits of the urban circulator or streetcar, they are focused on employees, don’t have stops throughout downtown and may not incentivize redevelopment to the extent that a streetcar would. As development continues along the corridor and transit demand increases, investments could focus on increasing transit service and improving amenities for riders.
The study findings and analyses for expanding the current shuttle services and implementing an urban circulator will inform the upcoming planning and community engagement work for the Transit District and Central Redwood City visioning process.

More information about the Broadway Streetcar/Urban Circulator Study is available on the Project webpage.

**FISCAL IMPACT**

There is no financial impact from accepting the findings of the Broadway Streetcar / Urban Circulator and Transit Center Redesign studies; however, further feasibility analysis for one or both approaches would require additional funding which has not been allocated to date, and proceeding to construction and operation would require substantial resources which have not been identified.

**ENVIRONMENTAL REVIEW**

Accepting planning studies is not a project under California Environmental Quality Act (CEQA) as defined in CEQA Guidelines, section 15378, because it has no potential for resulting in either a direct or reasonably foreseeable indirect physical change in the environment. Any projects stemming from these studies would undergo the required environmental review.

**PUBLIC NOTICE**

Public Notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Extensive community outreach was completed in the development of both of the studies, and they were reviewed with the Transportation Advisory Committee on June 11, 2019 and downtown interest groups as well. Staff notified Caltrain, SamTrans and downtown interest groups of this agenda item, and the public, major employers, downtown interest groups and transportation partners will be invited to participate in the Community Visioning Process and in the development of the Sequoia Station Transit Plan.

**ALTERNATIVES**

The City Council may choose not to accept the Transit Center Redesign and Broadway Streetcar Feasibility Studies’ findings.

**ATTACHMENTS**

Attachment A - Transit Center Redesign Study – Draft Summary Report
Attachment B - Broadway Streetcar / Urban Circulator Study – Draft Final Report