Transit Coordinating Committee
October 21, 2020 – TCC 9:00 a.m. to 11:00 a.m.
Hosted via Zoom

Members of the public wishing to address the committee on any item not on the agenda may do so at the beginning of the meeting. We ask that members of the public request to speak and keep their remarks brief. Testimony will be limited to a total of ten (10) minutes.

Conference Call Option – SACOG Zoom Meeting 3 - Join Zoom Meeting via laptop, computer, or smartphone: https://zoom.us/j/98473081154?pwd=Sm9Qbm8veC8yYk1Kd2VLM1JUSEt3UT09 Meeting ID: 984 7308 1154 Password: 822684. Join with one tap mobile +16699009128, 98473081154# US Password: 822684. Dial in with your phone +1 669 900 9128 US, +1 669 219 2599 US, +1 651 372 8299 US, 888 475 4499 US Toll-free, 877 853 5257 US Toll-free. Meeting ID: 984 7308 1154 Password: 822684. Please do not put your phone on hold during the conference call; instead please hang up and call back when you’re free.

1) TCC Coordination (All, 20 minutes)
   a. Public Comment on non-agenda topics
   b. Brief introductions and sharing of significant news about transit systems
   c. Joint Transit Operator Project or Training Opportunities
   d. General TCC Information & Discussion
      • RT Network Integration Plan
      • Unmet Transit Needs hearings start October 27th – www.sacog.org/unmet
      • Upcoming FTA 5307/5339 Discretionary Funding – see attachment
      • TCC 2020 schedule available at: https://www.sacog.org/calendar
      • Other

2) Review and Approve August 19, 2020 TCC Minutes (All, 5 minutes) – see attachment

3) COVID-19 Related Updates (All, 20 minutes)

4) SacRT Forward New Bus Network Review (Boyle, RT and Drake, RT/All, 30 minutes) – see attachment

5) 2021 MTIP Adoption (Foster/Cáceres/All, 15 minutes) – see attachment

6) Next Gen Transit Project Update (Dougherty/Rosson/All, 20 minutes) – see attachment

7) Meetings/Events/Updates (All, 5 minutes)
   a. Meetings or Events
   b. Updates on Other Items

8) Set Next Meeting Dates (All, 5 minutes)
   a. Next TCC meeting on December 9, 2020– via Zoom
   b. Adjourn TCC

SACOG is operating remotely until further notice, and our staff are restricted from in-person meetings. All staff are available via email, phone, and online meetings. If you have an upcoming meeting scheduled, please be on the lookout for a virtual option. We appreciate your flexibility during this time. Upcoming board and committee meetings are also all online. Sign up for electronic notifications to get the latest information.

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1) **TCC Coordination** (All, 20 minutes)
   a. Public Comment on non-agenda topics
   b. Brief introductions and sharing of significant news about transit systems – Roseville Transit – Eileen Bruggeman left Roseville. Will be doing recruitment for transit analyst position – see jobs page. Couple of positive COVID-19 tests of drivers. MV did contact tracing, as well as City of Roseville maintenance staff.
   PI – Continuing great plates delivered with ACC and UCP, food bank box for seniors with Sacramento Food Bank through the fall and may assist ACC meals on wheels with deliveries.
   Unitrans – Getting new maintenance manager and have outgoing IT manager. Broken ground on rehab of pavement at Unitrans maintenance yard. Also, digging trenches and conduit for electric vehicle charging – 7 charging units for 14 buses to be completed by summer of 2021. Have funds for 6 electric buses. Will be getting 5 more from FTA 5339 discretionary pot.
   RT – Going back to 100% service in September 2020. Seven cases of COVID-19, 5 are back at work.
   El Dorado Transit – Started charging fares on August 1st, and have barriers installed on all buses.
   SCT/Link – Looking for a general manager as previous manager Becky Egleston retired.
   e-tran – Doing planning study for ZEB – battery electric and fuel cell technology to complete by the end of the calendar year.
   PI – Separated from RT in June. Travel training demand increasing and continuing.
   ACC – Providing essential and critical trips. Increased ridership from April 130%.
   c. Joint Transit Operator Project or Training Opportunities – Transit Asset Mgmt. training. PI – have trainers available for variety of subjects and all can be done virtually.
General TCC Information & Discussion

- LTF, STA, and STA-SGR estimates updates – FY 2020-21 LTF revision will go to committee and board in September. SGR – going to SACOG Board on Thursday (August 20).
  - RT – More SGR funds may be needed to increase funding amounts or include a new project.
  - SACOG – Original due date for SGR is September 1st. Will send an amendment with the revisions and any changes to revenue amounts. STA decrease of approximately 40% and LTF decrease 15-20%.
- Unmet Transit Needs going all digital this fall
- TCC 2020 schedule available at: https://www.sacog.org/calendar

2) Select new TCC Chair and Vice Chair for FY 2020-21 (SACOG/All, 15 minutes)
   a. Nominations – Motion Keith Martin, Yuba-Sutter Transit, Second Tiffani Fink, Paratransit, Inc., Mike Dour continuing as Chair. Motion Mike Costa, e-tran, Second Will Garner, PCT, Tiffani Fink continuing Vice Chair.
   b. Voting – both motions were approved unanimously by the TCC members in attendance.
   c. Selection – Mike Dour, Chair and Tiffani Fink, Vice Chair.

3) Review and Approve June 17, 2020 TCC Minutes (All, 5 minutes) – see attachment Motion Keith Martin, Yuba-Sutter Transit, Second Kristen Mazur, YCTD – approved.

4) COVID-19 Related Updates (All, 20 minutes)
   - Roseville Transit – putting in driver barriers to be done 1st week of Sept. and start charging fares beginning of October.
     - PCT – August 10th started charging fares after barriers were installed, 50% of ridership is local, at only 15-20% of previous commuter ridership. No positive employee tests since March. Others sharing positive tests? Commuter service from suburbs and what are thoughts on restoration. PCT – Continuing with ½ service until people go back to commuting.
     - Roseville – holding the line until we see what is going to happen with state government. Publicizing positive COVID-19 test following RT’s lead.
     - RT – Management wanted to stay as transparent as possible with riders and the public. Trying to return to full service.
     - Yuba-Sutter Transit – July 1st fare collection, ridership dropped 22% after fares were reinstated. Down 50% on local fixed route, 85-90% on commuter, and reductions in dial-a-ride. Cutaways and commuter service getting barriers installed. Dial-a-ride and rural services fares back by December 1st. Had following buses for excessive heat and no one got left behind. Discussion about limiting capacity. One positive test but a dial-a-ride driver and did not publicly announce because of limited rider contact. Cut commuter service by 30% with only 11 passengers allowed max, though usually only 3-4 ride. Plan to speak to board about permanently cutting service.
   - YCTD – 3 or 4 cases. Post on website with routes, dates, and times. What level of service to bring back? Completed COA right before COVID-19. Going to do one more look at how COVID-19 would affect COA recommendations. Surveying riders about what they’d do in the future. At 30% of where ridership was before.
   - PI – two non-driving staff have positives. Internal document used in contracted service in Boston. Great plates delivering 15,000 meals per week over 13 weeks, 38,000 meals per month with food bank. Total 400,000 meals delivered. 10 passenger trips each week. Working with contractor to make sure we’re ready for increase in trips. Working with CTSA partners with capacity increases/more vehicles with fewer riders per vehicle. Longer spans of service, weekend, and more vehicles. Starting earlier and doing shifts, to keep people apart/socially distant.
   - Yuba-Sutter Transit – Putting people going to different programs on one bus it will be a challenge, and especially weekend service.
   - El Dorado Transit – Do a lot with Alta as well.
   - PI – Keep everyone informed on discussions with Alta. How to make tech available to make sure clients get to the right place. El Dorado, Yuba-Sutter Transit, and Roseville.
   - Unitrans – No positives. 15 people per bus capacity. 50-80% reduction in apartment occupancy. 90% reduction in ridership. Plan to go back to charging fares on Sept. 30th after driver barriers are in place.
   - e-tran – 1 positive case of driver. Had been out on leave prior to testing positive. Continuing to coordinate with SacRT on how we do the contact tracing, and notifications. Ridership down 75% local, 90% commuter, and 55% on DAR. Still/continue to collect fares. Clean buses between runs in morning and afternoon.
El Dorado Transit – no positive cases of COVID-19. August 1st start charging fares. DAR down 60%, commuter down 90%. Local fixed route down 20%. Limiting how many people can ride the bus. Increase commuter service as demand increases, DAR as well and see where budgets are in the future.

SCT/Link – 1 case but was off on vacation. Driver barriers are on order. Service is down and have continued to charge fares. Buses are cleaned after each run.

ACC – 1 staff tested positive no exposure with other staff. Transported one COVID-19 positive person. Doing about 150 meals per day (hot meals).

5) Discretionary Funding Reprogramming Requests (All, 15 minutes)
   a. Unitrans CMAQ Reprogramming – Tier 1 regional funding – CMAQ. Use balance reinvest into electrification infrastructure project. YCTD – Good partner, good use of funds.
   b. YCTD Discretionary 5307 Reprogramming – Y Shuttle funds special events at Golden 1 Center. Discontinued Y Shuttle. Check with FTA on flexibility of older money during COVID-19.

6) 2021 MTIP Adoption (Foster/Cáceres/All, 15 minutes) – see attachment – see slides. Can include CARES act funding if desired. PI – May assist with showing the gap in transit funding.

7) Vehicles, Services, and Software Contracting Opportunities available to Transit Agencies (Peterson/All, 15 minutes) – see attachment

8) Updates and Background on Remix and Replica (Rosson/Conly/All, 10 minutes)

9) Meetings/Events/Updates (All, 3 minutes)
   a. Meetings or Events – Board equity working group. Share equity efforts with SACOG staff. TRB released TCRP reports on how to include equity in transit planning process.
   b. Updates on Other Items – Next Gen study – don’t have info for this meeting. Hopefully next week have signed agreement, and will be able to provide copies to operators and PAC and TAC scheduling information. Deadline for study is March/April of 2021.

   Mobility Accelerator update from Adrienne.

10) Set Next Meeting Dates (All, 2 minutes)
    a. Next TCC meeting on October 21, 2020 – via Zoom
    b. Adjourn TCC

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SacRT Forward
New Bus Network
Implementation and Results

SACOG Transit Coordinating Committee
October 2020
- 20 million boardings (pre-COVID)
- 1.1 million person service area
- Bus, light rail, paratransit, microtransit
- Cost-neutral bus network restructuring
- Took effect 9/8/19
Boardings Per Revenue Hour
Before SacRT Forward

Weekday
(40 Routes)

Saturday
(27 Routes)

Sunday/Holiday
(22 Routes)

Headways
- 15 minutes
- 30 minutes
- 60 minutes

2 routes w/ 30m headways
Key Strategies
Fewer Routes, Better Headways, Simpler Network

• Consolidate and simplify
• Eliminate redundancy
• Eliminate routes with narrow purpose
• Focus on major corridors
Key Outcomes
Fewer Routes, Better Headways, Simpler Network

- Reduced from 40 to 27 regular routes
- Seven days of service (on all 27 regular routes)
- Improved weekend headways (mostly from 60 minutes)
- Added weekend service to many routes
- Some route eliminations, realignments, span changes
- 3.8% increase in service (annualized)
Ridership Forecasts

- 30% return on investment
- Service levels increase (+3.8%)
- Ridership increases (+1.2%)
- Productivity decreases

Histogram of Headway Elasticities
Bimodal Distribution (Average = 0.3)
Results
Ridership Methodology

- February 2020 vs 2019 (six month ramp-up)
- 19.5% raw ridership gain (annualized basis)
- Deducted 12.5% for student free ride program
- Deducted 3.2% for expected no-change growth
  - Based on 15 comparable agencies (without changes)
  - Accounted for weather (more favorable in 2020)
- Yields 3.8% ridership gain from project
- Passenger mile trends matched boardings
### Bus Ridership | Six Months
February 2020 vs 2019

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<th>Revenue Hours</th>
<th>Return on Investment</th>
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<td>Mon-Fri</td>
<td>+0.3%</td>
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<td>Saturdays</td>
<td>+28%</td>
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<td>+37%</td>
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Ridership adjusted down 15.7% annualized to account for student free ride program (+12.5%) and expected growth (+3.2%).

**Ridership Forecast = +1.2%**

Based on TCRP Report 95 standard 30% elasticity
Lessons Learned
Lesson #1: Prepare a Ridership Forecast

- Needed for budget
- Needed for board report
- All major publicly traded firms make sales forecasts
- It will improve your plan
- Our ridership forecast led to macro-level changes to our initial draft plan
Lessons Learned

1. Always prepare a ridership forecast
Lesson #2: Focus on Cost, Not Demand Estimation

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<th>Minimizing Cost</th>
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<td>• Speculative</td>
<td>• Knowable and controllable</td>
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<td>• Laborious analysis</td>
<td>• Simple math</td>
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<td>• Minimal, delayed fiscal impact</td>
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Farebox Recovery = 20%
Lessons Learned

1. Always prepare a ridership forecast
2. Focus on cost (design), not demand estimation (research)
Lesson #3: Don’t Front-Load Your Scope

Where Time Is Typically Scoped

Data Gathering
Demand Modeling
Opinion Surveys
Workshops

Network Design

Board Report
Public Review
Plan Revisions

What Customers Expect

What Are You Proposing?
Lessons Learned

1. Always prepare a ridership forecast
2. Focus on cost (design), not ridership estimation (research)
3. Don’t front-load your scope
Lesson #4: If It Ain’t Broke, Don’t Fix It

<table>
<thead>
<tr>
<th>What it is</th>
<th>Reallocation</th>
<th>Restructuring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• No change to map</td>
<td>• Design changes</td>
</tr>
<tr>
<td></td>
<td>• Cut bad routes, improve good ones</td>
<td>• New route maps</td>
</tr>
<tr>
<td></td>
<td>• Headways or span changes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Add service days</td>
<td></td>
</tr>
<tr>
<td>Pros/Cons</td>
<td>• Easy to plan and evaluate</td>
<td>• Complicated</td>
</tr>
<tr>
<td></td>
<td>• Predictable benefits</td>
<td>• Speculative benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Forfeits more existing riders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Results may be counterproductive</td>
</tr>
</tbody>
</table>
Lessons Learned

1. Always prepare a ridership forecast
2. Focus on cost (design), not ridership estimation (research)
3. Don’t front-load your scope
4. If it ain’t broke, don’t fix it
## Lesson #5: Reimagining Has Its Limits

<table>
<thead>
<tr>
<th>Route Reimagining (Ex: SacRT Forward)</th>
<th>Fare Reductions (Ex: Student Free Rides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1-2 years, $400-500k project</td>
<td>• Six months, existing staff time</td>
</tr>
<tr>
<td>• $4.38 per new rider</td>
<td>• Under $1.00 per passenger</td>
</tr>
<tr>
<td>• 350k new riders</td>
<td>• 1 million new riders</td>
</tr>
<tr>
<td>• Speculative benefits</td>
<td>• Concrete benefits</td>
</tr>
<tr>
<td>• Popular with non-riders (e.g., voters)</td>
<td>• Universally popular</td>
</tr>
<tr>
<td>• Complaints from existing riders</td>
<td>• Good for a system with excessive fares</td>
</tr>
<tr>
<td>• Good for a system that recently expanded rapidly</td>
<td></td>
</tr>
</tbody>
</table>
Lessons Learned

1. Always prepare a ridership forecast
2. Focus on cost (design), not ridership estimation (research)
3. Don’t front-load your scope
4. Reallocation (simple) is better than restructuring (high-risk)
5. Not every system is ripe for reimagining
Lesson #6: Free Rides on Launch Day

- One less thing for riders to worry about
- One less thing for drivers to worry about
- Faster boardings, to offset delay from customers who will be asking lots of questions
- Defuses tensions when things go wrong
- Helps ridership
Lessons Learned

1. Always prepare a ridership forecast
2. Focus on cost (design), not ridership estimation (research)
3. Don’t front-load your scope
4. Reallocation (simple) is better than restructuring (high-risk)
5. Not every system is ripe for reimagining
6. Free rides on launch day
Questions? Comments?

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Planning Director  
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# Draft Development Schedule

**2021-24 MTIP, 2020 MTP/SCS Amendment #1, and Draft Conformity Analysis**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 22, 2020</td>
<td>Call for Updates to MTIP Project List</td>
</tr>
<tr>
<td>August 21</td>
<td>Deadline for submittals</td>
</tr>
<tr>
<td>August 24 – November 20</td>
<td>SACOG review of submittals, determination of financial constraint, determination of regional significance, identification of grouped project listings, air quality modeling, and air quality conformity analysis.</td>
</tr>
<tr>
<td>November 23 - December 7</td>
<td>Interagency Review of Draft MTIP, Draft 2020 MTP/SCS Amendment #1, and Draft Conformity Analysis</td>
</tr>
<tr>
<td>December 8–January 6, 2021</td>
<td>Public Comment Period</td>
</tr>
<tr>
<td>December 9</td>
<td>Transit Coordinating Committee Presentation</td>
</tr>
<tr>
<td>December 17</td>
<td>Board: Public Hearing</td>
</tr>
<tr>
<td>January 20</td>
<td>Regional Planning Partnership Presentation</td>
</tr>
<tr>
<td>February 4</td>
<td>Transportation Committee: Board Recommendation</td>
</tr>
<tr>
<td>February 18</td>
<td>Board Adoption of MTIP</td>
</tr>
<tr>
<td>March 1</td>
<td>Final MTIP due to Caltrans</td>
</tr>
<tr>
<td>March 8 – 22</td>
<td>Statewide FSTIP Public Comment Period</td>
</tr>
<tr>
<td>April 1</td>
<td>Caltrans submits FSTIP (which includes SACOG MTIP) to FHWA and FTA</td>
</tr>
<tr>
<td>April 16</td>
<td>Final MTIP &amp; Air Quality Conformity Determination approval by Federal DOT</td>
</tr>
</tbody>
</table>
EXHIBIT “A”

Scope of Work

The Arup team scope includes tasks organized by the following Key Topic Areas:

1. Transit Service
2. Interagency Collaboration
3. User Experience
4. Travelers
5. Land Use
6. Emerging Mobility

Our proposed task structure is as follows:

Task 1: Stakeholder Engagement
Task 2: Background Conditions
Task 3: Strategy Development
   1. Goals and Evaluation Metrics
   2. Strategy Identification by Topic
   3. Evaluate Strategies and Develop Key Recommendations
   4. Final Plan
Task 4: Grant Administration and Project Management

The detailed task descriptions, example strategies, and deliverables are described below.

All parties acknowledge the deliverable dates are aggressive and will be adjusted if the funding agency (Caltrans) provides authorization of an extension.

1. Stakeholder Engagement

   Task Lead: Arup

1.1 Facilitate Advisory Committees – Arup/NWC/Steer

Arup will prepare for, attend and/or facilitate up to six stakeholder meetings for the project. Because of the condensed schedule Arup anticipates three PAC and TAC meetings each through the project duration. The meetings will focus on project updates, task findings, and reviewing the project team’s recommendations. NWC Partners, Inc. (Subconsultant) and Steer (Subconsultant) will also attend a limited amount of meetings pertaining to tasks they are leading. These six meetings will be spread across the following categories.

- Policy Advisory Committee (PAC): Business, economic, and policy leaders.
- Technical Advisory Committee (TAC): Transit service providers and technical experts.

Members of the PAC and TAC will be identified by SACOG staff with input from the Arup team. SACOG staff will take the lead on organizing, facilitating and soliciting feedback from the
TAC, with participation from Arup as requested. The PAC meetings will be concentrated in the second half of the project (Task 3).

At the outset of the project, Arup will prepare a schedule of TAC and PAC meetings with high-level agendas for each meeting that correspond to key milestones. This schedule will be submitted to SACOG staff for review and approval. Content for each of the three PAC meetings, including agendas, memos and slide decks, will be prepared in advance for SACOG staff review. SACOG staff will take the lead on all meeting logistics, including scheduling, materials distribution, and virtual or in-person meeting spaces.

Arup understands the importance of engaging the SACOG Board and relevant committees throughout the project lifecycle. Arup will consult with SACOG staff to determine if any of Arup’s designated six meetings will be Board or relevant committee meetings. If selected, Arup will prepare slide decks for the designated Board and/or committee meetings. Arup will be available to virtually attend and present and answer questions at the designated meetings. All parties acknowledge that if an extension is granted, Arup will prepare for, attend and/or facilitate one additional stakeholder meeting (for a total of seven meetings).

1.2 Support SACOG staff with materials for other meetings
Arup will provide support for additional meetings beyond the six identified. This may include updates to previously created slide decks or updates to other meeting materials for use by SACOG staff. The Arup team will not attend or participate in these additional meetings. We will review meeting notes and summaries prepared by SACOG staff and incorporate the feedback received into our work products.

A contingency to the budget is included and may be used to allow Arup’s participation in additional TAC, PAC and/or SACOG meetings, to conduct grassroots community engagement, or any other purpose with advance written approval from SACOG.

**Task 1 Deliverables – To be completed by February 28, 2021:**
- PAC and TAC meeting schedule
- Facilitate and/or prepare for up to six meetings (TAC, PAC, SACOG Board, and/or SACOG Committee meetings)
- Support for additional meetings

2. Background Conditions

Task Lead: Arup

2.1 Review and summarize existing reports and data
The Arup team will review historic, existing and anticipated future conditions organized by the
Key Topic Areas. This will include any available COVID-related data and plans from the SACOG region as well as agencies in similar markets that have already adopted recovery plans. Arup will rely primarily on information provided by SACOG staff, supplemented by independent research as resources allow. The findings of this task will be summarized in a Background and Existing Conditions memo. Information to be assembled is summarized below for each Topic Area. Arup will submit a draft memo to SACOG for review, and will make one round of revisions upon receipt of a single set of consolidated, internally-consistent comments.

2.1.1 Transit Service - Arup
Based on available information collected by SACOG, summarize existing (pre and post-COVID) service levels and route structures. Identify significant changes in service that are planned, including planned extensions of light rail and anticipated changes to regional rail services (Capital Corridor and San Joaquin). Sources: SACOG MTP and other regional documentation/data, transit agency reports and plans, information provided to SACOG by agencies through the TAC process.

2.1.2 Interagency Collaboration – Arup/NWC
Based on available information from SACOG, summarize existing and planned collaboration efforts, such as interagency fare media, schedule coordination, and procurement. Evaluate factors contributing to successful collaborations to date. Assess current multi-county, multi-agency funding strategies. Sources: Research/data provided by SACOG; additional independent research as resources allow.

2.1.3 User Experience - Steer
Based on available information from SACOG, describe key components of the rider experience, focusing on ease of use of the systems and public information provided to riders. Complement SACOG staff efforts to gather best practices/case studies on fare integration, traveler information tools, procurement, cobranding, operational efficiencies, particularly during COVID or other recessions/downturns. Sources: Research provided by SACOG; additional independent research as resources allow.

2.1.4 Travelers - Arup
Review available information from SACOG to identify key characteristics of existing transit users in the region; as well as potential markets for new riders. We will review available passenger surveys, historic and forecast ridership information, including trip origins and destinations if readily available. Demographic information will be assembled from SACOG datasets and other publicly available sources (Census and/or ACS) as resources allow.

2.1.5 Land Use - Arup
Summarize existing and projected land use patterns. Where possible with available data and resources, we will also document historic transit ridership as a function of land use. Source: SACOG MTP/SCS and travel demand forecasting data.
2.1.6 **Emerging Mobility - Steer**

Summarize examples of emerging mobility applications within the study area based on existing readily available information (VIA on-demand shuttle pilot programs, micro-mobility partnerships, private mobility service availability). Summarize major national trends in emerging mobility use, with a focus on public transit partnerships and first/last mile solutions. Sources: Information from SACOG, supplemented with independent research by the consultant team.

**Task 2 Deliverables – To be completed by November 30, 2020:**
- Draft/Final Background and Existing Conditions Memo.
  Arup will make one round of edits upon receipt of consolidated, internally-consistent comments.

### 3. Strategy Development and Evaluation

**Task Lead: Arup**

In Task 3 the Arup team will identify, evaluate and prioritize strategies to achieve a more integrated, resilient, and effective regional transit network.

- In Task 3.1, we will identify near- and long-term goals for the regional transit network, as well as associated evaluation criteria.
- In Task 3.2, we will identify a ‘long list’ of potential strategies to reach these goals, organized by each key topic. This will result in a list of strategies and, depending on the Key Topic Area, other draft work products (such as the land use/service typologies described in Task 3.2.5. It is important to note that there is overlap and synergy between most of the Key Topic Areas; hence we anticipate that the strategies themselves will also span multiple topic areas.
- In Task 3.3, we will hone the long list of strategies into a toolkit of recommendations based on available feedback from the TAC and PAC that is received in accordance with the project timeline. Arup will also assess potential strategies against the evaluation criteria adopted in Task 2.
- Finally, in Task 3.4, the Arup team will deliver final recommendations and next steps from this comprehensive strategy development process.

#### 3.1 Goals and Evaluation Criteria

The MTP/SCS established broad goals related to people, places and travel. This project will build on these efforts by identifying specific goals for the region’s transit network that align/implement with the goals of the MTP/SCS, and the Key Topic Areas. We will solicit input from the TAC, PAC, and SACOG staff and leadership to the extent possible within the project timeline, to propose and refine a series of goals and related evaluation criteria. The criteria will then be used to evaluate and prioritize the transit and mobility strategies identified in Task 3.2.
Task 3.1 Deliverables – To be completed by December 18, 2020:
- Draft/Final Goals and Evaluation Criteria Memo.  
  Arup will make one round of edits upon receipt of consolidated, internally-consistent comments.

3.2 Strategy Identification by Topic
The Arup team will identify strategies organized by the Key Topic Areas. Information to be assembled to identify strategies is summarized below for each Topic Area.

3.2.1 Transit Service - Arup
- The Arup team will develop 6-8 service typologies incorporating fixed route, on-demand, microtransit, and shared mobility services.
- Based on analysis performed in other tasks, use professional judgement to identify corridors where fixed route transit should be prioritized for service retention/improvement in the near term.
- Identify strategies to retain, restore, and improve these fixed route service corridors.
- Define service goals for fixed route corridors, including safety, reliability, availability (includes frequency, span of service and station/stop proximity), and speed.
- Identify strategies to improve access to existing and planned light rail and regional rail services.
- Recommend strategies for microtransit, micromobility and other alternatives to complement or replace fixed-route service in the near term and long term.

3.2.2 Interagency Collaboration – Arup/NWC
- Identify opportunities to increase collaboration among transit providers in the region, both formally and informally, in response to the COVID crisis and over the longer term. These may include:
  - Creative regionwide and multi-county funding approaches and strategies
  - Shared procurement/outsourcing – among transit agencies, and/or how SACOG could play a role in procurement and outsourcing for the region as a whole to leverage economies of scale
  - Increased coordination of schedules, payment options, branding and marketing
  - Build on successful models of joint service provision, eg. Causeway Connector and airport service
  - Build on successful models of intercounty and interjurisdictional collaboration, including solutions for rural operators eg. Yuba-Sutter
- Identify most likely and promising new funding opportunities including COVID-related stimulus and funding opportunities

3.2.3 User Experience - Steer
- Identify promising strategies that build on the efforts of SACOG staff and consultants related to fare payment/Connect Card and other traveler information tools.
- Identify other strategies to improve user experience including schedule and fare
integration, co-branding, universal accessibility strategies, stop/station amenities, passenger information and feedback mechanisms.

3.2.4 **Travelers – Arup**

Identify target markets, including disadvantaged communities, essential workers and other transit-dependent populations. Based on analysis conducted in Task 2.1, we will identify criteria for target markets with SACOG’s input. Target markets will be identified for both near (COVID-recovery) and long-term conditions. Consider social equity and target the core riders that rely on transit, and identify populations that have critical unmet transportation needs, as well as those where public transit could provide a reasonably competitive alternative to driving.

- Assess working from home opportunities and constraints. For near-term recovery, assess which employment sectors are likely to remain working from home, and which are likely to return to workplaces, and factor that into target markets. Focus on the many essential, service-oriented, and blue-collar jobs – key groups especially highlighted due to the pandemic - and factor their travel behaviors into opportunities.

3.2.5 **Land Use - Arup**

- Define service and land use typologies. Land use will include at least two rural/exurban typologies and will reflect both existing urban nodes and job centers (e.g. downtown Sacramento) and emerging urban nodes and job centers (e.g. West Sacramento, Roseville).

- Identify most appropriate service typologies for each land use typology. Using these typologies, the Arup team will identify corresponding land use and demographic profiles (density, mix of uses, transit-dependent populations, proximity to major job centers) suited to each typology. The team will determine SACOG-specific examples of a geographic area (neighborhood, town, or rural area) for each typography.

3.2.6 **Emerging Mobility - Steer**

- Explore the feasibility and benefits of transit agency partnerships with micro-mobility providers in areas where it could replace or increase access to fixed-route transit.

- Explore the feasibility and benefits of expanding microtransit partnerships into other parts of the SACOG region.

- Examine the long-term impact of autonomous transit vehicles on service operations.

**Task 3.2 Deliverables - To be completed by December 18, 2020:**

- Draft/Final Strategy long list. Vision, goals, and Key Topic Areas relevant to each strategy will be marked.
  - Includes draft land use and service typologies

  Arup will make one round of edits upon receipt of consolidated, internally-consistent comments.

3.3 **Evaluate Strategies and Develop Key Recommendations – Arup/NWC/Steer**

The Arup team will engage in a multi-step process to refine the long list of potential strategies into a toolkit of prioritized strategies for consideration.
The Arup team will engage the technical and policy advisory committees to provide feedback and input on the most promising strategies to the extent possible within the project timeline.

The selection of key strategies will also be informed by a qualitative evaluation of each strategy’s performance against a set of evaluation metrics identified in Task 3.1. Strategies that are shown to have a higher impact across multiple indicators will then be evaluated for feasibility and plotted in an impact/feasibility matrix, as illustrated below. The results of this analysis will then be shared with SACOG staff to settle on a final set of strategies that form the basis of our toolkit of prioritized strategies.

![Figure 1: Example Impact/Feasibility Matrix](image)

**3.4 Final Report**

The Final Report will summarize the tasks and strategy evaluation in a set of recommendations and next steps. It will include graphics and illustrations of key concepts (e.g. street section before/after BRT improvements).

Arup will lead production of the report. NWC and Steer will lead the pieces identified in Tasks 2 and 3 (NWC: Interagency Collaboration; Steer: User Experience and Emerging Mobility).

The Final Report will include:

- An executive summary, including key findings from Task 2 Background Conditions.
- A toolkit of prioritized strategies to consider for the near-term (18 months to five years)
and long-term (15-20 years).

- Documentation of the planning, outreach, and strategy development process
- Documentation of the technical analyses
- Next steps: SACOG’s roadmap for the next twenty years. The Toolkit answers the “what” and the next steps answers the “how.” Next steps will be divided into two components: a short-term set of steps for the next 18 months to 5 years (including pandemic-related recommendations and actions to ensure broad-based community buy in) and a long-term set of steps for the next 15-20 years. As part of this, the Arup team will consider steps for SACOG to identify benchmarks and ways to incentivize progress for interagency collaboration.

Arup will submit a draft Final Report to SACOG and will make two rounds of edits upon receipt of consolidated, internally-consistent comments.

**Task 3.4 Deliverables - To be completed by February 28, 2021:**

- Draft/Final Report
  Arup will make two rounds of edits upon receipt of consolidated, internally-consistent comments.

### 4. Project Management and Grant Administration

**Task Lead: Arup**

#### 4.1 Invoicing

The Arup team will submit monthly invoices that track all grant expenditures for all team members to SACOG. This will support the invoice package submissions to Caltrans staff.

#### 4.2 Support quarterly overall work program (OWP) reports

The Arup team will support SACOG staff in submitting quarterly reports to Caltrans and Division of Rail and Mass Transportation staff by providing a summary of project progress and grant/local match expenditures

#### 4.3 Final request for funding/grant closeout

The Arup Team will submit a final invoice to SACOG staff after acceptance of the final deliverables.

#### 4.4 Project management

The Arup team will manage the project to ensure that the budget and schedule is maintained to the maximum extent possible. The Arup Project Manager will coordinate weekly project status meetings with SACOG co-leads. The minutes from these meetings shall serve as a record of decisions. Minutes will be emailed to SACOG staff within 24 hours of the meeting, and SACOG staff will have one week to make any corrections.
Task 4 Deliverables - To be completed by February 28, 2021:

- Monthly invoices
- Meeting minutes from weekly check-ins