



MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

Wednesday, March 29, 2017
10:00 a.m. – 11:30 a.m.

SCAG Los Angeles Main Office

818 W. 7th Street, 12th Floor
Policy Committee Room A
Los Angeles, California 90017
(213) 236-1800

Teleconferencing Available:

To join the meeting: <http://scag.adobeconnect.com/rttac/>
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1405 North Imperial Ave., Suite 1
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Orange, CA 92868

Riverside SCAG Office

3403 10th St., Suite 805
Riverside, CA 92501

San Bernardino SCAG Office

1170 West 3rd St., Suite 140
San Bernardino, CA 92410

Ventura SCAG Office

950 County Square Dr., Suite 101
Ventura, CA 93003

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Matt Gleason at (213) 236-1832 or gleason@scag.ca.gov.

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1993. We require at least 72 hours (three days) notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.

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REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA

Wednesday, March 29, 2017

The Regional Transit Technical Advisory Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items. **TIME** **PG#**

1.0 CALL TO ORDER

(Gary Hewitt, OCTA, Regional Transit TAC Chair)

2.0 PUBLIC COMMENT PERIOD - Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Regional Transit Technical Advisory Committee, must fill out and present a speaker’s card to the assistant prior to speaking. Comments will be limited to three minutes. The chair may limit the total time for all comments to twenty (20) minutes.

3.0 RECEIVE AND FILE

- | | | | |
|-----|---|---|---|
| 3.1 | <u>Minutes of the January 31, 2017 Regional Transit TAC Meeting</u> | 1 | 3 |
| 3.2 | <u>Partnerships with Transportation Network Companies (TNCs)</u> | 1 | 9 |

4.0 INFORMATION ITEMS

- | | | | |
|-----|---|----|----|
| 4.1 | <u>Metro Ridership Task Force</u>
<i>(Conan Cheung, LA Metro)</i> | 20 | 33 |
| 4.2 | <u>Transit Ridership Update</u>
<i>(Philip Law, SCAG)</i> | 5 | 36 |
| 4.3 | <u>SB375/2017 GHG Emissions Reduction Targets</u>
<i>(Frank Wen, SCAG)</i> | 20 | 40 |



**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
AGENDA
Wednesday, March 29, 2017**

4.4	<u>Metropolitan Planning Agreements</u> <i>(Philip Law, SCAG)</i>	15	48
4.5	<u>Transit Asset Management Update</u> <i>(Matt Gleason, SCAG)</i>	20	56

5.0 ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wed. May 31, 2017.

Regional Transit Technical Advisory Committee (RTTAC)
of the
Southern California Association of Governments

January 31, 2017

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE (RTTAC). AN AUDIO RECORDING OF THE MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Regional Transit Technical Advisory Committee held its meeting at SCAG's Downtown Los Angeles Office. The meeting was called to order by Vice Chair Joyce Rooney.

Members Present:

Joyce Rooney (Vice Chair)	Redondo Beach Transit
Amy Ahdi	Redondo Beach Transit
Wayne A. Wassell	LACMTA
Marla Westervelt	LACMTA
Lori Huddleston	LACMTA
Kirk Schneider	Caltrans District 7

Video Conference:

Gary Hewitt (Chair)	Orange County Transportation Authority
Matt Miller	Gold Coast Transit District
Vanessa Rauschenberger	Gold Coast Transit District
Heather Miller	Ventura County Transportation Commission
Martin Erickson	Ventura County Transportation Commission
Carlos Lopez	Antelope Valley Transportation Authority
Norm Hickling	Antelope Valley Transportation Authority

Teleconference:

Kevin Kane	Victor Valley Transportation Authority
Anita Petke	Sunline Transit
Roderick Diaz	Metrolink
Shirley Hsiao	Long Beach Transit

SCAG Staff:

Philip Law	Joseph Briglio
Matthew Gleason	Marco Anderson
Stephen Fox	

1.0 CALL TO ORDER

Joyce Rooney called the meeting to order at 10:07 a.m.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 CONSENT CALENDAR

3.1 Approval Item

Minutes of the October 5, 2016 Regional Transit TAC Meeting

The Consent Calendar was approved by consensus.

4.0 RECEIVE AND FILE

No receive and file items presented.

5.0 INFORMATION ITEMS

5.1 First-Last Mile Environmental Life-Cycle Assessment of Multimodal Transit in Los Angeles

Christopher Hoehne, Arizona State University, reported on First-Last Mile Environmental Life-cycle Assessment of Multimodal Transit in Los Angeles. Mr. Hoehne stated the study examines the environmental impacts from multi modal transit trips by assessing environmental impacts from 10 different transit systems in Los Angeles as well as equivalent automobile travel. The transit systems include all the bus, light, heavy and commuter rail lines. The travel mode split and transit mode split was reviewed noting 82% of trips in the study area are taken by automobile. The transit mode split indicates 76% of passengers use the bus system while 24% use rail. Rail energy use was next examined and it was noted energy provided to individual rail lines come from multiple sources based on the utility provider with each having a different level of environmental impact. It was noted Metro's Red Line has the greatest energy consumption, as well, 39% of its electricity is generated through coal energy and 31% from natural gas. Similarly, Metro's Gold Line receives 34% of its energy from coal generated electricity.

Mr. Hoehne next reviewed drive cycles, trip characteristics and transit egress noting 26% of Metro rail trips are accessed by automobile. The per-passenger-mile impacts were next reviewed per mode and it was indicated that fuel combustion in automobiles, busses and Metrolink rail are contributors to greenhouse gas emissions. Also, while fuel combustion is not present in electrified rail, propulsion electricity is also a source of greenhouse gas emissions given that Los Angeles Department of Water and Power imports coal generated electricity from out of state. Next, greenhouse gas emissions per-passenger-trip was reviewed comparing the impacts of a similar automobile trip to the different transit modes.

Philip Law, SCAG staff, asked when calculating the competing auto trip, if it is based on distance travelled or is travel time, congestion and speed considered? Mr. Hoehne responded that congestion was at first accounted for but the data became convoluted in the process and the data presented does not reflect any impact from congestion although that is noted in the report.

Kirk Schneider, Caltrans, asked about the assessment of two-passengers per automobile for transit park and ride users. Mr. Hoehne responded that the assumption is two passengers per vehicle but calculations for single occupancy automobiles are presented as dotted lines in the graphs showing the increased emissions of a single occupancy automobile trip. Mr. Schneider also noted that Metrolink is converting to Tier 4 locomotives which will affect current emissions data assumptions.

5.2 Metro Mobility on Demand (MOD) Sandbox Grant

Marla Westervelt, LACMTA Office of Extraordinary Innovation, reported on Metro's Mobility on Demand Sandbox Grant. Ms. Westervelt stated the grant explores a pilot program for a first and last mile delivery service agreement between Metro and Lyft. A Metro passenger at one of the participating pilot stations would be able to order a Lyft ride and a portion of the Lyft fare would be subsidized by Metro. She stated an analogous project is being conducted by Seattle's Sound Transit in an effort to provide additional research data. Ms. Westervelt stated the equity and access issues to consider in this effort is providing access for those in wheelchairs, how to enable the service for those without cell phones or without financial accounts.

It was noted the proposal includes an arrangement with Lyft to subcontract with a wheelchair accessible vehicle that will be dispatched through Lyft. Additionally, for those lacking financial accounts, Lyft will be integrated into the TAP system and a customer can enter their TAP card into the Lyft application or by phone. Ms. Westervelt also noted a phone in service can be used by those lacking a cell phone. The first phase will be 12-month planning process which will explore issues like equity and access as well as determining the appropriate performance measures and fares.

Wayne Wassell, LACMTA, asked if the 2 hour transfer would be available to those who take Lyft to access transit. Ms. Westervelt indicated that is one issue to be investigated during the process.

Philip Law, SCAG staff, asked about the amount of the subsidy. Ms. Westervelt stated an appropriate subsidy amount would need to be explored in the planning process.

5.3 OCTA Transit Master Plan

Gary Hewitt, OCTA, reported on OCTA's Master Plan. Mr. Hewitt reviewed the system analysis noting annual boardings decreased from 53 million in FY 12 to 43 million in FY 16 while boardings per revenue hour declined from 34 in FY 12 to 26.6 in FY 16. Farebox recovery was 24% in FY 12. It increased to 26% in FY 14 and is currently 24%. Weekday bus boardings were reviewed next as well as peak hour service frequency, population density, county income levels and employment density. Next, the Market Analysis was reviewed including transit travel patterns and factors correlated with increased transit use including per capita income, total low-income households in an area, employment density, total employment, approach volumes at intersections and intersection density or walkability. It was

noted there is potential opportunity to increase service along I-5 in South County. He reviewed key themes affecting ridership trends including changes in fare structure and service hours. It was further noted OCTA's response to recent ridership declines where service in lower productivity areas was allocated to those in higher productivity areas has been useful. Mr. Hewitt noted next steps include receiving input from OCTA Board and the Citizens Advisory Committee.

Kirk Schneider, Caltrans, stated one factor affecting ridership trends could be that many of the new post-recession jobs do not follow the peak hour ridership trends traditionally associated with transit. Mr. Hewitt noted that changes in the job market is an issue under discussion and there may be need to increase late night frequency to correspond to the needs of many service industry workers.

Steve Fox, SCAG staff, asked about recent on-board surveys. Mr. Hewitt stated an on-board survey is conducted every two years to gather information from riders. It was noted recent data indicates a shift in employment patterns as fewer riders are using the service to travel to work while others are working part time. Mr. Hewitt stated that a follow-up effort to a 2012 on-board survey indicated that some riders had moved out of the county.

5.4 GCTD Holiday Bus

Vanessa Rauschenberger, Gold Coast Transit District, reported on their Holiday Bus. Ms. Rauschenberger stated the district has a fleet of 56 busses that serves 4 million passengers in Ventura County including Oxnard, Ojai, Port Hueneme, Ventura and other parts of the county. It was further noted that one of the 40-foot busses was scheduled to be retired so as a staff building activity and seasonal passenger event the bus was decorated with lights and holiday decoration. The Holiday Bus was run on regular route schedules for three weeks in December 2016. Agency staff joined the bus in service and handed out candy canes to passengers. Facebook was used to allow passengers to post "sELFies" and other photos of themselves with the Holiday Bus. In all 700 passengers rode the bus during the holiday season. Ms. Rauschenberger noted several calls and emails were received from passengers who appreciated the concept.

Additionally, the Holiday Bus was present at community events including the FOOD Share Annual Holiday CAN-tree Collection and the local Holiday Parade. These efforts were found to be a great way to get staff and community connected and as a positive outreach for the agency.

5.5 Clean Cities Annual Report Survey

Marco Anderson, SCAG staff, reported on the Clean Cities Annual Report Survey. Mr. Anderson stated the Clean Cities Coalition is a Federal Department of Energy Program to which SCAG was originally designated in 1996. The coalition's mission is to reduce petroleum consumption in the United States. He stated it has both an environmental and fuel independence aspect. Additionally, the group reports to SCAG's Energy and Environment Committee. Mr. Anderson noted that in the past year the Plug-in Electric Vehicle Multi-Family Housing Implementation Strategy Study began which is funded by the California Energy Commission

(CEC). Additionally, the group will serve as a liaison to the CEC and California Public Utilities Commission (CUC) as well as communicating with various transit agencies in the region that are piloting, demonstrating and operating electric vehicles as well as hydrogen. The commission also sponsors the AltCar Expo in Santa Monica.

Mr. Anderson further noted the Annual Report consists of data collected from the coalitions and information submitted from participating members. It is estimated that based on data collected an equivalent of 82 million gallons have been reduced mostly through the use of alternative fuels as well as 74,528 tons of greenhouse gas emissions. Additionally, the program has developed competencies in grant applications and members cities submitting relevant grants are encouraged to contact Mr. Anderson regarding support. Additionally, there is a focus on electric vehicles, natural gas and hydrogen. Mr. Anderson noted the 2016 survey will be distributed soon and recipients are encouraged to submit data.

Joyce Rooney, Redondo Beach Transit, asked if the survey covers transit fleets or all municipal vehicles. Mr. Anderson noted the annual survey will be sent only to transit fleets.

5.6 Sustainability Planning Grant Program

Marco Anderson, SCAG staff, reported on SCAG's Sustainability Planning Grant Program. Mr. Anderson noted the grant program supports the principles and policies of the 2016 RTP/SCS and there has been a call for proposals approximately every three years. The project funding categories include Active Transportation, Integrated Land Use and Green Region Initiatives. He noted the 2013 call for proposals resulted in the submission of 76 projects totaling \$11 million. As a result SCAG was able to fund 70 projects for \$8.4 million. The 2016 call for projects received 139 applications totaling \$35.5 million in requested funding. Altogether 54 projects totaling \$9.6 million will be submitted to the Regional Council for approval February 2, 2017. Once approval is received SCAG staff will reach out to entities that are ready to move forward and start refining scopes.

5.7 Transit Asset Management Data Collection

Matt Gleason, SCAG staff, provided an update on Transit Asset Management Collection. It was noted by Mr. Gleason that the Federal Transit Administration (FTA) has issued the Transit Asset Management Final Rule (49 CFR 625) effective October 1, 2016 to implement the asset management provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21). Additionally, initial performance targets from agencies providing public transportation with Chapter 53 funds were due January 1, 2017. Consequently SCAG has 180 days to put together a regional target coordinated with the local targets. Further, as a part of the effort a series of letters were sent to agency chief executive officers, general managers and city managers asking them to identify the agency's accountable executive for asset management. Also, if the agency will be participating in the group participation plan, who will sponsor the group plan and the agency's initial asset management

performance targets for rolling stock, non-revenue vehicles, facilities and right of way. Mr. Gleason noted that it is hoped that the requested information can be received by February 28, 2017.

6.0 **STAFF UPDATE**

6.1 **FTA Triennial Reviews**

Philip Law, SCAG staff, provided an update on FTA Triennial Reviews. Mr. Law stated the FTA is conducting triennial reviews in the region. He noted several regional agencies are undergoing triennial reviews and site visits are planned for February 2017. Currently it is not known if the FTA has raised any issues requiring a response. It was requested that if member agencies receive issues related to SCAG processes during the reviews to contact himself or Matt Gleason so a response can be developed.

6.2 **2017 Agenda Look Ahead**

Matt Gleason, SCAG staff, announced that at the request of the committee Chair and Vice Chair three standing items will be part of future agendas; regulatory compliance, response to ridership declines and technology and mobility innovations.

ADJOURNMENT

The meeting adjourned at 12:10 p.m.

REPORT

DATE: March 29, 2017
TO: Regional Transit Technical Advisory Committee (RTTAC)
FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov
SUBJECT: Partnerships with Transportation Network Companies (TNCs)

DISCUSSION:

As part of its continuing discussions about technology and mobility innovations, the RTTAC has received presentations on pilot projects that operators in the region have initiated with TNCs. This includes the Blue at Night first/last mile service in Santa Monica, and Metro's recent Mobility-On-Demand (MOD) Sandbox Grant, which will fund a partnership with Lyft to provide first/last mile service to select Metro stations.

SCAG staff has prepared the following summary of recent or on-going pilot projects, where transit providers have partnered with TNCs to provide first/last mile service, supplement or replace fixed-route service, and/or provide on-demand paratransit service. The summary also includes projects where operators have experimented with microtransit or dynamically routed transit service.

Local and California pilots are listed first, followed by pilots from other states. Each pilot has a brief summary along with web links for further information.

Following the summary are two attachments with additional information regarding TNC partnerships:

- Attachment 1:** Dec. 5, 2016 Dear Colleague letter from USDOT Secretary Anthony Foxx re: Transportation Network Company Obligations
- Attachment 2:** Aug. 1, 2016 Metro research paper, "Partnerships with Technology Enabled Mobility Companies: Lessons Learned"

SUMMARY OF RECENT/ONGOING PILOT PROJECTS WITH TNCs

PROVIDING FIRST/LAST MILE SERVICE

Santa Monica, California – Big Blue Bus

Blue at Night

One-year pilot, on-demand service to/from the 17th Street/SMC Station that began Friday, June 17, 2016. Service runs every Friday and Saturday from 8pm to 3am. Each one-way trip (one origin and one destination) costs \$3, within the designated Santa Monica service area, as long as the trip begins or ends at the 17th Street/SMC Station. Supplemental charges may apply, such as \$3 for each additional stop within the designated Santa Monica service area or \$3 for more than 4 passengers (up to vehicle capacity).

<https://www.bigbluebus.com/Newsroom/News/Blue-at-Night-Your-Late-Night-Connection-to-Expo.aspx>

Los Angeles, California – Los Angeles County Metropolitan Transportation Authority (Metro)

In 2016, Metro received a \$1.35 million FTA Mobility-on-Demand (MOD) Sandbox grant for a two-region partnership with the car-sharing company, Lyft, in Los Angeles and Seattle. The project will explore the viability of first/last mile solutions for trips originating and ending at select transit stops. Customers can use the Lyft app or call a dispatcher phone number, providing equity to lower income individuals.

<http://thesource.metro.net/2017/01/06/oei-wins-1-3-million-to-expand-the-definition-of-transit-access/>

<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA%20MOD%20Project%20Description%20-%20LA%20County%20and%20Puget%20Sound.pdf>

Sacramento, California – Sacramento Regional Transit District (RT)

RT Station Link

Starting on Monday, October 3, 2016, RT will provide up to \$5 off Uber, Lyft or Yellow Cab for rides to or from one of RT's participating light rail stations. Offer ends March 31, 2017 or after the first 10,000 redemptions.

<https://www.sacrt.com/stationlink.stm>

Dublin/Pleasanton, California – Metropolitan Transportation Commission (MTC), Bay Area Rapid Transit (BART)

MTC is partnering with BART and Scoop Technologies to maximize the efficiency of BART's parking lots through carpooling. Starting Jan. 23, 2017, commuters who carpool to the Dublin/Pleasanton Station with the Scoop app will be guaranteed parking until 10 a.m. The app will verify that two or more people were in the car when it parked, and Scoop will coordinate with BART police to verify which vehicles belong to Scoop users.

BART received a \$358,000 MOD Sandbox grant, which will help expand the program to all BART stations with parking facilities.

<http://mtc.ca.gov/whats-happening/news/mtc-partners-bart-and-scoop-guarantee-parking-spots-carpoolers>

<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA%20MOD%20Project%20Description%20-%20BART.pdf>

Marin, California – Transportation Authority of Marin (TAM), Sonoma-Marín Area Rail Transit (SMART)

Details are still being worked out for the six-month, \$70,000 pilot funded by TAM. The pilot will subsidize LyftLine rides from a SMART station to a place of employment and back. TAM will subsidize up to \$5 of the cost; riders must pay the initial \$2 plus any cost beyond the \$5 subsidy. SMART is a new passenger rail service in Marin and Sonoma Counties that is anticipated to open in late spring 2017.

<http://www.marinij.com/general-news/20170219/marin-rail-commuters-to-be-offered-lyft-discounts>

<http://main.sonomamarintrain.org/>

Centennial, Colorado

Go Centennial

Go Centennial is a pilot program that connects Centennial, Colorado residents and businesses to and from RTD's Dry Creek Light Rail Station. For six-months, beginning August 17, the City of Centennial and the Denver South Transportation Management Association is offering free Lyft Line rides to and from the Dry Creek Station to people who live or work within the existing RTD Call-n-Ride service area. Lyft Line rides will be available for free Monday-Friday, 5:30 a.m. – 7 p.m.

<http://go.centennialco.gov/>

Altamonte Springs, Florida

The City is providing a 20% discount on all Uber trips that both begin and end in the city limits. As an added benefit to encourage increased SunRail ridership, all trips starting or ending at the Altamonte Springs SunRail station will receive a 25% discount.

<http://www.altamonte.org/index.aspx?NID=736>

<http://www.orlandosentinel.com/news/seminole/>

Pinellas County, Florida – Pinellas Suncoast Transit Authority (PSTA)

Direct Connect

Beginning in February 2016, PSTA partnered with Uber and United Taxi to provide access to the public transit network in two underserved areas for a six-month pilot. PSTA paid half the fare, up to \$3 per ride to and from one of two designated stops within each zone. Trips must begin or end at the designated stop, must be in the service zone, and must take place between 7 a.m. to 7 p.m. Monday through Saturday.

In January 2017, PSTA expanded Direct Connect countywide in eight zones, seven days a week, from 6am to 11pm. PSTA will subsidize \$5 per trip to or from a PSTA bus stop. The program is budgeted for \$100,000 for the first six months. Five companies are approved to provide the service: Uber, Lyft, United Taxi, Care Ride, and Wheelchair Transport. The services for disabled passengers will be funded by an FTA Mobility on Demand Sandbox grant.

<http://www.psta.net/directconnect/index.php>

<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA%20MOD%20Project%20Description%20-%20Pinellas%20Suncoast.pdf>

Summit, New Jersey

In a pilot to run from Oct. 3, 2016 to Mar. 31, 2017, the City of Summit will subsidize door-to-door uberX service to and from the Summit train station. The program will initially be limited to the first 100 residents who apply, but may be expanded if it is successful.

<https://www.cityofsummit.org/CivicSend/ViewMessage/message?id=25285>

<https://www.cityofsummit.org/FormCenter/Parking-Services-8/Summit-Ridesharing-Program-52>

SUPPLEMENTING/REPLACING FIXED-ROUTE SERVICE

San Clemente, California

In order to supplement the closing of the 191 and 193 bus routes, the City of San Clemente approved a contract with Lyft on Oct. 4, 2016, to operate a rideshare service in town. Riders must download Lyft's mobile app onto their smartphone and order a ride, using a valid form of electronic payment. If a rider's starting point and destination are near a former Route 191 or 193 bus stop in San Clemente, the rider will pay \$2, and the rest of Lyft's normal fare will be subsidized up to \$9. For rides costing more than \$11, it's Lyft fare, minus \$9. Hours of operation are expected to be from 6 a.m.-8 p.m. every day. Uber, Yellow Cab of Greater Orange County and Via had also bid on the city's project. Funding is provided by an OCTA grant, through an agreement with the City for two years.

<http://www.sanclementetimes.com/lyft-san-clemente-rideshare-program-chosen-pick-closing-bus-routes/>

<http://www.ocregister.com/articles/octa-731232-clemente-san.html>

Dublin, California – Livermore Amador Valley Transit Authority (LAVTA)

GoDublin

Pilot project provides subsidized, shared-ride TNC service for trips that start and end within Dublin, including two BART stations. Service would be provided by uberPOOL, Lyft Line, or DeSoto Share (taxi cab). LAVTA will pay 50% of the fare, up to \$5, for passengers travelling within the project area, or to/from BART to the project area. The pilot will run to July 2017, or until funds are exhausted.

<http://www.wheelsbus.com/godublin/>

Pinellas County, Florida – Pinellas Suncoast Transit Authority (PSTA)

TD Late Shift

The one-year pilot program, called TD Late Shift, is the latest collaboration between PSTA and Uber. The \$300,000 grant-funded pilot demonstration, awarded by the Commission for the Transportation Disadvantaged (TD), is aimed at helping low-income, unemployed residents overcome transportation barriers to employment. With this new program, riders can request up to 23 free rides per month between the hours of 9 p.m. and 6 a.m. Rides must be to a place of employment or residence.

<http://www.psta.net/press/07-2016/index.php>

<http://www.citylab.com/commute/2016/06/pinellas-county-uber-dial-a-ride/487568/>

PROVIDING ON-DEMAND PARATRANSIT SERVICE

Centennial, Colorado

Go Centennial Access

For those with limited mobility, Go Centennial Access allows users to take a free ride in an accessible vehicle with a ramp, provided by Via, anywhere within RTD's existing Dry Creek Call-n-Ride service area. The hours are the same as Go Centennial, 5:30 a.m. to 7 p.m., Monday through Friday.

<http://go.centennialco.gov/access>

<http://www.centennialco.gov/Town-Hall/news-releases.aspx?a9fbbcf1e2fd43a9b16b2bb5f6c3ac98blogPostId=d12388787524450facb511585be1778c>

<http://www.citylab.com/commute/2016/08/centennial-lyft-transit-partnership/495080/>

Tampa, Florida – Hillsborough Area Transit Authority (HART)

HARTPlus Customer Choice Voucher Pilot Program

HARTPlus is paratransit service providing transportation for people with disabilities. Utilizing a public/private partnership with Yellow Cab of Tampa, the Customer Choice Pilot Program provides HARTPlus riders with 24 hours a day/7 days a week service. Starting January 2016, HARTPlus riders are able to get same day service for the same \$4.00 fare. HART covers up to \$16 of the trip, after the initial \$4.00 fare.

<http://gohart.blogspot.com/2015/12/hart-and-yellow-cab-of-tampa-to-partner.html>

<http://www.bizjournals.com/tampabay/news/2016/08/04/harts-partnership-with-yellow-cab-answers-pstas.html?ana=tw>

Boston, Massachusetts – Massachusetts Bay Transportation Authority (MBTA)

THE RIDE

Launched on Sep. 19, 2016, this is a one-year pilot program with Uber and Lyft to provide on-demand paratransit service in conjunction with existing RIDE services. Riders pay the first \$2 of a trip, MBTA subsidizes the next \$13, and the riders pay the remaining amount. The benefits include reduced fares, lower wait times, same-day booking, faster trips, and no need to share rides. Rides can be booked online, or by calling (Lyft). For customers without access to a smartphone, Uber will provide a limited number of smartphones for use on a

limited basis to book trips. MBTA announced in February 2017 that 10,000 rides had been given so far.

http://www.mbta.com/riding_the_t/accessible_services/default.asp?id=6442456760

http://www.mbta.com/about_the_mbta/news_events/?id=6442456779&month=&year=

<https://www.boston.com/news/local-news/2017/02/28/mbta-to-expand-use-of-uber-lyft-for-disabled-riders>

Washington, DC – Washington Metropolitan Area Transportation Authority (WMATA)

Abilities-Ride

WMATA issued an RFP on Sep. 30, 2016 for on-demand paratransit service. Customers will pay the first \$5, WMATA will subsidize the next \$15, and customers will pay any additional cost. Service will be limited to Maryland customers and four one-way trips per day. Pilot was slated to begin in March 2017, however the implementation was delayed at the time this report was prepared.

https://www.wmata.com/upload/090816_3BAilitiesRidePilotTOPOST.pdf

MICROTRANSIT/DYNAMICALLY ROUTED TRANSIT

San Jose, California – Santa Clara Valley Transportation Authority (VTA)

FLEX

FLEX was a six-month dynamic transit pilot program that ended on July 1, 2016. FLEX tested the viability of on-demand, shared-ride public transit service in the North San Jose area surrounding the Tasman Light Rail Station. It was operated by VTA on Mondays through Fridays from 5:30am to 8:30pm, with single ride fares at \$3 peak/\$2 off-peak.

<http://www.vta.org/FLEX>

Alameda County, California – Alameda County Transit (AC Transit)

Flex

This one-year pilot was announced on July 18, 2016. AC Transit Flex provides on-demand transit weekdays from 6am to 8pm at the same fare as other AC Transit local bus service, \$2.10 for adults. The service area is limited to the area of Line 275 in Newark, and the northern portion of Line 48 in Castro Valley, and rides are picked up/dropped off at selected bus stops. Rides can be booked online (via smart phone, tablet, computer) or by calling. Recurring trips can be booked up to three months in advance. Riders can board without reservation at one of the BART stations in the service area.

<http://www.actransit.org/flex/>

<http://www.actransit.org/2016/07/18/ac-transit-launches-on-demand-flex-bus-service/>

Kansas City, Missouri – Kansas City Area Transportation Authority (KCATA)

RideKC

Customers used the Bridj app to select where they were and where they wanted to go, and the app produced a nearby rally point where riders meet the vehicle. The app-based service area included downtown Kansas City, River Market, Hospital Hill, Crown Center, portions of Midtown, University of Kansas Medical Center and the Historic 18th and Vine Jazz district. Monday-Friday, 6:30 to 9:30 a.m. and 3:30 to 6:30 p.m. The introductory fare for the pilot program was \$1.50, the same as a fare for the local RideKC bus service. Trips were dynamically routed using Bridj app but service was provided via KCATA branded vehicles and KCATA drivers. \$1.3 million total cost.

This one-year pilot ended on March 3, 2017. Just 1,480 people rode on a Bridj van in this period. Lessons learned are discussed in this article, <https://www.wired.com/2017/03/failed-experiment-still-future-public-transit/>:

“Research suggests Bridj faced two problems in Missouri: Marketing and geography. A survey conducted six months into the experiment found that 40 percent of the people being serviced by Bridj didn’t know about it. And among those who signed up, most didn’t use the service regularly because it didn’t go where they wanted or operate when they most needed it, like late at night.

The data also revealed that Bridj reached an unusual audience. “The demographics of the riders for Bridj are different from the riders for our other services,” says Auten. He means younger and richer: 55 percent of riders were between 19 and 35, and more than 80 percent earned more than the local median income of \$46,000.”

<http://ridekc.org/rider-guide/bridj>

<http://www.citylab.com/cityfixer/2016/02/kansas-city-bridj-microtransit/462615/>

West Salem, Oregon – Salem-Keizer Transit (Cherriots)

West Salem Connector

The West Salem Connector is a flexible, dynamically routed transit service that must be booked online at book.cherriots.org or by calling 503-361-7551. The bus takes passengers between Connector points within the service zone, or to connect to a Cherriots bus route going downtown (at specified location). Fares are the same as for the Cherriots bus service, \$1.60 one way and \$3.25 day pass. Connector operates from 6am to 9pm. Trips can be booked up anywhere between 30 minutes and two weeks in advance, and recurring trips can be booked for up to three months. The pilot was initiated in June 2015, and in June 2016 was extended until May 2017.

<http://www.cherriots.org/en/connector>

Denver, Colorado – Denver Rapid Transit District (RTD)

Call-n-Ride

Call-n-Ride provides personalized bus service that can be arranged two hours to two weeks in advance, by phone or on-line. Cash fare is \$2.60 one-way, within one Call-n-Ride area. Service is provided within 23 specified zones and will connect travelers to bus routes, Park-n-Rides, rail stations, or to work, school, and appointments. Recurring trips at the same time and location can be reserved via subscription service. Flex routes offer a reservation-free ride during morning and evening rush hours at scheduled stops and times.

<http://www.rtd-denver.com/callNRide.shtml>

Boston, Massachusetts – Massachusetts Bay Transportation Authority (MBTA)

MBTA is considering an unsolicited proposal from Bridj to provide late-night transit service, to cover in part the weekend late-night service that MBTA cancelled in March 2016.

<http://www.thetransitwire.com/2016/11/02/mbta-considers-bridj-for-late-night-service/>

http://www.mbta.com/uploadedfiles/About_the_T/Board_Meetings/H.%20%20FINAL%2011_15%20am%20Innovation%20Proposals%20-%20BRIDJ%2010%2028%2016_vF-POSTING.pdf



THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

December 5, 2016

Dear Colleague:

The U.S. Department of Transportation encourages innovation and welcomes the interest of Transportation Network Companies (TNCs) and other private entities in meeting the travel needs of riders through partnerships with transit agencies. I applaud the transit industry for embracing the use of innovations in technology and new mobility concepts to create a more traveler-centric mobility environment that empowers travelers to make smart mobility decisions that address their individual needs, while contributing to desirable system outcomes. With that in mind, I am writing to remind you of your obligation to ensure equity and access as you partner with TNCs and continue to develop relationships with other private entities that offer the potential to provide improved service at a lower cost.

At the Department, we believe it is important to balance technological innovation with the basic civil rights principles of equity and accessibility inherent in the provision of transit service. There are basic Federal requirements that apply to transit service, including partnerships with TNCs and service operated under contract or other arrangement or relationship with private entities. Some of these are conditions of eligibility for Federal assistance (Title VI of the Civil Rights Act of 1964), while others apply independently regardless of whether Federal funding is involved (the Americans with Disabilities Act (ADA) of 1990).

For example, TNC services typically rely almost exclusively on the use of a smartphone linked to a credit or debit card to arrange for service, which presents a significant barrier to lower income and limited English proficiency individuals who do not own a smartphone and/or who do not have a credit card or bank account. Given that communities of color are disproportionately low-income, each public transit agency has an obligation under Title VI to ensure that alternative methods of both payment and reservations are available. Most TNCs currently lack accessible vehicles for persons with disabilities, including those who use wheelchairs. When your agency enters into a covered partnership with a TNC, however, you must ensure that your service is accessible to and usable by persons along the full spectrum of disabilities, including both physical and intellectual disabilities.

Unlike many other requirements, the transportation requirements under the ADA apply regardless of whether Federal funding is involved. The specific provisions of the Department's ADA regulations vary according to type of service provided, such as whether it is fixed route or demand-responsive. Currently the majority of partnerships with TNCs involve demand-responsive service. As such, you should be aware of two important points.

First, under DOT ADA Regulations (49 C.F.R. section 37.77), public entities operating a demand-responsive service must either acquire accessible vehicles or otherwise ensure that such services provide equivalent service to persons with disabilities, including those who use wheelchairs and/or have intellectual disabilities.

The need for your transit agency to provide wheelchair-accessible vehicles could be met in a number of ways, such as requiring the TNC to provide a sufficient quantity of vehicles as a condition of entering into an agreement with the transit agency; entering into a separate agreement with another entity that is capable of providing accessible vehicles; or relying on accessible vehicles that are already part of the paratransit fleet.

Second, service is considered equivalent when persons with disabilities, including wheelchair users, are provided with the same level of service according to the following criteria (see 49 C.F.R. section 37.77(c)):

- 1) Response time;
- 2) Fares;
- 3) Geographic area of service;
- 4) Hours and days of service;
- 5) Restrictions or priorities based on trip purpose;
- 6) Availability of information and reservations capability; and
- 7) Any constraints on capacity or service availability.

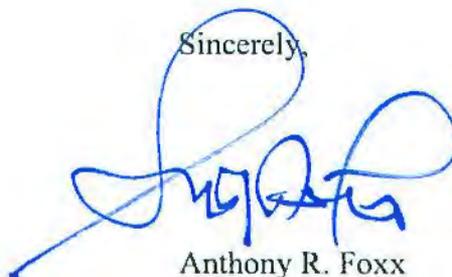
Some transit agencies have explored integrating TNCs into their paratransit service. The Department believes that TNCs have the potential to improve the provision of paratransit service, with the possibility of lowering costs while improving service to paratransit-eligible riders. Yet, it is important to emphasize that any such service improvements must benefit all paratransit riders. It would not be appropriate, for example, to offer real-time service to ambulatory paratransit riders, while leaving wheelchair users with next-day service.

Finally, it is important to ensure that TNC personnel are highly trained in professional and respectful interactions with persons with disabilities. All personnel should be familiar with requirements concerning the accommodation of service animals, for example, and personnel operating accessible vehicles must know how to operate boarding and securement equipment. Where TNCs are used to provide paratransit service, personnel should be familiar with the paratransit service criteria and the requirement to provide origin-to-destination service.

As long as all passengers are receiving service according to the service criteria or in the same manner, there is nothing to prevent transit agencies from engaging the services of TNCs—including for provision of paratransit services.

Once again, I commend the transit industry for embracing technology and innovation as a means to expand and improve the provision of transit services. As we embark on a new era in personal mobility, together we will ensure that our transportation system continues to provide effective mobility for all.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Anthony R. Foxx', is written over a large, stylized blue loop that starts above the word 'Sincerely' and extends downwards and to the left.

Anthony R. Foxx

1 Partnerships with Technology Enabled Mobility Companies: Lessons Learned

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1 **ABSTRACT**

2 The rise and proliferation of the on-demand economy is creating a new mobility marketplace. This
3 research explores how these new options can be synergistic with public transit models and details the
4 experiences of two transit operators who have entered into service delivery partnerships with a
5 transportation network company and with a micro-transit operator. Based on a series of interviews and
6 experiences of these two public agencies, this research provides a set of key takeaways and
7 recommendations for transit operators exploring the potential of partnering with new mobility services

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1 INTRODUCTION

2 The rise and proliferation of the on-demand economy is creating a new mobility marketplace. Where
3 metropolitan regions once had limited options, there is now a growing array of services. In addition to the
4 traditional transportation modes (such as bus and rail provided by public agencies), metropolitan residents
5 can now choose from bikeshare, Transportation Network Companies (TNCs, i.e. Uber or Lyft), carshare
6 (i.e. Zipcar), or micro-transit (Bridj or Via). It is expected that this diverse marketplace will grow and new
7 technological options will continue to become available.

8 This growing marketplace is relatively disconnected from traditional mobility providers, creating the
9 potential to exacerbate social inequities. A growing body of research has begun to indicate that the public
10 sector has a role in ensuring that the benefits of this growing menu of options are both well integrated into
11 regional transportation networks and accessible to all customers.

12 While bikesharing and carsharing platforms and partnerships have proliferated across the United States in
13 the last decade, TNCs and micro-transit are newcomers to the mobility marketplace. Informed both by the
14 literature and the growing popularity of these options, public transit agencies have begun exploring
15 service delivery partnerships with these services. This research explores these newly emerging
16 partnerships to provide a set of lessons learned and recommendations for transit agencies seeking to enter
17 into a mutually beneficial relationship with a TNC or a micro-transit company.

18 19 METHODOLOGY

20 This report first defines TNCs and micro-transit. It then includes a literature review of the growing body
21 of research in this area and ancillary areas. Following, it provides an overview of a number of
22 partnerships that have piloted at agencies across the United States, with an in-depth case study on a
23 partnership between a TNC and a transit agency and a partnership between a micro-transit operator and a
24 transit agency. This research concludes with a set of lessons learned and recommendations for transit
25 agencies interested in partnering with these types of companies.

26 This research was conducted through a series of interviews with key implementers at participating transit
27 agencies. It was also informed by discussions with TNC policy advisors, micro-transit operators, and a
28 variety of experts in the field.

29 30 TECHNOLOGY ENABLED MOBILITY PROVIDERS

31 While there are numerous technology-enabled mobility providers entering the market, this report focuses
32 on transportation network companies (TNCs) and micro-transit, as these are the two newcomers to the
33 shared mobility marketplace. Each can be described as follows:

34 35 **Transportation Network Companies**

36 According to the California Public Utilities Commission (CPUC), TNCs are companies that “provide
37 prearranged transportation services for compensation using an online enabled application or platform
38 (such as smartphone applications) to connect drivers using their personal vehicles with passengers (1).”
39 Well known TNCs include Uber and Lyft, but there is a growing contingent of competitors both in the
40 United States and abroad. These services offer on-demand services with a variety of options. Using their
41 smart phones, customers can select the size vehicle they would like to pick them up. The driver, rather
42 than the TNC software company, generally owns vehicles.

43 Customers can also select whether they would like to share their ride with other customers. The ability for
44 customers to choose to share their ride creates an important distinction between TNCs and the more
45 traditional taxi model. The Shared Use Mobility Center (SUMC) defines this as “ride-splitting,” as this
46 feature allows customers to split the cost of the ride (2). When a user chooses to share a ride with other
47 customers, the software uses proprietary algorithms to find other riders who are going in a similar
48 direction and prices the ride based on the likelihood that they will be able to identify such a rider.

1 Lyft reported 2.8 million unique riders in May 2016 across their various markets, with a 25 percent
 2 increase in year-over-year riders per active passenger (3). It is projected that Lyft will match 152 million
 3 rides by years end. Lyft currently operates in select cities in the U.S., Indonesia, Singapore, the
 4 Philippines, Malaysia, Thailand and Vietnam.

5 In mid-July, Uber announced that it had given a total of two billion rides over its seven year lifespan; the
 6 company had reached its one billion rides landmark just six months prior (4). Uber is currently active in
 7 76 countries (5). For a sense of scale, in 2015, transit providers in the United States provided a collective
 8 10.6 billion rides (6). These numbers demonstrate that these companies are growing at an exponential
 9 rate. While TNCs are providing just a fraction of transit ridership, their numbers are significant.

11 **Micro-transit**

12 Micro-transit can be characterized as privately operated, dynamically routed or crowd sourced routed
 13 transit service, such as Bridj, Via, Chariot, or Loup. It shares a strong resemblance to traditional publicly
 14 operated demand responsive transit. It diverges from the traditional model in its integration of technology
 15 and ability to operate privately. Each provider operates a unique model. For example, Bridj selects
 16 heavily congested geographic regions and allows customers to request a shared ride on demand (when the
 17 customer is going in the direction of demand) and a passenger van picks up the customer within a short
 18 walk where they are and drops them at their final destination. On the other hand, Chariot crowd-sources
 19 in their operating markets to determine what commuting routes are currently being under served by
 20 traditional public sector transit. It then provides a fixed route commuter service based on the crowd
 21 sourced information. A variety of other models exist.

23 **LITERATURE REVIEW**

24 There is a growing body of research exploring the potential benefits and synergies of public transit
 25 agencies partnering with technology enabled mobility companies. Research shows that technology
 26 enabled mobility options can augment and improve existing transit service, reduce car dependency, and
 27 improve overall mobility.

28 In spring 2016, the American Public Transportation Association (APTA) and the Shared Use Mobility
 29 Center (SUMC) published a paper that found that shared modes complement public transit. SUMC found
 30 that “ridesourcing services are most frequently used for social trips between 10 PM and 4 AM, times
 31 when public transit runs infrequently or is not available.” This finding suggests that transit and
 32 technology enabled mobility companies are not necessarily in competition with one another, and there
 33 may be mobility aspects that are better served by one service than another. For example, mass transit
 34 excels at effectively moving a large quantity of people efficiently, such as during commuting times.
 35 Whereas, technology enabled mobility options may provide a cost-effective and more efficient late night
 36 service.

37 SUMC’s report followed a paper published in early 2016 by the Transportation Research Board (TRB)
 38 (7). TRB found that new, innovative mobility services are expanding travel choices and are being widely
 39 embraced by millions of travelers. TRB recommended that, “policy makers and regulators should seek to
 40 integrate the features of TNCs and other innovative shared mobility services into existing transportation
 41 systems and services in ways that leverage the new services’ strengths and features.”

42 In 2014, Berkeley’s Transportation Sustainability Research Center published a report that found “a
 43 substantial portion of sampled ridesourcing trips are spatially and temporally not well served by public
 44 transit, suggesting a complementary relationship with transit, at least for some trips.” It also found that,
 45 “ridesourcing users also appear to be less likely to own an automobile (8).”

46 In addition to service synergies, researchers have found that there is a role for policy makers to ensure
 47 public benefit. TRB found that without public sector intervention, TNCs could exacerbate the “digital
 48 divide,” which is the divide between those who have access to technologies like smart phones and have
 49 the digital literacy to capitalize on these services, and those who do not. Similarly, SUMC recommended

1 that, “public entities should identify opportunities to engage with [technology enabled mobility
2 companies] to ensure that benefits are widely and equitably shared (9).” Through thoughtful partnerships,
3 these services could enhance mobility for low-income and older adults.

4 In May 2016, the Pew Research Center released a study that evaluated the rise of new on-demand
5 services, including TNCs. Pew’s study found that TNC users generally capitalize on the larger, wider
6 range of transportation options, reducing their reliance on personal vehicle ownership (10).
7 Pew’s study also found that 26 percent of survey respondents that made over \$75,000 had used TNC
8 services before, whereas only 10 percent of those who make less than \$30,000 had used the service. This
9 finding suggests that without governmental intervention, there may be a continued bifurcation based on
10 income level for those who can and those who cannot access TNCs as a mobility service.

11 In February 2016, the Eno Center for Transportation (Eno) released a paper titled “Emerging Technology
12 Trends in Transportation (11).” In this paper, Eno found that the federal government has a role in
13 facilitating the creation of partnerships between the public and private sectors to provide innovative
14 mobility solutions and in ensuring equitable access to economically disadvantaged communities.
15 While there are a number of potential synergies between shared mobility and traditional transit, data also
16 suggest that there may be barriers to partnerships between transit agencies and shared mobility providers.
17 For example, to access existing TNC and micro-transit services, customers must have a credit or debit
18 card. As of 2013, the Federal Deposit Insurance Corporation (FDIC) calculated that that 7.7 percent of
19 Americans were unbanked and 20 percent were underbanked (12). “Unbanked” means that a person does
20 not have access to bank accounts at all, whereas “underbanked” means that they have bank accounts, but
21 rely on alternative financial providers, such as cashier’s checks or pawn shops, in order to meet some of
22 their banking needs.

23 Customers must also have access to smart phones and data plans to access these services. On a national
24 level, access to smart phones is growing. According to a Pew Research Study, as of April 2015, 64
25 percent of American adults owned smart phones (13). However, that level of smart phone penetration
26 may not be representative of a variety of transit customers. For example, Los Angeles County
27 Metropolitan Transportation Authority (LA Metro) surveyed their customers in spring 2015 and found
28 that only 47 percent of rail customers and 38 percent of bus customers have access to smart phones, and
29 overall mobile phone access in Los Angeles is increasing (14).

30 Research also indicates that for some customers, a smart phone may be the only device available to them
31 that can access the internet. According to a nationwide Pew Institute report, 13 percent of households with
32 low incomes (defined as below \$30,000) are smartphone dependent, meaning that a smartphone is their
33 only viable means of internet access (15). Research suggests that the cost of data plans and wireless data
34 may be prohibitively expensive for low-income populations who largely make up LA Metro’s ridership
35 base. Pew’s survey found that “seven percent of Americans own a smartphone but have neither traditional
36 broadband service at home, nor easily available alternatives for going online other than their cellphone
37 (15).”

38 The findings also revealed that customers frequently are either not able to pay their smartphone bill or
39 max-out on available data. Based on the data from Pew, it is likely that there is a portion of transit
40 customers that have experienced unreliable access to smartphone data for a variety of reasons.

41 Thought leaders and policy makers have also been exploring the benefits and challenges associated with
42 technology enabled mobility companies with full vehicle automation just on the horizon. As fully
43 autonomous vehicles reach the market, researchers have developed a variety of potential scenarios for
44 how vehicle automation may penetrate the market. It is possible that policies and strategic partnerships
45 could incorporate technology enabled mobility and vehicle automation onto the public mobility market,
46 optimizing the use of resources and assets, increasing public mobility, and potentially cutting down on
47 greenhouse gas emissions (GHG). However, without strategic partnerships, it is possible that autonomous

1 vehicles may replace personal vehicles, which may lead to an increase in national and local vehicle-miles
 2 travelled, increased congestion, and an increase in GHG. Policy makers have a role in incentivizing the
 3 whichever option they prefer, and to be most effective that will likely have to occur prior to full vehicle
 4 automation through partnerships with technology enabled mobility companies.

5 This body of literature continues to grow with many current research projects underway. Research entities
 6 including TransitCenter, Transportation for America, Eno, the National Research Defense Council, the
 7 Shared Use Mobility Center, and the Berkeley Transportation Sustainability Research Center currently
 8 have related research projects on-going that are expected to be released sometime within the year.

9 10 **EXPERIENCES AT TRANSIT OPERATORS**

11 While there have been a growing number of transit agencies entering into marketing relationships with
 12 TNCs or other technology enabled mobility companies, few agencies have entered into service delivery
 13 relationships. There are some transit agencies experimenting with dynamically routed micro-transit,
 14 including (and not limited to) the Kansas City Area Transportation Authority (KCATA), the Santa Clara
 15 Valley Transportation Authority, Salem-Keizer Transit, and the Houston Metropolitan Transit Authority.
 16 The next sections are the following:

- 17 1. An overview of some of the agencies that have entered into marketing arrangements with
- 18 TNCs,
- 19 2. A case study of a direct service delivery partnership with a TNC and a transit agency, and
- 20 3. Insights from an agency that has partnered with a micro-transit provider (Bridj) to provide
- 21 transit service.

22 23 **Marketing Partnerships**

24 The majority of partnerships that have been forged between transit agencies and TNCs have been
 25 temporary marketing agreements. For example, in May 2016 LA Metro's Office of Extraordinary
 26 Innovation brokered a marketing partnership with Uber featuring the opening of the Expo Line extension.
 27 In this partnership, LA Metro and Uber offered co-branded marketing and Uber subsidized first mile and
 28 last mile pool rides at up to \$5 to the newly opened stations for a weekend. The marketing partnership
 29 lasted for two weeks.

30 Agencies across the country have entered into similar partnerships. Metropolitan Atlanta Rapid Transit
 31 Authority and Dallas Area Rapid Transit both entered into temporary marketing partnerships with Uber in
 32 which no money changed hands. In these partnerships, the agencies and the participating TNC had a co-
 33 branded marketing campaign. The Southeastern Pennsylvania Transportation Authority (SEPTA) is
 34 currently running a marketing partnership with Uber where Uber is discounting first mile and last mile
 35 rides from selected transit stops, with up to \$10 per discount. As a result of Uber paying for the discounts
 36 during this pilot, no money has changed hands between SEPTA and Uber.

37 Most recently, San Diego's Metropolitan Transit System entered into a marketing agreement with Uber in
 38 conjunction with Comic-Con International in which Uber provided a one-time \$5 discount to one of 20
 39 bus or trolley stations in the city.

40 41 **TNCs as Service Delivery**

42 While the majority of partnerships have been marketing agreements, as a result of emerging research and
 43 the success of the existing marketing partnerships, many transit agencies are looking into ways to develop
 44 mutually beneficial service delivery partnerships with TNCs. While a number of agencies have actively
 45 solicited partnerships with TNCs, only one agency (at time of writing) was identified as directly
 46 subsidizing TNC service operation.

1 Pinellas Suncoast Transit Authority (PSTA), serving the St. Petersburg region of Pinellas County in
 2 Florida, is the first transit operator in the country to execute a service delivery partnership with a TNC.
 3 PSTA serves 14.9 million customers a year with an annual operating budget of \$66.66 million (16). The
 4 operator serves 40 bus routes with 210 vehicles.

5 In February 2016, PSTA announced that it was partnering with Uber, United Taxi, and Care Ride, a van
 6 option for individuals with disabilities (including individuals in wheelchairs). The partnership aimed to
 7 provide an innovative solution to the region's first mile and last mile access to the rapid transit network.
 8 The pilot demonstration was deployed in a zone that was previously under-served by transit options (17).
 9 Within the defined service area, PSTA subsidizes rides that originate or end at the designated transit
 10 stops. The customer's ride is subsidized at 50 percent of the cost, up to a total of \$3 (18). To use the
 11 service, customers are asked to first self-select Uber, United Taxi, or CareRide. If the customer selects
 12 Uber, they are asked to use the Uber smartphone application and select the PSTA option to request a ride.
 13 If the customer selects United Taxi they have the option of calling or using an app. While Uber only
 14 accepts credit card or debit card as payment, United Taxi and the accessible van service accept both credit
 15 card and cash. At the end of each payment cycle PSTA is invoiced for their portion of the fare.
 16 (According to a PSTA spokesman, they have not yet been invoiced.)

17 Following the launch of their initial pilot, PSTA was awarded \$300,000 from the Florida Department of
 18 Transportation to provide free late night ride service via Uber for low-income customers. The service will
 19 be available to customers who earn 150 percent or less of the federal poverty level. For a single person,
 20 incomes of less than \$17,655 qualify; \$36,375 for a family of four. When launched, the new service will
 21 provide qualifying customers 23 free rides per month for qualifying trips from Uber or United Taxi from
 22 9 PM to 6 PM from any starting point and end point (19).

24 *Regulatory Hurdles*

25 Florida's regulatory framework and political culture provides significant flexibility in piloting innovative
 26 mobility partnerships For example, PSTA has flexibility on its local level procurement rules and operates
 27 for a constituency that brings forward few legal battles. As such, PSTA was able to roll out this
 28 partnership through a sole-source pilot program, complying with federal level pilot regulations. PSTA
 29 kept an open door policy with FTA, who was supportive in the process. Through providing options for the
 30 unbanked and populations without smartphone access, PSTA assuaged equity concerns.
 31 PSTA was cognizant of ensuring accessible, ADA compliant services during the crafting of the
 32 partnership. This is illuminated by the presence of a separate contract that works in parallel for an
 33 accessible van service for those that cannot be accommodated in a passenger sedan. For all services
 34 included in the pilot, PSTA provides an estimated 20-minute wait, but the services may arrive sooner.
 35 There has not yet been discussion of a fare equity analysis for this partnership. At the federal level, the
 36 primary consideration was whether the geographic location was equitable.

38 *Lessons Learned*

39 In terms of developing the partnership, a representative at PSTA noted that one of the key components of
 40 their success has been predicated on maintaining a good relationship with Uber. As of writing, PSTA
 41 ridership had continued to grow since the launch of the pilot in February 2016, and PSTA has credited
 42 that growth in part to Uber's own outreach efforts.

43 The PSTA representative commented that the crux of developing an effective relationship with a TNC is
 44 recognizing that they are technology and marketing companies, not transportation companies. Whereas
 45 transit agencies tend to excel in providing transportation, they are generally not as proficient in
 46 technological expansion and marketing prowess. As such, through partnerships, there is the potential to
 47 leverage each organization's skillsets.

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Micro-transit as Service Delivery

The Kansas City Area Transportation Authority (KCATA) is a bi-state agency in charge of planning, construction, owning, and operating passenger transportation systems and facilities within the seven-county Kansas City metropolitan area. KCATA operates bus, rapid transit, demand responsive routes, and para-transit.

In March 2016, KCATA launched a demand-responsive micro-transit service with Bridj called Ride KC: Bridj. Bridj currently operates in Boston, Washington, D.C, and Kansas City. Bridj is privately operated and funded in both Boston and Washington, D.C. Kansas City is Bridj’s first public-private partnership with a transit operator. Bridj uses data points and a proprietary algorithm to determine how to route riders to their destination within a specified geographic region and direction.

This new service provides a new mobility option to downtown Kansas City, Hospital Hill, Crown Center, and a portion of Midtown, University of Kansas Medical Center, and the Historic 18th and Vine Jazz district. Service is available Monday through Friday from 6 AM- 10AM and from 3 PM- 7 PM. The fare for the pilot program is \$1.50 (the same cost of the fixed route bus service). In conjunction with this pilot, Bridj is also running a promotion that allows a customer to apply a promotional code to receive the first 10 rides free. Ride KC: Bridj also features free Wi-Fi, a guaranteed seat (there are 14 seats per vehicle), no transfers within the zone, and fewer stops than a high capacity vehicle (20).

The yearlong pilot is being paid for with local funds. The cost to KCATA is \$25 per revenue hour per vehicle. For comparison, KCATA operates para-transit service at about \$40 per revenue hour. While there are no contractual performance measures to evaluate the program, Bridj has an inherent incentive to provide the best possible service and to invest in proper marketing in order to maximize profits.

Labor and Equity

When KCATA initially met with the Amalgamated Transit Union (ATU) to negotiate terms of a partnership with Bridj, there was hesitation. ATU expressed concern that a privately owned service had the potential to negatively affect the ridership of the traditional KCATA service. Additionally, during negotiation there was a learning curve for both ATU and KCATA in terms of developing a contract within an entirely different service model. Ultimately, KCATA and ATU were able to develop a mutually agreed upon contract and the new service is fully operated by KCATA employees and union members.

In order to access Bridj, customers must have both a credit card to pay for the service, and a smart phone with a data plan to dispatch the service. Based on the experimental nature of this pilot, both the Federal Transit Administration (FTA) and KCATA agreed that demonstrating a proof of concept should come before solving for these challenges. However, in selecting the geographic region included, equity played a role.

It should also be noted that not all of the vehicles used for this pilot are accessible for individuals with disabilities, including wheelchairs. Within the fleet, there are two vehicles that can carry individuals in wheelchairs that a customer can select to be dispatched, providing similar levels of service.

As this is a fairly new service, ridership is still growing, but low. Upon launch, ridership was about 3-4 riders a day. Recently there has been a marketing push and ridership has reached between 10-15 riders per day. Ridership is expected to continue to grow as customers learn about the service and how to use the service.

Lessons Learned

1 The development of KCATA’s partnership with Bridj highlighted the necessity to begin the conversation
 2 with labor as early as possible, potentially even before a conversation is initiated with a private sector
 3 partner. Throughout the industry, there is concern that the dawn of technology enabled mobility
 4 companies inherently operate outside of the guise of the labor union. The partnership between KCATA
 5 and Bridj demonstrates that labor unions can and do play a crucial role in ensuring successful service
 6 delivery with these innovative mobility options.

7 KCATA’s experience also unveiled that when introducing a new type of service delivery, there is an
 8 uncertainty for both management as well as labor unions in terms of how to best construct a mutually
 9 beneficial contract. Due to this uncertainty, the contract negotiations for this service took longer than the
 10 time that was originally budgeted. Ultimately, KCATA and ATU were able to successfully reach a
 11 mutually agreed upon contract, but there was a learning curve for each entity in determining what that
 12 contract should look like. This suggests that there may be benefit to allowing a longer than average
 13 timeline for contract negotiation.

14 15 **KEY TAKEAWAYS**

16 Technology enabled mobility options are transforming an industry that has been relatively stagnant since
 17 the mid-20th century. Given the recent emergence of these options, the transit industry is reacting
 18 remarkably fast in terms of investing in research, identifying potential synergies between traditional
 19 transportation business models and new options, and even piloting these new services. Based on the two
 20 cases explored in this report, as well as interviews with key players in a number of the marketing
 21 partnerships mentioned, the following key takeaways are defined:

22 **1. There are not yet defined best practices and rules of engagement.** TNCs and micro-transit
 23 options are new to the market and the concept of partnerships has just recently emerged. As a result, the
 24 transit industry has not yet defined best practices and standards for entering into such relationships.
 25 Without common industry guidelines, engagements between TNCs and transit agencies can be
 26 inconsistent, even within the same region. Lack of consistency can breed confusion and frustration for
 27 both the agency and the private sector partner, and can even lead to the dissolution of potential
 28 partnerships.

29 **2. The regulations are inconsistently interpreted at the transit operator level, in part due to**
 30 **an outdated regulatory framework.** A lack of a framework or guidance for applying laws, regulations,
 31 and guidance designed for fixed route bus and rail modes to emerging on-demand modes such as TNCs
 32 and micro-transit has led to de-facto interpretation and decision making on a localized and case-by-case
 33 basis. Interviews with various transit agencies engaging with TNCs revealed that each had a different
 34 interpretation of how to apply Title VI, Environmental Justice (EJ), ADA, and drug and alcohol testing
 35 rules and regulations in their partnerships with TNCs. Without clear guidance from the federal level it is
 36 extremely challenging to enter into legal partnerships with TNCs or other technology enabled
 37 transportation companies.

38 **3. It is crucial to engage labor early.** The experience in Kansas City highlighted the need to
 39 engage labor early when considering partnering with new mobility services. Kansas’ experience set a
 40 precedent for how to develop mutually beneficial labor contracts for Bridj service delivery. However,
 41 partnerships will likely be slightly different in each region introducing micro-transit, and therefore transit
 42 operators should include additional negotiation time within their deployment timeline. In the case of
 43 PSTA, when partnering with Uber they were unable to engage organized labor to provide those services.
 44 This is a function of the TNC business model, where Uber serves as a technology platform rather than an
 45 employer. For example, by adding TNCs to the mobility menu for first mile and last mile service delivery
 46 or in underserved transit areas, it is likely that demand for union operated service will increase.

47 **4. Currently, there is no clear method for ensuring the availability of vehicles capable of**
 48 **transporting individuals in wheelchairs on a TNC or micro-transit platform.** Both transit operators
 49 and TNCs have noted that ensuring wheelchair accessible vehicles (WAVs) are available on the platform

1 is challenging, especially at the same level of service as the majority non-WAV vehicles that are currently
 2 leveraged on Uber and Lyft’s platform. Uber and Lyft are currently working on providing WAVs on their
 3 platform, but this service is not yet robust and is not necessarily in compliance with ADA requirements.
 4 The taxi industry also historically has a challenge with ensuring that WAVs are available because it is
 5 challenging to deploy a density of WAVs to meet the needs of disabled users with similar response times
 6 to that of non-WAVs. This is also a challenge that the micro-transit industry faces. As noted, within the
 7 Kansas City/Bridj partnership, the Bridj fleet includes two vehicles capable of transporting individuals in
 8 wheelchairs. Further study will be needed to evaluate whether this model is capable of providing the same
 9 level of service as the other vehicles that are being dispatched.

11 **RECOMMENDATIONS**

12 The mobility menu is growing, and many metropolitan residents are choosing on-demand and shared use
 13 mobility for their travel. Through partnering with these companies, public transit operators have the
 14 opportunity to:

- 15 ▪ Improve overall mobility by ensuring that these new models are well-integrated into the
 16 existing transportation network, which taxpayers have invested billiond of dollars to develop,
 17 and
- 18 ▪ Ensure that these mobility options are available to all transit operator constituents in an
 19 equitable and accessible fashion.

20 Based on the literature and the experience in regions currently partnering with technology enabled transit
 21 companies, researchers recommend the following:

22 **1. Actively explore partnership opportunities, and be willing to experiment and test new**
 23 **models.** Partnerships with technology enabled mobility companies and transit operators are still in their
 24 infancy. As such, transit operators have the opportunity to help develop a framework for engaging with
 25 these companies. This will mean developing and piloting a variety of approaches to partnering with these
 26 types of companies. Through new pilots, transit operators can define what works best for their region. It is
 27 also critically important that transit operators make their experiences available at the national level to help
 28 transit agencies across the country learn what works best. It will also be crucial to provide an adequate
 29 timeline for partnership deployment. In speaking with a variety of public and private sector interests that
 30 have experimented with these types of partnerships, the amount of time needed to reveal the partnership
 31 value can vary.

32 **2. Work with the Federal Transit Administration (FTA) to develop pilot programs.** FTA has
 33 demonstrated a willingness to working with transit agencies to identify ways to develop equitable
 34 demonstrations to test the benefits of partnerships. Recently, FTA released a notice of funding
 35 opportunity (NOFO) for a grant program that specifically asked agencies across the country to propose
 36 pilot programs such as partnerships with TNCs or micro-transit companies. Further, FTA offered to
 37 provide regulatory flexibility to allow agencies to work with them to define best practices in rolling out
 38 these types of programs. Transit operators should work within this framework or otherwise engage with
 39 FTA to work together to define best practices.

40 **3. Maximize integrated mobility by prioritizing shared riding, and trips that connect with**
 41 **existing transit service.** Researchers have identified that there are synergies between transit and new
 42 technology enabled mobility options. One way that customers use these new options is for first mile and
 43 last mile access to rapid transit. Another option for customers is to share or split their rides to rapid transit
 44 with other customers. When developing partnerships, transit operators should incentivize these types of
 45 rides.

46 **4. Prioritize ADA and Title VI accessibility in pilot development.** TNCs and micro-transit
 47 operators are not currently operating services that adhere to ADA and Title VI protocol, but they could.
 48 Through thoughtfully constructed partnerships, transit operators have the opportunity to ensure the
 49 availability of accessible vehicles and equitable access. By making this a priority in pilot development,
 50 transit operators can help to inform national policy and best practices in ensuring these partnerships result
 51 in service that is for the public benefit.

1 **5. Develop approaches to payment integration.** In order to ensure that those who are unbanked
 2 or underbanked have access to these technology enabled, privately operated services, we need to develop
 3 a payment integration system. At many agencies across the country, this will necessitate an upgrade of
 4 technology to account based systems. While this may represent a significant investment, as transit
 5 agencies shift their business model from being bus and train operators to mobility providers, it is likely
 6 that there will be an increasing number of mobility options that operators wish to incorporate into their
 7 system; account based payment technology will enable this.

8 **6. Invest in comprehensive wireless access and Mobility Hubs.** To ensure equitable access to
 9 these types of services, transit operators should expand access to wireless connections, which will allow
 10 those without data plans to access these technology enabled services. Further, transit operators should
 11 strategize in investing in Mobility Hubs, which would have screens that could dispatch these types of
 12 services for those without smart phones.

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**Regional Ridership Improvement Task Force (RRITF)
Executive Summary and Data Request
March 2017**

Objective:

To develop solutions that grow transit ridership in Los Angeles (LA) County by better understanding changes in the region’s demographics, travel options and patterns.

Members:

Lead: Conan Cheung (Metro)	Debra Johnson (Long Beach Transit)
Lead: Kenneth McDonald (Long Beach Transit)	David Feinberg (Big Blue Bus)
Ed King (Big Blue Bus)	Pari Ahmadi (Metro)
Art Ida (Culver CityBus)	Metro Service Development, Communications, OEI department support
Jim Parker (Norwalk Transit)	

Goals:

1. Ride more – increase the overall number of transit trips
2. Retain existing customers
3. Reclaim former customers
4. Recruit new customers

Customer Categories:

- Occasional Customers – take transit once in a while for specialized reasons
- Commuters – take transit regularly but only for work
- All-Purpose Customers – take transit regularly for multiple purposes

Focus Areas:

Safety; More Service; Better Service; Accessibility; Customer Info/Amenities; Fares

Regional Growth Action Plan:

LA County is a diverse community of 10.12 million residents. As such, LA County is served by a network of transit operators and each operator reflects the needs of the communities they serve.

The Los Angeles County Metropolitan Transportation Authority (Metro) provides public transportation service to Los Angeles County, and the Los Angeles County Municipal Operators Association (LACMOA), comprised of 16 city departments, Joint Powers Authorities and public, non-profit corporations, offers transit services throughout LA County and portions of Orange County and San Bernardino County. The 16 operators, or Munis, along with Metro, all share in regional funding via the Formula Allocation Procedure (FAP).

Metro bus and rail operations account for 64 percent of the region’s transit service, while LACMOA operators distribute 36 percent of the service.

Regional Ridership Improvement Task Force (RRITF)
Executive Summary and Data Request
March 2017

Recognizing that the LA region is primed for transit ridership growth, the Regional Ridership Improvement Task Force (RRITF), which includes members from both Metro and LACMOA, convened for the purpose of developing innovative solutions that address customer needs based on a better understanding of the changes in the region's demographics, travel options and patterns.

The Task Force seeks to hire a Consultant to assist in developing a Ridership Growth Action Plan (RGAP) aimed at increasing transit use in the LA region over the next decade. The RGAP will identify innovative solutions to attract customers to Ride More by Retaining current customers, Reclaiming past customers, and Recruiting new customers. Solutions should be developed based on a comprehensive understanding of bus and rail ridership within the LA region and nationally, and the travel attributes that are important to various transit markets, including Commuters, Occasional, and Multi-Purpose Riders, as defined in the Transit Center's report "Who's On Board 2016." The RGAP shall prioritize solutions based on a cost/benefit analysis, and other criteria such as ease of implementation and implementation timeline.

This project is expected to be completed within approximately 10 months following the issuance of the Notice to Proceed (NTP). The Contractor shall submit interim deliverables throughout the course of the contract, which will form part of the final report. The following are tasks that the Consultant shall complete as approved by the Task Force's Project Manager:

1. Review of Existing Information on Ridership Trends and Customer Needs
2. Review of Transit Services and Other Travel Options within the LA County region
3. Identify and Prioritize Travel Attributes Important in Mode Choice
4. Identify Solutions that Improve or Enhance Prioritized Travel Attributes
5. Develop Ridership Growth Action Plan
6. Presentation(s) of Final Report

Regional Ridership Improvement Task Force (RRITF)
Executive Summary and Data Request
March 2017

Information Requested from Individual Operators (due April 7, 2017)

- Ridership data by operator, preferably in Excel format
 - Average daily ridership by line for each month over the past three fiscal years
 - Or lowest level of data available for past three fiscal years
- Existing route or system plans or analyses (i.e., Comprehensive Operational Analyses). If you have recently completed, are undergoing, or are planning to conduct a COA/ Complete System Restructure, please answer the following questions:
 - What are the Goals and Objectives you wish to accomplish?
 - What is the Service Concept (s) you will be using to guide your service restructuring? (e.g. establishing a frequent grid network, feeder service to regional rail/BRT, network of point to point commuter express bus service, community circulation, etc.)
 - Are there any coordination issues between transit agencies that you feel need to be addressed? (e.g. service, fares, information, wayfinding, etc.)
 - What are the Key Performance Indicators (KPIs) you will be using to evaluate the success of your system restructure?
- Existing surveys or market research reports, including customer satisfaction surveys (i.e., Metro's recent Rider/Non-Rider survey, etc.)
- Municipal General Plans or Master Plans (i.e., Mobility Element)
- Any studies detailing changes in travel patterns over the next 10 years (i.e., major developments such as the new NFL stadium in Inglewood)
- Any other pertinent documents relating to service planning or service standards

Regional Information to be Collected by Metro

- Regional, Municipal, and Tier II Transit and Transportation Plans (SRTP, LRTP)
- SCAG Regional Transportation Plans
- Smart card (Transit Access Pass or TAP) data by operator, mode, day of week, time period, route/line

REPORT

DATE: March 29, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

SUBJECT: Transit Ridership Update

DISCUSSION:

As part of the continuing discussion of transit ridership trends at the RTTAC, SCAG staff has prepared information using the latest available data for 2016 from the National Transit Database (NTD). The NTD data used for this report are the unlinked passenger trips (UPT) reported in the December 2016 Adjusted Database available at <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>. Note that this monthly data is “unaudited” and there may be discrepancies with the 2016 annual numbers, which are not expected to be released until fall 2017.

The data summarized in this report suggest that bus ridership continued to decline in 2016 for almost all of the largest transit providers in the region (see Table 1). Total regional bus ridership experienced a fourth consecutive year of decline in 2016, down by 9.8% from 2015 levels (see Figure 1). The rate of decline appears to be accelerating; NTD annual numbers for 2015 show a decline in regional bus ridership of only 4.1% from 2014 levels.

Rail ridership performance was mixed, with Metro heavy rail (Red Line) ridership down by 1.1% in 2016 compared to 2015, and Metrolink commuter rail ridership down by 13.4% (see Table 2). Metro light rail ridership increased by 8.4% in 2016 with the opening of the Expo Phase 2 and Foothill Gold Line extensions. Overall, rail ridership in the SCAG region increased by 2.3% from 2015 to 2016, due to the Expo and Gold Line extensions. (Data from Metro for each of the Metro Rail lines is shown in Figure 2.)

Operators in the rest of California also experienced bus ridership declines in 2016 (see Table 3). In San Diego, bus ridership decreased by 7% from 2015 levels, while in Sacramento it declined by 13.7%. San Francisco Muni held steady, while bus ridership in other major Bay Area systems saw decreases—Alameda-Contra Costa Transit was down 3.2% and Santa Clara Valley Transportation Authority (San Jose) was down 8.5%.

In terms of rail (see Table 4) light rail ridership in San Francisco was up by 3.2% in 2016 compared to 2015, and Bay Area overall commuter rail ridership (Altamont Commuter Express and Caltrain) increased by over 5%. The Bay Area Rapid Transit (BART) experienced its first year-over-year ridership declines in the 3rd and 4th quarters of 2016, but overall 2016 annual ridership remained relatively unchanged compared to 2015. Light rail ridership decreased by 10% in San Jose and by 2.4% in Sacramento. In San Diego, ridership on the Sprinter and Coaster systems decreased by 5.1% and 6%, respectively.

Table 1. Change in Unlinked Passenger Trips (UPT) – SCAG Region (Bus)

BUS OPERATOR/SYSTEM	TOTAL UPT (000s)		YEAR-TO-YEAR CHANGE				
	2015	2016	Annual	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Anaheim Transportation Network	9,369	8,309	-11.3%	13.2%	-4.0%	-15.9%	-29.9%
Antelope Valley Transit Authority	3,292	2,802	-14.9%	-16.9%	-13.7%	-15.6%	-13.1%
Beach Cities Transit	397	376	-5.3%	-1.3%	-4.6%	-9.2%	-6.5%
City of Los Angeles (LADOT)	22,365	19,386	-13.3%	-8.5%	-10.7%	-15.6%	-19.3%
Culver CityBus	5,966	5,338	-10.5%	-10.5%	-10.0%	-10.3%	-11.4%
Foothill Transit	14,171	13,585	-4.1%	-7.0%	-9.3%	1.2%	-1.2%
Gold Coast Transit	3,889	3,701	-4.8%	-5.9%	-3.2%	-4.2%	-6.0%
GTrans (City of Gardena)	3,700	3,289	-11.1%	-7.9%	-4.0%	-10.7%	-21.7%
Imperial Valley Transit	866	797	-8.0%	-5.5%	-5.4%	-12.9%	-8.0%
Laguna Beach Transit	945	1,017	7.7%	134.1%	57.3%	-7.8%	-14.5%
Long Beach Transit	27,023	25,811	-4.5%	-6.9%	-3.7%	-4.8%	-2.4%
Metro	334,113	304,444	-8.9%	-7.6%	-8.0%	-9.3%	-10.7%
Montebello Bus Lines	7,275	6,678	-8.2%	-8.6%	-4.3%	-8.5%	-11.6%
Norwalk Transit System	1,465	1,466	0.1%	-12.6%	-10.3%	12.9%	11.9%
Omnitrans	13,106	11,619	-11.3%	-10.7%	-11.2%	-11.7%	-11.8%
Orange County Transp. Authority	45,491	41,202	-9.4%	-10.0%	-9.3%	-9.0%	-9.5%
Riverside Transit Agency	9,150	8,513	-7.0%	-6.0%	-8.6%	-5.4%	-7.7%
Santa Clarita Transit	3,189	2,916	-8.6%	-7.2%	-7.4%	-9.1%	-10.6%
Santa Monica's Big Blue Bus	17,255	14,854	-13.9%	-13.0%	-1.0%	-23.0%	-18.9%
SunLine Transit	4,526	4,243	-6.3%	-7.6%	-6.6%	-5.9%	-4.8%
Torrance Transit Agency	3,992	3,588	-10.1%	-8.4%	-11.7%	-10.4%	-10.0%
Ventura Intercity Service Transit Auth.	867	840	-3.1%	7.9%	0.6%	-11.3%	-7.9%
Victor Valley Transit Authority	2,008	1,849	-7.9%	-2.0%	-2.5%	-13.2%	-13.3%

Source: NTD December 2016 Adjusted Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

Table 2. Change in Unlinked Passenger Trips (UPT) – SCAG Region (Rail)

RAIL OPERATOR/SYSTEM	TOTAL UPT (thousands)		YEAR-TO-YEAR CHANGE				
	2015	2016	Annual	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Metro (heavy rail)	46,357	45,864	-1.1%	-2.1%	-0.9%	0.3%	-1.5%
Metro (light rail)	60,618	65,727	8.4%	-0.8%	10.7%	11.5%	12.5%
Metrolink (commuter rail)	13,984	12,113	-13.4%	-0.5%	-5.8%	-22.2%	-24.9%

Source: NTD December 2016 Adjusted Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

Figure 1. Transit Ridership, SCAG Region 2010-2016

Source: National Transit Database, December 2016 Adjusted Database (unaudited)

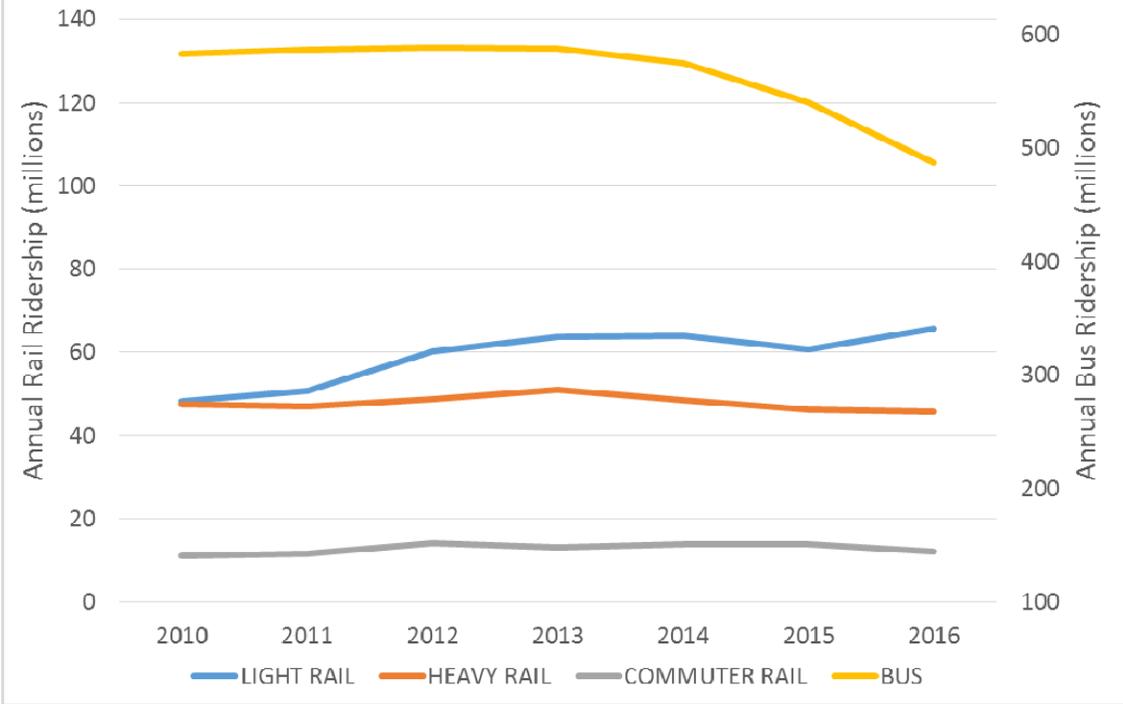


Figure 2. Metro Rail Estimated Weekday Ridership by Line

Source: Metro, <http://isotp.metro.net/MetroRidership/Index.aspx>

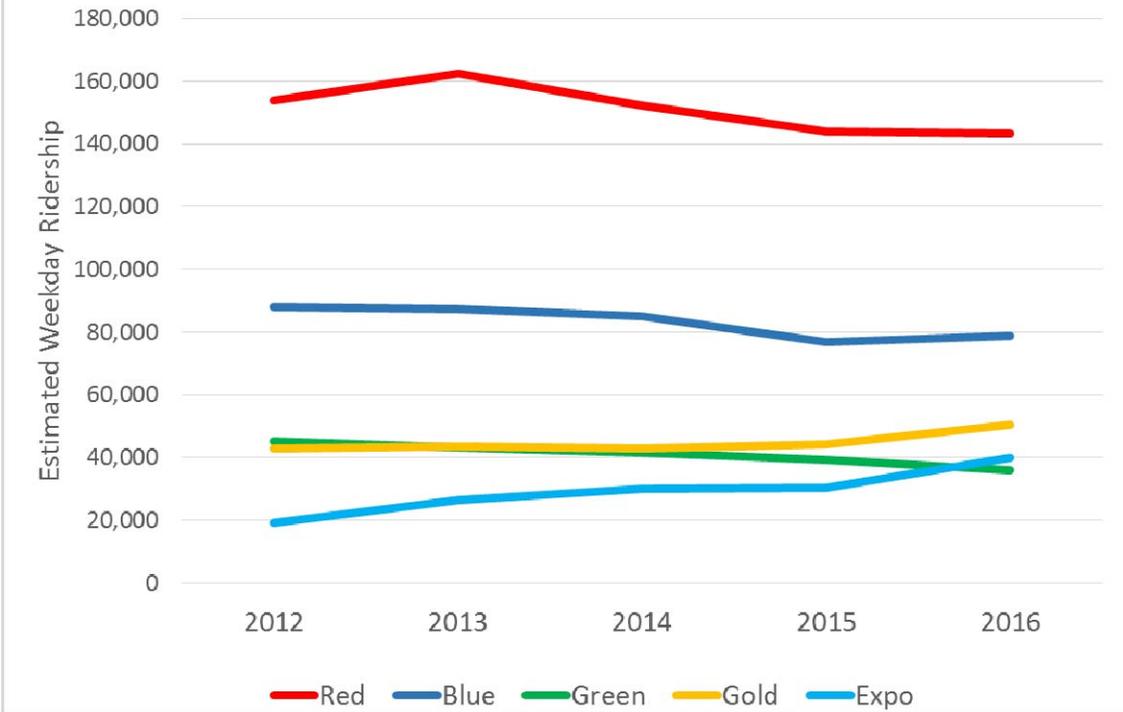


Table 3. Change in Unlinked Passenger Trips (UPT) – Other California (Bus)

BUS OPERATOR/SYSTEM	Total UPT (000s)		Year-to-Year Change				
	2015	2016	Annual	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Alameda-Contra Costa Transit	54,966	53,203	-3.2%	-3.7%	-4.4%	-3.2%	-1.5%
North County Transit District	7,821	7,139	-8.7%	-6.9%	-6.3%	-9.8%	-11.9%
Sacramento Regional Transit	13,017	11,237	-13.7%	-14.9%	-12.3%	-13.4%	-14.1%
San Diego Metrop. Transit System	54,046	50,422	-6.7%	-5.3%	-8.3%	-7.3%	-5.9%
San Francisco Muni*	159,815	160,746	0.6%	11.3%	7.7%	-7.1%	-7.7%
Santa Clara Valley Transp. Authority	33,690	30,834	-8.5%	-5.3%	-7.3%	-10.9%	-10.2%

*Includes trolley bus

Source: NTD December 2016 Adjusted Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

Table 4. Change in Unlinked Passenger Trips (UPT) – Other California (Rail)

RAIL OPERATOR/SYSTEM	Total UPT (000s)		Year-to-Year Change				
	2015	2016	Annual	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Altamont Commuter Express	1,255	1,329	5.9%	4.9%	6.5%	1.3%	11.1%
Bay Area Rapid Transit	134,987	135,311	0.2%	4.9%	0.2%	-1.3%	-2.5%
Caltrain	17,586	18,495	5.2%	6.0%	2.1%	5.0%	7.8%
North County Transit District (Coaster)	1,601	1,504	-6.0%	-5.4%	-5.8%	-8.7%	-3.2%
North County Transit District (Sprinter)	2,740	2,601	-5.1%	-5.4%	-3.6%	-6.1%	-5.1%
Sacramento Regional Transit	11,953	11,666	-2.4%	5.2%	3.8%	-13.2%	-4.6%
San Diego Metrop. Transit System	40,724	38,086	-6.5%	-2.6%	-8.4%	-7.1%	-7.6%
San Francisco Muni (light rail)	50,547	52,189	3.2%	4.8%	9.3%	0.6%	-0.2%
San Francisco Muni (streetcar)	7,546	7,395	-2.0%	-3.8%	-1.6%	-1.1%	-2.0%
Santa Clara Valley Transp. Authority	11,028	9,929	-10.0%	-8.1%	-3.3%	-12.6%	-15.7%

Source: NTD December 2016 Adjusted Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

REPORT



DATE: March 2, 2017

TO: Regional Council (RC)
Executive/Administration Committee (EAC)
Community, Economic and Human Development (CEHD) Committee
Energy and Environment Committee (EEC)
Transportation Committee (TC)

FROM: Frank Wen, Acting Director, Land Use and Environmental Planning;
(213) 236-1854, wen@scag.ca.gov

SUBJECT: SCAG SB375 Regional GHG Target Recommendations for 2020 RTP/SCS and Beyond – Status Report

EXECUTIVE DIRECTOR’S APPROVAL: 

RECOMMENDED ACTION:
Receive and File

EXECUTIVE SUMMARY:

This staff report provides a summary of progress on finalizing SCAG’s GHG target recommendation to the California Air Resources Board (CARB) since the SB 375 Stress Test results were presented to Regional Council (RC) and SCAG’s Policy Committees on November 3, 2016. Additional developments and considerations include impacts from Metro’s Measure M, potential VMT rebound effects from enhanced fuel efficiency and cleaner fuel technology proposed in ARB’s Scoping Plan, and further discussions and consensus among California’s major MPOs. SCAG staff is currently coordinating with other MPOs to schedule a meeting with CARB management to discuss key concerns, and to jointly develop GHG target recommendations for CARB’s adoption.

STRATEGIC PLAN:

This item supports Strategic Plan Goal 2. Obtain Regional Transportation Infrastructure Funding and Promote Legislative Solutions for Regional Planning Priorities. a. Develop, monitor, or support state legislation that promotes increased investment in transportation programs in Southern California.

BACKGROUND:

At the September 29, 2016 RC and Policy Committee meetings, staff reported that CARB is preparing to update the regional greenhouse gas (GHG) emission reduction targets for the years 2020 and 2035 for each MPO in California. CARB released the draft Scoping Plan in January 2017 and is scheduled to adopt the draft preliminary SB 375 GHG targets in spring 2017, and final targets in summer 2017. The new CARB targets for the years 2020 and 2035 will be required to be met by each MPO in the next round of RTP/SCS plans, which for SCAG will be the 2020 RTP/SCS. CARB announced on February 16, 2017 that the Scoping Plan adoption will be pushed back to June 2017, and the anticipated SB 375 GHG target recommendations from MPOs will be provided to CARB at a later date (previously scheduled between February and March 2017).



Currently, the SCAG regional GHG emissions reduction targets were set by CARB in 2010 at 8% and 13% below per capita GHG emissions recorded in 2005 for the years 2020 and 2035, respectively. SCAG has prepared two Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) plans, (2012 and 2016) that met or exceeded the required CARB targets for 2020 and 2035. SCAG’s 2016-2040 RTP/SCS, which was adopted in April 2016, met the per capita GHG reduction target of 8% in 2020 and demonstrated an 18% per capita GHG reduction in 2035, exceeding the target of 13% by five percentage points.

SB 375 TARGET SETTING PROCESS and SCAG STRESS TEST RESULTS:

CARB’s SB 375 target setting process is informed by a suite of concurrent planning activities and technical exercises. Among them, CARB’s AB 32 and SB 32 Scoping Plan Update, CARB’s Mobile Source Strategy, and the MPO Stress Test. Originally, each MPO was asked to submit to CARB their respective GHG emissions reduction target recommendations by December 2016. This deadline was postponed to allow for further discussion among the MPOs.

SCAG, in collaboration with the other major MPOs in California, has conducted a technical “Stress Test” aimed to gauge GHG reduction strategies that would yield the most ambitious, yet achievable GHG emission reductions. The purpose of the Stress Test is to quantify potential GHG emission reductions that would result from adoption of various land use and transportation strategies, such as rapid deployment of zero emission vehicles and mobility innovations. The technical analysis and off-model assessment of potential additional GHG emission reductions from strategies included in the stress test will form the technical basis for SCAG’s 2020 and 2035 target recommendations to CARB.

Since SCAG has already adopted very ambitious strategies in land use, pricing, and transit investment in both the 2012 and 2016 RTP/SCSs, staff focused the agency’s “Stress Test” and potential additional GHG emissions reductions in three “strategy buckets”: (a) active transportation (AT), (b) zero-emission vehicles (ZEVs) and (c) mobility enhancements and innovations. As indicated in the November 3, 2016 RC and Policy Committees staff reports (Attachment), SCAG’s Stress Test results indicate that about 2 to 2.5 percentage points (2.0%-2.5%) of per capita GHG emissions could be reduced further above the 18% in 2035—with an additional funding need of \$10 billion (unfunded) in active transportation programs/investments, and more refined off-model assessment of mobility enhancements and innovations.

ADDITIONAL CONSIDERATIONS, MPO COORDINATIONS and SCAG SB 375 TARGET RECOMMENDATIONS:

It is important that the ultimate SB 375 targets continue to be set at levels that MPOs can meet with an SCS - not an Alternative Planning Strategy (APS). Targets should also take into account federal requirements that MPOs must meet for financial constraints and other factors.

As indicated, SCAG staff estimates that it will cost roughly \$10 billion dollars for the additional investments and programs called for in active transportation (AT) as specified in the Stress Test. It should be noted, also, that these costs are not within the financial constraints of the 2016 RTP/SCS



financial plan. In addition to the Stress Test results, staff also identified and assessed the likely ranges of GHG impacts from the following factors:

Impacts from Transit and AT Investments in Measure M approved by voters on November 8, 2016

- May result in additional per capita GHG reductions in the SCAG Region
- Active Transportation investments estimated to reduce Stress Test funding gap to just under \$5 billion

Automotive Technology Improvements in Fuel Efficiency

- It will induce more than 1% increase in per capita GHG or VMT due to the decreased cost of driving
- This negative effect on per capita GHG reductions might be mitigated through additional mileage based user fees beyond what was assumed and assessed in the 2016 RTP/SCS

MPO Coordination, Consensus in Target Recommendations, and Further Communication with CARB

Since the four largest MPOs (SCAG, SACOG, SANDAG, and MTC) follow similar RTP/SCS development processes and address similar issues, these four MPOs through the California Association of Council of Governments (CALCOG) have been closely coordinated with each other in conducting Stress Tests and in developing each MPO's SB 375 GHG target recommendations. The goal of this collaboration is to develop parallel, independent, but comparable Stress Test results and ranges of target recommendations based on consistent modeling and off-model framework and assumptions. As a result of this effort, here is a summary of consensus items among the MPOs:

- The ranges of additional GHG emissions reductions from each MPO's Stress Tests are between two to four percentage points per capita for land use, transportation expenditure, and pricing scenarios. However, some of these reductions are based on "*Extreme Land Use, Transportation Expenditure, and Pricing Scenarios*" which are not expected to be adopted by each MPO's governing board.
- CARB's advance clean car & fuel regulations will have some unintended consequences.
 - VMT rebound effect: By increasing fuel efficiency, the cost of driving is decreasing, and both VMT and GHG will increase
 - Transportation revenues will continue to decline due to declining fuel sales from more efficient vehicles and zero emission vehicles.
 - What does this mean? There will be gaps between GHG targets and MPOs' existing and next RTP/SCS GHG reduction strategies, requiring MPOs to assess additional "aggressive" strategies to fill the "gaps" through the next RTP/SCS development process. So far, no MPO has all of the answers yet.
- Considering the GHG reductions achieved by MPOs in the previous two rounds of their RTP/SCSs, the "Stress Test" results, and the VMT/GHG rebound effect, the four major MPOs are trying to reach a consensus to recommend a single and uniform target for CARB's consideration and adoption. However, the four MPOs have not yet reached a consensus on a joint recommendation and work continues on developing a single and uniform target.

A meeting with CARB management will be scheduled shortly, primarily to discuss MPOs' concerns, and further elaborate that the recommended GHG targets are contingent on the following commitments from the State as follows:

- CARB's acknowledgement of the VMT rebound effect; it will be difficult to meet targets similar to the 2012 and 2016 cycles under CARB's clean car and fuel technology assumptions
- Recognize the State's role in implementing user fee/pricing
- CARB's commitment to:
 - Address the issues resulting from their update to the EMFAC emissions model—there should be consistent use of the same EMFAC emissions model for target setting and target compliance
 - Off-Model Adjustments: consistent treatment/analytical review for the quantification of off-model strategies in target setting, as used in the CARB RTP/SCS technical review process

In addition, the California Air Resources Board staff will host three public workshops throughout the State in March 2017 to seek public input on issues the Board should consider when updating the regional passenger vehicle greenhouse gas (GHG) emission reduction targets for California's Metropolitan Planning Organizations (MPO). At the workshops, ARB staff will present information on the target update process, share MPO target recommendations received thus far, as well as seek public input on staff's preliminary target update concepts. ARB staff will also present information discussed at these workshops as part of an informational item at ARB's regularly scheduled Board meeting on March 23-24, 2017.

The workshops will be held at the locations and dates shown in the link below:

https://www.arb.ca.gov/cc/sb375/meetings/notice_02222017.pdf. One of the workshops will be held at SCAG Policy Committee Conference Room A on March 7, 2017 between 1:30 pm and 3:30 pm.

ADDITIONAL CONDITIONS FOR SCAG'S TARGET RECOMMENDATIONS

It is important to further note that the SCAG's GHG target recommendations are built upon the 2016 RTP/SCS and its successful and timely implementation. As such, key conditions and assumptions in the 2016 RTP/SCS, including but not limited to policies, funding, strategies, and assistance from all levels of government, private business, advocacy groups, stakeholders, and technology innovation enablers, etc., will need to be coordinated and secured to ensure the attainment of the recommended targets.

Specifically, SCAG's regional GHG target recommendations are conditioned upon a combination of actions or alternative equivalent measures:

- Successfully transitioning from an excise tax on gasoline to a mileage based user fee starting in 2025, as one of the primary sources of funding for our roadways and transit infrastructure in the 2016 RTP/SCS
- Successful implementation of the Regional Express Lane Network (HOT Lane Network) within the timeframe specified in the 2016 RTP/SCS

REPORT

- Implementation of over \$38 billion in passenger rail improvements, including Phase 1 of CA High Speed Rail, connecting the Bay Area and Central Valley to the SCAG region including LA Union Station and Anaheim
- Implementation of over \$56 billion in transit improvements, including expansion of the Metro Rail heavy and light rail system in Los Angeles County (representing a doubling of service compared to baseline), expansion of commuter rail service in the Inland Empire, implementation of streetcar service in Orange County, and region-wide expansion of bus rapid transit services
- Targeted increase in funding commitments and enabling information technology for Transportation Demand Management (TDM) from federal, state and local agencies
- With technical assistance/funding, and in cooperation with local governments, improvements in land use planning at the neighborhood scale along growth opportunity areas - including high quality transit areas (HQTA), neighborhood mobility areas and livable corridors
- Continuing partnership and commitment from each County Transportation Commission (CTC) to support the SCS development process, including a focus on non-motorized transportation solutions
- Promote potential efficiency gains from the quick deployment of autonomous transportation systems and identify policy priorities to maximize sustainable outcomes from autonomous vehicles
- Promote shared-use mobility, such as bike sharing, car sharing and ride sourcing
- Continued leadership and partnership of state and regional partners to increase availability of State funding for the region
- Continued leadership by the regional stakeholders to increase availability of federal funding through the next transportation authorization and through climate change legislation
- CARB will commit to working with MPOs, local governments, state agencies and the State Legislature to identify, pursue and secure adequate incentives and sustainable sources of funding for local and regional planning and other activities related to the implementation of SB 375
- Expanded funding from Cap & Trade and other sources to fund the Affordable Housing and Sustainable Communities (AHSC) grants and ensure the fair and adequate allocation of funding and awards to the SCAG region for implementation of the RTP/SCS
- Support regulatory incentives and dedicated funding sources at the state level for affordable housing
- Promote and incentivize the development of infrastructure for zero emission vehicles (ZEVs) and alternative transportation fuel systems

FISCAL IMPACT:

Work associated with this item is included in the Fiscal Year 16/17 Overall Work Program (17-080.SCG00153.04: Regional Assessment).

ATTACHMENT/S:

November 3, 2016 Staff Report to RC & Policy Committees: SB 375 Target Setting Stress Test Status Report

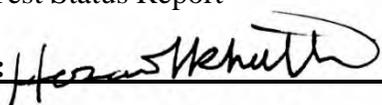
REPORT

DATE: November 3, 2016

TO: Regional Council (RC)
Executive/Administration Committee (EAC)
Community, Economic and Human Development (CEHD) Committee
Energy and Environment Committee (EEC)
Transportation Committee (TC)

FROM: Frank Wen, Manager Research & Analysis Department, 213-236-1854,
wen@scag.ca.gov

SUBJECT: SB 375 Target Setting Stress Test Status Report

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

Receive and File

EXECUTIVE SUMMARY:

At the September 29, 2016 RC and Policy Committee meetings, staff reported that the California Air Resources Board (ARB) is preparing to update the regional greenhouse gas (GHG) emission reduction targets for the years 2020 and 2035 for each MPO. ARB is proposing to release draft preliminary target recommendations in spring 2017, and adopt final targets in summer 2017. Accordingly, the four (4) major MPOs in California have each decided to conduct a technical "Stress Test" aimed to test GHG reduction strategies that would yield the most ambitious yet achievable GHG emission reductions. Staff has worked on the Stress Test for the SCAG region since August, and completed the potential GHG reduction assessment. This staff report provides an overview of the technical analysis and off-model assessment of potential additional GHG emission reductions from strategies included in the Stress Test. Staff also shared the Stress Test results with Technical Working Group (TWG), CEO Sustainability Working Group, and several environmental stakeholders. These Stress Test results will be used to form the technical basis for SCAG's 2020 and 2035 target recommendation to ARB immediately after the Regional Council meeting in January 2017, per agreement of MPOs and ARB target setting process and schedule.

STRATEGIC PLAN:

This item supports Strategic Plan Goal 2. Obtain Regional Transportation Infrastructure Funding and Promote Legislative Solutions for Regional Planning Priorities. a. Develop, monitor, or support state legislation that promotes increased investment in transportation programs in Southern California.

BACKGROUND:

SB 375 requires that each MPO adopt, as part of its regional transportation plan, a "Sustainable Communities Strategy" that sets forth plans to meet regional GHG emission reduction targets set by ARB. SB 375 also requires that ARB update the regional targets at least every eight years. In 2010, ARB established the GHG emissions reduction targets for the SCAG region, respectively at 8% and 13% below per capita GHG emissions recorded in 2005 for the years 2020 and 2035. SCAG has

prepared two Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) plans, (in 2012 and 2016) that meet or exceed the required ARB targets for 2020 and 2035.

OVERVIEW OF ARB SB 375 TARGET SETTING PROCESS:

ARB is preparing to update the regional SB 375 GHG emission reduction targets for each MPO and is proposing to release draft preliminary target recommendations in spring 2017, and adopt final targets in summer 2017. The new ARB targets for the years 2020 and 2035 will be required to be met by each MPO in the next round of RTP/SCS plans, which for SCAG will be the 2020 RTP/SCS.

The SB 375 Target Setting Process is informed by a suite of concurrent planning activities and technical exercises. Among them, the ARB AB 32 and SB 32 Scoping Plan Update, the ARB Mobile Source Strategy, and the MPO Stress Test. It is anticipated that the forthcoming revised GHG emissions reduction targets adopted by ARB will be much higher than current targets for all MPOs issued by ARB in 2010.

PURPOSES OF ARB/MPO STRESS TEST:

As reported at the September 29, 2016 meeting, the four major MPOs in California have collaborated and each decided to conduct a technical “Stress Test” aimed to test GHG emission reduction strategies that would yield the most ambitious yet achievable GHG emission reductions. The purpose of the Stress Test is to quantify potential additional GHG emission reductions that would result from deployment of various land use and transportation strategies, such as rapid deployment of zero emission vehicles. These Stress Test results will be used to form the technical basis for SCAG’s 2020 and 2035 target recommendation to ARB immediately after the Regional Council meeting in January 2017, per agreement of MPOs and ARB target setting process and schedule.

It is important to the MPOs that the ultimate SB 375 targets continue to be set at levels that MPOs can meet with an SCS, not an Alternative Planning Strategy (APS), and take into account federal requirements the MPOs must meet for financial and land use constraint. To that end, the MPOs in coordination with ARB are working on a process to update SB 375 targets. To implement the State's climate goals, participating MPOs will work with each other, and ARB staff, to conduct a more visionary, “less” constrained form of Scenario Planning—the “stress test scenarios”, to determine what kinds of: a) land use and transportation measures; b) more aggressive implementation of technology solutions (e.g. electric vehicles, autonomous vehicles, etc.) and c) changes to external factors (e.g. millennial driving patterns, gas prices, etc.) might be needed to create the greater GHG reductions needed to meet ARB’s Mobile Source Strategy goals.

MPO staff agreed to assess further GHG reduction potentials in the following six (6) strategy buckets:

1. Land Use
2. Active Transportation (AT)
3. Pricing
4. Transit

5. Greater penetration of zero emission vehicles (ZEVs)
6. Enhanced Mobility/Mobility Innovations
 - a. Car sharing
 - b. Ride sourcing/Transportation Network Companies
 - c. Connected and Autonomous Vehicles

SCAG STRESS TEST:

Since SCAG has already adopted very ambitious strategies in land use, pricing, and transit investment in both the 2012 and 2016 RTP/SCS, staff focused the agency's "Stress Test" and potential additional GHG emissions reductions in three strategy buckets: AT, ZEVs and Mobility Enhancement and Innovations. In addition, more advanced researches and information has become available, enabling staff to conduct more robust assessment of potential additional GHG reductions from enhanced mobility and innovations, including connected and autonomous vehicles, car sharing, ride sourcing and transportation network companies.

With all strategies, programs, and investment in the 2016 RTP/SCS by 2035, the region demonstrated a reduction of per capita GHG emissions by 18% below 2005 level in 2035 (five percent above the regional target of 13%). SCAG's Stress Test results indicate that about 2 to 2.5 percent (2.0%-2.5%) of per capita GHG emissions could be reduced further above the 18% in 2035--through additional AT programs, investment, and more refined off-model assessment of enhanced mobility and innovations.

Results from the hypothetical scenarios or stress tests described above are not fiscally constrained or otherwise limited by any regional, state or federal rules or guidance, and market feasibility is not assessed. They are intended to build knowledge about the connections between land use, transportation and GHG emissions reduction, and, for SCAG staff to form a technical basis for target recommendations. For example, SCAG staff estimate that it will cost roughly \$10 billion dollars for additional investment and programs called for by strategy buckets included in the stress tests, and the cost is not within the financial constraint of the 2016 RTP/SCS financial plan.

FISCAL IMPACT:

Work associated with this item is included in the Fiscal Year 16/17 Overall Work Program (17-080.SCG00153.04: Regional Assessment).

ATTACHMENT:

None

REPORT

DATE: March 29, 2017
TO: Regional Transit Technical Advisory Committee (RTTAC)
FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov
SUBJECT: Metropolitan Planning Agreements

DISCUSSION:

In 2007, SCAG established metropolitan planning agreements with the county transportation commissions (CTCs) and transit operators in the region. The regulatory basis for the metropolitan planning agreements is found in the Metropolitan Transportation Planning Final Rule issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) (see 23 CFR 450.314(a)), which states:

The MPO, the State(s), and the providers of public transportation shall cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities shall be clearly identified in written agreements among the MPO, the State(s), and the providers of public transportation serving the MPA....The MPO, the State(s), and the providers of public transportation should periodically review and update the agreement, as appropriate, to reflect effective changes.

These agreements acknowledge the role of the CTCs within the SCAG region for countywide planning and programming, and specify that the CTCs will coordinate with the transit operators in their respective county to ensure that transit projects, plans and programs are recommended to SCAG for inclusion in the Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP). SCAG maintains the RTTAC as a forum for transit operators and the CTCs to participate in the metropolitan planning process.

Staff previously reported to the RTTAC regarding the forthcoming update of these agreements, or memoranda of understanding (MOUs). Since they were first executed in 2007, there have arisen several new federal requirements that must be incorporated, including the federal rulemaking to implement the performance-based planning provisions from the Moving Ahead for Progress in the 21st Century Act (MAP-21).¹ There are also issues that have arisen through the FTA’s Triennial Review process and identified in FTA Circulars. This report identifies provisions that are proposed to be addressed in the MOUs, for discussion with the RTTAC. A list of signatories to the 2007 MOUs is provided at the end of the report.

Next steps include: 1) drafting proposed revisions to the MOUs; 2) updating and confirming the parties to the MOU; and 3) circulating for comments and obtaining signatures.

¹ At this time, the only outstanding rule is the Public Transportation Agency Safety Plan Final Rule. The Notice of Proposed Rulemaking was issued on Feb. 5, 2016, and the Federal Transit Administration has not provided an expected schedule for the release of the Final Rule.

Federal Rulemaking

The following requirements identified in the Metropolitan Transportation Planning Final Rule are not currently addressed in the MOUs and must be included.

Metropolitan Transportation Planning Final Rule

23 CFR 450.314 – Metropolitan planning agreements

- Specific provisions for the development of financial plans that support the metropolitan transportation plan (see § 450.324) and metropolitan TIP (see § 450.326)
- Specific provisions for the development of the annual listing of obligated projects (see § 450.334)
- Specific written provisions for cooperatively developing and sharing information related to:
 - transportation performance data
 - the selection of performance targets
 - the reporting of performance targets
 - the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO (see § 450.306(d))
 - the collection of data for the State asset management plan for the NHS

With regard to performance target setting, the Final Rule for Transit Asset Management provides additional clarification on coordination and the sharing of information.

Transit Asset Management (TAM) Final Rule

49 CFR 625.45(e) – Coordination with metropolitan planning process

- To the maximum extent practicable, a provider and group TAM plan sponsor must coordinate with the MPO in the selection of MPO performance targets.

49 CFR 625.53 – Recordkeeping for transit asset management

- To aid in the planning process, a provider must make available to the MPO its:
 - TAM plan,
 - any supporting records or documents,
 - performance targets,
 - investment strategies, and
 - the annual condition assessment report.

FTA 5307 Triennial Review Questions

The following questions from the FTA 5307 Triennial Review process are not currently addressed in the MOUs. This includes questions regarding operators' reliance on SCAG's public participation process. SCAG has worked with FTA to adjust the FTIP public notices in accordance with the requirements, however, this also must be addressed in the metropolitan planning agreement.

Additional review questions regarding security and technical capacity, provided below, should also be considered for inclusion in the updated metropolitan planning agreements, since they may require action and/or coordination between the MPO and transit providers.

Planning/Program of Projects (see FTA C. 9030.1E, Ch. V, Section 6)

Does the grantee rely on the MPO's public participation process to satisfy its public participation requirements for the program of projects (POP)?

- Does the MPO have an adopted public participation plan? What is the date of the document?
- Does the public notice for the TIP state that public notice of public participation activities and time established for public review of and comments on the TIP will satisfy POP requirements?
- Does the agreement with the MPO state whether the grantee will rely on the MPO's public participation process?

Security (see FTA C. 9030.1E, Ch. VI, Section 1 a. (13))

If the grantee is the designated recipient in an urbanized area (UZA) where there are more than one 5307 grantees, what process will be used to certify that at least one percent of Section 5307 expenditures in the UZA are spent on security projects, or that the expenditures are not necessary?

Technical Capacity (see FTA C. 9030.1E, Ch. V, Section 9)

Provide information that demonstrates that the grantee has met its Section 5307 associated transit improvement expenditure commitments (for 5307 funds obligated before Oct. 1, 2015). To ensure program funds are expended as proposed, the designated recipient, all recipients, or the MPO must submit an annual Associated Transit Improvement Report listing projects carried out in the preceding fiscal year.

REPORT

Signatories to the Existing Metropolitan Planning Agreements

The list of signatories should be updated to include the Imperial County Transportation Commission/Imperial Valley Transit and reflect changes in agency names, such as the San Bernardino County Transportation Authority and Gold Coast Transit. SCAG will also work with the CTCs to update and confirm the list of operators that should be included in the metropolitan planning agreements. For example, consideration should be given to the operators that must develop TAM plans.

County	Agency	County	Agency
Los Angeles	Los Angeles County Metropolitan Transportation Authority	Orange	Orange County Transportation Authority
	Access Services, Incorporated	Riverside	Riverside County Transportation Commission
	Antelope Valley Transit Authority		City of Banning
	Arcadia Transit		City of Beaumont
	Beach Cities Transit		City of Blythe
	City of Commerce Municipal Bus Lines		City of Corona
	City of Los Angeles Department of Transportation (LADOT)		City of Riverside
	Claremont Dial-A-Ride		Riverside Transit Agency
	Culver CityBus		SunLine Transit Agency
	Foothill Transit	San Bernardino	San Bernardino Associated Governments
	Gardena Municipal Bus Lines		Omnitrans
	La Mirada Transit		Victor Valley Transit Authority
	Long Beach Transit	Ventura	Ventura County Transportation Commission
	Montebello Bus Lines		City of Ojai
	Norwalk Transit System		City of Simi Valley
	Santa Clarita Transit		South Coast Area Transit
	Santa Monica's Big Blue Bus	Multiple	Southern California Regional Rail Authority (Metrolink)
	Torrance Transit System		

Metropolitan Planning Agreements

Regional Transit Technical Advisory Committee

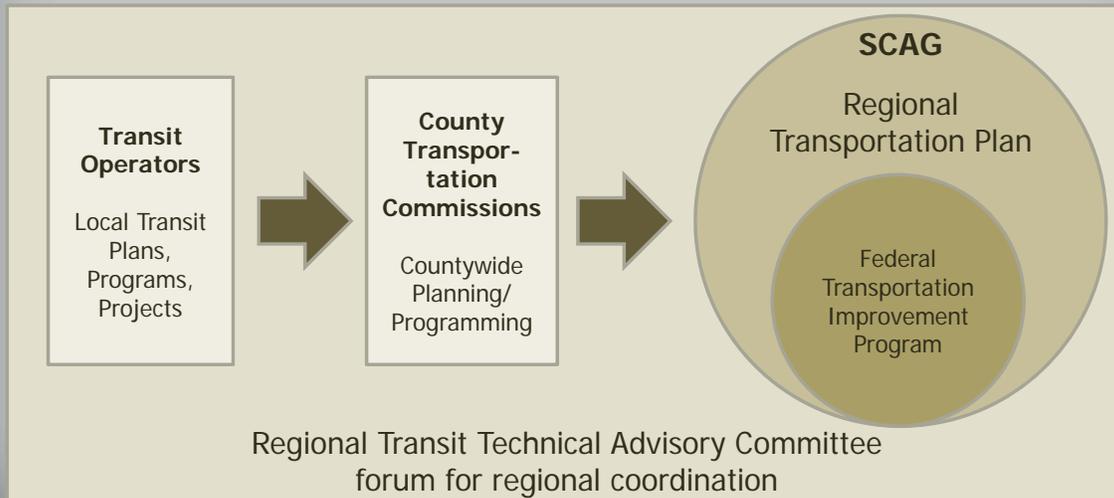
March 29, 2017



Regulatory Basis

- 23 CFR 450.314(a)
- The MPO, States, providers of transportation shall:
 - Cooperatively determine mutual responsibilities for metropolitan transportation planning
 - Identify these responsibilities in written agreements
 - Periodically review and update the agreement

Metropolitan Planning Framework



Planning Provisions To Be Added

- USDOT requires specific provisions be included in the Metropolitan Planning Agreements, regarding:
 - Development of financial plans that support the RTP and FTIP
 - Development of annual listing of obligated projects
 - Cooperative development and sharing of information related to:
 - transportation performance data
 - the selection of targets
 - the reporting of performance and targets

Transit Asset Management (TAM)

- To the maximum extent practicable, a provider and group TAM plan sponsor must coordinate with the MPO in the selection of MPO performance targets.
- To aid in the planning process, a provider must make available to the MPO its:
 - TAM plan,
 - any supporting records or documents,
 - performance targets,
 - investment strategies, and
 - the annual condition assessment report.

Provisions to be Added (cont.)

FTA 5307 Triennial Review Questions

- Planning/Program of Projects
 - Does the grantee rely on the MPO's public participation process to satisfy its ...requirements...?
 - Does the agreement with the MPO state whether the grantee will rely on the MPO's public participation process?
- Process used to certify at least 1% spent in UZA on security
- Annual Associated Transit Improvement Report

Next Steps

- Draft proposed revisions to MOUs
- Update and confirm agencies to be included
- Circulate drafts for comments
- Obtain signatures

Thank You



REPORT

DATE: March 29, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

SUBJECT: Transit Asset Management Update

DISCUSSION:

At the Jan. 31, 2017 RTTAC meeting, staff reported that SCAG had distributed letters to the transit operators in the SCAG region that receive Federal Transit Administration (FTA) Chapter 53 funds to provide public transportation. In these letters, SCAG requested information to support compliance with the FTA Final Rule on Transit Asset Management (TAM), specifically the deadlines for developing initial targets (see <https://www.transit.dot.gov/regulations-and-guidance/asset-management/dear-colleague-letter-tam-performance-targets>).

SCAG requested each operator's initial TAM targets, which FTA required to be established by Jan. 1, 2017. SCAG must develop regional targets by June 30, 2017. Given that the transit operators' first asset inventories and condition reporting, along with their first TAM plans, are not due until October 2018, it is understood that the initial targets submitted to SCAG are based on the best available data, and that additional data may be forthcoming as agencies complete their TAM plans. Additionally, it is understood that FTA is not requiring that these initial targets be submitted to the National Transit Database (NTD).

Over 82% of the transit operators responded (31 out of 38 contacted), providing a combined 127 targets. Regarding the MPO requirement to develop regional targets, the FTA has acknowledged that simply incorporating 100+ separate targets would be unwieldy and could undermine the transparency and accountability goals of the performance-based planning process. Accordingly, the FTA expects that MPOs will develop unified regional targets for each of the four asset management categories.

The TAM Final Rule provides flexibility for MPOs to determine how best to integrate performance-based planning into their planning processes. In doing so, SCAG must coordinate, to the maximum extent practicable, with the transit operators. Written provisions for the sharing of information related to the selection of performance targets will be cooperatively developed and incorporated into the updated metropolitan planning agreements between SCAG, the county transportation commissions, and transit operators (see separate agenda item 4.4).

Given the data limitations and short timeframe with which to establish the initial targets before the operators complete and submit their TAM plans, **staff proposes to utilize the initial targets provided by the transit operators to establish a set of weighted county-level targets, plus a separate set of targets for the multi-county commuter rail system (Metrolink).** Collectively, these county-level and commuter rail targets would constitute the initial regional targets.

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Looking beyond the initial targets, SCAG will next establish regional targets as part of the development of the 2020 Regional Transportation Plan (RTP). The first TAM plans are due to be completed by transit operators by October 2018, and the first sets of targets are due to be reported by transit operators to NTD by October 2018 as well. At that point, SCAG expects to have a more comprehensive set of data to use in developing long-range regional targets. The metropolitan planning agreements should also be updated by that time. In setting the targets for the 2020 RTP, SCAG will continue to coordinate with the county transportation commissions and transit operators, through the RTTAC.

Initial Targets Received from Transit Operators

The performance measures established by FTA are summarized in the table below (see 49 CFR 625.43).

TAM Performance Measures

Category	Capital Assets	Measure/Target
Rolling Stock	Revenue vehicles by asset class	<u>Age (Useful Life Benchmark or ULB)</u> % of revenue vehicles within a particular asset class that have met or exceeded their ULB
Equipment	Non-revenue, support-service and maintenance vehicles equipment	<u>Age (ULB)</u> % of vehicles that have met or exceeded their ULB
Facilities	Maintenance and administrative facilities, passenger stations, and parking facilities	<u>Condition (TERM)</u> % of facilities within an asset class, rated below 3.0 on the TERM scale (1=poor to 5=excellent)
Infrastructure	Rail fixed-guideway, track, signals and systems	<u>Performance (%)</u> % of track segments with performance restrictions

The operators' initial targets are listed by category and by county in the following tables. Operators that did not respond to SCAG's letter are excluded from the tables. Not all operators that responded provided percentage targets in accordance with the FTA's performance measures; these are identified in the table notes by county. Where it appeared that existing conditions were reported, these were assumed to be the initial targets. Within each asset category, different operators may have identified a different set of asset classes. SCAG proposes at this time to maintain the flexibility for each operator to do so, however the asset classes may be simplified/combined to develop the regional targets.

REPORT

ROLLING STOCK

% of revenue vehicles within a particular asset class that have met or exceeded their ULB

Imperial County

Agency	Rolling Stock Target
Imperial Valley Transit/Imperial County Transportation Commission	0%

Los Angeles County

Agency	Rolling Stock Target	
Antelope Valley Transit Authority	40ft transit	55%
	45ft commuter	43%
Beach Cities Transit (City of Redondo Beach)		0%
City of Commerce Municipal Bus lines		25%
City of Los Angeles Department of Transportation (LADOT)	Over the road bus (104)	10%
	Bus (220)	10%
	Cutaway bus (44)	20%
Culver CityBus		10%
Gardena Municipal Bus Lines (GTrans)	40' Buses	0%
	Vans/Cutaways	25%
Los Angeles County Group Plan (Metro)	Motor Bus (115)	10%
	Articulated Bus (5)	0%
	Cutaway Bus (66)	8%
	Minivan (24)	0%
	Van (10)	10%
	Trolley Bus (1)	100%
	Vintage Trolley (3)	67%
Los Angeles County Metropolitan Transportation Authority (Metro)	Motor Bus (2,235)	35%
	Articulated Bus (391)	2%
	Light Rail Vehicles (224)	0%
	Heavy Rail Vehicles (104)	0%
Long Beach Transit	Articulated Bus	0%
	Over-the-road coach	100%
	Bus	20%
	Ferryboat	0%
	Minivan	0%
Norwalk Transit System		20%
Santa Clarita Transit		10%
Santa Monica's Big Blue Bus		0%
Torrance Transit System		43%

Note: Access Services, Foothill Transit, and La Mirada Transit responded to the survey, but did not provide percentage targets.

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ROLLING STOCK (continued)

% of revenue vehicles within a particular asset class that have met or exceeded their ULB

Orange County

Agency	Rolling Stock Target	
Orange County Transportation Authority (OCTA)	60' bus (36)	10%
	40' bus (501)	10%
	27'-32' fixed-route cutaways (18)	10%
	24' demand-response cutaways (273)	10%

Note: Anaheim Transportation Network responded to the survey, but did not provide percentage targets.

Riverside County

Agency	Rolling Stock Target	
City of Corona	Fixed Route Bus	25%
	Dial-A-Ride Cutaway Light Duty	100%
City of Riverside	Cutaway (35)	1%
	Van (1)	1%
SunLine Transit Agency	Bus (74)	0%
	Cutaway buses (35)	0%

Note: Riverside Transit Agency responded to the survey, but did not provide percentage targets.

San Bernardino County

Agency	Rolling Stock Target	
Morongo Basin Transit Authority		35%
Omnitrans	Fixed-route (40'-60')	0%
	Paratransit	0%
Victor Valley Transit Authority		15%

Ventura County

Agency	Rolling Stock Target	
Camarillo Area Transit		0%
Gold Coast Transit District		0%
Thousand Oaks Transit	Fixed Route	0%
	Commuter Bus	0%
	Demand Response	50%
Ventura Intercity Transit Authority/Ventura County Transportation Commission		0%

Southern California Regional Rail Authority (Metrolink)

Agency	Rolling Stock Target	
Metrolink		5%

REPORT

EQUIPMENT

% of vehicles that have met or exceeded their ULB

Imperial County

Agency	Equipment Target
Imperial Valley Transit/Imperial County Transportation Commission	0%

Los Angeles County

Agency	Equipment Target	
Antelope Valley Transit Authority	Automobiles	13%
	Vans	75%
	Trucks	25%
	Trailers	0%
Beach Cities Transit (City of Redondo Beach)	N/A	
City of Commerce Municipal Bus lines	10%	
City of Los Angeles Department of Transportation (LADOT)	N/A	
Culver CityBus	25%	
Gardena Municipal Bus Lines (GTrans)	30%	
La Mirada Transit	N/A	
Los Angeles County Group Plan (Metro)	Automobiles (incl. SUVs) (11)	9%
	Trucks/other rubber tire vehicles (1)	0%
	Van (1)	100%
	Cutaway Bus (1)	100%
Los Angeles County Metropolitan Transportation Authority (Metro)	Automobiles (incl. SUVs) (658)	14%
	Trucks/other rubber tire vehicles (610)	39%
	Steel Wheel Vehicles (17)	22%
Long Beach Transit	Automobile	30%
	Trucks/other rubber tire vehicles	30%
Norwalk Transit System	50%	
Santa Clarita Transit	N/A	
Santa Monica's Big Blue Bus	25%	
Torrance Transit System	73%	

Note: Access Services and Foothill Transit responded to the survey, but did not provide percentage targets.

REPORT

EQUIPMENT (continued)

% of vehicles that have met or exceeded their ULB

Orange County

Agency	Equipment Target	
Orange County Transportation Authority (OCTA)	Utility sedans (93)	20%
	Patrol cars/SUVs (12)	0%
	SUVs (10)	10%
	Fork lifts, tractors (32)	25%
	Electric cars (13)	25%
	Trucks/vans (56)	25%

Note: Anaheim Transportation Network responded to the survey, but did not provide percentage targets.

Riverside County

Agency	Equipment Target	
City of Corona		N/A
City of Riverside	Automobiles (1)	1%
SunLine Transit Agency	Automobiles (44)	23%

Note: Riverside Transit Agency responded to the survey, but did not provide percentage targets.

San Bernardino County

Agency	Equipment Target	
Morongo Basin Transit Authority		83%
Omnitrans		0%
Victor Valley Transit Authority		15%

Ventura County

Agency	Equipment Target	
Camarillo Area Transit		N/A
Gold Coast Transit District		25%
Thousand Oaks Transit		0%
Ventura Intercity Transit Authority/Ventura County Transportation Commission		N/A

Southern California Regional Rail Authority (Metrolink)

Agency	Equipment Target	
Metrolink		5%

REPORT

FACILITIES

% of facilities within an asset class, rated below 3.0 on the TERM scale (1=poor to 5=excellent)

Imperial County

Agency	Facilities Target
Imperial Valley Transit/Imperial County Transportation Commission	N/A

Los Angeles County

Agency	Facilities Target
Access Services, Incorporated	N/A
Antelope Valley Transit Authority	Admin/maintenance facility 0% Wave chargers 0% Depot chargers 0%
Beach Cities Transit (City of Redondo Beach)	0%
City of Commerce Municipal Bus lines	25%
City of Los Angeles Department of Transportation (LADOT)	Downtown Bus Maintenance & Fueling Facility (under construction) 0% Metrolink Stations (5) 0% Park-and-Ride (1) 0% Warner Center Transit Hub 0%
Culver CityBus	20%
Gardena Municipal Bus Lines (GTrans)	20%
La Mirada Transit	N/A
Los Angeles County Group Plan (Metro)	Passenger Facilities (stations) (5) 20% Passenger Parking Facilities (3) 0% Maintenance Facilities (10) 20% Administration Facilities (1) 0%
Los Angeles County Metropolitan Transportation Authority (Metro)	Passenger Facilities (stations) (123) 0% Passenger Parking Facilities (1) 0% Maintenance Facilities (22) 23% Administration Facilities (3) 33%
Long Beach Transit	Admin/Maint Facilities 30%
Norwalk Transit System	0%
Santa Clarita Transit	0%
Santa Monica's Big Blue Bus	20%
Torrance Transit System	62%

Note: Foothill Transit responded to the survey, but did not provide percentage targets.

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FACILITIES (continued)

% of facilities within an asset class, rated below 3.0 on the TERM scale (1=poor to 5=excellent)

Orange County

Agency	Facilities Target	
Orange County Transportation Authority (OCTA)	O&M facility (5)	0%
	Control center (1)	0%
	Transportation centers (4)	0%
	Park and ride lots	0%

Note: Anaheim Transportation Network responded to the survey, but did not provide percentage targets.

Riverside County

Agency	Facilities Target	
City of Corona		0%
City of Riverside	Admin facility (1)	0%
	CNG Maintenance Bay (1)	0%
SunLine Transit Agency	Admin facility	0%
	Maintenance facility	0%
	Fueling facilities	0%
	Passenger shelter	0%

Note: Riverside Transit Agency responded to the survey, but did not provide percentage targets.

San Bernardino County

Agency	Facilities Target	
Morongo Basin Transit Authority		0%
Omnitrans		0%
Victor Valley Transit Authority		10%

Ventura County

Agency	Facilities Target	
Camarillo Area Transit		N/A
Gold Coast Transit District		0%
Thousand Oaks Transit		0%
Ventura Intercity Transit Authority/Ventura County Transportation Commission		TBD

Southern California Regional Rail Authority (Metrolink)

Agency	Facilities Target	
Metrolink		5%

REPORT

INFRASTRUCTURE

% of track segments with performance restrictions

Currently, only two transit operators in the SCAG region operate rail and must establish infrastructure targets: Metro and Metrolink.

Los Angeles County

Agency	Infrastructure Target	
Los Angeles County Metropolitan Transportation Authority (Metro)	Heavy Rail (31.9 mi)	0%
	Light Rail (172.1 mi)	0%

Southern California Regional Rail Authority (Metrolink)

Agency	Infrastructure Target	
Metrolink		5%

Transit Asset Management (TAM) Update

Regional Transit Technical Advisory Committee

March 29, 2017



Initial Targets Due Jan. 1, 2017

Category	Capital Assets	Measure/Target
Rolling Stock	Revenue vehicles by asset class	<u>Age (Useful Life Benchmark or ULB)</u> % of revenue vehicles within a particular asset class that have met or exceeded their ULB
Equipment	Non-revenue, support-service and maintenance vehicles equipment	<u>Age (ULB)</u> % of vehicles that have met or exceeded their ULB
Facilities	Maintenance and administrative facilities, passenger stations, and parking facilities	<u>Condition (TERM)</u> % of facilities within an asset class, rated below 3.0 on the TERM scale (1=poor to 5=excellent)
Infrastructure	Rail fixed-guideway, track, signals and systems	<u>Performance (%)</u> % of track segments with performance restrictions

Initial Targets Collected

- SCAG sent letter to 38 agencies requesting data; 31 responded
- Montebello - largest operator not responding
- Not all respondents provided percentage targets
- Total 127 targets received
- FTA expects MPOs to develop unified regional targets, but provides flexibility for cooperative development with operators

Data Limitations

- Initial targets are based on best available data, and may change once more data becomes available
 - Initial targets do not need to be reported to NTD
 - Asset inventory, condition reporting, and first TAM plans due Oct. 2018
 - First reporting on performance related to targets due Oct. 2019
- MPO regional targets
 - Initial targets due June 30, 2017
 - Targets revisited with 2020 Regional Transportation Plan (RTP) update

Approach to Initial Regional Targets

- Calculate weighted county-level targets based upon initial targets received from operators
- Maintain flexibility for operators to use their own asset classes, but simplify/combine to develop regional targets
- Maintain separate multi-county commuter rail target
- Present draft targets to RTTAC at next meeting (May 31)

Thank You

