

**Contract No. ML18072**  
**City of Anaheim Funding for Micro-Transit Vehicles and Electric Buses**

Final Report

Contractor Organizations:  
City of Anaheim  
Anaheim Transportation Network

August 25, 2020

Prepared for the Mobile Source Air Pollution Review Committee (MSRC) under the AB 2766  
Discretionary Fund Work Program

## Acknowledgements

The City of Anaheim and Anaheim Transportation Network (ATN) expresses their gratitude to the Mobile Source Air Pollution Reduction Review Committee and staff for their funding and assistance in the City of Anaheim and ATN's Micro-Transit Vehicles and Electric Buses project. The City of Anaheim and ATN also acknowledge the energetic and invaluable assistance provided by the Economic Development Department, the Center City Association, Polaris, and BYD Motors in establishing and ensuring the success of the project.

This report was submitted in fulfillment of AB 2766/ ML18072, Micro-Transit Vehicles and Electric Buses by The City of Anaheim under the partial sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of March 31, 2020.

## Disclaimer

The statement and conclusions in this report are those of the contractor and not necessarily those of the Mobile Source Air Pollution Reduction Review Committee (MSRC) or the South Coast Air Quality Management District (SCAQMD). The mention of commercial products, their sources or their uses in connection with material reported is not to be construed as either an actual or implied endorsement of such products.

## Project Description and Work Performed

The City of Anaheim's Community and Economic Development Department applied for a \$239,560 allocation of MSRC funds in the 2018 allotment cycle for the procurement of nine (9) light-duty zero emission vehicles and two (2) heavy-duty zero emissions vehicles in partnership with the Anaheim Transportation Network ("ATN"). The agreement between the City of Anaheim and South Coast Air Quality Management District ("SCAQMD") was formally entered into on December 12, 2018.

In further detail, the project includes the following two components:

1. Procurement of nine (9) Polaris GEM e6 for the operation of a microtransit service in Center City Anaheim. The vehicles were ordered August 31, 2018 and delivered in a satisfactory condition on January 2019. The vehicles were placed into operation on January 24, 2019.
2. Procurement of two (2) 30' BYD Electric Buses to be included in the operation of Anaheim Resort Transportation shuttles in the Anaheim Resort. Vehicles were ordered August 8, 2018 and delivered in a satisfactory condition on February 14, 2020. The vehicles were placed into operation on March 1, 2020.

## Problems Encountered

The following issues were encountered for the project:

1. During the quarter of August 2018 through July 2019, there was a delay in shipping parts to the BYD facility in Lancaster, CA has resulted in a push back of the electric buses' delivery date to January 2020.

2. During the quarter of October to December 2019, there was a short delay in production for the electric buses related to parts availability of the HVAC systems. The parts have arrived, and production has continued two weeks behind schedule.
3. To assist with quality control and streamline production and bus acceptance, the ATN procured the services of Vehicle Technical Consultants to provide on-site vehicle inspection services at the BYD facility in Lancaster. ATN also held weekly production meetings with the BYD project manager to receive weekly updates on production to ensure timely responses to issues.

### Emissions Benefits

The City of Anaheim estimated 3.84 tons of carbon dioxide was reduced during the first year of operations (2019). Based on the U.S. Environmental Protection Agency’s fact sheet on greenhouse gas emissions, the average vehicle has tailpipe CO<sub>2</sub> emissions of about 404 grams (0.9 lbs.) per mile. This was the standard used to calculate emission reduction.

Calculation:

<sup>1</sup>Carbon dioxide emission of (1) average vehicle = 404g (0.9 lbs.) per mile  
 2019 Average Trip Distance = 0.4 miles  
 2019 Total Number of Trips = 21,530

2019 Total Miles Travelled = (Average Trip Distance) x (Total Number of Trips)  
 = 0.4 miles x 21,530 trips  
 = 8,612 miles

2019 Reduced Carbon Emissions = (Carbon Dioxide Emission of 1 Average Vehicle) x (Total Miles Travelled)  
 = (0.9 lbs.) x (8,612)  
 = 7,670.43 lbs. of CO<sub>2</sub>  
 = 3.84 tons of CO<sub>2</sub>

### 2019 Operations Summary

Requested Trips Completed	21530
Average Response Time (Request Time to Pick Up)	0:02:13
Average Ride Time (Pick Up to Drop Off)	0:02:50
Average Trip Length and Time	0.4 miles

### Trips Completed by Day of Week

Day	Trips Completed	# of Passengers Served
Sun	2900	6855
Mon	2547	5004
Tue	2612	4976
Wed	2733	5305
Thu	2909	5871

Fri	3757	7976
Sat	4072	9827

#### Trip Completed by Time of Day

Hour	Requested Trips Completed	# of Passengers Completed
11:00 AM	1577	2871
12:00 PM	2140	4384
1:00 PM	1900	4139
2:00 PM	1760	3602
3:00 PM	1914	3734
4:00 PM	1751	3490
5:00 PM	1933	4085
6:00 PM	2158	4781
7:00 PM	2244	5082
8:00 PM	1861	4337
9:00 PM	1748	3929
10:00 PM	332	868
11:00 PM	178	443

<sup>1</sup> U.S. Environmental Protection Agency. (2018). Greenhouse Gas Emissions from a Typical Passenger Vehicle. Retrieved from <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100U8YT.PDF?Dockey=P100U8YT.PDF>

Photographs and Outreach

Pursuant to the contract, the following table documents the efforts done for public outreach:

<p><u>4. Display of MSRC Logo</u> – Contractor agrees to permanently display one MSRC decal in a prominent location on each vehicle procured pursuant to this contract.</p>	<p>A. MSRC Logo</p> <p>The MSRC logo was displayed on the exterior of the vehicles to inform the general public of the funding partnership.</p>  <p><i>MSRC stickers attached to a FRAN vehicle.</i></p>
<p><u>5. Promotion</u> – Proposed Public Outreach Plan to promote the MSRC’s co-funding of the vehicles. Acceptable outreach may include, but is not limited to, notices in contractor mailings to residents, newspaper notices, flyers, and information items at contract board meetings and community events.</p>	<p>A. FRAN Launch Party</p> <p>A launch party was held on January 24, 2019 at the Carnegie Plaza with Nine (9) Polaris GEM e6 placed into operation. The event was participated by project partners, community members, and agency staff.</p>



*City council members and city staff riding the FRAN vehicle*



*FRAN vehicles in operation*

## B. Pop-Up Events

The City of Anaheim and the Anaheim Transportation Network participated in local city street fairs and events such as Japan Fair, Halloween Parade (photos below), Summer Nights at Pearson Park, etc. These events allowed the staff to answer questions about services and informed the public of the operations and funding partners.



*FRAN participating in the Halloween Parade*



*FRAN's Pop-Up Event at the 2019 Children's Day at Pearson Park*

## C. Microtransit How-To Guide

Anaheim Transportation Network created an informational how-to guides that explains the process behind building a microtransit program. The guide includes defining the scope of service, selecting an asset model, developing the technology, securing funding, and coming up with its branding and marking.



# FRAN

**Free Rides Around the Neighborhood**



FRAN is an on-demand, MicroTransit system of electric vehicles providing point-to-point on-demand trips in Anaheim, California

### FRAN FAST FACTS

- 10 all-electric GEM e6 vehicles
- Point-to-Point service, 10 stops, 1.9-square-mile area
- Provide on-demand connectivity to local destinations, civic uses, residential complexes, parking facilities and FUN
- Custom designed CtrCity mobile app
- Averages over 100 riders per day within four months of launch
- Over 25,000 patrons served in seven months since inception

**How to Build a  
MicroTransit Program**

### Contact

Jim Appleby, Project Control Manager  
Anaheim Resort Transportation (ART)  
888-364-2787 / [JAppleby@atnetwork.org](mailto:JAppleby@atnetwork.org)  
[www.rideart.org](http://www.rideart.org)

*Cover Page of the FRAN How-To Microtransit Guide*

#### D. Professional Seminars/Publications

The City of Anaheim and the Anaheim Transportation Network shared knowledge about new mobility solutions which include microtransit programs at various professional gatherings such:

- Urban Land Institute Conference – September 2019 (below)
- Transportation Association and California Association for Local Economic Development (CALED) – March 2019
- Mobility Summit – October 2019
- Impact cities



FRAN & Ollie-AuthenTECH Connections in the Smart City

127 views • Sep 30, 2019

👍 0 👎 0 ➦ SHARE ⌵ SAVE ...

 Urban Land Institute   
8,09K subscribers

SUBSCRIBE

As tech transforms the built environment, an everyday human instinct is evolving with it: the art of gathering. To combat the woes of sterile tech-infused environments, new platforms are starting to rely on crafted, authentic user experiences that speak to the heart of the place and people.

*Screen Capture – ULI Conference 2019 with Kevin Clausen, City of Anaheim Project Manager*

*YouTube Video Link*

<https://www.youtube.com/watch?v=5mbk1zyUuRg>

## E. Print/Digital Media – Anaheim Magazine

The City of Anaheim, Anaheim Transportation Network and Center City Association used Anaheim Magazine to publicize information about the project and funding streams. Anaheim Magazine was distributed to all city residents and social media channels on January 17, 2020.



### FRAN-tastic



FRAN named after Francisca Avila Rimpan

You've probably noticed her in downtown Anaheim. Her trademark flash of orange, a friendly smile and a wave as she whizzes by. It's FRAN! The easiest way to get around Center City. FRAN, which stands for Free Rides Around the Neighborhood, is Anaheim's on-demand fleet of electric vehicles that offers free rides throughout the downtown area. The service's name also comes from Anaheim history. Francisca Avila Rimpan, FRAN's namesake, was a founding pioneer in our city. Each vehicle has the name of one of Francisca's daughters and granddaughters. This year, we're celebrating FRAN's first birthday. In just one year, the service has served more than 40,000 riders. And year two looks even brighter.

In honor of the occasion, we're expanding service to make FRAN even more convenient for residents, businesses and visitors. You can now catch a ride to and from several nearby parks and libraries: Central Library, Washington Park, Pearson Park, Founder's Park, Colony Park and Citrus Park. And coming soon, we'll be adding FRAN stops in various neighborhoods around downtown. The ideal! Ditch the car and still enjoy all the fun restaurants, shopping and entertainment in our hip downtown, also known as Center City. Even if you're driving to downtown, FRAN makes it easy to park in any of our structures without having to worry about walking too far to your destination. Plus, it pairs perfectly with our new parking

Anaheim Winter 2020

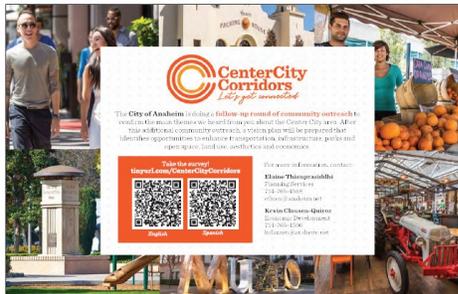
### service

guidance system, which helps you find open parking spots throughout Center City. Want to get in on the fun? Just download the Center City Anaheim app on your phone. You can use it to hail a free FRAN ride at one of our stops. You can also explore points of interest and find promotions from local businesses on the app as well. Soon, the app will also have real-time parking information, once we get it linked up with our parking guidance system. FRAN, a partnership between Anaheim and Anaheim Transportation Network, or ATN, is funded through two state grants: Mobile Source Air Reduction Review Committee Grant and Transit and Intercity Rail Capital Program Grant. We continue to seek additional grant funding to ensure the program's future. Also, the FRAN vehicles are made right here in Anaheim by Polaris Industries. Learn more at [RideFRAN.com](http://RideFRAN.com).



**FRAN Service**  
 • Monday — Thursday: 11 a.m. to 10 p.m.  
 • Friday & Saturday: 11 a.m. to Midnight  
 • Sunday: 11 a.m. to 11 p.m.

Want to get in on the fun? Just download the Center City Anaheim app on your phone. You can use it to hail a free FRAN ride at one of our stops. You can also explore points of interest and find promotions from local businesses on the app as well.



Winter 2020 Anaheim

Anaheim Magazine featuring FRAN in an article for their Winter 2020 Issue

## Summary and Conclusions

### **Project 1 – Microtransit (FRAN-Free Rides Around the Neighborhood)**

All FRAN (MicroTransit) vehicles have been procured and equipped and have been operational since January 24, 2019. A total of 10 vehicles were purchased; two (2) are equipped to provide ADA accessibility. ATN continues to work with the City of Anaheim to expand the current FRAN service boundaries.

FRAN provides connecting service between downtown Anaheim's civic and residential land uses, employment destinations, retail/entertainment venues and transportation/parking facilities. FRAN services operate as a deviated flex route with real-time reservation and arrival system powered by a mobile application.

The expansion of FRAN service to a broader area to include the nearby neighborhoods is underway with the City of Anaheim. This expansion will more than double the initial service area and bring a new transportation alternative to the residents in the surrounding communities.

### **Project 2 – Zero-Emission Bus**

A Purchase Agreement for two (2) Zero Emission Buses was executed with BYD Motors. Pre-production meetings were completed at the BYD facility in Lancaster. Delivery was completed in February 2020 and the buses were placed into service in March 2020.

An on-site inspector (Vehicle Technical Consultants) was contracted to oversee all production related matters and prepare weekly Progress & Issues Reports to ATN.

ATN currently utilizes six (6) BYD electric buses with the addition of these two new units. ATN has drivers and maintenance staff who are thoroughly trained to utilize and maintain electric vehicles. The expanded service will operate primarily on the routes in the Center City area. In addition to replacing less efficient fossil fuel buses, the new electric buses will operate with 50% greater frequency, cutting headway times in half on routes that are projected to see tremendous growth over the next three years.