



Foothill Transit

FINAL REPORT | MS 16099

Funding to Provide Special Bus Service to the LA County Fair

Foothill Transit

May 12, 2017

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



Acknowledgements

Special acknowledgment to the staff at the Pomona Fairplex for their assistance in the implementation of a clean emission transit service for patrons of the LA County Fair. Additionally, we would like to acknowledge support from multiple departments within Foothill Transit that ensured smooth operations of transit services.

This report was submitted in fulfillment of MS 16099 and Provide Special Bus Service to the Los Angeles County Fair by Foothill Transit under the partial sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of September 25, 2017.

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 & Work Performed

Started in the 1920s, The LA County Fair, held at the Fairplex in Pomona, is a popular end of summer tradition in Southern California and receives over 1.2 million visitors annually over a nineteen day period. The high volume of visitors results in traffic congestion along the surface streets and freeway off-ramps along the 10 and 57 freeways.

In March 2016, LA Metro opened the Gold Line extension phase 1, which connected Pasadena to Azusa. Since its opening, the ridership of the Gold Line extension exceeded LA Metro's initial estimates.

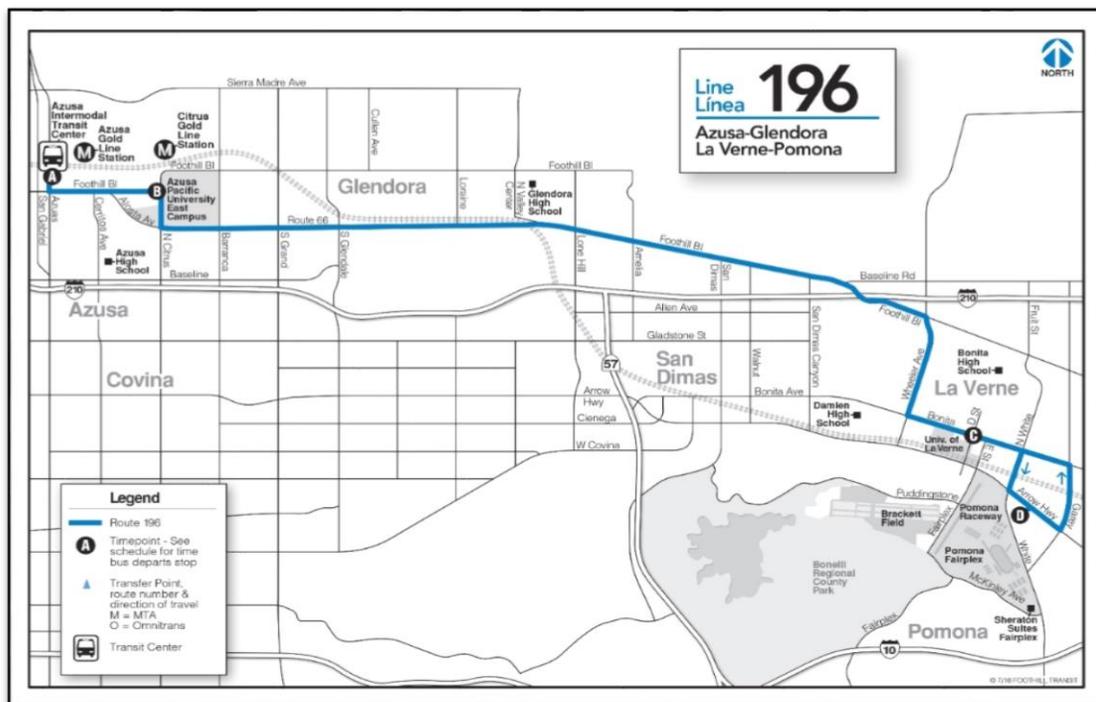
As a means to help ease congestion caused by the LA County Fair and take advantage of the popularity of the Gold Line extension, Foothill Transit implemented a brand new line, Line 196, specifically designed for visitors of the LA County Fair. The new bus line allowed customers to travel on the Gold Line, then take the limited stop bus service into the Fairplex. The route originated at the newly constructed Azusa Intermodal Transportation Center which allowed transfers with not only the Gold Line, but other heavily used Foothill Transit lines. The obvious goal is to get visitors out of their single occupancy vehicles to reduce emissions, but also leverage the vast LA Metro rail network to get visitors from all areas of Los Angeles county.

LA County Fair Service Characteristics

Line 196 is a new line created to serve the Fairplex during the LA County Fair. During its first year in operation, the line operated one hour before the fair opened and the last trip one hour after the fair closed on Saturday, Sunday, and Labor Day. At its peak, the service utilized two 2016 New Flyer Compressed Natural Gas (CNG) buses.

The line had a limited number of stops to allow faster travel time. The stops along the route allowed transfer opportunities with one of Foothill Transit's busiest lines, Line 187. Two additional stops were added along the route to service three college campuses in the area. One stop serviced Azusa Pacific University and Citrus College and another stop serviced the University of La Verne.

Customers that used the service saved a minimum of \$15 on parking. They also had the opportunity to save \$8 when pre-purchasing tickets by entering the coupon code "Foothill" on the LA County Fair website.





Line 196 Schedule (Weekends and Holidays Only)

Eastbound to LA County Fair

Westbound to Azusa

Leave Azusa

Arrive Pomona

Leave Pomona

Arrive Azusa

Azusa Downtown Gold Line Station	Citrus Ave. & Foothill Blvd.	Bonita Ave. & D St.	LA COUNTY FAIR	LA COUNTY FAIR	Bonita Ave. & D St.	Citrus Ave. & Foothill Blvd.	Azusa Downtown Gold Line Station
9:00	9:05	9:25	10:00	1:00	1:35	1:55	2:00
10:00	10:05	10:25	11:00	2:00	2:35	2:55	3:00
11:00	11:05	11:25	12:00	3:00	3:35	3:55	4:00
12:00	12:05	12:25	1:00	3:40	4:15	4:35	4:40
12:40	12:45	1:05	1:40	4:20	4:55	5:15	5:20
1:20	1:25	1:45	2:20	5:00	5:35	5:55	6:00
2:00	2:05	2:25	3:00	5:40	6:15	6:35	6:40
2:40	2:45	3:05	3:40	6:20	6:55	7:15	7:20
3:20	3:25	3:45	4:20	7:00	7:35	7:55	8:00
4:00	4:05	4:25	5:00	7:40	8:15	8:35	8:40
4:40	4:45	5:05	5:40	8:20	8:55	9:15	9:20
5:20	5:25	5:45	6:20	9:00	9:35	9:55	10:00
6:00	6:05	6:25	7:00	9:40	10:15	10:35	10:40
6:40	6:45	7:05	7:40	10:40	11:15	11:35	11:40
7:20	7:25	7:45	8:20	Saturdays and Sunday 9/4 additional trips	(11:10)	(11:55)	(12:00)
8:00	8:05	8:25	9:00		(11:40)	(12:35)	(12:40)
					(12:40)	(1:35)	(1:40)

Note: Line 196 will drop you off at the shuttle stop where a free LA County Fair Shuttle will take you to the fair. Line 196 only operates on weekends and holidays in September.

The schedules above show the estimated departure times at the Line 196 bus stops. Traffic, weather, and construction may affect arrival times.

LEGEND: LIGHT TYPE = AM **BOLD TYPE = PM** DROP OFF ONLY (PARENTHESES) = Schedule for fair hours through midnight.

Foothill Transit staff met with representatives from the Fairplex to coordinate the bus movement and on-site stop location. The bus stop at the LA County Fair for Line 196 was located in the Blue Gate parking lot, adjacent to the tram loading area, allowing customers to exit the bus, then conveniently board the LA County Fair tram to the admission gates.

To help assist customers, four Foothill Transit ambassadors were assigned to each day of service. Two ambassadors were stationed at the Azusa Intermodal Transportation Center from 9AM to 1PM and 2 ambassadors were stationed at the LA County Fair stop from 6PM till the last trip. The ambassadors answered customer questions and surveyed customer on:

1. Trip origin
2. Mode of transfer to the stop
3. How they heard about the service

Promotion and Outreach

Foothill Transit worked with the LA County Fair marketing team to obtain official fair images to use in Foothill Transit advertising. Foothill Transit created interior cards displayed in the buses and “take-one” brochures that were distributed in its five Transit Stores, on the buses, local high schools, colleges, and community centers. Signs were also posted at Foothill Transit’s busier stops.

A webpage on Foothill Transit’s website was dedicated to the service and social media was used to “spread the word” about the new service. The dedicated webpage garnered a little under 10,000 views between 8/26/2016 to 9/25/2016.

Geo-localized web banner smartphone app advertisements were also used to target potential customers and reached a total of 128,000 users. Two Facebook ads were developed and reached about 50,000 users, the ads were “liked” 300 times, “shared” 60 times, and had 30 comments.



The image shows a Facebook advertisement for Foothill Transit. At the top left is the Foothill Transit logo, a blue and green stylized 'F' with a checkmark. To its right is the text 'Foothill Transit' and 'Written by Pulsar SparkEast [?] · August 25 ·'. On the far right is a 'Like Page' button. Below the header is the main text: 'Save on LA County Fair admission and see it all when you ride our new Line 196!'. The central part of the ad is a photograph of several children sitting in a colorful, multi-colored roller coaster car, with their arms raised in excitement. Below the photo is the text 'Welcome to the excitement' followed by 'Visit the L.A. County Fair without paying for parking or searching for a space, and get discounted tickets!'. At the bottom left is the website 'FOOTHILLTRANSIT.ORG' and at the bottom right is a 'Learn More' button.

Foothill Transit ✓
 Written by Pulsar SparkEast [?] · August 25 · 🌐

Like Page

Enjoy stress-free rides to the LA County Fair with our new Line 196!



Welcome to the experience

Visit the L.A. County Fair without paying for parking or searching for a space, and get discounted tickets!

FOOTHILLTRANSIT.ORG

Learn More

Facebook comments about the service:

-  **Regina Mc Reynolds** We took this bus on Monday and the ride was nice had a great time will definitely do agin
 Unlike · Reply · Message · 👍 2 · September 7 at 4:22pm
-  **Debroah Basye** Yay can't wait to go so excited gonna try this
 Unlike · Reply · Message · 👍 1 · August 29 at 5:00am
-  **David Myers** Barbara, I think this is the Foothill line you were talking about today. Such an easy connection. Yvonne would have loved this!
 Unlike · Reply · Message · 👍 1 · August 26 at 9:26pm



Rose Sevilla So happy we can now get to the fair using public transportation. They need to include Friday and not just weekends. A lot of people also go to the fair on Friday. We also need a schedule to see the stops and time that they pick up.

Unlike · Reply · Message · 3 · September 5 at 9:09am



Foothill Transit We're providing this service through a grant, and this year the grant doesn't cover service on Fridays. But if it goes well this year, we'd like to continue serving the fair -- and maybe increasing service, too! Click on the link in the post to see the schedule and stops.

Like · Reply · 1 · Commented on by Gabrielle Klein-Mejia [?] · September 7 at 8:00am



Rose Sevilla Thank you very much for replying and providing us with information about the new fair bus. I am sure that the fair bus service will do well this year. Parking at the fair is so expensive and the admission price has also increased. The admission price does not include any of the rides and their are a lot of extra charges now in the fair. Having this bus service would really help to have extra money for fun and food. The best part is that you don't have to deal with driving and waiting in that big line to get into the parking lot. I have seen it backed up on Foothill Blvd and white Ave for several blocks. Thank you Foothill Transit for bringing us aboard the Fair bus this year! I will let others know so we can make it a success!

Unlike · Reply · Message · 1 · September 7 at 11:01am



Jackie Munguia Hi rose I bought my fair tickets at Ralph's for \$12.00.

Like · Reply · Message · 2 · September 17 at 10:49am

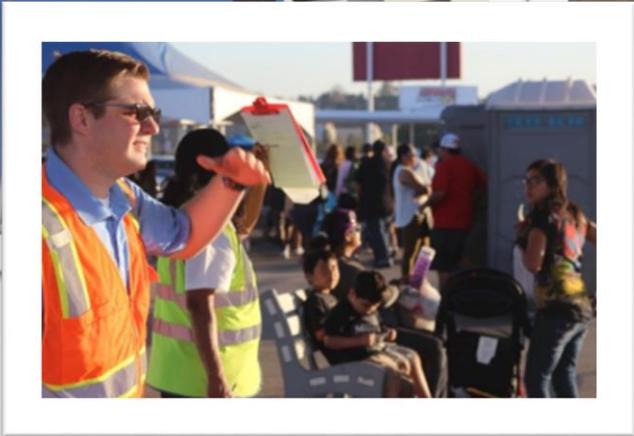


Write a reply...



Foothill Transit also advertised the service on various radio stations throughout the county that was played on twelve local radio stations.

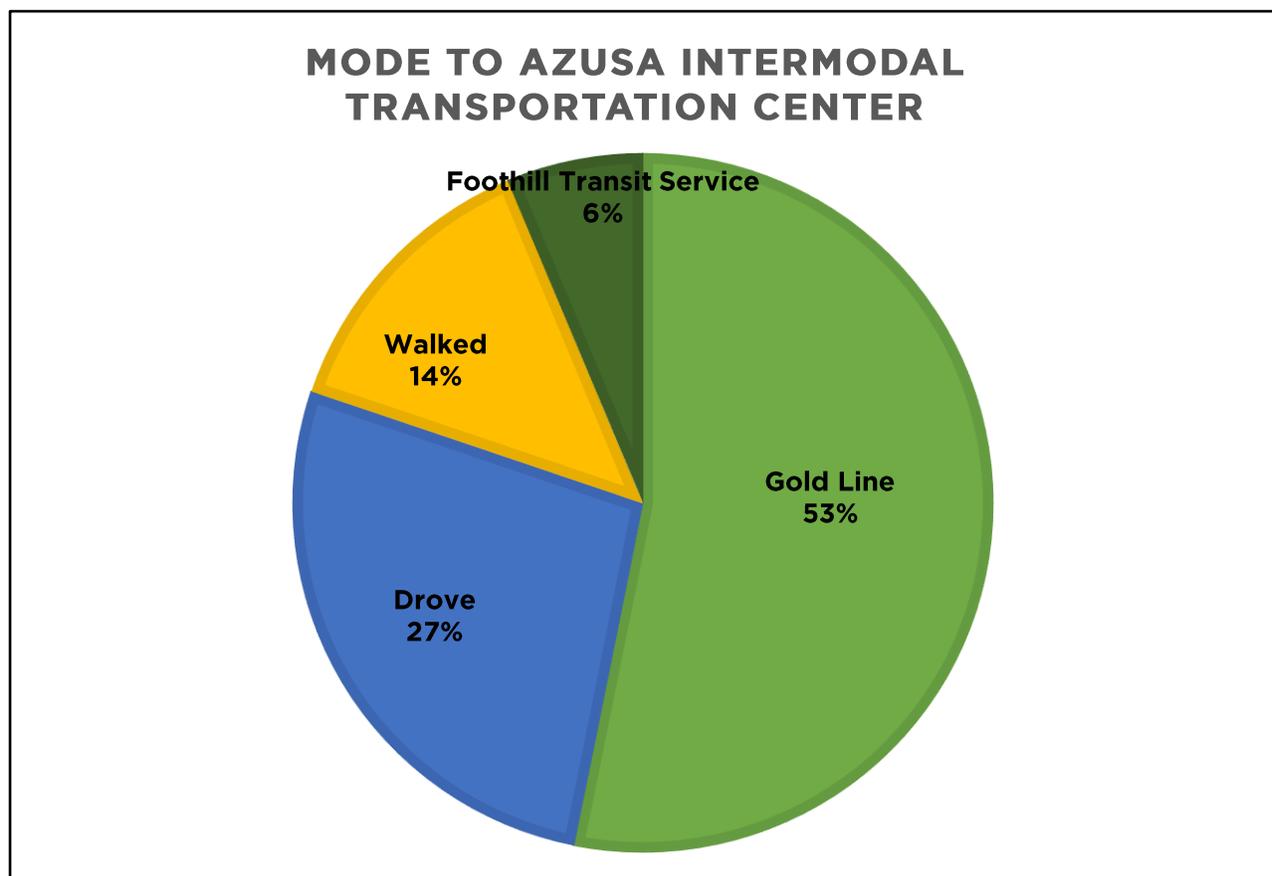
To advertise to Gold Line customers, Foothill Transit created a “Michelangelo” ad which was displayed on the ceiling of Gold Line trains.



Ridership and Service Performance

September 2016 was the first year Foothill Transit provided special service to the LA County Fair. Ridership overall was not as high as expected, but there was a steady increase of customers each week. The total number of trips provided during the service was 1,003 based on farebox data.

One goal of the service was to leverage transfers from the Gold Line extension, based on the results of the conducted surveys, the service succeeded showing 54% of those who rode Line 196 started their trips on the Gold Line. The next highest mode of transportation was driving, then walking, and finally transferring from another Foothill Transit line.



The customers who started their trip on the Gold Line said they started their trips in the following cities listed in the table below. Most of the customers taking the Gold Line started their trip in Los Angeles, the next highest group came from cities along the Gold Line route:

City of Customers using the Gold Line to get to the Azusa Station	Number of Groups
Los Angeles	19
Pasadena	9
Monrovia	6
Reseda	3
South Pasadena	2
Glendale	2
Lawndale	1
Montebello	1
Baldwin Park	1
El Monte	1
La Puente	1
Altadena	1
Long Beach	1
Arcadia	1
Compton	1
Azusa	1
Duarte	1
Van Nuys	1
South El Monte	1
Henderson	1
Torrance	1
Huntington Park	1
Alhambra	1
Inglewood	1

Customers heard about the service through:

Method learned about service	Number of Groups
Online not specified	31
LACF.org	25
Metro Gold Line	21
Bus Stop Sign	11
Foothill Transit Website	6
Interior bus ads	5
Facebook	3
Word of mouth	3
Local Paper	2
LA Metro Website	2
Fair Employee	1
Transit Store	1

Reduction in Emissions

This project was very successful in reducing emissions. In total, this project eliminated 10,897 lbs. of CO2 (4.94 metric tons), 855 grams of NOx, and 44.3 grams of particulate matter. In addition, we eliminated 24,000 passenger car vehicle miles, freed up 1,000 parking spaces at the Fairplex, and reduced local traffic congestion. The section below describes our methodology and calculation of emission benefits.

As part of the Fairplex service, we performed surveys of riders, including trip distance. Each survey revealed the number of riders and where the rider originated (zip code). Based on this zip code data, we calculated the total distance that the rider would have driven, had he not taken the bus. This was calculated as a trip from the home zip code to the Fairplex.

Based on the survey and this calculation, the average distance traveled was 24 miles. Extrapolated to all 1000 riders, this is equal to 24,000 SOV vehicle miles that would have occurred absent this project. It also would have been 1000 parking spaces that would have been required, and additional congestion at the Fairplex.

Instead, we replaced this traffic with our bus service. We ran our CNG buses for 3,700 bus miles throughout the weekend of the fair.
 Vehicle Miles Traveled

Passenger Cars (avoided)	24,000
Foothill Transit Buses	3,700

We can quantify the emission benefits of the project using these VMT numbers above, combined with emission factors (EFs) for cars and buses. EFs for passenger cars were sourced from ARB's EMFAC tool, using the statewide annual average for the entire fleet of gasoline vehicles.

Transit bus EFs came from two sources. Note that we are running compressed natural gas (CNG) buses powered by renewable natural gas. For NOx and PM, the EFs were calculated in Altoona bus testing report for our bus model. For CO2, we relied on the fuel pathway that ARB certified for our RNG in the Low Carbon Fuel Standard.

Emission Factors (g/mi):

	CO2	NOx	PM
Passenger Cars	323	0.105	0.002
Foothill Transit Buses	758	0.45	0.001

[Link to Altoona report:

<http://altoonabustest.psu.edu/buses/reports/384.pdf?1310655392>]

Using the VMT reductions and emission factors above, the total emission reductions are:

Total emissions and reductions

	CO2 (lbs)	Nox (g)	PM (g)
Car emissions eliminated	17,075	2,520	48.0
Bus emissions created	6,178	1,665	3.7
Net project benefit	-10,897	-855	-44.3

In total, this project eliminated 10,897 lbs of CO2 (4.94 metric tons), 855 grams of NOx, and 44.3 grams of particulate matter.

Summary and Conclusions

General feedback from customers and Pomona Fairplex staff was positive. They expressed interest in the continuation of this line for future years. Riders of the service enjoyed the affordability of riding the bus without the traffic congestion associated with driving their personal vehicles.

Upon completion of the service, Fairplex staff was optimistic about discussions to increase the level of service for 2017 and to expand to more locations in an effort to discourage automobile congestion.

Some things that can be done to improve future service and boost ridership are:

- Start the marketing campaign earlier to attract more riders.
- Work with Fairplex staff to incorporate Foothill Transit in some of the LA County Fair marketing.
- Purchase advertising space earlier on Gold Line trains and stations regarding the service to get more desirable high visibility locations.
- Improve guest control so that the line of customers waiting for the Fair Tram does not extend to the designated on-site Foothill Transit bus stop.
- Provide clearer more prominent wayfinding signage for customers looking for the Foothill Transit bus.
- Provide better traffic control to ensure customer automobiles do not enter designated bus only traffic lanes.

Overall, we feel the service was a success, even though the numbers were not quite as high as we would have liked. We would like to continue the service and make improvements based on lessons learned from the first year of service and build this into a service LA County Fair customers will look for and depend on to get the fair in the future.