City of Long Beach

Working Together to Serve

Memorandum

Date: August 1, 2017

To: Patrick H. West, City Manager

From: Jess L. Romo, Director, Long Beach Airport

For: Mayor and Members of the City Council

Subject: **Update of Ground Transportation at the Long Beach Airport**

On May 2, 2017, the Long Beach Airport (Airport) retained InterVISTAS Consulting, Inc., to conduct a ground transportation study and provide recommendations for modifying ground transportation fees at the Airport. The study included a detailed review of the Airport's ground transportation program, analyzing industry best practices that are most appropriate for the Airport's business model, and providing recommendations for changes that develop and maintain a robust program.

The study reviewed the operations of Transportation Network Companies (TNCs), taxicabs, limousines, vans, charter buses, off-site courtesy vehicles, and other common modes of commercial ground transportation at the Airport. Detailed recommendations were provided for each type of operator, including recommendations for the following fees and changes:

- Maintain the current ground transportation application fee of $120 for all providers
- Modify ground transportation annual permit fees to a three-tier structure based on fleet size ranging from $100 to $200
- Implement per-trip fees for each commercial ground transportation type ranging from $1 to $6, based on vehicle size, volume of operation, impact to roadways, and consideration of other strategic business practices

Implementation of per-trip fees for each type of operator will require a new system to monitor commercial vehicle trips and to assist in the enforcement of the new fee structure. A beacon-based ground transportation management system (GTMS) was recommended as the most suitable for Long Beach, based on the size of the Airport, volume of vehicular traffic, and comparable cost of a beacon system. Following the recommendations of the study, the Airport expects to procure and implement a GTMS sometime in 2018.

The recommendations of the study also included updating the non-exclusive licensing agreements (NELA) with TNCs and taxicab companies. The NELA with TNCs will build on the current agreements in use for the TNC pilot program and incorporate aspects of industry best practices and requirements specific to operations at the Airport. An updated NELA with Long Beach Yellow Cab will also be negotiated to reflect current standards for taxicab operations at airports and will provide for a more equitable allocation of costs than the model currently in place.

A ground transportation stakeholders meeting is scheduled at the Airport on August 21, 2017, to inform the stakeholder groups and receive input about proposed changes to the Airport's ground transportation program.

The recommended fees are proposed for implementation in FY 18 and are contained in the City's Master Fee and Charges Schedule, tentatively scheduled for City Council adoption on September 5, 2017. If adopted, the new fees will go into effect October 1, 2017.

The ground transportation study is attached for your review and contains a thorough overview of the program, including overall management, technology solutions to monitoring activity, and the recommended fees for each type of operator. Additionally, the study may be viewed online at www.lgb.org.

If you have any questions or require additional information about the ground transportation study, please contact Claudia Lewis, Manager of Administration and Finance, at (562) 570-2612.

JR:CL:KM

ATTACHMENT

CC: CHARLES PARKIN, CITY ATTORNEY
LAURA L. DOUD, CITY AUDITOR
TOM MODICA, ASSISTANT CITY MANAGER
KEVIN JACKSON, DEPUTY CITY MANAGER
REBECCA JIMENEZ, ASSISTANT TO THE CITY MANAGER
JOHN GROSS, DIRECTOR OF FINANCIAL MANAGEMENT

InterVISTAS

a company of Royal HaskoningDHV

GROUND TRANSPORTATION STUDY
Phase II

long beach airport

July 2017

InterVISTAS
a company of Royal HaskoningDHV

Inter*VISTAS* Consulting Inc.

1350 Bayshore Highway
Suite 205
Burlingame, CA 94010
USA

TEL:
+1-650-597-3867

OFFICES:
Canada
United States
United Kingdom
The Netherlands
Brazil

www.inter*VISTAS*.com
info@inter*VISTAS*.com

July 6, 2017

Mr. Mony Chhey
Finance & Administration
Long Beach Airport
4100 E. Donald Douglas Drive, Second Floor
Long Beach, CA 90808

Re: Ground Transportation Study II, Long Beach Airport

Dear Mr. Chhey,

Inter*VISTAS* is pleased to submit our recommendations for improving the ground transportation program at Long Beach Airport (the Airport), which is owned and operated by the City of Long Beach (the City).

Airport staff are responsible for managing, controlling, and enforcing the operations of private vehicles and commercial ground transportation providers using the Airport access and curbside roadways. Commercial ground transportation providers include taxicabs, limousines, Transportation Network Companies (TNCs), shared-ride vans, scheduled and chartered buses, and courtesy vehicles (e.g., those courtesy vehicles serving nearby hotels and motels, rental car companies, and off-airport parking businesses).

The attached report describes:

1. The mission of the Airport/goals of Airport management
2. The Airport's current business relationships with the ground transportation providers and recommendations for improving these relationships
3. The types of ground transportation fees used at other airports, the fees the Airport now charges ground transportation providers, and recommendations for modifying these fees, including the use of per-trip fees calculated on a cost-recovery basis
4. Methods of monitoring commercial vehicle trips to support the collection of per-trip fees
5. Implementation recommendations/next steps

1. Mission of the Airport/Goals of Airport Management

Relevant goals of Airport management include:

- Maintain the highest level of safety and security, and ensure that the ground transportation vehicles are properly licensed, insured, maintained, and operated
- Offer customers ground transportation options available at a broad range of costs and levels of convenience

- Improve the quality of life of the surrounding community by operating the Airport in an environmentally sustainable manner, improving air quality and reducing vehicle emissions
- Maintain an efficient and effective business model by operating the Airport in a financially self-sustaining manner, as required by the Federal Aviation Administration. Require that all businesses pay fees that 1) allow the Airport to at a minimum recover its costs, 2) reflect the benefits the businesses receive from the presence of the Airport, and 3) help offset the erosion of Airport revenues.
- Maintain, preserve, and enhance non-airline revenues in a manner that is consistent with management's other goals.
- Provide a fair and reasonable operating cost to the Airport's business partners allowing providers the opportunity to earn a reasonable return on their investments, and the drivers an opportunity to receive appropriate compensation.
- Promote efficient operations of the Airport's roadways and other facilities by minimizing the efforts required by police, discouraging inefficient use of the terminal curbsides, and accurately monitoring vehicle trips.
- Remain competitive with other Airports, in particular those located in the Southern California Region.

2. Recommendations for improving the Airport's business relationships with the ground transportation providers

The recommended changes to the Airport's business relationships with each class of ground transportation provider are described below. The recommended changes to the fees ground transportation providers are required to pay to the Airport are described in the subsequent section.

- *Taxicabs* — It is recommended that the Airport either (a) issue a Request for Proposals (RFP) for an exclusive taxicab concessionaire, or (b) re-negotiate the existing Non-Exclusive License Agreement (NELA) for Airport taxicab service, which Long Beach Yellow Cab has held since 1983, to incorporate industry best practices such as those related to vehicle and driver standards, and expand the language describing operations on the Airport
- *Reservation-based services—Limousines, Vans, and Charter services* — Require limousine, van, and charter bus drivers to wait in the cell phone lot or other designated location until after their passenger's flight has landed, park in a designated location, and then greet their customers, and accompany them back to the parked vehicle. Provide a designated limousine driver meet and greet area at the baggage claim area. Create space for limousine parking in the planned Ground Transportation Center (GTC), and, upon its completion, require limousine drivers to wait for customers at this location
- *Non-reservation based services— Courtesy vehicles* — In order to reduce vehicle miles of travel and vehicle emissions, and thus improve air quality, encourage the operators of courtesy vehicles to use alternative fuel vehicles to reduce vehicle emissions/improve air quality, and consolidate their trips (e.g., one courtesy vehicle serving several hotel properties)

- *Non-reservation based services— Shared-ride vans* —Award an exclusive concession contract for walk-up shared-ride van service to one or two shared-ride van providers through an RFP process. Require the concessionaire to comply with the Airport Commercial Ground Transportation Rules and Regulations for vehicles, drivers, and customer service. Eliminate "free call" vans. Shared-ride van providers not awarded a concession contract could serve the Airport operating under a reservation-based ground transportation permit.
- *Transportation Network Companies* — The Airport's temporary or pilot program NELA for TNCs incorporates most aspects of best industry practices. Provisions not currently included, but recommended include:
  - Require each TNC company to maintain at least $1,000,000 in automobile liability insurance for each vehicle at all times the vehicle is on Airport property.
  - Require that TNC drivers remain connected to the Company's Mobile Application at all times while on the Airport.
  - Establish a geofence around the designated TNC Airport Assignment Area.
  - Require that the TNC company track each vehicle trip crossing the geofence and report the trip number and location, driver identifier, and vehicle license plate
  - Require the TNC company to cooperate with the Airport should the Airport acquire a technology to monitor and audit the TNC company's operations and trips
  - Require that the TNC provide a copy of its training material (e.g., a video or booklet) presented to TNC drivers describing operations on the airport
  - Establish fines or fees to be charged TNC company for violations of Airport rules and regulations by the Company or its drivers

3. Recommendations for modifying ground transportation fees

The recommended changes to the fees that ground transportation providers are required to pay to the Airport are described below. These fees include (1) permit fees, (2) per-trip fees, and (3) privilege fees.

- *Permit* fee — It is recommended that all ground transportation providers be required to obtain an airport permit (or NELA) and pay an annual fee described below. By signing the permit, a ground transportation provider would indicate that they have (1) entered into a formal business relationship with the Airport, and (2) agreed to obey all Airport rules and regulations, including providing required liability insurance and paying all airport fees. The proposed permit fees are:

Number of vehicles operated or owned by permittee	Annual permit fee per permittee
Five vehicles or fewer	$100
Six to ten vehicles	$150
More than ten vehicles	$200

- *Permit application fee* — It is recommended that the Airport maintain its current $120 application fee.
- *Per-trip fee* — This fee is intended to allow the Airport to recover its costs attributable to providing, operating, and maintaining the Airport facilities used directly by commercial ground transportation providers. The method used to calculate the proposed fees, which vary based upon the vehicle size and class of ground transportation provider, are described in the attached report.

Proposed per-trip fees

Vehicle class	Vehicle size (Number of passenger seats)		
	5 seats or fewer	6 to 14 seats	15 seats or more
Taxicab (all taxicabs)	$2.00		
Reservation-only limousine, van, and charter bus	$1.00	$1.50	$5.00
Shared-ride vans (a)	--	$20.00	--
Shared-ride vans (b)	--	$6.00	--
Courtesy vehicles	--	$1.50	--
TNCs (all TNCs)	$3.00		

(a) Proposed per-trip fee if the Airport were to retain the existing "free call" shared-ride vans. Not recommended

(b) Proposed per-trip fee to be charged shared-ride concessionaire if the Airport awards exclusive concession contract for walk-up, shared-ride vans. Recommended

- *Privilege fee* — It is suggested that (a) off-airport rental car companies continue to be required to pay a privilege fee calculated as 8% of their gross airport-related revenues, and (b) any future off-airport parking businesses be required to pay a privilege fee calculated as 10% of their gross airport-related revenues. It is suggested that off-Airport rental car companies and off-Airport parking businesses be allowed to credit any per-trip fees charges against the amount of the privilege fees paid, and thus would, in essence, only pay the higher of these two fees.

4. Monitoring commercial vehicle trips

It is recommended that the Airport install a ground transportation management system (GTMS) to support the collection of per-trip fees and accurately monitor the number of trips made by each ground transportation provider. It is suggested that a beacon-based GTMS system is most suitable for Long Beach Airport due to the size of the Airport, the volume of commercial ground transportation traffic, and the comparable costs of a beacon system. The attached report provides additional information about alternative GTMS technologies, including the use of self-reporting.
The Airport does not need a GTMS to monitor TNC trips as these trips are monitored using the company's geofence. However, it is suggested that the Airport monitor the volume of TNC activity for one to two years, and then determine if TNC tracking software is warranted.

5. Implementation recommendations/next steps

It is recommended that the Airport implement the recommendations contained in the attached report in a phased manner. The proposed implementation actions and their suggested schedule include:

- Review the recommendations contained in this report with the ground transportation providers, meeting separately with each industry group to allow them to discuss their specific concerns and questions. As appropriate, modify the recommendations contained in this report to reflect the suggestions offered by the ground transportation providers.
- Present the recommendations, revised as appropriate, to City Council for approval
- Adopt the final NELA for TNCs
- Award new taxicab and shared-ride van concessions using an RFP process to select a new concessionaire
- Purchase and install a beacon-based GTMS system
- Implement the proposed per-trip fees in phased increments to allow the ground transportation providers the opportunity to adjust their business models to the additional charges, and to test and refine the reporting systems.

Please contact me with any questions regarding this report.

We appreciate the opportunity to have assisted the City of Long Beach and the management of Long Beach Airport.

Sincerely,

Peter Mandle
Executive Vice President

Study Background and Scope

Long Beach Airport (the Airport) is owned and operated by the City of Long Beach (the City). Airport staff are responsible for managing, controlling, and enforcing the operations of private vehicles and commercial ground transportation providers using the Airport access and curbside roadways. Commercial ground transportation includes taxicabs, limousines, Transportation Network Companies (TNCs), shared-ride vans, scheduled and chartered buses, and courtesy vehicles (e.g., those courtesy vehicles serving nearby hotels and motels, rental car companies, and off-airport parking businesses). As described in this report, Airport management have established rules and regulations governing the operations of these ground transportation providers, and require that they pay certain fees to the Airport.

In March 2017, at the request of Airport staff, Frasca and Associates completed a review of the Airport's existing ground transportation program. In May 2017, Airport staff retained Inter*VISTAS* Consulting Inc. to consider the Frasca report and provide more detailed recommendations for improving the Airport's ground transportation program. This report presents the findings and recommendations resulting from the Inter*VISTAS* study.

Inter*VISTAS* was tasked with developing recommendations to (1) improve the business arrangements between the ground transportation providers and the Airport, (2) modify the fees the Airport charges the ground transportation providers, and (3) monitor the volume of business conducted by these providers.

Specifically, the study was conducted to:

- Summarize the Airport's business relationships with the current ground transportation providers
- Develop fee structures to be charged the ground transportation providers
- Analyze the current TNC pilot program and make recommendations for a permanent program
- Estimate the initial and on-going costs of a Ground Transportation Management System (GTMS) or other technology to assist Airport staff in managing ground transportation
- Suggest an implementation schedule for the recommendations
- Provide recommendations on stakeholder outreach

Mission of the Airport/Goals and Objectives of Airport Management

The mission of the of the Airport is to provide the highest level of customer service while operating a safe, efficient, and environmentally sustainable airport.

The relevant goals and objectives of Airport management with respect to the provision of ground transportation services are described below.

- *Maintain the highest level of safety and security*. Management wishes to provide safe and secure transportation for the Airport's passengers and visitors. To do so, the Airport management ensures that the ground transportation providers serving the Airport are (1) properly licensed and insured, (2) maintain and operate their vehicles in accord with Federal, State, and City standards, (3) use

properly licensed and properly trained drivers, and (4) comply with the Airport's rules and regulations while on Airport property.

- *Offer customers a broad range of transportation options*. Management wishes to continually enhance the experience of the Airport's customers by ensuring that they can select from an expanded choice of ground transportation options offered at a range of costs and levels of convenience. These options are to be available to passengers with special needs, including disabled passengers using wheelchairs, family groups with many pieces of luggage, and customers with golf clubs, skis, surfboards, or other large objects.
- *Improve the quality of life of the surrounding community*. Management strives to operate the Airport in an environmentally sustainable manner. With respect to ground transportation, management seeks to improve air quality by reducing vehicle emissions. To do so, management encourages the use of alternative fueled vehicles, promotes the use of multi-passenger vehicles or public transit, and discourages unnecessary trips (e.g., deadhead trips or ground transportation drivers travelling to the airport in empty vehicles to wait for deplaning customers).
- *Maintain an efficient and effective business model.* The Airport relies upon fees and charges paid by the airlines and other Airport tenants—including ground transportation providers—to develop, operate, and maintain the Airport. The revenues resulting from these fees and charges are needed to comply with Federal Aviation Administration requirements that the Airport be operated in a financially self-sustaining manner, without reliance on local or State taxes. Consequently, it is the policy of Airport management that all ground transportation providers doing business on the Airport (i.e., picking up or dropping off passengers) pay fees that (a) allow the Airport to at a minimum recover its costs of providing, operating, and maintaining the facilities used by these providers, (b) reflect the benefits these providers receive from the presence of the entire Airport, (c) offset the erosion of Airport parking and rental car revenues resulting from the diversion of customers to transportation providers benefitting from the presence of the Airport but not paying fees reflecting these benefits, and (d) provide the Airport with reserves for required infrastructure improvements.
- *Maintain, preserve, and enhance non-airline revenues*. The Airport derives significant non-airline revenues from its landside operations. In 2016, the Airport received approximately $7,758,000 from the Airport's public parking operations and about $3,090,000 from the fees paid by the rental car companies operating at the Airport. These revenues allow the Airport to maintain a cost per enplaned passenger that allows it to attract and maintain airline service. Airport management seeks to maintain, preserve, and enhance these revenues in a manner that is consistent with its other goals.
- *Provide a fair and reasonable operating cost to its business partners*. Airport management recognizes that the ground transportation providers serving the Airport have different operating methods and costs, and seek to provide all authorized providers access to Airport passengers, while avoiding unfair advantages to any provider. Management believes that the ground transportation providers serving the Airport should have an opportunity to earn a reasonable return on their investments. Airport management also believes that the drivers operating the ground transportation services should have an opportunity to receive appropriate compensation and benefits.

- *Promote efficient operations of the Airport's roadways and other facilities*. It is a goal of management that the Airport roadways, curbside areas, and other facilities be operated in a manner that minimizes the effort required by police (or traffic control officers) to enforce Airport regulations, discourages inefficient use of and unnecessary trips past the terminal curbside areas, and allows the volume of trips made by each ground transportation provider to be accurately monitored.
- *Remain competitive with other Airports, in particular those located in the Southern California Region.* It is a goal of management that the range of ground transportation services offered at the Airport and the costs and quality of these services, reflect best industry practices and be comparable to those transportation services available at other Southern California airports. Management also strives to ensure that the Airport's roadways, curbsides, and parking areas provide adequate capacity and are properly maintained in order to provide an attractive and competitive environment.

The Airport's Business Arrangements with the Existing Ground Transportation Providers

This section describes (a) the Airport's current business relationships with the providers of taxicab, limousines, courtesy vehicles, TNCs, and other ground transportation services, (b) best practices for the management of these services, and (c) recommendations for changes to the Airport's current business relationships with operators of each service.

Taxicabs

The City of Long Beach requires that taxicab companies obtain a City permit in order to transport passengers on City streets. The terms of this permit are described in Chapter 5.80 (Vehicles for Hire) of the City Code. At present Long Beach Yellow Cab is the only company allowed to provide on-demand taxicab service within the City. The City Code requires that drivers "wear clothes that are neat and clean, and be well groomed", and requires background checks on drivers to verify that they have not been found guilty of reckless driving, committing a felony, or driving under the influence. The Code requires that taxicabs be kept in a "clean and sanitary" condition, and describes the use of taximeters. The Code does not define a maximum mileage or age standard for taxicab vehicles, or refer to the training of drivers.

On-demand taxicab service at the Airport is provided through a Non-Exclusive License Agreement (NELA or agreement) with Long Beach Yellow Cab. This agreement was initially signed in 1983 and has been extended by the Airport annually ever since. It provides Long Beach Yellow Cab with the exclusive right to serve walk-up customers (i.e., passengers seeking on-demand taxicab service). For this privilege, Long Beach Yellow Cab is required to pay the Airport $500/month, an amount unchanged since the contract was first awarded in 1983.

An exclusive agreement (or concession contract) for the provision of on-demand taxicab service at an airport is generally considered best industry practice as it allows airport management to control the quality of service including vehicle age and condition, driver training and appearance, and other service characteristics and operating regulations. Further, the typical airport taxicab concession contract requires that the taxicab company or concessionaire pay the airport fees that reflect, directly or indirectly, the business benefits they receive as a result of their exclusive agreement or concession contract. Typically, these activity-based fees are calculated per outbound taxicab trip, per deplaning passenger, or as a percentage of airport-related revenues.

Because of its age, the NELA between the Airport and Long Beach Yellow Cab does not reflect best industry practice. Some examples of variances from industry practice include:

- *Lack of activity based concession fee*—The existing monthly fee (i.e., $500/month) is not linked to the volume of taxicab trips, Airport passengers, Airport-related revenues, or other indication of the amount of business Long Beach Yellow Cab conducts at the Airport as a result of their exclusive right to provide on-demand taxi service. The monthly fee has remained constant despite the substantial increases in airline passenger traffic (and thus potential customers) during the 34-year term of the contract. Since 1983 the number of enplaned passengers has increased nearly 350% from about 409,000 in 1983 to about 1,423,000 in 2016. Nor does the contract require that the fee be adjusted for inflation. Adjusted for inflation, using the Bureau of Labor Statistics Consumer Price Index (CPI), $500/month in 1983 is equivalent to about $1227/month in 2017.
- *Out-of-date vehicle standards*—The NELA requires that vehicles operated by the licensee be "neat and clean" but does not specify any requirements for vehicle age or mileage, vehicle safety (e.g., properly working brakes, exhaust system, or seat belts), properly functioning heating and air conditioning systems, vehicle appearance (e.g., free of dents), or the use of taxicab meters with modern mobile data terminals capable of securely accepting credit cards in accord with Payment Card Industry security standards.
- *Out-of-date driver standards*—The agreement requires that drivers be "qualified, competent and experienced" but does not require training in safe driving or customer service, the ability to clearly communicate with passengers, knowledge of local streets and destinations, or the ability to securely accept credit cards.
- *No reference to transportation of passengers with special needs*—The agreement does not require the licensee to provide service to passengers using wheelchairs or others with special needs, or to provide service during periods of irregular operations.
- *Operations on the Airport*—The NELA does not refer to the location or use of a hold lot or staging area where taxicab drivers may queue while waiting their turn to approach the curbside boarding area. The agreement does not require the licensee to provide a taxicab starter, or describe how the queue of waiting taxicabs is to be managed, how passengers are to be assigned to the appropriate taxicab, or how passengers requiring special vehicles are to be accommodated.

Recommendation: It is recommended that the Airport either issue a Request for Proposals (RFP) for a taxicab operator, or re-negotiate the existing NELA for Airport taxicab service. The new agreement should incorporate industry best practices including updated vehicle and driver standards, an activity based fee, and expand the language describing operations on the Airport.

Non-Exclusive License Agreement—Other Ground Transportation Providers

All ground transportation providers serving the Airport are required to enter into a NELA with the Airport. The taxicab NELA, described above, differs from the NELA used for other ground transportation providers. The NELA for other ground transportation providers (a) states that ground transportation providers or licensees must abide by all Airport rules and regulations including those that may be established by the Airport Director in the future, (b) describes where the licensee's vehicles may pick up passengers, (c) allows the Airport to implement a ground transportation control system requiring decals or transponders to be affixed to each of the licensee's vehicles, and (d) requires the licensee to pay the Airport an annual permit fee.

The current annual ground transportation permit fees, which were increased in April 2017, are:

- Reservation-based ground transportation permit: $100 each
- Non-reservation-based ground transportation permit: $1,200 each

In addition to the annual permit fee, there is a $120 application fee for a ground transportation permit. In 2016, the Airport received approximately $35,000 from ground transportation licensees with this amount expected to increase in future years due to the recent fee increase. In comparison, as noted above, the Airport received approximately $7,758,000 in revenues from its public parking operations and $3,090,000 in revenues from the rental car companies.

As noted, the amount of the annual permit fee varies according to whether the licensee provides reservation or non-reservation transportation. However, the amount of the annual permit fee does not vary regardless of whether the licensee operates one vehicle or many, whether the licensee rarely picks up passengers at the Airport or picks up customers many times each day, or whether the licensee operates large, over-the-road buses or smaller cars or vans.

It is considered best industry practice for airports to:

- Require all ground transportation providers doing business (i.e., picking up passengers) on an airport to enter into a business agreement with the airport operator (i.e., obtain a NELA or its equivalent) indicating the provider's willingness to abide by all airport rules and regulations, including the payment of required airport fees.
- Establish either (a) a small, fixed annual permit fee amount that is supplemented with a fee that varies based on the volume of business a licensee conducts on an airport as evidenced by the licensee's number of vehicle trips or another metric, or (b) a large annual permit fee (e.g., $5,000 per vehicle). A small, fixed annual permit fee supplemented with an activity based fee

(e.g., fee per trip) is preferred as it reflects the volume of business conducted on an airport. In other words, it is rational that a limousine or courtesy vehicle operator who seldom picks up passengers should pay lower airport fees than one who does so frequently. (Subsequent sections of this report describe these fees in greater detail.)

- Allow infrequent users (e.g., charter or tour bus operators who pick up passengers at an airport fewer than 12 times per year, or other number reflecting airport policy), to purchase a daily rather than an annual permit. At other airports, a daily permit encourages ground transportation providers to obtain an annual permit (because it is less expensive to obtain an annual permit rather than purchase several (e.g., three) daily permits), become more familiar with airport rules and operating policies, and allows the airport to better manage infrequent users' curbside operations. Use of a daily or infrequent users permit is consistent with the Airport's management policy that all ground transportation providers enter into a business agreement with the airport operator and contribute to the airport's costs.
- Vary the vehicle fee amounts based upon vehicle size, recognizing that large, heavy vehicles require more curb space and cause more wear and tear on the Airport's roadways and other facilities than do small cars or vans.

Recommendation: It is recommended that the Airport modify the NELA to reflect best industry practice including:

- Charge all licensees—including both reservation and non-reservation licensees—the same annual permit fee. Supplement this annual permit fee with an activity based fee such as per-trip fees and other fees described in subsequent paragraphs.
- Establish a Daily Permit fee for infrequent users.
- Establish policies and business arrangements specific to each ground transportation service currently operating under a NELA. Best practices and recommendations for these services are summarized below.

Reservation-based services—Limousines and charter services

Reservation-based ground transportation services include limousines and charter buses/vans, both of which are pre-arranged services licensed by the California Public Utilities Commission (PUC) as Transportation Charter Party (TCP) carriers, and whose customers have made prior arrangements or reservations for these transportation services. The regulation and licensing of these transportation services are identical, with the only difference being the type of vehicles used and number of passengers transported.

Limousine service is typically provided in cars and stretch or other luxury vehicles, including high-end SUVs. Charter services include tour buses, cruise ship buses, and pre-arranged van services. There are approximately 300 reservation-based licensees at the Airport, most of which are limousine or luxury vehicle operators. It appears that these licensees are based throughout the Los Angeles Basin, and it is likely that some, if not most, are licensed to serve several of the other airports within the LA Basin.

Best industry practices with respect to pre-arranged limousines and charter buses include:

- Providing a staging area for limousine drivers and charter bus drivers to park while waiting for arriving customers. This may be a section of the parking structure or a nearby parking lot.
- Provide a limousine driver meet and greet area. Such areas, typically designated zones located near baggage claim areas, can help customers find their driver and can help airport staff reduce illegal passenger solicitation. At some airports limousine drivers are not allowed to leave their vehicle unattended at the curbsides, and instead must greet their customers, and escort them to the curbside, and then retrieve their car, or escort the customer to a nearby lot where their vehicle is parked.
- Require limousine and charter bus drivers to provide evidence of prior passenger reservations such as a waybill, if requested.
- Allow infrequent users to purchase a daily permit sold at a fee that is set to encourage providers to purchase an annual permit if they serve the airport more than 12 times a year, for example.

Recommendations:

- Require limousine and charter bus drivers to wait in the cell phone lot or other designated location until after their passenger's flight has landed, and then allow drivers to park, greet their customers, and accompany them back to the parked vehicle.
- Provide a designated limousine driver meet and greet area at the baggage claim area.
- Create space for limousine parking in the planned Ground Transportation Center (GTC), and, upon its completion, require limousine drivers to wait for customers at this location.

Non-reservation based services—courtesy vehicles and shared-ride vans

Non-reservation based services are those providing both walk-up (i.e., on-demand) and scheduled services. Non-reservation based services include (1) courtesy vehicles serving nearby hotels, rental car companies, and off-airport parking businesses, and (2) shared-ride vans such as Super Shuttle and Prime Time, which provide both on-demand and reservation-based services.

Courtesy Vehicles—At present, five hotel/motels offer courtesy vehicle service to Airport passengers: The Long Beach Marriott, the Courtyard by Marriott, the Holiday Inn, the Residence Inn by Marriott, and the Extended Stay America. Allied Rent-a-Car (located at the Marriott Hotel) offers courtesy service in conjunction with the Marriott. Several hotels including the Holiday Inn and Marriott offer paid parking to customers who are not hotel guests. All of these businesses offer their customers regular or scheduled (e.g., every 15 minute) courtesy vehicle service between the Airport and their properties at no charge with the cost of the service being incidental to (i.e., included in) the hotel room rate, rental car charges, or parking fees. As noted above the NELA requires that these providers pay an annual permit fee of $1200. However, at the present time the Airport is not collecting fees from any of the courtesy vehicle providers.

Best industry practice for courtesy vehicles includes requiring the providers of these services to:

- Use alternative fuel vehicles to reduce vehicle emissions/improve air quality.
- Consolidate their trips (e.g., one courtesy vehicle serving several hotel properties) in order to reduce vehicle miles of travel and vehicle emissions, and thus improve air quality.
- Contribute to the airport's costs by paying one or more of the cost-recovery, privilege, or curbside management fees described in subsequent sections. As noted above, it is rational that companies who frequently pick up passengers pay higher airport fees than those who seldom do.
- Pay fees, commonly referred to as privilege fees, if the company benefits from the presence of the entire airport and access to its passengers, and if the company's business model depends on the presence of the airport. Off-airport rental car companies and parking businesses are frequently required to pay such fees.

Shared-Ride Vans—The Airport allows all shared-ride van companies licensed by the PUC to obtain a NELA and pick-up customers at the Airport. This form of operation—allowing all licensed providers to serve an airport—is commonly referred to as an "open system" as compared to the Airport's exclusive agreement with Long Beach Yellow Cab. The Airport's website lists 13 providers of van/bus services.

Many of the shared-ride van providers at the Airport primarily serve walk-up customers (i.e., operate on a free call basis), rather than serving customers with prior reservations. Vans wait for customers, on a first-in/first-out basis, while parked in a queue on the northern edge of the rental car lot. Vans are dispatched from the queue to the curbside passenger boarding area by a shared-ride van dispatcher. (The Airport retains ABM, the Airport's parking contractor, to provide shared-ride dispatching.) The revenues the Airport receives from the shared-ride van providers (i.e., $1,200 per permit) are less than the Airport's costs of providing the shared-ride dispatchers. As a result, the Airport is currently subsidizing the shared-ride van operations.

Best industry practice is to award an exclusive concession agreement to a few (e.g., three or less) shared-ride van providers and allow only these providers to serve on-demand or walk-up customers. These providers, as well as those companies not awarded a concession agreement, can serve customers with reservations. Compared to an open system, exclusive concession agreements allow an airport operator to better control the quality of service offered its customers (e.g., assigning customers to vans going to similar destinations, and limiting the maximum number of enroute stops), receive a concession fee from the selected share-ride van concessionaire, and efficiently manage the terminal curbsides and shared-ride van operations.

<u>Recommendations:</u>

- Award a concession contract to one or two shared-ride van providers through a RFP process to ensure the provider has sufficient experience, qualifications, and resources, and offers a customer service and operating plan meeting the objectives of Airport management
- Require the concessionaire to comply with the Airport Commercial Ground Transportation Rules and Regulations regarding (1) vehicle size, age, and condition, (2) the use of a vehicle fleet with a uniform appearance and uniformed drivers, (3) the use of alternative-fueled vehicles, and (4) customer service standards (e.g., the maximum time a customer may wait after boarding a

vehicle at the curbside before their vehicle leaves the airport, the maximum number of circuits a van may make, and the maximum number of enroute stops).

- Allow those shared-ride van providers not awarded a concession contract to serve the Airport using a reservation-based ground transportation permit. As with the charter buses and limousines operating under this permit, these shared providers would be allowed to only pick-up customers who have made prior arrangements and would be required to provide evidence of such arrangements (e.g., a waybill) if requested. In addition, these providers would not be allowed to solicit walk-up customers, and could only remain at the terminal curbsides while actively loading customers.
- Require both the shared-ride van concessionaire(s) and reservation-only carriers to contribute to the airport's costs by paying one or more of the cost-recovery, privilege, or curbside management fees described in subsequent sections
- Require all shared-ride van providers to comply with Federal and State laws concerning the transportation of customers using wheelchairs and other disabled passengers.

Transportation Network Companies (new pilot program)

Transportation Network Companies, such as Lyft, UberX, Wingz, and See Jane Go, which have a NELA with the Airport, are allowed to pick-up and drop-off passengers at the Airport under the terms of a temporary or pilot program initiated on April 5, 2017. This pilot program, which terminates on September 30, 2017, regulates how TNCs may operate on the Airport. Key provisions of this NELA include:

- Each TNC company wishing to do business on the Airport must have a California PUC permit allowing it to operate in the State, and the company must agree to comply with Airport rules and regulations as well as those rules and regulations established by the California PUC and Department of Motor Vehicles.
- Each TNC company must:
  - Ensure that all of its vehicles are operated by drivers using their Mobile Application and display the company trade dress approved by the PUC and LGB
  - Provide $1,000,000 in liability/property damage while vehicles are enroute to pick-up passengers and while transporting passengers
  - Establish a global positioning system (GPS)-based geo-fence using coordinates defined by Airport management. (The geo-fenced area, or TNC Airport Assignment Area is shown in Figure 1)
  - Require that their drivers park only in the designated staging area while waiting for passengers and not park in this area for longer than 30 minutes
  - Pay the Airport a fee for use of the staging area, if required. (At present, there is no fee for the use of the staging area.)
  - Ensure that drivers can only receive fares or ride requests while parked in the designated TNC Airport Assignment Area
  - Monitor and report the number of daily vehicle trips crossing the Airport geo-fence made by drivers using the company Mobile Application to either drop off or pick up customers.

- Pay the Airport, on a monthly basis, a fee calculated as $3.00 per Airport drop-off trip and $3.00 per Airport pick-up trip for each trip made by drivers using their Mobile Application. The amount of this per-trip fee is consistent with the fees charged at other small hub airports.
- Provide drivers with an electronic waybill indicating the name of the party being transported, time of booking, and Airport pick-up location, which drivers must present, if requested, to police or other Airport staff

For the period ending April 30, the initial period for which data were reported, the four TNC companies reported that, in total, their drivers made about 25,644 Airport trips—14,234 drop-off trips and 11,410 pick-up trips, and paid the Airport approximately $76,900 in trip fees.

Data from a recent Airport Cooperative Research Program project indicates that TNCs have had several impacts upon the operations of those airports at which they are permitted to operate. Among these impacts are (1) a 5% to 30% decrease in taxicab trips, (2) an 18% to 30% decrease in shared-ride customers, (3) a 5% to 10% decrease in parking customers, and (4) up to a 13% decrease in rental car transactions. Assuming that Long Beach Airport experiences these same impacts, TNCs could result in an erosion of Airport revenues of as much as $1.2 million, primarily due to the loss of public parking and rental car revenues.

Figure 1: Designated TNC Airport Assignment Area (yellow) and Geofence Area (red)

The Airport's temporary or pilot program NELA for TNCs incorporates most aspects of best industry practices. Provisions not currently included, but recommended that the Airport consider adopting in the final NELA for TNCs, include:

- Require each TNC company to maintain at least $1,000,000 in automobile liability insurance for each vehicle at all times the vehicle is on Airport property. Currently, vehicles that have dropped off passengers and are exiting the Airport may maintain less insurance.
- Require that TNC drivers remain connected to the Company's Mobile Application at all times while on the Airport.
- Establish one geofence around the designated TNC Airport Assignment Area.
- Using the transaction types described below, require that for each trip the TNC companies (a) track and describe the transaction type, and (b) provide a unique trip number, date, time, and geographical location, TNC driver identifier, and TNC vehicle license plate number. The transaction types are:
    - Entry into the geo-fence
    - Passenger drop-off or completion of ride on Airport property
    - Passenger pick-up on Airport property
    - Exiting the geo-fence
- Require that if the Airport acquires or develops an alternative technology solution to allow it to monitor and audit compliance of the TNC company's operations and trips, the company will work with the Airport in good faith to implement this alternative technology. More than 25 other airports have acquired one of several available software solutions allowing airport staff to monitor TNC trips in a real-time manner using trip data reported by the TNC company to a third-party (e.g., GateKeeper, AAAE/ABT Clearinghouse, or others).
- Expand the TNC driver requirement to require that the TNC provide the Airport, for its approval, a copy of its training material (e.g., a video or booklet) to be provided to all TNC drivers.
- Establish fines or fees that may be charged to a TNC company for violations of Airport rules and regulations by the company or its drivers
- Establish fees that allow the Airport to maintain and preserve its non-airline revenues and recover the foregone revenues due to TNCs.

Public Transit

The Airport is served by Long Beach Transit bus service Routes 102, 014, and 111. Long Beach Transit is governed by a Board Directors appointed by the Mayor with the approval of the City Council. As such, Long Beach Transit and the Airport are both departments of the City, and both are not-for-profit services.

In accord with its policies, Airport management encourages the use of Long Beach Transit as well as the nearby Metro Rail service. Consistent with best industry practice for not-for-profit public transit services, Long Beach Transit is not required to obtain an Airport permit, enter into a NELA, or pay Airport fees. However, Airport management designates the curbside stop where Long Beach Transit buses drop off and pick up passengers and requires that Long Beach Transit buses obey Airport rules and regulations.

Types of Commercial Ground Transportation Fees at Other Airports

The following section describes the four types of fees that other airport operators typically charge commercial ground transportation providers: permit fees, per-trip fees, demand management fees, and privilege fees.

As described above, the Airport is required to be financially self-sustaining and relies upon the fees paid by the airlines, other tenants, and other businesses benefiting from the presence of the airport. To the extent that one user does not contribute to the Airport's costs of developing, operating, and maintaining the Airport, this user is, in effect, being subsidized by others who do contribute. In addition, one of the goals of Airport management is to maintain and preserve its revenues, particularly non-airline revenues, including those from public parking, rental cars, and commercial ground transportation providers.

Permit Fees

Almost all hub airport operators require that ground transportation providers obtain an airport operating permit in order to do business on the airport (i.e., drop off or pick up passengers). By signing a permit, the ground transportation provider indicates that they have (1) entered into a formal business relationship with the airport owner, and (2) agreed to obey all airport rules and regulations, including providing required liability insurance and paying all airport fees. Proof of payment for an operating permit and possession of a current and valid permit is often signified by a decal affixed to each vehicle. Frequently, airports set the amount of the permit fee to offset the costs of issuing and administering the permits. Alternatively, airports may charge an application fee, such as the fee charged by Long Beach Airport.

Recommendation: It is recommended that:

- The Airport maintain its current $120 application fee.
- All ground transportation providers be required to obtain an airport permit (or NELA) and pay an annual fee described below.

Number of vehicles operated or owned by permittee	Annual permit fee per permittee
Five vehicles or fewer	$100
Six to ten vehicles	$150
More than ten vehicles	$200

Cost-recovery fees

Cost recovery fees reflect the costs attributable to providing, operating, and maintaining the airport facilities used directly by commercial ground transportation providers. These fees are typically calculated based on the volume of airport activity conducted by a commercial ground transportation provider as measured by the number of vehicle trips made on the airport roadways or curbside areas. A per-trip fee also encourages the efficient use of the airport roadways and other facilities, and may vary by type of service and/or vehicle size. A per-trip fee typically discourages inefficient operations and leads to improved customer service and roadway operations.

Some airports charge cost-recovery fees calculated per hotel room or per parking space, but fees calculated per trip are considered best industry practice as they are a more accurate measure of the provider's volume of airport activity.

Recommendation: It is recommended that the Airport establish per-trip fees in an amount that at a minimum allow it to fully recover its costs of providing, operating, and maintaining the Airport roadways, curbsides, staging areas, and other facilities used by commercial ground transportation providers. It is also recommended that the Airport install a beacon system or other technology to monitor and record the volume of vehicle trips.

Subsequent sections of this report (1) present the calculated full-cost recovery fees and the recommended per-trip fees, and (2) review beacon systems and other potential technologies.

Demand Management Fees

Demand management fees include (1) dwell time fees that penalize commercial ground transportation vehicles for remaining at the curbside in excess of an allowed time and (2) interval or headway fees typically charged courtesy vehicles that exceed an approved headway or number of trips per month. Ideally, all commercial ground transportation providers operate in accordance with airport regulations and none would need to pay such demand management fees. As such, the demand management fee can be considered a fine for improper operations that is rarely imposed.

AVI systems or other supporting technologies are used to monitor the length of time vehicles remain at the curbside area and the number of monthly trips each ground transportation provider makes. AVI systems used to record dwell times cost more than those that only record vehicle trips, as two sets of readers are required—one at the entrance to the curbside area, and a second at the exit.

Long Beach Airport management report that currently the terminal curbside area and adjacent roadways are generally free of congestion.

Recommendation: It Is recommended that the Airport:

- Not establish demand management fees at this time due to the lack of curbside and roadway congestion and additional costs of the supporting technology
- Approve changes to Airport rules and regulations allowing for future implementation of such fees at the discretion of Airport management.

Privilege Fees

Privilege fees reflect the business benefits derived from the presence of the entire airport. These fees are charged to those ground transportation providers whose business models depend on the presence of the entire airport and access to its passengers (not just its roadways), and who could not remain in business were it not for the airport. These ground transportation providers include rental car companies and off-airport parking businesses.

The on-Airport rental car companies—Avis, Budget, Enterprise, Hertz, and National/Alamo—are required to pay the Airport a privilege fee calculated as 10% of their Airport-related revenues as well as fees for their use of office space within the Airport Ground Transportation Center and other fees. In 2016, the Airport received approximately $3,026,000 in privilege fees from the five on-airport rental car companies.

The off-airport rental car companies are required to pay the Airport a privilege fee calculated as 8% of their Airport-related revenues. In 2016, the Airport received approximately $63,000 from the off-airport rental car company.

Off-airport parking businesses also rely upon the presence of the entire Airport for customers, and could not sustain their business were it not for the Airport. More than 50 airports require that off-airport parking businesses pay the airport a fee calculated as a percentage of their airport-related revenues. Several hotel/motels in the vicinity of Long Beach Airport advertise the availability of Airport parking and sell parking to customers who are not hotel guests and have no overnight stays (as opposed to offering free parking to hotel guests, including those participating in a "park-sleep-fly" promotion).

Recommendation: It is recommended that the Airport:

- Maintain and continue to require that on-Airport and off-Airport rental car companies pay a privilege fee of 10% and 8% respectively
- Establish an off-Airport parking privilege fee of 10%, and require any future off-Airport parking businesses to pay this fee
- At this time, not charge nearby hotel/motels that are offering paid parking to customers who are not hotel guests an off-airport parking privilege fee, but reserve the right to do so in the future
- Require TNCs to pay fees that exceed the calculated cost-recovery fees in recognition of the erosion of Airport revenues caused by their operations at the Airport

Proposed Per-trip Fees at Long Beach Airport

The per-trip fee amounts that the Airport would need to charge commercial ground transportation providers in order to fully recover the Airport's costs of accommodating and managing their vehicles were calculated for each type of commercial ground transportation service. The cost data, which was obtained from Airport management, includes both capital costs and the operating/maintenance expenses associated with the Airport's roadways, passenger pick-up and drop-off areas, ground

transportation vehicle staging areas, Airport staff time, and other resources provided by Airport management that are used directly or indirectly by the commercial ground transportation providers. These costs were allocated among each type of commercial ground transportation service based on the resources they use. The calculations also consider the size of each vehicle and thus the additional space required to operate and increased wear-and-tear on Airport facilities that results from larger vehicles.

Annual Traffic Volumes and Weighting Factors

Traffic volume and vehicle classification surveys were conducted on behalf of Airport management in May and June 2017. As shown in Table 1, based upon these surveys it is estimated that 2,237,000 vehicles enter the terminal area annually to drop-off or pick-up passengers. These volumes exclude motorists entering Airport parking or rental car facilities and non-terminal area traffic.

Commercial ground transportation vehicles compose about 40% of this traffic volume, with TNCs representing the largest share of commercial ground transportation traffic (55%). The remaining non-commercial vehicles include private cars and trucks (i.e., those not in commercial service), Airport- and/or City-operated vehicles, and Long Beach Transit buses. Commercial ground transportation traffic is reported separately from private vehicles and City-operated vehicle traffic for purposes of allocating costs because Airport management does not intend to charge non-commercial vehicles a fee to operate on the Airport. It would not be consistent with industry best practice to require private motorists to pay a fee, and it is illogical to require City-operated vehicles to pay a fee to the City.

Table 1 also shows the estimated weighting factor for each type of commercial vehicle. These weighting factors are used to reflect the additional curb space required by larger vehicles and the increased wear and tear on Airport roadways that results from their operations. The weighting factors reflect the size of the commercial ground transportation vehicles as indicated by the number of seats or potential number of passengers transported. For these calculations, vehicles were categorized according to those having 5 seats or fewer, 6 to 14 seats, and 15 seats or more.

Allocation of Annual Capital Expenses

Table 2 presents a summary of the Airport's current Landside Capital Improvement Program (CIP) including prior projects having remaining value. As shown, the Airport's total CIP for 2017 is $975,970. The largest component of the CIP is the widening of the Terminal Area Access Road exit, which directly benefits the commercial ground transportation providers. This project represents approximately 83% of the total annual amortized capital expense. This amount excludes future projects such as the planned Ground Transportation Center (GTC) or implementation of a ground transportation management system. As shown in Table 2, the annualized capital expenses have been allocated among each class of ground transportation provider based on their use of each Airport facility.

Allocation of Annual Operating Costs

Table 3 presents the Airport's estimated annual 2017 operating costs for ground transportation operations, which total approximately $949,200. The largest cost components are security and police staff responsible for roadway and traffic operations (approximately $433,000) and ground transportation staff (approximately $111,500). As shown in Table 3, these operating costs have been allocated among each class of ground transportation provider based upon the proportion of the weighted annual traffic volume (from Table 1) using the Airport facilities.

Calculated and Recommended Per-Trip Fees

Table 4 presents the calculated per-trip fees and the recommended per-trip fees for each class of commercial ground transportation provider. The calculated fees are those fees that are required to fully recover the Airport's costs based on (a) the estimated annual trips (from Table 1) on the Terminal Roadway, and (b) the allocated share of the totals of the capital costs (Table 2) and direct and indirect operating costs (Table 3). The calculated fees vary by type of commercial ground transportation provider reflecting the volume of trips made, typical size and weight of the vehicles used to provide these services, and their use of Airport facilities.

The recommended fees reflect the calculated fee required to fully recover the Airport's costs plus other considerations. These considerations including management's goals of (a) offering customers a broad range of transportation options, (b) maintaining and preserving non-airline revenues, and (c) maintaining an efficient and effective business model (including offsetting the erosion of Airport parking and rental car revenues resulting from the diversion of customers).

Summary of Proposed Fees

The fees to be charged commercial ground transportation providers are summarized below.

- **Application fee**. Commercial ground transportation providers should continue to be required to pay a $120 application fee when applying for an Airport permit.
- **Annual permit fee.** In addition to other fees, it is recommended that all permittees--including taxicabs, TNCs, and the shared-ride van concessionaire-- be required to pay an annual permit fee of between $100 and $200 depending on the number of vehicles operated by the permittee.
- **Per-trip fees.** The suggested per-trip fees to be paid by each ground transportation provider are:
    - *Taxicabs*—Assuming the Airport awards a new concession agreement, it is recommended that the taxicab concessionaire be required to pay a minimum of $2.00 per trip.
    - *Reservation-only limousines, vans, and buses*—It is recommended that limousines picking up passengers be required to pay $1.00 per trip, reservation-only vans be required to pay $1.50 per trip, and that charter-buses be required to pay $5.00 per trip. This assumes that the Airport eliminates the free call van service, and replaces this service with a shared-ride van concessionaire. It also recommended that the Airport establish a daily fee of [3 times the per-trip fee] to be paid by non-permittees picking up passengers at the Airport.
    - *Non-reservation based service--Shared-ride vans*—It is recommended that the Airport award an exclusive concession agreement for shared-ride van service, and that the concessionaire be required to pay $6.00 per trip.
    - *Non-reservation based service--Courtesy vehicles*—It is recommended that courtesy vehicles serving hotel/motels, off-airport rental car companies, and potentially off-airport parking businesses pay a fee of $1.50 per trip.

- *Transportation Network Companies*—It is recommended that TNCs be required to pay a fee of $3.00 per drop-off and pick-up trip. This amount includes the amount needed to fully recover the Airport's costs and to reflect the erosion of parking and rental car revenues that has resulted from the availability of TNC service at the Airport.

- **Privilege Fees.** In addition, as stated earlier, it is recommended that (a) off-airport rental car companies continue to be required to pay a privilege fee calculated as 8% of their gross airport-related revenues, and (b) any future off-airport parking businesses be required to pay a privilege fee calculated as 10% of their gross airport-related revenues. It is recommended that off-Airport rental car companies and off-Airport parking businesses be allowed to credit any per-trip fee charges against the amount of the privilege fees paid, and thus would, in essence, only pay the higher of these two fees.

Methods of Monitoring Commercial Vehicle Trips to Support Fee Collection

With the implementation of the proposed per-trip fees, Airport management will require a supporting ground transportation management system (GTMS) to accurately monitor the volume of trips made by each ground transportation provider. The Airport does not need a GTMS today as only the TNCs pay a per-trip fee, and TNC trips are monitored by the TNC company's established geofence.

GTMS components vary based upon the selected technology and the extent of the application, but can include (1) vehicle sensors or readers, (2) vehicle-mounted equipment to emit a signal, (3) servers, and (4) software to generate summary reports, billing information, and other management data. This section describes available GTMS technologies used by other airport operators to monitor commercial ground transportation trips.

- **Self-reporting**—It is possible to allow commercial ground transportation providers to self-report the number of trips they make each month, which is sometimes referred to as an "honor" system. While the use of self-reporting allows an airport operator to avoid a capital investment, other airport operators have found self-reported trip data, and thus the associated fees, to be inaccurate and unreliable. Airports that relied upon self-reported trips experienced an increase of more than 30% in revenues when a GTMS replaced the use of self-reported trips.

- **Automated Vehicle Identification**—Automated Vehicle Identification (AVI) is the technology used most frequently at airports to monitor commercial ground transportation volumes. This technology is similar to the FasTrak technology used on the 10/110 Metro Express Lanes, 91 Freeway Express Lanes, and other toll roads and bridges throughout California. An AVI system consists of transponders mounted on each vehicle and reader(s) or sensor(s) mounted overhead on a structure such as a pole, signage structure, or gantry. AVI systems have been proven to be very accurate and reliable. It is estimated that an AVI-based GTMS system would cost between $150,000 to $200,000 plus an annual software maintenance and management cost of about $35,000. Much of this cost (about $120,000) is due to the costs of the required site civil and electrical work needed to install, wire, connect, and test the poles or gantries.

- **Beacons**—Beacons are small devices, which, like AVI tags, are permanently mounted on each ground transportation vehicle, but are read by small sensors mounted near the road (e.g., on an overhead canopy or other location having electrical power) rather than on an overhead sign or pole. Because of the nature of the technology, the positioning (or aiming) of beacon sensors is not as critical as AVI readers. Beacons have been used within terminals and other buildings for many years, but are only recently being used to monitor commercial ground transportation traffic at airports. Images of a sensor mounted to a pedestrian canopy and a beacon are shown on the next page. Depending on the number of beacons required, it is estimated that a beacon-

Example sensor installation

Example beacon

based GTMS system at Long Beach Airport would cost between $25,000 and $30,000 plus a recurring annual cost of about $40,000 for software management, a beacon licensing fee, and a cellular or wireless plan.

- **Geo-fence**—TNC companies use geo-fences to determine the number of trips made by their drivers crossing a boundary defined by Airport management. The use of a geo-fence requires that each commercial ground transportation driver have a GPS-enabled smart phone and relies upon the smart phone and a company-based mobile application to receive requests for customer service. As such, a geo-fence-based trip fee is not readily adaptable to courtesy vehicles, limousines, or other ground transportation vehicles.

- **TNC monitoring software**—More than 20 airports use one of several available software systems to monitor TNC trips on a real-time and monthly basis. Typically, the airport permit requires that the TNC company report drop-off and pick-up trips to the system provider (e.g., AAAE/ABT, GateKeeper, or others) on a real-time basis. Among other tasks, this software allows airport staff to monitor the number of TNC vehicles on the airport, view the type of activity, enforce TNC operations, and compare the daily data with the monthly summaries used to calculate airport fees due. AAAE/ABT acts as a clearinghouse, in that it receives the TNC payments and then remits these payments to the individual airport, after subtracting its service fees. GateKeeper's TNC software operates as a supplement to its basic software package used by many airports to manage commercial ground transportation operations and support fees. AAAE/ABT reportedly charges airports a percentage of the TNC revenues collected, while GateKeeper's installation software costs are estimated to be about $25,000 depending whether

the airport has purchased GateKeeper's basic software system and the complexity of the application.

Recommendation: It is suggested that a beacon-based GTMS system is most suitable for Long Beach Airport due to the size of the Airport, the volume of commercial ground transportation traffic, and the comparable costs of a beacon system. It is recommended that the Airport monitor the revenues received from TNCs for 12 to 24 months, and then determine if TNC tracking software is needed. However, as stated above, it is recommended that the final TNC NELA contain provisions requiring TNCs to submit the required data on a real-time basis, if requested.

Implementation Recommendations/Next Steps

It is recommended that the Airport implement the recommendations contained in this report in a phased manner. The proposed actions and their schedule include:

- Review the recommendations contained in this report with the ground transportation providers. It is suggested that separate meetings be held with each industry group to allow them to discuss their specific concerns and questions. It is suggested that these meetings occur in July and August 2017. As appropriate, modify the recommendations contained in this report to reflect the suggestions offered by the ground transportation providers.
- Meet with City Council to present the recommendations contained in this report, revised to reflect the suggestions offered by the ground transportation providers (potentially September 2017)
- Adopt final NELA for TNCs (potentially by September or October 2017)
- Award new taxicab concession and shared-ride van concession using an RFP process to select a new concessionaire (e.g., issue RFP by December 2017 and contract service to begin in the first quarter of 2018).
- Purchase and install a beacon-based GTMS (by October 2017 to coincide with changes in the TNC NELA permit)
- Implement the proposed per trip fees in phased increments over a 12-month period to allow the ground transportation providers the opportunity to adjust their business model to the additional charges, and to test and refine the reporting systems. It is suggested that fees be initiated in November 2017, one month after the GTMS begins operation, and that fees be increased in a step-wise manner quarterly until the full fees are in place by November 2018.

Table 1
Estimated Annual Traffic Volumes by Vehicle Type
Long Beach Airport

			Estimated Annual Traffic Volume				Commercial Vehicle Weighting				
Non-Commercial Vehicles		Drop-off	Pickup	Total	Percent of Vehicle Category	Percent of All Vehicles	Number of seats (excludes driver)	Weighting Factor	Weighted Commercial Vehicles	Percent of Weighted Commercial Vehicles	Percent of Total
Private vehicles		1,056,076	529,742	1,585,819	97.3%	70.9%					
Public transit vehicles			-	-	0.0%	0.0%					
Other vehicles (a)		22,128	22,128	44,257	2.7%	2.0%					
Non-commercial vehicles: Subtotal	[A]	**1,078,205**	**551,871**	**1,630,075**	**100.0%**	**59.7%**					**59.7%**
Commercial vehicles											
Taxicabs		46,651	169,062	215,713	35.5%	9.6%	5 or less	2	431,427	34.0%	13.7%
Limousines		-	2,476	2,476	0.4%	0.1%	5 or less	2	4,952	0.4%	0.2%
TNCs		167,551	168,244	335,795	55.3%	15.0%	5 or less	2	671,590	53.0%	21.4%
Shared-ride vans		11,161	7,098	18,260	3.0%	0.8%	6 to 14	3	54,779	4.3%	1.7%
Hotel/motel courtesy vehicles		5,695	19,064	24,759	4.1%	1.1%	6 to 14	3	74,277	5.9%	2.4%
Off-airport parking courtesy vehicles		2,564	6,101	8,666	1.4%	0.4%	6 to 14	3	25,997	2.1%	0.8%
Off-airport rental car courtesy vehicles		774	774	1,547	0.3%	0.1%	6 to 14	3	4,642	0.4%	0.1%
Charter buses		-	-	-	0.0%	0.0%	35 or more	10	-	0.0%	0.0%
Commercial vehicles: Subtotal	[B]	**234,397**	**372,820**	**607,216**	**100.0%**	**40.3%**			**1,267,665**	**100.00%**	**40.3%**
All Vehicle Types	**[A] + [B]**	**1,312,602**	**924,690**	**2,237,292**		**100.0%**					

Source: Inter*VISTAS* Consulting, Inc., July 2017, based upon May 19 - 26, 2017 and June 12, 2017, traffic volume surveys conducted by WILTEC.

(a) Includes Airport vehicles, police, maintenance, and delivery vehicles.

Table 2
Estimated Capital Cost Depreciation Allocation
Long Beach Airport

	Total Cost or Remaining Value	Total 2017 Allocation	Taxicabs		Limousines		TNCs		Shared-ride Vans		Hotel / Motel Courtesy Vehicles		Off-airport Parking Courtesy Vehicles		Off-airport Rental Car Courtesy Vehicles		Charter Buses		All Commercial Vehicles	
			Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost
Terminal Access Road - Center Median	$ 468,541	$ 93,708	13.7%	$ 12,858	0.2%	$ 148	21.4%	$ 20,016	1.7%	$ 1,633	2.4%	$ 2,214	0.8%	$ 775	0.1%	$ 138	0.0%	$ -	39.5%	$ 37,007
TNC Hold Lot	$ 25,000	$ 25,000	0%	$ -	0%	$ -	100%	$ 25,000	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	100.00%	$ 25,000
Ground Transportation Booth	$ 15,520	$ 15,520	50%	$ 7,760	0%	$ -	0%	$ -	50%	$ 7,760	0%	$ -	0%	$ -	0%	$ -	0%	$ -	100.0%	$ 15,520
Access Roadway - Lakewood / Donald Douglas	$ 48,399	$ 9,680	13.7%	$ 1,328	0.2%	$ 15	21.4%	$ 2,068	1.7%	$ 169	2.4%	$ 229	0.8%	$ 80	0.1%	$ 14	0.0%	$ -	39.5%	$ 3,823
Cell Phone Parking Lot	$ 21,266	$ 21,266	15.9%	$ 3,373	0.2%	$ 39	0.0%	$ -	2.0%	$ 428	0.0%	$ -	0.0%	$ -	0.0%	$ -	0.0%	$ -	18.1%	$ 3,840
Lighting - Donald Douglas Drive	$ 3,979	$ 796	13.7%	$ 109	0.2%	$ 1	21.4%	$ 170	1.7%	$ 14	2.4%	$ 19	0.8%	$ 7	0.1%	$ 1	0.0%	$ -	39.5%	$ 314
Rental Car Parking Lot Resurfacing	$ 37,997	n/a	*Not allocated to these modes*																	
Terminal Area Access Road	$ 4,050,000	$ 810,000	13.7%	$ 111,145	0.2%	$ 1,276	21.4%	$ 173,016	1.7%	$ 14,112	2.4%	$ 19,135	0.8%	$ 6,697	0.1%	$ 1,196	0.0%	$ -	39.5%	$ 319,881
Ground Transportation Center	$ 2,739,000	n/a	*Future project; not yet allocated*																	
Ground Transportation Management System	$ 200,000	n/a	*Future project; not yet allocated*																	
Total Capital Costs		**$ 975,970**		**$ 136,574**		**$ 1,478**		**$ 220,270**		**$ 24,116**		**$ 21,597**		**$ 7,559**		**$ 1,350**		**$ -**		**$ 405,385**

Source: Inter*VISTAS* Consulting, Inc., based upon capital costs provided by Long Beach Airport, July 2017.

(a) Allocated to all modes.
(b) Allocated to TNCs only.
(c) Allocated to taxicabs only.
(d) Allocated to all modes except TNCs and courtesy vehicles.

Table 3
Estimated Operating Expenses Allocation
Long Beach Airport

	Total 2017 Allocation	Taxicabs		Limousines		TNCs		Shared-ride Vans		Hotel / Motel Courtesy Vehicles	
		Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost
Direct Operating Expenses											
Staff											
Security Manager	$ 12,961	13.7%	$ 1,778	0.2%	$ 20	21.4%	$ 2,768	1.7%	$ 226	2.4%	$ 306
Security Supervisor	57,386	13.7%	7,874	0.2%	90	21.4%	12,258	1.7%	1,000	2.4%	1,356
Security Officers	279,936	13.7%	38,412	0.2%	441	21.4%	59,794	1.7%	4,877	2.4%	6,613
Police Sergeant	28,219	13.7%	3,872	0.2%	44	21.4%	6,028	1.7%	492	2.4%	667
Police Officers	153,075	13.7%	21,004	0.2%	241	21.4%	32,697	1.7%	2,667	2.4%	3,616
Comm Center Staff	23,135	13.7%	3,174	0.2%	36	21.4%	4,942	1.7%	403	2.4%	547
GT Analyst	111,528	34.0%	37,957	0.4%	436	53.0%	59,086	4.3%	4,819	5.9%	6,535
Accounting Staff	8,637	34.0%	2,939	0.4%	34	53.0%	4,576	4.3%	373	5.9%	506
Clerical Staff (Cashier)	7,758	34.0%	2,640	0.4%	30	53.0%	4,110	4.3%	335	5.9%	455
Maintenance Staff	4,124	13.7%	566	0.2%	6	21.4%	881	1.7%	72	2.4%	97
Janitorial Staff	34,155	13.7%	4,687	0.2%	54	21.4%	7,296	1.7%	595	2.4%	807
GT Booth Staff	109,860	0.0%	-	0.0%	-	0.0%	-	100.0%	109,860	0.0%	-
Materials & Supplies											
Office Supplies	1,000	13.7%	137	0.2%	2	21.4%	214	1.7%	17	2.4%	24
Technology/Data	10,125	13.7%	1,389	0.2%	16	21.4%	2,163	1.7%	176	2.4%	239
Security vehicles	12,000	13.7%	1,647	0.2%	19	21.4%	2,563	1.7%	209	2.4%	283
Security Equipment/Uniform	9,000	13.7%	1,235	0.2%	14	21.4%	1,922	1.7%	157	2.4%	213
Total	$ 862,898		$ 129,312		$ 1,484		$ 201,297		$ 126,279		$ 22,263
Indirect Operating Expenses	$ 86,290	13.7%	$ 11,840	0.2%	$ 136	21.4%	$ 18,432	1.7%	$ 1,503	2.4%	$ 2,039
Total Operating Expenses	**$ 949,188**		**$ 141,153**		**$ 1,620**		**$ 219,728**		**$ 127,783**		**$ 24,302**

	Total 2017 Allocation	Off-airport Parking Courtesy Vehicles		Off-airport Rental Car Courtesy		Charter Buses		All Commercial Vehicles		Non-Commercial Vehicles	
		Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent	Cost
Direct Operating Expenses											
Staff											
Security Manager	$ 12,961	0.8%	$ 107	0.1%	$ 19	0.0%	$ -	40.3%	$ 5,225	59.7%	$ 7,735
Security Supervisor	57,386	0.8%	474	0.1%	85	0.0%	-	40.3%	23,137	59.7%	34,249
Security Officers	279,936	0.8%	2,315	0.1%	413	0.0%	-	40.3%	112,865	59.7%	167,070
Police Sergeant	28,219	0.8%	233	0.1%	42	0.0%	-	40.3%	11,377	59.7%	16,841
Police Officers	153,075	0.8%	1,266	0.1%	226	0.0%	-	40.3%	61,717	59.7%	91,357
Comm Center Staff	23,135	0.8%	191	0.1%	34	0.0%	-	40.3%	9,328	59.7%	13,807
GT Analyst	111,528	2.1%	2,287	0.4%	408	0.0%	-	100.0%	111,528	0.0%	-
Accounting Staff	8,637	2.1%	177	0.4%	32	0.0%	-	100.0%	8,637	0.0%	-
Clerical Staff (Cashier)	7,758	2.1%	159	0.4%	28	0.0%	-	100.0%	7,758	0.0%	-
Maintenance Staff	4,124	0.8%	34	0.1%	6	0.0%	-	40.3%	1,663	59.7%	2,461
Janitorial Staff	34,155	0.8%	282	0.1%	50	0.0%	-	40.3%	13,771	59.7%	20,384
GT Booth Staff	109,860	0.0%	-	0.0%	-	0.0%	-	100.0%	109,860	0.0%	-
Materials & Supplies											
Office Supplies	1,000	0.8%	8	0.1%	1	0.0%	-	40.3%	403	59.7%	597
Technology/Data	10,125	0.8%	84	0.1%	15	0.0%	-	40.3%	4,082	59.7%	6,043
Security vehicles	12,000	0.8%	99	0.1%	18	0.0%	-	40.3%	4,838	59.7%	7,162
Security Equipment/Uniform	9,000	0.8%	74	0.1%	13	0.0%	-	40.3%	3,629	59.7%	5,371
Total	$ 862,898		$ 7,792		$ 1,391		$ -		$ 489,819		$ 373,079
Indirect Operating Expenses	$ 86,290	0.8%	$ 713	0.1%	$ 127	0.0%	$ -	40.3%	$ 34,791	59.7%	$ 51,499
Total Operating Expenses	**$ 949,188**		**$ 8,506**		**$ 1,519**		**$ -**		**$ 524,610**		**$ 424,578**

Source: Inter*VISTAS* Consulting, Inc., based upon operating expenses provided by Long Beach Airport, July 2017.

Table 4
Calculated and Proposed Fees
Long Beach Airport

	Taxicabs	Limousines	TNCs	Shared-ride Vans	Hotel / Motel Courtesy Vehicles	Off-airport Parking Courtesy Vehicles	Off-airport Rental Car Courtesy Vehicles	Charter Buses
Allocated Capital Costs (a)	$ 136,574	$ 1,478	$ 220,270	$ 24,116	$ 21,597	$ 775	$ 1,196	$ -
Allocated Expenses (b)	141,153	136	219,728	127,783	24,302	8,506	1,519	-
Total Costs	$ 277,727	$ 1,614	$ 439,998	$ 151,899	$ 45,898	$ 9,280	$ 2,715	$ -
Estimated Annual Trips (c)	169,062	2,476	168,244	7,098	19,064	6,101	774	-
Calculated Per-trip Fee (d)	$1.64	$0.65	$2.62	$21.40	$2.41	$1.52	$3.51	
Recommended Fee (e)	$2.00	$1.00	$3.00	$6.00 (f)	$1.50	$1.50	$1.50 (g)	TBD

Source: InterVISTAS, July 2017

(a) See Table 2
(b) See Table 3
(c) See Table 1
(d) Calculated fees are the fees required to fully recover the Airport's costs based on the estimated annual trips (from Table 1) on the Terminal Roadway, and the allocated share of the totals of the capital costs (Table 2) and direct and indirect operating costs (Table 3). The calculated fees vary by type of commercial ground transportation provider reflecting the volume of trips, typical size and weight of the vehicles used to provide these services, and their use of Airport facilities
(e) Recommended fees reflect the calculated fee required to fully recover the Airport's costs plus other considerations including management's goals of 1) offering customers a broad range of transportation options, 2) maintaining and preserving non-airline revenues, and 3) maintaining an efficient and effective business model (including offsetting the erosion of Airport parking and rental car revenues)
(f) Recommended fee based on removal of two GT booth staff currently required for non-reservation shared-ride operations
(g) Cost recovery fee to be credited against concession fees paid