#### BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on Regulations Relating to Passenger Carriers, Ridesharing, And New Online Enabled Transportation Services

R.12-12-011

#### REPLY COMMENTS OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY, SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY, SAN FRANCISCO CITY ATTORNEY'S OFFICE, AND SAN FRANCISCO INTERNATIONAL AIRPORT TO PHASE III.C SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER

#### TRACK 3 – TNC DATA

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In response to the October 25, 2019 Assigned Commissioner's Scoping Memo, the San Francisco Municipal Transportation Agency ("SFMTA"), the San Francisco City Attorney's Office ("CAO"), and the San Francisco International Airport ("Airport" or "SFO"), collectively "the City", and the San Francisco County Transportation Authority ("TA") (together, the "City and County") submit these joint reply comments.

#### I. INTRODUCTION

The opening comments revealed several areas of agreement among parties. First, the City and County agree that preserving competition is an important goal of Commission regulation. The City and County also agree that Commission data collection from TNCs should be driven by regulatory goals, while protecting the privacy interests of both passengers and drivers. The City and County also agree that it is time for the Commission to reexamine the existing data reporting obligations and streamline them to align with regulatory goals. These reporting obligations do not exist in isolation. The Commission is currently considering reporting obligations in separate overlapping tracks of this rulemaking and other ongoing proceedings. To avoid confusion, the City and County address in these comments issues also relevant to the ongoing rulemaking regarding the TNC Access for All Act and the forthcoming rulemaking addressing implementation of Senate Bill 1014, the California Clean Miles Standard and Incentive Program.

The City and County Reporting and Disclosure Proposal outlined in the opening comments (the "Proposal") seeks to end the log-jam on public access to trip data that is essential to serve the regulatory purposes of both the Commission and other public agencies. The Proposal would replace the "Report on Providing Accessible Vehicles" and "Report on Providing Service by Zip Code" that are currently required by the Commission. The Proposal provides a foundation for the Commission to fulfill its new duties in relation to the TNCs for All Act and the Clean Miles Standard without implicating personal privacy concerns or revealing trade secrets. With respect to the material addressed in these reports, it would bring Commission practice into alignment with the public records requirements of the California Constitution and Public Records Act, General Order 66-D, and the Commission's handling of energy-usage related data set forth in Decision 14-05-016.

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While the Proposal would address many of the concerns raised in this proceeding by public entities, there are still issues that need to be addressed. In addition to requiring and publicly releasing the proposed Trip Report, Vehicle Segment Report, and Vehicle Report, the Commission should convene a workshop to address the reporting requirements for those public functions calling for more specific data and that may require more specialized handling to protect privacy. This includes data currently submitted by the TNCs to the Commission contained in the following reports: "Report on Problems with Drivers," "Report on Hours Logged by Drivers," "Report on Miles Logged by Drivers and Report on Drivers Completing Driver Training Course."

While the Commission should convene a Workshop on these remaining issues, this is not a reason for delay. The Commission should move quickly to replace the existing "Report on Providing Accessible Vehicles" and "Report on Providing Service by Zip Code" with the proposed Trip Report, Vehicle Segment Report, and Vehicle Report and provide for quarterly disclosure of these reports to the public on an ongoing basis.

#### II. REGULATORY MANDATES, OBJECTIVES AND PURPOSES

#### A. The Proposal Calls for Reporting and Disclosure of Trip Data and Vehicle Data Necessary to Serve the Commission's Mandates and Broader Regulatory Goals.

The Proposal would assist the Commission in fulfilling its regulatory obligations. Lyft, Uber, and HopSkipDrive all express concerns that the Commission's current data collection is not related to its mandates and purposes. Lyft, however, also acknowledges that the Commission has specific enforcement and regulatory purposes, including expanded responsibilities to implement the TNC Access for All Act and the Clean Miles Standard.<sup>1</sup> In addition to these new statutory requirements, it is not disputed that the Commission is responsible for monitoring and ensuring health and safety, consumer protection, program benefits that improve the lives of all Californians, environmental and social justice, and preventing discrimination. The City and County agrees that the Commission has a legitimate interest in collecting a variety of data to assist its oversight over TNCs.

To collect data relevant to these obligations, the Commission should replace the "Report on Providing Accessible Vehicles" and "Report on Providing Service by Zip Code" with the Trip Report,

<sup>&</sup>lt;sup>1</sup> Lyft's Opening Comments pp. 26, 28.

Vehicle Segment Report, and Vehicle Report reflected in the Proposal. These reports would improve on each of the existing reports as follows:

#### Existing Report on Providing Accessible Vehicles versus Proposed Trip Report and

**Vehicle Report**: This report currently requires statewide, monthly totals of accessible vehicle activity and ride requests, including the total number of rides in accessible vehicles requested, total number of accessible vehicles available, and total number of fulfilled accessible vehicle requests. Unfortunately, the fields required in this report do not adequately address the requirements established by the TNC Access for All Act<sup>2</sup>, including:

- 1. Community WAV demand,
- 2. WAV presence and supply,
- 3. Response times for WAV trips requested in each geographic area (county), and
- 4. Improved level of service over time

The current reporting requirements fail to capture this information because only the number of accessible vehicles is reported. With this information, one cannot determine whether a WAV is in use, when a WAV is requested or how long it takes to arrive, or in what geographic areas of California any WAV activity occurs.

<sup>&</sup>lt;sup>2</sup> Public Utilities Code § 5440.5(1)(A) (requiring that "the commission...determine community WAV demand and WAV supply"); Public Utilities Code § 5440.5(1)(G) (requiring that "(t)he commission shall adopt a designated level of WAV service that is required to be met in each geographic area via a TNC's online enabled application or platform in order for the TNC to be exempt from paying the fee"); Public Utilities Code § 5440.5(1)(B)(ii) (providing that the "commission shall require a TNC, at a minimum, to demonstrate, in the geographic area, the presence and availability of drivers with WAVs on its online-enabled application or platform, improved level of service, including reasonable response times, due to those investments."); Public Utilities Code § 5440.5(1)(D) (providing that the "commission shall select geographic areas, which shall be based on the demand for WAVs within the area"); Public Utilities Code § 5440.5(1)(G) (providing that "The commission shall require a TNC, at a minimum, to have response times for 80 percent of WAV trips requested via the TNC's online-enabled application or platform within a time established by the commission for that geographic area."); and Public Utilities Code § 5440.5(1)(I) (providing that "a transportation network company that receives an offset...shall submit a report to the commission. The report shall include, but shall not be limited to, all of the following: (i) The number of WAV rides requested. (ii) The number of WAV rides fulfilled. (iii) Data detailing the response time between when a WAV ride was requested and when the vehicle arrived."); and Public Utilities Code §5440.5(1)(J) (providing that, "The commission shall establish yearly benchmarks... These benchmarks shall include, but are not limited to, response times, percentage of trips fulfilled versus trips requested, and number of users requesting rides versus community WAV demand for each geographic area.")

In contrast, the proposed Trip Report includes each of these data fields, and will allow the Commission to measure WAV trip demand and fulfillment (including response times) for each geographic area, and to measure improvement over time. The proposed Vehicle Report will enable the Commission to measure the supply of WAVs as it may change over time. Without improving the current report, the Commission will not be able to adequately track compliance with SB 1376 over time.

Existing Report on Providing Service by Zip Code versus Proposed Reports: This report includes two separate tables: one for trip requests accepted by a driver, and one for trip requests not accepted by drivers. Both tables include trip records with date and time, and zip-code level geographic detail. The not accepted trip table also includes a narrative statement of when and why the request was not fulfilled.

The Clean Miles Standard requires establishing a baseline for emissions of greenhouse gases for vehicles used on the online-enabled applications or platforms by transportation network companies on a per-passenger-mile basis, implementing annual targets and goals of emissions of greenhouse gases per passenger-mile driven on behalf of a transportation network company, and setting annual goals for increasing passenger-miles traveled using zero-emission vehicles.<sup>3</sup> The Commission will need to refine its data collection practices in order to meet its statutory obligation to implement the Clean Miles Standard Program and track compliance.

On December 19, 2019, CARB released its SB 1014 Clean Miles Standard 2018 Base-year Emissions Inventory Report.<sup>4</sup> The report identifies the methodology needed to calculate Grams of CO2 per Passenger Mile Traveled as follows:

<sup>&</sup>lt;sup>3</sup> See, Public Utilities Code § 5450(b)(1) (providing that the State Air Resources Board "shall establish a baseline for emissions of greenhouse gases for vehicles used on the online-enabled applications or platforms by transportation network companies on a per-passenger-mile basis. For purposes of this section, emissions per passenger-mile traveled means the estimated emissions from all vehicles miles traveled in periods 1, 2, and 3, as those terms are used by the commission, including miles driven with no passenger in the vehicles, divided by the total number of passenger miles resulting from transport by those vehicles in period 3, including facilitation of walking, biking, and other modes of active or zero-emission transportation."); Public Utilities Code § 5450(b)(2) (providing that "the commission shall implement, annual targets and goals...of emissions of greenhouse gases per passenger-mile driven on behalf of a transportation network company. These targets and goals shall include annual goals for increasing passenger-miles traveled using zero-emission vehicles.") <sup>4</sup> <u>https://ww2.arb.ca.gov/resources/documents/2018-base-year-emissions-inventory-report</u>

(Vehicle Miles Traveled x In Use Fuel Consumption x Conversion Factor) / ((Ride VMT x Occupancy) + Active/ Transit PMT).

For purposes of making this calculation, CARB staff relied on a combination of one-time data submitted by the 14 TNCs operating in California (which had to be processed to remove double counting that can occur if a driver is using multiple platforms at the same time), trip diaries from 31 drivers collected over a two week period to estimate occupancy, a range of data sets and assumptions to estimate fuel consumption, and a conversion factor to estimate grams of CO2 per gallon.

No current Commission report collects the actual performance data needed to populate each element of this equation to measure emissions over time. The current reports include no information on vehicle passenger occupancy and no information on vehicle make, model and propulsion type, and do not enable an analysis of mileage and hours driven in Periods 1 & 2, passenger miles traveled, or the fuel type of vehicle, all of which are needed to measure greenhouse gas emissions.

The City and County Proposal is consistent with the CARB baseline analysis because it would provide for ongoing collection of data necessary to implement the Clean Miles Standard and track compliance over time. The following paragraphs outline the elements of the CARB formula for which the City proposal would provide reliable, actual data on an ongoing basis, and help facilitate the required data processing:

<u>Vehicle Miles Traveled</u>: The Proposal would provide a method for ongoing collection of actual VMT data associated with all periods for all TNC trips. CARB developed an algorithm to eliminate duplicate VMT data arising from TNC drivers who are logged in to more than one TNC driver app at the same time. The proposed Vehicle Segment Report would eliminate the need for complex data processing to eliminate duplicate VMT data. In the proposed Vehicle Segment Report, a new record is created for each change in Period and/or Occupancy. Collecting the data in this manner will allow the state to easily calculate and distinguish VMT and Ride VMT (only Period 3) and account for overlap caused by drivers being available for service on multiple platforms at the same time.

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In Use Fuel Consumption: The Proposal would provide a method for ongoing collection of information about vehicles operated for TNC use. CARB utilized VIN numbers to determine vehicle make, model, series and year information necessary to calculate fuel consumption. The Proposal calls for VIN information for each of the three proposed new tables; indeed, the VIN provides the link between the three proposed tables. The proposed Vehicle Report would improve the reliability of this information to fill data gaps.

Occupancy: The Proposal would provide a method for ongoing collection of information about TNC vehicle occupancy as it may change as one or more passengers enter or leave a TNC vehicle. CARB estimated occupancy using 31 trip diaries collected through a two week study. The proposed Vehicle Segment Report would directly collect occupancy for each vehicle segment. Neither the CARB baseline analysis nor the City and County Proposal calls for the reporting any personally identifiable information. These can easily be summed to calculate total PMT without relying on general occupancy factors.

Taken together, the proposed Trip Report, Vehicle Segment Report and Vehicle Report would provide the necessary data for the Commission to implement the Clean Miles Standard program.

# B. The City & County Proposal Calls for Reporting and Disclosure of Trip Data and Vehicle Data Necessary to Serve the Purposes of Other Public Agencies with Concurrent Jurisdiction.

In response to the Commission's question of whether *non-confidential* (emphasis added) information should be shared with interested government entities, Lyft asserted that the agencies interested in data, like the City and County, "have never clearly articulated how they would use such data; nor explained why other sources of traffic data available to them are inadequate for these purposes."<sup>5</sup> This argument is erroneous for three reasons. First, in addition to the City and County opening comments, here, numerous public entities have filed comments in previous stages of this proceeding articulating a wide range of public purposes that would be served by public disclosure of trip data and policy decisions that could be significantly informed by access to trip data.<sup>6</sup> The public

<sup>&</sup>lt;sup>5</sup> Lyft's Opening Comments at pp. 28-29.

<sup>&</sup>lt;sup>6</sup> See, e.g. City and County Opening Comments in this proceeding at pp. 10-13; Opening Comments of San Diego Association of Governments, the Sacramento Area Council of Governments,

sector parties have established ample public interest in receiving trip data in a way that protects individual privacy. That showing over multiple years and multiple comments clearly outweighs the *public interest* in non-disclosure. But in fact, the "burden of proof is on *the proponent of nondisclosure*, who must demonstrate a 'clear overbalance' on the side of confidentiality.<sup>7</sup>

Second, while the City and County and other public entities have articulated many clear public purposes for disclosure of TNC trip data, the Commission has a separate and independent obligation to comply with the CPRA. Under the CPRA, as to the public disclosure of non-confidential documents, the purposes behind requesting a public record is irrelevant. Section 6257.5 of the California Government Code states that the Public Records Act "does not allow limitations on access to a public record based upon the purpose for which the record is being requested, if the record is otherwise subject to disclosure." As noted in the *City of San Jose* case, "the purpose of the requesting party in seeking disclosure cannot be considered."<sup>8</sup>

Finally, as discussed in sections III and IV below, the TNCs' assertions that trip data reflected in current reports to the Commission or called for in the City and County's Proposal are confidential – whether based on privacy or trade secret arguments – range from overbroad to totally unfounded.

#### III. THE CITY & COUNTY REPORTING AND DISCLOSURE PROPOSAL WOULD PROTECT PRIVACY AND IS CONSISTENT WITH APPLICABLE CASELAW AND COMMISSION PRECEDENTS.

Citing different authorities, Lyft and Uber both argue that trip data broadly implicates passenger privacy rights and thus cannot be disclosed either to other government entities or the public. We are aware of no statutory or case law designating aggregate and anonymized TNC trip data as personal information or personally identifiable information that is protected from public disclosure under the California Public Records Act.

Lyft cites the California Information Practices Act of 1977, which limits the collection, management and dissemination of personal information by state agencies, as grounds for not

and the Metropolitan Transportation Commission at pp. 2,3,7; Opening Comments of the Los Angeles Department of Transportation, pp. 1-3, 6.

<sup>&</sup>lt;sup>7</sup> City of San Jose v. Superior Court (1999) 74 Cal.App.4th 1008, 1018 (emphasis added).

<sup>&</sup>lt;sup>8</sup> 74 Cal.App.4th at 1018; *See also, LAUSD, et al. v. Superior Court* (2014) 228 Cal.App.4th 222 (stating that the motive of a particular requester in seeking public records is irrelevant).

disclosing TNC data. This is a red herring. The Information Practices Act defines "personal information" as "any information that **identifies**, **relates to**, **describes**, **or is capable of being associated with, a particular individual**, including, but not limited to, his or her name, signature, social security number, physical characteristics or description, address, telephone number, passport number, driver's license or state identification card number, insurance policy number, education, employment, employment history, bank account number, credit card number, debit card number, or any other financial information, medical information, or health insurance information. . . . ." (emphasis added)<sup>9</sup>

Central to the Information Practices Act definition is the concept that information protected from disclosure is information **that identifies or relates to or is capable of being linked with a particular individual**. While TNC business records may contain a great volume of personal information, the disclosure of which could raise personal privacy concerns, the Proposal calls for no such information, and collects data in a manner that reliably prevents re-identification of passengers. The three reports proposed by the City and County do not implicate passenger privacy under the Information Practices Act because they do not identify or relate to a particular individual, such as driver or passenger name, and any ride information is geographically aggregated by census tract.

Lyft also incorrectly asserts that "(r)ecords that implicate a personal privacy interest should be disclosed only where disclosure of the records will shed light on the public agency's performance of its duty, disclosure would serve a public rather than a private interest, and the public interest outweighs the individual right to privacy enshrined in the California Constitution."<sup>10</sup> Lyft, however, misstates settled law regarding the required disclosure of public records. Whether created by the Commission or received from a regulated entity, the Commission's obligation under the California Public Records Act are the same. As stated in Decision 17-09-034:

The CPRA requires that public agency records be open to public inspection unless they are exempt from disclosure under the provisions of the CPRA. "Public records" are broadly defined to include all records "relating to the conduct of the people's business"; only records of

<sup>&</sup>lt;sup>9</sup> Cal. Civ. Code § 1798.80(e).

<sup>&</sup>lt;sup>10</sup> Lyft's Opening Comments p. 3

a purely personal nature fall outside this definition. Since records received by a state regulatory agency from regulated entities relate to the agency's conduct of the people's regulatory business, the CPRA definition of public records includes records received by, as well as generated by, the agency.

The CPRA presumes that records are public, unless those records are "exempt from disclosure by express provisions of law."<sup>11</sup> Section 6254(c) provides an exemption for "personnel, medical, or similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy." But, if none of the information contained in a public record is personal information or personally identifiable information that violates personal privacy, and assuming no other exemption applies, the record must be disclosed, and public disclosure of that information would not violate individual privacy rights.

Lyft relies on cases that have no application here. Both involve information linked to specific individuals, not anonymized and aggregated data. (*See Los Angeles Unified School District v. Superior Court*, (2014) 228 Cal.App.4th 222 [challenging school district's refusal to release names of teachers and schools associated with teacher evaluation scores]; *Haynie v. Superior Court* (2001) 26 Cal.4th 1061 [whether Sheriff's records concerning an individual stopped and detained by Sheriff were subject to disclosure under the CPRA.])

Uber states that "the Commission's current over-broad collection of data places all stakeholders at risk with respect to the consumer privacy...." But, Uber identifies no specific information required by current Commission reports and cites no relevant case supporting such a bold statement. Citing *Carpenter v. United States*,<sup>12</sup> Uber asserts that reports provided by TNCs to the Commission contain "highly sensitive PII of users, such as trip data" and suggests that TNC trip data is categorically PII under *Carpenter*. Uber is wrong.

At issue in the *Carpenter* case was the government's use of various suspects' cell phone records that revealed time-stamped records containing geolocation data that were used to track a

<sup>&</sup>lt;sup>11</sup> Cal. Gov. Code § 6253(b).

<sup>&</sup>lt;sup>12</sup> (2018) 138 S. Ct. 2206, 2217.

criminal defendant's movements over a period of 127 days. *Carpenter* cites *U.S. v. Jones*<sup>13</sup> as establishing precedent that a person has a reasonable expectation of privacy in his or her physical location and movements and that privacy concerns are raised by GPS tracking. The cell phone data at issue in *Carpenter* and *Jones* has no relation to aggregated TNC data that includes no names or other means of identifying, describing or being linked to a particular individual. The Proposal would not enable anyone to track the movements of any passenger. As such, *Carpenter* has no relevance here.

To the contrary, given Uber's most recent proposal to allow drivers to see a proposed passenger's destination prior to accepting the passenger's request,<sup>14</sup> it is even more important that the Commission receive trip data in a form that allows for meaningful analysis. As one commenter stated, "Did Uber Just Enable Discrimination by Destination?"<sup>15</sup> Having trip data related to rides requested and rides accepted will allow the Commission, and the public, to oversee the equal access and quality of trips to all geographic areas.

The public disclosure of TNC trip data has many similarities to the energy usage-related data addressed in Commission Decision 14-05-016. As noted in this decision, "high level aggregated data will prevent the identification of an individual customer, and therefore is not subject to disclosure restrictions arising from personal privacy considerations. . . . For residential customers, data stripped of personal identifying information and aggregated to a monthly time period and aggregated to the zip code geographic level, where a zip code has 100 or more residential customers, is sufficiently aggregated to prohibit re-identification. It is reasonable to require the public release of this data."<sup>16</sup>

In requiring utilities to publicly disclose aggregated and anonymized energy usage information to serve the public interest in understanding energy usage and response to energy conservation programs, Decision 14-05-016 establishes an "aggregation threshold" where the small number of customers in a particular zip code creates a risk that the public reports could re-identify an

<sup>&</sup>lt;sup>13</sup> (2011) 132 S.Ct. 945.

<sup>&</sup>lt;sup>14</sup> https://www.uber.com/blog/california/keeping-you-in-the-drivers-seat-1/

<sup>&</sup>lt;sup>15</sup> https://www.citylab.com/perspective/2019/12/uber-driver-policy-ride-destination-location-discrimination/603448/?utm\_term=2019-12-

<sup>11</sup>T20%3A54%3A58&utm\_campaign=citylab&utm\_source=twitter&utm\_content=edit-promo&utm\_medium=social

<sup>&</sup>lt;sup>16</sup> Decision 14-05-016, at p.139.

individual.<sup>17</sup> The Proposal avoids the need for additional *aggregation thresholds* by recommending the use of census data tracts rather than zip codes for identification of trip start and end locations. For purposes of aggregation geography, census tracts have several distinct advantages over zip codes.

First, census tracts are systematically managed and tracked over time; when their boundaries change, the U.S. Census Bureau publishes detailed documentation to support researchers seeking to validate data tracked over time. Second, while it is possible for a zip code to reflect a single building, census tracts are normalized to reflect an optimum size of 4000 people. Where population shifts over time, the normalized size of a census tract would continue to protect passengers from re-identification, whether the census tract reflects a dense urban environment or a more rural environment. (The Census Bureau also uses an even smaller area – a 'block group'; we think the various public purposes served by release of aggregate trip data are adequately addressed at the census tract level.) <sup>18</sup> Third, unlike zip codes, the U.S. Census Bureau provides demographic data by census tract that would enable the Commission to analyze population characteristics of the demand for TNC service and its supply. This demographic data would support the Commission in evaluating claims of discrimination in service delivery.

In response to Commission questions about granularity of trip data, Lyft makes many assertions about the ability to reverse engineer data and that "even anonymization of trip data cannot prevent harm to personal privacy because 'numerous studies have shown that even so-called 'anonymous' or de-identified ride data can be reverse engineered to identify particular individuals and track their movements'."<sup>19</sup> The articles cited to support these claims rely on elements not included in the Proposal, including published lists of drivers' names and licenses, published lists of encoded driver information produced by a replicable and publicly available algorithm, and precise geolocation data or

<sup>&</sup>lt;sup>17</sup> *Id.* at pp. 139-141.

<sup>&</sup>lt;sup>18</sup> According to the US Census Bureau, "Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people", while block groups are "statistical divisions of census tracts ... generally defined to contain between 600 and 3,000 people."<sup>18</sup> It is the disclosure avoidance practice of the US Census Bureau to publish sample data at the block group and larger geographic areas (like Census Tracts).

<sup>&</sup>lt;sup>19</sup> Lyft's Opening Comments p. 25 and materials cited at footnote 33.

"high accuracy location data." <sup>20</sup> Lyft also cites numerous other sources to support a claim that Commission data generally can be used to reveal mobility patterns that can identify gender and ethnicity and lead to discrimination. On the contrary, the Proposal calls for the Commission to collect and report to the public aggregate trip data at the census tract level. Even aggregated at this level, the Commission could use this information to investigate and reveal potentially unlawful discrimination, but there is no conceivable way it could be used to propagate unlawful discrimination. The concerns addressed in Lyft's cited studies are not relevant to the Proposal. For more detail on the context and relevance of each source cited by Lyft and how they are addressed by the Proposal, please refer to Attachment B.

As was described in Opening Comments, the Proposal protects TNC driver privacy in the same way that it protects passenger privacy – by not requiring personal information to be reported in the first instance. The Proposal would not affect driver privacy because the Trip Report, Vehicle Segment Report and Vehicle Report include no driver name or other identifier that could be used to link any record to a particular driver.

Although all three proposed reports include a VIN number, under California law VIN numbers are not considered "personal data" or information regarding an individual such that personal privacy rights are implicated. Specifically, the Information Practices Act of 1977 does not consider VIN numbers to be "personal information" that identifies or describes an individual. *See.* Cal. Civil Code section 1798.3. Further, VIN numbers may be collected by a state agency without notice to any individual and disclosed in response to a public records request.<sup>21</sup> The United States Supreme Court has taken this same view. In *New York v. Class*, (1986) 475 U.S. 106, the Court held that, for purposes of the Fourth Amendment, there is no reasonable expectation of privacy in a VIN number. The Court noted that, because VIN numbers play a pervasive role in the governmental regulation of automobiles

<sup>&</sup>lt;sup>20</sup> If the Commission does wish to include randomized or anonymized identifiers, the article cited by Lyft states there are simple and secure methods for producing them (i.e. a simple random number generator), and Commission staff need not perform any randomization, they can simply require the companies to submit randomized data.

<sup>&</sup>lt;sup>21</sup> Cal. Civil Code sections 1798.16 and 1798.24.

and the efforts made by the federal government to ensure that VIN numbers are placed in plain view on a vehicle, the respondent had no reasonable expectation of privacy in a VIN.

#### **IV. TRADE SECRETS**

#### A. The City & County Reporting and Disclosure Proposal Does Not Require or Disclose Trade Secret Information.

Lyft argues that trip level data is trade secret and protected from public disclosure. State law defines "trade secret" as information, including a formula, pattern, compilation, program, device method, technique, or process that: (1) derives independent economic value, actual or potential, from not being generally known to the public or other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.<sup>22</sup> Even if the information is a trade secret, the Evidence Code provides that the privilege may be asserted only "if the allowance of the privilege will not tend to conceal fraud or otherwise work injustice."<sup>23</sup>

Most of the authorities Lyft relies on to support its argument that "trip level data" is trade secret are not relevant because they involve information that is wholly different from trip data. Lyft offers no support for the proposition that TNCs derive economic value from aggregated anonymized trip data not being known to public agencies, researchers or the general public. For example, neither the Commission's existing "Report on Providing Accessible Vehicles," "Report on Providing Service by Zip Code," nor the proposed Trip Report, Vehicle Segment Report or Vehicle Report would call for a TNC's user base or customer database, business strategies, advertising studies, internal codes and methods of allocation in accounting and control procedures, marketing strategies, accounting and control procedures, the 'how and why' behind marketing strategies, pricing concessions, promotional discounts, advertising allowances, volume rebates, payment terms and rebate incentives, financial performance and projections.<sup>24</sup> Cases cited by Lyft provide no support for the assertion that TNC trip

<sup>&</sup>lt;sup>22</sup> Cal. Civ. Code § 3426.1

<sup>&</sup>lt;sup>23</sup> Cal. Evid. Code § 1060.

<sup>&</sup>lt;sup>24</sup> See Lyft's Opening Comments, pp. 11-14

data is 'precisely the kind of information that has been consistently found to constitute a trade secret.'<sup>25</sup>

The Proposal calls for the Commission to consolidate trip data submitted by all TNCs and release trip data on an industry-wide basis. Thus, public disclosure of the data would not reveal data specific to an individual TNC to the general public. To the extent the Commission is unwilling to aggregate the TNC data, sharing each company's aggregated data would be consistent with the treatment of TNC data in other jurisdiction, where the TNCs share their market information to each other.

As addressed in the City and County's Opening Comments, in *Lyft v. City of Seattle* (2018) 190 Wash.2nd 769, 788, the court rejected the TNC argument that all trip data is a trade secret. Following an unsuccessful appeal to the Washington Supreme Court, Lyft and Uber agreed to provide zip code based ride data to the City of Seattle.<sup>26</sup> Both Uber and Lyft now provide pick-up and drop-off trip data based on zip code. A Florida court reached a similar conclusion. In *Raiser-DC, LLC v. B&L Serv.*, (Dist. Ct. App. 2018) 43 Fla.L.Weekly D145, a Court of Appeal held that Uber's aggregate trip data was not a trade secret, that release of this data would not provide an advantage to a competitor, Yellow Cab, and that keeping the data secret did not provide an independent economic value to Uber. Further the court cited several cases holding that sales volumes, income statements, and gross sales of a corporation were not trade secrets.<sup>27</sup>

<sup>25</sup> See Lyft's Opening Comments, pp. 11-12 and cases cited. Bridgestone/Firestone, Inc. v. Superior Court, (1992) 7 Cal.App.4th 1384 involves the secret formula for the components of rubber tire compounds. Lion Raisins Inc. v. USDA, (9th Cir 2004) 354 F.3d 1072 involves the USDA's denial of three FOIA requests, based on "trade secrets" and "law enforcement" exemptions, which were submitted by Lion for documents related to USDA's raisin inspections conducted at Lion's packing facility and the facilities of its competitors, and two internal reports related to USDA's investigation of Lion. Mattel, Inc. v. MGA Entm't, Inc., (2011) 782 F.Supp.2d 911 involves a toy company's action in state court against a former employee, alleging that employee breached his contractual and common law duties by failing to disclose his concept sketches and sculpts for line of fashion dolls prior to leaving to work for a competitor None of these cases provide guidance on the question of whether aggregated TNC service data constitutes a trade secret.

<sup>&</sup>lt;sup>26</sup> Lyft v. City of Seattle (2018) 190 Wash.2nd 769, 788.

<sup>&</sup>lt;sup>27</sup> See Luigino's, Inc. v. Peterson, (8th Cir. 2003) 317 F.3d 909; Matosantos Commercial Corp. v. SCA Tissue N. Am., LLC, (D.P.R. 2005) 369 F.Supp.2d 191; Augat, Inc. v. Aegis, Inc., (1991) 409 Mass. 165,565 N.E.2d 415.

Even if TNCs could demonstrate that they derive economic value from aggregated trip data not generally known, TNCs do not protect this data in all markets. Several cities currently require TNCs to report trip data similar to data in the Proposal in order to operate within their jurisdiction. A recently released study on e-hail regulation conducted by New York University's Rudin Center for Transportation Policy and Management ("Rudin Center report") examined regulations in 13 cities around the world.<sup>28</sup> Despite requirements to report and disclose data, the sky has not fallen - TNCs continue to provide service in these markets.

The Rudin Center report sets forth the basic data reporting and disclosure framework in each city. The granularity of data reporting and public disclosure varies among the cities. For example, when New York City discloses data to the public, trip origin and destination points are aggregated spatially at the neighborhood level and driver and vehicle identifiers are redacted. In Chicago, pick-ups and drop-offs are published by census tract and Chicago Community Area. The Table in Attachment C restates the City and County's proposed Trip Report in relation to existing CPUC reports and in relation to precedents established by the requirements of other cities. We note that most data included in the proposed Trip Report that is not already being collected and reported in any of the example cities is required for purposes of the Commission's statutory duties under SB 1376 and/or SB 1014.

There is also no support for the assertion that fare and tip information, which are collected in a single field in the Commission's existing "Report on Providing Service by Zip Code," and which the Proposal addresses in two fields on the proposed Trip Report, is trade secret. In, *Cotter v. Lyft, Inc.*, (N.D. Cal. June 23, 2016) No. 13-cv-04065-VC, 2016 WL 3654454, a case involving the total amount taken by Lyft for commissions paid by Lyft riders, the court held that Lyft's algorithms and price models to set fares and commissions were trade secrets, however, the output of the algorithms and price models were not.<sup>29</sup> The cases cited by Lyft and Uber in their Opening Comments do not support

<sup>&</sup>lt;sup>28</sup> https://wagner.nyu.edu/files/faculty/publications/RUDIN\_EHAIL\_REPORT.pdf.

<sup>&</sup>lt;sup>29</sup> 2016 WL 3654454, at \*2 ("The Court cannot see how the aggregate output of the pricing model (i.e. the total amount of commissions taken) from two large time periods and a single piece of input information (i.e. the number of hours driven during the class period) relevant to a different formula (Lyft's base fare rate) for a different time period – since the class period and the Prime Time commissions periods do not precisely overlap – could ever be used to reverse engineer the

an argument that aggregated TNC trip data reported on a census tract level or the fares and tips charged to customers constitute trade secrets.

#### V. CONCLUSION

Over six years have passed since the Commission adopted footnote 42. Since that time, TNC vehicles have had a major impact on the operation and safety of San Francisco's transportation network. The Trip Report, Vehicle Segment Report and Vehicle Report proposed by the City and County describe a starting point for public disclosure of TNC trip data that would not include precise trip locations. The City and County respectfully requests that the Commission take prompt action to make significant trip data available to the public in a manner that satisfies Commission and other public agency regulatory purposes, complies with the California Constitution and Public Records Act, protects privacy, and takes reasonable measures to protect the competitive market.

The City and County further request that the Commission convene a workshop to discuss how additional TNC information can be made available to support a broader range of public purposes. Using the workshop that preceded D.14-05-016 as a model, the workshop should review different use cases calling for disclosure to public agencies or researchers of the reports not proposed to be replaced by the Proposal: "Report on Problems with Drivers," "Report on Hours Logged by Drivers," "Report on Miles Logged by Drivers and Report on Drivers Completing Driver Training Course," or their successor reports. For these reports, any disclosure should protect individual privacy. The workshop should also address use cases calling for more detailed location data, such as the precise latitude and longitude of trip starts and ends to address local needs such as curb management. The workshop should also consider use cases related to enforcement of hours of service limitations for drivers and driver incidents and training. All parties should discuss how information will be made available to government agencies, such as the File Transfer Protocol ("FTP") server recommended by SANDAG, SACOG, and MTC on how data should be managed. Finally, Commission should consider the value of forming a TNC Data Access Committee that could provide ongoing support for maximizing release of public records as required by the California Public Records Act while protecting privacy and the competitive market for TNC service.

sophisticated formula or formulas Lyft uses to calculate its Prime Time premiums and determine its rates of commission after accounting for Power Driver bonuses.").

Dated: December 20, 2019

Respectfully submitted,

DENNIS J. HERRERA City Attorney JOHN I. KENNEDY AUSTIN M. YANG Deputy City Attorneys

By:<u>/s/</u> JOHN I. KENNEDY

> On behalf of: THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY, SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY, SAN FRANCISCO CITY ATTORNEY'S OFFICE, AND SAN FRANCISCO INTERNATIONAL AIRPORT

# **ATTACHMENT A**

#### Annual TNC Reports Currently Required by the Commission to be Replaced by City and County Proposal

#### 1. Report on Providing Accessible Vehicles

| Report on Providing Accessible Vehicles, Report Fields            |
|---|
| Month & Year  |
| Total # of Requested Rides (all types)                            |
| Number of Hours an Accessible vehicle is available per month      |
| Number of accessible vehicles                                     |
| Total Number of Customer Requests for Accessible Vehicles         |
| Total Percentage (%) of Customer Requests for Accessible Vehicles |
| Total Number of fulfilled Accessible Vehicle Requests             |

#### 2. Report on Providing Service by Zip Code

| Report on Providing Service by Zip Code – Accepted Report Fields |  |  |  |
|--|--|--|--|
| Date of request  |  |  |  |
| Time of request  |  |  |  |
| Zip Code of Requester (at the time of request)                   |  |  |  |
| Date that request was accepted                                   |  |  |  |
| Time that request was accepted                                   |  |  |  |
| Zip Code of Driver (at the time request was accepted)            |  |  |  |
| Zip Code of Where the Ride Began                                 |  |  |  |
| Zip Code of Where the Ride Ended                                 |  |  |  |
| Miles Traveled   |  |  |  |
| Amount Paid/ Donated   |  |  |  |

#### **Report on Providing Service by Zip Code – Not Accepted Report Fields**

Date of request

Time of request

Zip Code of Requester (at the time of request)

Date that request was not accepted

Time that request was not accepted

Zip Code of Driver (at the time request was not accepted)

Reason / explanation for ride not being accepted

# **ATTACHMENT B**

### Analysis of Lyft's Reported Re-identification Concerns

# 1. FOOTNOTE 33 "New York taxi details can be extracted from anonymized data, researchers say," The Guardian, June 27, 2014, at <a href="https://www.theguardian.com/technology/2014/jun/27/new-york-taxi-details-anonymise-data-researcherswarn">https://www.theguardian.com/technology/2014/jun/27/new-york-taxi-details-anonymise-data-researcherswarn</a>;

This example revealed trip histories of drivers (not information about passengers) because the data had "been anonymized by hashing, a cryptographic function [with the feature that] the same piece of data always results in the same hash" and that the NYC Taxi and Limousine commission publishes lists of Taxi driver names and license numbers. But it notes "there are a number of ways that the city could have more successfully anonymized the data [...] if they had simply assigned random numbers to each license plate."

This example relies on the following elements:

- Published lists of drivers' names and licenses
- Published lists of data with encoded drivers' names and licenses along with other data produced by an encoding algorithm that is replicable (always produces the same result) and publicly available

Both of these elements must be present for this technique to be applied. The Proposal does not include either of these elements. The Commission does not publish drivers' names and licenses, and the Proposal does not include drivers' names and licenses. The proposal does not include encoded driver information produced by a replicable and publicly available algorithm. Instead it features VIN numbers which identify vehicles, not drivers, and is not produced by a publicly available algorithm. Additionally, a vehicle and its VIN number may be shared by multiple drivers, owned by a third party separate from its driver(s), and cannot be tied back to its current owner using any publicly available data. Finally, if the Commission desires to include randomized or anonymized identifiers, the article cited by Lyft states there are simple and secure methods for producing them (i.e. a simple random number generator), and Commission staff need not perform any randomization, they can simply require the companies to submit randomized data.

2. **FOOTNOTE 33** FTC Testifies on Geolocation Privacy at <u>https://www.ftc.gov/news-events/press-releases/2014/06/ftctestifiesgeolocation-privacy</u> ("The ability to track the pattern of pick-ups and destinations for a specific person (e.g., a politician, a celebrity, or an ex-husband or ex-wife) can be potentially damaging if revealed to an adversary or person with improper motives.").

According to the FTC's press release, "precise geolocation data is sensitive personal information increasingly used in consumer products and services," and that "geolocation information can divulge intimately personal details about an individual." This is not in dispute. However, the Proposal does not call for reporting or disclosure of "precise geolocation data." To the extent that "precise geolocation data" is collected, it should be handled according to accepted data security practices, and should not be released publicly.

 FOOTNOTE 34 "I Don't Have a Photograph, but You Can Have my Footprints"- Revealing the Demographics of Location Data," Riederer et al., 2015 at <u>http://sebastianzimmeck.de/riedererEtAlPhotograph2015ShortPaper.pdf</u> (2015 Columbia University research paper showing that mobility patterns can be potentially be used to discriminate based on gender or ethnicity);

This research seeks to "explore how the growing number of geotagged footprints [...] can reveal demographic attributes [...]" It relies on "high accuracy location data [which] are routinely available [...] to mobile apps and web services." It finds that "the existence of regional variations in mobility and reveals statistically significant differences in mobility between genders and ethnicities." This work does NOT claim to identify individuals, and relies on "high accuracy location data" which the Proposal does not call for.

4. **FOOTNOTE 34** "Unique in the Crowd: The privacy bounds of human mobility," de Montjoye, et al., 2013 at <u>https://www.nature.com/articles/srep01376</u> (finding that 95% of individuals can be identified using only four spatiotemporal data points)

This work uses location-based data from Foursquare, a smartphone app, comprised of 15 months of data from 1.5 M people. It finds that, with low spatial resolution (defined by cell towers which serve approximately 2000 people each) and low temporal resolution (hourly) that 95% of individuals could be uniquely identified from the other records in the data set if there were 4 or more records for that individual. This is different from determining who the records represent, which is a significant challenge. Beyond that challenge, the data that could be revealed is not sensitive because: (1) Census tracts are too big to reveal specific locations, (2) the locations are driven by user demand and not drivers' routine travel decisions, and (3) vehicles can be shared by multiple users; the location of a vehicle is not the same as the location as a user. Finally, this example is wholly inapplicable to passengers, for whom there is nothing in the data that identifies passengers or links their trips together.

 FOOTNOTE 35 Estimating the success of re-identifications in incomplete datasets using generative models, at <u>https://www.nature.com/articles/s41467-019-10933-3</u> ("Using our model, we find that 99.98% of Americans would be correctly re-identified in any dataset using 15 demographic attributes.");

This report argues that de-identified sample data can be correctly re-identified to individuals with high likelihood using detailed demographic data. The City and County Proposal calls for reporting of no demographic data.

6. **FOOTNOTE 35** Your Data Were 'Anonymized'? These Scientists Can Still Identify You, NY Times, July 23, 2019, at <u>https://www.nytimes.com/2019/07/23/health/dataprivacy-protection.html;</u>

This article presents the work of the report in (5). See (5) for response.

7. FOOTNOTE 35 Fitness tracking app Strava gives away location of secret US army bases, at

https://www.theguardian.com/world/2018/jan/28/fitness-tracking-app-gives-away-location-of-

secret-us-army-bases ("anonymized" fitness activity heatmap can be used to invade user privacy);

This article details the possible disclosure of US military bases in Afghanistan using detailed GPS trace data aggregated to show regular routes. The City and County Proposal calls for reporting of no detailed GPS trace data. Should the Commission choose to collect detailed GPS data, this should not be disclosed to the general public.

 FOOTNOTE 35 Evaluating the privacy properties of telephone metadata, <u>https://www.pnas.org/content/113/20/5536.full</u> (researchers were able to infer home locations, personal relationships and other sensitive traits from anonymous phone logs);

This report explores the potential for reidentifying individuals from a non-representative, nonrandom sample of phone call and text message metadata records similar to those available to law enforcement and security agencies for surveillance purposes. The City and County Proposal does not contain phone call or text metadata, or similar data. The type of data discussed in this article is not typically available to the public, and similarly the data used in the research was collected for the purpose of the research and was not, and is not, publicly available.

9. FOOTNOTE 35 Reidentification attack reveals German judge's porn-browsing habits, https://boingboing.net/2017/08/02/anonymization-meets-reality.html

This article claims that individuals can be easily re-identified from internet browsing history data using two methods (1) identifying users who visit sites only available to them like their personal social media admin pages and (2) unique combinations of URLs. The article contains no explanation of the second method. Nor is either of these relevant; the City and County Proposal does not call for reporting or disclosure of browsing history.

10. FOOTNOTE 36 research conducted by University of Texas researchers in which they applied a deanonymization methodology to anonymous movie reviews released by Netflix to identify individual reviewers, and using other publicly available information, to determine their political preferences and other potentially sensitive information. http://www.cs.utexas.edu/~shmat/shmat\_oak08netflix.pdf.

This research describes methods to re-identify datasets with "high-dimensional micro-data, such as individual preferences, recommendations, transaction records..." The City and County Proposal does not call for reporting or disclosure of microdata.

11. **FOOTNOTE 36** The re-identification of "de-identified" patient health data described by Harvard Professor Latanya Sweeney in "Weaving Technology and Policy Together to Maintain Confidentiality," at <u>https://dataprivacylab.org/dataprivacy/projects/law/law1.html</u>

This article describes methods and tools to maintain patient confidentiality in anonymized medical datasets released for research. It finds that such methods and tools can be effective. Regardless, this is irrelevant because the City and County Proposal does not call for reporting or disclosure of medical records or similar data.

# **ATTACHMENT C**

# City and County Proposal in Relation to Current CPUC Reports and Data Use in Other Cities TABLE 1. TRIP REPORT

| Current Data<br>Item <sup>30</sup> | Proposed Data Item          | Description                                    | Other Cities   |
|------------------------------------|-----------------------------|--|--|
| Date of request                    | REQUEST_DATETI              | Trip request datetime                          |  |
| / Time of                          | ME                          | stamp  |  |
| request                            |                             | 1  |  |
| Zip Code of                        | REQUEST_TRACT               | Trip requestor census                          |  |
| Requestor                          | × _                         | tract  |  |
|                                    | REQUEST_WAV                 | Wheelchair access<br>vehicle request indicator | NYC – duration between<br>requesting accessible<br>vehicle service and actually<br>getting it<br>Chicago – monthly reports<br>on aggregated wait times<br>for wheelchair accessible<br>vehicle trips |
|                                    | REQUEST_POOLE<br>D          | Pooled trip request<br>indicator               | NYC – whether the ride is<br>shared or pooled<br>Chicago – whether the ride<br>is shared or pooled<br>Toronto – type of service<br>provided (for example Uber<br>X, UberPool, Lux, etc)              |
|                                    | ACCEPT                      | Trip acceptance indicator                      |  |
|                                    | PERIOD_3_START_<br>DATETIME | Trip start datetime stamp                      | NYC – date/time of every<br>pick-up and drop-off   |
|                                    |                             |  | Chicago – date/time at<br>census block level for<br>every pick-up and drop-off   |
|                                    |                             |  | Toronto – date/time of<br>every pick-up and drop-off   |

<sup>&</sup>lt;sup>30</sup> "Report on Providing Service by Zip Code." California Public Utilities Commission. Required Reports TNCs Must Provide the CPUC. <u>https://www.cpuc.ca.gov/General.aspx?id=3989</u>. Accessed on December 2, 2019.

| Reason /<br>explanation for<br>ride not being<br>accepted                               | NOT_ACCEPT_RE<br>ASON     | The reason the ride was<br>not accepted. This<br>should be a value from a<br>list of valid reasons, or<br>null if the ride was<br>accepted. Valid reasons<br>should include that no<br>driver accepted, the<br>driver cancelled, the<br>passenger cancelled, no<br>match was found, or<br>other reasons relevant to<br>SB 1376 | Toronto – information<br>regarding trip cancellations   |
|---|---------------------------|--|---|
| Date that<br>request was<br>not<br>accepted/Time<br>that request<br>was not<br>accepted | NOT_ACCEPT_DA<br>TETIME   | Timestamp when the<br>ride request ended<br>without being fulfilled  |   |
|   | PERIOD_3_END_D<br>ATETIME | Trip end datetime stamp  | NYC – date/time of every<br>pick-up and drop-off<br>Chicago – date/time at<br>census block level of every<br>pick-up and drop-off<br>Toronto – date/time of<br>every pick-up and drop-off         |
| Zip Code of<br>Where the<br>Ride Began  | PERIOD_3_START_<br>TRACT  | Trip start location.<br>Currently reported at the<br>zipcode level, proposed<br>to be reported at the<br>census tract level  | NYC –location of every<br>pick-up and drop-off<br>Chicago –location at census<br>block level of every pick-<br>up and drop-off<br>Toronto –location of every<br>passenger pick-up and<br>drop-off |

| Zip Code of<br>Where the<br>Ride Ended | PERIOD_3_END_T<br>RACT | Trip end location.<br>Currently reported at the<br>zipcode level, proposed<br>to be reported at the<br>census tract level | NYC –location of every<br>pick-up and drop-off<br>Chicago –location at census<br>block level of every pick-<br>up and drop-off<br>Toronto –location of every<br>pick-up and drop-off  |
|--|------------------------|---|---|
| Miles Traveled                         | PERIOD_3_VMT           | Trip vehicle miles<br>traveled  | NYC – total trip mileage<br>Chicago – total distance of<br>the trip   |
|  | PERIOD_3_VHT           | Trip vehicle hours<br>traveled (in minutes)   | NYC – date/time of every<br>pick-up and drop-off (can<br>calculate total trip time<br>from this information)<br>Chicago – date/time at<br>census block level of every<br>pick-up and drop-off (can<br>calculate total trip time<br>from this information)<br>Toronto – date/time of<br>every pick-up and drop-off<br>(can calculate total trip<br>time from this information) |
| Amount<br>Paid/Donated                 | FARE                   | Required fare paid  | NYC – itemized fare for<br>each trip<br>Chicago – total cost, total<br>fare, taxes and fees all<br>reported separately<br>Toronto – Total fare paid   |

| TIP                      | Additional / optional                           | NYC – itemized fare for  |
|--------------------------|---|--|
|                          | fare paid                                       | each trip including gratuity   |
|                          |   | Chicago – tip paid   |
| PASSENGERS               | Number of non-driving                           | NYC – total number of  |
| <br>DEDIOD 1 DATETI      | vehicle passengers                              | passengers   |
| PERIOD_1_DATETI<br>ME    | Period 1 start datetime                         |  |
| PERIOD 1 START           | stamp<br>Period 1 start location                |  |
| TRACT                    | census tract                                    |  |
| <br>PERIOD_1_VMT         | Period 1 vehicle miles                          |  |
|                          | traveled  |  |
| PERIOD_1_VHT             | Period 1 vehicle hours<br>traveled (in minutes) | NYC – time spent by a<br>vehicle between trips but<br>not on the way to a<br>passenger |
| PERIOD_2_DATETI          | Period 2 start datetime                         |  |
| ME                       | stamp   |  |
| PERIOD_2_START_<br>TRACT | Period 2 start location census tract            |  |
| <br>PERIOD_2_VMT         | Period 2 vehicle miles<br>traveled              |  |
| PERIOD_2_VHT             | Period 2 vehicle hours<br>traveled (in minutes) | NYC – time spent on the<br>way to a passenger  |
| VIN                      | Vehicle identification<br>number                | Chicago – VIN of vehicle<br>that made the trip   |
|                          |   | Toronto – VIN required   |

## TABLE 2. VEHICLE SEGMENT REPORT

| Proposed Data Item     | Description                   | Other Cities |
|------------------------|-------------------------------|--------------|
| VIN                    | Vehicle identification number |              |
| SEGMENT_PERIOD         | Segment period (1,2,3)        |              |
| SEGMENT_START_DATETIME | Datetime stamp when           |              |
|                        | segment starts                |              |
| SEGMENT_END_DATETIME   | Datetime stamp when           |              |
|                        | segment ends                  |              |
| SEGMENT_START_TRACT    | Segment start location census |              |
|                        | tract                         |              |

| SEGMENT_END_TRACT | Segment end location census |
|-------------------|-----------------------------|
|                   | tract                       |
| SEGMENT OCCUPANCY | Number of non-driving       |
|                   | vehicle passengers          |
| SEGMENT VMT       | Segment vehicle miles       |
| _                 | traveled                    |
| SEGMENT VHT       | Segment vehicle hours       |
| _                 | traveled (in minutes)       |

### TABLE 3. VEHICLE REPORT

| Proposed Data Item | Description                                | Other Cities   |
|--------------------|--|--|
| VIN                | Vehicle identification<br>number           | Chicago - VIN<br>Toronto – VIN   |
| VEHICLE_MAKE       | Vehicle make                               | Toronto – vehicle make<br>Chicago – vehicle make   |
| VEHICLE_MODEL      | Vehicle model                              | Toronto – vehicle model<br>Chicago – vehicle model   |
| PROPULSION         | Vehicle propulsion type                    | NYC – higher fuel efficiency<br>requirements in the congestion<br>zone   |
| VEHICLE_WAV        | Wheelchair accessible<br>vehicle indicator | NYC – whether the vehicle is<br>wheelchair accessibleChicago – requires monthly<br>reports on aggregated wait<br>times for WAV tripsToronto – trips involving<br>accessible vehicles |