



# ADMINISTRATION AND REGULATORY AFFAIRS DEPARTMENT

## Transportation Section Policy

Subject: **Integrated Global Positioning Satellite (GPS)/Credit Card Payment System for Taxicabs in Houston**

Policy No. **VFH - 007**

Effective Date: **Upon Approval**

### 1. AUTHORITY

1.1 Chapter 46, Houston Code of Ordinances

### 2. PURPOSE

2.1 The purpose of this policy is to establish guidelines for the installation, support and maintenance of equipment that delivers an integrated solution for the electronic collection of trip data, credit/debit card payment capability, and an interactive passenger information monitor.

### 3. POLICY STATEMENT

Taxi drivers are often the first impression visitors receive of the City of Houston. Taxi drivers need to navigate the 600+ miles of the City of Houston as well as provide safe, secure credit card transactions. These are public safety issues, and this policy is written to set the standards for a Global Positioning Satellite (GPS) and Credit Card System to be placed in taxicabs operating within the city limits.

### 4. PROCEDURES

4.1 This policy will be effective from the date of signature and expire upon date of any replacing or overriding Ordinance provision and/or new Director's Rule and Regulation.

4.2 This policy is to be utilized by taxi companies, and any mobile dispatch service registered with the City of Houston Administration & Regulatory Affairs Department Transportation Section.

4.3 The following technological enhancements must be included in the integrated solution:

4.3.1 Credit/Debit Card Acceptance: The solution must provide for quick, easy and secure credit/debit card acceptance. The transaction process must not require the driver intervention but may provide for driver assistance to the passenger. The passenger must maintain control over the credit card throughout the entire process.

4.3.2 Passenger Information Monitors: the solution must include an interactive passenger information monitor (PIM) in the rear passenger compartment.

4.3.3 Global Positioning Satellite System: the solution must include a GPS system that provides for vehicle location determination and electronic trip data collection.

4.3.4 The solution must include messaging capabilities, which allow the city to communicate with taxi drivers on a real time basis.

4.3.5 The solution must include a process for driver authentication. The solution will be fully activated only upon driver authentication.

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10/31/2013

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- 4.3.6 The solution must be simple to use with fonts, key sizes, receipts, messaging and equipment markings that are easily legible.
- 4.3.7 The City desires a solution that is compatible with currently installed taximeters. The installation of a new meter that is compatible is allowed, however that meter must be fully compliant with all City of Houston rules and standards.
- 4.3.8 The solution must ensure privacy and reduce security risks while minimizing fraud.

4.4 Credit/Debit Card Acceptance:

- 4.4.1 Security and confidentiality of credit/debit card information must be maintained throughout the system.
- 4.4.2 The solution must enable drivers to accept payments from all major credit/debit cards. All major credit cards is defined as Visa, MasterCard, American Express and Discover Card.
- 4.4.3 The PIM must be used to ensure the highest level of security. No handheld cell phone credit acceptance.
- 4.4.4 The PIM should communicate wirelessly to get approvals for credit cards. Credit card acceptance needs to be done within 10 seconds.
- 4.4.5 The solution must allow the passenger to pay via credit card without handing the card to the vehicle driver.
- 4.4.6 Credit/debit card transactions must be fast and secure and there must be a high success rate of completing a card-based transaction. They system shall not allow for exposure of credit card numbers; e.g. receipts detailing card numbers.
- 4.4.7 The system must support adjustments (edits) and voids before transactions are settled.
- 4.4.8 A receipt must be printed by the meter or PIM for every credit card transaction.

4.5 Payment Processing and Settlement:

- 4.5.1 The system must include a credit and debit card payment processing solution at competitive credit card processing rates.
- 4.5.2 The City understands that typically taxicab owners or fleets would be the merchant of record. Merchant accounts should be available to licensed taxicab owners or multiple taxis (fleets). However, the City also anticipates instances in which drivers may need to act as merchants.
- 4.5.3 Timely settlement is a key interest.
- 4.5.4 Merchants will be required to obtain reports for shift change reconciliation, daily reconciliation, transaction details, and historical views of payments. Access should be secure, simple and in keeping with technology knowledge levels.
- 4.5.5 An end shift report detailing card transactions successfully processed through the system should be available to the driver.
- 4.5.6 Each card transaction should be identified by license number, trip number, date, and time and will include the total fare including tolls and surcharges.

4.6 Payment Card Industry (PCI) Security Standards:

- 4.6.1 The system must comply with all relevant PCI security standards, with proof of such certification.

4.7 Passenger Information Monitor (PIM)

- 4.7.1 System Requirements:

- 4.7.1.1 The PIM will be used to complete the electronic payment process. The City desires a PIM solution that includes touch screen capabilities enabling the passenger to retrieve and enter desired information; and displays public service announcements (PSA), operator information, and an interactive route map. However, the City will consider alternative lower cost solutions.
- 4.7.1.2 The PIM must be installed in the rear passenger compartment of the taxicab. The PIM should not be removable.
- 4.7.1.3 The PIM must be integrated directly to the taxi meter via a hard wire connection not a wireless Bluetooth connection.
- 4.7.1.4 The PIM should be the interactive device for the passengers to understand and complete credit card payment processing.
- 4.7.1.5 The payment process needs to be self-explanatory.

4.7.2 Display Requirements:

- 4.7.2.1 Ideally, the PIM should display an interactive map, where the current start point (meter engaged), ongoing route, and end point (meter disengaged) is clearly indicated to the passenger. The goal is to provide the passenger with a real-time visual representation of their ride. However, the City will consider alternative lower cost solutions.
- 4.7.2.2 Ideally the PIM should be capable of displaying PSAs such as fare information and the passenger's bill of rights. However, the City will consider alternative lower cost solutions.
- 4.7.2.3 At the end of every fare, the PIM must display the summary of charges for that trip regardless of the passenger's method of payment. The summary of charges shall consist of an itemized list including total fare, surcharges, tolls and tip amount. The tip shall only be displayed for credit and debit payments. For cash transactions, the PIM must display an itemized list of charges, but no further action shall be required for the passenger or driver to complete the cash transactions.
- 4.7.2.4 The PIM should be capable of displaying multiple languages including English and Spanish.

4.7.3 Hardware Specifications:

- 4.7.3.1 The PIM screen must be durable with vandal-proof features.
- 4.7.3.2 The PIM screen shall be safe in the case of a collision or sudden stop, which could include smooth rubberized or similar style coating to prevent injury in the event of a collision.
- 4.7.3.3 The PIM should be designed in a way to withstand continuous operation and be weather and spill resistant.
- 4.7.3.4 The PIM must have the ability to mute all audio, at the passenger's discretion.
- 4.7.3.5 The PIM must have a dimming mechanism, removing all visual stimuli, at the passenger's discretion.
- 4.7.3.6 After a fare is complete, the PIM must automatically return to its default audio and brightness levels. However, when no passengers are present, i.e. no active fare, the driver should have the ability to control the volume of the PIM.
- 4.7.3.7 The PIM should reset to the default audio and brightness levels at the start of a new fare, upon engagement of the meter.
- 4.7.3.8 Some form of remove update for changing information will be needed.

4.8 GPS System Solution – Vehicle Location and Data Collection Services:

4.8.1 System Requirements:

- 4.8.1.1 The solution will include GPS location-based technology that provides vehicle position and route determination; and trip data tracking, collection and reporting. Data will be made available to both the taxicab operator and the regulator.
- 4.8.1.2 Ideally, location data will also be input to an interactive passenger trip map. However, the City will consider alternative lower cost PIM solutions.
- 4.8.1.3 The system must be able to capture trip data and transmit the data to a database hosting facility. Data must be transferred in a secure fashion to ensure data integrity.
- 4.8.1.4 Automating the trip-sheet should be simple and require minimal manual input and interaction from the driver.
- 4.8.1.5 The system provider must be able to host, maintain and store data in a secure environment.
- 4.8.1.6 The system must compensate for momentary signal blockage or distortion.
- 4.8.1.7 Data should be accessible within reasonable time frames.
- 4.8.1.8 All data fields populated by the system must be searchable.
- 4.8.1.9 The system/solution owner will be required to work with the City to develop a data structure/format. At a minimum, the following data elements shall be captured and stored:
  - Date, time and location of passenger pick-up and drop-off;
  - Trip duration measured in time and miles;
  - Trip number;
  - Itemized fare (tolls, surcharges, and tip amount for card payments);
  - Payment method;
  - Amount due driver;
  - Credit card transaction status (approved, declined, etc.);
  - Total number of passengers;
  - Car identifier; and
  - Driver identifier.

4.9 Wireless Telecom Services: Wireless communication is necessary to process electronic payments in a mobile environment. In addition, wireless service plays a major part in collecting and transmitting trip data. Coverage of the wireless networks is vital to the success of the transactions. Therefore, reliability is critical. In selecting a system, the operator should ensure that the system/solution owners guarantee uptime and provide a solution for dead zone and network outages.

5.0 Maintenance and Trouble Reporting: In selecting a system, operator should ensure that the system/solution owners have the means to repair or replace equipment quickly. Maintaining an adequate supply of spare equipment for “hot-swaps” is encouraged. The targeted PIM device and application uptime percentage should be at least 99.6%.

6.0 The targeted network uptime percentage is at least 99.6%. Back end systems must be designed with reliability in mind. System problems may occur and it is necessary for the system/solution owner to accurately determine the source of the problem and rapidly repair the failure. Sufficient network diagnostic information must be available so that problems can be resolved remotely.

- 7.0 Customer Service: In selecting a system, Operator shall ensure the system provider is able to operate Help Desk services for equipment seven days per week, twenty-four hours per day. Help Desk services must be available to City Staff and the taxi industry, including fleet operators, dispatchers and drivers.
- 8.0 Training and Ongoing Support: Operator should provide ongoing training for drivers to accommodate technology refreshment and staff turnover.
- 9.0 System Upgrade: Operator must ensure technology is upgraded as recommended by the manufacturer or system owner.
- 10.0 Back Up Plan and Disaster Recovery: Operator must ensure business continuity and must maintain a plan that identifies procedures relating to an emergency or significant business disruption.