



REPORT FOR ACTION

Pay by Plate Equipment Purchase

Date: April 5, 2023

To: Board of Directors, Toronto Parking Authority

From: President, Toronto Parking Authority

Wards: All

SUMMARY

A key priority of Management's approved 2023 Annual Operating and Capital Plan is to initiate the modernization of its' parking payment equipment. As a critical first step in our multi-year journey, Management is seeking authorization from the Board of Directors, Toronto Parking Authority, to purchase 225 pay-by-plate (PbP) on-street payment machines valued at \$2,056,961.25. The current pay and display (P&D) machines, which have been in the market since 1998, are approaching their end-of-serviceable-life and require replacement.

As background, The Toronto Parking Authority's (TPA) current on-street parking portfolio includes approximately 21,500 parking spots and accepts payment via 2,728 pay-and-display (P&D) parking machines, 180 single-space parking meters, and our Green P App. In 2022, TPA's on-street paid parking program generated \$44.7 million in revenues with 30 percent generated directly through the pay and display equipment.

TPA's current equipment is rapidly approaching obsolescence. While providing rudimentary payment options, the existing P&D machines are severely limited in their capacity to support both current and emerging payment technologies:

- Critically, 20+ year old P&D equipment does not accept Debit card payments, which represents 28 percent of all retail payments in Canada. In addition, the equipment does not support any other form of contactless payments including tap, Apple Pay, Google Pay, Samsung Pay etc.
- There is a risk that the P&D machines will not be "chip and pin" compliant.
- P&D equipment requires a physical ticket to be placed on the vehicle dashboard as proof of payment. Not only is this process archaic from a customer perspective, it is unproductive from an enforcement standpoint, driving incremental costs.

- TPA's legacy P&D equipment operates exclusively on 3G networks, which will not be supported post 2025.

In 2023, as a first step in addressing these operational limitations, Management will deploy 225 of the new PbP machines in high velocity zones to maximize customer reach while de-risking our exposure identified above. The new PbP equipment, which is currently in markets across Canada and the United States, will provide a myriad of payment solutions for our customers including Debit card, Credit card, Apple, Google and Samsung Pay, as well as cash payments. Proof of payment will be virtual, obviating the requirement to display proof of payment in the vehicle. Lastly, the new equipment will operate over a 4G compliant network and will be fully integrated with TPA/Toronto Police services' digital enforcement platforms.

In conjunction with the deployment plan described above, Management will be developing a longer-term customer payment strategy that will elevate the use of technology and digitization to provide a more seamless, integrated solution to our customers across our entire portfolio including on and off-street parking, Bike Share and Electric Vehicle (EV) Charging. This work will help to inform Management of the required pace and scale of our equipment upgrades over the next three (3) years.

TPA will leverage its Master Services Agreement with Precise Parklink Inc, to purchase the equipment. The total cost of this purchase is included in TPA's approved 2023 – 2025 Capital Budget.

RECOMMENDATIONS

The President, Toronto Parking Authority recommends that:

1. The Board of Directors, Toronto Parking Authority, authorize payment of \$2,056,961.25 (excluding Harmonized Sales Tax (HST)) for the purchase of 225 Pay by Plate parking machines from Precise Parklink Inc., which will be made pursuant to the terms and conditions of the Master Services Agreement between the Toronto Parking Authority and Precise Parklink Inc. dated July 1, 2016.

FINANCIAL IMPACT

The total cost of the new PbP parking machines is \$2,056,961.25 (excluding HST) and is based on a cost submission provided by Precise Parklink Inc. dated February 17, 2023 as a statement of work against the existing Master Services Agreement dated July 1, 2016. The total cost of this purchase has been included in TPA's approved 2023 Capital Budget.

Direct operating costs on a per unit basis for the new PbP parking equipment will remain consistent with the operating costs for the current equipment.

DECISION HISTORY

The Board of Directors of Toronto Parking Authority received for consideration item PA33.1 “Toronto Parking Authority – 2023 Operating Budget and 2023-2032 Capital Budget) at its meeting of November 14, 2022”. The Board received the proposed 2023 Operating Budget and 2023-2032 Capital Budget for TPA as outlined in the report.

<https://secure.toronto.ca/council/agenda-item.do?item=2022.PA33.1>

The Board of Directors of Toronto Parking Authority received for information item PA1.5 “2023 Annual Operating Plan: Executive Summary.”

<https://secure.toronto.ca/council/agenda-item.do?item=2023.PA1.5>

COMMENTS

The purpose of this paper is to seek authorization from the Board of Directors, Toronto Parking Authority, to purchase 225 PbP on-street parking machines valued at \$2,056,961.25 (excluding HST). The current equipment is rapidly reaching its end-of-serviceable-life.

TPA is North America’s largest municipal on and off-street parking operator and has historically been recognized as a leader in the deployment of innovative parking solutions. In 1995, TPA introduced the first fully-automated parking garage at the St. Lawrence Market. In 1998, the TPA pioneered the use of automated P&D machines for on-street parking and by 2002 had deployed the largest network in the world with 1,269 units. Most recently in 2016, the TPA launched its Green P App, which remains today one of the premiere municipal parking apps in the world.

Today, TPA operates 21,500 on-street paid parking stalls across the City of Toronto, which are supported by 2,728 P&D parking machines and 180 single-space parking meters spanning more than 200 km of roadway. What was once class leading P&D parking technology in the early 2000’s is now more than 20 years old and is approaching the end of it’s intended serviceable life. There is an immediate need to begin the process of modernizing TPA’s parking equipment; to reduce the risk profile associated with the aging equipment, maximize customer payment options, and integrate proof of payment into TPA and Toronto Police Service’s enforcement platforms.

PbP parking equipment provides superior customer service, integrates with the Green P application, and unlocks the potential for an integrated on and off-street parking solution. Major metropolitan cities including many Ontario municipalities have already converted to PbP technology. New York City is deploying 13,000 PbP devices (in flight); Chicago has installed 5,000 units; Amsterdam 2,500; Montreal 1,250; and Vancouver 675. Locally, Oakville, Niagara Falls/Niagara Parks Commissions and Burlington have all successfully transitioned to PbP equipment with further municipalities preparing for new deployments.

From a consumer perspective, TPA's current equipment lacks the functionality to accept both tap and go credit and debit card payment options. The new PbP equipment will address that shortcoming thus improving customer payment options and maximizing reach. In addition, TPA's current technology is limited to a 3G network; whereas the new PbP units will operate on a 4G network (including flexibility to upgrade to 5G), which will future proof our assets.

Operationally, the payment and enforcement platforms have traditionally relied on an anonymous, physical "proof of payment" system whereby a physical ticket is displayed on a vehicle's dashboard, verifying that a valid parking payment has been made. In 2016, the TPA introduced the Green P Mobile App to the on-street program, significantly transforming how customers paid for parking. The Green P Mobile App created a more simplified payment process that adds the vehicle license plate number and user account to a cloud-based system at the time of transaction. PbP parking machines would replicate this process, thereby allowing seamless integration of proof of payment between the Green P app, the PbP parking machines and TPA and TPS' enforcement platforms.

In summary, a deliberately phased purchase and deployment of PbP equipment allows the TPA to jump start its multi-year journey to modernize equipment, protect its on-street base business and minimize current risks. More importantly, PbP equipment enables the TPA to elevate its customer offerings. It provides modern payment options, ease of use, speed and choice. It allows customers to pay and continue their journey without returning to the vehicle to provide proof of payment. Strategically, PbP unlocks the future development of an integrated omni-channel digital solution for Parking, Bike Share and EV charging verticals.

TPA will leverage its Master Services Agreement with Precise Parklink Inc, to purchase the PbP equipment on-street. Precise Parklink Inc. is a Toronto-based organization with more than 800 staff across Canada that is recognized for providing integrated parking and mobility solutions for both private and public sector customers including hospitality, commercial, healthcare, aviation, institutional and government. Existing municipal customers include, Toronto, Ottawa, Vancouver, Calgary, Edmonton, Saskatoon, Halifax, Fredericton, Oakville, Burlington and Mississauga.

Risk

While the benefits of undertaking this initiative are clear, the TPA would face elevated operational and reputational risks should this modernization be unduly delayed. See Table 1.

Table 1: Risk and Impact Assessment

Risk	Summary	Impact
Serviceable Life	Existing P&D parking machines are at the end of it's intended serviceable life with an increasing rate of service failure. Refurbished parts and other components that are used to maintain the existing P&D equipment have been in circulation for over 20 years with reduced opportunity to ensure that parts will be available or meet service level standards post ~2025.	Increased labour cost for maintaining end of life P&D parking machines. Higher rate of failure with critical parts in P&D parking machines will result in poor customer satisfaction, loss revenue, and reputational risks.
Network Connectivity	Network connectivity of the existing P&D parking machines is built to operate on the 3G network. 3G, which stands for the third generation of mobile networks, first came online some 20 years ago. While 3G is still supported in Canada, industry experts widely believe that telecommunication providers plan to sunset and discontinue the use of the network post ~2025.	Network connectivity is required to process payments and other transactional data from the P&D parking machines. Without network connectivity the P&D devices would no longer be able to communicate with servers. Therefore, payment and other transactional information would not be transmitted from P&D machines.
EMV / Chip & Pin Mandate	EMV is a standard for globally interoperable, secure payments. The key element of EMV involves including dynamic digital data in every transaction. This makes chip transactions extremely secure and reduces the risk of counterfeit fraud. When a consumer uses an EMV-enabled card or device to pay at a chip terminal, the transaction is dynamically authenticated, verified and then authorized. In 2017, Visa announced all payment terminals (which includes payment terminals on existing P&D parking machines) must be EMV compliant. The existing P&D parking machines are not equipped to meet this requirement.	Effective October 1, 2023, all transactions that occur from a payment terminal (including P&D parking machines) must be EMV "chip and pin" compliant.
Revenue	Customers have increasingly moved to using alternate forms of payment including mobile payment, digital wallets (Apple Pay, Google Pay, Samsung Pay) and the increasing use of debit cards.	Not offering customers the option to pay using new forms of payment that are primarily used today will increase the risk of non-compliance and discourage customers for choosing parking as a viable mobility option. Additionally, there is a risk to cost productively as debit card transactions are less expensive to process than cash or credit card.

CONTACT

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SIGNATURE

W. Scott Collier, President
Toronto Parking Authority

ATTACHMENTS

Attachment A – Precise Parklink Inc. Comparison of Equipment Type (Pay and Display versus Pay by Plate) February 17, 2023