

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: May 28, 2009

SUBJECT: BICYCLE INITIATIVES AT THE TTC

ACTION ITEM

RECOMMENDATION

It is recommended that:

1. The Commission forward this report to the City of Toronto, Councillors Heaps and Fletcher, and the Toronto Cycling Advisory Committee, noting that:
 - TTC staff have expanded, introduced, or planned a number of bicycle-related initiatives over the past several years to better accommodate bicycles on TTC vehicles, to provide better bicycle access in rapid transit stations, and to provide additional bicycle parking at stations;
 - at present, the TTC's standard for bicycle storage/parking at rapid transit stations is the traditional publicly-accessible bicycle rack or "post-and-ring";
 - in response to a request from the City of Toronto and the Toronto Cycling Advisory Committee, TTC staff have developed a draft design standard for a secure bicycle parking facility – a controlled-access enclosed storage area for large numbers of bicycles;
 - a 72-space secure bicycle parking facility would cost approximately \$280,000;
 - the TTC's approved capital program does not contain any funding for the construction or implementation of secure bicycle storage/parking facilities;
 - the implementation of such bicycle storage facilities would require that City Council approve new funding for this purpose. This should be considered in the preparation of the TTC and City of Toronto 2010-1014 capital budgets;
 - subject to new funding being approved for the implementation of such facilities, the TTC would be responsible for design and construction, and the City of Toronto would be responsible for the administration, operation, maintenance, and contents liability of such facilities; and
 - a secure bicycle parking facility will be installed at Victoria Park Station as part of that station renovation project. This bicycle facility has no approved funding, so the capital costs of this facility will result in a budget over-run which will be shared equally by TTC and the City of Toronto.

2. Funding for secure bicycle parking be discussed in the TTC's 2010-2014 Capital Program review process.

FUNDING

This report has no effect on the TTC's operating or capital budgets.

BACKGROUND

Over the past several years, TTC staff have been expanding existing bicycle initiatives, and introducing new ones, to encourage better integration of cycling and transit. These initiatives, which are highlighted in this report, include: better accommodation of bicycles on TTC vehicles (such as the ongoing expansion of the bicycle-racks-on-buses program); planning for better bicycle access at stations (including the upcoming pilot project to implement bicycle stair channels); and the provision of additional bicycle parking at/near rapid transit stations in partnership with Toronto Transportation Services.

Toronto Transportation Services is the City division which is responsible for the implementation and operation of transportation facilities other than public transit. As part of its overall transportation strategy, the City of Toronto is strongly promoting sustainable modes of travel, including both transit and cycling. The provision of bicycle parking, and the integration of cycling and transit, are two of the six key components of the *Toronto Bike Plan*, which establishes a vision for cycling in the city.

Transportation Services' next big initiative is a program to plan and provide secure bicycle parking facilities at key locations across the city, including Union Station and City Hall. Secure bicycle parking at TTC stations is considered to be an important component of this plan, to better accommodate the needs of cyclist-transit users, particularly commuters. For this reason, the Transportation Services Division and the Toronto Cycling Advisory Committee would like to have secure bicycle parking implemented at all new subway stations and at subway stations which are undergoing significant renovations, where space permits.

Additionally, the TTC has received correspondence from Councillor Heaps, Chair of the Toronto Cycling Advisory Committee, requesting that secure bicycle parking be constructed as part of the current renovations to Victoria Park Subway Station, and from Councillor Fletcher requesting the same for Pape Station.

In response to these requests, TTC staff have developed a draft design standard, and cost estimates, for secure bicycle storage/parking at rapid transit stations.

DISCUSSION

Bicycles on TTC Vehicles

Bicycle Racks on Buses Program

The TTC's bicycle-racks-on-buses program has expanded rapidly over the past two years. All new bus orders since 2007 have included bicycle racks, and the ongoing plan to retrofit the existing bus fleet, by installing bicycle racks on 985 buses, is proceeding ahead of schedule. This has allowed an important milestone to be reached earlier than expected, and in time for the start of the City of Toronto's *Bike Month*. Specifically, effective May 25, 2009, with the addition of bicycle rack service on 18 new routes, over half of all bus routes (53%) will offer bicycle rack service. These routes are shown in Exhibit 1, attached. Bicycle rack service is expected to be available on over 85% of all bus routes by the end of 2009. All buses are expected to be equipped with bicycle racks by 2012.

New Light Rail Vehicles

The planned replacement of the TTC's existing streetcar fleet with new light rail vehicles has presented the opportunity to provide specific provisions for bicycles. While no funding has yet been secured for the new light rail vehicles, and detailed design specifications are still being developed, it is intended that there will be accommodation for two bicycles inside each light rail vehicle. An example is provided in Exhibit 2, attached.

Subway/RT Cars

Bicycles will continue to be allowed on subway and RT cars during non-peak hours.

Bicycle Access at Rapid Transit Stations

TTC's standard "easier access" fare gate, which is being incorporated into all rapid transit stations to accommodate mobility devices, also makes it easier for cyclists to enter and exit stations.

The TTC will also be evaluating the use of bicycle stair channels to make stations more accessible to cyclists. Such channels are being incorporated in the Dufferin Station Modernization as a pilot project.

In addition, Toronto Transportation Services is currently developing a plan to improve bicycle access approaching rapid transit stations.

Secure Bicycle Parking at Rapid Transit Stations

The current TTC standard for bicycle parking at subway stations is what would be considered “traditional” publicly-accessible bicycle racks or “post-and-rings”.

Secure bicycle parking is considered important to attract bicycle commuters to the TTC, because it would provide a higher level of confidence that a parked bicycle would not be stolen or vandalized. For the purpose of this report, such bicycle parking refers to an enclosure which provides permanent, sheltered, and secured parking for a large number of bicycles. Access to these enclosures would be restricted to registered users.

Funding for Secure Bicycle Parking Facilities

The TTC’s Capital Program currently contains no funding for secure bicycle storage/parking facilities at any location. Implementation of secure bicycle parking would require the approval of new earmarked funding specifically for this purpose. This will be discussed in the preparation of the TTC’s next capital budget, and should be similarly discussed in the City’s budget deliberations.

Potential Design Standard for Secure Bicycle Parking Facilities

TTC staff have developed a draft design standard for a secure bicycle parking facility at rapid transit stations, in consultation with Toronto Transportation Services staff. It consists of a storage facility which is enclosed and secured by a strong industrially-designed, but attractive full-height fence, covered by a roof or canopy. Power and communications would be supplied for lighting and electronically-controlled and monitored access (gate locks, and user identification). The facility would be designed to be integral to the architecture of its adjacent station and, therefore, would typically not be prefabricated.

A rendering of what such a potential bicycle storage facility could look like is provided in Exhibit 3, attached. That illustration shows traditional post-and-ring storage within the storage facility, but there are better and more space-efficient storage racks which would be recommended. The design standard for secured storage facilities calls for modular design of a fixed width, with the length varying as required to accommodate different quantities of parking spaces and different types of bicycle storage racks. For example, more-effective use of an enclosed storage facility could be achieved by using two-level bicycle racks, which maximize the number of bicycles that can be accommodated in a given area. Examples of two-level racks are shown in Exhibit 4. The upper-level storage space of these racks is designed to slide horizontally, and pivot down, to provide easy bicycle loading and locking, independent of bicycles stored on the lower level. The use of two-level racks in such a facility would be much more space-efficient than using individual bicycle racks or lockers.

A guideline would have to be developed for the storage capacity of such facilities. For this report, TTC staff worked on a 72-bicycle storage facility but, if such facilities were funded for implementation, then the size of each facility would be set to meet the estimated demand at the specific station.

Such facilities would ideally be located in an area with high-visibility and high pedestrian activity, and adjacent to the main pedestrian entrance. Passenger flows, sightlines, and urban design, among other potential issues, would need to be considered as part of the overall location and design. Additionally, security risks would be identified and mitigated, to the extent possible, in the location and design of each facility.

Estimated Cost of Construction

Cost estimates of this draft design standard have been based on a facility with an inside dimension of 5.7 x 7.62 m, which could accommodate 72 bicycles using a two-level rack. Although two-level racks are more expensive than traditional racks, this cost would be a relatively-small component of the overall cost of the facility; the resulting overall cost per bicycle storage space would be considerably lower.

The estimated capital cost for such a 72-bicycle facility, including the supply and installation of two-level racks, is \$280,000 (in current dollars, including engineering and contingencies). Actual capital costs would vary based on local conditions and the size of the facility at each station.

Operation and Maintenance

Consistent with established practices for all bicycle-related facilities, the City's Transportation Services Division would be responsible for:

- identifying the rapid transit stations which would have the greatest demand for such facilities;
- establishing and enforcing the operating rules, which would be based on registered users only having access to the facility, likely for a nominal monthly fee;
- administering and operating such facilities, as they already do for existing bicycle lockers at TTC stations; and
- general maintenance, including cleaning and repairs of all operational components of the storage facility, such as lighting, communications, and access gate locks and automatic gate openers.

TTC would maintain the structural components of these facilities, as part of overall station maintenance.

Detailed agreements would need to be finalized on these and a variety of issues, including security provisions and general liability for damaged or stolen bicycles, if a decision were made to proceed with such facilities.

Possible Locations for Secure Bicycle Storage Facilities

Secure bicycle storage facilities could be considered for installation at:

- new subway stations under design for extensions of the Yonge and Spadina Subway lines: up to five of the six new stations related to the Spadina Subway Extension (excluding York University Station, where City staff would need to negotiate such a provision directly with the university, which owns the lands surrounding the planned station entrance), and all six new stations on the proposed Yonge Subway Extension; and
- existing stations which are already planned for renovation or rehabilitation (e.g., the Station Modernization Program), and where space is available.

Any such facilities located outside of the City of Toronto would be subject to funding and formal operating agreements with the local and/or regional municipality.

Other Bicycle Parking at Rapid Transit Stations

Traditional Bicycle Racks

Over the past several years, TTC and Transportation Services staff have worked together to significantly increase the supply of “traditional” bicycle parking spaces at/near TTC stations. There are currently 1,250 such spaces, primarily post-and-ring racks.

Additional post-and-ring racks are planned for the following stations: Pape (26 bicycles), Dufferin (20 bicycles), Kipling (16 bicycles), Warden (24 bicycles), Victoria Park (16 bicycles), Islington (to be determined), and Woodbine (to be determined).

TTC staff have, and will continue to work with City staff (which supplies the racks and provides input regarding their placement) to increase the supply of this type of bicycle parking, where possible, targeting stations where demand exceeds supply.

This type of “traditional” parking will always be required to provide cyclists with a choice of options, and the opportunity to park spontaneously without the need for prior registration or payment of fees.

Bicycle Lockers

As part of its Bicycle Locker Program, City staff have installed 36 bicycle lockers to-date at subway stations. These are maintained and administered by the City. City staff have expressed an interest in expanding this program, whether or not the above-described secure

bicycle parking facilities are provided. City staff could choose to install bicycle lockers at some locations as an interim measure, until a secure bicycle parking enclosure were constructed. At other locations, lockers could provide a secure parking option for cyclists where a secure storage facility might not be feasible for various reasons. TTC staff will continue to work with the City on the locker initiative.

A critical consideration for bicycle lockers would be that security risks be mitigated, to the extent possible, in the location selection, based on the U.S. Federal Transit Administration's "Transit Security Design Considerations" manual.

Secure Bicycle Parking at Victoria Park Station

A secure bicycle parking facility will be installed at Victoria Park Station as part of that station renovation project. This bicycle facility has no approved funding, so the capital costs of this facility will result in a budget over-run of approximately \$280,000 which will be shared equally by TTC and the City of Toronto.

Proposed City Public Bicycle Program

TTC staff will also work with City staff to identify possible locations at subway stations for the City to install special racks relating to a proposed "public bicycle" program. Such automated programs allow people to "rent" a bicycle at one location and return it at another location. Details of such a program are not yet known.

Other Considerations

"Full service" bicycle stations, which typically provide additional features such as a bicycle repair shop and/or bicycle-related retail space, are beyond the scope of this report. Any proposals for full-service bicycle stations would need to be considered in the context of retail lease arrangements, on a station-by-station basis, but with special consideration for the provision of level/outdoor access for bicycles.

SUMMARY

TTC staff have expanded, introduced, or planned a number of bicycle-related initiatives over the past several years to better accommodate bicycles on TTC vehicles, to provide better bicycle access in rapid transit stations, and to provide additional bicycle parking at stations.

The City of Toronto has expressed interest in establishing secure bicycle parking/storage facilities at rapid transit stations. The provision of secure bicycle parking facilities would support the City's *Sustainable Transportation Initiative* which, in part, promotes sustainable multi-modal travel and commuting. This is one of the primary goals of the City of Toronto's overall transportation strategy. The provision of secure bicycle parking could attract bicycle commuters to the TTC, because it would provide a higher level of confidence that a parked bicycle would not be stolen or vandalized.

There is presently no approved funding for the implementation or operation of secure bicycle parking/storage at TTC stations. In order to implement such facilities, new funding would have to be approved for this purpose. This should be considered in the preparation of the City of Toronto 2010-2014 capital budget, and will be discussed in TTC budget deliberations as well.

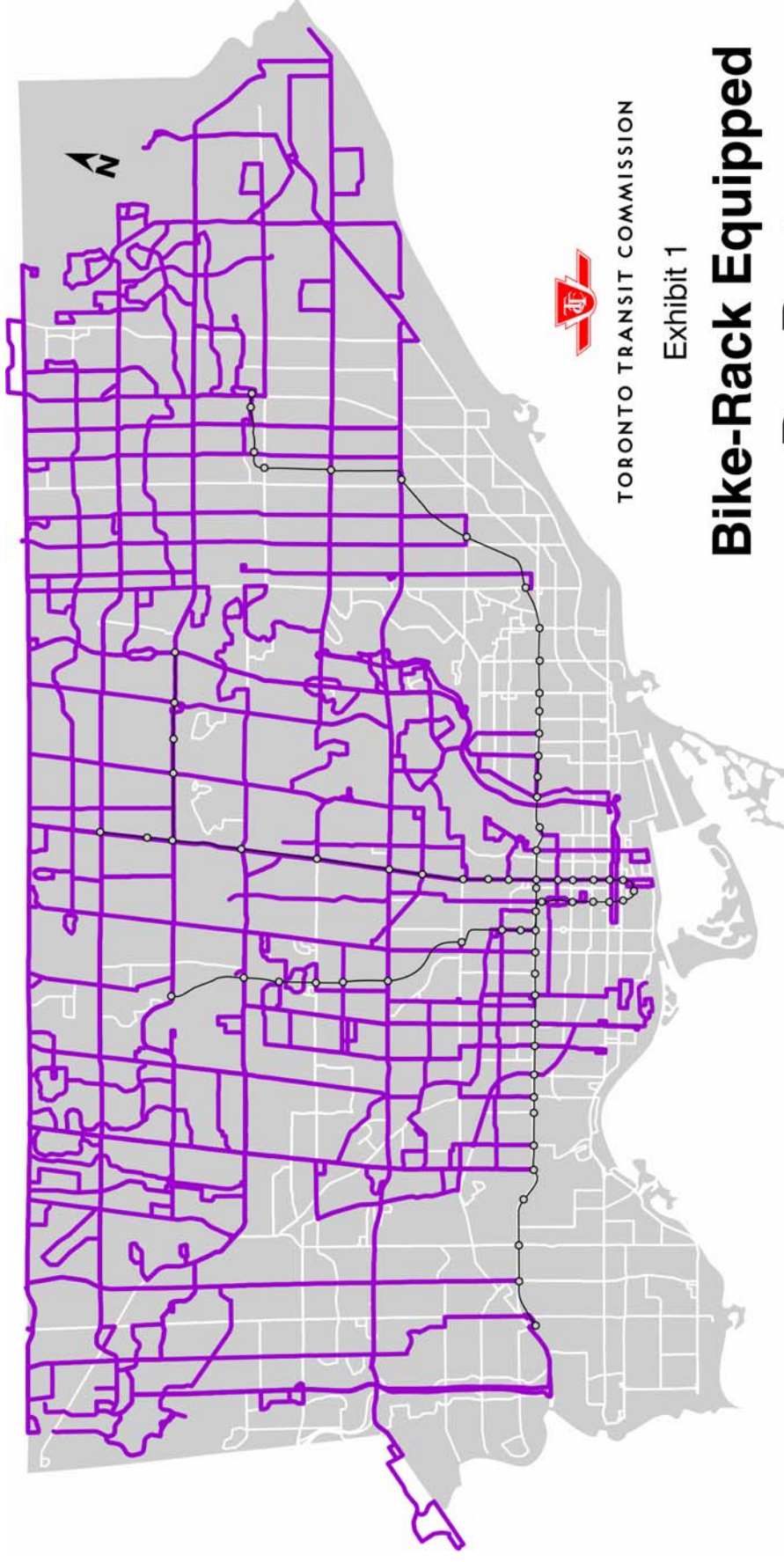
TTC staff have developed a design standard for such facilities which would provide space-efficient secure bicycle parking. If new funding were to be approved for such facilities, TTC staff would work with Toronto Transportation Services staff to finalize the design standard.

A secure bicycle parking facility will be installed at Victoria Park Station as part of that station renovation project. This bicycle facility has no approved funding, so the capital costs of this facility will result in a budget over-run which will be shared equally by TTC and the City of Toronto.

May 14, 2009

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Attachment: Exhibits 1, 2, 3 and 4



TORONTO TRANSIT COMMISSION

Exhibit 1

Bike-Rack Equipped Bus Routes

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Exhibit 2: Example of Bicycle Accommodation on a Light Rail Vehicle



Exhibit 3: Rendering of Potential Secure Bicycle Parking Facility



Exhibit 4: Examples of Two-level Bicycle Racks