

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: May 28, 2009

SUBJECT: TRANSIT CITY LIGHT RAIL PROGRAM:
SHEPPARD EAST LRT CONNECTION AT
DON MILLS STATION

ACTION ITEM

RECOMMENDATIONS

It is recommended that the Commission:

1. Endorse the City/TTC staff position that the Sheppard East Light Rail Transit Line (LRT) should connect to the Sheppard Subway at the subway-platform level of Don Mills Station, noting that:
 - the EA report for the Sheppard East LRT line included two possible rapid transit alternatives for the section between Don Mills Station and Consumers Road: (1) a light rail line connecting at and continuing east from Don Mills Station; and (2) an extension of the Sheppard Subway east to Consumers Road with a light rail line connecting there and continuing east;
 - an LRT connection at Don Mills Station would provide the most convenient connection between these two services, allowing customers to walk along a single continuous platform between the subway and LRT without having to change levels, as would be necessary if the subway were extended to Consumers Road;
 - an extension of the Sheppard Subway to Consumers Road would benefit customers on the subway who are destined to that business park area, but would impose an inconvenient transfer on a greater number of customers who would use the Sheppard East LRT and be destined for the Fairview Mall area or other bus routes at Don Mills Station;
 - connecting the Sheppard East LRT at Don Mills Station is the more cost-effective option of the two, costing \$120 million less than an extension of the subway;
 - the underground LRT connection to Don Mills Station will add \$110 million to the current project budget, which was developed based on the LRT continuing on the surface to the Sheppard / Don Mills intersection;
 - the Sheppard East LRT project schedule is being revised to incorporate the underground LRT connection at Don Mills Station -- including the required

construction of a tunnel under Highway 404 -- and the revised milestones will be reflected in the 2010-2014 Transit City Capital Budget; and

- this alignment decision resolves the last outstanding matter related to the Sheppard East LRT Environmental Assessment Study which was approved by Toronto City Council at its meeting of July 15, 2008;
2. Note that staff are currently doing further design work on how Don Mills Station would have to be modified to accommodate Metrolinx's preferred concept of a continuous east-west light rail line across Sheppard and Finch Avenues, which would be achieved by extending the Etobicoke-Finch West LRT east of Yonge Street via Finch Avenue East, and then south on Don Mills Road, joining the Sheppard East LRT within Don Mills Station. The outcome of this design work will be subject to a future Commission Report; and
 3. Forward this report to the City of Toronto Planning and Growth Management Committee, North York Community Council, Scarborough Community Council, and Metrolinx.

FUNDING

In an announcement on May 15, 2009, Prime Minister Stephen Harper and Ontario Premier Dalton McGuinty committed \$950 million in funding for the Sheppard East LRT line. While this funding is conditional on the signing of a contribution agreement with Canada and Ontario which will include the eligibility of costs, work must proceed to achieve the timelines of the project with commencement of construction expected in July, 2009.

The Sheppard East LRT Project as presented below the line in the TTC 2009-2013 Capital Program (and subject to funding) consisted of three elements including \$624 million for the Sheppard East LRT (pages 1499-1502), \$210 million for LRT Vehicles (pages 1527-1530) and \$244 million for an LRT Maintenance & Storage Facility (pages 1487-1490) at an estimated total cost of \$1,078.870 million including escalation. The current budget allows for a surface LRT option, with customers connecting to the subway from a surface LRT platform on Sheppard Avenue; the recommended underground LRT option would add \$110 million to the current budget.

BACKGROUND

At its meeting on June 18, 2008, the Commission approved the Sheppard East LRT Environmental Assessment (EA) study, which recommended that a Light Rail Transit (LRT) line be constructed on Sheppard Avenue East, between Don Mills Station and Meadowvale Road, to provide significantly-improved transit service in that corridor. That study was approved by Toronto

City Council on July 15, 2008.

The EA report identified two rapid transit alternatives for the section between Consumers Road and Don Mills Subway Station:

- i) a light rail line connecting at and continuing east from Don Mills Station; this would require a tunnel under Highway 404, and would feature a connection at the subway platform level at Don Mills Station; and
- ii) an extension of the Sheppard Subway east to Consumers Road with a light rail line connecting there at ground level and continuing east;

The Ontario Minister of the Environment recently approved the Environmental Assessment for the Sheppard East LRT line subject to specific conditions, including the requirement that one of these two alternatives be selected as the preferred design.

This report summarises the reasons for recommending the first of these two options: connecting the Sheppard East LRT line directly to Don Mills Station.

DISCUSSION

The two alternative designs identified in the Sheppard East LRT Environmental Assessment (EA) study for the LRT connection with the Sheppard Subway were:

- (1) a light rail line connecting at and continuing east from Don Mills Station; this would require a tunnel under Highway 404, and would feature a connection at the east end of the existing subway platform level at Don Mills Station; transferring customers would walk along a single continuous platform between the subway and the LRT (illustrated conceptually in Exhibit 1, attached); and
- (2) an extension of the Sheppard Subway east to Consumers Road; the LRT would terminate at that intersection, with a wide passenger platform constructed in the middle of Sheppard Avenue with stairs, escalators, and an elevator to allow customers to transfer to the new subway station below.

The latter option was included in the EA primarily because the previously-approved EA for the Sheppard Subway already provided for a subway on this section of Sheppard Avenue, and because this option recognized the input received in favour of the subway extension option during the public consultation for the Sheppard East LRT EA project. The inclusion of this option in the EA report was not intended to seek re-approval for a subway on this section of Sheppard Avenue.

The evaluation of these two options is summarised below.

Assessment of Options

The two options for the LRT/subway connection were compared on the bases of customer convenience and cost.

Customer Convenience - additional transfers required:

It is projected that in the future – 2021 and beyond – approximately 8500 customers per day will travel between the Sheppard Subway and the Consumers Road business park area. These customers would benefit from an extension of the subway because they could make their trip without the need to transfer to the LRT and travel only one stop to Consumers Road.

It is projected that, in this same time horizon, approximately 9500 customers per day will travel between points east of Consumers Road and Don Mills Station – either the Fairview Mall area and/or the connecting bus services available there. If the Sheppard Subway were extended to Consumers Road, then these customers would be required to transfer from the Sheppard East LRT to the subway at Consumers Road, and then travel a single stop to Don Mills Station.

Customer Convenience - ease of transfer:

It is projected that in the future – 2021 and beyond -- approximately 18,000 customers per day will travel between the Sheppard Subway and points east of Consumers Road. These customers must transfer between the LRT and the subway, regardless of whether the subway is extended to Consumers Road, or the LRT continues to Don Mills Station. The ease of transferring between services is extremely important to the attractiveness of these trips. The LRT connection achievable at Don Mills Station is a very convenient design for transferring customers; the platform area at the subway level would be expanded to the east to allow customers to walk directly between the LRT and the subway, without changing levels. An extension of the subway to Consumers Road would not be as convenient; it would require customers to use stairs and escalators to transfer between the subway and the surface LRT.

An early design option had been developed for the extension of the subway to Consumers Road that incorporated an underground subway/LRT station which would have provided the same ease of transfer between LRT and subway as the Don Mills Station design. However, the LRT tunnel would have had to be extended almost to Victoria Park Avenue, and this would have added even more cost to the subway extension option, so it was dropped from further consideration.

The minimum number of transfers and, therefore, the minimum inconvenience to customers, is achieved through the connection of the Sheppard East LRT directly to Don Mills Station.

Cost

The underground LRT connection to Don Mills Station would cost \$120 million less than a subway extension. The principal reason for the higher cost of a subway extension is the need for a new subway station at Consumers Road.

The current budget for the LRT project was based on the LRT continuing on the surface to the Sheppard / Don Mills intersection. The now-recommended underground LRT connection at Don Mills Station will cost \$110 million more than is currently in the budget.

Recommendation: Sheppard East LRT Should Connect to The Sheppard Subway at Don Mills Station

Based on the above assessment, the connection of the Sheppard East LRT to the Sheppard Subway at Don Mills Station would cost significantly less than the subway extension, and provide better customer service. Therefore, the joint recommendation of TTC and City of Toronto staff is that this option be selected.

The selection of this option concludes this outstanding item from the Sheppard East LRT EA design discussions.

Metrolinx Alternative Alignment Concept

Metrolinx has expressed a preference to establish a continuous east-west light rail line across Sheppard and Finch Avenues, by extending the Etobicoke-Finch West LRT east of Yonge Street via Finch Avenue East, and then south on Don Mills Road, joining the Sheppard East LRT within Don Mills Station. Staff are currently doing further engineering and design work to determine what changes would be required to Don Mills Station to allow this alternative continuous through-running service to be accommodated.

JUSTIFICATION

The Sheppard East LRT EA study involved the assessment of alternative designs on a section of Sheppard Avenue that had prior EA approval for an extension of the Sheppard Subway. Within this context, the EA report identified two alternative design concepts for the LRT connection to the Sheppard Subway – an LRT connection to the subway at Don Mills Station, and an extension of the subway to Consumers Road with a connection there to the LRT at ground level.

Based on an assessment of these two alternatives, the direct connection of the Sheppard East LRT at Don Mills Station is a more cost-effective design and provides the best transit service to customers in this area.

Exhibit 1: Recommended Concept – LRT Connection at Don Mills Station

