

Transportation of Inflammable Liquids Over Subways

Date:	May 31, 2010
To:	Public Works and Infrastructure Committee
From:	General Manager, Transportation Services
Wards:	Ward 8
Reference Number:	P:\2010\ClusterB\TRA\TIM\pw10015tim

SUMMARY

By-law No. 72, enacted by the former Municipality of Metropolitan Toronto back in 1954, is a by-law which is still in effect that regulates the transportation of inflammable liquids on former Metropolitan roads over subways.

The preferred design of the Finch West LRT includes an underground LRT station at the intersection of Keele Street and Finch Avenue West. With the proximity of three major tank farms to the Keele/Finch intersection, a high volume of tanker trucks transporting inflammable liquids currently travels through this intersection. By-law No. 72, as amended, would prohibit these tanker trucks from continuing their use of this intersection in the future because they would pass over the proposed underground LRT station. As a result, they would be required to travel circuitous routes to access and egress these tank farms.

Since the enactment of former Municipality of Metropolitan Toronto By-law No. 72 in 1954, there have been significant safety improvements in tanker truck design as well as stricter regulations in the related fire and engineering codes. Furthermore, a recent independent risk analysis has concluded that continuing the transportation of inflammable liquids at this location, once the LRT station is in operation, would result in an acceptable level of risk to public safety. Therefore, this report recommends an exemption to By-law No. 72 which would allow tanker trucks to continue to use Finch Avenue West and travel over the underground LRT station. The implication of not granting the exemption is that the station would have to be designed at-grade in order for these tanker trucks to continue to use the Keele/Finch intersection, which would actually result in a higher risk to the transit passengers using this station.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. City Council amend former Municipality of Metropolitan Toronto By-law No. 72 to provide an exemption to the general prohibition such that the transportation of inflammable liquids would be permitted along or upon Finch Avenue West from Tangiers Road to Romfield Lane over the proposed LRT station;
2. The General Manager, Transportation Services, report directly to City Council on the appropriateness of a similar amendment to former Municipality of Metropolitan Toronto By-law No. 72 that would provide an exemption to the general prohibition and permit the transportation of inflammable liquids on the section of Keele Street under which the Spadina Subway Extension will operate, upon completion of an appropriate risk analysis; and
3. The appropriate City Officials be authorized and directed to take the necessary action to give effect thereto.

Financial Impact

There is no financial impact associated with the adoption of the recommendations contained within this report.

ISSUE BACKGROUND

In March 1954, the former Municipality of Metropolitan Toronto enacted By-law No. 72, “To regulate the transportation of inflammable liquids on Metropolitan roads over Rapid Transit subways”. This by-law, as amended, remains in effect and Section 1 of this by-law states that, “No person shall transport any inflammable liquid along or upon any portion of a road included in the Metropolitan Road System under which is located any part of a subway of the Rapid Transit system of the Toronto Transit Commission or upon which is located any entrance or exit to such a subway.” By-law No. 72 does provide exemptions to the Section 1 prohibition. However, the exemptions are not applicable in the case at hand.

COMMENTS

The Finch West LRT is one of seven rapid transit lines proposed as part of the Transit City initiative. The Finch West LRT is proposed to operate from Yonge Street in the east to the campus of Humber College in the west. At Keele Street, the Finch West LRT will intersect the Spadina Subway Extension in proximity to the Finch West Subway Station. The Spadina Subway Extension will run directly below Keele Street between St. Regis Crescent and The Pond Road. The Finch West LRT Transit Project Environmental Assessment was approved by the Minister of the Environment on May 20, 2010 and

detailed design is underway. Meanwhile, the Spadina Subway Extension is nearing the completion of detailed design, with tendering and construction scheduled to commence in early 2011.

The preferred design for the Finch West LRT in the vicinity of Keele Street is for the LRT to run underground, between the road surface and the Spadina Subway Extension tunnel. The east transition ramp for the LRT from the surface to the underground station will start west of Tangiers Road while the west transition will start east of Romfield Lane (see Attachment 1). The underground design is preferred to an at-grade design mainly due to superior pedestrian connectivity between the LRT and the subway. The underground connection also received more support from attendees at the Public Information Centres held for the Finch West LRT project.

Three major fuel terminals, commonly referred to as tank farms, are located just east of Keele Street and just north of Finch Avenue West. Tanker trucks servicing two of these facilities (Shell and Suncor) currently use Keele Street for access/egress while those servicing the third facility (Imperial Oil) use Finch Avenue West for access/egress.

In conjunction with the construction of the Spadina Subway Extension, Tangiers Road will be extended north from Finch Avenue West to Murray Ross Parkway. As a result, tanker trucks that currently use Keele Street between Finch Avenue West and Murray Ross Parkway will be able to use the extension of Tangiers Road to directly access Finch Avenue West. Most of these tanker trucks will be destined for Highway 400 and will therefore want to travel west along Finch Avenue West from Tangiers Road. Consequently, assuming the preferred design of the LRT, these tanker trucks would pass over the underground LRT station which would be in contravention of By-law No. 72.

In order to evaluate the risks associated with tanker trucks transporting fuel in proximity to the underground LRT station, two studies were undertaken on behalf of the Toronto Transit Commission (TTC). Delcan Corporation prepared the "Tanker Truck ByLaw Study" in February 2010 while DMA Technical Services prepared the "Finch West LRT Risk Assessment Report" in April 2010. The Delcan study reviewed the practices of other jurisdictions, and collected crash and spill data. This study documented only one tanker truck spill in the Greater Toronto Area in the six-year period from 2003-2008. The DMA study made use of the Delcan data and compared the risks associated with the underground LRT station option with an at-grade LRT station option, using a combination of quantitative and qualitative factors including the potential public reaction. The DMA study concluded that the underground LRT station option poses less of a public safety risk than the at-grade option. This study also concluded that allowing loaded tanker trucks to travel on the subject section of Finch Avenue West, assuming the proposed design of the Finch West LRT station, poses a risk that is within an acceptable range. A significant factor in this conclusion is the improvements in vehicle design, and relevant fire and engineering codes since By-law No. 72 came into effect in 1954. The TTC Safety Department has reviewed the DMA report and concurs with the conclusion.

Based on the Delcan and DMA studies, an exemption to By-law No. 72 for the subject section of Finch Avenue West is appropriate. There would be implications for the TTC if the subject exemption was not granted. Although some rerouting of tanker trucks is planned (as noted above), these vehicles will still require access to Finch Avenue West in any event. A complete relocation of the tank farm operation would be prohibitively costly and impractical. Therefore, if tanker trucks have to operate in this vicinity, the TTC would have to construct an at-grade LRT station at Keele Street in order to avoid contravention of By-law No. 72. This is not TTC's preferred design for the reasons noted above, and more importantly, it has been documented as the riskier design option in terms of public safety compared to the underground option.

The Canadian Petroleum Products Institute (CPPI), which represents the petroleum transportation industry, has expressed concern regarding the significant operational impacts that would result should their tanker trucks not be permitted to travel on Finch Avenue West. In fact, the CPPI is seeking not just a local exemption to the by-law, but a City-wide repeal of the by-law.

Staff of City Transportation Services, Risk Management and both the TTC's Finch West LRT Project Team and Safety Department are in agreement that an exemption to By-law No. 72 for the subject section of Finch Avenue West is appropriate. However, in the absence of site-specific risk analyses in other areas of the City, a City-wide repeal of By-law No. 72 is considered inappropriate at this time. Staff of Legal Services have also been consulted in the preparation of this report.

It is recognized, however, that a similar situation exists for the section of Keele Street impacted by the Spadina Subway Extension which services the tank farm sites. Therefore, a risk analysis is also being conducted for the affected section of Keele Street to determine the appropriateness of a similar exemption. The results of this risk analysis should be available shortly and can be provided to City Council for consideration with this report.

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SIGNATURE

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ATTACHMENT

Attachment 1 – Finch West LRT Alignment and Station

Attachment 1

Finch West LRT Alignment and Station

