

Key Transfer Stations - Technical Memo

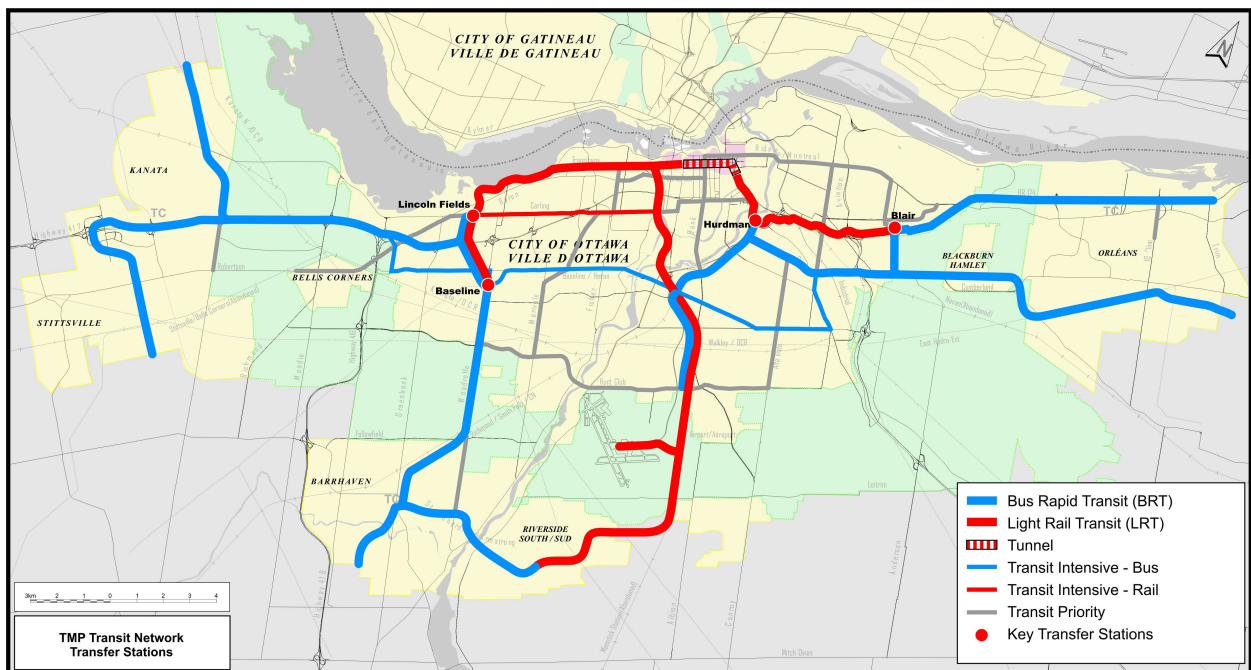
1.0 INTRODUCTION

In May 2008 Council approved a Primary Rapid Transit Network which includes both Light Rail Transit (LRT) and Bus Rapid Transit (BRT) corridors. A significant component of the network is the conversion of the existing BRT Transitway between Baseline and Blair Stations to LRT technology. Riders from suburban communities who currently use express buses to access the downtown will no longer travel directly into the core area by bus; rather they will be required to transfer to the LRT line. The primary network incorporates four key stations where the Transitway interfaces with the LRT and modal transfers must be accommodated as shown below.

- Baseline
- Lincoln Fields
- Hurdman
- Blair

The intention of this memo is to provide the reader with an understanding of the elements required at a transfer station. The above-noted transfer stations are discussed below, as well as examples of similar transfer facilities in other North-American cities.

TMP Transit Network – Transfer Stations



2.0 OTTAWA’S FUTURE BRT/LRT TRANSFER STATIONS

Transfer stations require separate LRT and Bus platforms as well as efficient pedestrian linkages between them to accommodate the high volume of passengers transferring between modes. Ottawa’s Transitway was originally designed with the intention of conversion from bus to rail. The stations have therefore already been configured such that they have separate BRT and local bus platforms. It is assumed that the City will take advantage of the previous station investments and preserve the existing station elements as much as possible. These stations would need to be upgraded for LRT by modifying the existing BRT platform areas for level LRT boarding/alighting. The local bus platforms may need to be expanded to accommodate the high number of buses in service, as well as to provide lay-over areas for those that are waiting to begin their service. The detailed design of these stations and their associated operations will be the subject of future studies.

The existing configuration of the four transfer stations are presented below. For each station, the number of existing in-service bus bays and lay-up bays are identified.

Baseline Station

The Baseline station connects the East-West LRT with the Southwest Transitway which provides service to Barrhaven.



Local stop: 9 Layup area: 10

Lincoln Fields

This station will be used for transfers to/from the West Transitway.



Local stop: 4 Layup area: 10

Hurdman Station

This station is currently used as a bus to bus transfer station. Some bus routes terminate at this location requiring passengers to transfer to access the downtown. Once the LRT is operational, this station will be the major transfer for passengers using the Southeast Transitway.



Local stop: 7 Layup area: 30



Blair Station

This Station is located at the future eastern terminus of the LRT Line. Transit passengers from Orleans would use the Cumberland and East Transitways to access Blair Station where they would transfer to the LRT.

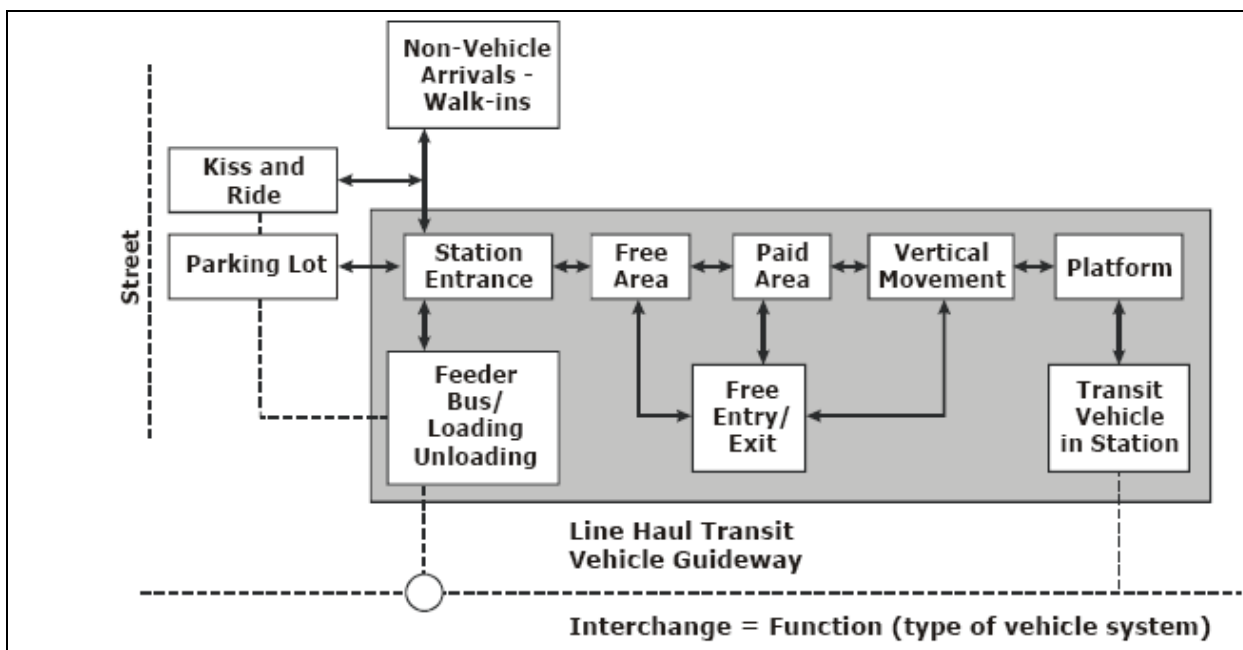


Local stop: 5 Layup area: 9

3.0 TRANSFER STATION DESIGN ELEMENTS

A transfer station is the interface between various components of the transit network including; bus to rail; pedestrian and cyclist to rail or bus; kiss and ride drop off to rail or bus and bus to bus transfers. The following exhibit illustrates the functions of a transfer station.

**Sample Pedestrian Flow Diagram Through a Transit Terminal
(TCRP Report 100)**



As such the design of the transfer station may include all or some of the following elements:

- Accessible bus platforms (waiting, drop off and pick up)
- Bus staging/lay-up area (for time stops)
- Accessible LRT platforms (waiting, drop off and pick up)
- Pedestrian links between platforms (grade separated access)
- Passenger information Systems (real time schedule information)
- Ticket sales (staffed or machines)
- Security monitoring (staffed or video monitoring)
- Kiss and Ride stop (drop off and pick up)
- Taxi service (taxi stand or telephone)
- Bicycle stands
- Park and Ride Lots (where demand warrants)

Park and Ride lots have not been identified at the transfer sites identified in the Primary Network. The size and functional requirements of a transfer station – or any station in the network – will depend on the operating strategy employed. At this time the City has yet to detail that strategy. It is assumed that the city will operate feeder bus routes that provide suburban passengers with a direct connection to the Transfer stations. In addition the shape of the facility will be constrained by the land available and site conditions.

In the absence of an operating strategy, a high level approach to the operation of the network was developed to identify the potential requirements and difference in stations. The following table presents an estimate of some key statistics for each of the stations, including potential boarding and alighting from both the bus and rail, transfer potential between facilities, potential number of bus bays and lay-up requirements.

Future 2031 Transfer Stations (AM peak hr, 2031 ridership):

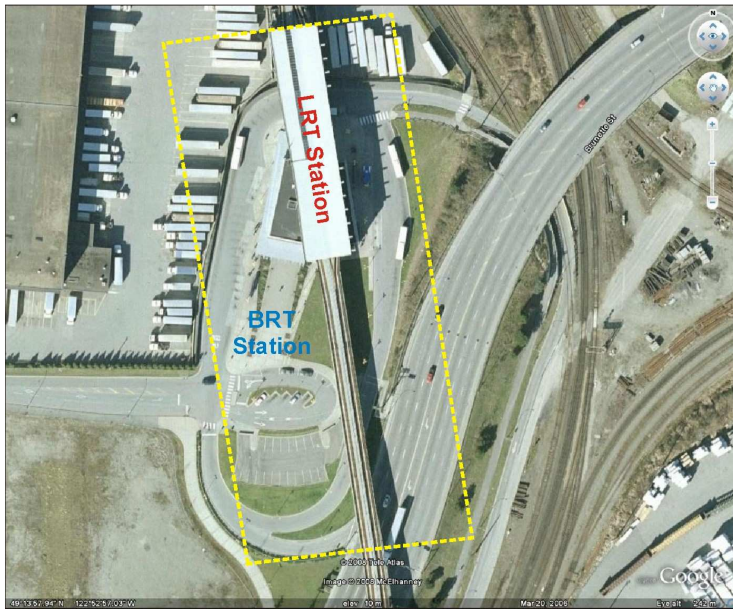
	BASELINE	LINCOLN FIELDS	HURDMAN	BLAIR
Walk to LRT	1480	180	200	540
Walk to Bus	690	60	200	260
Bus to LRT / LRT to Bus	3960	2640	4700	8580
Bus to Bus	980	1300	3200	2040
LRT to Walk out	1140	80	200	270
Bus to Walk out	820	70	100	240
Total passengers serviced / hr	9,090	4,300	8,600	11,930
Bus Bays	6	8	6	10
Bus Lay-up Bays	12	19	16	21

Of note is the number of passengers moving through the station. This will require convenient and efficient pedestrian accesses between and to each of the facilities as well as on the platforms. Pedestrian information systems, grade separated walkways and real time schedule information is means to accommodate the expected volumes within the facility.



4.0 EXAMPLES OF TRANSFER STATIONS

The following pictures are presented as examples of what transfer stations can look like and the elements associated with them. Many of the Stations include platforms for buses and Rail, parking areas, kiss and ride area, and passenger facilities (ticketing, stairs, elevators, wayfinding). Note that many of the concepts below are grade separated to enhance and simplify transfers between modes.



Vancouver Burnette Transfer Station



Calgary Heritage Transfer Station



Calgary Southland Transfer Station



Calgary 61st Street Transfer Station

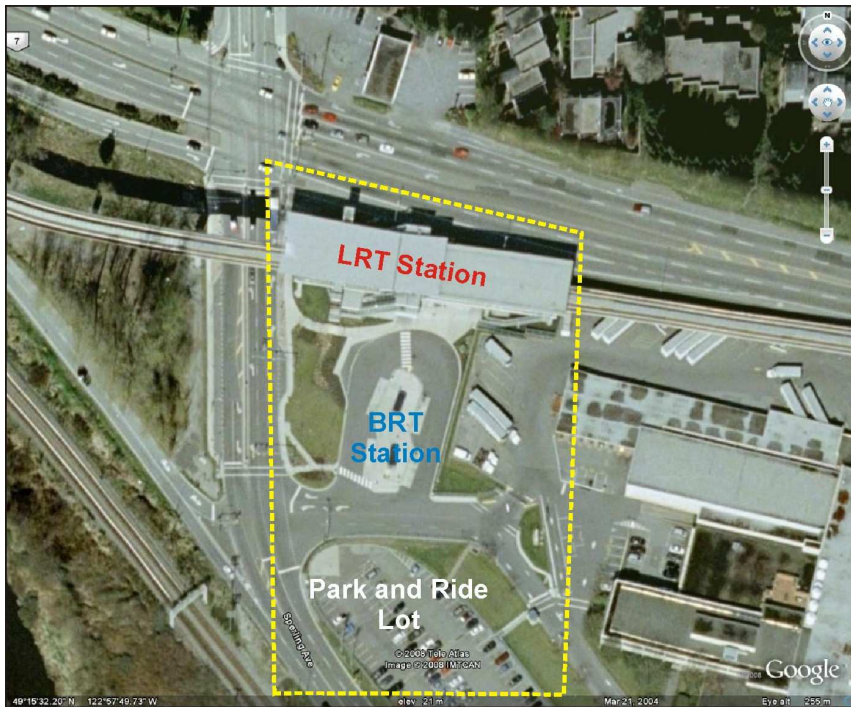




Vancouver Sperling 'Millennium Line'



Vancouver Lougheed Town Centre Transfer Station



Vancouver Sperling Transfer Station



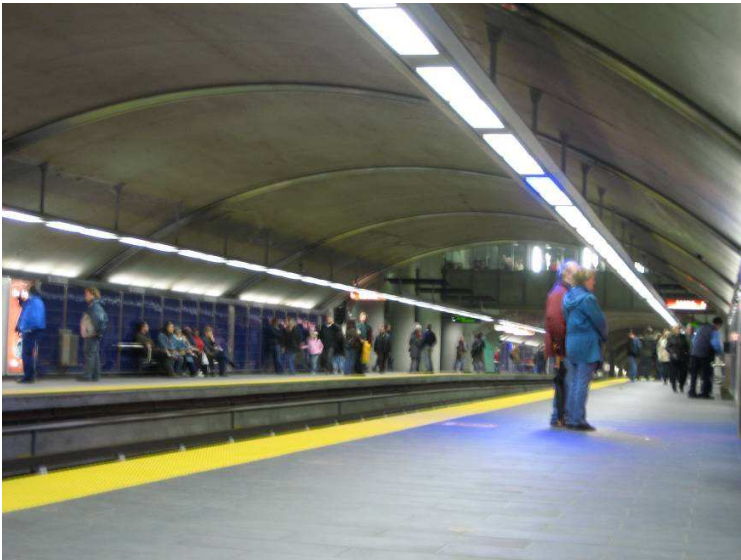
Vancouver Lougheed

Note: Warmer Climate



Vancouver Surrey Central





Montreal Metro Extension to Laval

