

## **Confederation Line Maintenance and Storage Requirements Report (Stage 2)**

### **1. The Need for an Additional Maintenance and Storage Facility (MSF)**

A Maintenance and Storage Facility is essential for the operation and safe running of any LRT system. As with bus transit, Light Rail Vehicles (LRV's) require regular and routine maintenance to ensure reliability of service, safety of operation, upkeep of warranty and day to day cleaning. The facility also acts as a holding area in which the LRV's can be stored during non-running hours and protected from vandalism or intrusion.

The Belfast Yard MSF currently under construction on Belfast Road as part of the Confederation Line project will have the capacity to service the initial vehicle fleet and early expansion. However, as the fleet grows to accommodate Stage 2 and the increased ridership forecasted in the TMP, additional and / or expanded facilities will be required to service and store the additional trains.

Due to the geographic span of the LRT network, an additional train storage facility located on one of the extensions has the added benefit of reducing the distance and travel time that would otherwise be involved in returning all trains to the Belfast Yard. Providing service from multiple MSF sites allows for faster and more efficient service build-up and reduction, and will permit a longer window on the mainline tracks for maintenance requirements.

### **2. List of Candidate Sites and Evaluation Criteria**

As part of the Confederation Line West extension EA study, the following 19 sites were investigated for suitability as a Maintenance and Storage Facility for the Stage 2 Project:



- Site 15: Aviation Parkway (Considered in DOTT EA)
- Site 16: Hurdman South (Considered in DOTT EA)
- Site 17: Walkley Yard/City Works
- Site 18: Jeanne D'Arc West
- Site 19: Jeanne D'Arc East

Each of the candidate sites were reviewed to determine if the site met basic screening criteria. The major factors in determining whether or not the site was carried forward for further evaluation were:

- Adequate size and configuration
  - Parcel large enough and shaped appropriately for efficient layout
- No major environmental site issues such as known contamination
  - Free of industrial contamination or prior use as a landfill
  - Not adjacent to sensitive natural features
- Reasonable costs to connect to the system, including reasonable costs to relocate any existing businesses
  - Balance of proximity to utility, considering the cost to construct access to and from the mainline track
- Compatibility with long term land use plans
  - Preferably not adjacent to residential areas unless buffering can be provided
  - On lands suitable for industrial or commercial activity

After the candidate sites were screened on the above criteria, six (6) sites were recommended to be carried forward for more detailed evaluation, the other sites having failed one or more of the critical criteria.



loops and proximity to municipal services, utilities and power. The Facility Operations criteria also looked at efficiency of road access and ability for track redundancy and reversal of trains within the yard. Proximity to the rail line and stations was the primary consideration given to the Systems Operations criteria. Capital, Operation and Maintenance costs as well as property ownership and acquisition were all looked at as part of the cost analysis and criteria.

The detailed screening of the short-listed sites showed that two sites; Woodroffe and an expanded Belfast site, either on their own or in combination, were best suited to meet the ultimate requirements for servicing the Confederation Line:



**Figure 2-3 – Recommended Sites**

As the actual requirement for MSF sites will be dependent on several factors such as procurement, operational considerations, potential use of tail track for vehicle storage and further optimization of the design, both of these sites will be kept as options going forward. They are situated both to the west and east of the downtown area which ultimately will lend itself to a more efficient operation.