

6.0 PRELIMINARY COST ESTIMATES

6.1 Roadway Cost Estimate

A preliminary cost estimate has been prepared that can be used as a feasibility tool to assess the potential implementation of a roadway in the rail corridor. The cost estimate has been developed for the two preferred alternatives, Option 1 and Option 4A.

Unit costs have been developed and are presented in **Appendix C**. The cost estimate has been prepared using mapping information provided by HRM and photographs taken on site. The cost estimate has also been prepared without the use of a Digital Terrain Model (DTM). The cost estimate does not include any allowances for bridge structure replacement or reconstruction. The estimate does not include costs for the staging areas that will be required at the two access/egress points in the corridor. The estimate does not include cost for excavation under the bridge. At the project outset we were instructed that no detailed information was available with respect to vertical clearances. However, it is known that only the north track has been lowered to accommodate double-stack railcars. Therefore, it is acknowledged that the cost estimates are potentially low.

The estimate contains cost items under three categories: services, capital, and property. Items that are included under Services include items such as program management, obtaining necessary approvals, truck road design, contract administration and geotechnical investigations. Capital costs consist of such items as construction of the new truck road, crossings, specialized systems for traffic control and rail relocation (Option 4A only). An allowance has been assumed for miscellaneous property acquisition only. It is assumed that the rail right-of-way would be leased from the railway. The costs for such a leasing arrangement are unknown. GO Transit in Ontario would provide an example of the costs of such a lease arrangement, because their trains operate on CN/CP corridors.

Table 5 summarizes the preliminary roll-up cost estimate for potential implementation of Option 1 and Option 4A:

**TABLE 5
COST ESTIMATE – ENTIRE RAIL CORRIDOR
(JOSEPH HOWE DRIVE TO OCEAN TERMINALS)**

Item	Option 1	Option 4A
Services	\$5,800,000	\$7,400,000
Capital		
Road	\$29,700,000	\$30,300,000
Special Systems	\$1,500,000	\$1,500,000
Rail	\$500,000	\$8,900,000
Property (Allowance)	\$1,000,000	\$1,000,000
Total Cost	\$38,500,000	\$49,100,000
Chebucto Bridge Structure	\$1,850,000	\$1,850,000
Grand Total	\$40,350,000	\$50,950,000

6.2 Chebucto Road Bridge Structure

The Chebucto Road rail bridge structure has been identified as potential physical constraint, limiting implementation of a roadway in the rail corridor. A preliminary cost estimate has also been developed to assess the replacement cost of the Chebucto Road rail bridge structure, including any allowance for the demolition of the existing structure, construction staging, traffic management and approach works. The estimation is summarized in **Table 6**.

There is the potential that the existing bridge structure may be rehabilitated to accommodate a roadway in the rail corridor. This has not been assessed as part of our investigation.

**TABLE 6
COST ESTIMATE - CHEBUCTO BRIDGE**

Item	Cost
Services	\$240,000
Capital	
Bridge Construction	\$700,000
Approaches	\$400,000
Bridge Demolition	\$260,000
Traffic Management & Staging	\$250,000
Total Cost	\$1,850,000

7.0 SUMMARY AND CONCLUSIONS

Feasibility of the TruckWay Concept

The report has addressed the feasibility of a TruckWay in the CN rail corridor as well as alternatives to this idea. The TruckWay appears to be feasible and potentially attractive, based on operating considerations relating to travel time, as well as potential collateral benefits for transit service and emergency response. The concept of an elevated expressway over the CN rail lines is **not** recommended for any further analysis, due to the expected costs, community impacts and issues related to lack of accommodation for more single occupant vehicles in downtown Halifax.

Five preliminary options have been developed as part of our investigation of options to provide a road in the existing CN rail corridor to accommodate either commercial truck or commuter bus traffic. All five options are feasible geometrically for implementation in the corridor.

Option 1 and Option 4A have been selected as the preferred alternatives through an evaluation process based on observations of the existing site conditions and a review of the potential constraints in the corridor. These represent two very different options in terms of cost and operation.

Based on the existing rail operation timetable in the corridor, there is a significant amount of time during the day when the corridor is not in use, so that it could be used for either a commuter bus and/or truck route. **Either Option 1 or Option 4A would be feasible operationally. It is recommended that these Options be considered further should HRM wish to proceed with the TruckWay project.** It is also recommended that the Municipality should discuss rail schedules with CN, in order to reach into a mutually convenient, flexible and cost-effective time-sharing schedule.

There is the potential for corridor connections to be accommodated in the North End via the existing at-grade rail crossing on Joseph Howe Drive. This is a short distance away from Highway 102 (Bicentennial Drive) via Joseph Howe Drive. There is also the potential to provide a direct commuter bus connection at the existing Mumford Road Transit Terminal that is located adjacent to the rail corridor. The obvious corridor terminus in the South End is in the Ocean Terminals port facilities.

With any of these options, snow storage and drainage in the corridor will be issues to address. In some sections of the corridor, the side slopes are fairly flat, which should facilitate snow storage. In other sections with more vertical slopes, snow removal may be required. This would add to the operating cost of the TruckWay.

Another issue to be resolved should HRM wish to pursue this concept with CN is storage of rail cars on the second, unused track. This is understood to be an issue for CN. The reduction in number of trains (understood to have occurred earlier this year) has resulted in the need for increased number of rail cars to be stored in close proximity to the Ocean Terminals. It is possible that an alternate storage location would need to be defined and preserved.

Estimated Costs of TruckWay Options

Cost estimates were prepared based on the implementation of Option 1 and Option 4A, to assess the feasibility of constructing a road system in the corridor. The cost estimate included cost items under three categories: services; capital and property. Items that are included under Services include items such as program management, obtaining necessary approvals, truck road design, contract administration and geotechnical investigations. Capital costs consist of such items as construction of the new truck road, crossings and the rail relocation cost. An allowance has been assumed for miscellaneous property allocation. The estimated cost for Options 1 and 4A, from Joseph Howe Drive to Ocean Terminal, were \$38.5 million and \$49.1 million respectively. The Chebucto Road rail bridge replacement estimated cost was an extra \$18.5 million.

Robie Street Connector

The alternative of providing a connection to the rail corridor from Robie Street was investigated during this study as a possible first phase of developing the entire TruckWay. Three alternatives were evaluated for a direct connection at-grade to the corridor, and two fly-over options were assessed in terms of feasibility. The cost estimates were \$17.2 million for the direct at-grade connection and \$9.3 and \$10.3 million for the grade separated alternatives. These connections are feasible connections to the corridor and Ocean Terminals but would have significant impact to the residential/hospital/university area in the South End of Robie Street.

Benefits of the TruckWay Concept

The benefits of the TruckWay extending to Joseph Howe Drive in the CN rail corridor may be summarized as follows:

- Removal of heavy trucks from municipal streets in downtown Halifax. This would have benefits in terms of reduced traffic congestion, noise and vibration, and air quality;
- Potential service as an express and/or commuter bus route. This would assist in managing traffic growth into downtown Halifax and supporting the downtown area as an employment and activity centre within HRM;
- Support for the economic vitality of the Ocean Terminals; and

- Enhanced response times for emergency services. Police, Fire and Ambulance could all utilize the TruckWay to travel between the waterfront area and Joseph Howe Drive in an emergency situation.

The concept of a truck road extending only from the Ocean Terminals to Robie Street has a lower cost than the entire TruckWay, but also fewer benefits. This connection would remove trucks from the narrow and congested sections of Hollis Street and Lower and Upper Water Street, such as the Historic Properties area, but it would not be useful for express bus service. It would also have only very limited utility as an emergency services route. The impact of large trucks on the residential and university communities adjacent to Robie Street should also be noted as a potential issue for this concept.

Relationship to the Halifax Urban Greenway Proposal

Most of the concepts discussed in this report require utilization of the second, unused rail track in the corridor. That would preclude the Greenway trail from passing under the bridges which span the rail corridor. (It is understood that the trail is currently foreseen to only pass under Quinpool Road.) However, our review of the corridor indicates that in some sections of the corridor, it would be possible to make these connections via the local street network. Thus the Greenway could be developed as a corridor combining on-street and off-street sections.

Also, based on our on-site observations, it should be noted that in some locations, it is believed that the steepness of the rock cut could preclude the introduction of the Greenway within the rail corridor property. This would require a detailed investigation, once a decision has been reached with respect to the preferred alternative for managing truck and/or commuter bus traffic.

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