

# HALIFAX

P.O. Box 1749  
Halifax, Nova Scotia  
B3J 3A5 Canada


**Item No. 14.1.3**  
**Halifax Regional Council**  
**April 5, 2016**

**TO:** Mayor Savage and Members of Halifax Regional Council

Original Signed by 

**SUBMITTED BY:**

\_\_\_\_\_  
John Traves, Q.C. Acting Chief Administrative Officer

Original Signed by 

\_\_\_\_\_  
Jane Fraser, Acting Deputy Chief Administrative Officer

**SUBJECT:** Shearwater - Mount Hope Connector Road

---

## ORIGIN

June 2, 2015, agenda item 11.3.1, Regional Council requested a staff report, the purpose of which would be to provide a status update and a go forward plan of action in regard to the Shearwater/Mount Hope Connector Road.

## LEGISLATIVE AUTHORITY

Subsection 104(1)(f) of the *Halifax Regional Municipality Charter* allows Council to “make by-laws imposing, fixing and providing methods of enforcing payment of charges for... (f) laying out, opening, constructing, repairing, improving and maintaining streets, curbs, sidewalks, gutters, bridges, culverts and retaining walls, whether the cost is incurred by the Municipality directly or by, or pursuant to, an agreement with Her Majesty in right of the Province, the Minister of Transportation and Infrastructure Renewal or any person”.

Sub section 284(1)*Halifax Regional Municipality Charter* allows Council to impose infrastructure charges for “new or expanded streets...to recover all, or part, of the capital costs incurred, or anticipated to be incurred, by the Municipality by reason of the subdivision and future development of land.”

## RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Request formal approval from the Department of National Defense and/or Ministry of Transport for the alignment of the Shearwater Connector; and
2. Await the completion of the Integrated Mobility Plan to re-assess the priority of the Shearwater Connector prior to moving forward with the action plan outlined in this report.

## **BACKGROUND**

The Cole Harbour Arterial Corridor and Interchange Study (Dillon 2002) identified the need for a connector road linking Caldwell Road to Highway 111, to accommodate future land development in the Morris-Russell Lake master plan area and relieve traffic congestion on Portland Street.

The connector road was proposed to be constructed across a portion of 12 Wing Shearwater that was planned for closure. In 2005, approximately 600 acres of land were conveyed from the Department of National Defence, 12 Wing Shearwater (DND) to Canada Lands Corporation (CLC) with a mandate to develop the land. As requested by CLC, Council initiated a secondary planning process and appointed a Public Participation Committee to oversee the process.

To date Council has adopted the Morris – Russell Lake Secondary Planning Strategy and development is underway in two sub-areas in the Morris-Russell Lake (MRL) Secondary Plan Area: Portland Hills (135 acres) and Russell Lake West (265 acres).

The first phase of the Shearwater Connector project, the Mount Hope Interchange and Baker Drive connector road, was completed in 2006, at a total project cost of \$11,510,886. Funding for the project at this time was based on collecting infrastructure charges from developers within the MRL master plan area, and approximately \$3.4 million could reasonably have been collected from the lands then owned by CLC.

DND has since re-acquired the 600 acre parcel for air defence purposes, and the Public Participation Committee was disbanded. Because of this decision the future development and funding of the Shearwater Connector, as well as recovery of the \$3.4 million invested in the interchange in respect of the Shearwater land, is unlikely.

Construction of the Shearwater Connector, from the Russell Lake West Boundary to Caldwell Road, was anticipated to occur in 2012 in both the Portland Hills and Russell Lake West secondary plan studies. The cost to build this section of the Shearwater Connector was estimated at approximately \$7.3 million (2012 dollars), based on a four-lane divided arterial, with an alignment that followed the former runway.

## **DISCUSSION**

### Connector Road

All runways at 12 Wing Shearwater, whether in service or not, are currently subject to Airfield Zoning Regulations which establish exclusion zones to protect approaches to the runways. The regulations are made under the Aeronautics Act and are administered by Transport Canada. Staff has investigated whether the connector road could be constructed across the DND land, in a manner such that vehicles using the road do not interfere with the exclusion zones.

To meet the Airfield Zoning Regulations, the profile of the roadway must be lowered so that a vehicle using the road is below the approach of an aircraft taking off or landing on all runways. Since the terrain is level in this area, lowering the road creates a tunnel effect, and generates a surplus of material that will need to be trucked off site and which increases the cost.

If the Shearwater land is not developed, a two lane collector road with provisions for left hand turn lane will suffice (refer to Attachment B) for the Shearwater Connector. An alignment has been developed with an estimated cost of \$11.4 million (2012 dollars) to build the remaining section of the Shearwater Connector, as a two lane collector. In addition, a multi-use trail has been included to accommodate a key linkage in the Regional Trail network.

An approval is also required by the Government of Canada for a license to build the road on Federal land, supported by the appropriate impact assessments and studies. The best guess at the length of approval time, based on discussions with Federal officials, is 3 -5 years.

It is important to note that no field surveys or test pits have been carried out to confirm conditions that may be encountered. Avoiding the runway involves deep excavation across land used for military purposes beginning at least 75 years ago, and there is a risk that conditions encountered will increase the cost. Conditions encountered on-site may also necessitate a change to the alignment away from Morris Lake, and if this is the case an amendment to the Airfield Zoning regulations will be required.

#### Other Concerns

The level of Morris Lake is also a concern for the Shearwater Connector. The level is reported at between 28 and 29 metres above sea level. A study carried out in 1998<sup>1</sup> estimated that the flow through Morris Lake could increase by almost 40% if both Topsail/Lamont Lakes are decommissioned as a public water supply and the Imperial Oil refinery is closed. The same study also identified a risk of flooding downstream in the Cow Bay River under this scenario. The lowest elevation of the collector road subgrade is approximately 32 metres, which is close enough to the level of Morris Lake to warrant further analysis to ensure that future lake levels will not interfere with the operations and maintenance of the collector road.

The proposed Shearwater Connector also passes over lands owned by Imperial Oil Canada Ltd. and the Province of Nova Scotia (Innovacorp.), who will need to be consulted if the project advances to the next steps as outlined in the Action Plan section of this report.

In summary, an alignment has been developed that complies with the Airfield Zonings Regulations, but has been developed without the benefit of ground level surveys or site assessments. The viability of the project may be impacted by conditions encountered on site, including the level of the Morris Lake. For this reason, the \$11.4million (2012 dollars) should be treated as a rough order of magnitude cost, and a higher class estimate will be forthcoming if the project advances to the next steps.

#### Other Transportation Infrastructure

In addition to the Shearwater Connector, extending Portland Estates Boulevard to the Shearwater Connector and upgrading the Caldwell Road/Portland Street intersection are required to complete the Morris-Russell Lake transportation infrastructure plan. The estimated cost to complete the Shearwater Connector, extend Portland Estates Blvd., and upgrade Caldwell Road is expected to exceed \$15 million, in addition to the \$11.5 million cost of the Mount Hope Interchange.

The amount of this capital cost that can be allocated to the lands owned by the DND and within the Morris-Russell Lake secondary plan area has never been formally established. The Morris-Russell Lake capital cost contribution study assumed that 600 acres of the DND lands would be developed: 500 acres were assumed to be light industrial and 100 acres were assumed to be residential. Based on a preliminary estimate of traffic volume generated from this mix of development, approximately 38% of the cost of remaining infrastructure could be recovered by infrastructure charges assigned to the DND land, if the lands were allowed to develop.

The 2014 update to the Regional Plan acknowledges that the 600 acres of land within 12 Wing Shearwater have not been able to develop as expected, and provides for amending the Morris-Russell Lake Secondary Plan to allow for additional serviced development at the north end of Morris Lake and Eastern Passage if the Shearwater Connector is feasible.

Development of approximately 300 acres along Caldwell Road is on hold until the completion of the Shearwater Connector because of traffic congestion on Portland Street. A Secondary Plan policy prohibits the extension of Portland Estates Boulevard to the Shearwater Connector until a connection is made to Caldwell Road. Extending Portland Estates Boulevard without completing the Shearwater Connector would free up capacity on Portland Street to allow further development along Caldwell Road, but would not provide the same level of traffic relief as would the connector. This option would still need

---

<sup>1</sup> Morris Lake Watershed Management Plan, May 1998, Griffiths Muecke Associates et al

some type of approval from DND since DND owns the land between the end of Portland Estates Boulevard and the proposed Shearwater Connector, and would also require an amendment to the Morris-Russell Lake Secondary Planning Strategy.

The Shearwater Connector is one of six strategic transportation projects identified in the Regional Plan, and which will be reviewed through the Integrated Mobility Plan. The other projects are improvements to the Lacewood Drive/MacKay Bridge approach; Bayers Road/Highway 102 widening; Highway 107 Extension (Burnside Expressway); Herring Cove Road widening; and, the Middle Sackville Connector. The Integrated Mobility Plan will help Council understand the benefits of the Shearwater Connector relative to the other planned projects.

#### Wastewater Capacity

The connector road is the last major impediment to development in the Morris-Russell Lake master plan area. With the recent upgrade to the Eastern Passage Wastewater Treatment Facility, all growth can be accommodated within the existing service boundary, or expanded service boundaries consistent with the intent of the Regional Plan. Halifax Water proposes a coordinated capacity management plan with HRM to track actual growth against remaining treatment capacity during the life of the new facility, and ensure a sufficient amount of time is available for planning the next facility expansion.

Consideration of local capacity constraints within the wastewater collection system, changes in Provincial and Federal environmental regulations and the assimilative capacity of the receiving waters may also influence and/or control the timing of future upgrades.

#### Action Plan

Prior to moving forward with the Shearwater-Mount Hope Connector requires the following:

1. Formal approval from the Department of National Defense and/or Ministry of Transport for the alignment of the Shearwater Connector; and,
2. Completion of the Integrated Mobility Plan confirming the Shearwater Connector as a priority project.

Once these are in place the following can be carried out:

3. Field surveys and tests to confirm the viability and cost of the Shearwater Connector; and,
4. If the project is deemed viable by Council, investigate the development potential of land to the north of Morris Lake, and develop a revised funding plan for the Shearwater Connector.

If the recommendation contained in this report is approved, formal approval from DND will be sought. The Integrated Mobility Plan is currently being carried out.

#### **FINANCIAL IMPLICATIONS**

There are no immediate financial implications. However, moving forward with the Action Plan (described in the Discussion section of this report) will require funding in future operating budgets, not yet funded, to carry out the necessary studies in Step 3 of the Action Plan. Step 1 and Step 2 (as required) can be funded at current resource and funding levels.

#### **COMMUNITY ENGAGEMENT**

Not applicable.

#### **ENVIRONMENTAL IMPLICATIONS**

None identified.

**ALTERNATIVES**

Council could agree not to approve the Action Plan described in this report.

**ATTACHMENTS**

Attachment A – Site Plan  
Attachment B – Cross Section

---

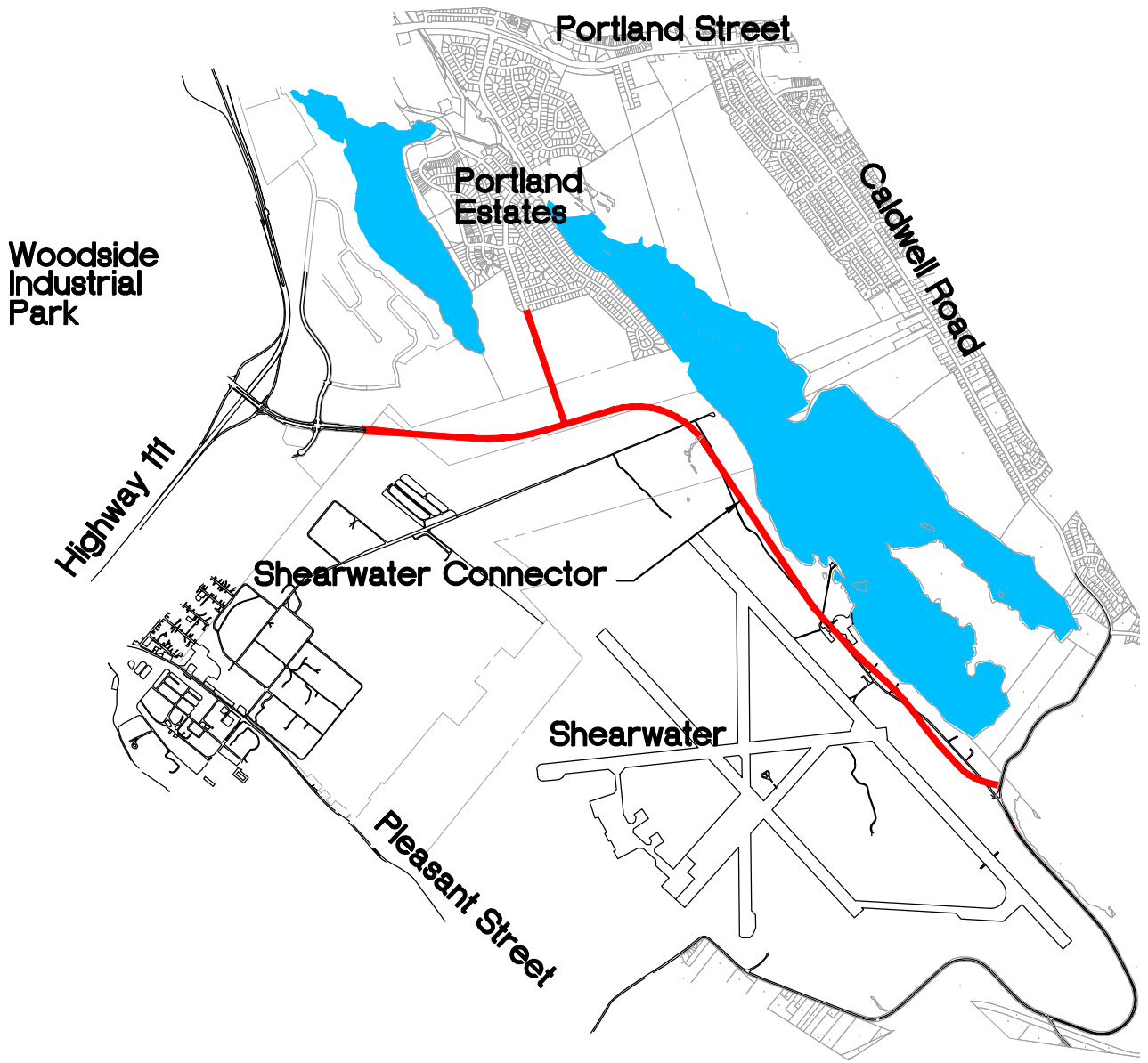
A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.php> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

Report Prepared by: Peter Duncan, P.Eng., Growth Analysis & Development Charges, 902.490.5449

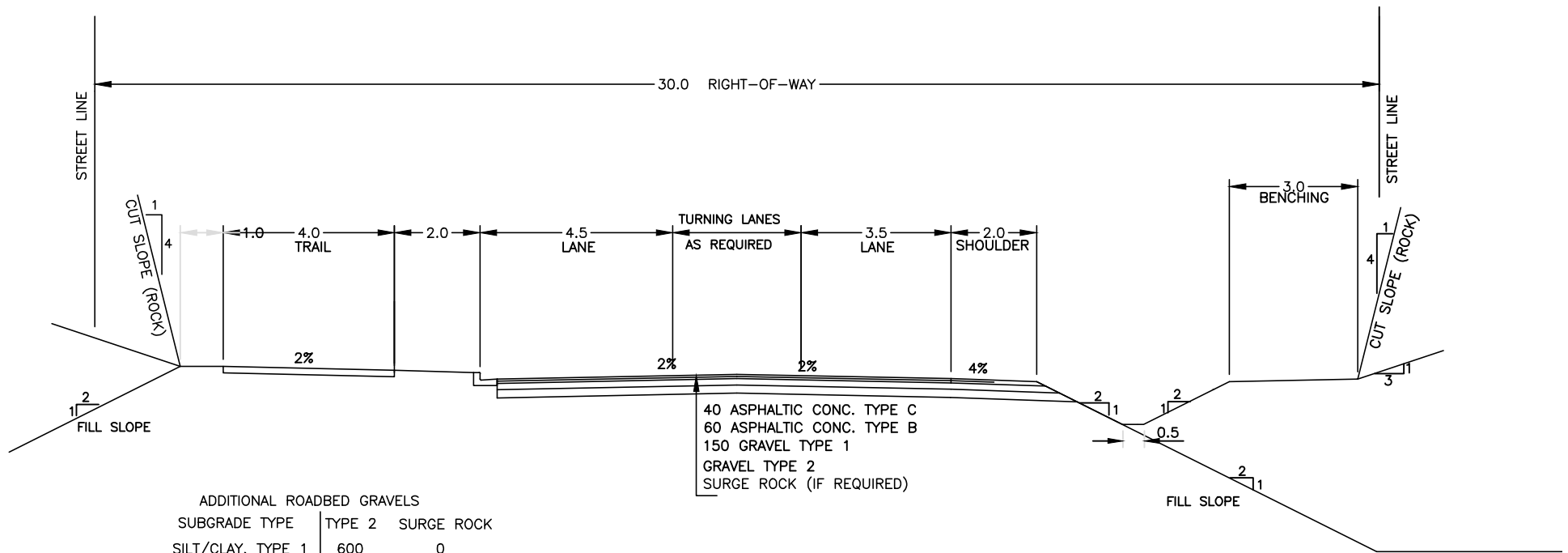
Financial Approval by: \_\_\_\_\_  
Amanda Whitewood, Director of Finance & ICT/CFO, 902.490.6308

Report Approved by: \_\_\_\_\_  
Bob Bjerke, Chief Planner and Director, Planning and Development 902.490.1627

---



**Attachment A - Site Plan**



ADDITIONAL ROADBED GRAVELS

SUBGRADE TYPE	TYPE 2	SURGE ROCK
SILT/CLAY, TYPE 1	600	0
SILT/CLAY, TYPE 2	350	400
GRANULAR TILL	400	0
ROCK FILL	225	0

CROSS SECTION

- NOTES:
- 1) ADDITIONAL SLOPE STABILIZATION AS PER GEOTECHNICAL REPORT.
  - 1) MINIMUM TYPE 2 GRAVEL THICKNESS. A GEOTECHNICAL REPORT IS REQUIRED TO DETERMINE SUBGRADE TYPE FOR THE PAVEMENT STRUCTURE

**Attachment B - Cross Section**