

Attachment M:

Summary of Research – Selected Research Reports Informing the Centre Plan

Stantec. April 2013. Sustainable Urbanism: Quantifying the Costs and Benefits to HRM, Residents and the Environment of Alternative Growth Scenarios

This major study prepared during the Regional Plan review analysed the costs and benefits of four residential growth scenarios in the Municipality, and the effects of such allocations on the use and requirement for public and private services within the region. The final report includes economic and environmental analysis of the impacts of alternative growth scenarios, as well as a high-level health impact assessment. This report significantly contributed to the creation of goals for population growth within the Regional Centre. It determined that significant social, economic and environmental benefits can be accrued by realizing at least 40% of regional growth in the Regional Centre.

GM BluePlan. July 2016. Regional Centre Local Wastewater Servicing Capacity Analysis (LoWSCA)

This study was commissioned by the Halifax Water to support a wastewater servicing master plan for regional infrastructure to support existing and future growth areas in the Municipality. It highlighted servicing and infrastructure issues occurring within the Regional Centre. The study reviewed servicing capacity at 6 key sites to determine whether upgrades are required to accommodate future development. Those sites were: Quinpool Road, Spring Garden, Young Street, Agricola and Gottingen Street, Canal Street, and Wyse Road. The project was concluded in June 2016 and informed the Centre Plan process, Urban Structure and recommendations for future infrastructure investments.

Terashima, Mikiko; Davidson, Tim; Kuhn, Penelope. Dalhousie University. September 2015. Creating Indicators to Support Evidence-based Planning within the Halifax Regional Centre

This community profile for the Regional Centre was based on the 2016 Census and other administrative data. Work with Dalhousie University's School of Planning has allowed municipal staff to build indicators looking at matters such as household size and composition, and distance travelled to work – and other demographic details. These indicators and the Regional Centre profile has helped to inform the existing conditions analysis and policy direction in the Centre Plan.

HRM Planning Staff Lot Block Typology. 2015

This is a comprehensive study of existing building lots in the Regional Centre, and the lot composition of existing city blocks, within potential mixed-use and multi-family residential areas of the Regional Centre. The study examined building lot and city block characteristics such as: size (area), orientation, lot shapes, topography, abutting uses, block composition, zoning, and existing uses to provide an exhaustive inventory of typical existing building lots and typical city blocks. This typology supports a built form framework containing combinations of criteria related to: building heights, setbacks, lot coverage and transitions. This study contributes to the understanding of implementation tools that will be useful in the Centre Plan, where significant redevelopment of sites is considered.

SHS Consulting, CBCL Ltd., Jozsa Management and Economics. July 2015. HRM Housing Needs Assessment: Final Report.

This study was commissioned by HRM in partnership with the Housing and Homelessness Partnership. The goal of this study was to assess housing supply, demand, affordability, and estimate future housing supply and demand over a five and ten year period at regional and lower level geographies. The focus was on the housing gaps across the Canada Mortgage and Housing Corporation (CMHC) housing continuum.

This project uses the Regional Centre as a sub-geography of the Region and as such provided an in-depth assessment of housing needs to be considered within the development of the Centre Plan.

TEAL Architects, Toderian Urban Works, Cantwell and Company Ltd, Coriolis Consulting Corp. October 2015)

This study reviewed existing policy in the Downtown Halifax Plan Area and examined the potential for new policy to allow bonusing in the Regional Centre. This study produced recommendations for amendments to the existing bonusing policy in Downtown Halifax as well as recommendations to guide new bonusing policy for the Centre Plan. It also proposed seven density bonus districts within the Regional Centre, and density bonus value rates.

Turner Drake and Partners Ltd. Letter of Opinion Report: Updating Market Land Values by Value Area for Proposed Density Bonusing Program in the Regional Centre of HRM. December 2018.

This Study confirmed and provided property value estimates for the 7 bonus rate precincts in the Regional Centre proposed draft Centre Plan. These land values were used to create the bonus rate which will apply to all density bonusing calculations for determining public benefit under the Centre Plan. The density bonusing program uses a percentage of market land value to determine the rate per square meter that will be charged for developments that exceed 2,000 square meters in floor area.

RWDI Ltd. Pedestrian Wind Impact Assessment Protocol and Performance Standards. October 2018.

This protocol was commissioned to assist staff in the preparation of wind mitigation requirements in the Centre Plan, and provide standards for wind assessment that will accompany development applications.

Buildings taller than their immediate surroundings are exposed to stronger winds at higher elevations. These winds can be redirected down by building facades, and can subsequently accelerate around exposed building corners and along the gaps between buildings, resulting in high wind activity in pedestrian areas.

Increased wind speeds may affect pedestrian comfort and safety on and around a proposed development and, therefore, a project's success. The potential wind impact can be assessed through an experience-based review, computer simulations, and wind tunnel testing. If a negative wind impact is predicted, mitigation strategies shall be developed, as required by the *Regional Centre Secondary Municipal Planning Strategy*.

The study provides guidance for the preparation and review of pedestrian wind impact assessments, including detailed assessment methodologies, local wind climate data, wind comfort, and safety performance standards, as well as wind mitigation measures. It is intended to ensure enhanced consistency and accountability in the development approval process.

R. Bouwmeester & Associates Sun & Shadow Position Specialists. November 2018. Peer Review Services Development of a New Building Shadow Performance Standard for the Regional Centre Municipal Planning Strategy & Land Use By-law.

A shadow study is a report, containing supporting shadow diagrams and a written analysis, which demonstrates what impact a proposed development will have on access to sunlight within spaces or locations recognized as important to the community. The *Regional Centre Secondary Municipal Planning Strategy* requires the provision of a shadow study confirming that access to sunlight, and therefore the enjoyability and usability of open spaces, will be maintained despite new development in proximity to properties (prominent municipal parks in the vicinity of proposed high-growth areas) identified in the Regional Centre Land Use By-law. This Peer Review reviewed and suggested changes to the proposed performance standard and protocol under the Land Use By-law.

Servant, Dunbrack, McKenzie & MacDonald (SSDM). December. Halifax Citadel View Planes, Dartmouth View Planes, Halifax Citadel Ramparts Survey Work 2018.

WSP. 2018. Downtown Dartmouth Waterfront View Corridors Survey Work. 2018.

HRM commissioned SSDM to update all schedules related to the Downtown Dartmouth View Planes, Halifax Citadel View Planes, and Halifax Citadel Ramparts. In the case of the Halifax Citadel View Planes and Ramparts it was a matter of updating the various points and view planes to the new horizontal and vertical measuring systems (e.g. for the Halifax view planes it involved transforming NAD27 by-law Northings and Eastings of the 4 viewing positions and 10 view planes to NAD83(CSRS) 2010, and applying a vertical shift to the by-law elevations from CGVD28 to CGVD2013.

WSP was commissioned to survey existing waterfront view corridors to ensure predictability, location and extent of the corridors.

O2 Planning + Design and Robert M. Graham In collaboration with Anne Muecke, CBCL, and TransActive Solutions. Cultural Landscape Framework Study. March 2016.

The Cultural Landscape Framework Study (Framework Study) was prepared in concert with, and as an adjunct to, the Halifax Green Network Plan (HGPN) that includes cultural landscapes as part of the development of a regional open space Priorities Plan. The Framework Study provided information to potentially respond to the forthcoming proposed amendments to the Heritage Property Act regarding the conservation and regulation of cultural landscapes. It discusses the theory and practice for their identification, evaluation and management and outlines the methodology used to develop a First Phase Inventory of Potential Cultural Landscapes in the HRM.