

Drainage Issues - Engineering Investigation & Remediation



Engineering Activities

Norfolk Ram Group, LLC (Norfolk) was retained by Hidden Bay Condominiums, to perform engineering investigation to address the cause(s) of historic basement flooding at the condominium complex. Norfolk's engineers researched original development plans and records, and conducted several field investigations to review the approach utilized by the developer to control stormwater run-off, to determine the potential sources of the flooding, and to prepare recommendations for preventing the flooding.

Field activities used to document the existing site conditions included, the oversight of site borings to profile subsurface glacial till and bedrock, an extensive field topographic survey to determine existing stormwater run-off conditions, and field excavations to determine the existing configuration of foundation and roof collection drainage components. Upon completion of the field activities and research, Norfolk provided the client with an analysis of the problems, and three recommended options to reduce or eliminate the historic basement flooding. Norfolk also provided engineering review services and consultation with the association's attorney during dispute mediation with the original developer.

Scope of Services

Norfolk performed the following specific tasks which were completed on-time and within budget:

- Conducted file research at various Town offices to determine if construction as-built plans were required at the time of construction, to ascertain the location of water service and public sewer lines, and to locate any subsurface drainage components installed in connection with the site's development plans.
- Reviewed the design plans provided by the Trustees relative to the final site grading, the overall drainage schemes, as well as other proposed design components; conducted field survey activities to determine whether the final grading was in agreement with the proposed grading, and inspected all relevant drainage structures adjacent to the affected buildings to determine if the foundation footing drains were connected to the street drainage system, as was called for in the original design plans.
- Oversaw and recorded data from 19 geoprobe borings, to obtain sufficient information for profiling the firm substratum and bedrock layers at the site; and prepared a problem assessment report with remedial recommendations and cost estimates. Norfolk also provided engineering oversight and inspection services during construction of the remedial systems.
- Consulted with the Trustees and their attorney to assist with successful settlement of their claim against the site developer.

