

SCHEDULE "G"

56

DRAINAGE REPORT

The Heron Lake Subdivision consists of 41 Estate Residential Lots. The development will cover approximately 42.1 hectares of land which is comprised of reforested pine areas and some open areas.

An existing municipal drain system, the Dowdall Drain, flows through the property and provides the outlet for the bulk of the subdivision runoff. The subdivision lands slope naturally toward the municipal drain system which flows into the Jock River. Sections of the drain within the subdivision require regrading to improve the drainage through the area. Details of the subdivision drainage are shown on the Grading and Drainage Plan (Drwg. No. 84-1141-GR1). The intent of the regrading work is to clean out the ditches and eliminate any areas in the system where water may collect. The proposed grades are the same elevation or lower than the original grades on the municipal drain.

The Rational Formula was used to determine all internal flows. The 10 year design storm was used to design the internal road crossing culverts and swales.

The internal culverts sizes are shown on the Grading plan. Culverts No. 1, 3, 4, 5, 7, 8, 9 and 10 have been upgraded to the Township standard minimum diameter of 600 mm corrugated steel pipe for road crossing culverts. Culvert No. 2 will be 800 mm diameter to correspond with the existing 800 mm diameter culvert across Regional Road 10. Approximately 900 acres of the Jock River basin drains to the municipal drain that flows through the subdivision. This area generates 2770 L/s or 97 cfs of runoff to Culvert No. 6. Two 1000 mm diameter culverts will be installed at this location which will provide 120 cfs capacity with a headwater to depth ratio of 1.3 to 1.

All driveway culverts are the minimum 450 mm diameter corrugated steel pipe with the exception of Lots 18, 19, 13 and 14, which require 800 mm diameter culverts.

A swale will be constructed between lots 34 and 35 to allow drainage into the branch of the municipal drain system that runs along the west boundary of the property. The runoff from the subdivision that is directed into the swale section is 260 L/s or 9.2 cfs. The swale will be a minimum 0.45 m deep and have 3:1 side slopes which will provide a capacity of 582 L/s or 20.4 cfs.

The Engineer's report for the Dowdall Drain is to be revised to reflect a proportionate cost sharing, by lot owners for maintenance of the Dowdall Drain and two lakes.

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The Purchasers shall be responsible for consulting with the Township Engineer before altering the elevation of any of the lands within the subdivision. In addition, the Purchaser must have approval from the Township Engineer and the Rideau Valley Conservation Authority before making any changes to the municipal drain system.

Part 5 - Lake Area Development

Development of the lake area will consist of:

- lake excavation
- tree transplanting
- construction of an emergency fire access

The size and location of the two lakes that will be excavated are shown on the grading plan. They will have 8:1 side slopes and will be approximately 2.6 metres below the existing grade in the lake area. The depth of water in the lakes will range from approximately 1.5 to 2.0 m.

Approximately 150 pine trees will be transplanted from other locations in the subdivision to the open areas around the lakes. The specific location of the tree planting will be discussed with the Township of Goulbourn Planning Department.

An emergency access road will be constructed to provide access to the lake for fire-fighting equipment. The road will be 6 metres (20 ft) wide and will consist of 300 mm Granular "B", 150 mm Granular "A" and 100 mm topsoil, seed and mulch as indicated on the grading plan. No. 84-1141-GR1, Rev. (5) and on Plan No. 84-1141-5, Rev. (2).

The remainder of the site will be kept in its natural state.

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Drew