

SITE SERVICING BRIEF

FOR

**PROPOSED
DEVELOPMENT AT
15117 MEDWAY ROAD
ARVA, ONTARIO**

FEB. 24, 2026

Prepared by:



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1.0 INTRODUCTION

The services of Raft Consultants Inc. have been retained by Mr. Mostafa Heikal to prepare Site Servicing Brief. The purpose of this report is to outline the servicing strategy for the site, including sanitary, water, and stormwater infrastructure, as well as erosion and sediment control measures

The subject property is located at 15117 Medway Road (between Highbury Avenue North & Adelaide Street North) in Arva, as shown in Figure.



Figure 1 - Site Location Plan

The subject property, approximately 10.59 hectares in area, currently accommodates a residential structure. The proposed development includes the retention of the existing dwelling, along with the addition of a recreational facility and surface parking within the landscaped area.

Potential stormwater management (SWM) strategies to mitigate any potential negative impacts will be according to County of Middlesex INFRASTRUCTURE DESIGN STANDARDS. New site servicing requirements for sanitary and water supply will also be discussed in the following sections.

2.0 SERVICING STRATEGY

2.1 SANITARY SERVICING

Municipal sanitary servicing is not available along Medway Road. In lieu of a conventional septic system, the proposed development will be serviced by a private on-site wastewater treatment plant (WWTP) designed to treat domestic sewage generated from the proposed development.

The treatment system will be designed in accordance with the Ontario Ministry of the Environment, Conservation and Parks (MECP) Design Guidelines for Sewage Works, and will require an Environmental Compliance Approval (ECA) under the Environmental Protection Act. The whole sanitary system is anticipated to include the following components:

- Sanitary manholes
- Interconnecting PVC piping
- Wastewater treatment plant (WWTP)
- Effluent sampling chamber
- Outfall structure discharging to the adjacent watercourse.

A detailed Assimilative Capacity Study (ACS) and receiving water assessment will be completed to confirm the ability of the watercourse to accept treated effluent in accordance with MECP's F-5 series policies. Effluent quality criteria will be established through the ECA process and will be met through the design and operation of the treatment facility.

The WWTP will be situated within the development area with adequate access for maintenance, year-round operation, and compliance monitoring.

2.2 WATER SUPPLY (DOMESTIC / FIRE PROTECTION)

Water servicing for the proposed development will be provided through on-site groundwater wells. Each building will be connected to either a shared or individual well system, with capacity sized based on projected occupancy and domestic water demand. To support groundwater sustainability, infiltration galleries will be incorporated to promote aquifer recharge and mitigate potential impacts on local groundwater levels.

Fire protection for the site will be provided through a system of dry fire hydrants. In addition to drawing water from the on-site wells, the dry hydrant system will be supported by filtered and stored stormwater, collected through the site's stormwater management infrastructure. Stormwater will be routed through sediment-removal and filtration components before entering a dedicated storage chamber sized to meet fire-flow requirements. This dual-source approach enhances fire protection reliability while reducing demand on the groundwater supply.

All fire protection components, including the dry hydrants, storage chamber, and associated piping, will be designed in accordance with applicable local fire code requirements and the Ontario Fire Code.

2.3 STORM

No municipal storm sewer infrastructure exists along Medway Road. Stormwater runoff generated from the proposed development will be managed through a combination of on-site collection, treatment, infiltration, and controlled discharge.

Stormwater will be conveyed through a system of catch basins and catch basin manholes, directing flows to on-site infiltration and evaporation ponds designed to promote groundwater recharge and reduce peak runoff. Prior to any discharge to the adjacent natural watercourse, stormwater will undergo quality treatment to remove sediment and contaminants.

To achieve the required level of treatment, the system will incorporate Stormceptor units and/or Oil Grit Separators (OGS), or an equivalent MECP-approved stormwater quality device. These units will provide effective removal of Total Suspended Solids (TSS), hydrocarbons, and floatables, ensuring that stormwater discharged from the site meets applicable environmental protection criteria.

The feasibility of discharging treated stormwater to the watercourse will be confirmed through coordination with the relevant regulatory authorities. All stormwater management components will be designed in accordance with the County of Middlesex Infrastructure Design Standards, MECP stormwater management guidelines, and accepted engineering practices.

3.0 EROSION AND SEDIMENT CONTROL

An erosion and sediment control strategy will be implemented during the construction to mitigate the transportation of silt from the site.

To prevent construction-generated sediments from leaving the site by overland flow, the following measures should be implemented with regular inspection and maintenance.

- Management of construction activities in a manner to minimize disturbed areas and duration of soil disturbance.
- Provision of a mud mat construction to minimize sediment on adjacent municipal road.
- Installation of drain inlet protection at each catch basin and storm manhole cover within the construction site.
- Installation and maintenance of silt fences (OPSD 219.130 or equivalent) around the perimeter of any construction/disturbed areas.
- Periodically removal of sediments accumulated behind silt fences or sediment protection when 50% of its individual design capacity has been reached.
- Dust control measures should be followed during construction.
- Erosion and sediment control practices to be decommissioned after paving, landscaping or other stabilization measures and restoration of disturbed areas have been completed.

4.0 CONCLUSIONS

- Sanitary servicing for the proposed development will be provided through a new on-site wastewater treatment plant (WWTP). The system will be designed in accordance with MECP Design Guidelines for Sewage Works and will require an Environmental Compliance Approval (ECA). Treated effluent will be discharged to the adjacent natural watercourse, subject to confirmation of assimilative capacity and regulatory approval.
- Domestic water supply will be sourced from on-site groundwater wells, supported by infiltration galleries to promote aquifer recharge. Fire protection will be provided through dry fire hydrants supplied by both the groundwater system and filtered, stored stormwater collected through the site's stormwater management infrastructure.
- Stormwater management will be achieved through on-site collection, infiltration, and controlled discharge. Prior to release into the natural watercourse, stormwater will undergo quality treatment to achieve effective Total Suspended Solids (TSS) removal.
- Erosion and sediment control measures will be implemented throughout construction to prevent sediment transport off-site and protect surrounding natural features. These measures will be maintained until all disturbed areas are stabilized.

We trust you will find this submission complete and in order. Should you have any questions, please contact the undersigned.

Respectfully Submitted,

For and on behalf of Raft Consultants Inc.,



**Rasheed Ahmad Bhatti (M.Eng.)
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Dated: Feb 24, 2026.



Reviewed by



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