H. BYE CONSTRUCTION LTD.

SERVICING OPTIONS STUDY

VIKING CIVES MUNICIPALITY OF WEST GREY COUNTY OF GREY

> JUNE 2025 Modified September 2025

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INTRODUCTION

Cobide Engineering Inc. was retained by H. Bye Construction Ltd. to prepare a Servicing Options Study to support a consent application and zoning by-law amendment for 255 Watson Drive within the former Town of Mount Forest. The application will be to divide a single parcel in three (3) parcels and merge one (1) of the newly created parcels with an existing adjacent parcel to support the expansion of industrial industry in the area.

A copy of the overall proposed development lot fabric has been included in Appendix A as Drawing A1 - Lot Fabric and Rezoning Plan.

1.1 LOCATION

The proposed development, herein referred to as the Site, is located at 255 Watson Drive within Municipality of West Grey, County of Grey. The site is just north and west of the former Town of Mount Forest, Township of Wellington North, County of Wellington boundary. The property is further defined as Part Lot 32, Concession 1, Geographic Township of Normanby, Municipality of West Grey, County of Grey. A Regional Location Map is included as Figure 1.

The site is located on the north side of Watson Drive, west of Norpark Ave. It is bordered by existing industrial properties to the north, east and south and by densely wooded areas to the west. There is an existing municipal ditch that runs diagonally through the southwest portion of the site. The site will be accessed from Watson Drive and Viola May Crescent.

1.2 DEVELOPMENT PROPOSAL

The overall property area is 23.60 hectares (58.31 acres) in size. It is planned to divide the property into three (3) parcels including merging one with an existing adjacent property along with stormwater management ponds, parking and landscaping areas.

The following provides a summary of the proposed development plan for the property:

Lot	Description	Size
Lot 1	Roll No. 420501000702500 To be Merged with Roll No. 420501000702430	7.50 ha 2.06 ha
Lot 2	Roll No. 420501000702500 To be Merged with Roll No. 420501000702460	2.54 ha 0.04 ha
Lot 3	Roll No. 420501000702500 To Remain	13.26 ha

Approximately 7.50 ha (Lot 1) will be merged with Roll No. 420501000702430 that has an area of approximately 2.06 ha with frontage onto Harry Bye Way. After the two properties are merged, the total parcel area will be approximately 9.56 ha.

Approximately 2.54 ha (Lot 2) will be created from Roll No. 420501000702500 and will be merged with Roll No. 420501000702460 to provide access and frontage on Viola May Crescent.

The remainder of Roll No. 42050100702500, approximately 13.26 ha, will be retained and remain as currently zoned. It should be noted that the retained parcel will have frontage onto the unopened road allowance of Watson Drive.

Page 1 of 14 Cobide Engineering Inc. No. 05093 A copy of the overall proposed development lot fabric has been included in **Appendix A** as Drawing A1 – Lot Fabric and Rezoning Plan.

The parcel at 255 Watson Drive is currently zoned "Restricted Rural (A3)" and "Natural Environment (NE)". The existing parcel that fronts onto Harry Bye Way is currently zoned "Industrial (M1-237)". Lot 1 will require a zoning by-law amendment and consent to merge with the adjacent lot having Roll No. 420501000702430. Lot 2 will also require a zoning by-law amendment and consent. Both properties will be zoned "Industrial (M1-237)" consistent with the zoning of the adjacent industrial parcels. Lot 3 will be retained and will remain as "Restricted Rural (A3)".

The Grey County Official Plan designates the proposed development parcel as "Rural". The surrounding properties are designated "Industrial Business Park Settlement Area" within the Grey County Official Plan. An Official Plan Amendment is proposed to redesignate Lots 1 and 2 to "Industrial Business Park Settlement Area."

1.3 OTHER REPORTS

In support of this application, the following reports have been prepared:

- Planning Justification Report, Official Plan and Zoning By-Law Amendment, H. Bye Construction, 255 Watson Drive, Municipality of West Grey, MHBC Planning, Urban Design, and Architecture. June 2025:
- Hydrogeological and Nitrate Attenuation (D-5-4) Study, GEI Consultants Canada Ltd., April 2025;
- **Stormwater Management Report**, Viking Cives, Municipality of West Grey, Cobide Engineering Inc., June 2025;
- Stage 1 2 Archaeological Assessment, AS&G Archaeological Consulting Inc., May 2025;
- Environmental Impact Study, SAAR Environmental Ltd., May 2025;
- Traffic Impact Brief, Paradigm Transportation Solutions Limited, June 2025;

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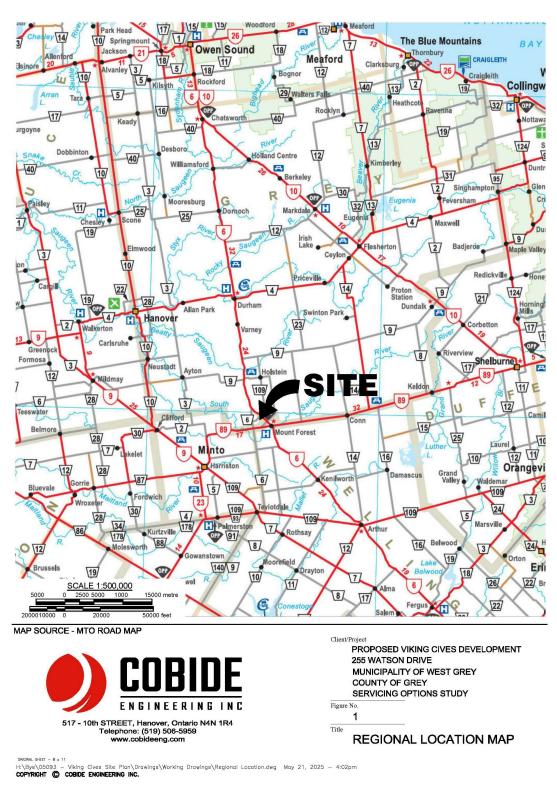


Figure 1 - Regional Location Map

EXISTING CONDITIONS

2.1 LAND USE

2.1.1 **ON-SITE**

The present land use of the subject property is agricultural (cropped) with an unnamed municipally owned ditch and wooded area within the bottom southwest corner of the property.

The overall property area is approximately 23.60 ha (58.31 acres).

More detailed information relating to the present on-site environmental conditions can be found in the Environmental Impact Study that was prepared by SAAR Environmental Ltd.

2.1.2 SURROUNDING

The surrounding land use is a mix of agricultural, woodland forest and industrial.

South

Immediately to the south of the site are lands owned by the Township of Wellington North that are zoned "Restricted Rural (A3)" and "Industrial (M1)" within the Municipality of West-Grey/Township of Wellington North's Zoning Bylaws.

West

To the west of the site is a large, wooded area along with cropped fields. The lands are zoned a mix of "Restricted Rural (A3)" and "Natural Environment (NE)". There is a municipally owned ditch that bisects the site on the southwest corner with eventual outlet into the South Saugeen River.

North

Industrial properties and a large, wooded area bound the site to the north. The lands are zoned "Industrial (M1)" and "Natural Environment (NE)". Harry Bye Boulevard and Viola May Crescent provide road access to the site on the north side.

East

Directly east of site are additional industrial properties which are zoned "Industrial (M1)" along with Watson Drive and Norpark Avenue.

2.2 GEOLOGY, TOPOGRAPHY AND SOIL CONDITIONS

Physiographic mapping shows that the Site is located within a Drumlinized Till Plain, a landform typically characterized by broad, flat to gently sloping terrain formed by glacial till deposited by retreating glaciers, with drumlins occurring in certain localized areas. The Site is also situated within the Horseshoe Moraines physiographic region, which is generally defined by irregular, stony knobs and ridges composed primarily of till, along with some sand and gravel deposits. This region may also include pitted sand and gravel terraces and swampy valley floors (Chapman & Putnam, 1984).

There is a breakpoint at approximately the mid-point of the overall development where the site slopes from southeast to northwest towards an existing drainage ditch that flows towards Harry Bye Boulevard. The southwest portion of the site slopes in two directions. The northwest half slopes from east to west

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towards a series of unnamed tributaries of the South Saugeen River. The southeast half slopes from north to south towards an existing municipal ditch that bisects the property on the southeast side into a series of unnamed tributaries of the South Saugeen River. The range of measured elevations for the property is between 419.50m to 404.00m.

A single subsurface soil sample was taken by CMT Engineering Inc. in September 2021. This sample revealed that the site consists of silty sand with some gravel and trace clay with a T-time of 12 min/cm. Information about the native soil found during the excavation of the subsurface sample completed on the property can be found in **Appendix C**.

Additional information regarding the geology, topography and the subsurface conditions can be found within the **Hydrogeological Nitrate Attenuation (D-5-4) Study** that was prepared by **GEI Canada Consultants Inc.**

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3. WATER SUPPLY EVALUATION

3.1 ALTERNATIVES CONSIDERED

The following three (3) alternatives were considered to provide domestic water supply for the proposed development:

Alternative 1: Individual Private Wells

Alternative 2: Extension of the nearest municipal water supply

Alternative 3: Construction of an on-site communal water supply system

The above alternatives were evaluated and compared based on the overall cost to construct, annual operational and maintenance costs and the suitability of existing underground water supply. Each alternative is outlined below:

3.1.1 ALTERNATIVE 1: INDIVIDUAL PRIVATE WELLS

All the existing properties within the industrial park obtain their water supply from individual private wells due to their geographical location. Therefore, the use of individual private wells has been considered for this development.

The estimated capital cost to drill a well would be approximately \$15,000-20,000 per lot based on the following assumptions:

- Requirement to provide basic treatment;
- Cost of well drilling and development;
- Extension of water line to the building;
- Submersible well pump and electrical control

The annual operational and maintenance costs to each lot owner would include but is not limited to hydro consumption, chemicals for treatment if desired and periodic water testing analysis. The operational and maintenance costs for individual well systems is primarily related to the hydro consumption with the addition of chemical treatment disinfection and minor testing costs. These costs are estimated to range from \$500 to \$1,000 per lot per year.

3.1.2 ALTERNATIVE 2: EXTENSION OF THE NEAREST MUNICIPAL WATER SUPPLY

The nearest municipal water supply is located in the Town of Mount Forest settlement area, within the Township of Wellington North. However, the existing municipal water distribution system lies outside the boundaries of the proposed development which is located within the Municipality of West Grey. As a result, extending the existing municipal watermain from Wellington North is not considered feasible due to jurisdictional limitations. Therefore, no further review of this option will be undertaken.

3.1.3 ALTERNATIVE 3: ON-SITE COMMUNAL WATER SUPPLY SYSTEM

A communal well used for industrial purposes would involve a shared well system where multiple users access water from a single well. This system would typically be managed by a well owner, who would be responsible for the operation, maintenance and repairs of the communal system.

As the development is proposed as industrial use, it would be crucial to ensure that the well can meet the necessary water volume and quality requirements of the various industrial processes for the various properties. Communal wells also have many rigorous Ministry guidelines that must be followed with

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respect to treatment, testing, and analysis of treated water. Generally, communal water supply systems also have a large capital expense for the initial construction which is borne by the developer.

A communal water supply is not considered a suitable option for this development due to the uncertain nature of future industrial water demands and the lack of clarity regarding ownership, operation, and management responsibilities for the system. Municipalities are also reluctant to assume this type of system due to the rigorous guidelines that must be followed and the additional liability they can inflict as well as the management, operation, and maintenance of the system. Therefore, no further review of this option will be undertaken.

3.2 PREFERRED WATER SUPPLY ALTERNATIVE

The preferred water supply option for the proposed development is the use of individual private wells. This approach is consistent with existing properties within the industrial park, all of which currently rely on private wells for their water supply. It is a cost-effective solution that places responsibility for the operation, maintenance, and regular testing of the well on the individual lot owner, thereby reducing broader liability.

Based on the available well records in the area, the water supply comes from below a limestone layer found between 30 m to 40 m below ground level. It is recommended that the existing wells within 500m of the proposed development be taken into consideration as to ensure that neither the proposed development nor the existing wells will adversely impact one another.

It is further recommended that the individual wells be installed and constructed in accordance with Ontario Regulation 903. The MECP Guideline B-1-1, Water Management – Policies, Guidelines, Provincial Water Quality Objectives of the Ministry of Environment and Energy will also be used as a basis to provide protection and enhancement of drinking water quality and describes the Provincial Water Quality Objectives (PWQOs) and the Ontario Drinking Water Objectives (ODWOs).

The well placement will follow the Ontario Building Code (OBC) and the Ontario Water Supply Wells: Requirements and Best Practices Guide. The wells will be installed by a licensed well contractor and will have adequate protection from potential effluent contamination from the on-site sewage systems.

The following will be taken into consideration:

- All lots must be provided with water for domestic consumption that is of acceptable quality and of adequate quantity;
- Appropriate well construction techniques must be followed in order to minimise the possibility of well water quality degradation;
- There must be minimal adverse effects on well water in the development from sources of contamination on the site or on adjoining lands;
- The development must not result in water quantity interference conflicts between users in the development and users on the adjoining lands;

Raw water quality will be tested in order to ascertain the level of treatment required for consumption.

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SANITARY SEWAGE SERVICING EVALUATION

4.1 ALTERNATIVES CONSIDERED

The following three (3) sewage servicing options were considered to provide sewage treatment and disposal for the proposed development:

Alternative 1: Extension of the nearest municipal sanitary sewer

Alternative 2: On-site gravity sanitary sewer with communal treatment and disposal system

Alternative 3: Individual On-site sewage treatment and disposal systems

4.1.1 ALTERNATIVE 1: EXTENSION OF THE NEAREST MUNICIPAL SANITARY SEWER

The nearest municipal sanitary sewer is located in the Town of Mount Forest settlement area, within the Township of Wellington North. However, this sewer system lies outside the boundaries of the proposed development which is located within the Municipality of West Grey. As a result, extending the existing municipal sanitary sewer from Wellington North is not considered feasible due to jurisdictional and capacity limitations. Therefore, no further review of this option will be undertaken.

4.1.2 ALTERNATIVE 2: ON-SITE GRAVITY/FORCEMAIN SANITARY SEWER WITH COMMUNAL TREATMENT AND DISPOSAL SYSTEM

A communal sewage system can be described as a shared facility for the on-site collection, treatment, and disposal of sewage. The construction of this type of system would still require the installation of a gravity sanitary sewage collection system that would provide each lot with a sanitary sewer connection leading to a centralized sewage treatment facility. The treatment facility would consist of a treatment component and a subsurface or surface water disposal component. The system would need to be placed in a location such to assist in meeting the MECP's Reasonable Use Criteria (i.e., Effluent Nitrate Concentration > 2.5 mg/L).

A variety of design alternatives exist with respect to communal systems. The chosen system would have to have denitrification and phosphorus removal capabilities and possible UV disinfection depending on the subsurface overburden within the site.

Further design consideration would be required to ascertain the size and location of the dispersal bed which may require reconfiguration of the proposed development layout. In addition, the MECP will likely require a Groundwater and Surface Water Monitoring Program to be set-up to ensure the system is functioning properly.

A financial assurance arrangement is typically required to be entered into between the developer and local municipality to guarantee that the system will be operated and maintained in accordance with the Environmental Compliance Approval (ECA) until the Municipality assumes ownership of the system. Financial assurance is a financial security to guarantee that the developer is able to cover the cost of operating and maintaining the system in compliance with the ECA.

As there are several design and layout factors that must be considered for this alternative, a preliminary capital cost was not explored at this time. Generally, municipalities do not prefer this option as the system will become the overall responsibility of the Municipality once the subdivision is assumed. Therefore, no further review of this option will be explored.

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ALTERNATIVE 3: INDIVIDUAL ON-SITE SEWAGE TREATMENT AND 4.1.3 DISPOSAL SYSTEMS

This alternative would involve constructing individual on-site sewage treatment and disposal systems for each individual development within the overall project. Each development owner would ultimately be responsible for their own sewage treatment and disposal system including the cost of construction and installation as well as all the operation and maintenance costs.

This option offers low capital and operational costs. The following summarizes the average installed costs for a conventional and tertiary treatment sewage system:

Conventional Class 4 Sewage System ~ \$25,000 Tertiary Sewage Treatment System ~ \$35.000

Individual sewage systems require little maintenance on an annual basis. These systems are generally required to be pumped every three to five years with an average cost of pumping around \$500.

The MECP's D-5-4 Procedure was completed by GEI Consultants in order to support the use of individual on-site sewage treatment disposal systems. According to the completed D-5-4, the proposed development is suitable for servicing with Conventional Class 4 Sewage Systems as they can result in resultant nitrate concentrations of less than 10 mg/L. For further information regarding the details of the Nitrate Attenuation (D-4-5) Study, please refer to the report completed by GEI Canada Consultants Inc.

4.2 PREFERRED SANITARY SEWAGE SERVICING ALTERNATIVE

Based on a review of the above three (3) alternatives, the preferred sewage servicing option is to install individual on-site sewage treatment and disposal systems for each development within the overall project. It has been proven by the D-5-4 Procedure that each development can support the use of individual onsite sewage treatment and disposal systems. This option aligns with the existing sewage servicing for the surrounding properties, has the lowest construction and maintenance costs and requires considerably less maintenance than the other alternatives. It also releases both the Municipality and the Developer of additional risk, liability, and overall short and long-term costs for both construction, operation, and maintenance.

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5. STORM SEWER AND STORMWATER MANAGEMENT EVALUATION

This section will pertain to the collection and outfall of the stormwater into the various stormwater management discharge points within the overall development. A **Preliminary Stormwater Management Report** prepared by Cobide Engineering Inc. has been prepared under separate cover.

All stormwater will be conveyed through each proposed development within the overall industrial site and directed to their respective proposed stormwater management facilities as shown on Drawing 05093-DP1 within **Appendix A** of this report. The flows will be controlled to pre-development conditions prior to their outlet at the two (2) discharge points, which eventually outlet into the South Saugeen River.

The **Preliminary Stormwater Management Report** outlines the details of the pre and post development conditions, flows, modelling and the geometry and facility performance of the four (4) proposed stormwater management ponds.

6. GRADING, EROSION & SEDIMENT CONTROL

Erosion and sediment controls shall meet the requirements of the most recent version of the MECP's Stormwater Management Planning and Design Manual at the time of construction.

6.1 CONSTRUCTION STAGE

Prior to the start of construction, appropriate sediment control facilities are to be in place. Following are details regarding erosion and sediment control that are to be implemented:

- Placement of heavy-duty siltation fencing is required along the southeast and northwest property boundaries to intercept sediment that could potentially be transported by sheet flow across the site towards the environmentally sensitive areas and drainage features within the overall development. Light Duty Siltation fence will also be installed at any development grading limits where runoff may discharge from the site.
- It is proposed that each pond be constructed first to act as a sedimentation basin for each development. A temporary outlet would be installed and surrounded in clear stone.
- Placement of temporary straw check dams within swales and any other locations where a concentrated flow of runoff may occur. All proposed drainage swales are to be seeded during construction:
- Installation of filter cloth under all new and existing catchbasin grates until paving of the parking lots and adjacent streets is completed;
- Mud mats will be placed at construction accesses to keep public roadways free from debris during the construction period.
- Re-vegetate all disturbed areas after underground and surface works have been constructed.

Prior to removal of sediment control facilities, ensure that sediment that may have accumulated has been removed.

Once the area has been stabilized, the silt fencing can be removed.

6.2 LOT DEVELOPMENT

During individual development of the lots within the overall project area, silt barriers are to be constructed, as appropriate, to prevent the eroding of materials into the roadside drainage system or adjacent existing environmentally sensitive features and watercourses. The sedimentation control can be in the form of siltation fences placed in the direction of flow from the construction site and shallow excavated sediment traps (moats) should be constructed around any stockpiled materials.

The responsibility for the individual lot sediment control lies with the developer/builder constructing on each\ lot.

The proposed development grading design will generally follow the existing grade. The proposed grading design will match all existing grades at the property lines and will not alter or affect the drainage patterns of the neighbouring properties. The proposed site grading will drain the stormwater through the network of storm sewers and towards the stormwater management pond. Most of the slopes on the site are planned to be less than 6%, with some areas having slopes as steep as 3:1.

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ROADS AND PARKING LOTS

All internal roads and parking lots within the individual development lots will be built to the following minimums:

- Parking Lot/Internal Road design
 - 40 mm HL3 asphaltic (surface)
 - o 50 mm HL4 asphaltic (base)
 - o 150 mm Granular A base
 - o 350 mm Granular B base

At final build out, municipal roadways throughout the development will be designed to meet the Municipality's Development and Servicing Guidelines for an industrial road cross section.

8. UTILITIES

8.1 NATURAL GAS

Natural gas is present within the adjacent developed areas. Enbridge will be responsible for completing the design of the natural gas distribution system. Each proposed development/lot within the overall site will be serviced with natural gas.

8.2 STREETLIGHTS

The configuration of the streetlights will be designed in accordance with municipal standards. Streetlights will be mounted on the overhead hydro poles. Lamp fixtures and arms shall be as per the municipal standards.

8.3 ELECTRICITY

Hydro One will be responsible for completing the design of the electrical distribution system. Each lot will be individually serviced. Overhead distribution lines will be utilized for this development.

8.4 TELEPHONE/INTERNET

Bell Canada, EH!Tel, and Eastlink will be given the opportunity to provide telephone and internet services to the development. They will complete their own design and provide drawings showing their proposed service locations.

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9. CONCLUSIONS

The above report presented the various servicing options in support of the consent application and zoning by-law amendment for 255 Watson Drive. Based on the findings of this report, the following conclusions are made:

- 1. Domestic water supply can be provided by on-site individual wells.
- 2. On-site sewage disposal and treatment systems are the preferred alternative as supported by the **Nitrate Attenuation (D-4-5) Study** completed by GEI Consultants.
- 3. Stormwater can be conveyed to the proposed stormwater management facilities by site grading and internal storm sewers. Further details of the proposed stormwater management concept will be outlined in the Stormwater Management Report completed by Cobide Engineering Inc.
- 4. The proposed internal roadways and parking lots within each individual development can be constructed to meet the Municipality of West Grey standards.
- 5. The proposed development can be serviced with natural gas, hydro, telephone, and internet.

Based on the above conclusions of this report, it is recommended that the above Servicing Options Study for the subdivision be submitted to the SVCA, Municipality of West Grey and Grey County as part of the various planning applications.

Sincerely,

Cobide Engineering Inc.

Amy Hoffarth, P. Eng. Project Engineer

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Appendix A

DRAWINGS

DRAWING A1 – LOT FABRIC AND REZONING PLAN

