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4296 Anderson Road

Conceptual Site Servicing and Stormwater Management Report

Prepared for: Noel's Ottawa Snow Inc.



4296 Anderson Road

Ottawa, Ontario

**Conceptual Site Servicing and
Stormwater Management Report**

Prepared For:
Noel's Ottawa Snow Inc.

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

April 2026

Novatech File: 124156
Ref: R-2026-016

April 28, 2026

By Email
adam.brown@ottawa.ca

City of Ottawa
Planning, Development and Building Services Department
110 Laurier Ave W.
Ottawa, ON K1P 1J1

Attention: Adam Brown, Manager Development Review Rural

**Reference: Conceptual Site Servicing and Stormwater Management Report
4296 Anderson Road
City of Ottawa File No.: PC2024-0405
Novatech File No.: 124156**

Please find enclosed the Conceptual Site Servicing and Stormwater Management Report (April 2026) for the 4296 Anderson Road property.

The report has been prepared to show the proposed servicing and stormwater management concept for the subject site. The report has been submitted in support of a Zoning By-law Amendment application.

A pre-consultation meeting was held for the proposed Zoning By-law Amendment and Site Plan control on October 18, 2024. Notes from this meeting are included in Appendix A.

If you have any questions or comments, please contact us.

Yours truly,

NOVATECH



Lisa Bowley, P. Eng.
Senior Project Manager
Land Development Engineering

cc: Noel's Ottawa Snow Inc.

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1.0 INTRODUCTION

Novatech has been retained to prepare a Conceptual Site Servicing and Stormwater Management Report for Noel's Ottawa Snow Inc. property located at 4296 Anderson Road. This report outlines the conceptual servicing and stormwater management strategy for the property in support of a Zoning By-law amendment application.

The purpose of the Zoning By-law amendment application is to accommodate the existing equipment storage and landscape material supply business operating on the property. A Site Plan Control application including a detailed Site Plan will be filed at a future date for the property when further details of any required modifications to the site are determined after zoning approvals are in place.

Details of the required Zoning By-law amendment application were discussed with City staff at a pre-consultation meeting held on October 18, 2024. Notes of the meeting are included in **Appendix A**.

1.1 Site Location

The site is legally described as Part of Lot 16, Concession 7, Geographic Township of Gloucester, now City of Ottawa. The site is located at 4296 Anderson Road, approximately 1.26km south of Leitrim Road. Refer to **Figure 1 – Key Plan** for the site location.

The total area of the property is approximately 0.46 hectares in size. The entirety of the property is considered for the Zoning By-law Amendment. This area is used for both the existing residential use and home-based business.

1.2 Reference Documents

This report should be read in conjunction with the following reference documents:

- Environmental Impact Statement report prepared by Gemtec, dated June 23, 2025
- Geotechnical Investigation report prepared by Gemtec, dated April 24, 2026
- Hydrogeological Investigation, Terrain Analysis report prepared by Gemtec, dated April 21, 2026

1.3 Existing Conditions

Based on discussions with the owner, the development of the home-based businesses began in 2008. Therefore, for the purposes of this report the pre-development conditions are assumed to be the site conditions in 2008. Refer to **Figure 2 – Pre-Development Conditions (2008)**. This plan with aerial imagery shows a house, a garage and an asphalt entrance and gravel parking area.

For the purposes of this report the current site conditions are assumed to be the conditions in 2024, the date of the topographic survey. The survey was completed by Ontario Land Surveyor, Annis, O'Sullivan, Vollebakk Ltd. The current site features are detailed on the **Existing Conditions Plan (124156-EX)**.

This plan shows the same residential features as in 2008, with an increase in asphalt area and two structures described as metal garages on slab and one metal shed on concrete blocks.

The site is serviced by a private well and septic system.

1.4 Proposed Development

The owner has been working with Novatech, to develop a Conceptual Site Plan for the future home-based business that aligns with the Zoning By-law amendment. The **Conceptual Site Plan (124156-SP)** is included at the back of this report.

Novatech has developed a conceptual Grading, Erosion, Sediment Control Plan based on this plan which provides proposed grading for the areas that would be reinstated as greenspace, specific parking areas and reduced outdoor storage areas. The material storage area on the south property line was encroaching over the property limits. This area would be regraded and reinstated as greenspace.

The site will continue to be serviced by private well and septic.

At the Site Plan Control stage, should it be determined that fire protection is required, under ground water storage tanks would be sized and located in consultation with Ottawa Fire Services.

Refer to the **Conceptual Grading, Erosion and Sediment Control Plan (124156-GR)** for site details.

2.0 SITE SERVICING

Gemtec reviewed the groundwater quality and quantity assessment and impact assessment of the servicing in the Hydrogeological Investigation, Terrain Analysis report.

There is an existing dug well on-site. Based on Gemtec's findings, the water quality of the well was not considered fit for consumption. It is understood that the water quality in this area is poor. The property to the east, Anderson Links Golf & Country Club, is connected to the municipal Carlsbad Trickle Feed system.

This site is located outside the City of Ottawa urban boundary. Through various correspondence with the City and Gemtec, it is understood that a connection to the Carlsbad Trickle Feed system would not be considered.

A new drilled well would be recommended as part of the Site Plan Approval process.

3.0 CONCEPTUAL STORMWATER MANAGEMENT

For the purposes of this report the pre-development conditions are assumed to be the conditions in 2008, and the post-development conditions are assumed to be site conditions after the implementation of the proposed works shown on the conceptual Grading Plan.

Pre-development and post-development drainage areas were developed to assess the stormwater management design criteria for the subject property. The overall drainage patterns are unchanged from the pre-development conditions, including external drainage patterns on to and off the site in the post-development condition.

The total drainage area for the proposed development boundary is approximately 0.46 hectares as depicted on **Pre & Post Development Storm Drainage Area Plan (124156-SDA)** included in **Appendix B**.

3.1 Stormwater Management Criteria

As per City of Ottawa guidelines, the following stormwater management criteria is proposed:

Stormwater Quantity

100-year post-development peak flow rate would be controlled to the 2-year pre-development flow rate.

Stormwater Quality

Enhanced level of water quality protection to 80% total suspended solids (TSS) removal

Erosion & Sediment Control

Provide guidelines for site preparation and construction.

3.2 Stormwater Quantity Control

Pre-Development

Under pre-development conditions (2008), the stormwater runoff for the 0.46-hectare drainage area is split, approximately 0.41 hectares flows south east and approximately 0.05 hectares flows north east. Both drainage areas outlet to the Anderson Road, roadside ditch. The roadside ditch joins with the Smith-Gooding Municipal Drain and flows through the existing Anderson Links Golf & Country Club.

Refer to **Pre & Post Development Storm Drainage Area Plan (124156-SDA)** for details.

Peak Flows

Peak flows were estimated using the Modified Rational Method. Supporting calculations are provided in **Appendix B**.

Pre-Development vs. Post-Development Peak Flows

| Outlet Location | Drainage Area (ha) | | Peak Flow (L/s) | | | | | |
|-----------------|--------------------|------|-----------------|------|--------|------|----------|--------------|
| | | | 2-year | | 5-year | | 100-year | |
| | PRE | POST | PRE | POST | PRE | POST | PRE | POST |
| Area A | 0.41 | 0.41 | 22.2 | 57.8 | 30.1 | 78.5 | 62.5 | 159.7 |
| Area B | 0.05 | 0.05 | 3.5 | 5.6 | 4.7 | 7.6 | 9.5 | 14.8 |

Storage Requirements

There are minimal changes to the existing drainage patterns (2008) and the post-development conditions. However, runoff has increased due to the expanded hard surface areas (asphalt area and two buildings), as well as over controlling the site to the 2-year peak flows. Therefore, stormwater detention would be required for Area A.

The stormwater management quantity control for Area A would be provided by a linear vegetated filter strip with a level spreader and adjacent swale. Stormwater management design criteria for the level spreader berm and vegetated filter strip is provided in Section 4.5.12 of the MOE Stormwater Management Design Guidelines (relevant sections are provided in **Appendix B** for reference).

Area B would remain uncontrolled, however the total peak flow leaving the site has been controlled within Area A. Further details for the storage area including ponding elevations will be provided at the Site Plan Control stage.

Storage requirements were calculated using the Modified Rational Method, to control 100-year post-development flows to the 2-year pre-development rate. Calculated storage volumes are outlined below.

| Outlet Location | Storage Required | Storage Provided |
|-----------------|-------------------|-------------------|
| Area A | 142m ³ | 148m ³ |

There is sufficient area within the lot to provide adequate storage for stormwater quantity control. The proposed development will meet the MOE Design Guidelines for vegetated filter strips including minimum filter strip width, maximum drainage area size and maximum slope across the filter strip. Controlled flows would be directed to the Anderson Road roadside ditch as in pre-development conditions. This is a legal outlet, as it located in the Municipally owned right-of-way. With the proposed on-site detention, the post-development flows to the roadside ditch would be reduced from the pre-development condition, providing a sufficient outlet.

Refer to the **Conceptual Grading Plan & Erosion and Sediment Control Plan (124156-GR)** for details.

Detailed stormwater management calculations are provided in **Appendix B**.

3.3 Stormwater Quality Control

Quality control will be provided by a vegetated filter strip and level spreader berm along the Anderson Road property line. Stormwater will sheet drain away from the buildings across the gravel yard towards the level spreader berm and water detention area. Stormwater will both infiltrate into the soil as well as filter through a sand layer and subdrain at the bottom of the level spreader. In larger storm events, when the ponding water exceeds the height of the level spreader, stormwater is conveyed over the berm as sheet flow to maximize the contact area with the vegetated filter strip.

The South Nation Conservation has indicated that an Enhanced level of water quality control (corresponding to a long-term average TSS removal rate of 80%) is required for this site. This would be achieved by designing the swales as water quality swales, as described in the criteria outlined in Section 4.5.9 of the MOE Design Guidelines, March 2003.

In addition, Best Management Practices would be implemented including:

- Overall site drainage patterns would remain the same.
- Directing surface drainage via grassed swales with flat-bottom.
- Swales at minimal slopes.
- The existing landscape area would be maintained where possible to minimize erosion and sediment transport.

3.4 Erosion and Sediment Control

Erosion and sediment control measures would be implemented prior to, during and after construction of the stormwater detention areas in accordance with the “Guidelines on Erosion and Sediment Control for Urban Construction Sites” (Government of Ontario, May 1987) and the “Erosion and Sediment Control Guide for Urban Construction” (Toronto and Region Conservation Authority, 2019) as applicable.

Temporary Measures

- Confining work within silt fence areas;
- Installing straw bales in existing ditches;
- Storing and completing maintenance of all machinery away from the ditches.

The proposed temporary erosion and sediment control measures would be implemented prior to construction and remain in place throughout each phase of construction and would be inspected regularly. Future detailed design drawings would indicate that no control measure shall be permanently removed without prior authorization from the Engineer.

Permanent Measures

- Seeding disturbed areas and establishing grass growth;
- Level spreader and vegetated filter strip;
- Additional landscaped areas adjacent to Anderson Road.

4.0 CONCLUSIONS

It is proposed to bring the existing home-based business on the property into compliance with the requirements of the City of Ottawa's Zoning By-law for home-based businesses. It is understood that should the Zoning By-law be approved for a site-specific home-based business exception; a Site Plan Control application would be required.

The stormwater management design would be further refined at the Site Plan Control stage and follow these recommendations.

Site Servicing

- The site will continue to be serviced by private well and septic.
- A new drilled well will be required at the Site Plan Control stage.

Quantity Control

- Quantity control measures would be implemented to reduce post-development peak flows to 2-year pre-development flow rate
- Quantity control storage would be provided in Level spreader and vegetated filter strip

Quality Control

- Quality control measures would be designed to provide an Enhanced level of water quality protection, corresponding to a long-term average TSS removal rate of 80%.
- Quality control would be provided using flat-bottomed ditches and Infiltration Best Management Practices to further enhance water quality.

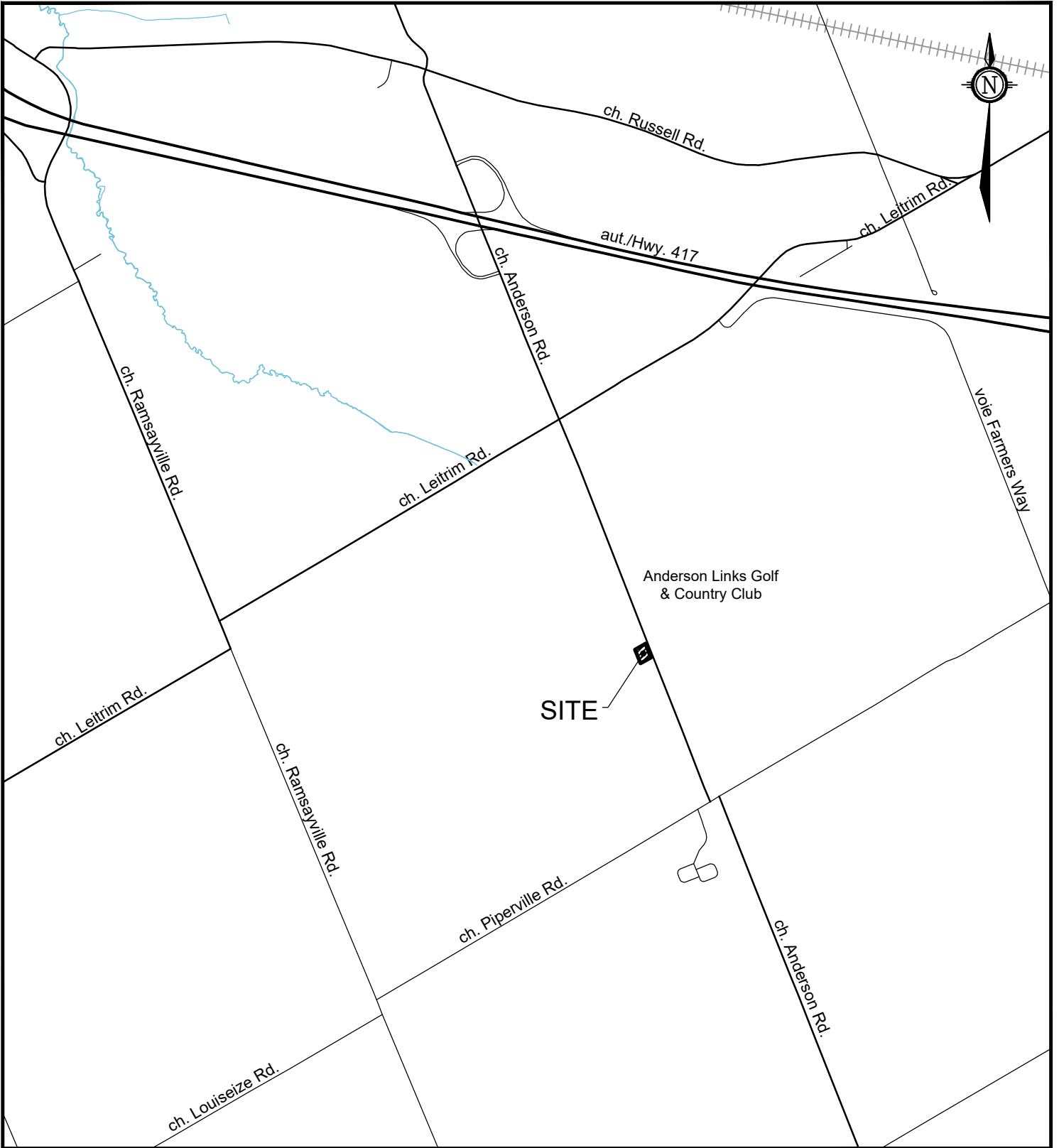
Erosion and Sediment Control

- Erosion and sediment control would be implemented prior to, during and after construction.

NOVATECH

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KEY PLAN

PART LOT 16, CONC. 7
 CITY OF OTTAWA

4296 ANDERSON ROAD

DATE APR 2026

JOB 124156

FIGURE 1

M:\2024\124156\CAD\Civil\Figures\124156-FIG1 KP.dwg, KP, Apr 22, 2026 - 11:50am, lcoory



M:\2024\124156\CAD\CIVIL\FIGURES\124156-FIG2.EC.DWG 4/28/2026 10:06 AM - LCORRY

SOURCE REFERENCE:
AERIAL IMAGERY:
GEOOTTAWA / BASEMAP GALLERY / 2008
LEGAL BOUNDARY:
PLAN OF SURVEY OF PART LOT 16 - CONCESSION 7 (OTTAWA FRONT) - GEOGRAPHIC TOWNSHIP OF GLOUCESTER - CITY OF OTTAWA / ANNIS, O'SULLIVAN, VOLLEBEKK LTD. / DEC. 16, 2024 / MTM ZONE 9 NAD-83 (CSRS)(2010)

ANDERSON ROAD

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4296 ANDERSON ROAD

PRE-DEVELOPMENT
CONDITIONS (2008)

SCALE 1 : 300

DATE APR 2026 JOB 124156 FIGURE 2

Appendix A

Correspondence

October 23, 2024

Kayla Blakely
Novatech
Via email: k.blakely@novatech-eng.com

**Subject: Pre-Consultation: Meeting Feedback
Proposed Zoning By-law Amendment and Site Plan Control
Application – 4296 Anderson Road**

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on October 18, 2024.

Pre-Consultation Preliminary Assessment

| | | | | |
|----------------------------|----------------------------|---------------------------------------|----------------------------|----------------------------|
| 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input checked="" type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
|----------------------------|----------------------------|---------------------------------------|----------------------------|----------------------------|

One (1) indicates that considerable major revisions are required while five (5) suggests that the proposal appears to meet the City's key land use policies and guidelines. This assessment is purely advisory and does not consider technical aspects of the proposal or in any way guarantee application approval.

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. Pre-consultations are no longer mandatory, if another Pre-consultation is desired, please proceed to complete a Pre-consultation Application Form and submit together with the necessary revised studies and/or plans to planningcirculations@ottawa.ca.
2. Please note, responses to any additional comments provided below may be included within a subsequent pre-consultation submission or addressed as part of a formal application submission.
3. In the subsequent pre-consultation or formal application submission, please ensure that all comments detailed herein are addressed. A detailed cover letter stating how each comment has been addressed must be included with the submission materials. Please coordinate the Page 2 of 20 numbering of your responses within the cover letter with the number(s) herein. If all review comments are not sufficiently addressed as a part of the formal application submission, the application may be deemed incomplete and will not be circulated or reviewed until Staff deem the application complete.

General Questions

1. Please confirm if salt is stored on the property as part of the snow removal operation.

Planning

Comments:

1. Official Plan

- a. The subject property is designated as Rural Countryside as per Schedule B9-Rural Transect of the Official Plan.
 - i. The intent of the Rural Countryside designation is to accommodate a variety of land uses that are appropriate for a rural location, limiting the amount of residential development and supporting industries that serve the travelling public, while ensuring that the character of the rural area is persevered.
- b. As per Section 2(b) of the Official Plan, small light industrial and commercial uses **may** be permitted in the Rural Countryside designation if **all** criteria outlined in *Section 9.2.2.2(2)(b) are met*.

2. Zoning By-law

- a. The property is currently zoned RU – Rural Countryside.
- b. The proposed zoning is RG – Rural General Industrial Zone.
 - i. The purpose of the RG Zone is to accommodate a range of light industrial uses and limited service commercial uses for the travelling public and regulate development in a manner that respects adjacent land uses and will have a minimal impact on the surrounding rural area.
 - ii. Please refer to [Sections 219-220 of the Zoning By-law](#) to view all permitted and conditional permitted uses in the RG Zone.

3. Zoning By-law Provisions

- a. Please review Table 207 below for RG Zone Provisions:

TABLE 219 - RG ZONE PROVISIONS

| I ZONING MECHANISMS | | II PROVISIONS |
|--|----------------------------------|--|
| (a) Minimum lot width (m) | | 30 |
| (b) Minimum lot area (m ²) | | 4,000 |
| (c) Minimum front yard setback (m) | | 15 |
| (d) Minimum rear yard setback (m) | | 15 |
| (e) Minimum interior side yard setback (m) | (i) Abutting a RG, RH or RC zone | 3 |
| | (ii) Other cases | 8 |
| (f) Minimum corner side yard setback (m) | | 12 |
| (g) Maximum principal building height (m) | | 15 |
| (h) Maximum lot coverage (%) | | 50 |
| (i) Outdoor storage | | <p>(a) outside storage is not permitted within any required front yard or corner side yard</p> <p>(b) outside storage must be screened from abutting residential uses or zones and public streets by an opaque screen at least 1.8 m in height from finished grade</p> |

- b. The provided Site Plan, along with existing buildings on the subject property does not comply with the proposed zone provisions:
- i. Outdoor storage is not to be located within the 15 metre front yard setback.
 - ii. The required rear yard setback of 15 metres is not respected.
 - iii. The interior side yard setback abutting an RU zone of 8 metres is not respected. In addition, the two rear building located in both rear corners of the property are crossing over the property lines.
- c. Please ensure outdoor storage is screened from Anderson Road, at least 1.8 metres in height as per the zoning provisions listed above.
- d. What is the intention of the existing office use located in the dwelling? For example, is the office use for administrative purpose and/or as a dispatch office?
- i. The office will be considered accessory to the existing business currently operating on the subject property, including the use of a dispatch office. As such, a dispatch office is a permitted accessory use in an RG zone.

4. Parking Requirements

- a. Please refer to Section 101 – Table 101A to view minimum parking requirements:
 - i. Storage Yard
 - 1 parking space per 100 m² of gross floor area.
 - ii. Equipment and Rental Servicing
 - 0.75 parking space per 100 m² of gross floor area.
 - iii. Retail Sales
 - 3.4 parking spaces per 100 m² of gross floor area.
 - iv. (Accessory) Office
 - 2.3 parking spaces per 100 m² of gross floor area.
 - v. Detached Dwelling
 - 1 parking space per dwelling unit.
- b. Parking calculations are to be included in the Zoning Chart on the Site Plan. The building breakdown must be included to ensure there is sufficient parking for each use.
 - i. Additional details are required on the Site Plan, such as materials used on surfaces and dimension for site elements such as parking stalls.

5. Planning Discussion

- a. Aerial photography has identified development spreading over the property lines west of the subject property. It is to be noted, the City will not approve development that is occurring on another property. Is there an agreement which permits development on 4296 Anderson Road to occur behind the subject property on the adjacent property?
 - i. The City will not approve development that is occurring on another property that is not under the ownership of this application.
 - ii. If there is no agreement that allows the two building in each rear property corner to cross-over property lines, it will be the responsibility of the applicant/owner to solve this issue. For example, remove or relocate the buildings.

- iii. In addition, the two buildings located in the each of the rear property corners are not zoning compliant. The City will not approve buildings that are not zoning compliant. It will be the responsibility of the applicant/owner of the property to ensure all existing buildings on the property are zoning compliant. Please consider the following as potential solutions to resolve the two corner buildings zoning issues: minor variance to reduce the rear and side yard setbacks, lot line addition, or remove or relocate that buildings so that they comply with the rear and side yard setbacks.
 - Please note that Consent applications (minor variance and lot line adjustment) are handled by the [Committee of Adjustment](#) (CoA). If you would like more information on the Committee of Adjustment, including application forms please visit [Apply for a Minor Variance | City of Ottawa](#). Committee of Adjustment City Planners are available to provide preliminary comments on the potential application(s) prior to submitting an application. City Planners (panel3_planners@ottawa.ca) can identify potential planning concerns, but it is the applicant's responsibility to determine if a variance is required. If contacting the Panel 3 Planners, please provide further details, including a sketch regarding your inquiry/proposed development.
- b. The site contains existing buildings that do not possess a building permit from the City of Ottawa. Upon the formal Site Plan Control application, all buildings located on the property that do not possess a building permit will have to go through the Site Plan Control process, following Site Plan approval, said buildings will have to apply for building permits through Building Code Services – buildingpermits@ottawa.ca.
 - i. Please note, when applying for building permits, the review will consider the buildings 'new' even though they are already built.
- c. Please ensure that the required parking allocated for this project considers the minimum parking rates for all permitted uses currently on site.
- d. Planning staff will be looking at the Planning Rational to demonstrate all permitted and all conditional uses in the RG zone are appropriate for the subject property. If any of the permitted and/or the conditional uses are not determined appropriate to the subject property, the applicant may propose a site-specific amendment.
- e. A Zoning By-law Amendment and Site Plan Control application can be submitted concurrently. The concurrent application will be subject to the 120-day Planning Act timeline.

- f. The subject property is adjacent to the Tewin Expansion Area (Future Neighbourhood – New Tewin Community). Please consider any relevant Official Plan policies specific to Future Neighbour Overlay(s) – Schedule C17.
6. Submission Requirements
- a. The required submission material listed below must meet the [City's Terms of Reference](#).
 - b. The following submission material has been identified as a requirement for a Zoning By-law Amendment (ZBA) and/or Site Plan Control (SPC) application.
 - i. Landscape Plan – to identify any existing landscaping elements and natural features that will be preserved and illustrate the proposed landscaping element to support the development (ZBA & SPC).
 - ii. Plan of Survey – to depict legal boundaries (ZBA & SPC).
 - iii. Planning Rational – this document is to organize and validate the planning justification in support of the Zoning By-law Amendment. In addition, this document should demonstrate that all permitted and any conditional permitted uses within the proposed zone are appropriate for the subject property and if not, may propose a site-specific amendment (ZBA).
 - If the Zoning By-law Amendment and Site Plan Control application are submitted concurrently, the Planning Rational can include how the proposed development meets all criteria listed in Section 9.2.2.2(2)(b) of Official Plan.
 - iv. Site Plan – a visual drawing that will illustrate the proposed development of the site and will include a significant amount of information and detail. The Site Plan is based off of the Plan of Survey (ZBA & SPC).
 - v. Zoning Confirmation Report – to identify compliance issues at the beginning of the planning application. If circumstances of the Site Plan do not comply with the proposed zone, a minor variance application to the Committee of Adjustment, may be required (ZBA & SPC).
 - c. Public Consultation Strategy Report (PCSR) – a Zoning By-law Amendment typically requires a PCSR. However, this proposed amendment does not meet the assessment criteria listed in the *Public Consultation Strategy Report Terms of Reference*. Therefore, it has been



determined that a PCSR is not required as part of the formal submission material (ZBA).

Feel free to contact Jaime Mallory, File Lead, for follow-up questions.

Urban Design

Preliminary Comments

7. Please ensure that outdoor storage is screened from the Right-of-Way (ROW).
8. Please ensure that there is a substantial landscape buffer along the ROW including space for tree planting.
9. The above should be incorporated into the proposed zoning provisions for the site and addressed in the Planning Rational.

Required Plans for Future Site Plan

10. Site Plan.
11. Landscape Plan.

Feel free to contact Lisa Stern, Urban Design, for follow-up questions.

Engineering

Comments:

12. General
 - a. For a complete description of the Terms of Reference and application submission requirements, please reference the City's web site: [Planning application submission information and materials | City of Ottawa](#).
 - b. All drawings and reports submitted for engineering review must be stamped and dated by a Professional Civil Engineer, Civil Engineering Technologist registered in the Province of Ontario, or Ontario Land Surveyor.
13. Environmental Site Assessment (Phase 1 & 2 ESA)
 - a. A Phase One Environmental Site Assessment (ESA) is required for the Site Plan Control of the site.
 - b. ESAs are required to ensure that development only takes place on sites where the environmental conditions are suitable for the proposed use in accordance with provincial legislation and regulations.

- c. The Phase 1 ESA report will determine whether a Phase 2 ESA is required.

14. Geotechnical Study

- a. A Geotechnical report is required to support the design and construction of this project.
- b. The Geotechnical report should provide sufficient soils and engineering information to confirm that the site(s) are suitable or can be made suitable for development. The geotechnical report shall adequately discuss the fill requirements, grade raise restrictions, and other limitations and earthworks required for development within a floodplain or adjacent to a watercourse, and wetland.
- c. The Geotechnical report might typically include: borehole logs, Atterberg limits, consolidation testing, shear strength testing, grade raise restrictions, or a sieve analysis as required.
- d. The report should clearly state whether sensitive marine clays or organic soils are present on this site, or not.
- e. The report should clearly state whether soil liquefaction is a risk on this site, or not.
- f. The report should clearly state thin soils or karst topography are present on this site, or not.
- g. If the proposal intends to include infiltration or soak-away areas as part of the stormwater management design, be advised that:
 - i. The soil must be tested and proved to have an infiltration rate in excess of 15mm/hr. ref: Low Impact Development Technical Guidance Report (Feb 2021), Section 3.5.1 page 23).
 - ii. Depth to groundwater should be measured over a considerable amount of time that includes the Spring freshet. Low Impact Development Technical Guidance Report (Feb 2021), Section 3.5.3, page 26).(Also Ref: Ottawa Sewer Design Guidelines (2012), update: ISTB 2018-04 Section 8.2).
 - iii. The seasonal groundwater level must be at least 1.0 metre below the bottom of the trench or infiltration structure. (ref: MOECP SWM Planning and Design Manual (March 2003) page 164 of 379). (Also Ref: Low Impact Development Technical Guidance Report (Feb 2021) Section 3.5.3 pages 25 of 68).

15. Grading and Drainage Plan

- a. A Grading and Drainage Plan is required to support the design and construction of this project.
- b. A Grading and Drainage Plan establishes the grading relationships between connecting (or abutting) properties. It serves as the basis for controlling surface runoff. A grading plan directs water from the building. The focus is on the landscaping around the building and soil elevation. The goal is to provide proper yard grading for drainage away from buildings.
- c. Grading Plans provided to the City of Ottawa should include:
 - i. All elevations must be referenced to a geodetic reference point.
 - ii. Please indicate the Site Benchmark and the external reference that provides the horizontal and vertical datum of the reference used to set this benchmark.
 - iii. All measurements must be in metric units, imperial measure may be provided as a secondary measurement.
 - iv. Provide top of curb (TC) and bottom of curb (BC) elevations.
 - v. Please maintain a minimum 150 mm difference between the proposed finished floor elevation and the finished grade at the structure. Maintain positive surface drainage away from the foundation wall.
 - vi. A 0.3 m freeboard should be provided between the 100-year water elevation and the finished floor elevation.
 - vii. Please include the Pavement Design provided in the Geotechnical Report. Typically, this should include a low-density and a heavy - duty pavement design.
- d. It appears that infilling for parking spaces along Anderson Road may have partially filled in the roadside ditch. The ditches must be dug out and returned to their required profile.

16. Site Servicing Study [*Item #7 on the SPIL*]

- a. A Site Servicing Study is required to support the design and construction of this project.

- b. Applications for new development are required to demonstrate, to the City's satisfaction, that adequate services are available and can be allocated to support the proposal.
- c. An Erosion and Sediment Control Plan is required in support of the design and construction of this project.
- d. If required, please include servicing insulation details as per drawing 'W22 - 'Thermal Insulation for Watermains in Shallow Trenches', S35 – 'Insulations for Shallow Sewers', and/or OPSD 1109.030 – 'Insulation for Sewers and Watermains in Shallow Trenches'.
- e. Septic System Review and Approval
 - i. The City will require septic approval from the Ottawa Septic System Office (OSSO) before we can issue Site Plan Approval.
 - ii. If the sanitary sewage daily design flow is less than 10,000 L/day, the septic permit from the OSSO must be issued prior to future Site Plan Approval being granted.
 - iii. If the sanitary sewage daily design flow is greater than 10,000 L/day, the septic system(s) is regulated by the Ministry of the Environment, Conservation and Parks (MECP) and requires a direct submission Environmental Compliance Approval (ECA) application.
 - iv. Be advised that a Groundwater Impact Assessment will be required if the site-wide daily design flow is greater than 10,000 L/day.
 - v. Please ensure that the OSSO is aware if an oil/grit separator or car wash runoff is contributing flows to the septic system.
 - vi. As per the OSSO, the septic system must be at least 3.0 metres from the property lines.
 - vii. Technical consultation with the City's hydrogeologist is encouraged, please contact the City hydrogeologist, Travis Smith, and copy the assigned Infrastructure Project Manager to schedule a technical consultation.
- f. Stormwater Management Report
 - i. A Stormwater Management report is required in support of the design and construction of this project.
 - ii. Stormwater design must adhere to the City's 'Ottawa Design Guidelines -Sewer', Second Edition, document no. SDG002,

October 2012, City of Ottawa, including technical bulletins: ISDTB-2014-01, PIEDTB-2016-01, ISTB 2018-01, ISTB-2018-04, ISTB-2019-02.

- iii. The quantity criteria for the development are that the 100-yr post development peak flow rate must match the 2-year pre-development peak flow rate.
- iv. The stormwater management quality criteria for this site are 80% total suspended solids (TSS) removal.
- v. A calculated time of concentration (cannot be less than 10 minutes) is required. (Ref: Section 5.4.3.6 of the City of Ottawa Sewer Design Guidelines (October 2012)).
- vi. Runoff volumes must be calculated using the 'C' values found in Ottawa Design Guidelines (Sewer), Section 5.4.5.2.1 page 5.26. There are no standard or maximum 'C' values in the Rural area.
- vii. Stormwater must outlet to a legal and sufficient outlet.
- viii. A 0.3m freeboard should be provided between the 100-year high-water elevation and the finished floor elevation.
- ix. Stormwater or Drainage plans must include the ponding depth, volume, and ponding extent for 2-year and 100-year storm events.
- x. Please provide pre- & post- development drainage plans clearly identifying the sub-drainage zones, their areas, and 'C' values.
- xi. In regard to proposed LID development, please reference to the City's 'Low Impact Development Technical Guidance Report', in particular 'Section 2.0 Hydrological Constraints', Section 3.3 Geotechnical Investigations, and 'Section 3.5 Current Approaches and Guidance'.

g. Fire Services

- i. The consultant should provide fire flow calculations using both the FUS (Fire Underwriters Survey), and the Ontario Building Code methodologies. The Engineer, Fire Protection (Ottawa Fire Services), will review the proposal and determine the criteria that will govern. Contact Allan Evans in Fire Services (allan.evans@ottawa.ca).
- ii. Fire truck routes should be shown on civil plans. Fire Routes now require designation with By-law through following Site Plan Control Approval by contacting fireroutes@ottawa.ca.

- iii. Underground storage tanks for Fire Fighting purposes may be required if the building(s) is above 600 sq.m. in size.
- iv. Fire Services requires an access point or draft hydrant be located some distance from the building itself. Trucks must be able to physically draft water from a safe distance. For more information contact Allan Evans in Fire Services Allan.evans@ottawa.ca.
- v. The consultant should give careful consideration to the placement of any on-site storage tanks, ensuring that sufficient area and clearances are provided. The designer must also consider the location of the access to the on-site water supply and ensure it can be accessed safely during a fire event.
- vi. The Site Servicing Study must include a section addressing the provision of a water supply for fire suppression, determination of the required fire flow, and confirmation of size and location of any on-site storage required. It is the responsibility of the owner to ensure that an adequate water supply for firefighting is provided. The method for determining required fire flows is under review, currently the FUS (Fire Underwriters Survey), the NFPA 1142, and the Ontario Building Code methodologies for determining required fire flow and storage shall be provided in the reporting. The Engineer, Fire Protection (Ottawa Fire Services), shall review the proposal and determine the criteria that will govern. Highly developed sites will require thought as to the placement of the on-site storage ensuring that sufficient area and clearances are provided. The designer must also consider the location of the access to the on-site water supply and ensure it can be accessed safely during a fire event.

17. Site Lighting Certificate

- a. The City will require an Exterior Lighting Certificate certified by a qualified engineer before issuing Site Plan Approval.
- b. Any exterior lighting proposed for the site is required by the City of Ottawa to be certified by a qualified engineer confirming the design complies with the following criteria:
 - i. It must be designed using only fixtures that meet the criteria for Full-Cut-Off (Sharp cut-off) Classification, as recognized by the Illuminating Engineering Society of North America (IESNA or IES).
 - ii. It must result in minimal light spillage onto adjacent properties. As a guide, 0.5 foot-candle is normally the maximum allowable spillage.

- iii. The location of the fixtures, fixture types (make, model, and part number) and the mounting heights must be provided.

18. Ministry of the Environment, Conservation and Parks (MECP) Review

- a. An MECP Environmental Compliance Approval (ECA) may be required for the proposed development. Please contact the Ministry of the Environment, Conservation and Parks, Ottawa District Office for more information.
- b. It is the applicant's responsibility to determine which of the several types of ECA approvals may be required for this application. If a Direct Submission is by the nature of the application required by the MECP, the applicant can request a Transfer of Review in its place by contacting Charles Warnock. charles.warnock@ottawa.ca.
- c. For any water taking of volumes greater than 50,000 L/day, either an Environmental Activity and Sector Registration (EASR) or a Permit To Take Water (PTTW) is required from the MECP, dependent on dewatering requirements.
- d. MECP/ECA Contact info:
 - Patrick Lalonde at (613) 363-1652 patrick.Lalonde@ontario.ca (Site Plans).
 - Shannon Hamilton-Browne at (613) 880-4255 or shannon.hamiltonbrowne@ontario.ca (subdivisions)
 - Charles Warnock at 613-580-2424 x27809 or Charles.warnock@ottawa.ca .

Feel free to contact Brian Morgan, Project Manager, for follow-up questions.

Hydrogeology

Comments:

19. A **Hydrogeological and Terrain Analysis** will be required for the Zoning By-law Amendment and Site Plan Control application(s) to establish that there is an adequate quantity and quality of groundwater to support the proposed development(s) and that there is sufficient septic dilution to accommodate the proposed sewage flows. The scope of the study will be further clarified once the water demands, and sewage flows are determined. Applicant will need to work with Development Review and Building Code Services staff to determine the servicing demands for the present and any proposed uses. A detailed study will be required for the Zoning By-law Amendment. The requirements for the Hydrogeological and Terrain Analysis Report are outlined in the City of Ottawa's

Hydrogeological and Terrain Analysis Guidelines (HTAG), section 5.0 for Site Plans (pages 81 to 83). The study forms part of the requirements for Zoning By-law Amendments and Site Plan Control applications noted in the Studies and Plan Identification List, provided with the feedback documents.

- a. **Quantity/Yield:** A pumping test is required to confirm that the well(s) on-site can supply the required quantity and quality of water at the Zoning Amendment stage. The reporting must demonstrate that the property can provide a water supply suitable for the industrial/proposed zoning and provide the maximum allowable sewage flow that the lot can safely attenuate.
 - i. For commercial/industrial operations, an 8-hour pump test, or longer, is normally recommended, however a minimum of 6-hours is required in the HGTA Guidelines. As part of the proposed Zoning By-law Amendment, a nearby technically representative well can be used. If a nearby, technically representative test well demonstrates poor quality or quantity, a well(s) may need to be drilled on the site.
 - ii. An on-site supply well(s) must be established in the Site Plan Control stage to confirm that the water quality and quantity are suitable for the proposed use prior to Site Plan approval.
 - iii. If an existing well is proposed to be used as the on-site water supply, then a well inspection is required to confirm it meets the Wells Regulations (O.Reg.903) or bring it into conformance with regulations; specifically, confirming that the well casing and grouting are sound, grading is directed away from around the wellhead, and that the casing height is at least 40 cm above ground and meets the rest of the regulations. The existing well forms part of the Planning Act approval and must be brought to standards or consideration provided to drilling of a new well and abandoning the non-conforming well. The Ontario Building Code and the Wells Regulation [R.R.O. 1990, Regulation 903 (Wells) as amended made under the Ontario Water Resources Act, R.S.O. 1990, c. O. 40] set the minimum requirements for well construction and separation distances.
 - iv. The anticipated water demands (average day, maximum daily, and maximum hour) must be presented and justified for the pump test rate. The pumping rate should be the maximum daily demand rate. The pumping rate should consider the actual use, as well as any uses permitted under the proposed zoning. The Ottawa Design Guidelines – Water Distribution provides information for determining water demand rates for the proposed zoning, or uses, in Table 4.2 – Consumption Rates. Should an alternate method be proposed for determining the pump rate, the rate must be converted to a maximum daily demand value, such as the 120-

minute peak demand, as demonstrated in Ministry of Environment, Conservation and Parks (MECP) D-5-5.

- b. **Quality:** The parameters of water quality that will be tested will be the “subdivision suite” known to local well testing companies, as well as trace metals, and volatile organic compounds (VOC). Requirements are outlined in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines. The report should also provide an assessment of adjacent land uses and concerns and determine if any other parameters need to be tested (e.g., petroleum hydrocarbons, etc.).
 - i. The site is within the East Ottawa Aquifer Screening Tool and identifies that water quality is poor with both shallow and deep wells susceptible to water quality exceedances. Wells in this area are often mineralized which must typically be abandoned when observed, but Director written consent not to abandon a well producing mineralized water can be applied for by the applicant. The application would required a Hydrogeological Assessment for the MECP to review the application, and the process could take more than 8 months to complete based on previous review timelines for this application type.
 - ii. Aesthetic and operational water quality exceedances must be identified, treatment systems are to be specified, where they are recommended, and shown on the plans. The development may not be approved if health-related parameters are exceeded in the untreated groundwater.
 - iii. If well water is mineralized, then approval from the MECP will be needed to continue to use the well, as specified in Ontario Regulation 903 (Section 21). The consultant should also consider, and report, the other issues associated with the mineralized water including corrosivity of the water and shortened lifespan of plumbing fixtures and the septic system. Specialized plumbing, and fixtures, may provide some mitigation of issues.
- c. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the existing or proposed well(s).
- d. A **Septic System Impact Assessment** must be completed as part of the Hydrogeological and Terrain Analysis Report, as per the City’s Hydrogeological and Terrain Analysis Report Guidelines and MECP Guideline D-5-4, please refer to the HTAG for the predictive assessment for commercial/industrial developments, pages 30 to 31 (not applicable for residential developments). The sewage system design must be submitted with the Site Plan Control application.

- i. In the Zoning Amendment stage, the septic impact assessment using the assessment above will identify a maximum allowable sewage flow. The actual sewage flows on-site must be shown to be less than the maximum allowable for the zoning to be supported.
 - ii. In the Site Plan stage and not applicable to the Zoning stage, septic treatment (i.e. tertiary treatment with nitrate reduction) may be considered as part of the septic impact assessment calculations (Site Plan Control only, cannot be considered in the Zoning Amendment stage). A septic system certified though NSF or BNQ should be recommended if advanced treatment is needed to meet nitrate impact targets.
 - iii. If the sewage system/s daily design flow is 10,000 L/d or less, the septic permit from the Ottawa Septic System Office must be sent to the City prior to Site Plan Approval being granted.
 - iv. If the sewage system's design flow exceeds 10,000 L/d (per lot), a Reasonable Use Assessment must accompany the application to the City. Sewage systems with design flows exceeding 10,000 L/d require the issuance of an Environmental Compliance Approval (ECA) from the MECP prior to Site Plan Approval being granted (and the duration of approval is anticipated to be lengthy [many months]).
 - v. Note that gravel shall be considered impermeable in the septic impact assessment unless field testing results confirm alternative infiltration rates.
 - vi. If system isolation is contemplated, the technical pre-consultation with the reviewer is mandatory to ensure the assessment meets the minimum requirements identified in City Guidelines, and to convey the minimum on-site testing requirements.
 - vii. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the proposed septic system(s).
- e. Fuel storage or other potential sources of contamination should be located based on the setbacks provided in the Wells Regulation (O.Reg. 903) and Ontario Building Code, from the current or future wells. The list of water quality parameters to be tested should be expanded based on any known potential activities of concern on the property.
 - f. Technical consultation with the hydrogeological report reviewer is recommended for all Site Plan Control applications. Please contact the reviewer assigned to the file to arrange for the consultation. The hydrogeological consultant should conduct a background review and

provide a work plan for review prior to the meeting. Please see list below of factors where technical consultation is considered mandatory that may apply to this site:

- i. Where system isolation argument is being put forward,
- ii. Where dug wells are proposed as a water supply, or
- iii. Where septic design flows exceed 10,000 L/d.

Feel free to contact Travis Smith, Sr PM, Hydrogeology, for follow-up questions.

Transportation

Comments:

20. The site's private approach is located on a high-speed road. Ensure that the sightlines exiting the site are not obstructed in any way.

21. Right-of-Way Protection

- a. See [Schedule C16 of the Official Plan](#).
- b. Any requests for exceptions to ROW protection requirements must be discussed with Transportation Planning and concurrence provided by Transportation Planning management.

22. A Transportation Impact Assessment (TIA) is not required.

Feel free to contact Mike Giampa, Transportation Project Manager, for follow-up questions.

Environment

Comments:

23. An Environmental Impact Statement (EIS) will be required as part of this application. The triggering features are the presence of unevaluated wetlands on the adjacent property surrounding the subject parcel.

- a. The EIS must investigate the potential presence of wetlands on the adjacent property. If present, the setbacks these wetlands are provided may affect development on the subject site. If necessary, the EIS may argue for a reduced setback based on the ecological function of these wetland features and provide necessary mitigation measures to ensure that no negative impact occurs as a result of the proposed development.

- b. The potential impacts of salt, fuel, or other pollutants used in business operations must be addressed as part of the EIS within the context of wetland impacts.
- 24. Species-at-risk must also be addressed in the Environmental Impact Statement. Black Ash are most likely to be on-site, but the potential presence of butternut should also be investigated. Bobolink and wood thrush are noted on the NHIC database as being present nearby and the wetlands/woodlands may also host bat maternity habitat or potentially Blanding's turtles as well.
- 25. Additional tree plantings are always encouraged to help meet the City's forest canopy goals as well as to reduce the impacts of climate change and the urban heat island effect. Please note that the City prefers all plantings to be of native and non-invasive species.

Feel free to contact Mark Elliott, Environmental Planner, for follow-up questions.

Forestry

Comments:

- 26. There are no City owned trees in the Right-of-Way bordering this property.
- 27. No comments/concerns.

Feel free to contact Hayley Murray, Planning Forester, for follow-up questions.

Parkland

Comments:

- 28. The amount of parkland dedication required is to be calculated as per the City of Ottawa [Parkland Dedication By-law No. 2022-280](#). This application will be calculated as 2% of the gross land area of the site being developed for commercial or industrial purposes, including buildings, roads, parking lot and other associated land.
- 29. Please provide the City with a surveyor's area certificate/memo which specifies the exact gross land area of the site being developed/redeveloped, but not including any hazard lands or natural heritage features identified in the official plan, an approved Secondary Plan, or through an environmental impact study accepted by the City.
- 30. Section 11 (1) of the Parkland Dedication By-law states that "The conveyance of parkland or the payment of cash-in-lieu of parkland is not required for development or redevelopment where it is known, or can be demonstrated, that the required parkland conveyance or cash-in-lieu of parkland, or combination

thereof, has been previously satisfied in accordance with the Planning Act, unless:

- a. there is a change in the proposed development or redevelopment that would increase the density providing a net dwelling unit gain;
- b. the proposed development or redevelopment increases the gross floor area of a non-residential use; or
- c. land originally proposed for development or redevelopment for commercial or industrial purposes is now proposed for development or redevelopment for other purposes that have a higher conveyance requirement pursuant to the rates described herein.”

If parkland dedication for the parcel has been satisfied previously, please provide Parks & Facilities Planning with the supporting documentation.

31. Please note that the park comments are preliminary and will be finalized (and subject to change) upon receipt of the development application and any requested supporting documentation. Additionally, if the proposed land use changes, then the parkland dedication requirement will be re-evaluated accordingly.

32. Parks and Facilities Planning will be requesting **cash-in-lieu of conveyance of parkland** for parkland dedication in accordance with the Parkland Dedication By-law No. 2022-280.

Feel free to contact Warren Bedford, Parks Planner, for follow-up questions.

Submission Requirements and Fees

1. Regarding the formal Site Plan Control application, please refer to the application type thresholds provided below. The thresholds below can guide what application type (Rural Small or Standard Rural) this proposal will fall under when more detail is provided.
 - a. Rural Small – on private services
 - 300 – 600 square metres and
 - \leq 10 parking spaces
 - b. Standard Rural – on private services
 - 600 – 1,860 square metres or
 - \geq 10 parking spaces
 - c. As the application proposes to develop a property in a manner that deviates from the current zoning, rezoning the property from Rural Countryside to Rural General Industrial, a Major Zoning By-law



Amendment is required. Please refer [Zoning By-law Amendment | City of Ottawa](#) for more information regarding the process and fees.

- d. Additional information regarding fees related to planning applications can be found [here](#).
2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
 - a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on [Ottawa.ca](#). These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.
3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

Consultation with Technical Agencies

1. You are encouraged to consult with technical agencies early in the development process and throughout the development of your project concept. A list of technical agencies and their contact information is enclosed.

Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,
Jaime Mallory

Encl. Study and Plan Identification List (SPIL)
List of Technical Agencies
Pre-consultation Supplementary Development Information

c.c. Cheryl McWilliams
Oyin Egbeyemi
Lisa Stern
Brian Morgan
Damien Whittaker
Travis Smith
Mark Elliott
Hayley Murray
Warren Bedford
Joshua Good

Appendix B

- Stormwater Management Calculations
- Pre & Post Development Storm Drainage Area Plan (124156-SDA, revision 1)
- Design Criteria (pages from MOE SWM Planning and Design Manual)

Area A

Pre-Development Runoff Coefficient "C"

| Area | Surface | Ha | "C" | C _{avg} | *C ₁₀₀ |
|-------|---------|------|------|------------------|-------------------|
| Total | Hard | 0.03 | 0.90 | 0.25 | 0.31 |
| 0.41 | Gravel | 0.00 | 0.70 | | |
| | Soft | 0.38 | 0.20 | | |

Runoff Coefficient Equation
 $C = (A_{\text{hard}} \times 0.9 + A_{\text{gravel}} \times 0.7 + A_{\text{soft}} \times 0.2) / A_{\text{TC}}$
 $*C = (A_{\text{hard}} \times 1.0 + A_{\text{gravel}} \times 0.90 + A_{\text{soft}} \times 0.2) / A_{\text{TC}}$
 * Runoff Coefficient increases by 25% up to a maximum value of 1.00 for the 100-year event

Pre-Development (uncontrolled)

| Outlet Options | Area (ha) | Q _{2 Year} (L/s) | Q _{5 Year} (L/s) | Q _{100 Year} (L/s) |
|----------------------|-----------|---------------------------|---------------------------|-----------------------------|
| To Roadside Existing | 0.41 | 22.2 | 30.1 | 62.5 |

| | | | |
|-------------------------------------|--------------------|--------|-------|
| Time of Concentration | T _c = | 10 | min |
| Rainfall Intensity (2 Year Event) | I ₂ = | 76.81 | mm/hr |
| Rainfall Intensity (5 Year Event) | I ₅ = | 104.19 | mm/hr |
| Rainfall Intensity (10 Year Event) | I ₁₀ = | 122.14 | mm/hr |
| Rainfall Intensity (25 Year Event) | I ₂₅ = | 144.69 | mm/hr |
| Rainfall Intensity (50 Year Event) | I ₅₀ = | 161.47 | mm/hr |
| Rainfall Intensity (100 Year Event) | I ₁₀₀ = | 178.56 | mm/hr |

100 year Intensity = $1735.688 / (\text{Time in min} + 6.014)^{0.820}$
 10 year Intensity = $1174.184 / (\text{Time in min} + 6.014)^{0.816}$
 5 year Intensity = $998.071 / (\text{Time in min} + 6.053)^{0.814}$
 2 year Intensity = $732.951 / (\text{Time in min} + 6.199)^{0.810}$

For 25 year storms add 10% to C value
 For 50 year storms add 20% to C value
 For 100 year storms add 25% to C value

Area B

Pre-Development Runoff Coefficient "C"

| Area | Surface | Ha | "C" | C _{avg} | *C ₁₀₀ |
|-------|---------|------|------|------------------|-------------------|
| Total | Hard | 0.01 | 0.90 | 0.31 | 0.37 |
| 0.05 | Gravel | 0.00 | 0.70 | | |
| | Soft | 0.04 | 0.20 | | |

Runoff Coefficient Equation

$$C = (A_{\text{hard}} \times 0.9 + A_{\text{gravel}} \times 0.7 + A_{\text{soft}} \times 0.2) / A_{\text{TC}}$$

$$*C = (A_{\text{hard}} \times 1.0 + A_{\text{gravel}} \times 0.90 + A_{\text{soft}} \times 0.2)$$

* Runoff Coefficient increases by 25% up to a maximum value of 1.00 for the 100-year event

Pre-Development (uncontrolled)

| Outlet Options | Area (ha) | Q _{2 Year} (L/s) | Q _{5 Year} (L/s) | Q _{100 Year} (L/s) |
|----------------------|-----------|---------------------------|---------------------------|-----------------------------|
| To Roadside Existing | 0.05 | 3.5 | 4.7 | 9.5 |

| | | | |
|-------------------------------------|--------------------|--------|-------|
| Time of Concentration | T _c = | 10 | min |
| Rainfall Intensity (2 Year Event) | I ₂ = | 76.81 | mm/hr |
| Rainfall Intensity (5 Year Event) | I ₅ = | 104.19 | mm/hr |
| Rainfall Intensity (10 Year Event) | I ₁₀ = | 122.14 | mm/hr |
| Rainfall Intensity (25 Year Event) | I ₂₅ = | 144.69 | mm/hr |
| Rainfall Intensity (50 Year Event) | I ₅₀ = | 161.47 | mm/hr |
| Rainfall Intensity (100 Year Event) | I ₁₀₀ = | 178.56 | mm/hr |

$$100 \text{ year Intensity} = 1735.688 / (\text{Time in min} + 6.014)^{0.820}$$

$$10 \text{ year Intensity} = 1174.184 / (\text{Time in min} + 6.014)^{0.816}$$

$$5 \text{ year Intensity} = 998.071 / (\text{Time in min} + 6.053)^{0.814}$$

$$2 \text{ year Intensity} = 732.951 / (\text{Time in min} + 6.199)^{0.810}$$

For 25 year storms add 10% to C value

For 50 year storms add 20% to C value

For 100 year storms add 25% to C value

Area A

Post-Development Runoff Coefficient "C"

| Area | Surface | Ha | "C" | C _{avg} | *C ₁₀₀ |
|-------|---------|------|------|------------------|-------------------|
| Total | Hard | 0.16 | 0.90 | 0.66 | 0.79 |
| 0.41 | Gravel | 0.15 | 0.70 | | |
| | Soft | 0.10 | 0.20 | | |

Runoff Coefficient Equation
 $C = (A_{\text{hard}} \times 0.9 + A_{\text{gravel}} \times 0.7 + A_{\text{soft}} \times 0.2) / A_{\text{TC}}$
 $*C = (A_{\text{hard}} \times 1.0 + A_{\text{gravel}} \times 0.90 + A_{\text{soft}} \times 0.2) / A_{\text{TC}}$
 * Runoff Coefficient increases by 25% up to a maximum value of 1.00 for the 100-year event

Post-Development (uncontrolled)

| Outlet Options | Area (ha) | Q _{2 Year} (L/s) | Q _{5 Year} (L/s) | Q _{100 Year} (L/s) |
|----------------------|-----------|---------------------------|---------------------------|-----------------------------|
| To Roadside Existing | 0.41 | 57.8 | 78.5 | 159.7 |

| | | | |
|-------------------------------------|--------------------|--------|-------|
| Time of Concentration | T _c = | 10 | min |
| Rainfall Intensity (2 Year Event) | I ₂ = | 76.81 | mm/hr |
| Rainfall Intensity (5 Year Event) | I ₅ = | 104.19 | mm/hr |
| Rainfall Intensity (10 Year Event) | I ₁₀ = | 122.14 | mm/hr |
| Rainfall Intensity (25 Year Event) | I ₂₅ = | 144.69 | mm/hr |
| Rainfall Intensity (50 Year Event) | I ₅₀ = | 161.47 | mm/hr |
| Rainfall Intensity (100 Year Event) | I ₁₀₀ = | 178.56 | mm/hr |

100 year Intensity = $1735.688 / (\text{Time in min} + 6.014)^{0.820}$
 10 year Intensity = $1174.184 / (\text{Time in min} + 6.014)^{0.816}$
 5 year Intensity = $998.071 / (\text{Time in min} + 6.053)^{0.814}$
 2 year Intensity = $732.951 / (\text{Time in min} + 6.199)^{0.810}$

For 25 year storms add 10% to C value
 For 50 year storms add 20% to C value
 For 100 year storms add 25% to C value

Area B

Post-Development Runoff Coefficient "C"

| Area | Surface | Ha | "C" | C _{avg} | *C ₁₀₀ |
|-------|---------|------|------|------------------|-------------------|
| Total | Hard | 0.02 | 0.90 | 0.51 | 0.58 |
| 0.05 | Gravel | 0.00 | 0.70 | | |
| | Soft | 0.03 | 0.20 | | |

Runoff Coefficient Equation

$$C = (A_{\text{hard}} \times 0.9 + A_{\text{gravel}} \times 0.7 + A_{\text{soft}} \times 0.2) / A_{Tc}$$

$$*C = (A_{\text{hard}} \times 1.0 + A_{\text{gravel}} \times 0.90 + A_{\text{soft}} \times 0.2)$$

* Runoff Coefficient increases by 25% up to a maximum value of 1.00 for the 100-year event

Post-Development (uncontrolled)

| Outlet Options | Area (ha) | Q _{2 Year} (L/s) | Q _{5 Year} (L/s) | Q _{100 Year} (L/s) |
|----------------------|-----------|---------------------------|---------------------------|-----------------------------|
| To Roadside Existing | 0.05 | 5.6 | 7.6 | 14.8 |

| | | | |
|-------------------------------------|--------------------|--------|-------|
| Time of Concentration | T _c = | 10 | min |
| Rainfall Intensity (2 Year Event) | I ₂ = | 76.81 | mm/hr |
| Rainfall Intensity (5 Year Event) | I ₅ = | 104.19 | mm/hr |
| Rainfall Intensity (10 Year Event) | I ₁₀ = | 122.14 | mm/hr |
| Rainfall Intensity (25 Year Event) | I ₂₅ = | 144.69 | mm/hr |
| Rainfall Intensity (50 Year Event) | I ₅₀ = | 161.47 | mm/hr |
| Rainfall Intensity (100 Year Event) | I ₁₀₀ = | 178.56 | mm/hr |

$$100 \text{ year Intensity} = 1735.688 / (\text{Time in min} + 6.014)^{0.820}$$

$$10 \text{ year Intensity} = 1174.184 / (\text{Time in min} + 6.014)^{0.816}$$

$$5 \text{ year Intensity} = 998.071 / (\text{Time in min} + 6.053)^{0.814}$$

$$2 \text{ year Intensity} = 732.951 / (\text{Time in min} + 6.199)^{0.810}$$

For 25 year storms add 10% to C value

For 50 year storms add 20% to C value

For 100 year storms add 25% to C value

Site - Controlling POST 100-year to PRE 2-year

QUANTITY STORAGE REQUIREMENT: Allowable less POST-B, direct runoff

$$\begin{aligned} \text{Allowable} &= \text{Pre-A Q2 Year} + \text{Pre-B Q2 Year} - \text{Post-B Q100 Year} \\ &= 22.2\text{L/s} + 3.5\text{L/s} - 14.8\text{L/s} \\ &= 10.9\text{L/s} \end{aligned}$$

0.41 =Area (ha)
 0.79 = C

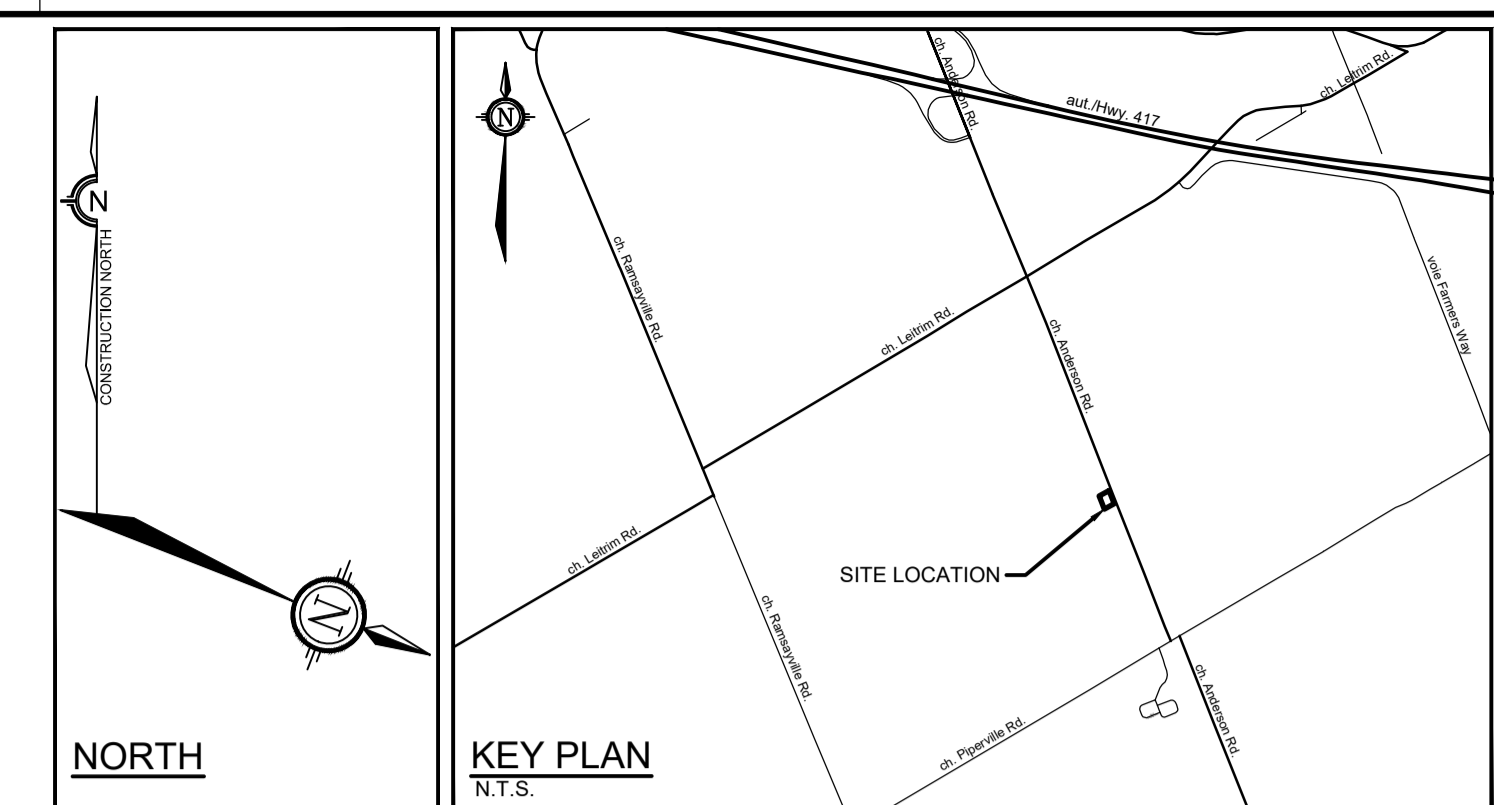
| Return Period | Time (min) | Intensity (mm/hr) | Flow Q (L/s) | Allowable Runoff (L/s) | Net Flow to be Stored (L/s) | Storage Req'd (m ³) |
|---------------|------------|-------------------|--------------|------------------------|-----------------------------|---------------------------------|
| 100 YEAR | 60 | 55.89 | 49.99 | 10.9 | 39.09 | 140.73 |
| | 65 | 52.65 | 47.09 | 10.9 | 36.19 | 141.13 |
| | 70 | 49.79 | 44.53 | 10.9 | 33.63 | 141.25 |
| | 75 | 47.26 | 42.27 | 10.9 | 31.37 | 141.14 |

∴ Storage Required = 141.25m³

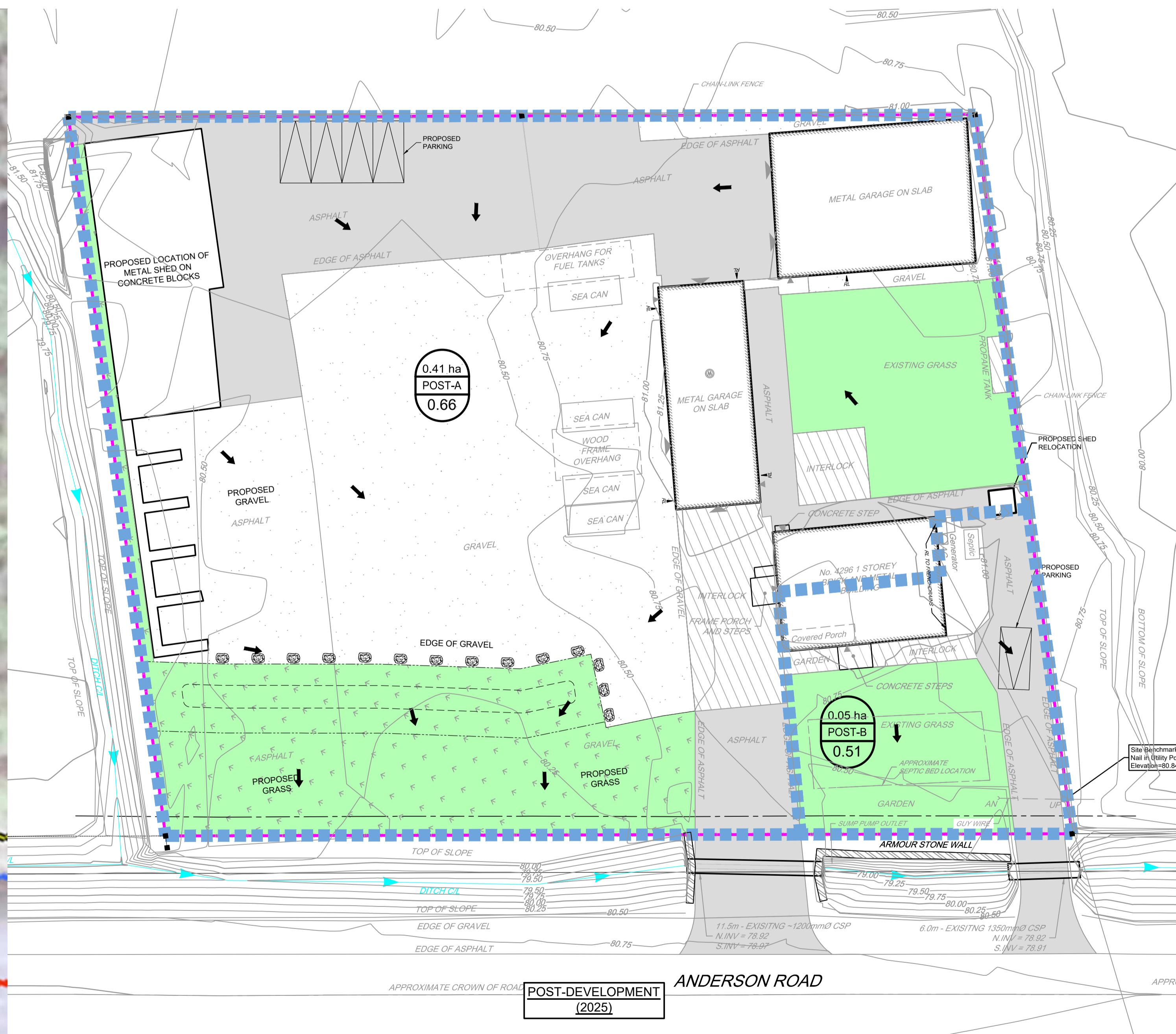
LEGEND

- PROPERTY BOUNDARY
- WATERSHED BOUNDARY
- EXISTING DITCH AND DIRECTION OF FLOW
- EXISTING TOP OF SLOPE
- EXISTING BOTTOM SLOPE
- EXISTING FENCE
- EXISTING TREELINE
- EXISTING BUILDING
- EXISTING GRAVEL AREA
- EXISTING INTERLOCK
- EXISTING ASPHALT AREA
- EXISTING UTILITY POLE WITH ANCHOR
- EXISTING LIGHT STANDARD
- DIRECTION OF OVERLAND FLOW

0.67 ha
 PRE-A
 0.28
 DRAINAGE AREA (ha)
 AREA ID
 RUNOFF COEFFICIENT



NOTE: THIS PLAN IS TO BE READ IN CONJUNCTION WITH CONCEPTUAL SITE SERVICING AND STORMWATER MANAGEMENT REPORT (R-2026-016) PREPARED BY NOVATECH



NOTE: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

SOURCE REFERENCE:
 AERIAL IMAGERY: GEOTOWNIA BASEMAP GALLERY / 2009
 LEGAL/TOPOGRAPHIC INFORMATION: PLAN OF SURVEY OF PART LOT 16 - CONCESSION 7 (OTTAWA FRONT) - GEOGRAPHIC TOWNSHIP OF GLOUCESTER - CITY OF OTTAWA / ANNIS, O'SULLIVAN, VOLLEBEK LTD. / DEC. 16, 2024 / MTM ZONE 9 NAD-83 (CSRS) (2019)

| No. | REVISION | DATE | BY |
|-----|-------------------------|-----------|-----|
| 1. | ISSUED WITH CSWM REPORT | APR 26/28 | LKC |

SCALE

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| DESIGN | TGS |
| CHECKED | LKC |
| DRAWN | TGS |
| CHECKED | LKC |
| APPROVED | LAB |

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NOVATECH
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 Facsimile: (613) 254-5867
 Website: www.novatech-eng.com

LOCATION
 CITY OF OTTAWA
 4296 ANDERSON ROAD

DRAWING NAME
 PRE & POST DEVELOPMENT
 STORM DRAINAGE AREA PLAN

PROJECT No. 124156
 REV 1
 DRAWING No. 124156-SDA

M:\2024\124156\CAD\DWG\124156-SDA.dwg, SDA, Apr 22, 2026, 1:20pm, lccary

One of the benefits of pervious catchbasins which are located off-line is that they can be plugged until construction has finished and the development has been stabilized. This helps to prolong the life of the exfiltration storage.

Pre-treatment of road drainage before it reaches the pervious catchbasins will enhance the longevity of the system and reduce the potential for groundwater contamination. Frequent catchbasin cleaning is required to ensure the longevity of this SWMP. Eventually, the exfiltration storage will become clogged and need to be replaced.

4.5.12 Vegetated Filter Strips

Vegetated filter strips are engineered stormwater conveyance systems which treat small drainage areas. Generally, a vegetated filter strip consists of a level spreader and planted vegetation. The level spreader ensures uniform flow over the vegetation which filters out pollutants, and promotes infiltration of the stormwater.

There are two types of vegetated filter strips: grass filter strips, and forested filter strips. There is a need for further research comparing the efficiency of these two systems for water quality enhancement, since the research to date has focussed on their individual assessment.

Vegetated filter strips are best utilized adjacent to a buffer strip, watercourse or drainage swale since the discharge will be in the form of sheet flow, making it difficult to convey the stormwater downstream in a normal conveyance system (swale or pipe).

Design Guidance

Drainage Area

Vegetated filter strips are feasible for small drainage areas (< 2 ha).

Slope and Width

Vegetated filter strips should be located in flat areas (< 10%) to promote sheet flow and maximize the filtration potential. The ideal slope in a vegetated filter strip is < 5% (1% - 5%).

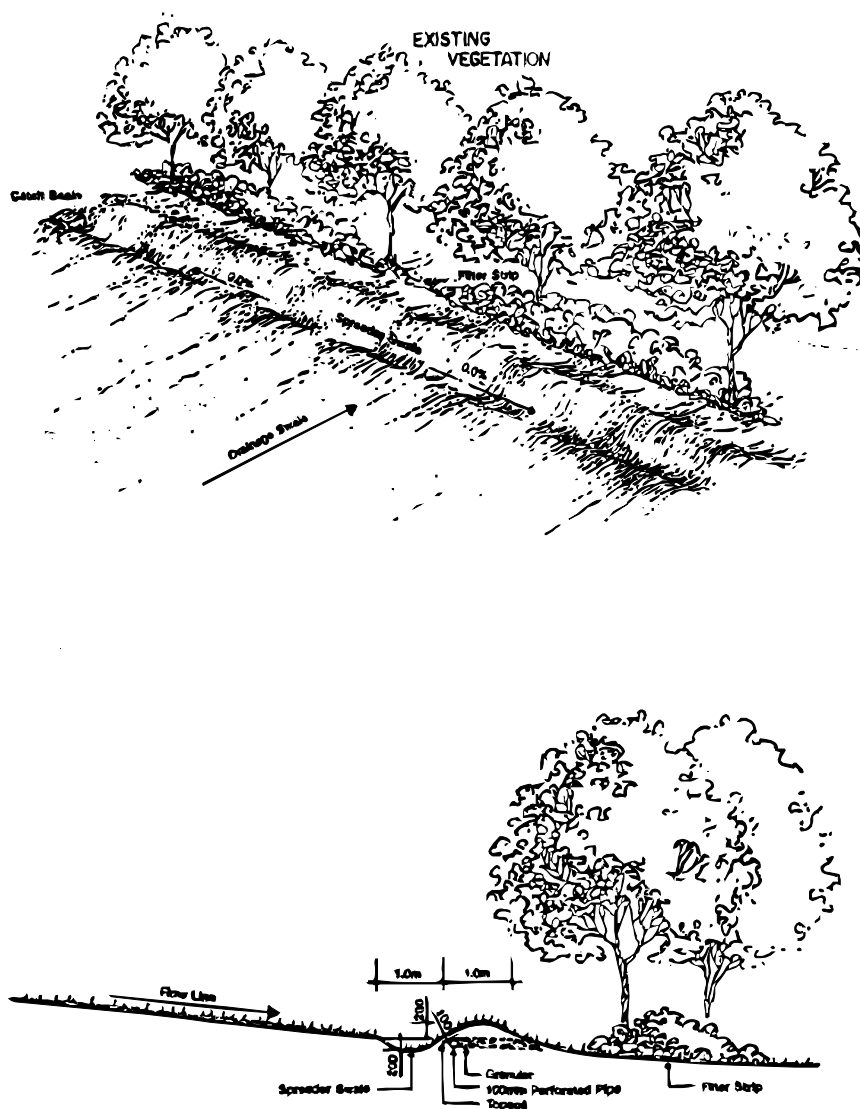
The vegetated filter strip should be 10 m - 20 m wide in the direction of flow to provide sufficient stormwater quality enhancement (Osborne et al., 1993; Metropolitan Washington Council of Governments, 1992; Minnesota Pollution Control Agency, 1989). The slope of the vegetated filter strip should dictate the actual width. Shorter vegetated filter strip widths (10 m - 15 m) are appropriate for flat slopes, whereas longer vegetated filter strips (15 m - 20 m) are required in areas with a higher slope (5% - 10%).

Level Spreader

The level spreader consists of a raised weir constructed perpendicular to the direction of flow. Water is conveyed over the spreader as sheet flow to maximize the contact area with the vegetation. Although the spreader can be engineered using concrete, more natural spreader designs/materials are recommended to maintain a natural appearance.

Figure 4.16 illustrates a typical level spreader design. A small berm is used as the level spreader. It creates a damming effect, preventing stormwater from entering the vegetation until the water level exceeds the height of the spreader. A perforated pipe (100 mm diameter) is installed in the spreader berm to ensure that any water which is trapped behind the berm after a storm can be drained. The perforated pipe should be wrapped in a filter sock to ensure that native material does not infiltrate the pipe.

Figure 4.16: Typical Filter Strip



The length of the level spreader should be chosen based on site specifics (topography, outlet location, drainage area configuration). It should be recognized, however, that a shorter level spreader necessitates the trade-off of greater upstream storage to maintain the desired flow depth over the vegetation. It is recommended that the level spreader length, and hence vegetated filter strip length, be as large as possible.

Flow Depth

The level spreader and vegetated filter strip should be designed such that the peak flow from a 4 hour Chicago 10 mm storm results in a flow depth of 50 - 100 mm through the vegetation. The flow depth over the level spreader can be calculated using a standard broad crested weir equation (Equation 4.4).

$$Q = \alpha L H^{1.5} \qquad \text{Equation 4.4: Weir Flow}$$

where Q = discharge
α = coefficient
L = length of crest of weir
H = head

Storage

Storage will be required behind the level spreader depending on the level of control desired, and the length of the level spreader itself. The amount of storage required should be based on the excess runoff from a 4 hour Chicago distribution of a 10 mm storm, accounting for the flow over the weir. The 10 mm storm was chosen recognizing that 70% of all daily precipitation depths are less than or equal to this amount.

Vegetation

Species such as red fescue, tall fescue and redtop can be introduced in addition to the natural surrounding vegetation to filter out stormwater pollutants. Species native to the area should be used, where commercially available, in the planting strategy.

Technical Effectiveness

Vegetated filter strips have limited effectiveness for water quality control due to the difficulty of maintaining sheet flow (i.e., preventing channelization) through the vegetation. They are best implemented as one in a series of SWMPs in a stormwater management plan.

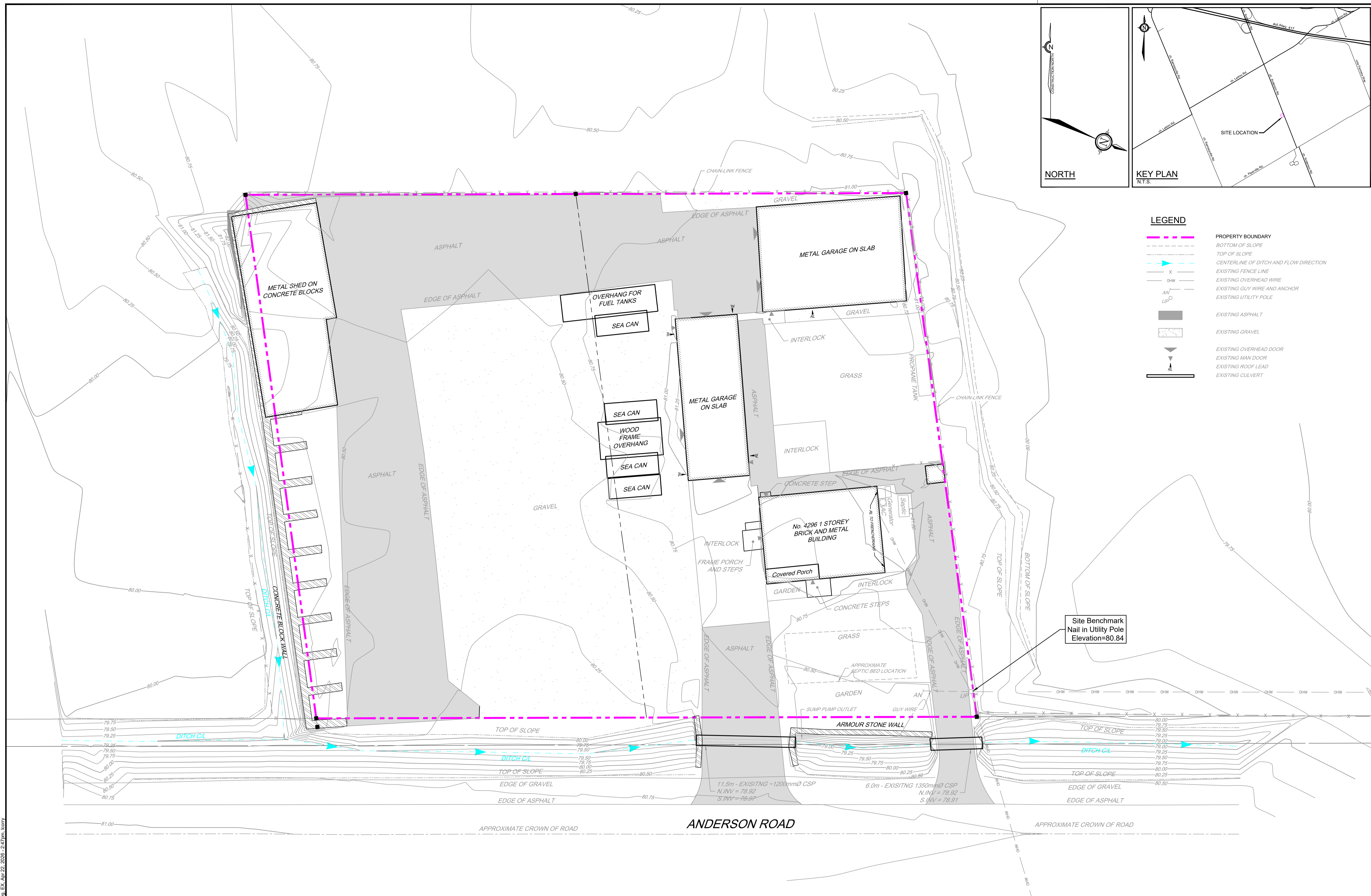
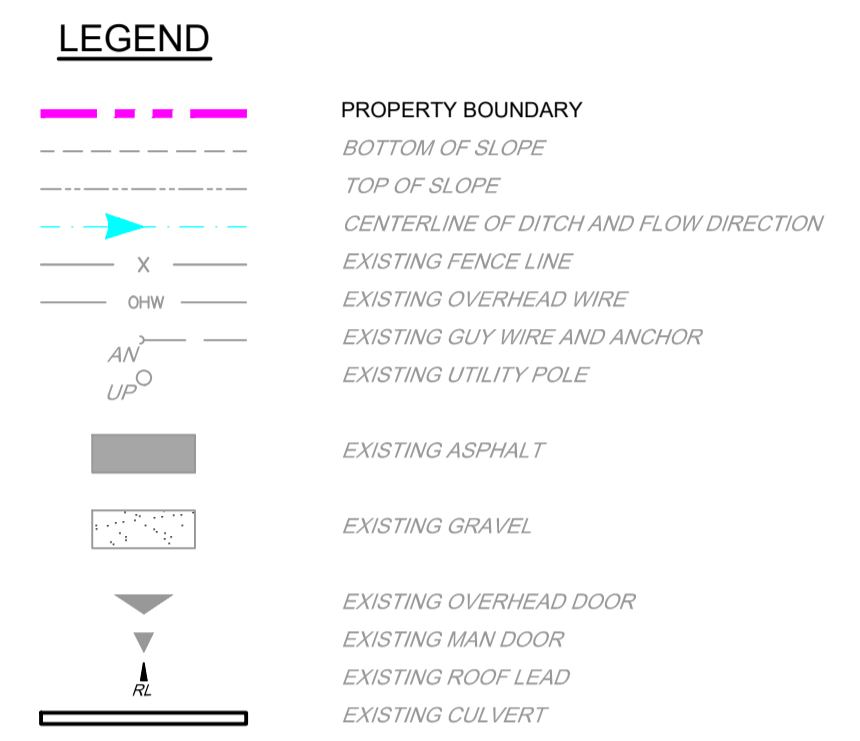
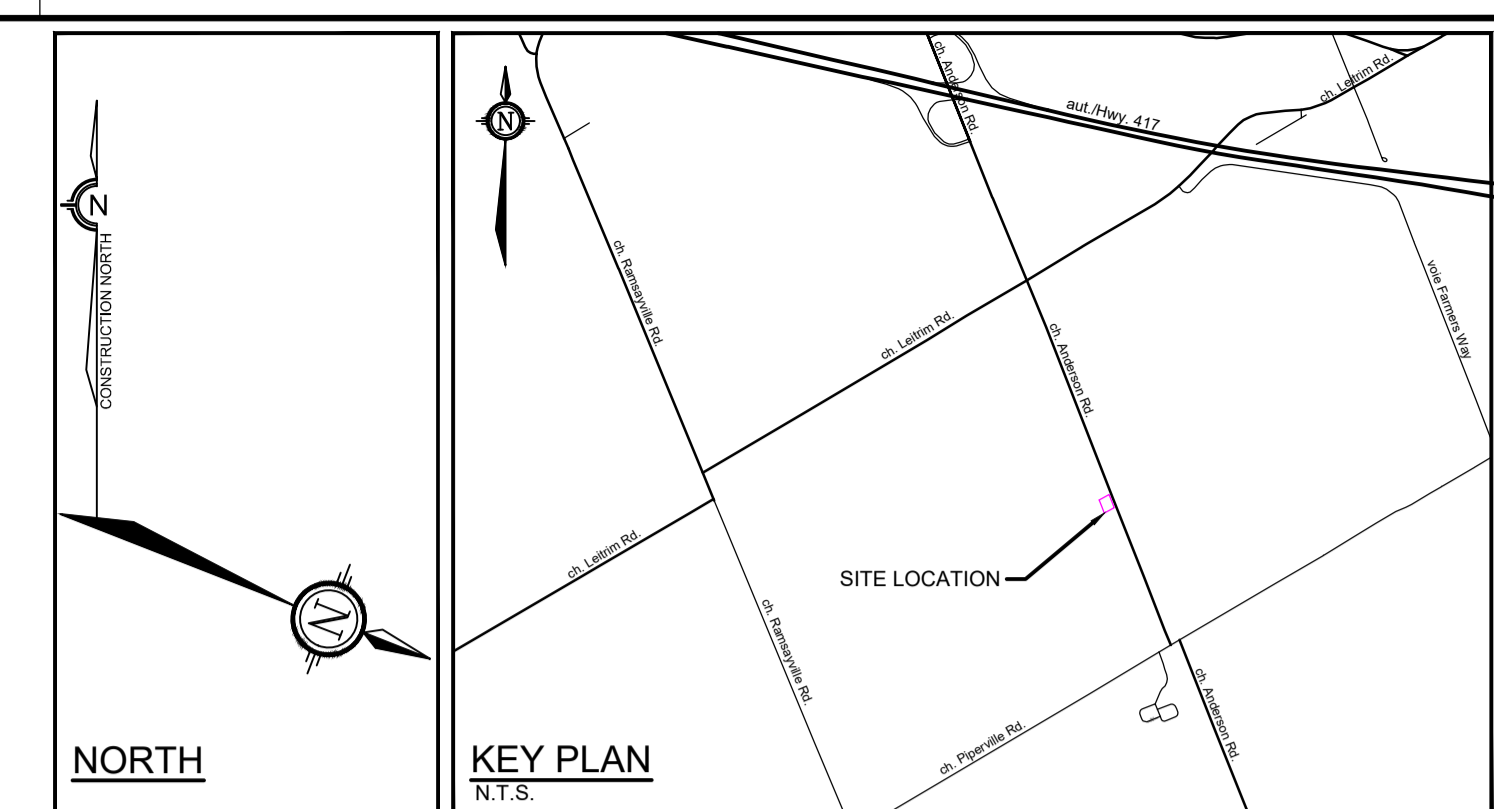
4.5.13 Stream and Valley Corridor Buffer Strips

Buffer strips are simply natural areas between development and the receiving waters. There are two broad resource management objectives associated with buffer strips:

- The protection of the stream and valley corridor system to ensure their continued ecological form and functions; and

Drawings

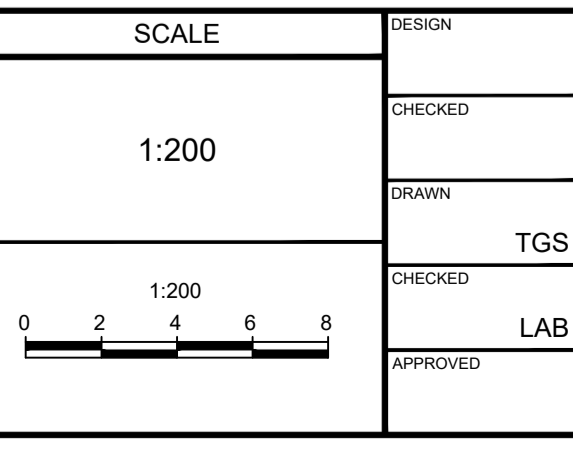
- x Existing Conditions Plan (Survey 2024) (124156-EX, revision 1)
- x Conceptual Site Plan (124156-SP, revision 2)
- x Grading, Erosion and Sediment Control Plan (124156-GR, revision 2)



NOTE:
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SOURCE REFERENCE:
 LEGAL TOPOGRAPHIC INFORMATION:
 PLAN OF SURVEY OF PART LOT 16 - CONCESSION 7 (OTTAWA FRONT) - GEOGRAPHIC TOWNSHIP OF GLOUCESTER - CITY OF OTTAWA / ANNIS, OSULLIVAN, VOLLEBECK LTD. / DEC. 16, 2024 / MTM ZONE 9 NAD-83 (CSRS) (2010)

| No. | REVISION | DATE | BY |
|-----|-------------------------|-----------|-----|
| 1. | ISSUED WITH CSWM REPORT | APR 26/28 | LKC |



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| DRAWN | TGS |
| CHECKED | LAB |
| APPROVED | |

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 Facsimile: (613) 254-5867
 Website: www.novatech-eng.com

| | | |
|--|--|--------------------------|
| LOCATION CITY OF OTTAWA 4296 ANDERSON ROAD | | PROJECT No. 124156 |
| DRAWING NAME EXISTING CONDITIONS (2024) | | REV REV # 1 |
| | | DRAWING No. 124156-EX |

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| City of Ottawa Zoning By-law 2008-250 / 2026-50 | | | |
|---|-------------------------------|------------------------------|------------------------|
| Zone: RG – Rural General Industrial to be rezoned from RU – Rural Countryside | | | |
| Land Use: Storage Yard with Accessory Maintenance Garages and Office | | | |
| Zone Provision | (By-law 2008-250) Required | (By-law 2026-50) Required | Provided |
| Lot Width, Minimum (m) | 30 | 30 | 75.52m |
| Lot Area, Minimum (m ²) | 4,000 | 4,000 | 4,604.89m ² |
| Front Yard Setback, Minimum (m) | 15 | 15 | 15.37m |
| Rear Yard Setback, Minimum (m) | 15 | 15 | 35.05m |
| Accessory Building Rear Yard Setback, Minimum (m) | 1 | 1 | 0.32m |
| Interior Side Yard Setback, Minimum (m) | 8 | 8 | 7.91m |
| Accessory Building Interior Side Yard Setback, Minimum (m) | 8 | 1 | 0.77m |
| Principal Building Height, Maximum (m) | 15 | 15 | 3.0m |
| Accessory Building Height, Maximum (m) | 6 | 6 | 3.5m |
| Overall Lot Coverage, Maximum (%) | 50 | 50 | 16% |
| Accessory Building Lot Coverage, Maximum (%) | 5 | 5 | 13% |
| Vehicle Parking Spaces, Minimum | | | |
| Storage Yard | 3 | 0 | 4 |
| Dwelling Unit | 1 | 0 | 1 |
| Total | 4 | 0 | 5 |



KEYPLAN
NOT TO SCALE

CONCEPTUAL SITE PLAN

4296 ANDERSON ROAD

PART OF LOT 16
CONCESSION 7 (OTTAWA FRONT)
Geographic Township of Gloucester
Now CITY OF OTTAWA

Noel's Ottawa Snow Inc.



| No. | REVISION | DATE | BY |
|-----|-----------------------------|------------|----|
| 2 | ISSUED WITH ZBA APPLICATION | APR 28/26 | SP |
| 1 | PREPARED FOR DISCUSSION | JULY 17/25 | KB |

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Website: www.novatech-eng.com

ISSUED
APRIL, 2026
PROJECT No.
124156
DRAWING No.
124156-SP



Anderson Road

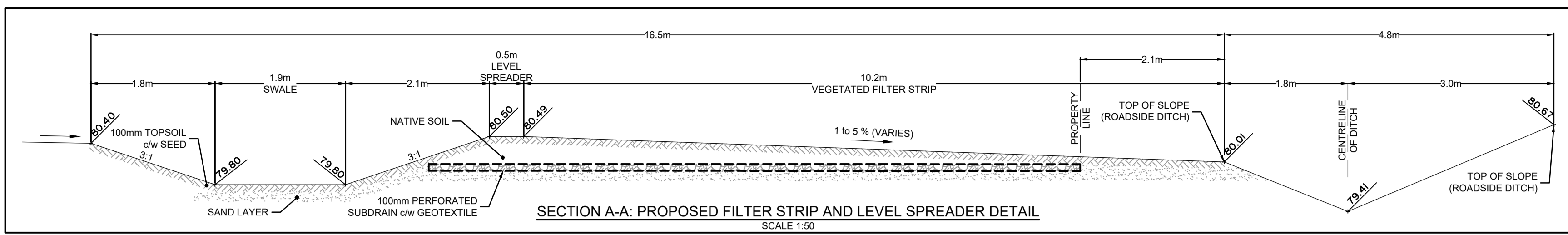
ROAD ALLOWANCE BETWEEN LOTS 15 AND 16
(KNOWN AS ANDERSON ROAD)
AS WIDENED BY FENCING

SOURCE REFERENCE:
Legal & Topographic Information: Plan of Survey
Annis, O'Sullivan, Vollebakk Ltd. / Dec. 16, 2024 / MTM Zone 9, NAD-83 (CSRS)

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#XXXXX



GENERAL NOTES:

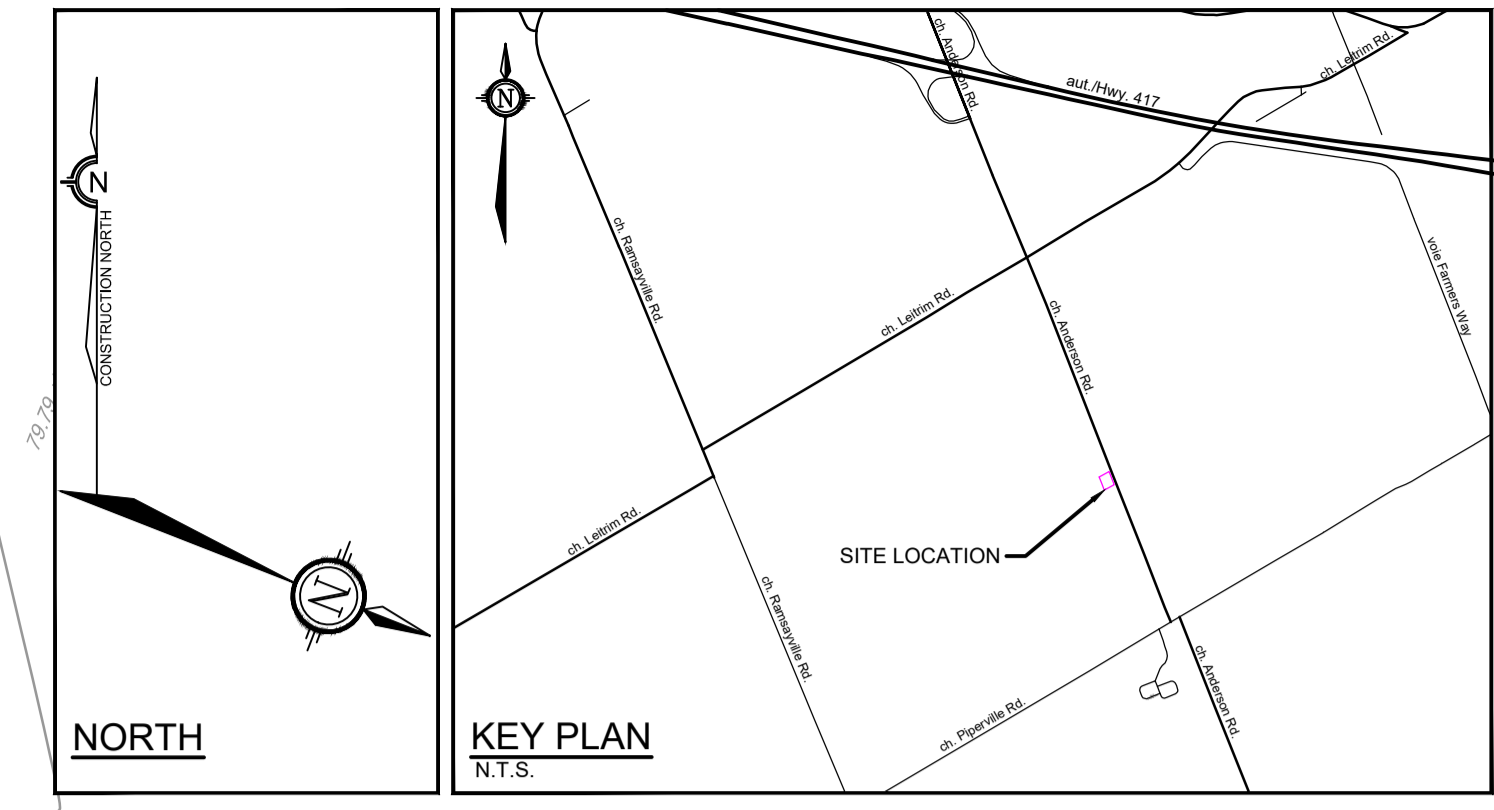
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO GEOTECHNICAL REPORT (No. 100011.121, DATED APRIL 24, 2026), PREPARED BY GEMTEC FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- REFER TO CONCEPTUAL SITE SERVICING AND STORMWATER MANAGEMENT REPORT (R-2026-016) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

GRADING NOTES:

- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
- ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.

EROSION AND SEDIMENT CONTROL NOTES:

- THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL, SUCH AS BUT NOT LIMITED TO INSTALLING AND MAINTAINING A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- SILT FENCING FOR ENTIRE PERIMETER OF SITE, SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
- THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.



Erosion and Sediment Control Responsibilities [1]:

| ESCC Measures | Symbol | OFSD No. | Installation Responsibility | Inspection Responsibility | Inspection Frequency | Maintenance Responsibility | Removal Responsibility | Inspection Frequency |
|-----------------------|----------|----------|-----------------------------|---------------------------|-----------------------|----------------------------|------------------------|---|
| Straw Bale Check Dam | [Symbol] | 219.180 | Developer's Contractor | Developer's Contractor | Weekly (as a minimum) | Developer's Contractor | Developer's Contractor | Weekly until site stabilization and after rainfall events |
| Light-Duty Silt Fence | [Symbol] | 219.110 | Developer's Contractor | Developer's Contractor | Weekly (as a minimum) | Developer's Contractor | Developer's Contractor | Weekly until site stabilization and after rainfall events |

[1] ESCC MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OR CONSERVATION AUTHORITY. THIS IS CONSIDERED A LIVING DOCUMENT.

LEGEND

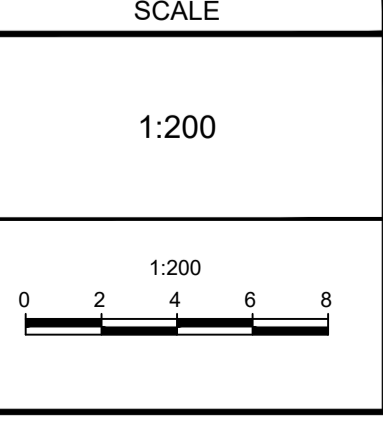
- PROPERTY BOUNDARY
- PROPOSED ELEVATION
- EXISTING ELEVATION
- PROPOSED DIRECTION OF OVERLAND FLOW
- PROPOSED 100-yr PONDING LIMITS (ELEV=80.50 PRIOR TO OVERTOPPING LEVEL SPREADER)
- PROPOSED GREENSPACE
- PROPOSED TERRACING (3:1 MAX)
- PROPOSED MARKER BOULDERS
- BOTTOM OF SLOPE
- TOP OF SLOPE
- CENTRELINE OF DITCH AND FLOW DIRECTION
- EXISTING FENCE LINE
- EXISTING OVERHEAD WIRE
- EXISTING GUY WIRE AND ANCHOR
- EXISTING UTILITY POLE
- EXISTING ASPHALT
- EXISTING GRAVEL
- STANDARD IRON BAR (SIB)
- EXISTING OVERHEAD DOOR
- EXISTING MAN DOOR
- EXISTING ROOF LEAD
- EXISTING CULVERT



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| No. | REVISION | DATE | BY |
|-----|-------------------------|-----------|-----|
| 2. | ISSUED WITH CSWM REPORT | APR 26/28 | LKC |
| 1. | ISSUED FOR COORDINATION | SEP 04/25 | LKC |



DESIGN: TGS
CHECKED: LAB
DRAWN: TGS
CHECKED: LAB
APPROVED: JLS

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Website: www.novatech-eng.com

LOCATION
CITY OF OTTAWA
4296 ANDERSON ROAD

DRAWING NAME
CONCEPTUAL GRADING, EROSION
AND SEDIMENT CONTROL PLAN

PROJECT No. 124156
REV # 2
DRAWING No. 124156-GR

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