



February 20, 2024

Koren Lam, MSc., Senior Planner  
County of Lanark  
99 Christie Lake Road,  
Perth, ON K7H 3C6

**Re: Brown Lands  
Draft Plan of Subdivision Resubmission  
Comment Response Letter  
File No. 09-T-23005**

Dear Koren,

Please find below a comprehensive response to the comments received from staff via e-mails and correspondence over the course of the last year. In support of this response, revised plans and reports reflecting the updates below are provided with this submission.

- *Julie Stewart email dated May 12, 2023, directed to Evan Garfinkel with Lanark County Public Works Department Comments in response to the Brown Lands Draft Plan of Subdivision Submission 1.*
- *Sean Derouin email dated May 12, 2023, directed to Evan Garfinkel with Lanark County Public Works Department Comments in response to the Brown Lands Draft Plan of Subdivision Submission 1.*
- *Sean Derouin email dated June 12, 2023, directed to Evan Garfinkel with Lanark County Public Works Department Comments in response to the Brown Lands Draft Plan of Subdivision Submission 1.*
- *Municipality of Mississippi Mills - First Submission Comment Letter, dated June 2, 2023.*
- *Mississippi Valley Conservation Authority - Technical Review Memorandum, dated April 21, 2023.*
- *Mississippi Valley Conservation Authority - Review Letter, dated June 21, 2023.*
- *Municipality of Mississippi Mills and Mississippi Valley Conservation Authority – Joint Comments from the Municipality of Mississippi Mills and the Mississippi Valley Conservation Authority Regarding the July 7<sup>th</sup> Meeting with Novatech and Regional Group Letter, dated July 14, 2023.*
- *Mississippi Valley Conservation Authority – Review of Slope Stability – County Road No. 29, Strathburn Street and Malcolm Street, Almonte, Ontario, dated August 4<sup>th</sup>, 2023.*
- *Municipality of Mississippi Mills – Second Submission Transportation Comment Letter – Subdivision – Brown Lands – 09-T-23005, dated August 4, 2023.*
- *Municipality of Mississippi Mills – Infrastructure and Transportation Submission – Review Comments – Brown Lands – 09-T-23005, dated November 21, 2023.*
- *Municipality of Mississippi Mills – Memo – Water Servicing – Buildout Timing and Fire Flow Requirements – Brown Lands – 09-T-23005, dated February 4, 2024.*

**County of Lanark - Public Works Comments (May 12, 2023 & June 12, 2023)**

1. Road widening along the entire frontage will be required – this can be through a draft plan condition.

**Regional Group: Noted. The requested widening has been provided on the revised draft plan (Block 159).**



2. Public Works has no comments on the SWM study.

**Regional Group: Noted.**

3. The TIS is currently under a peer review to confirm the warrant for turn lanes, etc. Comments will be provided once available.

**Regional Group: Noted. No further comments were provided.**

4. We would like the ROW to be consistent across the entire frontage. There is a ~3m bump out on the north end that we would like to be part of the ROW, see below.

**Regional Group: Noted. The requested widening has been provided on the revised draft plan (Block 159).**

5. We have completed our review of the TIS and approve.

**Regional Group: Noted.**

#### **Municipality of Mississippi Mills (June 2, 2023)**

##### **Planning Comments**

1. For clarity, please label the street at the north end of Street Four.

**Regional Group: The revised Draft Plan has re-aligned a few road patterns. We are of the opinion that all streets are now clearly labeled.**

2. The Draft Plan indicates 133 units of single detached dwellings and 92 townhome units; however, on page 12 of the Planning Rationale, it lists 133 units of single detached dwellings, 4 semi-detached dwellings and 92 townhome units. Please clarify.

**Regional Group: The unit mix has been revised in this Draft Plan re-submission. The revised unit count includes a total of 235 units, with a mix of 143 single detached dwellings, 18 semi-detached dwellings, and 74 townhome units. The Draft Plan of subdivision has been lotted for 143 single detached lots and 7 blocks for semis and towns. The revised Draft Plan and Planning Rationale have been updated to accurately capture the revised layout and unit count.**

##### **Zoning By-law Amendment**

3. Staff acknowledge that the proposed single zone approach to zoning was used in previous subdivision applications by the same applicant; however, the proposed zoning of the property should more accurately reflect the proposed uses. Please separate Residential First, Second and Third Density subzones with special exceptions are required to be proposed and identified.



**Regional Group:** Pursuant to a recent meeting between the Municipality (M. Knight) and Regional Group (E. Garfinkel), the Municipality deemed it appropriate for Regional Group to proceed with an R1 zone for single detached dwellings and an R2 zone for Semi-Detached and Townhome dwellings. The planning rationale has been updated to reflect this.

4. Additional zoning details are also expected to be provided for any proposed stormwater management, conservation lands and parkland areas. Special exceptions reflecting intent for the areas to be used for conservation purposes may be appropriate.

**Regional Group:** We will await a further response from the Municipality regarding their preference for specific zones/zoning provisions for stormwater management, conservation, parkland, and infrastructure blocks.

5. Please be advised that further comments will be provided after the resubmission regarding zoning. There are a number of zoning related items regarding parking that the Department will review including but not limited to, garage setbacks, sufficient on-site parking requirements in light of Bill 23 permissions with Additional Residential Units. Consideration of the design of the lots should incorporate the parking of vehicles on-site, preferably two vehicles per lots (can be in tandem). The Department would appreciate receiving conceptual site plans for each standard type of lots proposed with the proposed building envelopes to ensure that the proposed lots (and associated zoning) can accommodate an appropriate building envelope as well as on-site parking.

**Regional Group:** We will await further response from the Municipality regarding specific zoning comments. In the interim, we have provided conceptual sketches of a typical 42' lot and a typical six-unit townhouse block attached to this comment response letter. The sketches demonstrate that the builder's standard building envelope is compliant with the proposed Zoning provisions as well as the Municipality's parking space requirements, which currently requires one space per dwelling unit. The standard builder footprint can accommodate at minimum one vehicle in the garage and an additional vehicle in the driveway.

#### **ESA Phase 1**

6. As per the recommendation of the Phase 1 ESA, a condition in the subdivision agreement will include the requirement for the decommissioning of the private well on-site.

**Regional Group:** Noted.

#### **0.3m Reserve**

7. Please add a 0.3m reserve along the lots which back onto the Strathburn right of way. Please confirm with the County of Lanark if the same requirements will be required along County Road 29.

**Regional Group:** A reserve has been added at the rear of lots 22-42 (inclusive). Further to that, we have added a road widening block (Block 159) adjacent to Block 145 and County Road 29 per the County's comments.



### Noise Study

8. The Noise Study indicates that noise walls are required for Block 137, Lot 1, Block 138, Lot 23. Please be advised that any noise attenuation barrier required to be installed shall be located a minimum of 0.30 metres inside the property line of the private property, and the location of the barrier shall be verified by an Ontario Land Surveyor, prior to the release of securities for the noise attenuation barrier.

**Regional Group: Noted. This requirement is noted in Section 2.3.1 of the Noise Impact Feasibility Report (Novatech, 2024).**

### Public Works Department

#### Water

9. The proposed connection to the future watermain on County Road 29 is acceptable to the public works department. The timeline for construction of this future watermain is not currently set but more information regarding schedule will be available in the new water and wastewater master plan set to complete by the end of 2023.

**Novatech: Noted. The Municipality has subsequently confirmed the County Road 29 watermain will be constructed in 2024/2025 (Serviceability and Conceptual Stormwater Management Report, Appendix A, Meeting Minutes - July 26, 2023).**

10. The proposed connection to the future watermain crossing at Carss Street is acceptable. The timeline for construction of this future watermain is not currently set but more information regarding schedule will be available in the new water and wastewater master plan.

**Novatech: Noted. The Municipality has subsequently confirmed the Mississippi River third watermain crossing will be constructed in 2026/2027 (Serviceability and Conceptual Stormwater Management Report, Appendix A, Meeting Minutes - July 26, 2023).**

11. The applicant must connect to the watermain on Malcolm Street for looping and redundancy purposes. More information regarding pressure zones will become available with the release of the new water and wastewater master plan and the design of the water servicing can be updated accordingly based on the new projections.

**Novatech: Further discussions have occurred with the Municipality since the initial comments were sent to the applicant have provided alternative direction. A memorandum regarding water servicing was provided to the Municipality on December 22, 2023, entitled "Water Servicing – Build Out Timing and Fire Flow Requirements". The Serviceability and Conceptual Stormwater Management Report has been updated to reflect the finding of this memorandum (Section 5.0 and Appendix D).**



## Wastewater

12. The current proposed connection of a set of two forcemains to manhole 1-108 is not acceptable as the depth of that manhole is not sufficient to accommodate the expected flows and there are a number of properties on Malcolm that require servicing connections which cannot be accommodated with the forcemain. An alternate proposal should be submitted.

**Novatech: The design has been revised to shift the proposed forcemain outlet to sanitary MH 1-107. Refer to Section 3.2 of the Serviceability and Conceptual Stormwater Management Report. A separate memorandum, dated January 11, 2024, has been provided for the Municipality's consideration should they wish to pursue additional revisions or upgrades to the existing sanitary infrastructure on Malcolm Street to service existing homes concurrent to the subdivision work.**

13. The proposed sewer sections within the subdivision runs within a wetland setback on a very steep slope. This is not acceptable for a number of reasons including long term maintenance. Servicing the sewers and manholes in a wetland area poses both regulatory and practical challenges that the Municipality does not want to entertain. Based on the grading of the area servicing the sewers would be overly complicated and accepting this design would not be in the interest of the Public Works Department.

**Novatech: To address these concerns, it is proposed that the existing wetland/West Tributary will be abandoned, and the area will be filled and designated as parkland. The proposed sanitary sewer alignment through the existing wetland has also been revised to avoid the areas with existing steep slopes. Refer to Figure 4: On-Site Conceptual Servicing Layout in the Serviceability and Conceptual Stormwater Management Report for the proposed sanitary sewer alignment. The proposed abandonment of the wetland/West Tributary has been discussed and reviewed with both the MVCA and the Municipality of Mississippi Mills. Details of the proposal are provided in the EIS (Arcadis, 2024).**

## Storm Water

14. More detail needs to be provided with regards to the water quality devices. Information regarding which devices are being used, their placement and size of such devices is necessary for review and approval.

**Novatech: Preliminary sizing of proposed oil grit separator units (OGS) have been included in the Serviceability and Conceptual Stormwater Management Report (Section 2.3.3 and Appendix B). The units are proposed to be located within the servicing block in the northeast corner of the site. Further details will be provided for review and approval as part of the detailed design submission following draft plan approval.**

## Roads and Sidewalks

15. There is a missing sidewalk on Street Four. Each street must have a sidewalk on at least one side.

**Novatech: Noted. Sidewalk has been included on Street Four. See Figure 15: Network and Pathways Plan in the Serviceability and Conceptual Stormwater Management Report for updated road and sidewalk layout.**



16. As raised at the meeting of May 15, 2023, there is little consideration in the report for pedestrian or cyclist traffic. The Public Works department needs to see a multi modal evaluation of the traffic in the subdivision and more importantly between the subdivision and the surrounding areas. The evaluation must address pedestrian walking and cycling routes, potential pedestrian crossings, and the level of pedestrian and cycling traffic within the new neighbourhood, along Strathburn and on Malcolm.

**Novatech: Section 7.2 of the TIS has been updated to discuss the on-site active transportation facilities and how they connect to the area roadways. Section 8.0 of the updated report discusses the off-site design relating to Strathburn Street and Malcolm Street.**

17. As raised at the meeting on May 15, 2023, the traffic impact study says that there are no cyclist or pedestrian facilities present. There is a cycling trail head on Strathburn St., and the trail is represented in the proposed site drawings. There is significant cycling and pedestrian traffic in this area currently and will only increase with the proposed development. Design considerations must be taken into account when proposing increases to traffic on these corridors.

**Novatech: As part of the proposed development, the cycling trail head is proposed to be moved internally within the subdivision. An updated discussion of existing pedestrian and cycling facilities is provided in Section 2.3.**

**The Municipality of Mississippi Mills 2016 Transportation Master Plan identifies a planned sidewalk along Strathburn Street between CR29 and Malcolm Street and that Strathburn Street is a collector roadway. A separate memorandum, dated January 11, 2024, has been provided for the Municipality's consideration should they wish to pursue upgrades to municipal infrastructure on Malcolm Street and Strathburn Street concurrent to the subdivision work.**

18. Considerations for the upgrade of the current sidewalks on Malcolm should be addressed as well as how the new neighbourhood and Malcolm Street connect.

**Novatech: The Municipality of Mississippi Mills 2016 Transportation Master Plan identifies a planned sidewalk along Malcolm Street between Strathburn Street and the existing sidewalk south of Dunn Street and that Malcolm Street is a collector roadway. Therefore, it is our opinion that the requested sidewalk upgrades are a Development Charge eligible project. A separate memorandum, dated January 11, 2024, has been provided for the Municipality's consideration should they wish to pursue upgrades to municipal infrastructure on Malcolm Street and Strathburn Street concurrent to the subdivision work.**

19. The current culvert crossing over Wolf Grove is a potential bottle neck to traffic on the road. An evaluation of the traffic capacity of the culvert and whether it will accommodate all multi modal traffic is required.

**Novatech: The Municipality of Mississippi Mills 2016 Transportation Master Plan identifies a planned sidewalk along Strathburn Street between CR29 and Malcolm Street and that Strathburn Street is a collector roadway. Therefore, it is our opinion that the requested sidewalk upgrades are a Development Charge eligible project. A separate memorandum, dated January 11, 2024, has been provided for the Municipality's consideration should they wish to pursue upgrades to municipal infrastructure on Strathburn Street concurrent to the subdivision work.**



20. The applicant must communicate with Lanark County with regards to traffic coming into and out of the neighbourhood along County Road 29.

**Novatech: The County (S. Derouin) was circulated on the initial TIS submission confirmed via June 12, 2023 e-mail correspondence that they had completed their review of the TIS and approved of the findings.**

## Engineering Department

### Water

21. As part of the review process, communications occurred between the Municipality and the applicant via meetings, emails, and phone calls. As discussed, the Municipality's position on several water servicing policies is below:

- FUS method is required for fire flow calculation. OBC method is accepted if the water infrastructure identified in the master plan have not been constructed and put into use, fire flow rate identified from OBC method could be accepted as an interim solution. In this case, fire flow rate identified from OBC method must be achieved.

**Novatech: Two water analyses were completed, one under interim conditions (single feed from County Road 29) using the OBC fire flow calculation method and one under ultimate conditions (looped feed from County Road 29 and Mississippi River Third Crossing) using the FUS simple method. The fire flow rate identified from the OBC method under interim conditions can be achieved for all single unit products in the development. Fire flows for all proposed townhome units can be accommodated for this condition if there are 2-hour firewalls provided between some units. An update to the memorandum regarding water servicing that was provided to the Municipality on December 22, 2023, entitled "Water Servicing – Build Out Timing and Fire Flow Requirements" can be found in Appendix D of the Serviceability and Conceptual Stormwater Management Report.**

- Once the available fire flow rates have been identified in the master plan for the area based on zoning and other considerations, development activities in the area need follow and work under the system capacity. If any development has higher fire flow demands based on individual FUS calculation, the developer is responsible to provide additional planning/engineering measures to meet this requirement.

**Novatech: Noted. At the detailed design stage, the available fire flow rates from the updated master plan will be reviewed against calculated fire flow demands and if applicable, planning and/or engineering measures will be provided.**

22. The Municipality does not support the arrangement of supplying fire flow from a pond within the urban boundary, as a result the fire flow calculation method and conclusions will need revisit per comments above.

**Novatech: Noted. The proposed servicing approach has been revised to remove the proposed dry hydrant.**



23. Depending on the time and the status of the water crossing project, looping with Malcolm may be required given the fact that the water-crossing is not achievable in the near future. The conclusion and two development conditions described on page 20 will then need revisited, if this is the case.

**Novatech: Further discussions with the Municipality have occurred since the initial comments were provided have clarified that a connection to Malcolm Street is not preferred/required. A memorandum regarding water servicing was provided to the Municipality on December 22, 2023, entitled “Water Servicing – Build Out Timing and Fire Flow Requirements”. The memorandum has subsequently been updated and can be found in Appendix D of the Serviceability and Conceptual Stormwater Management Report.**

24. The applicant should discuss with the Municipality regarding the status of the infrastructure upgrades recommended in the 2018 Master Plan, as a number of projects referenced in the water servicing chapter will not be implemented as scheduled.

**Novatech: Further discussions with the Municipality have occurred since the initial comments were provided, including on July 26, 2023, where the Municipal Staff (Ken Kelly) confirmed that the Municipality will be proceeding with the projects relevant to this project on schedule and as previously communicated to the applicant. Refer to Appendix A of the Serviceability and Conceptual Stormwater Management Report.**

### Wastewater

25. Section 3.2, the Municipality has concern regarding some sanitary sewers are proposed within wetland setback limits but a minimum of 5.0m outside of the defined wetland limits.

**Novatech: As subsequently discussed with the Municipality and the MVCA, it is proposed that the existing wetland/West Tributary will be abandoned, and the area will be filled and designated as parkland. Refer to Figure 4 – On-Site Conceptual Servicing Layout in the Serviceability and Conceptual Stormwater Management Report for the proposed alignment of the sanitary sewer through the park block.**

26. The existing Malcolm Street sanitary sewer and manholes are very shallow at the northern end and it is not acceptable for the proposed forcemain to connect. The existing Malcolm Street sanitary sewer will need to be re-aligned and lowered to accommodate the proposed connection. Please be advised that the Municipality has no current schedule to implement this sanitary sewer project.

**Novatech: The Serviceability and Conceptual Stormwater Management Report has been revised to move the proposed force main outlet to sanitary MH 1-108 (Sections 3.1 and 3.2). A separate memorandum, dated January 11, 2024, has been provided for the Municipality’s consideration should they wish to pursue additional revisions or upgrades to the existing sanitary infrastructure on Malcolm Street to service existing homes concurrent to the subdivision work.**





27. The possible lowering and extending the Malcolm Street sanitary sewer may provide an opportunity to shorten the proposed forcemain, as well as to provide sanitary servicing to residents along Malcolm Street. The applicant has been advised to work closely with the Municipality on this, the Municipality has no current plan to implement this project.

**Novatech: A separate memorandum, dated January 11, 2024, has been provided for the Municipality's consideration should they wish to pursue additional revisions or upgrades to the existing sanitary infrastructure on Malcolm Street to service existing homes concurrent to the subdivision work.**

28. Section 3.3, use I/I allowance = 0.33.

**Novatech: Noted. Revised infiltration value of 0.33 L/sec/ha used for calculating extraneous sanitary design flows. See Section 3.3 and Sanitary Sewer Design sheet (Appendix C).**

29. Section 3.3, use K = 1.

**Novatech: Noted. Revised Harmon Equation Correction factor (K) of 1.0 used for calculating peak sanitary design flows. See Section 3.3 and Sanitary Sewer Design sheet (Appendix C).**

30. Show pipe or manhole depth in the sanitary calculation sheet, the Municipality has a concern regarding the bury depth being too great.

**Novatech: The requested preliminary information has been provided for both the storm and sanitary maintenance holes on the drainage area plans (Figure 6 – Post-Development Storm Drainage Area Plan and Figure 9 – Sanitary Drainage Area Plan) and on Preliminary Maintenance Hole Information sheets located in Appendices B and C. It should be noted that the information provided is based on preliminary information and the lowest invert in a structure.**

31. Section 3.1 and 3.4, the statement of 58% capacity is available for sewer segment MH1-101 to MH1-100 will need be revisited. A number of considerations:

- a. Available capacity calculation does not start at 100% full, but a lower full percentage.

**Novatech: Further clarification was requested from the Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting clarification were completed and no response was ever provided. The conclusion of the servicing report is that, based on a review of available information, the downstream gravity sewer to the Gemmill Bay pump station has the capacity to accommodate the flows from this development under existing conditions.**

- b. Downstream analysis shall extend to cover a long stretch, not just one/two selected sewer segment.

**Novatech: The Municipality's master servicing report (2018) analyzed the entire municipal sewer system. That report identified two sections of pipe between the development and the downstream outlet (Gemmill Bay pump station) that would be surcharged under full build out conditions. Therefore, only the two critical pipes lengths were assessed.**



- c. The applicant is responsible for capacity confirmation of full development.

**Novatech:** Further clarification was requested from Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting clarification were completed and no response was ever provided. The conclusion of the servicing report is that the downstream gravity sewer to the Gemmill Bay pump station has the capacity to accommodate the flows from this development under existing conditions.

32. Section 4.0, as mentioned above, the location of the pumping station, the inlet elevation, and the starting and ending points of the forcemains shall be revisited.

**Novatech:** Further clarification was requested from Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting clarification were completed and no response was ever provided so it is unclear what the concerns with the pump station location, inlet elevation and starting point were.

The location of the pump station block has been slightly revised. Refer to Figure 10 – Preliminary Pump Station Layout and Figure 11 – Preliminary Pump Station Elevation for more details.

The ending point of the forcemain has been revised to existing maintenance hole 1-107, which has adequate cover. Refer to Figure 5 – Off-Site Conceptual Servicing Layout for the proposed start and end points of the sanitary forcemain.

33. Confirm if the pumping station will be equipped with diesel generators, in which case additional approval is needed.

**Novatech:** As per section 4.5 Emergency Generator of the submitted report, a diesel generator is proposed as the emergency power supply source (refer to Section 4.5 and Figure 10 – Preliminary Pump Station Layout). It is anticipated that additional details and approvals will form part of the detailed design approvals and are not required for the approval of the draft plan of subdivision.

34. Odour study and attenuation measures may be required at detailed design stage and subject to CLI ECA.

**Novatech: Noted.**

35. Section 4.3, the Municipality will send a separate comment regarding one or two on-duty pumps will be required.

**Novatech:** Further clarification was requested from Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting additional comments were sent and no response was ever provided. The current preliminary design is for one duty pump and one back up pump. It is anticipated additional details and approvals will form part of the detailed design approvals and are not required for the approval of the draft plan of subdivision.



36. Please provide approximate total dynamic heads.

**Novatech: Total dynamic heads are anticipated to be approximately 25m. Refer to section 4.3. Further analysis will be completed at detailed design.**

#### **Stormwater**

37. With respect to 2.2.4, first bullet, the Municipality will confirm the requirement for water quality control.

**Novatech: Further clarification was requested from Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting confirmation were sent and no response was ever provided.**

**An “Enhanced” (80% long-term total suspended solids removal) level of quality control will be provided.**

38. Page 7 and Section 2.3.3. In the next submission, the Municipality requests a detailed description of appropriate level of design of the proposed water quantity control measures and the TSS removal credit verification document.

**Novatech: Preliminary OGS unit selection and sizing has been provided in Section 2.3.3 of the updated servicing report. The preliminary sizing reports can be found in Appendix B.**

39. Via checking the 5-year storm sewer calculation sheet, municipal staff identified even under 5-year storm, velocities in a lot of sewer segments are at the high end of the allowed range. This is not surprising due to the topography in the area. However, this is concerning under the 100-year storm. For example, the velocity is 1200mm downstream pipe segments will definitely much greater than 3.0m/s. Erosion control was briefly mentioned in the report, however energy dissipation measures were not mentioned. The Municipality may request significant engineering solutions in this aspect.

**Novatech: Noted. Section 2.3.1 has been expanded to address that flows between 3m/s and 6m/s are anticipated and energy dissipation will be reviewed as part of detailed design.**

40. Page 12, please include a reference for the coefficient calculation.

**Novatech: Section 2.4.2 has been updated to provide a discussion on the selection of 0.65 as the runoff coefficient utilized for the preliminary stormwater modelling calculations.**

41. Section 2.4.3, the Municipality is checking the fact for Outlet 1 and the assumption made in the report.

**Novatech: A boundary condition for Outlet 1 is no longer required since the proposed storm sewer design has been revised and the previously proposed outlet to Wolf Grove Creek (Outlet 1) has been eliminated.**



42. Section 2.4.4, the method and conclusions will need revisit.

**Novatech:** Further clarification was requested from Municipal Staff (David Shen) in email correspondence dated June 19, 2023. Multiple follow-ups requesting clarification were sent and no response was ever provided.

The modelling approach utilized for the conceptual stormwater management is consistent with standard industry practice and is to a level of detail which is appropriate for conceptual design to enable the draft plan of subdivision to be approved. Further details and modelling will be completed as part of the detailed design reports.

### **Geotechnical Study**

43. Similar to two comments in wastewater and stormwater sections, construction may trigger MVCA Ontario Regulation 153/06 review and natural hazard review.

**Novatech:** Noted. Advanced discussions have been held with the MVCA and it is anticipated that approvals under O. Reg 153/06 will be required to permit the removal/filling of the west tributary and the corresponding enhancement/rehabilitation of the north tributary, the road and infrastructure crossing of the north tributary by Street Five and the proposed storm sewer outlet to the Mississippi River.

44. The Municipality requests a discussion with the applicant regarding Section 6.9 slope stability analysis and setback conclusions.

**Paterson:** Further clarification was requested from Municipal Staff (David Shen) an email correspondence dated June 19, 2023. Multiple follow-ups requesting clarification so a meeting could be arranged were completed and no response was ever provided. During the detailed design of the subdivision, Paterson Group will undertake a detailed review of the proposed grading and slope stability, and where required, will provide directions for how to stabilize the existing slopes in order to adjust the limit of hazard lands setbacks, if needed.

### **Traffic Impact Study**

45. As discussed at the meeting of May 15, 2023, options for mitigating traffic impacts on Malcolm Street in particular should be explored including the conversion of part of Strathburn Street to a one-way street. The Municipality is in receipt of a concept plan (Conceptual One-way Alignment – Strathburn Street figure (118178 FIG-RM)) which reflect this design and will provide comments in the coming weeks on the revised design.

**Novatech:** Noted. Comments were received in the Second Submission Transportation Comment Letter (August 4, 2023) and can be found later in this letter along with the appropriate responses.

46. A response to the other items discussed at the meeting of May 15, 2023, will be provided after the TIS has been revised as per the Municipality's requests as follows:



- a. Examine the 10% traffic assignment to Malcolm Street – the Municipality is of the opinion this % should be higher.

**Novatech:** The revised assignment, shown in Section 4.3, does not assign any outgoing traffic to Malcolm Street as a southbound left turn prohibition is proposed at the Strathburn Street access. Based on the analysis in the revised TIS, 35% of inbound traffic from the east has been assigned to Malcolm Street. Given the Town comments and community concerns, a sensitivity analysis was also conducted within the revised TIS.

- b. Further address multi-modal transportation connectivity.

**Novatech:** The TIS has been updated to include discussions on how the active transportation facilities within the proposed site connect to the surrounding area. Updated discussions are provided in Section 7.2 of the revised TIS.

- c. Further address County Road 29 and Almonte Street traffic impacts.

**Novatech:** The County Road 29/Almonte Street intersection has been added to the study area at the request of the municipality. Results from the total traffic scenario analysis of the County Road 29/Almonte Street intersection are discussed in Section 6.3.2.

- d. The Municipality will provide traffic data.

**Novatech:** Traffic data was obtained through additional counts. All traffic count data is provided in Appendix B of the revised TIS.

- e. The Applicant should obtain signal timing from the County.

**Novatech:** Noted. The signal timing plan was obtained from the County and is included in Appendix C of the revised TIS.

47. As per the meeting of May 15, 2023, the Municipality will provide a list of requested items related to transportation issues that have not been identified in the submission after the TIS has been revised as per the above. Some of the items discussed at the May 15 meeting include:

- a. Adding a sidewalk on Malcolm Street.

**Regional Group:** Further to the response to comment 18, it is our opinion that the request to construct a sidewalk on Malcom Street is not a developer requirement. Should Staff wish to pursue the requested works, we are of the opinion that the works should be paid for by the Municipality. A separate memorandum, dated January 11, 2024, was provided for the Municipality's consideration regarding the upgrades to municipal infrastructure on Malcolm Street concurrent to the subdivision work.



- b. Widen the culvert on Strathburn Street if required to provide a sidewalk.

**Regional Group:** Further to the response to comment 19, it is our opinion that the request to construct a sidewalk on Strathburn Street and widen the culvert if required is not a developer requirement. Should Staff wish to pursue the requested works, we are of the opinion that the works should be paid for by the Municipality. A separate memorandum, dated January 11, 2024, was provided for the Municipality's consideration regarding the upgrades to municipal infrastructure on Malcolm Street concurrent to the subdivision work.

- c. Repave/widen Strathburn Street.

**Regional Group:** The desired works along Strathburn Street are not within the site's frontage, are located on collector roadways, and provide system connectivity for the greater community, therefore they should not be considered local services. It is our opinion that the request to repave and widen Strathburn Street is not a developer requirement. Should Staff wish to pursue the requested works, we are of the opinion that the works should be paid for by the Municipality. A separate memorandum, dated January 11, 2024, was provided for the Municipality's consideration regarding the upgrades to municipal infrastructure on Malcolm Street concurrent to the subdivision work.

- d. Add an appropriate railing on the Strathburn culvert.

**Regional Group:** Further to the response to comment 19, it is our opinion that the request to construct a railing on the Strathburn Street culvert is not a developer requirement. Should Staff wish to pursue the requested works, we are of the opinion that the works should be paid for by the Municipality. A separate memorandum, dated January 11, 2024, was provided for the Municipality's consideration regarding the upgrades to municipal infrastructure on Malcolm Street concurrent to the subdivision work.

- e. Add traffic signals at County Road 29 and Street 1.

**Regional Group:** Pursuant to the January 11, 2024 memorandum submitted to the Municipality by Novatech, the Transportation Impact Study concluded that any roadway modifications and improvements requested by the Municipality on County Road 29 (other than a northbound right turn taper) should be considered as a Development Charges eligible project and included in the City's Development Charges Background Study. The transportation analysis concluded that the development does not meet the required warrants for traffic signals construction based on the proposed subdivision development. Further to that, it is our opinion that the requested traffic signals are therefore not considered 'local services' under the *Development Charges Act*.

## Other

- 48. Please confirm if a DFO review is triggered.

**Arcadis:** A DFO review is anticipated to be required for the stormwater outfall to the Mississippi River. This will be reviewed and addressed during detailed design.



### **Building Department**

49. Confirmation of slope stability for the Lots 111 to 119 will be required at building permit stage.

**Paterson: Noted. During the detailed design of the subdivision, Paterson Group will undertake a detailed review of the proposed grading plan and will provide confirmation of slope stability, where required.**

### **Parks and Recreation Department**

50. The Municipality recognizes the efforts of the applicant to address and accommodate the Municipality's desire to appropriately accommodate the existing trail on the subject property. The Municipality requests that prior to draft approval, the approximate location of the multi-use pathway be identified on-site (staked out) so that staff can further assess the location of the multi-use pathway with respect to the existing slope.

**Novatech: The location of the proposed pathway has been revised based on the revisions to the draft plan. The revised locations can be staked out when requested.**

51. Please provide details as to the future owners of the Open Space blocks.

**Regional Group: Further to telephone correspondence between Mississippi Mills (M. Knight) and Regional Group (E. Garfinkel) on July 5, 2023, Staff agreed that the pathway is a desirable community feature and would likely take ownership of the pathway pending further details and discussions. Staff noted that they would prefer a naturalized pathway with the remainder of the park left 'clean and green'. Regional would kindly request that Staff confirm they will take ownership of Block 152, 153, and Block 154.**

### **Drainage Superintendent**

52. The property does not appear to be within the drainage area of any Municipal Drain. No objection/concerns to be expressed with regard to the Drainage Act.

**Novatech: Noted.**

### **Fire Department**

53. The proposal to have a dry hydrant installed to supplement the lack of current water flow to the proposed land cannot be supported. Any such measures, even in an expanding urban area is not acceptable. Dry hydrants are designed to provide the fire department a location to fill our tankers in rural areas where there are no other options and is not considered an alternative solution in a residential area, within the boundaries of Almonte.

**Novatech: Noted. The proposed servicing approach has been revised to remove the proposed dry hydrant.**



**Mississippi Valley Conservation Authority - Servicing & Stormwater Technical Review (April 21, 2023)**

1. A northern portion of Park appears to be within the Limit of Hazard Lands, identified in Geotechnical Investigation (Paterson Group, January 2023) from the West Tributary. The proposed development should be outside of the development limit. Please revise.

**Paterson: During the detailed design of the subdivision, Paterson Group will undertake a detailed review of the proposed grading plan and will provide slope stabilization recommendations such that the limit of hazard lands is adjusted, if needed, so that it does not conflict with the proposed development.**

2. Please provide a plan showing permissible grade raise restrictions from the slopes along the West and North Tributaries and demonstrate that the ranges in the Paterson Group report (2023) are met in the preliminary grading plan.

**Paterson: Noted. The requested plan can be provided during detailed design. During the detailed design of the subdivision, Paterson Group will undertake a detailed review of the proposed grading plan and will provide confirmation of conformance with permissible grade raise restrictions and slope stability setbacks, as required.**

3. Section 2.4.4 of the report indicates that the post-development major system peak flows to North and West Tributaries are less than the pre-development levels. However, the minor system flow (i.e., 2,591 L/s) will be directed to Wolf Grove Creek at Outlet 1 at the downstream of Strathburn Street. It is understood that Wolf Grove Creek is adjacent to the Mississippi River, and the post-development flow through Outlet 1 to the creek eventually discharges to the river. Historically, water quantity control to the pre-development levels has not been requested when post-development flows are directed to a large watercourse such as the river. However, it is noted that post-development flows, including the 100-year flow from the site to the creek, are proposed to convey through a 1.2 m diameter storm sewer pipe. The anticipated higher volume and flow velocity at Outlet 1 could potentially erode the banks along the creek.
  - a. Please provide peak volumes, the timing of peak flows at the outlet, downstream of the creek and river (if there is any flood-prone area), and the flow velocity at Outlet 1; and demonstrate there will no negative impacts to the creek or river downstream.

**Novatech: The proposed storm sewer design has been revised and Outlet 1 has been eliminated.**

- b. Please provide details of the outlet structure, erosion protection, energy dissipation measures at Outlet 1, and mitigation measures to protect the banks of the creek.

**Novatech: The proposed storm sewer design has been revised and Outlet 1 has been eliminated.**

4. Section 2.3.1 states that the storm sewer system at the downstream end of each outlet (i.e., MH 202-204 and MH 512-514) is designed to capture the 100-year peak flows to prevent excess flows to Strathburn Street and to prevent erosion in the wetland/tributaries and along the Mississippi River. Storm Sewer Design Sheet provided in Appendix B is based on the 5-year design event. Please demonstrate that the preliminary storm sewers at low points for each outlet can accommodate the 100-year peak flows from the site and the major system flows from the site will be safely conveyed to each outlet via the storm sewer system.





**Novatech:** The HGL results from PCSWMM demonstrate that the 100-year flows can be accommodated by the proposed storm sewer. Some of the pipes will be surcharged as a result, but the corresponding minimum USF elevations for the dwellings along the Street Five sewer that is carrying the 100-year flow to the Mississippi Outlet are reasonable. This can be confirmed at detailed design when proposed USF details are known.

5. PCSWMM schematics provided in Appendix B show that external drainage areas (i.e., EXT-1, EXT-2, and EXT-3) are connected to the proposed stormwater management design. However, it appears that offsite model parameters are not included in these areas. Please confirm if the external drainage areas are included in the PCSWMM analysis.

**Novatech:** These external areas were included in the design. EXT-1 will be captured by the proposed development stormwater systems. Area EXT-2 and EXT-3 are only used to compare the post development flows to the tributaries and Wolf Grove Creek to pre-development levels, to ensure that there are no adverse impacts. An additional subcatchment parameter table for these areas has been added to the report (Section 2.4.2) and Appendix B.

6. Please note that any development within the MVCA's Regulation Limit (i.e., construction of the proposed outlet and/or culvert to the watercourse) will require a permit from MVCA under Section 28 of the Conservation Authority Act.

**Novatech:** Noted.

#### **Mississippi Valley Conservation Authority (June 21, 2023)**

1. All recommendations with respect to the Stormwater Management Plan (SWMP) (refer to the attached MVCA Technical Review of SWMP), be addressed. In addition, please provide LID techniques on-site to help maintain the local hydrologic conditions.

**Novatech:** a) See above responses (1-6).

**Novatech:** b) It is anticipated that low impact development techniques such as perforated stormwater pipes in the rear yards will be implemented on this project. Please refer to section 2.3.5 of the Serviceability and Conceptual Stormwater Management Report.

2. All recommendations with respect to the EIS be addressed as follows:
  - The EIS indicates that the removal of agricultural tile drains will result in a 50% loss of flow into Wetland-2 and the West Tributary. Impacts to the hydrology of the wetland and watercourse are anticipated. We request further analysis as to how these flows will be augmented.

**Novatech:** The West Tributary is proposed to be eliminated and inflows to that tributary will be captured by the proposed storm sewer, outletting to the Mississippi River. Flows to the North Tributary will be supplemented where possible by directing surface flows from adjacent soft surface areas (Parkland and Rear Yards of lots).



- Page 32 of the EIS references the removal of the West Tributary. Please clarify and clearly identify what is proposed for removal.

**Arcadis: The EIS has been updated to reflect further discussions with the MVCA which will result in the removal of the West Tributary and the corresponding enhancement of the North Tributary.**

- Part of Wetland-1 is proposed to be eliminated in order to accommodate a road and trail crossing. Further discussion is requested to specifically address MVCA Regulation Policies. These policies indicate that any loss of wetlands needs to address impacts associated with the control of flooding, hydrologic function, and erosion. Compensation/offsetting measure are typically required to address any loss in wetland.

**Arcadis: The EIS has been updated to reflect further discussions with the MVCA and compensation (enhancement of the North Tributary) is being proposed for the loss of land associated with the Street Five crossing.**

- We request further efforts to achieve the 30 m wetland setback, as required under MVCA's Regulation Policies. Of particular note is the proposed sanitary sewer line within the 30 m setback.

**Arcadis: The EIS has been updated to reflect further discussions with the MVCA and compensation (enhancement of the North Tributary) is being proposed for the loss of land associated with the Street Five crossing.**

- With respect to Wetland-1, the rear lot line of several lots abut the wetland. Please show the building envelope and proposed setback thereto on subsequent plans.

**Arcadis: The proposed zoning for the subdivision provides for a minimum 6m rear yard setback. Further details can be provided at detailed design.**

- We understand that additional evaluation is intended, following the results of 2023 field investigations, including a Headwater Drainage Feature Assessment.

**Arcadis: The EIS has been updated based on field assessments completed in the spring of 2023.**

- Integrate the recommendations and mitigation measures from the EIS with the results of the Headwater Drainage Feature Assessment, and the SWMP, as relevant.

**Arcadis: The EIS has been updated based on field assessments completed in the spring of 2023.**

## **Municipality of Mississippi Mills - Public Works Comments (May 12, 2023 & June 12, 2023)**

### 1. Wastewater Infrastructure in a Wetland Setback



A sanitary sewer alignment is proposed to extend through MVCA's Regulation Limit (RL) within 30 m of a Regulated Wetland and it appears that the sanitary sewer alignment extends as close as 5 m to the Regulated Wetland. It is understood that there would likely be considerable disturbances within the RL at the time of construction, and disturbances relating to operations & maintenance for the sanitary sewer alignment would be required on an ongoing basis.

The MVCA is unlikely to permit the 5 m setback and requests that options be explored to completely avoid the wetland and its RL, which would avoid the potential requirement for an MVCA permit each time disturbance within the area is required. If this is not feasible, please advise the MVCA and the Municipality as further discussions with the MVCA will be required.

Through internal consultations between Engineering and Public Works Departments, the Municipality will also not support the design of your proposed sewer alignment within the wetland setback based on factors relating to construction, environmental risk and compliance, operations & maintenance, as well as any future repair, replacement, and rehabilitation of the assets.

**Novatech: Following further discussions with the MVCA and the Municipality, the revised draft plan proposes the abandonment of the West Tributary/wetland, which allows the sanitary sewer to be constructed outside of the proposed MVCA regulatory limit. Refer to Figure 4 – On-Site Conceptual Servicing Layout in the Serviceability and Conceptual Stormwater Management Report for the proposed alignment of the sanitary sewer through the park block.**

## 2. Deep Sewers and Erosion Hazard/Slope

The northwest bank of the Wetland is relatively high and steep. The sewer alignment is proposed within this slope, and this alignment is anticipated to require extensive excavation and the re-grading of the slope.

It recently became apparent that a Slope Stability Assessment (SSA) was embedded within the Geotechnical Assessment. As the MVCA does not necessarily review Geotechnical Assessments, the MVCA was unaware of the SSA therein. The MVCA defers further comment on the SSA pending a review of the SSA.

The Municipality appreciates the applicant's effort of maximizing the pumping station tributary area and thus minimizing the number of proposed pumping stations, which is normally an industrial practice. However, in this case the resulting deep sewer close to the wetland and high slope area is concerning. The applicant is advised to find an alternative solution (i.e.: applying a trenchless technology) and balancing the considerations of deep sewer vs. the number of pumping stations. This point shall be implemented in conjunction with the Wastewater Infrastructure in a Wetland Setback comments above.

**Novatech: Following further discussions with the MVCA and the Municipality, the revised draft plan proposes the abandonment of the West Tributary/wetland, which will allow the sanitary sewer to be constructed outside of the proposed MVCA regulatory limit and away from the northwest bank. Refer to Figure 4 – On-Site Conceptual Servicing Layout in the Serviceability and Conceptual Stormwater Management Report for the proposed alignment of the sanitary sewer through the park block.**



### 3. Stormwater Quantity Control

Historically, the MVCA has not recommended water quantity control to the pre-development level when post-development flows directly discharge to a large watercourse such as the Mississippi River. Unlike the Mississippi River, Wolf Grove Creek, adjacent to the subject site, is considered a stream, and water quantity control is typically recommended. However, in this particular case, it is noted that Outlet 1 is proposed to be located at the downstream end of Wolf Grove Creek, approximately 350 m upstream of the Mississippi River. Therefore, quantity control may not be required if it is demonstrated that the proposed development will not negatively impact Wolf Grove Creek (i.e.: flooding and erosion on the creek). Additional details required at this time are as follows:

- a. Demonstrate that Wolf Grove Creek has sufficient capacity to safely convey the additional peak flows from the development (including peak flows up to the 100-year storm).
- b. The proposed development will increase peak flows at Outlet 1 to Wolf Grove Creek. This may result in erosion potential on the banks downstream of Outlet 1. Please include erosion protection measures.

The Municipality will rely on the MVCA to comment on stormwater quantity design criteria and the proposed outlets. The Municipality also wants to point out that the Mississippi Mills Community Official Plan Section 4.1.1.4.2 Subsection 9 states that all flow out of site must be controlled to preconstruction levels.

**Novatech: The proposed storm sewer design has been revised and Outlet 1 has been eliminated. All outflow from the storm sewers will be directed to a single storm sewer outlet to the Mississippi River and the MVCA has indicated that quantity control for flows directly to the river will not be required.**

#### **Mississippi Valley Conservation Authority – Review of Slope Stability (August 4, 2023)**

1. The site plan showing the Erosion Hazard Limit (in accordance with the Technical Guide on River and Stream Systems: Erosion Hazard Limit by the Ontario Ministry of Natural Resources and Forestry) (OMNRF Technical Guide) should be stamped. In addition, the plan is showing proposed development encroaching into the concluded Erosion Hazard Limit.

**Paterson: The Drawing PG6260-1 with the Erosion Hazard Limit will be stamped when the Geotechnical Investigation Report is updated during the detailed design process. Further, during the detailed design phase, slope stabilization recommendations will be provided so that the Erosion Hazard Limit can be adjusted such that the proposed development no longer encroaches onto the Erosion Hazard Limit.**

2. For the West Tributary Slope:
  - a. For the slope segment (Section A-A), a total setback is calculated to be 15 m, measured from the top of the slope. The site plan shows the setback to be zero at two ends. Please clarify why the limit is not recommended at the same setback distance from the start to the end of this segment of the slope.



**Paterson:** At the specific location of Section A-A, the slope has a height of about 8 to 9 m, which is associated with the 15 m Limit of Hazard Lands setback at this location. However, to the east and west of Section A-A, the height of the slope decreases to approximately 4 to 5 m, and the factor of safety under static and seismic conditions is over 1.5 and 1.1, respectively, such as shown at Section B-B. Therefore, in these areas adjacent to Section A-A, no Limit of Hazard Lands setback is required.

- b. For the other segment of the slope (Section B-B), an erosion access allowance of 6 m was concluded. The erosion access allowance is expected to support the following:
- emergency access to erosion prone areas;
  - construction access for regular maintenance and access to the site in the event of an erosion event or failure of a structure; and
  - providing protection against unforeseen or predicted external conditions.

Please comment on the stability of top of the slope (in case of unforeseen or predicted external conditions) and the possibility of the overburden soils to become loose and its impact on the stability of the “surficial” overburden soils near the top of the slope.

Unless additional analyses (including, those recommended earlier regarding the risks associated with “surficial” shallow slope failures near the top of slope) and additional comments clarifying how 0 m setback is considered appropriate to support the erosion access allowance are provided, it is considered more appropriate to recommend a setback distance of 6 m.

**Paterson:** The boreholes in the vicinity of section B-B indicate a hard to very stiff silty clay within the height of this slope. Cohesive soils such as these will not become “loose” due to external conditions, and accordingly, impacts to the surficial overburden soils near the top of slope are not expected.

- c. Please provide analysis and details to support a toe erosion allowance of 0 m. Otherwise, it is considered more appropriate to assume the minimum toe erosion allowances suggested in Table 3 of the OMNRF Technical Guide referenced above.

**Paterson:** At the time of our field investigations, which included spring conditions in May 2022, no water was observed in the area identified as the West Tributary. Further, as no water was observed here, no signs of erosion were observed. Accordingly, a toe erosion allowance is not considered to be required along this slope.

3. For the North Tributary Slope, please provide analysis and details to support a toe erosion allowance of 0 m. Otherwise, it is considered more appropriate to assume the minimum toe erosion allowances suggested in Table 3 of the OMNRF Technical Guide.

**Paterson:** The North Tributary was observed to be located more than 30 m away from the toe of the slope. Due to this setback, a toe erosion allowance is not considered to be required along this slope.



4. For the Mississippi River Slope, please provide analysis and details to support a toe erosion allowance of 1 m. Otherwise, it is considered more appropriate to assume the minimum toe erosion allowances suggested in Table 3 of the OMNRF Technical Guide referenced above.

**Paterson: The boreholes at the top of slope along the Mississippi River slope have indicated shallow bedrock, and our observations along the toe of this slope indicated shallow bedrock with a thin layer of overburden, and no signs of active erosion.**

**Accordingly, in Table 3 of the Ontario Ministry of Natural Resources' Technical Guide – River & Stream Systems: Erosion Hazard Limit, these subsurface conditions are considered to correspond to the "Hard Rock" category. For "No evidence of Active Erosion" and "Bankfull Width >30 m" under the "Hard Rock" category, this corresponds to a toe erosion allowance of 1 m.**

#### **Municipality of Mississippi Mills – Second Submission Transportation Comment Letter (August 4, 2023)**

##### **Conceptual One-Way Alignment**

Please find below the comments regarding the Strathburn Street Road Modifications Conceptual One-way Alignment dated May 2023.

1. The Municipality is generally supportive of the conceptual one-way alignment subject to the following comments/requirements:
  - a. A public meeting be held with the residents on Strathburn and Malcolm Street to gather feedback on the conceptual design.

**Novatech: Noted. Further discussion with the Municipality has indicated that they are not in support of this alternative and the resubmission of the draft plan of subdivision does not propose any modifications to Strathburn Street.**

- b. That information be provided regarding the existing culvert over Wolf Grove River in terms of size and capacity (see comment #4 below)

**Novatech: Noted. Further discussion with the Municipality has indicated that they are not in support of this alternative and the resubmission of the draft plan of subdivision does not propose any modifications to Strathburn Street.**

- c. Consideration given to the existing resident at 286 Strathburn St to allow for two-access from the existing driveway.

**Novatech: Noted. Further discussion with the Municipality has indicated that they are not in support of this alternative and the resubmission of the draft plan of subdivision does not propose any modifications to Strathburn Street.**



### New Comments Regarding Transportation Impact Study

1. The study is taking guidance from a single traffic count in an off-peak period (Nov. 2022). A traffic study in August prior to resubmission, would aid in providing peak traffic data.

**Novatech: Noted. Additional traffic counts have been obtained and have been used within the resubmitted TIS.**

2. The report should refer to actual peak times for both am and pm in the body of the report so the public can better understand.

**Novatech: Noted. This has been updated within the revised TIS.**

3. Baseline peak period counts should be included to review the splits at Strathburn and Malcolm, and/or Malcolm and Almonte to provide a baseline for discussion with the community and Council.

**Novatech: Noted. Recent traffic counts have been included with the report.**

### Municipality of Mississippi Milles – Infrastructure and Transportation Submission – Review Comments (November 21, 2023)

#### **Engineering and Public Works Department**

##### Wastewater

1. It is recognized the plans submitted are conceptual and may change due to the grading of the property as the application proceeds to detailed design.

**Novatech: Noted.**

2. Concerns remain about the water table in the area of the current/former wetland. During the detailed design stage, further exploration will be required regarding the water table elevations and changes may be required, to the Municipality's satisfaction. Alternatively, if the applicant provides detailed design information prior to Draft Approval, the Municipality would be willing to review and comment at that time.

**Novatech: Noted. The water table elevation impacts to the design will be reviewed at the detailed design stage.**

##### Transportation

3. The Municipality reviewed the information provided by your traffic consultant on November 8, 2023. While traffic signals are not warranted based on traffic volumes at County Road 29 and Street One, the Municipality is of the opinion that traffic signals at this intersection would help to mitigate traffic impacts through the adjacent neighbourhood (via Malcolm St) and can improve potential safety for future residents entering and exiting the subdivision. Traffic signals at this intersection are still the Municipality's preferred option.



**Novatech: Noted.** Per the separate memorandum submitted to the Municipality, dated January 11, 2024, it is our opinion that any roadway modifications and improvements desired by the Municipality on County Road 29 (other than a northbound right turn lane) should be reviewed and included as DC projects as they are not local services and further they do not meet the required warrants for construction based on the proposed development, as demonstrated by the Traffic Impact Study (TIS) and therefore are not the responsibility of the Developer.

4. Upon review of the one-way concept for Strathburn Street, the Municipality has concerns with operational aspects of the design as well as the impact that the one-way conversion would have on the existing residents of Strathburn Street. As a result, the Municipality does not support the one-way conversion of Strathburn Street.

**Novatech: Noted.** A one-way concept for Strathburn Street is no longer being considered.

5. Please be advised that to attempt mitigate potential cut-through traffic through the existing neighbourhood, the Municipality will implement peak time turning restrictions from Street Two onto Strathburn Street and at the intersection of Strathburn Street and Malcolm Street.

**Novatech: Noted.** A southbound left turn prohibition at the Strathburn Street/Street Two intersection has been identified in the updated TIS.

6. Please be advised that the Municipality requires that County Road 29 will need to be widened southbound leading and up to the intersection of Street One to provide a layby.

**Novatech: A southbound left turn lane is not warranted based on the analysis presented in the revised TIS. A left turn lane or lay-by is not proposed.**

7. Please be advised that the Municipality requires a northbound, right-hand turn lane from County Road 29 onto Street One.

**Novatech: A right turn taper is recommended along County Road 29 based on the revised TIS.**

8. Please be advised that the Municipality requires Strathburn Street to be fully upgraded to a local cross section from Street Two to Malcolm Street including a minimum 1.5 metre sidewalk. It is noted that any sidewalks cannot be impeded by guardrails/culvert infrastructure on Strathburn Street and will need to be addressed to the Municipality's satisfaction.

**Regional Group: It is our opinion that the request to fully upgrade the Strathburn Street cross section from Street Two to Malcolm Street is not a developer requirement. The requested works are not local services as they are not within the site's frontage, are located on a collector roadway, and provide system connectivity for the greater community. Additionally, the desired works are not feasible within the current right-of-way protection and would require land acquisition from properties not associated with the development. The works will also necessitate the widening of a large municipally owned concrete drainage structure. Should Staff wish to pursue the requested works, we are of the opinion that the works should be paid for by the Municipality. A separate memorandum, dated January 11, 2024, was provided for the Municipality's consideration regarding the upgrades to municipal infrastructure on Malcolm Street concurrent to the subdivision work.**





**Municipality of Mississippi Milles – Memo – Water Servicing – Buildout Timing and Fire Flow Requirements (February 4, 2024)**

**Planning Department**

1. As originally stated, the Municipality is satisfied that 50 units can be constructed and occupied with a single offsite watermain feed as an interim condition.

**Novatech: Noted.**

2. For the requested additional 25 units (in addition to the 50 units), the Municipality is in agreement that these additional units could be constructed and occupied while being connected to the same single offsite watermain feed on the condition that that the water service along Street Five has been constructed and is able to be connected to the water service from the river crossing. Additionally, the applicant's engineer must confirm that fire flow as per the Ontario Building Code is available to all hydrants on the dead end watermain. The Municipality is happy to work together on the coordination of the timing of the water service and river crossing.

**Novatech: Noted. The watermain analysis has been completed for the single offsite watermain feed and demonstrates that the minimum fire flows required per the Ontario Building Code are able to be supplied to the hydrants on the dead end watermain.**

3. In addition to the above, please see the comments below from the Building Department regarding the OBC fire flow calculations and figures.

Step 2 – OBC A-3.2.5.7. 3.a. V = total building volume in cubic meters

- Applicant will need to confirm building volumes as scaled measurements of the provided drawings indicate the values listed are undersized.

**Novatech: Areas were confirmed to be within +/-1m<sup>2</sup> of the areas provided in the report and did not impact the calculation results for required fire flow. Areas and volumes have been updated to include the spaces occupied by exterior walls. A revised copy of the memorandum has been included in Appendix D of the Serviceability and Conceptual Stormwater Management Report.**

- Building volumes are to include the spaces occupied by the exterior walls or to centerline of fire walls. See definition of "building area" in OBC.

**Novatech: Noted. Volumes have been updated to include the spaces occupied by exterior walls. A revised copy of the memorandum has been included in Appendix D of the Serviceability and Conceptual Stormwater Management Report.**



- Note: Effective building height is assumed accurate as there are no elevations provided to confirm.

**Novatech: Noted. Effective building height includes the basement (+/-3m) and all storeys above grade (+/-3m per storey), and the distance from the uppermost storey to the centroid of the attic space (+/-2.6m).**

Step 5 - Bungalows can use 1800 L/min per OBC A-3.2.5.7. Table 2 for single storey buildings not exceeding 600 m<sup>2</sup>.

**Novatech: Noted.**

Step 7 - Based on the existing data (which needs to be confirmed per items above), many of the models are indicated appear to exceed the water supply needed, including singles; however, this needs to be confirmed by the applicant.

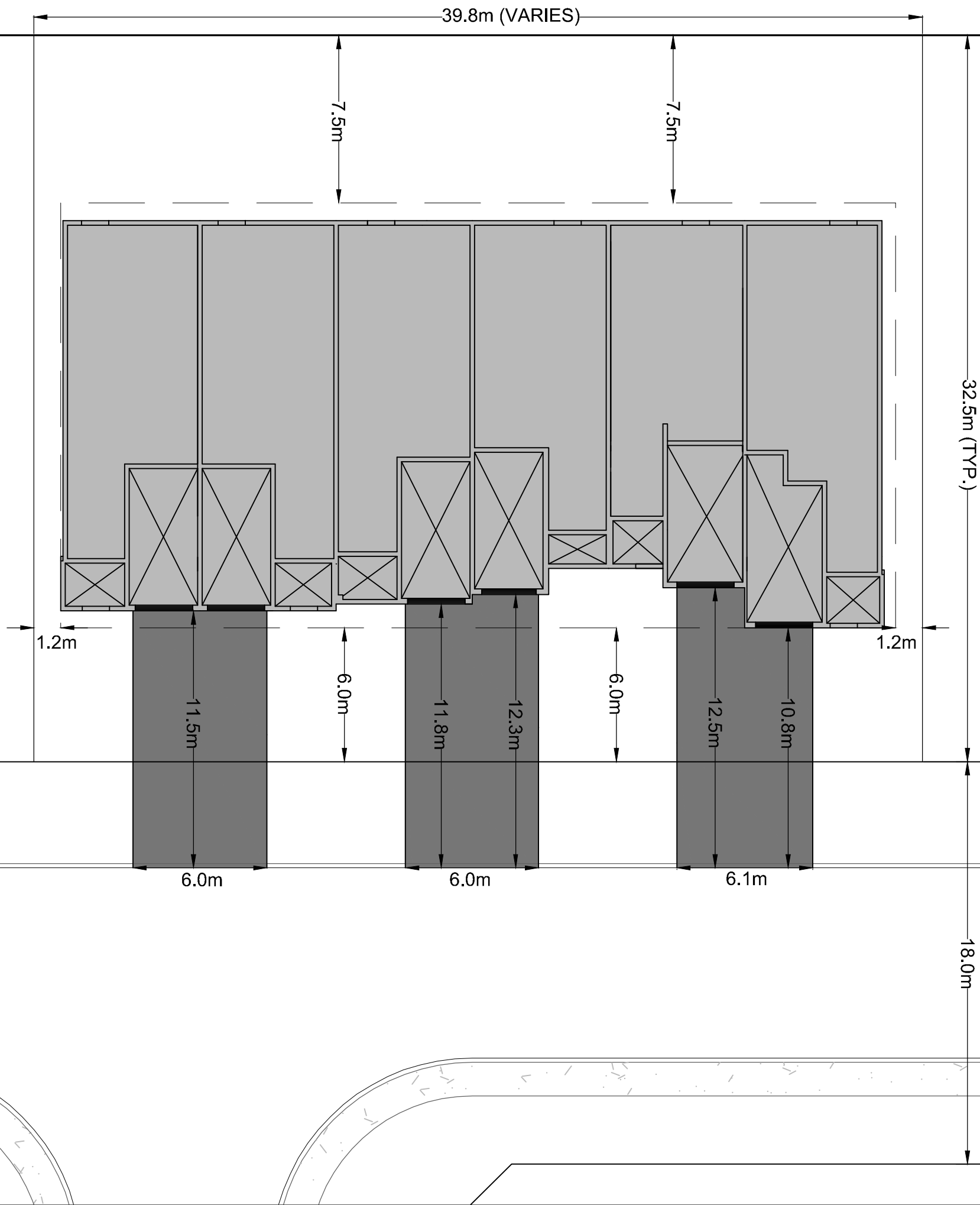
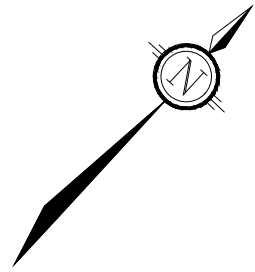
**Novatech: Step 7 of the OBC Water Supply for Firefighting Calculation spreadsheet is the required volume of water required for fire protection. This volume is used for buildings where a municipal water supply is not available. Where a municipal water supply is present, the system can provide large fire flow volumes so the limiting factor for consideration of during the design of the water network is the minimum supply flow rate that is required (Step 5).**

Best regards,

**STRATHBURN ALMONTE REGIONAL INC.**  
c/o the Regional Group

Evan Garfinkel  
Manager, Land Development

Encl: Figure SP-1, February 2024 – “Typical Site Plan – 6-unit (6-1) Two-Storey Townhome Block”  
Figure SP-2, February 2024 – “Typical Site Plan – 42’ Unit (Sawgrass ‘A’ 2019)”



## LEGEND

- PROPERTY LINE
- - - - - ZONING SETBACK



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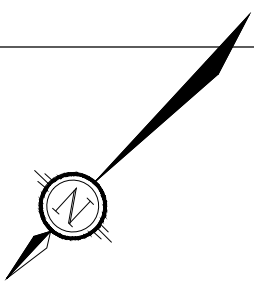
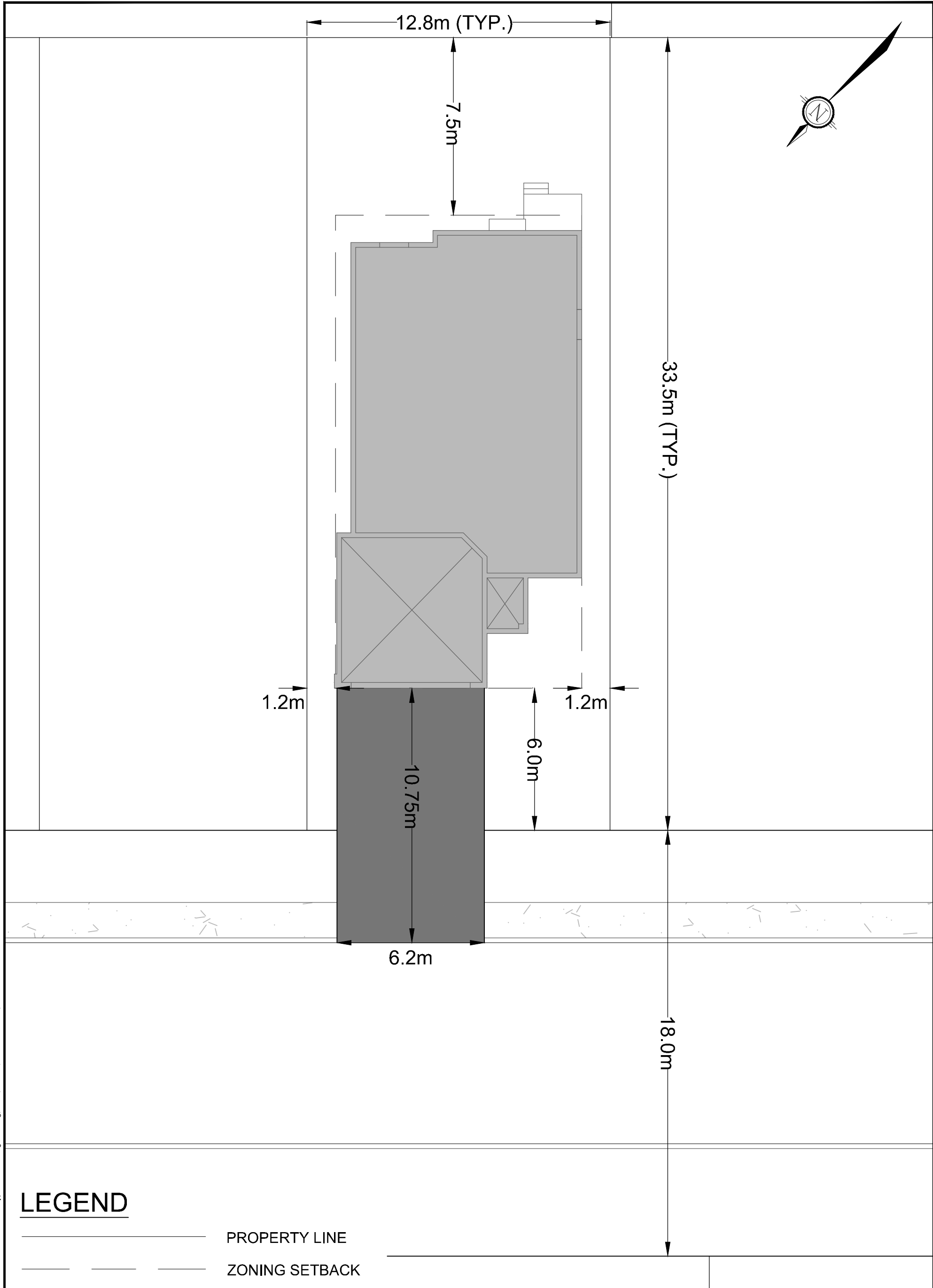
MUNICIPALITY of MISSISSIPPI MILLS  
 BROWN LANDS

TYPICAL SITE PLAN - 6-UNIT (6-1)  
 TWO-STOREY TOWNHOME BLOCK

SCALE 1 : 200

DATE FEB 2024 JOB 118178 FIGURE SP-1

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### LEGEND

- PROPERTY LINE
- - - - - ZONING SETBACK



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MUNICIPALITY of MISSISSIPPI MILLS  
 BROWN LANDS

TYPICAL SITE PLAN - 42' UNIT  
 (SAWGRASS 'A' 2019)

SCALE 1 : 150

DATE	JOB	FIGURE
FEB 2024	118178	SP-2

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