MTE Consultants
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October 21, 2021

MTE File No.: 46037-100

Ms. Annette Simpson, B.A., C. Tech.
Senior Engineering Technologist Capital Works
Development and Infrastructure Division
City of Burlington
426 Brant Street, PO Box 5013
Burlington, ON L7R 3Z6

Dear Ms. Annette Simpson:

RE: Site Engineering Comments (2nd Submission) – 2294 & 2300 Queensway Drive

Thank you for your comments dated April 30, 2021 with regards to the development at 2294 & 2300 Queensway Drive in the City of Burlington. We have reviewed your comments and offer the following in response:

1.3 Stormwater Management

1. Section 1.2 does not reference the City's Stormwater Management Design Guidelines, please reference and consult for the SWM design of the site.

Response: *Section 1.2 now references the City's Stormwater Management Design Guidelines. Refer to FSR & SWM Report.*

2. Table 2.3, for catchment 203 states "uncontrolled roof and landscape drainage to the south", there should be no uncontrolled roof drainage to the south, all hard surfaces are to drain to the sites storm sewer system. This might be a typo? Drawing F2.2 looks to show no uncontrolled roof drainage but we want to ensure it is clear in all areas of the report.

Response: *Table 2.3 has been updated. There are no uncontrolled roof areas draining to the south.*

3. Originally there was a French drain system proposed to control stormwater for flankage and rear yards (east, south and west perimeter areas), this has been eliminated, why? We acknowledge that soil conditions may prove challenging for infiltration, may have longer than 48 hour draw down times, however we would ask that controls be reinstated to ensure that the development controls all it's own stormwater. As per Section 5.1.1 of the City's Stormwater Management Design Guidelines, "Lot grading for development sites shall be self-contained and prevent spills onto adjacent properties."

Response: *French Drains have been added. Refer to Dwg. C2.1.*

4. Is the MTO agreeable to the Brentwood stormwater storage system? Our experience has been that the MTO does not accept non-traditional storage, please confirm with the MTO and if necessary update report to confirm SWM is feasible.

Response: *Confirmed with MTO via email correspondence that Brentwood stormwater storage system is acceptable. Refer to Dwg. C2.2 as well as correspondence in Appendix D.*

5. Similar to above our experience is that the MTO requires a min. 5m orifice tube in the municipal ROW, please confirm the MTO requirements and update report if necessary.

Response: *Confirmed with MTO via email correspondence that 5m orifice tube is required within municipal right-of-way (ROW). A redundant MH (MH7) has been added at the MTO 7.5m setback line and a secondary 5m-75mm orifice tube downstream of MH7, to ensure the orifice tube is fully with the ROW. The location of the MH and orifice tube has been approved by MTO, refer to correspondence in Appendix D as well as Dwg. C2.2.*

6. Appendix A, Design Storm Information and Allowable Release Rate table contains old IDF information, please update to current City Standards: https://www.burlington.ca/uploads/92/Doc_637285861251414490.pdf

Response: *IDF parameters have been updated. Refer to FSR & SWM report.*

1.4 Servicing & Grading

MTE Preliminary Site Grading and Sediment and Erosion Control Plan, Drawing C2.1, revision 2, signed and dated 2021-04-21:

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1. Erosion Control will be reviewed at the site plan/subdivision stage, and comments provided then, However please be advised that heavy duty erosion control fence will be required, as per OPSD 219.130 or equivalent. Additionally the erosion control fence should go across the entire frontage of Block 4, without breaks at the proposed driveways (they will be constructed last) as the entrance with the mud mat should be used to construct the site.

Response: *Noted. Erosion control fence has been updated and continues across the entire frontage of Block 4. Refer to Dwg. C2.1.*

2. Please clearly note (and identify if possible) that all hard surface drainage (roofs/pavement/sidewalks/etc.) are to drain to the sites storm system and outlet to the Queensway Drive Municipal Storm Sewer, no flows from pavement or roofs will be directed to rear or side yards.)

Response: *All hard surface drainage is to drain to the Queensway Drive Municipal Storm Sewer, no flows from pavement or roof areas will be directed to rear or side yards. Refer to FSR + SWM report* ***Section 2.3*** as well as drawing C2.1.

3. The rear yards of Blocks 1, 2 and 3 are proposed to drain uncontrolled to neighboring properties, when a property redevelops it needs to control it's own drainage, originally there was a French drain system proposed, which has since been eliminated. Please demonstrate how the site controls all of it's own stormwater, it cannot drain uncontrolled onto neighboring properties. Please also see SWM report comments above.

Response: *French Drains have been added at rear yards of Blocks 1,2 and 3.*

4. The municipal curb and gutter and sidewalk across the frontage of the site will need to be removed and replaced to provide depressions for the proposed driveways and approach, additionally the curb stops at the sidewalk and restarts afterwards as per City Standard Drawing S-110 or S-112, this can be revised at the site plan stage, just an advisory at this point.

Response: *Noted. City Standard reference added to Grading Plan, refer to Dwg. C2.1.*

5. Where is a potential location for a community mailbox? Please identify on the drawing, it cannot be located in a snow storage area or in the 7.5m deemed ROW block. The ICON drawing A001 shows it between the two transformers at the front of Block 4. At the site plan stage Canada Post will need to confirm it is an acceptable location, we are agreeable to leaving this to the Site Plan stage to finalize, if planning staff are agreeable as well.

Response: *Refer to site plan. Community mailbox is located between the transformers. Mailbox also shown on MTE Dwg. C2.1.*

6. Is it possible to increase the driveway slope to min. 2%? The opening elevations of the garages /outside grades of the units need to be min. 200mm higher than the front lot grade. The grading details are still to be finessed at the site plan stage, just need confirmation that it's feasible to do.

Response: *Driveway slope increased to min. 2%. Refer to Dwg. C2.1.*

7. The swale bases need to be min. 200mm lower than the outside grade of the unit and the outside grade of adjacent buildings and/or at neighboring property lines to ensure drainage from the proposed development is contained within the proposed development limits. The grading details are still to be finessed at the site plan stage, just need confirmation that it's feasible to do.

Response: *Swale base is now min. 200mm lower than the outside grade of the unit and property line.*

8. Further to above, please have the Civil consultant look at the landscape plans to ensure that the proposed trees/hedges required for headlight mitigation will not conflict with the proposed swales. We acknowledge that this is early design stages, and grades will be finessed at the site plan stage, but it's also a really tight site, so we need to know that there is room for everything at this stage to confirm feasibility of the project.

Response: *We confirm the landscape plan does not conflict with the proposed swales.*

9. At the site plan stage we will look for bottom of curb elevations at both sides of the entrance at the property line at the highpoint, overland flow route is critical and we need to ensure all hard surfaces will drain to the Queensway ROW and not into houses or neighboring properties.

Response: *Grading plan was updated to show additional grade tags as requested.*

10. Does the transformer pad encroach into the 7.5m deemed ROW block?, if so please reconfigure as the 7.5m block needs to be free and clear above and below ground, as this area is the deemed Right of Way for Queensway Drive.

Response: *Transformer pads do not encroach into the 7.5m ROW block. Refer to site plan.*

11. Please clearly identify the proposed noise wall on the drawing.

Response: *Noise wall identified on Dwg. C2.1. Also refer to Site Plan, Landscape Plan and Noise Report for details.*

12. Please eliminate the proposed (garbage) concrete pad in the City's right of way(ROW), we have confirmed with Roads Parks and Forestry staff that a concrete pad in the ROW is not supportable, as there are maintenance and liability issues.

Response: *Garbage concrete pad has been eliminated.*

13. Please label the 7.5m block as deemed right of way, it can also be labeled 7.5m MTO setback.

Response: *Labeled as 7.5m MTO setback. Refer to Dwg. C2.1.*

14. We acknowledge that this is an early design stage, and that grading will be closely looked at the site plan stage, but it is a unique site without a lot of green space and reduced east/west/south setbacks, so it needs to be demonstrated that everything can fit within the tight development limits.

Response: *Noted. Dimensions have been added in backyards for clarity.*

MTE Preliminary Site Servicing Plan, Drawing C2.2, revision 2, signed and dated 2021-04-21:

1. For "X8" Is there correspondence from Bell and Gas confirming that they agree (in principal, details to be worked out) to raising/lowering their lines? We need a copy of the correspondence to confirm the servicing of the site is feasible, as it was not feasible on sites further east.

Response: *Correspondence from Bell and Gas will be provided by owner.*

2. AD1 and AD2 need to drain to the site's storm system, it can't drain uncontrolled to the neighboring properties.

Response: *AD2 removed. AD1 now drains to the site's storm system. Refer to Dwg. C2.2.*

3. There are no storm services shown to the units, all the roof drainage has to be accommodated in the site's stormwater system, and if downspouts proposed they must drain to a permeable surface, which is limited at the front of the units. On another similar site MTE worked on further east, each unit had it's roof rainwater leaders connected to the storm sewer. We acknowledge that it is early design stages, but it must be clearly demonstrated that all hard surfaces will drain to the site's stormwater management system.

Response: *No downspouts are proposed to discharge to hard surfaces. Each unit will have its own storm lateral that will ultimately discharge to the existing storm sewer within Queensway Drive. All hard surfaces will drain to the site's stormwater management system, ultimately discharging to Queensway Drive municipal sewer system.*

4. A Brentwood underground stormwater storage tank is proposed, our experience is that the MTO does not support use of non-traditional stormwater storage on sites that require an MTO Land Use Permit, we have not received a copy of the MTO comments yet, and need their confirmation of no-objection to the proposed storm tanks. This needs to be confirmed at the RZ/OPA stage to determine feasibly of the proposed development. If the Brentwood system is not supported by the MTO, is there room for traditional stormwater storage on the site? it would need to be demonstrated on a revised drawing.

Response: *Confirmed with MTO via email correspondence that Brentwood stormwater storage system is acceptable. Refer to Dwg. C2.2 & correspondence in Appendix D.*

5. A 100mm short orifice tube with eccentric expander is proposed for the storm sewer quantity control, the SWM section of the FSR was not provided with the submission and it is our experience that the MTO requires the orifice tube to be located within the municipal right of way and be a minimum 5m length, , we have not received a copy of the MTO comments yet, and need their confirmation of no-objection, and we also need the SWM section of the FSR and a detail for the eccentric expander to confirm if the proposed orifice control would meet City requirements. Please note that Section 5.2.5 of the City's Stormwater Management Design Guidelines states "The City of Burlington approves the use of orifice pipes for this purpose to eliminate the possibility of the ICD being physically removed". Please also note that Section 6.1.1.1 of the City's Stormwater Management Design Guidelines states "A minimum orifice diameter of 75 mm is allowable for flow restrictors, to prevent clogging".

Response: *100mm short orifice tube has been changed to 75mm orifice pipe, 5.5m in length. Confirmed with MTO via email correspondence that 5m orifice tube is required within municipal right-of-way (ROW). A redundant MH (MH7) has been added at the MTO 7.5m setback line and a secondary 5m-75mm orifice tube downstream of MH7, to ensure the orifice tube is fully with the ROW. The location of the MH*

and orifice tube has been approved by MTO, refer to correspondence in Appendix D as well as Dwg. C2.2.

6. Please provide a detail for the eccentric expander.

Response: *Detail for eccentric expander has been added. Refer to Dwg. C2.2.*

7. Further to above, and as per first submission comments the length of pipe between CBMH2 and MH1 is just over 5m length, can the whole length of pipe be the orifice to avoid the transition in size? And also as mentioned above the orifice may need to be moved to the ROW, and if so it would still be the responsibility of the condo corporation, not the municipality, there would be language in the subdivision site plan agreements to reflect.

Response: *Yes, pipe between CBMH2 and MH1 is now 75mm to act as an orifice and to avoid the transition in size. Refer to Dwg. C2.2.*

8. MH1 – EF4, is this an OGS? Please ensure the Canadian ETV certification is included in the SWM appendix of the FSR when submitted.

Response: *Correct, MH1 – EF4 is an OGS. Canadian ETV certification is included in the SWM appendix of the FSR.*

9. Is the transformer concrete pad extended into the 7.5m block? The 7.5m block has to remain free and clear. All private utilities for the sole use of the proposed development have to be located on site.

Response: *All private utilities are located on site. Refer to Site Plan.*

10. The concrete garbage pad in the municipal right of way is not supported by staff, we have confirmed with RPF, as it poses a maintenance and liability risk to the City. If curbside collection is a requirement for the Region it may just need to be on a grass boulevard. Please revise the design to eliminate the concrete pad. Please confirm with the Region their waste collection requirements, it may be that private collection will be needed for this site.

Response: *Concrete garbage pad has been removed.*

11. Are there basements or foundations that require foundation drainage? If not please clearly note on drawing “no basements/no foundation drainage required”, in whatever wording you deem appropriate. If foundation drainage is required, due to POTLs proposed each unit would require it’s own sump pump and connection to the storm sewer.

Response: *No basements are proposed. A note has been added to the drawings. Refer to Dwg C2.2.*

12. Please clearly identify the proposed noise wall on the drawing.

Response: *Noise wall shown on Dwg. 2.1. Also refer to Site Plan.*

13. Please label the 7.5m block as deemed right of way, it can also be labeled 7.5m MTO setback.

Response: *Labeled as 7.5m MTO setback. Refer to Dwg. C2.1 & C2.2.*

14. Advisory: At the site plan stage a details page of all the specifications/standards referenced on the drawings will need to be included in the engineering package.

Response: *Noted.*

MTE Preliminary Cross Sections Plan, Drawing C2.3, revision 2, signed and dated 2021-04-01:

1. Drawing may need to be updated with April 5, 2020 locate information that was emailed, please confirm the locate/elevation information shown on the drawing is the most up to date information.

Response: *Drawing is up to date with April 5, 2020 locate information. Refer to Dwg. C2.2.*

2. At the site plan stage when details are worked out, if there is subdrain at the bottom of the retaining wall required, it will need to have an appropriate on-site outlet.

Response: *Noted.*

3. Section D-D, base of swale need to be min. 200mm lower than ex. grades on adjacent properties.

Response: *Base of swale is min. 200mm lower than ex. grades along property line.*

4. Section F-F, site cannot drain onto neighboring property, site needs to control it's own runoff, a swale along the east property line is required, with an appropriate outlet, please show on the detail to confirm there's room for all elements of the back yard, i.e. stairs and enough room at the bottom of the stairs for a person to walk. Swale base needs to be min. 200mm lower than adjacent property grade.

Response: *French Drain has been added.*

5. What is the dimension between the bottom step and the property line? does it meet min. OBC requirements?

Response: *Dimension between bottom step and property line is 1.7m behind block 1-2 and 2.8m minimum behind block 3. Refer to Dwg. C2.1 and Site Plan.*

6. Please show the french drain system, if re-implemented on the sections, including dimensions.

Response: *French Drain system has been added.*

We trust the above response to be satisfactory in addressing your comments and we thank you for your continued cooperation in processing this application. Please contact the undersigned should you have any questions.

Yours Truly,

MTE Consultants Inc.



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