



**INFRASTRUCTURE AND ENGINEERING SERVICES
INFRASTRUCTURE PLANNING AND DEVELOPMENT ENGINEERING**

September 13, 2023

MEMO TO: Ferdi Toniolo, Senior Planner
FROM: Paul Guerreiro, Manager of Engineering - Site Plans and Site Alterations
SUBJECT: ZBLA-23-0010 (Zoning By-Law Amendment) - Submission #1
OPA-23-0006 (Official Plan Amendment)
Collecdev (8868 Yonge) LP
8868 Yonge Street

The Development Engineering Division has reviewed the above noted application. The applicant/consultant shall confirm that all comments noted below have been addressed by ensuring each box is checked off, initialed and included with the next submission.

Zoning Bylaw Amendment (ZBLA-23-0010)
Official Plan Amendment (OPA-23-0006)

Functional Servicing Report - Please contact Annie Kwok, Development Engineering Programs Coordinator at (905) 771-2456 if you have any questions or concerns.

Below to be addressed for Zoning By-law Amendment Application:

Initial/Check box	Comments
<input type="checkbox"/>	The subject lands are located within the UMESP study area. The FSR shall include a section to address conformity to the recommendations in the Urban MESP for the City growth centers and corridors and shall, without limitation, address adequacy of the storm, sanitary and water systems, stormwater management including development impacts to groundwater and surface water resources. The FSR shall also include supporting Geotechnical, Hydrogeological and Water Balance studies in accordance with the recommendations of the City's Urban MESP. Currently the City is undertaking an update to the water and wastewater components of the UMESP. The timing for these system improvements will be tied to the development activity in the area.
<input type="checkbox"/>	STORM: Update SWM section calculations to conform to City's Standards. Coordinate the information with the architect and provide updated FSR and drawings for review. Any impacts to the U/G parking shall be addressed through the ZBLA application. If no impacts to the U/G, then detailed design to be addressed through the future Site Plan Application.

Initial/Check box	Comments
<input type="checkbox"/>	SANITARY: Schaeffers provided a sanitary drainage assessment of the downstream system based on City's Standards and Specifications Manual. However, the City's model and UMESP indicates existing capacity constraints in the downstream system. For the ZBLA application, FSR to identify a viable solution for sanitary servicing of the proposed development, either by upgrading the downstream sanitary sewers (Project #SAN_030A) or servicing the development from a separate sanitary drainage system located east of Yonge street which does not have capacity constraints. If upgrading the existing system, please include provisions for other intensification projects that will also be serviced through the proposed infrastructure and will be required to enter into a Servicing Agreement with the City. Detailed design to be addressed through the Servicing Agreement and/or the Site Plan Application including the CLI-ECA submission.
<input type="checkbox"/>	PERMANENT DEWATERING: Draft zoning by-law amendment indicates "nil" for the below grade setback. Please coordinate with planner, hydrogeologist and architect to verify if "nil" means 0.0m setback. Refer to redlined comments. For the permanent dewatering system, please verify below and indicate if any impacts to the U/G Parking and proposed setbacks: <ul style="list-style-type: none"> ▪ permanent dewatering volume and storage requirements in U/G; ▪ pre-treatment of GW prior to discharge into storm sewer system; ▪ method proposed for permanent dewatering i.e. foundation drains to sump pumps?
<input type="checkbox"/>	Address redlined comments.

Below to be addressed at the detailed Site Plan Application stage

Initial/Check Box	Comments
<input type="checkbox"/>	WATER: Adjacent private coordinate with adjacent development's engineering consultant. 8888 Yonge St. (D06-12066) in process of replacing the watermain in Westwood Lane from 150mm dia. To 200mm dia., updated flow test results will be required at the 1 st submission detailed Site Plan Application stage to verify adequate water supply and pressure exists to service proposed development for all demand conditions.
<input type="checkbox"/>	Detailed servicing, grading, ESC, SWM design, shoring design, temporary construction dewatering, construction and traffic management, etc.

Comments based on: FSR prepared by Schaeffers Consulting Engineers dated May 2023.

Transportation and Traffic - Please contact Irfan Akram, Senior Transportation Planner, at (905) 771-2548 if you have any questions or concerns.

Site Plan

Initial/Check Box	Comments
<input type="checkbox"/>	As per City's design standard, the minimum curb radii for all driveways is 9.0m.
<input type="checkbox"/>	A Pavement Marking and Signage Plan should be included in the submission illustrating stop signs, stop bars, fire route signs, accessible parking spaces, etc.
<input type="checkbox"/>	Depressed curbs shall be provided at crosswalks and accessible parking spaces.
<input type="checkbox"/>	Snow storage area(s) shall be identified on the site plan.
<input type="checkbox"/>	Illustrate the 4.5m by 4.5m daylight triangle at the Westwood Lane and Rosewater Street intersection as well as the site driveway.
<input type="checkbox"/>	Confirm the 15% downgrade from the surface to parking level 1 is heated. As per City Standards, a maximum grade 15% grade is permitted for indoor and heated outdoor grades, and 10% for outdoor non-heated grades.
<input type="checkbox"/>	Please provide the dimensions of the temporary-T turn around at the southern terminus of Rosewater Street. Ensure it meets the standards as set out in Dwg No. C-24 of the City's Standards and Specifications Manual.

Parking Comments

Initial/Check Box	Comments
<input type="checkbox"/>	To support the reduced parking rates, please survey the east block to determine parking demand rate and apply the observed rate to the west block.
<input type="checkbox"/>	Overall, the proposed parking supply is acceptable. However, the proposed one-bedroom parking rate of 0.75 spaces per unit is considered low. Please increase the one-bedroom rate and, in order to maintain the proposed parking supply, the two-bedroom and three-bedroom parking rates can be decreased. Any tandem spaces should not be included in the proposed supply, that is, two car spaces placed in tandem is considered one space. Agreed vehicle parking rates should be included in the draft Zoning By-law.
<input type="checkbox"/>	The City will permit up to 10% of resident spaces to be allocated as small car spaces with minimum dimensions of 2.4-2.75m in width and 4.8-5.8m in length.
<input type="checkbox"/>	<p>Electric vehicle ownership is growing at an exponential rate and is the future standard of private automobile ownership. It is therefore recommended that the site provide more EV charging station spaces at the following rates:</p> <ul style="list-style-type: none"> a. 100% of all residential spaces should be EV ready, that is, a Level 2 electrical outlet on the wall of each resident space with the appropriate voltage (4-share or 3-share on a 40A circuit) for residents to plug in their charging adaptor for their specific EV. b. 20% of all resident visitor spaces should be EV ready as described above. The remaining 80% of resident visitor spaces should be EV capable, that is, with an electrical rough in to each space and power room capacity. <p>An Energy Management System should be considered as part of the system implementation. Also, please note that the percentages listed above are subject to change based on the City's ongoing review of parking standards.</p>
<input type="checkbox"/>	In Section 6.1.1, identify the number of accessible parking spaces proposed and confirm it meets the City's municipal code.

TDM Comments

Initial/Check Box	Comments
<input type="checkbox"/>	Please provide bike parking at a rate of 0.6 spaces per unit resulting in 259 spaces, with 5% of spaces located at-grade. Include this bicycle-parking rate in the draft Zoning By-law. Please also provide an on-site bicycle repair station.
<input type="checkbox"/>	Please strongly consider the provision of Uber or Lyft gift cards to new owners as a way of promoting on-demand ride-share services as a viable alternative to owning a vehicle.
<input type="checkbox"/>	The applicant will undertake TDM Monitoring Initial Surveys with residents at 50% occupancy and report back to City staff within 2 months of reaching this occupancy rate. The Owner will coordinate with the City for list of survey questions. Securities of \$2,500 are required to undertake the initial survey. The cost related to the TDM monitoring surveys should be identified in the TDM cost summary table.
<input type="checkbox"/>	The applicant will undertake TDM Monitoring Follow-Up Surveys two years after the Initial Surveys and report back to City staff within two months. The Owner will coordinate with the City for list of survey questions. Securities of \$2,500 are required to undertake the Follow-Up Surveys. The cost related to the TDM follow-up monitoring surveys should be identified in the TDM cost summary table.

Site Circulation Comments

Initial/Check Box	Comments
<input type="checkbox"/>	Update the waste collection AutoTURN analysis to reflect the vehicle dimensions outlined in the City of Richmond Hill Standards and Specifications.
<input type="checkbox"/>	Complete AutoTURN swept path analysis for fire trucks navigating the designated fire route, and for personal vehicle navigating the site access and entry ramp.

Noise Comments

Initial/Check Box	Comments
<input type="checkbox"/>	As requested in the pre-submission requirements, submit a Noise Study in support of the development proposal.

Comments based on Transportation Mobility Study, prepared by Dillon Consulting, dated June 2023.

Hydrogeological - Please contact Natalia Codoban, Environmental Engineer Hydrogeologist at (905) 771-5447 if you have any questions or concerns.

We have reviewed a hydrogeological investigation report dated March 28, 2023 prepared by Groundwater Environmental Management Services (GEMS) and provide the following comments:

Initial/Check Box	Comments
<input type="checkbox"/>	<p>Please note that dewatering estimates and Zones of Influence from short-term and long-term dewatering provided in Section 7 appear to be excessive. The City of Richmond Hill prefers to limit the impacts to structures associated with dewatering. Please consider designing a watertight structure or implementing other measures (e.g., caisson walls, etc. around the development perimeter) to reduce dewatering volumes and mitigate long-term dewatering impacts to structures. The City will be looking for this commitment at the Site Plan application stage.</p>
<input type="checkbox"/>	<p>Please include evaluation of regional hydrogeological conditions and description of watercourses for a 500-m buffer zone around the Site in Sections 1, 4 (physiography and bedrock discussion), 4.2 (discussion re: surface water features), 8.1 and 9, in a revised hydrogeological report; description of well records for a 500-m buffer zone was provided in Section 8.2. This is required for evaluation of contaminant plume migration (if applicable), impacts to water well users, natural heritage features and structures associated with dewatering activities in vicinity of the Site.</p> <p>The following guidance documents provide information regarding a 500-m evaluation zone for hydrogeological studies:</p> <ul style="list-style-type: none"> • 'Hydrogeological Assessment Submissions: Conservation Authority Guidelines for Development Applications' (June 2013), which can be downloaded at: https://www.lsrca.on.ca/Shared%20Documents/permits/hydrogeological%20guidelines.pdf?pdf=Hydrogeological-Guidelines • 'Technical Guidance Document for Hydrogeological Studies in Support of Category 3 Applications', which can be downloaded at: https://www.ontario.ca/page/technical-guidance-document-hydrogeological-studies-support-category-3-applications
<input type="checkbox"/>	<p>Please correct the geographical reference of the Site in Section 2.1 'Location and Land Usage'. The Site is located approximately 160 m <i>west</i> (not <i>east</i>) of Yonge Street.</p>
<input type="checkbox"/>	<p>Please provide the rationale for selection of well screen intervals for monitoring wells BH101 through BH105, in Section 3.1 'Drilling Program'. Was any design information available at the time of drilling?</p>
<input type="checkbox"/>	<p>Please correct the depth of boreholes in Table 4.1A 'Borehole Details' as per borehole logs included in Appendix B:</p> <ul style="list-style-type: none"> • BH101: depth is 20.4 mbgs; • BH102: depth is 20.4 mbgs; • BH103: depth is 20.4 mbgs; • BH104: depth is 20.4 mbgs; • BH105: depth is 31.1 mbgs (elevation of 169.95 masl, not 169.89 masl). <p>If borehole logs were updated, please revise details in Table 4.1A using the most recent logs.</p>
<input type="checkbox"/>	<p>Please review and revise the well depths (mbgs and masl) for wells in Table 4.1A 'Borehole Details' as details do not match with those provided in Tables 4.2 and 4.3. If borehole logs were updated, please revise details in Table 4.1A using the most recent logs.</p>

<input type="checkbox"/>	<p>Please update soil descriptions in Table 4.1B ‘Site Stratigraphy’, as per the following details:</p> <ul style="list-style-type: none"> • Depth of topsoil / gravel: revise to ‘up to 0.15 m bgs’; • Description of fill: revise to ‘comprised of compact, moist, brown gravelly sand to clayey silt, trace gravel’; • Depth of silty clay / clayey silt / silt: this layer was encountered in five boreholes at elevations ranging from 200.04 masl (0.8 mbgs) in BH101 to 199.49 masl (1.5 mbgs) in BH104; • Depth of clayey silt till: this layer was encountered in all five boreholes, at depths ranging from 10.9 mbgs (190.09 masl) in BH104 to below 31.1 mbgs (169.95 masl) in BH105; • Depth of bedrock: revise to 31.1 mbgs. <p>If borehole logs were updated, please revise details in Table 4.1B using the most recent logs.</p>
<input type="checkbox"/>	<p>Please make the following revisions in Section 4.2:</p> <ul style="list-style-type: none"> • Revise elevations of Halton Till to 193.36 – 198.66 masl (2.3 – 7.6 mbgs) and Oak Ridges or equivalent unit to 188.50 – 198.66 masl; • Add a reference to the ORMGP cross-section (included in Appendix C) in paragraph 1; • Revise the excavation depth to 11 mbgs in paragraph 2 (based on depths discussed in Section 2.2); • Correct the maximum depth to 31.1 mbgs (elevation of 169.95 masl).
<input type="checkbox"/>	<p>Please update references for water streams in Section 4.2:</p> <ul style="list-style-type: none"> • Pomona Creek, a tributary of East Don River, described in the report; • East Don River, located 1.4 – 1.6 km west to southwest of the Site; • German Mills Creek, flowing approximately 1.0 – 1.5 km northeast of the Site.
<input type="checkbox"/>	<p>Please correct the hydraulic conductivity results for SWRT#1 for well MW103 to 5.3×10^{-8} m/sec, as per results included in Appendix D.</p>
<input type="checkbox"/>	<p>Please provide details in Section 4.5 ‘Groundwater Quality’:</p> <ul style="list-style-type: none"> • Whether filtered or unfiltered groundwater sample was collected from well MW102 in February 2023; and • Describe what type of treatment is expected to be implemented for groundwater discharge to meet the Region of York storm sewer criteria for short-term and long-term discharge purposes.
<input type="checkbox"/>	<p>Please make revisions in Sections 5 and 6:</p> <ul style="list-style-type: none"> • Provide sketches showing breakdown of impervious and pervious areas for pre-development and post-development scenarios, included in Tables 5.1 and Table 6.1 of the report; • Correct the infiltration rate for pervious area in Table 5.7. The estimate should be 418 m³/year (not 4418 m³/year); • Correct the infiltration rate and runoff in paragraph preceding Table 6.2, as this wording does not match details in Table 6.2; • Revise the infiltration increase from pre-development to post-development conditions, which is 298 m³/year or approximately 71% (not 170%) in Section 6.2.

<input type="checkbox"/>	<p>Please revise short-term construction dewatering details in Section 7.1:</p> <ul style="list-style-type: none"> • Highest ground surface elevation to 201.05 masl for BH-105 (as per Table 4.1A); • Maximum anticipated groundwater elevation to 195.99 masl for BH-103 (as per Table 4.3)
<input type="checkbox"/>	<p>Please correct the reference to the MECP water well records (Appendix G, not Appendix E) in Section 8.2.</p>
<input type="checkbox"/>	<p>Section 8.1 'Regulated and Sensitive Areas' discusses source water protection policies and TRCA regulated areas for the Site.</p> <p>The Site and the Study Area are located within an area of highly vulnerable aquifer with score "6". TRCA-regulated area associated with Pomona Creek is located approximately 230 m - 330 m southwest of the Site, within a 500-m buffer zone of the Site.</p> <p>The Site and the Study Area are not located within:</p> <ul style="list-style-type: none"> • Intake protection zone; • Significant groundwater recharge area; • Wellhead protection areas Q1 and Q2; • Recharge management area Q; • Wellhead protection areas A, B, C or D; • Wellhead protection area WHPA-E (under the direct influence of surface water); and • "Area of high aquifer vulnerability" identified by the Oak Ridges Moraine Conservation Plan. <p>The above policy areas can be found at:</p> <ul style="list-style-type: none"> • Source Water Protection Information Atlas from the MECP: https://www.lioapplications.lrc.gov.on.ca/SourceWaterProtection/index.html?viewer=SourceWaterProtection.SWPViewer&locale=en-CA • York Maps: Source Water Protection: https://maps.york.ca/Html5ViewerPublic/Index.html?viewer=SourceWaterProtection.YorkMaps • TRCA: Regulated Area Search: https://trca.ca/planning-permits/regulated-area-search-v3/ <p>Please include the above wording in Section 8.1 as per the above-mentioned details, in an updated hydrogeological report.</p>
<input type="checkbox"/>	<p>Please make revisions to bullet points in Section 9 'Conclusion':</p> <ul style="list-style-type: none"> • The K-test results range from 5.3×10^{-8} to 6.6×10^{-5} m/s; • The groundwater elevations at the Site ranges from 194.13 to 195.99 masl during the monitoring carried out between February 1 and 17, 2023; • Water balance analysis has determined that infiltration will increase from 418 m³/year to 716 m³/year.

Figures

Initial/Check Box	Comments
<input type="checkbox"/>	Please include a 500-m buffer zone around the Site on Figure 1, as per comment #1. Names for Pomona Creek, which traverses the 500-m buffer zone, should be clearly visible within the buffer.
<input type="checkbox"/>	Please revise the name of the street north of the Site from 'Edgar Avenue' to 'Westwood Lane' and add the street name 'Sunnywood Crescent' present southwest of the Site on Figure 2.

Appendices

Initial/Check Box	Comments
<input type="checkbox"/>	Borehole logs (Appendix B) do not show well survey details and well screen intervals, included in Table 4.1A. Please update borehole logs to include these details, in a revised hydrogeological report.
<input type="checkbox"/>	Please include a plan view of the ORMGP cross-section (included in Appendix C), so it is clear which area this cross-section represents.
<input type="checkbox"/>	Please correct the C_4 constant from '4790' to '= 1 / 135' in Tables 1 and 2 (Appendix F), as $C_4 = 1/135$ is used for conversion of metric units; $C_4 = 4790$ is used for conversion of U.S. units in dewatering calculations in Powers (2007) dewatering textbook.

Please note that the following requirements will need to be addressed at the site plan application stage.

REQUIREMENTS FOR SITE PLAN APPLICATION

Initial/Check Box	Comments
<input type="checkbox"/>	<p>Please note that the Site is located within the Town's Urban Master Environmental Servicing Plan (Urban MESP) study area. At site plan stage, the Urban MESP report needs to be reviewed as a background document by GEMS. Conformity of the hydrogeological study to recommendations provided in the Urban MESP for the Town's growth centres and corridors needs to be addressed:</p> <ul style="list-style-type: none"> • The impact assessment and mitigation measures need to conform to the specific requirements for hydrogeological studies identified in recommendations of Section 3.3 of the Urban MESP. Please add a section to the final hydrogeological report to address this requirement. • The study will need to include an updated water balance assessment to evaluate measures to maintain groundwater recharge and protect water quality in the area in post-development conditions in accordance with the Source Protection Plan for the Toronto and Region Source Protection Area. Comments related to the water balance completed by GEMS for the Site are included under item #11 (Comments for OPA and ZBLA) and item #6 (Comments for Site Plan). <p>A copy of the Urban MESP is attached, for reference purposes.</p>
<input type="checkbox"/>	<p>Please prepare a hydrogeological cross-section using the soil stratigraphy details obtained from drilling of wells MW101, MW102, MW103, MW104 and MW105 and show seasonally high groundwater levels and proposed excavation depths for underground parking.</p>
<input type="checkbox"/>	<p>Please include details associated with active Permit to Take Water (PTTWs) with 1 km of the Site and discuss whether dewatering activities at the Site are expected to interfere with dewatering occurring as part of active PTTWs, at the time of the report preparation.</p>
<input type="checkbox"/>	<p>Please include review of EcoLog ERIS records or Phase Two ESA results (if available) discussing the contaminant potential for soil and groundwater at the Site and a 500-m buffer zone.</p>

<input type="checkbox"/>	<p>Please update dewatering calculations and hydrogeological report to address the following requirements:</p> <ul style="list-style-type: none"> • Obtain final building design plans and update dewatering calculations and report accordingly; • Confirm the raft slab elevation and update the excavation inverts in Table 5.1 (as required); • Confirm whether an impermeable shoring system is proposed to be installed below the raft slab elevation and if a development is being designed as a watertight structure and update the report (as needed). If this is not the case, please provide an updated estimate of long-term dewatering rates, including supporting calculations. The elevation of the foundation drain will need to be confirmed for revised calculations; • Confirm that seasonal high groundwater levels are relied on in dewatering calculations. This will require incorporation of results of one-year monitoring program being completed by GEMS in a revised hydrogeological report, to evaluate groundwater fluctuations in different seasons; • Confirm whether construction of elevator pits were considered in short-term dewatering estimates; • Illustrate zones of influence from dewatering activities on figures and discuss impacts from dewatering/depressurization to water supply wells and water streams in the 500-m buffer zone (as applicable).
<input type="checkbox"/>	<p>Please note that permeable pavers are proposed to be installed within the western portion of the proposed condominium, based on architectural drawing #A3.02 'Ground Level Floor Plan' dated September 8, 2022 (see Appendix A). Please indicate how this proposed Low Impact Development measure increases infiltration and reduces run-off on the Site in post-development conditions.</p>
<input type="checkbox"/>	<p>Include a settlement analysis associated with proposed dewatering activities. This analysis will need to be carried out by a geotechnical engineer, to assess the settlement potential. The settlement analysis will need to conclude whether settlement monitoring is recommended to be completed during dewatering activities, to monitor and mitigate impacts of dewatering.</p>
<input type="checkbox"/>	<p>Once all comments are addressed in a revised hydrogeological report, the following permits may need to be obtained:</p> <ul style="list-style-type: none"> • Environmental Activity and Sector Registry (EASR) or PTTW Category 3 to support short-term dewatering activities; • PTTW Category 3 to support long-term dewatering discharge as per the MECP requirements.

<input type="checkbox"/>	<p>Prior to construction, permission from the City of Richmond Hill will be required to be obtained for discharge dewatering flows to a City's storm sewer. Please note that discharge to a sanitary sewer is generally not supported, unless there are some extenuating circumstances.</p> <p>Below is a list of typical information to be submitted with a formal written request to discharge temporary construction dewatering to a City sewer:</p> <ul style="list-style-type: none"> • Supporting geotechnical and hydrogeological reports used to determine dewatering requirements, zone of influence, to assess impacts to existing wells, structures and natural heritage system, and proposed monitoring plan/ mitigation measures. • Provide estimated duration and dewatering flow estimates to City sewer. • Assess impacts of dewatering flow to capacity of City sewer. • Provide copy of obtained EASR or PTTW from the MECP (as applicable). • Provide a plan showing details of location(s) and type(s) of connection to City sewer. • Provide groundwater quality results (from a CALA-certified lab) and compare these results to the storm sewer criteria outlined in the Region of York sewer use bylaw #2021-102, identify any exceedances and propose groundwater treatment method(s) to comply with the sewer bylaw.
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Acknowledgement

These comments have been addressed by (to be completed by the owner's consultant):

Name: _____

Company: _____

Contact Number: _____

Paul Guerreiro

PG/sg