Region of Waterloo – Post-Circulation Comments (dated June 12, 2018)
Draft Plan of Subdivision 30T-16402 and Zoning By-law Amendment Z-16-14

No.	Comment	Response
1	Telus and HydrOne have each provided that they have no concerns regarding the applications	Noted
2	Rogers Cable, Ontario Power Generation Inc., Waterloo Catholic District School Board, Conseil scolaire de district catholique Centre-Sud, and Le Conseil scolaire de district du Centre-Sud-Quest have not responded to this circulation. By separate letter including a copy of these comments, these agencies are asked to respond at their earliest opportunity if they have any comments.	Follow up with Rogers Cable, Ontario Power Generation Inc., Waterloo Catholic District School Board, Conseil scolaire de district catholique Centre-Sud, and Le Conseil scolaire de district du Centre-Sud-Quest required
3	City of Waterloo comments provided under separate cover	Noted
4	In an email dated January 22, 2018, the Township's Manager of Planning stated that Township comments dated October 18, 2016 (attached as Appendix A), which were provided in response to the original draft plan circulation, continue to apply. However, the Township does note the removal of the walkway on the revised/updated draft plan. The Township is of the opinion that the deletion of the walkway and public access in this area would address Bullet No. 3 of the Township's October 18, 2016 comments concerning the potential impacts to the adjacent farm. The Township will prefer some form of fencing along the common lot line to ensure that residents backing onto the farm fields will not encroach, use and/or dump onto the abutting lands in Woolwich. The Township is further of the opinion that it would be onerous for the property owners in Woolwich to continually monitor this area to prevent this from occurring.	Draft plan updated to provide for reinstated trail connection as requested by City; fencing to be provided at rear of residential lots
5	Waterloo North Hydro Inc.	Noted
6	In an email dated April 16, 2018 (attached as Appendix B), Waterloo-North Hydro Inc. (WNH) has advised that it will require that the owner/applicant be required to comply with its requirements and/or conditions of electrical service including the establishment of necessary easements, agreement(s), and detailed engineering design and construction. Furthermore, if necessary, the Developer will be responsible for all costs associated with relocation of any existing WNH facilities as a result of this development.	Noted
7	In an email dated January 4, 2018, Union Gas provided that it will require the necessary easements and/or agreements for the provision of gas services for this project to the satisfaction of Union Gas.	Noted
8	In an email dated January 15, 2018 Canada Post provided that there are no changes needed to its comments dated September 22, 2016 (attached as Appendix C). Canada Post provided general requirements for the location and construction of centralized	Noted

	Community Mail Boxes. Canada Post has requirements that can be secured through conditions of draft plan approval.	
9	In an email dated September 6, 2016 (attached as Appendix D), Bell Canada provided that it will require the necessary easements and/or agreements for the provision of communication/ telecommunication infrastructure for this project to the satisfaction of Bell Canada.	Noted
10	The Grand River Conservation Authority (GRCA) has reviewed the revised draft plan and supporting documentation and have identified in an email dated April 26, 2018 that their original comments dated August 11, 2017 (attached as Appendix E) will continue to apply.	Separate summary response for GRCA comments to be prepared
11	In a letter dated September 21, 2016 (attached as Appendix F), the school board provided comments on the original proposed draft plan. Although the school board has not yet provided comments in response to the revised draft plan, it has indicated that its previous comments will continue to apply. When available, comments from the school board will be provided under separate cover.	Continue to coordinate with WRDSB regarding size and configuration of proposed school block (proposed Block 33)
12	Engineering and Planning staff have reviewed the above noted revised application(s).	Noted
13	The Servicing Strategy Report prepared for this development by Meritech, dated July 2016, is generally acceptable. a. The report recommends that a detailed water distribution study be prepared at detailed design stage to confirm the fire flow requirements for the subdivision, specifically the higher anticipated fire demand for the school, can be achieved by the proposed water system. Alternatively, building restrictions, materials, sprinkler requirements, etc. can be recommended based on more detailed information. b. The applicant should be aware that the Region is currently undertaking a study on the consolidation of Waterloo Pressures Zones 4B, 4C, and 5 which has a direct impact on the application. The objectives of the study are to ensure that once the zones are consolidated that the required level of service is provided to the existing and proposed communities. The study has evaluated the fire flow conditions under future conditions and have identified the existing and proposed fire flow availability. The detailed water distribution study shall incorporate the inding of the consolidation study.	Noted To be included as a condition of draft approval
14	In 2018, transit service will be operating on Pinery Trail in this subdivision with the Route 73 Northlake (busPLUS). Transit is requesting 3 transit landing pads within this subdivision with the exact locations to be confirmed in the very near future. The final routing options for the 2018 network are in the later stages of being finalized. Once the final routing is determined Transit staff can identify more exact locations. The current cost for one transit landing pad is $2,800; the total funds for three transit landing pads required from the developer will be $8,400.	Noted To be included as a condition of draft approval
15	Corridor Planning staff has reviewed the Preliminary Environmental Noise Impact Assessment for the proposed plan of subdivision at 556 & 576 Conservation Drive, City of	Noted

	Waterloo, prepared by Meritech, dated July 2016. The Report has assessed traffic noise from Conservation Drive.	
16	Corridor Planning staff generally concur with the conclusions and recommendations. The applicant will be required to provide a Detailed Noise Impact Assessment, including the height and exact location of the required noise walls. As the subject roads are within City of Waterloo jurisdiction, the recommendations of the study (including the installation of any noise barrier(s)) should be secured through a subdivision agreement with the City. The Region notes that the location of two noise walls identified on the "Noise Assessment Plan" within Appendix C of the Preliminary Environmental Noise Impact Assessment may change through the Detailed Noise Impact Assessment as result of the revised draft plan (last revised November 16, 2017).	Preliminary Environmental Noise Impact Assessment has been updated based on final draft plan of subdivision design
17	Hydrogeology and Source Water (HSW) staff have reviewed the applicable technical reports submitted for the subject applications and can provide the following comments:	Noted
18	Planning Justification Report (GSP, 2016) and Supplementary Information (GSP, 28 July 2016): No comments.	Noted
19	Servicing Strategy Report (Meritech, 2016a) a. Prior to DPA: i. Any existing private wells at the subject property will need to be decommissioned by a licensed well driller in accordance with Ontario Regulation 903 (as amended); ii. Any existing septic systems at the subject property will need to be decommissioned in accordance with applicable provincial legislation; and, iii. Any existing tile drains at the subject property will need to be decommissioned in accordance with applicable provincial legislation. b. Conditions of DPA: i. A Salt Management Plan (SMP) will be required for the proposed school block at Site Plan Control. In the event that future revised Draft Plan of Subdivision applications include multi-residential, commercial, institutional, industrial, or community uses properties are proposed, a SMP will be required for those properties at Site Plan Control.	a) Noted b) Noted. A SMP will be provided for those blocks at the time of Site Plan application.
20	Geotechnical Engineering Report (LVM, 2015): No comments.	Noted
21	North Waterloo, Phase 1 Groundwater and Surface Water Monitoring Program (Stantec, 2016) a. General Comments: i. Page 4.3 indicates that at MW6—10, located within the SW portion of the property, Spring 2013/2014 groundwater levels were observed to be as much as 0.9 m higher than previous levels presented in the NWSSS. This information should be incorporated into design considerations with respect to proposed SWM infrastructure, including lot-level, conveyance, 3rd pipe, and EOP infiltration galleries.	a) i) All groundwater levels have been checked to establish the seasonally high level to be used in the design b) i) Noted ii) Noted iii) Noted

	b. Prior to DPA: i. An updated groundwater contour map should be generated to reflect the high water table conditions observed across the monitoring area during the Spring 2013/2014 groundwater monitoring events. This should be submitted in an updated hydrogeological report; ii. The maximum groundwater elevations observed at each on-site groundwater monitoring well should be reported in m ASL in the report. This data needs to be summarized in tabular format in an updated hydrogeological report for all on-site wells, including the groundwater monitoring wells installed in 2015 by LVM; and, iii. Groundwater monitoring wells were installed across the site during the geotechnical investigations by LVM (2015) should be incorporated into the Phase I and Phase II monitoring program until site grading requires that they be decommissioned. Of particular interest are monitoring wells BH-04-15 and BH-05-15, which are installed in the vicinity of one EOP and one conveyance infiltration gallery. Information from these groundwater monitoring wells should be incorporated into the design considerations for these infiltration galleries. The hydrogeology report should be updated to reflect these additional groundwater monitoring locations.	
22	Preliminary Stormwater Management Report (Meritech, 2016b) a. Prior to DPA: i. Table 1 indicates that "Control of Roof Leaders" is not included in the SWM Plan for the proposed development. A 3rd pipe collector system is potentially being proposed as a means to infiltrate clean roof top water from residential homes; however, this has not been confirmed in the preliminary design. It is noted that the 3rd pipe system would only collect water from the front half of the roof tops, and rear-yard roof runoff would be directed towards pervious surfaces. The conceptual design details of a 3rd pipe system were not presented in the Preliminary SWM Report. HSW will require more details as to how this system will function (i.e. will it be perforated pipe that actively infiltrates water within the road right-of-way, or will it be collected in a larger infiltration gallery and discharged in a more point-source manner?). These details need to be provided in an updated Preliminary SWM Report; ii. The proponent should be aware that a distributed approach to groundwater recharge will be required across the proposed development, where soil conditions permit; iii. Page 11 of the report cites the NWSSS and Geotechnical Report (LVM, 2015) when discussing groundwater conditions at the site. The Report does not reference the higher groundwater elevation conditions noted in Stantec (2016). The Preliminary SWM Report will need to be updated to make	A) i. The SWM Report has been updated to better describe the function of the 3rd pipe collector system and infiltration. ii. The revised SWM Report expands on the proposed infiltration measures. Multiple infiltration measures are proposed across the site. iii. A finalized hydrogeological report has been prepared and the stormwater management design has been updated in accordance with the findings. iv. No longer applicable. v. The post-development infiltration rate on pervious surfaces matches pre-development rates.

		reference to the conditions noted in the Stantec (2016) report, and provide an opinion as to whether or not the feasibility of the SWM infrastructure is impacted by these results;	vi. This represents the entire roof area which will be directed to the 3rd pipe system.
	iv.	Page 14 indicates that infiltration measures that receive from the streets should be designed to bypass in the winter months. HSW agrees with this recommendation, however, was this winter by-pass taken into consideration for the post-development water balance? This needs to be confirmed, and potentially included in a new water balance in an updated Preliminary SWM Report;	vii. Infiltration systems that don't take runoff from road areas will not include a winter by-pass. They will be installed with appropriate depth for frost protection, downspouts will have overflows to grade, and surface drains will have a maximum ponding depth of 0.3m.
	v.	The assumed post-development infiltration rate on pervious surfaces was 228 mm/yr for all pervious areas within the proposed development. This is higher than either of the infiltration rates used for the pre-development conditions. The proponent should provide rationale as to a) why the property wasn't broken down into east and west portions (with different infiltration rates), as it was in the pre development infiltration calculation, and b) why the overall infiltration rate for the site was increased to 228 mm/yr. If the rationale is not to the satisfaction of HSW, the post development infiltration volumes will need to be re-assessed and summarized in an updated Preliminary SWM Report;	viii. Infiltration will be increased, runoff will increase and evapotranspiration will decrease. The requirement from the NWSSS is to maintain infiltration. The increase to the annual runoff rate is understood to be a result of development.
	vi.	The post-development infiltration area for the Clean-Water-Conveyance (CWC), or 3rd pipe system, was reported as 2.46 ha. Does this area represent the total roof area of the development, or only half of the roof area for the development? It is noted that earlier sections in the report stated that a 3rd pipe CWC system would only capture runoff from the front half of residential roof tops. This should be clarified in an updated Preliminary SWM Report;	ix. The proposed monitoring program has been updated as per the comment.
	vii.	Do the infiltration galleries in Catchments 504, 505 and 506 take winter by-pass shutoffs into consideration when determining post-development infiltration volumes? This needs to be clarified in an updated Preliminary SWM Report;	x. Complete
	viii.	The Preliminary SWM Report should be updated to include an analysis demonstrating, in terms of m3/yr: P Pre-Dev = P Post-Dev ET Pre-Dev + R Pre-Dev + I Pre-Dev = ET Post-Dev + R Post-Dev + I Post-Dev	
	ix.	The proposed Stage II Monitoring Program should include sodium and chloride in the groundwater quality monitoring program. Manual water levels and data logger downloads should be performed quarterly. The proposed Stage II Monitoring Program needs to identify which groundwater monitoring wells are proposed to included in the Program. Groundwater elevation and quality monitoring should be performed in the groundwater monitoring wells installed by LVM (2015) (particularly in BH-04-15 and BH-05-15). These details need to be included in an updated Preliminary SWM Report.	

	x. The Preliminary SWM Report should be updated to reflect the revision to the original draft plan of subdivision. Specifically, the water balance should be revisited to adjust for Block 243 (new proposed townhomes) and Block 251(proposed multi-res block). b. Conditions of DPA: i. Seasonal high groundwater elevations were observed during the spring months of 2013/2014 as presented in Stantec (2016). Proposed conveyance and EOP infiltration galleries will need to be designed to have a separation between the bottom of the infiltration gallery and the maximum groundwater elevation observed at each respective location. The high water table across the site may influence where lot-level and 3rd pipe conveyance systems are feasible. This will need to be verified prior to approval of the Final SWM Report, to the satisfaction of the Region, City and GRCA; ii. Any proposed lot-level infiltration galleries and / or 3rd pipe collector systems will need to be oversized by 15% to account for decreased performance over time and/or private homeowner disconnection; iii. Any EOP infiltration galleries will need to be oversized by 15% to account for decreased performance over time; iv. Is it feasible to install a CWC system throughout the entire 503 and 701 Catchments, given the generally lower-permeability soils identified in the eastern portion of the site? This should be addressed in the Final SWM Report; v. It is HSW's preference to see infiltration of clean roof top runoff to achieve a net zero loss of pre-development infiltration volumes. Infiltration of impervious road runoff should only be incorporated if additional infiltration volume is required to achieve a net zero loss of pre-development infiltration volumes. This should be taken into consideration during detailed design; vi. The proposed Stage III Monitoring Program proposes to monitor the performance of infiltration trenches/galleries and soak away pits on public property within 24 hours after a rainfall event once per year. These infiltration galleries should be equipped with continuous-read data loggers to evaluate the efficacy of the infiltration infrastructure. This will allow for multiple events of different sizes and timing to be analyzed. This detail can be included in the Final SWM Report; and, vii. Page 28 indicates that building sump pumps should be connected to the internal storm sewer system. If a 3rd pipe CWC system is utilized at the proposed development, building sump pumps should be directed towards the CWC rather than to the storm sewer, as recommended in the NWSSS. This detail can be incorporated into the Final SWM Report.	B) To be addressed during detailed design.

23	General Comments a. The proposed development lies within a Wellhead Protection Area (WHPA) D-2 for the Waterloo North Well Field, and requires a Section 59 Notice to be provided in accordance with the Clean Water Act. b. Prior to DPA: i. Generally, the SWM plan proposed in the Preliminary SWM Report is vague with respect to what types of engineered infiltration measures will be utilized at the propose development. HSW recognizes that detailed stormwater infrastructure designs will be completed and presented in a Final SWM Report; however, there should be more direction in an updated Preliminary SWM Report. In order to match or exceed the pre-development infiltration volumes, it is HSW's preference to see distributed infiltration of clean roof top runoff in areas where soils are conducive to infiltration. This may be via lot-level infiltration galleries and/or 3rd pipe systems, or a combination of both. The post-development infiltration volumes can be topped up with runoff from impervious road surfaces; ii. If a significant volume of infiltration is proposed from runoff originating from paved surfaces (via conveyance and/or EOP infiltration galleries), HSW will require a Chloride Impact Assessment to be completed prior to DPA, which can be included as a new section within an updated Preliminary SWM Plan; and, iii. Alternatively, if winter by-pass valves are proposed on conveyance and EOP infiltration galleries, HSW would re-consider the need for a Chloride Impact Assessment.	a) Noted b) i) The revised SWM report has provided more detail ii) Noted iii) Winter by-pass valves are not proposed as groundwater contours and surface water discharge from the pond are both towards the creek (there is no alternate outlet).
24	Environmental planning staff has reviewed the reports and revised plans related to the proposed residential subdivision by Cook Homes at Conservation Drive and Beaver Creek Road in Waterloo. Environmental Planning staff have the following comments for your consideration:	Noted
25	Draft Plan of Subdivision a. What is meant by the area identified as "Not included in dripline setback" (Block 256)? This area is identified as Significant Woodland and afforded a 10-metre buffer on Map 6 of the EIS but not identified as a Significant Natural Feature on Map 7 of the EIS. Please clarify.	Buffer associated with former Block 256 (currently Block 37) modified to accurately reflect dripline This area has been reviewed and modified, see response to item #26 d. and EIS report Section 5.3.1.1.
26	Environmental Impact Study a. Editorial note – Parts of the report do not have page numbers. b. The Region's Greenlands Network Implementation Guideline was endorsed by Regional Council in June 2016 (p.2). Please ensure that the EIS references the 2016 version of this document.	a. Noted and fixed b. Referenced c. Section 4.6 has been updated to include discussion of the northern hedgerow as an ecological linkage. The draft plan

	c. 4.6 Ecological Linkages (p.43) – While staff agrees that the Beaver Creek corridor is the primary existing ecological linkage, does the NWSSS not identify a linkage to be enhanced along the northern property limit (see NWSSS Figure 14.4)? Please clarify. Staff raised this issue at the October 2016 agency site walk and recommended considering enhancements to this linkage through removal of invasive species and planting a mix and range of trees/meadow species similar to the existing trail to the east of the subject lands. d. 5.4.1 Encroachment into Buffers (p.53) – First bullet states "the buffer provided always meets or exceeds the minimum Region of Waterloo recommended buffer of 10m from dripline for Core Environmental Features." Please note that a 10- metre buffer is a requirement under ROP Policy 7.C.11 and not a "recommendation." In addition, the Conceptual Grading Plan and Figure 4 of the SWM Report (Meritech, July 2016) appears to show grading in the SWM block up to/within the dripline of the Core Environmental Feature (Significant Woodland). However, the encroachment is difficult to determine since the woodland dripline and buffer are not shown on the grading plan. Please clarify with respect to how site alteration in this area would comply with ROP Policy 7.C.6. e. 5.6.1 Wetland/Woodland Edge Buffer (p.62) – The last sentence of this section makes reference to a "farm dump area". Where is this area located and could it be identified on one of the maps (i.e. EIS Map 7)? f. 6.3 Post Construction Monitoring (p. 66) – How long will post construction monitoring continue following 90% buildout of the subdivision? Please note that the Region typically requires 2 years of post-construction monitoring.	provides Block 39 at the northern property limit for a trail and will retain and buffer a portion of the existing hedgerow. Enhancement of the ecological linkage in this area is proposed through plantings of tree, shrubs and meadow species. See sections 5.3.1 and 5.6.6 of the EIS. Details of plantings can be provided in a Rehabilitation and Enhancement Plan as a Condition of Approval. d. EIS buffer text has been edited. Through further discussions with the City of Waterloo, Region of Waterloo and GRCA, and based on a September 26, 2018 site visit, the Core Natural Feature boundary was revised due to the distinct difference in characteristics of the dripline knob from the bulk of the significant woodland, as discussed in the field with City and Regional ecology staff. The knob contains declining and dead trees, is not wetland and does not contain Significant Wildlife Habitat. See EIS report Section 5.3.1.1. e. The farm dump is in the northwest corner of the property. It has been added to Map 7. f. The details of the post-construction monitoring program will be determined at the time of transition from one phase to another and will be based on the findings of the previous monitoring and will be refined and verified through a TOR at the time. Two years of post-construction monitoring will be included.
27	Stormwater Management Report	a. The limit of grading is now outside the 10m dripline buffer.

	a. Figure 4 – The limit of grading for the SWM facility appears to be coincident/within with the boundary of the Significant Woodland. The minimum buffer for Regional Core Environmental Features is 10 metres according to the ROP. Please clarify. b. Quantity (p. 15) – For Catchment 504, if a bioswale is to be used (instead or oil/grit separator), where would it be located? The last sentence of this section is somewhat vague in this regard. Please clarify.	b. The catchment has been modified and therefore the quality component is no longer necessary.
28	Staff have received the Archaeological Assessment Report Entitled, "Original Report" Archaeological Assessment (Stages 1 & 2) by Archaeological Research Associates Ltd. dated June 17, 2016, and acknowledge that a Stage 3 site-specific assessment is recommended for two locations of archaeological materials: Euro-Canadian Findspots 3 and 4. Such assessment, as well as an acknowledgement letter from the Ministry of Tourism, Culture and Sport (with two (2) copies of assessment provided to Region) that such report has been entered into the Ontario Public Registrar of Archaeological Reports, will need to be completed prior to Draft Plan Approval.	Noted To be included as a condition of draft approval
29	If any part of the development may potentially create a Non-Municipal Year-Round Residential System (NMYRRS) under the Safe Drinking Water Act (SDWA), 2002, such must be confirmed prior to draft plan approval and in consultation with the City of Waterloo; additional requirements may be applicable under the SDWA if a NMYRRS is confirmed.	Noted
30	Pursuant to the Region's standard conditions for Draft Plans of Subdivision and Condominium, a development is required to contain a permanent secondary access if more than 26 units are developed with only one point of access. The north-west portion of this plan would exceed this maximum requirement, and, depending on when/how lands to the east are ultimately developed, all lands north of Street 'E' could also exceed this maximum. Additional information showing how this issue can be resolved will be required prior to issuing a decision.	Noted
31	Regional staff has no objection in principle at this juncture with the proposed draft plan of subdivision, and associated zone change application. As stated in the aforementioned comments, Regional staff will require additional information prior to granting draft approval, and will consider additional comments (including the City's) as they are received.	Noted
32	Regional staff acknowledges receipt of the application fees for the plan of subdivision, and zone change and EIS review. The developer should be advised of the following fees and charges (subject to annual change by By-law): Subdivision Plans: Draft Approval - $4,025.00 Registration Release - $2,000.00	Noted