556, 560 and 576 Conservation Drive
Draft Plan of Subdivision 30T-16402
Response to City circulation comments (March 3, 2023)

Date: November 27, 2023

No	Comment	Responsible	Response
Zoning			
1	Staff recommend a series of new zones be applied to the Beaver Creek Meadows District, to implement the land use and built form framework established by the Beaver Creak Meadows District Plan. These zones have been prepared in draft form by the City of Waterloo, and form the basis for the review of all zoning applications within the District.	GSP Cook Mattamy	Noted Please refer to attached revised zoning summary
2	For awareness, zones will follow the boundaries of lots and blocks.		Noted
3	Where the lands are proposed to be zoned RBC2: a. Within Stage 1, Blocks 24 to 98 are designated Low Density Residential 2 in the Beaver Creek Meadows District Plan and are intended for singles and semi-detached dwellings. Staff recognize the intended building type for these blocks is freehold townhouse dwelling. For this reason, Staff recommend either: i. Applying the proposed RBC2 zone, with an exclusion on semis and singles; or ii. Applying the RBC3 zone (refer to attached Appendix A); or iii. The freehold townhouse dwelling regulations are the same in both zones. b. Staff note that Lots 99 to 104 in Stage 1 is identified as the location of a stormwater management facility within the District Plan. The City's Director of Engineering Services has recently approved in principle technical drawings for a communal stormwater	GSP Cook Mattamy	Please refer to attached revised zoning summary (dated September 18, 2023) a. Proposed zoning includes the application of RBC3 Zone for townhouse dwellings b. Noted c. Noted d. Noted; Please refer to proposed zoning as attached e. Proposed development continues to proposed 6.0 metres setback to garage for parking purposes f. Proposed development continues to propose 1.5 metre porch encroachment into flankage yard g. Noted

	management facility (SWMF) located at 580 Beaver Creek Road to service these and other lands within the District. In January 2023, the Committee of Adjustment approved a conditional consent application to create the parcel for the communal SWMF. On this basis, the City is supportive of shifting the land use to Low Density Residential 2, and zoning the lands accordingly. Refer to comment 4 (a) above for commentary on an appropriate zone category. c. For the remainder of the blocks identified as RBC2 on the draft zoning schedule, City staff agree this is an appropriate zone category. d. Site specific variations to the Beaver Creek Meadows zoning categories may be considered on a lot by lot basis. e. Within 7.17.4, the regulation "6.0 metres" to the garage will not be supported, and rather 7.0 metres is recommended. The basis of this position is that the minimum 6.0 metre streetline setback in the standard streetline setback in most low density zones. An exception is provided where the garage portion of the front façade is setback an additional 1.0 metres (from the minimum streetline setback), the habitable portion may come towards the streetline by an additional 1.0 metre. This is a give and take approach. f. Within Section 7.17.6 of the RBC2 zone — The flankage setback has already been reduced to 3.0 so a further encroachment than 0.6m will not be supported. b. Within Section 7.17.10 of the RBC2 zone — The City is supportive of this change. 4.		
4	Where the lands are proposed to be zoned RBC3: a. Blocks 105 and 106 are identified as RBC3 which is proposed to allow multi-unit residential, along with townhouse buildings, freehold townhouse buildings, stacked townhouse buildings and triplexes. These lands	GSP Cook Mattamy	Please refer to attached revised zoning summary (dated September 18, 2023)

	are identified as Mixed Use Medium Density Residential within the District Plan and Mixed Use Node within the District Plan and City's Official Plan (SPA 37). Since the proposed range of uses all fall under the definition of multi-unit residential (a residential building containing 4 or more dwelling units), and the intent is also to allow ancillary commercial uses here, a more appropriate zone category would be the draft RBC5 zone prepared by the City as set out in Appendix B. b. The western portion of Block 105 is identified as the location of a stormwater management facility within the District Plan. The City's Director of Engineering Services has recently approved in principle technical drawings for a communal stormwater management facility (SWMF) located at 580 Beaver Creek Road to service these and other lands within the District. In January 2023, the Committee of Adjustment approved a conditional consent application to create the parcel for the communal SWMF. On this basis, the City is supportive of shifting the land use to Mixed Use Medium Density Residential, and zoning the lands accordingly		
5	Noise Related Regulations — Please provide site specific zoning regulations to implement the necessary noise related setbacks from Conservation Drive to the blocks adjacent to Conservation Drive? Refer to the Region's forthcoming comments on the Noise Study.	GSP Cook Mattamy Meritech	Not applicable No recommendations from Noise Study related to Zoning; awaiting final comments from Region
6	The expectation is that Roy Schmidt Road and these sections of MUT are to be designed and constructed at the sole shared expense of the Applicant, and the adjacent landowner Activa Holdings Inc (reference 30T-17403). The City will be recommending conditions of draft approval to secure the terms regarding this road and MUT construction		Noted; to be included as condition of draft approval

7	Through conditions of draft approval, and possibly a holding provision, the City will require the multiple blocks demonstrated the site plan is consistent with the Design Guidelines Document prior to final approval.		Noted; to be included as condition of draft approval
8	Demonstrate the driveways for lots 42, 49, 73, 74, 98 will comply with General Regulation 6.8.6 of the City's Zoning By-law.	GSP Cook Mattamy	General Regulation 6.8.6 of the By-law requires that a DRIVEWAY shall be located a minimum of 6.0 metres from the STREET LINE tangent point of intersection for a CORNER LOT All corner lots intended to comply with General Regulation 6.8.6 of the Zoning By-law
Density			
9	To verify whether the subdivision contributes sufficiently to meeting the 58 persons and jobs/ha District Area density target from the City's Official Plan, the following is required: a. A Plan or alternative that provides a breakdown of the Net Land Area which you are using to calculate density. I want to review this with the Region and make sure we are all in agreement on what lands are in and what are out. As a reminder, only the Core Environmental Features can be discounted. The buffers have to be included. b. A breakdown of persons and jobs per block based on two calculation scenarios: i. The PPUs from the Regions; Land Budget ii. The PPUs from the District Plan Density Schedule. For ease of reference, the PPU and job rate numbers are provided in the table below (refer to summary)	GSP	Please refer to attached correspondence related to density calculations and details
Parkland - Amount			
10	Staff calculate the required parkland contribution as follow:	GSP	Noted

	Net Land Area: Gross Land (28.63) – Open Space (5.04) = 23.59 ha 5% Parkland Calculation of Net Land Area: 1.1795 ha Area of Park Block : 1.41ha Less Area Encumbered by Servicing Easement: 0.3927 ha Park Block with No Encumbrance: 1.0173 ha Parkland Deficiency: 0.1622 ha		Please refer to attached Preliminary Park Layout & Design Proposed Park Block (1.41 hectares) represents 5.95% of the net land area of the draft plan of subdivision Preliminary Park Layout has been completed in accordance with direction from City as provided on March 3, 2023 and incorporate all amenities and design requirements for park block with no impact from proposed Servicing Easement Proposed Servicing Easement has been requested by City staff to provide future servicing options for property to the west (Brohman property) It is our opinion that the proposed Park Block (1.41 hectares) should be accepted as the full parkland dedication requirement with no deductions incorporated related to the proposed Servicing Easement and therefore no additional cash-in-lieu for parkland requirement
11	Confirm the exact areas of all servicing easement encumbrances within the Park Block.	GSP Meritech	Please refer to attached Preliminary Park Layout & Design
12	Through further refinements to the plan of subdivision in response to the comments contained herein, the City requests that the park block strives to meet the full parkland dedication requirement equal to 5% of the net land area, without any encumbrances (ie. servicing easements). A very minor deficiency in land dedication may be	GSP	Proposed Park Block (1.41 hectares) represents 5.95% of the net land area of the draft plan of subdivision

	accepted as cash-in-lieu upon further consideration with the final resubmission.		
Urban Design Guidelines			
13	A Design Guidelines Document for this Subdivision should be provided for review in advance of staff preparing a report to Council, and to be implemented through Conditions of Draft Approval.	GSP	Noted; to be included as a condition of draft approval
14	The Design Guidelines must align and demonstrate the implementation of the urban design policies of the District Plan (Section 4 of the District Plan). Generally, the design of the Beaver Creek area should achieve a complete community, high quality design, and a high degree of connectivity, in addition to the urban design considerations for specific uses such as townhouses and single detached buildings. In particular, townhouses should be consistent with policies 3.4.17-19 of the District Plan, which outlines several considerations including variety of roof design, variation in elevation and preferred length of townhouse blocks among other matters.	GSP	Noted
15	Note that Policies 3.2.10 and 3.2.19 b) of the District Plan discourage back lotting onto municipal streets such as Conservation Drive and Beaver Creek Road.	GSP	Noted
Lot & Block Configuration/Labelling			
16	Provide up to date conceptual development plans for all multiple blocks to demonstrate the functional layout of buildings, driveways etc in accordance with the proposed zoning and that the density as indicated on each block can be achieved.	GSP Cook Mattamy	Please refer to concepts for Blocks 26 and 28
17	Demonstrate how the driveway will operate for Lot 99 through a turning movement analysis. It would appear to be awkward to maneuver from the street to the garage, and vice versa.	GSP Meritech	Former Lot 99 now incorporated as part of Townhouse Block 26; Rushing River Street revised to provide for appropriate access to Block 26
18	Walkway Block 113 should be moved west to align with Esker Lake Drive. Houses at the terminus of roads are often subject to extreme headlights and this puts the walkway in that location instead.	GSP	Block 35 (formerly Block 113) remains at northeast corner of revised draft plan of subdivision as it is required to facilitate an appropriate grading and drainage design

			Block 35 to act as an overland flow route for external lands (Catchment 3105 in the NWSSS) and this location prevents ponding on the neighbouring property
19	Block 114 and the adjoining lands immediately to the north are to be conveyed to the City. These lands should be consolidated to form one block. Note the size of Block 114 on the draft plan appears to be incorrect. Further these lands do not appear to be within a specific Stage. These lands/block should not be split between two stages. Consider and revise the staging and labelling accordingly. Block 113 and 114 should be constructed within the same stage. Refer to similar comment #1 from Robyn McMullen.	GSP	Block 38 (formerly Block 114) has been consolidated as one block and to be wholly included as part of Stage 1
20	What Block numbers are assigned to the yellow highlighted areas in Image 1 below? The redlined comparison version of the draft plan shows they are 36 and 112, but the label for 36 and the arrow for 112 do not appear on the 'clean' version. (refer to summary)	GSP	Draft plan of subdivision reviewed in detail to confirm accurate block/lot numbering and identification
Staging			
21	School Block 107 should be included within the limits of Stage 1.	GSP	School Block 30 (former Block 107) wholly contained within Stage 1
22	Turning circles are required at the terminus of all open road allowances. Consider where they will be required and adjust staging accordingly. Turning circles should be contained within the limits of the associated stage. Where the turning circle extends over future lots and blocks for development, the lots/blocks will be conveyed to City ownership, with the ownership returned to the developer upon the extension of the road, through the draft plan conditions / subdivision agreement.	GSP	Turning circle not required at western property boundary (adjacent to Brohman property). Pinery Trail proposed to continue and connect directly with Rideau River Street. Future development block provided for Brohman property, which can include future driveway access points Please refer to sketch “Pinery Trail Terminus – Temporary Condition” included as part of Appendix B, Preliminary Servicing Report as prepared by Meritech Engineering
23	The School Board plans to provide the only two road accesses to the School Block from Pinery Trail. With the School Block moved into Stage 1, the staging limits of Stage 1 and Stage 2 will need to be	GSP	School Block 30 (former Block 107) wholly contained within Stage 1

	adjusted accordingly to include that section of Pinery Trail across the school block frontage. Furthermore, since the Park Block is also in Stage 1, staff recommend extending Pinery Trail across the north side of the park block as part of Stage 1. This will ensure that a complete and continuous network (loop) of sidewalks and pathways is provided through the park and around the school block as part of Stage 1. We recognize this is a departure from the phasing shown in previous submissions, and there may be engineering implications.		
24	Ensure the most current draft plan of subdivision for the Activa Holdings Subdivision (Draft Plan 30T-17403) to the east has been ghosted in on the draft plan of subdivision. It appears an older version may have been ghosted in.	GSP	Draft plan updated to reflect approved Draft Plan of Subdivision 30T-17403
Transportation			
25	The entirety of Roy Schmidt Road must be constructed/reconstructed to a full 18 metre wide municipal standard cross-section, including that section between Rideau River St and Pinery Trail which was installed as an interim condition. The cost of this construction is to be shared 50/50 between the Applicant and Activa Holdings. For clarity, the City will not be constructing this road.	GSP Meritech	Noted; to be included as a condition of draft approval
26	The City will apply subdivision specific draft plan conditions to ensure the reconstruction of Roy Schmidt Road, and the multi-use pathways south to Conservation Drive and north to the Avon Trail takes place concurrently with the registration and construction of Stage 2.		Draft plan of subdivision revised to include 18.0 metre right-of-way for Roy Schmidt Drive, including a MUT trail along west limit of future right-of-way Refer to updated engineering designed package as prepared by Meritech Engineering for detailed information regarding right-of-way design and cross-sections
27	A multi-use pathway 2.5m to 3.0m in width is to be installed along the west side of Roy Schmidt Road, with a sidewalk on the east side	GSP	Draft plan of subdivision revised to include 18.0 metre right-of-way for Roy Schmidt Drive, including a MUT trail along west limit of future right-of-way Refer to updated engineering designed package as prepared by Meritech

			Engineering for detailed information regarding right-of-way design and cross-sections
28	A portion of the Roy Schmidt Road allowance should be closed to prevent road access to Conservation Drive. The closed portion should be constructed with a multi-use trail, the cost, and design and construction of which should be shared 50/50 between the Applicant and Activa Holdings. (refer to Image 2 below)		Noted; to be included as a condition of draft approval
29	A multi-use trail connecting between Rideau River Street and the Public Trail link along the City-Township boundary (which connects to the trail network in the Stamm Woodlot) is to be designed and constructed concurrently with Stage 2. The cost of the design and construction should be shared 50/50 between the Applicant and Activa Holdings.		Block 38 (formerly Block 114) has been consolidated as one block and to be wholly included as part of Stage 1 Noted; to be included as a condition of draft approval
30	School bus loading must be accommodated within the limits of the school block, rather than within the municipal road allowance.		Noted
31	Kawartha Street (in the adjacent subdivision) should not connect to Conservation Drive. Please update this on the draft plan of subdivision. Refer to comment #6 under the heading 'Staging'.	GSP	Draft plan of subdivision updated to remove connection from Kawartha Street o Conservation Drive as part of Draft Plan of Subdivision 30T-17403
32	A pedestrian crossing on Pinery Trail will be required near Finlayson Point Street (formerly Street)	GSP	Pedestrian connection provided between Finlayson Point Street and Rideau River Road, north of Pinery Trail (Refer to Block 37 on revised draft plan of subdivision)
33	The City does not require bicycle lanes along Pinery Trail since the existing section of Pinery Trail (east of this subdivision) does not have cycling infrastructure and it is not planned in the Transportation Master Plan as a part of the cycling network	GSP	Noted Active Transportation Plan and Preliminary Servicing Report updated to eliminate bike lands along Pinery Trail
34	Transportation Staff have concerns with the proposed residential properties on Rushing River Street (99-104). Staff recommend these lots be shifted south to improve driveway access to these properties	GSP	Former lots 99 to 104 have been consolidated as noted as Block 26

35	Please confirm who will maintain the corners of Rushing River Street as the lots do not follow the regular curvature at these corners. Refer to Image 3 below. There is a sidewalk proposed along the open space parcel and multi-use path, which does not align with the city's maintenance route. It is strongly recommended that the block to be created for Rushing River Street road allowance be modified in shape to align with the regular curvature of the road		Draft plan of subdivision updated to revise curvature of Rushing River Street right-of-way
36	The public trail along the north property boundary is proposed to connect with the adjacent property to the west. The plans for the adjacent property do not align with the proposed trail.	GSP	The public trail along the north property line (Block 38) is intended to connect to the public trail system within the Township of Woolwich
37	Street Naming: The updated draft plan proposes street names for the new internal roads. Implementation policy 6.0.6 of the BCM plan states: "The naming of public streets in all or parts of the District shall provide an opportunity to recognize, reflect and commemorate veterans that are associated with the City of Waterloo." The City maintains a list of potential veteran's names. Growth Management staff recommend that the veteran's street names be uses where the street is not a continuation of an existing street (e.g. Piney Trail).	GSP	Draft plan updated to include proposed street naming
School Block			
38	The comments below were provided by Brandon Coveney, of the Waterloo Region District School Board (WRDSB), in response to questions asked by Planning Approvals Staff. Additional comments provided by the School Board are attached (under separate cover, dated February 6, 2023)	GSP	Noted
39	WRDSB prefers that the school block be in the first stage of the development plan concurrent with the streets and park block adjacent to the school block.	GSP	School Block 30 to be included wholly within Stage 1
40	WRDSB prefers primary access along Pinery Trail to avoid traffic concerns on Esker Lake Drive.	GSP	Noted
41	WRDSB has no concerns with the proposed school block size and configuration (at 3.21 ha).	GSP	Noted
42	WRDSC does not anticipate any facility (recreational infrastructure or other features) encroaching onto the neighhouring park block.	GSP	Noted

43	WRDSB does have concerns regarding the approximate 5m drop from the NE to SW corner but believes this should be manageable through landscape design.	GSP Meritech	Noted
44	WRDSC would not expect to fence the property line [shared with the park block] unless the City of Waterloo made this a requirement for development.	GSP	Noted
45	WRDSB is agreeable to a formal pedestrian connection [between the park and the school block], but requests coordination with the placement of playing fields on the school board, most likely a full sized soccer pitch.	GSP	Noted
Environment			
46	Through previous comments (dated February 12, 2021), it was questioned whether Block 39, now Block 114, should be separated into two Blocks since one portion was shown in Stage 1 while the other was in Stage 2. The Response Matrix indicates it has been consolidated into one block and included entirely in Stage 1. The way it is shown on the draft plan is somewhat confusing, as the staging line just stops at the edge of the Block. Also, it should be confirmed how the western portion of Block 114 would be constructed as part of Stage 1 when all the lands to the south of it are in Stage 2.	GSP	Block 38 (formerly Block 114) has been consolidated as one block and included wholly within Stage 1
47	The Active Transportation Plan shows a multi-use trail behind Block 4, as indicated in Image 5 below. A trail in this location has not been shown on any other plans and it has not been explicitly contemplated in the EIS. The EIS needs to be updated to demonstrate that a trail in this location will not reduce the integrity and functionality of the buffer.	GSP	Proposed multi-use trail at the rear of Blocks 3 and 4 (formerly Block 4) has been removed from Active Transportation Plan Please refer to attached revised Active Transportation Plan
48	Through previous comments (dated February 12, 2021), the following was noted: • "While the Comment-Response Matrix submitted by GSP notes that Stantec prepared an updated Groundwater and Surface Water Monitoring Report, and the Revised EIS references it, the Report was not included in the resubmission package. The applicant should submit the Report to the City, Region and GRCA."	GSP	Noted Groundwater and Surface Water Monitoring Report 2021-2022 has been provided by Stantec. Per the report, monitoring was completed for 2016, 2018, 202, 2021 and 2022.

	In response to this comment, the applicant has noted the following in the Response Matrix: • "Please refer to Hydrogeological Study prepared by Stantec (dated December 2021); Refer to Section 6.0 for Groundwater Monitoring" Section 6.0 of the Hydrogeological Study prepared by Stantec, dated December 2021, appears to provide a simplified overview of the groundwater monitoring program. A Terms of Reference for the entire pre-construction (i.e. Stage 1) monitoring program was approved in 2014/2015. That Terms of Reference includes biological, surface water and groundwater components and is attached. That Terms of Reference also states that "Results from groundwater and surface water monitoring for Stage 1 will be presented in brief annual reports..." My comment from February 12, 2021 was in recognition of the fact that a 2014-2015 groundwater and surface water monitoring report was submitted in 2016 but no subsequent reports had been submitted, even though GSP's Comment-Response Matrix at the time indicated Stantec had prepared one and the Revised EIS referenced one. Since that comment was made in February 2021, a groundwater and surface water monitoring report for 2020 was submitted in July 2021. To avoid future confusion and gaps in reporting, the attached Terms of Reference should be reviewed as a gentle reminder of the groundwater and surface monitoring work that is to be undertaken, recognizing that it pre-dates the 6 monitoring wells that were installed in 2019		Groundwater and surface water elevations from 2021 and 2022 generally consistent with historical data.
49	Through the Response Matrix, the applicant has acknowledged the need for draft plan conditions related to Blanding's Turtle and the SWM Facility. For consistency with nearby subdivisions, the following wording should be used: Stormwater Management Facility, Stage 2 (Block 111)	Meritech NRSI	Noted; to be included as a condition of draft approval EIS has been updated to be consistent with the September 2021 version of the Blanding Turtles Mitigation Plan.

	a) After construction and prior to assumption of the stormwater management facility in Stage 2 of Draft Plan of Subdivision 30T-16402, the Owner shall prepare an operations maintenance plan for the stormwater management facility, to the satisfaction of the City, the Grand River Conservation Authority (the "GRCA"), and the Ministry of the Environment, Conservation and Parks (the "MECP"). b) The maintenance plan required in Condition X shall specify that in-water maintenance work should not be undertaken between May 1 and August 31 to ensure no negative impact to Blanding's Turtle. c) Notwithstanding Condition Y, where maintenance work cannot be avoided, wildlife salvage shall be implemented immediately prior to the maintenance work commencing, to the satisfaction of the Ministry of the Environment, Conservation and Parks and the City. Through previous comments (dated February 12, 2021), noted that the Blanding's Turtle Habitat Mitigation Plan, then dated June 8, 2020, needed to be updated to address a variety of items. The Mitigation Plan provides direction for a number of properties, and through comments provided on it through other draft plans of subdivision, specifically Northgate and Erbsville Kartway, it was updated to address the items of concern and now has a revised date of September 1, 2021. Further, through discussions related to those other draft plans of subdivision, it was confirmed that there is some flexibility within the Mitigation Plan with respect to the location of the turtle barrier fencing, provided the intent of the Mitigation Plan is maintained. Given the above, the Blanding's Turtle Habitat Mitigation Plan does not need to undergo further updates. However, the EIS needs to be updated to incorporate the September 1, 2021 version of Blanding's Turtle Habitat Mitigation Plan and the following will need to be		Construction monitoring program in Section 6.0 of the EIS has been updated to reflect the 2-year requirement for monitoring. Early April has been recommended as the timing for the spring inspection of the turtle barrier fencing.

	included as a draft plan condition, again using the same wording that was used for nearby subdivisions: a) Prior to the stripping of topsoil, area grading, land clearing, earthen works, servicing works, infrastructure works, tree removal, and registration, the Owner shall, at its expense, implement the fencing required by the Blanding's Turtle Habitat Mitigation Plan as approved, to the satisfaction of the Ministry of the Environment, Conservation and Parks and the City. The implementation of the Blanding's Turtle Habitat Mitigation Plan shall be coordinated with the City's road reconstruction works. In addition, to ensure the turtle barrier fencing is coordinated with the other types of fencing, the following will need to be included a draft plan condition, again using the same wording that was used for nearby subdivisions: X.X Further to Standard Subdivision Condition X, the Comprehensive Fencing Plan shall indicate the location of all temporary and permanent fencing, include all applicable details, and include and/or demonstrate: a) 1.5 metre high black vinyl chain-link fencing; b) Turtle barrier fencing required under the Blanding's Turtle Habitat Mitigation Plan; c) Property demarcation posts and living fences; d) Erosion and sediment control fencing; e) Vegetation protection fencing; f) Any retaining walls including indications of height; g) Any other fencing that may be required by the City; and h) Be coordinated between types and extents to avoid redundancies, unnecessary/unintended barriers, parallel/duplicate fencing.		

	This plan shall be coordinated with the Comprehensive Trails Network Plan and the Landscape Plan. The Owner shall, at its expense, design, install, maintain and monitor the approved Comprehensive Fencing Plan, to the satisfaction of the City. Through previous comments (dated February 12, 2021), the following was noted: • Section 6.0 of the EIS outlines the approach for the Pre-, During- and Post-Construction biological monitoring programs. For the Post-Construction monitoring program, the suggested frequency for a number of the components is listed as 3 years. As set out in the City's Development Monitoring Protocol, the Post-Construction phase only lasts 2 years. The frequency of those Post-Construction components will need to be modified. Also, for the Blanding's Turtle fencing, Table 16 sets out that it would be monitored once annually for the Post-Construction phase. The timing of this should be late April to ensure that if holes are detected, they could be repaired before female turtles start looking for nesting sites in late May. The late April timing should also be used for one of the twice annual visits for the During-Construction phase. In response to this comment, the applicant has noted the following in the Response Matrix: • "Noted; Updated EIS to be required as condition of draft approval" Given the nature of the requested updates (i.e. not time sensitive because they deal with the during- and post-construction monitoring program), requiring an updated EIS as a draft plan condition would be acceptable. However, given		

	that the EIS needs to be updated to reflect the revised wetland limits, the September 1, 2021 version of Blanding's Turtle Habitat Mitigation Plan, and the trail behind Block 4, and that GRCA has requested the EIS be updated to incorporate revisions to the water balance assessment, it would be appropriate to make all the updates now in advance of draft plan approval. Lastly, the requested updates to the monitoring program noted above reference 'late April'. That was incorrect. It should have specified 'early April'.		
50	Through previous comments (dated February 12, 2021), the following was noted: • As shown on Figure 9 in the Revised Preliminary Stormwater Management Report, the third pipe/clean water collector system runs through the buffer. This pipe should be moved to outside the buffer. Refer to Image 6 below. In response to this comment, the applicant has noted the following in the Response Matrix: • "Majority of third pipe/clean water collector system relocated outside of 30 metre wetland buffer". Based on the amount of proposed grading and infrastructure remaining within the buffer, staff are concerned about the feasibility and impacts of future maintenance. Is there opportunity to relocate the diversion pipe to outside the buffer?		Winter by-pass between forebay and the level spreader has been removed from preliminary design, reducing the amount of infrastructure in the buffer. Please refer to the revised Preliminary Stormwater Management Report prepared by Meritech Engineering showing the revised SWM facility.
51	Through previous comments (dated February 12, 2021), the following was noted: The Revised Preliminary Stormwater Management Report outlines the approach for the Pre-, During- and Post-Construction surface and groundwater monitoring programs. The During- and Post-Construction programs do not appear to align with the City's Development	NRSI Meritech	Please refer to revised Preliminary Stormwater Management Report prepared by Meritech Engineering

	Monitoring Protocol (attached). For example, for the During-Construction phase, samples from the inlet and outlet of the SWM facility will require analysis for Total Suspended Solids and during each monitoring year (March to November), at least one sample per month should be taken within 24 hours of a rainfall event, and where appropriate, at least three dry weather events should be sampled. The Clean Water Collector System and infiltration galleries will also need to be monitored as part of this stage. The proposed During- and Post-Construction surface and groundwater monitoring programs need to be revised to be consistent with the City's Development Monitoring Protocol. If it would be helpful, a copy of the monitoring protocol being used for the Clean Water Collector System in the Vista Hills subdivision can be provided. In addition, if a winter by-pass system is incorporated into the SWM facility the During- and Post-Construction phases of the monitoring program will need to include data collection and analysis around operating the valve. This aspect of the monitoring program can inform a standard operating procedure for the valve based on on-site data, with an appropriate date, date range and/or seasonal condition. In response to this comment, the applicant has noted the following in the Response Matrix: • Updated Revised Preliminary Stormwater Management Report (September 2022) submitted to City The during- and post-construction monitoring program outlined in the Updated Revised Preliminary SWM Report (September 2022) does still not align with the City's Development Monitoring Protocol (attached). Therefore, the previous comment is still relevant and needs to be		

	addressed. As an example of the misalignment, the Updated Revised Preliminary Stormwater Management Report identifies the following for during-construction (Stage II) monitoring (refer to summary)		
52	In addition to the specific wording provided for draft plan conditions above, and as noted in previous comments and acknowledged by the applicant in the Response Matrix, the following items will need to be included as draft plan conditions. For the most part, the wording that was applied to the Northgate and Erbsville Kartway draft plans can be used. • Approval and implementation of a pre-, during and post-construction monitoring program • Requirement to remove any refuse and/or garbage from the natural heritage features and buffers • Approval and implementation of a Landscape Plan that includes: — measures to enhance the habitat and connection of the hedgerow/trail block — clean up of the historic farm dump and any other garbage or debris in the natural features or buffer areas — educational signage in the buffer areas — buffer enhancements and plantings • Approval and implementation of an Invasive Species Management Plan • Approval and implementation of a Tree Saving and Protection Plan that specifies measures for removal, retention and replacement using a 2:1 ratio that is coordinated with the design of the SWM facility • Prohibition of clearing of vegetation during breeding bird season (April 1 — August 31) unless it can be ascertained that the clearing will not have the potential to disturb or destroy migratory birds or their active nests • Prohibition of grading within open space buffer during breeding bird season (April 1 —August 31) unless it can be ascertained	NRSI Meritech	Noted; to be included as a condition of draft approval

	the proposed works will not have the potential to disturb or destroy migratory birds or their nests • Dedication of the environmental lands and their buffers to the City free of charge and without any encumbrances • Requirement to prepare a standard operating procedures for the opening and closing of the winter bypass valve for the stormwater management facility in Stage 2, with the standard operating procedures considering water quality and quantity data and/or seasonal conditions to optimize the timing of the seasonal valve operations		
Landscape/Park/Trails			
53	The following comments are required to be addressed prior to Draft Plan Approval. Please ensure that comments are addressed and provide a comment response specific to landscape items (i.e., not to be completed by others).		Noted
Block 108 - Park			
54	Include a dimension on the Draft Plan of Subdivision showing park frontage (the south side of the park frontage is partially blocked by Lot 99).	GSP	Draft plan updated to include all Park Block 31 Please refer to updated draft plan
55	Provide a current/revised Conceptual Landscape Plan for Park Block 108. The revised plan shall include accurate and coordinated information, such as the proposed sanitary sewer and associated easement and coordinated trail width and alignments. Include a future pathway connection to the school block.	GSP	Revised draft plan of subdivision updated to reflect coordinated design with stormwater management and servicing design Please refer to revised Preliminary Park Design, which has been revised in accordance with comments provided by City on June 29, 2023
56	Please locate the stormwater connection on the same side of the pathway as the water service, on the south frontage of the park. Please also show hydro connections in the same two areas. At this stage, the park concept is not refined enough to determine which end of the park the services are required. Ensure this is coordinated with Engineering and shown on the Servicing Plan	Meritech GSP	Please refer to updated servicing drawing as contained in the Revised Preliminary Functional Servicing Report, which has been revised in accordance with comments provided by the City on June 29, 2023

	and is constructed during Stage 1 as the subdivision is serviced for park usage.		A storm service to the south will not be provided as drainage is to be directed to the SWM pond. The storm sewer on the east side of the park block is available for connection.
57	All pipes and other encumbrances should be strategically planned to permit shade trees along the trails and throughout the park. Please confirm that trees will be planted on the south and west sides of the trails, considering the proposed location of the sanitary easement. Please demonstrate this on the revised Landscape Sketch. Trees should be planted as part of park construction within Stage 1.	Meritech GSP	Please refer to revised Preliminary SWM Plan, which as been revised in accordance with comments provided by the city on June 29, 2023
58	Please clarify the timing of proposed sanitary sewer construction within the park block. Will this be completed with the park construction in Stage 1? Once constructed, the park should function on its own and not be disturbed with future servicing works.	Meritech	Sanitary sewer connection through Park Block 31 to be constructed prior to surface works
59	Similar to the above comment, please clarify how the storm sewer that brings water from the park (Stage 1) through swales to the catch basin and into the SWM pond will function before the SWM Block is constructed in Stage 2.	Meritech	Full SWM facility located wholly within Stage 1
60	The park should not drain towards the back yard of private properties. Please specifically review the boundary between residential Block 14 and Lot 99 and the park (Block 108) and revise grading as needed.	Meritech	Additional grading information has been added to the revised drainage plan to show that drainage is not directed to private residential lots
61	The pathway connection to the Open Space Block 109 shown on the Engineering plans should be refined. Confirm the park pathways will be achievable within ideal range of 2-4% slopes.	Meritech	Engineering plans have been revised to note that slopes on pathway connections must not exceed 5%
62	Staff note that a 3.0 m wide asphalt pathway between the Park Block and School Block is expected. According to the preliminary grading plan, it appears this pathway will be feasible within the ideal 2-4% slopes. However, it also appears there is an approximately 5 m grade change across the school block (NE to SW), which leave staff concerned about future grading of the school site and any impacts adjacent to the park. For example, will this require retaining walls (which cannot be located in the	GSP Meritech	Conceptual grading plan has been prepared and overlaid on Preliminary Park Plan prepared by GSP; please refer to Appendix D of revised Preliminary Servicing Report

	park block) and will the pathway be direct and accessible? Please provide a conceptual pathway location on the Preliminary Grading Plans to demonstrate this grading is achievable. It would be helpful to include the secondary pathway within the park as well. The exact location may be refined when preparing the Park Concept Plan in conjunction with the school site layout		
63	As noted further in Planning comments from Laura Dewar, the School Block shall be part of Stage 1 of the subdivision. Please also include Pinery Trail and required turning circle(s) past the Park Block within Stage 1.	GSP	School Block 30 to be included wholly within Stage 1
Block 111 – Stormwater Management			
64	Sufficient deterrents need to be designed into the shared property line between Block 108 (Park) and Block 111 (SWM) to maintain safety given the slopes of the pond and the proximity to the pond. Given the pond's grading and the proposed sanitary sewer easement, demonstrate where planting and other deterrents will be located.	Meritech	Please refer to Preliminary Park Plan and Preliminary SWM Plan for plantings, etc. A swale has been added between the pond block and the trail. Landscape plantings will also serve as a deterrent.
65	Staff have concerns with the SWM access path within the SWM Block 111. Specifically, the proposed elevation will mean the pathway is frequently under water, and the path's close proximity to the pond's permanent pool directly adjacent to steep side slopes. Per City standard, there shall be a 1.0 m wide mow strip along all public pathways and more is recommended where safety is a concern. The mow strips shall be 2% slope maximum grade for maintenance and safety. Please revise the access/pathway location and incorporate safety measures such as mow strips and heavy plantings or barriers. Previous comments recommend a minimum of 3.0 m flat planted area between the top of slope from the stormwater management pond and the proposed walkways for safety of the user. It is also common practice to design pathways to the above the high water level, at a minimum.	Meritech	Please refer to revised SWM pond design as contained within the Preliminary Stormwater Management Report prepared by Meritech Engineering
66	Given the proposed tree removals and required 2:1 compensation rate, ensure there is adequate space for tree planting within SWM Block. This comment reiterates previous comments regarding removal of trees around the hedgerow and woodland 'knob'.	Meritech	Please refer to Preliminary SWM Plan as prepared by GSP Group for proposed planting and landscape design
67	Please refer to Engineering comments provided by Michael Stewart for further SWM pond comment/information.		Noted
Block 114 - Trail			

68	Per City of Waterloo standard, a 3.0 m min. buffer between trail and residential property limits is required.	GSP	Noted; draft plan revised to incorporate 3.0 metres setback for Block 38 (formerly Block 114)
69	Provide a clear plan that demonstrates the trail, 1.0 m wide mow strips, grading, proposed infiltration galleries, planting, and buffer to residential property will all fit within the proposed trail block. The current grading plan is difficult to read and a clear plan showing all of these elements would be appreciated. Please include slope labels as required confirming the trail will meet AODA requirements. If possible, trails should be designed within ideal range of 24%. Per previous comment, the 2.5m trail (Avon Trail) width is acceptable in the trail block, however Engineering Services staff need to confirm that the proposed grading is acceptable and the slopes are stable, provide sufficient growing area and are able to be planted and maintained. As previously noted, the Trail Planting Concept Plan (dated May 9, 2019) prepared by GSP does not show Block 38 (Walkway).	GSP	In February 2019, Meritech Engineering submitted two options that demonstrated the Avon trail grading. City staff decided option 1 was ideal as it eliminates the use of retaining walls along the northern limit of the property, under the condition that the grades are reduced to achieve a maximum 8% slope to meet the AODA standards. Demonstration planting plan provided to City in September 2019 (please refer to attached) Please refer to Appendix D of Meritech's Preliminary Servicing Report for updated grading drawings related to Block 38 (formerly Block 114)
Block 109 – Open Space			
70	Provide further information for the 3.0 m asphalt walkway through the Open Space Block south of the Park Block. It appears that only a 2.0 m buffer is provided to residential properties and that may not be adequate given the adjacent 3:1 slopes. There shall be no water flowing over the pathway, as this will cause hazardous conditions, especially in colder weather. Similar to the trail blocks at the north of the plan, city staff need to be confident that the trail, mow strips, any required grading (including swales/CBs as needed), buffers, and tree planting can be accommodated within the space provided. Please include slope labels as required confirming the trail will meet AODA requirements. If possible, trails should be designed within ideal range of 2-4% and should avoid grading within the open space buffers.	GSP	Proposed trail associated with SWM block has been shifted; please refer to additional details added to preliminary grading plan as contained in the revised Preliminary Servicing Report prepared by Meritech Engineering. In the detailed design phase, culverts will be added to convey flow under the trail.

71	Confirm Open Space Bock 109 and associated trail is included within Stage 1. Clearly show the stage boundaries on Draft Plan.	GSP	Draft plan of subdivision revised to address staging; SWM Block 34 contained wholly in Stage 1
Block 110 – Open Space			
72	Staff note the Active Transportation Plan shows a trail connection behind Block 4 (Residential). Please refer to comment from Robyn McMullen on this connection.		Refer to revised draft plan; trail connection behind Blocks 3 and 4 (formerly Block 4) has been removed
73	Additional Landscape Comments: The following comments are required to be addressed while preparing the Park Concept Plan and other required drawings following Draft Plan Approval.		
Block 108 - Park			
74	Staff note that as per the Landscape Manual, a City-approved Park Concept Plan shall be in place prior to the registration of the first Phase of the subdivision.	GSP	Please refer to revised Preliminary Park Design, which has been revised in accordance with comments provided by City on June 29, 2023
75	Once work begins on the Park Concept Plan, please reach out for a meeting with the Development Engineering Landscape Architect to discuss the overall design including conceptual layout, required landscape features, and more.	GSP	Noted
76	These comments are to be used as guidance for the future Park Concept Plan. A full comprehensive review will be undertaken once a complete package is received. Applicant should refer to the Landscape Design Process *&* Requirements Manual (Landscape Manual) for City requirements. Please advise if a PDF copy of the manual is required and city staff can provide this.		Noted
77	Park Concept Plan to include preliminary grading information and cost estimates for all landscape features, per Landscape Manual section 3.2.1.	GSP Meritech	Please refer to revised Preliminary Park Design, which has been revised in accordance with comments provided by City on June 29, 2023
78	Include the following elements on the Park Concept Plan: a. Future ice rink and associated grading (with noted hydro and future light post location) b. Location of permanent signage, bollard gates, Moloks, trail entrances, etc. Please provide a Molok garbage receptacle and dog waste receptacle at the north entrance to the park off Pinery Road, per City details.	GSP	Please refer to revised Preliminary Park Design, which has been revised in accordance with comments provided by City on June 29, 2023

	c. Extend asphalt trails that form part of the active transportation network to the road, including curb cuts d. Proposed seating including benches and accessible pads, and bike racks, per City standard e. Provide shade in playground areas and seating areas. The provision of shade for park areas is of concern to the City and must be provided in and around pathways and areas where people sit, children play, etc. Applicant is to note the City concern and address the provision of shade in this park in a meaningful way. As noted above, all pipes and other encumbrances should be strategically planned to permit shade trees along the trails and throughout the park. f. We note that the orientation of the basketball courts north south while best practice is northeast/southwest orientation. If slight adjustment is possible while still achieving conceptual layout goals, please revise court orientation. Staff also note that only one full size basketball court is required. g. All walkaways within the park block must be 3.0 m in width asphalt, as per City Standard Detail. The secondary pathway in the park block is currently shown at 2.0 m. h. Based on input received from the School Board (February 2023), it is understood that a 3.0 m wide asphalt pathway shall be provided between the park block and school block. Please show the pathway location, coordinating with the school's future site layout and any proposed playing fields (i.e., soccer field). The path shall be winter maintained, as it will be part of a school walking route. At this time, a fence/gate is not expected between this property boundary. i. At the Park Concept Plan stage, the Landscape Consultant shall provide Development Engineering with a 3D layout plan of the proposed play structure, including safety and non-encroachment zones, edging and surfacing details, and a list of all components. See section 9.8.3 of the Landscape Manual for required playground components. This park's play equipment structure may be eligible for City contribution. Refer to Section 6, Financing *&* Compensation, of the Landscape Design Process and Requirements Manual for New Subdivision Development for		

	specifics including the need to obtain three quotes for layout and design. j. Previous city comments indicate that senior play structure and full-size basketball court should be designed as a connected space with shared seating and walkways, avoiding circulation through safety zones. k. The centre area of the park block should be graded flat to accommodate a variety of activities or play. Maintain 1-2% slope for positive drainage. Label this space as 'Passive Open Space' on the Park Concept Plan.		
79	As a reminder, the Developer shall install pre-construction signage for the park/open space development and signage shall remain in place until the park/open space construction is complete		Noted
General			
80	City staff would like to explore the possibility of varying the sizes of native plant material to ensure they can be planted on the slopes and thrive. We would consider a variety of ball and burlapped, whips, bare root, container grown stock depending on the slopes. Increasing the density of the proposed planting where possible should be undertaken to help re-establish the hedgerow. Appropriate timing of planting and maintenance will be required to ensure survivability. Erosion control blankets may also be warranted to help establish the seed on steep slopes.	GSP	Noted
81	City standard 1.5 meter height black vinyl chain-link fencing shall be provided at all public-private interfaces where private lands abut wetlands, buffer lands, environmental lands, woodlots and open spaces meant to be naturalized, and park interfaces to minimize encroachments. All fencing will need to be coordinated with the Blanding's Turtle Mitigation Plan.	GSP	Noted; to be included as a condition of draft approval Refer to the Fence Layout Plan prepared by Meritech Engineering
82	Educational signage is required to be designed / approved / installed in buffer area to educate property owners regarding encroachment and dumping, turtle barrier fencing, ownership, no winter maintenance, etc. Signage plan to be submitted for approval.	GSP	Noted; to be included as a condition of draft approval
83	If the Developer would like the City to plant the street trees, documentation must be provided which indicates that the City Forester has approved this request.	GSP	Noted

84	All Park and Open Space detailed design drawings shall be submitted at the same time as the Engineering Plans to the City of Waterloo to ensure coordination	GSP	Noted; to be included as a condition of draft approval
85	Unless other provisions are provided for within the Subdivision Agreement, all new parks/open spaces are to achieve the Substantial Completion Certification within one year of the first building permit being issued. Not withstanding the above, the timing of the construction of the park/open space block, as approved by the City, shall be outlined in the Subdivision Agreement.	GSP	Noted; to be included as a condition of draft approval
City Engineering			
86	The following numbered comments are in response to the numbered comments in the *Response to Third Preliminary Submission 556 and 576 Conservation Drive City of Waterloo* letter prepared by Meritech Engineering, dated September 6, 2022. Bulleted comments are additional comments.	Meritech	Noted
87	**Sanitary** 1. The City does not support temporary SWM facilities and requires the school and park to be constructed within Stage 1. For these reasons the City does not support the Quick Start Memo. 2. Acknowledged. 3. Acknowledged. 4. Acknowledged. 5. Acknowledged.	Meritech	All references to "quick start" option have been removed from reports
88	**Water** 6. Acknowledged. 7. Acknowledged. 8. Acknowledged.	Meritech	Noted
89	**Stormwater Management** • Please refer to the MECP Stormwater Management Planning and Design Manual (SMPDM) for clarification and guidance on end-of-pipe facility design. 10. The City does not support temporary SWM facilities and requires the school and park to be constructed within Stage 1. For these reasons the City does not support the Quick Start Memo. 11. Acknowledged.	Meritech	10. All references to "quick start" option, including temporary SWM facilities have been removed from revised reports and drawings 11. Noted 12. Preliminary Servicing Plan/Report revised to discuss impact of

	12. Acknowledged. Now that the Hydrogeological Assessment has been completed, please revise Preliminary Servicing Plan (or produce a plan specific to showing infiltration measures across the site) to show minimum surface and subsurface elevations for each proposed infiltration measure as well as the groundwater level and infiltration rate from the Hydrogeological Assessment. This is critical for assessing the feasibility of infiltration measures. Please note that depending on final configuration of proposed infiltration measures, additional infiltration tests may be required to support detailed design. Follow guidance provided by the Sustainable Technologies Evaluation Program (STEP) if unsure about how many tests are required. 13. Acknowledged. Please ensure continuous modelling includes any changes to the pond function during winter months. Note that the pond must provide quantity and quality control year-round, including during winter maintenance when flows are restricted from flowing to the infiltration basin. a) While there are not quantity requirements for Laurel Creek Reservoir, major system flows must be analyzed to ensure they do not pose danger to the public right of way downstream of the subdivision. Show the proposed overland flow pathway from the proposed subdivision to the communal SWM pond. Make sure to show how flows will interact with the proposed roundabout and adjacent sidewalks/ pedestrian paths at Conservation Drive. Provide calculations showing critical flow depths and velocities leaving the subdivision and how flows will be conveyed without causing danger to the public right of way. b) Please revise grading of the secondary cell to reduce the short-circuiting of flows from the forebay to the outlet. This may be done through use of a low flow channel. c) Please provide preliminary cross-sections of the pond. A minimum of one section from inlet to outlet and one additional one perpendicular to each of the following:		groundwater on proposed infiltration measures 13. a) Beaver Creek Road south of Conservation Drive (including the roundabout) has been designed by others. Drainage areas have been provided so that SWM design can accommodate overland flows in major storm events b) The revised SWM design will include deeper, low-flow channel to increase the flow length during minor flow c) A preliminary cross-section of the SWM pond has been included as part of the revised SWM Report d) Details have been added to the revised SWM Report and associated figures e) Catchment 703 accounts for only the drainage from the park. The drainage entering the wetland is clean and does not include roadway drainage. f) Pond construction has been moved to Stage 1.

	forebay, secondary cell, infiltration basin, and level spreader from eastern limit to Beaver Creek. d) Please provide details of pond structures including inlets, outlets, and connections between the inlet forebay and secondary cell. e) Clarify which drainage area is entering the pond's southern 450mm inlet? SWM Report Figure 6 shows Park area 703 directed to the northern portion of the ponds secondary cell. Please ensure all flows entering the secondary cell are clean (i.e. green space, roof areas) and do not include roadway drainage. f) Please clarify how stormwater runoff from the park will drain in Stage 1, prior to the construction of the pond in Stage 2. Please ensure drainage is not directed over the trail along the western boundary of the park block. g) The SWM report refers to the facility as "comprised of a sediment forebay, a constructed wetland, and an infiltration basin". Please clarify terminology. Per MECP guidelines, a constructed wetland is comprised of a sediment forebay and a secondary cell designed to the minimum criteria shown in Table 4.7: Wetlands — Summary of Design Guidance. Further, the infiltration basin (elsewhere referred to as an infiltrating dry pond) should be able to be hydraulically disconnected from the main pond without impeding the main ponds quality or quantity functions. This is described in MECP Section 4.6.6. Infiltration Basin Design in further detail: h) Infiltration basins should be designed with a by-pass system for large flows. Because of this requirement as well as the depth limitation to minimize soil compaction, infiltration basins are ineffective for water quantity control. Infiltration basins may be incorporated in a stormwater management plan downstream from another end-of-pipe facility. i) The current design shows quantity control provided within the infiltration basin. Please revise the facility to provide quantity control upstream of the		g) As discussed with the City of Waterloo staff on April 14, 2023, the infiltration basin has been changed to an infiltration gallery. This ensures hydraulic disconnection from the main pond. h) As discussed with the City of Waterloo staff on April 14, 2023, the infiltration basin has been changed to an infiltration gallery. i) As discussed with the City of Waterloo staff on April 14, 2023, the infiltration basin has been changed to an infiltration gallery. j) As mentioned above, the infiltration basin has been changed to an infiltration gallery. The permanent pool requirement has been changed to 70 m3/ha. k) The proposed wetland has been sized according to the MECP design criteria.

	infiltration basin. Further guidance provide by the MECP for Infiltration Basins should also be reviewed and implemented in future submissions. j) SWM Report Table 3 shows a permanent pool requirement of 32 m3/ha and ignores that the pond is intended to be a constructed wetland pond with infiltration basin. The proposed pond appears to confuse terminology and design criteria from different pond types. An infiltration type SWMP is ineffective for water quantity control (MECP Section 4.6.6). k) The permanent pool volume of the wet pond should be sized per MECP Table 3.2 for the appropriate facility type to assist in achieving water quality targets. The Storage volume provided should follow Wet Pond guidance for Enhanced 80% long term S.S. removal, unless a Constructed Wetland or Hybrid Wet Pond/ Wetland pond which follows MECP design criteria is proposed. The "Infiltration" guidance for water quality permanent pool volume may be employed in cases where water quantity control is not a requirement		
90	**Additional Cleanwater Collection and Infiltration Comments** 14. Acknowledged 15. Please demonstrate the proposed infiltration measures in Block 114 along the northern property line can meet infiltration targets while being fully constructed and maintained within the City's right of way including subsurface grading and maintenance vehicle access considerations. 16. Please support the design with a plan for ensuring private homeowners in Block **4** do not remove or alter infiltration features after city Acceptance. Further, please show how maintenance access will be provided to the city. 17. Acknowledged 18. Acknowledged 19. While the City supports the general idea of an infiltration basin within the Stormwater Management Block, there are concerns regarding the functionality of the proposed facility:	Meritech	14. Noted 15. Infiltration gallery is sized to store and infiltrate the 2-year runoff volume, ensuring infiltration targets are met. Previously approved cross-sections of the trail have been updated (refer to Appendix D of Preliminary Servicing Report) 16. Approved plans will form part of the package related to subdivision registration. It is suggested that the infiltration features should go on title, to make it clear to homeowners. 17. Noted 18. Noted 19.

	a) While the City agrees with the SWM report that *"winter runoff shall bypass end-of-pipe facilities to avoid large concentrations of chlorides being infiltrated',* winter operation should still provide water quantity and quality control. This may be achieved through use of a traditional wet pond, constructed wetland, or hybrid wet pond/ wetland design. It is our understanding that the current design shows the inlet forebay's intention is to act as the quantity and quality control during the winter months. This will not be accepted as the inlet forebay does not accomplish either target alone. Please re-configure facility per MECP guidance. The infiltration basin should be moved downstream of the storm pond per the MECP guidelines such that quantity and quality functions are not impeded in winter months. b) Public safety is a concern for trails and parkland adjacent to the pond. Please at a minimum follow the minimum criteria outlines in the **MECP Table 4.6: Wet Ponds —Summary of Design Guidance.** Terraced grading may also be employed to increase public safety. c) Maintenance access is required around the entire perimeter of the pond. d) The access road surrounding the pond should be kept above the high water level with ramps for accessing inlets and outlets. The reason for this is two-fold. First, for public safety during storm events and rapid rising of water levels. The second reason is to ensure access if the outlet becomes blocked and water backs up. e) The maintenance access must include a vehicle turning analysis to ensure adequate turning radii. f) The maintenance access (excluding ramps) should be designed to be AODA compliant with public safety in mind. g) Please provide an engineered emergency spillway from the secondary cell of the pond to the level spreader. 20. Acknowledged; please note that additional infiltration tests may be required depending on final configuration of infiltration BMPs.		a) Proposed SWM pond has bee redesigned as per MECP guidance b) Discussed at the meeting with City staff on Apr 13, 2023 a) Discussed at the meeting with City staff on Apr 13, 2023 b) Pond has been redesigned to provide for road access above the high water level c) Please refer to truck turning movement information contained in Appendix D of revised Preliminary Servicing Report d) Trail has been revised to include a maximum slope of 5% e) Emergency overflow weir will be constructed in cablecrete or similar; Please refer to revised SWM Report 20. Noted 21. Noted Cross-section of the end-of-pipe infiltration gallery is included in the Preliminary SWM report.

	21. Acknowledged; please note that additional infiltration tests may be required depending on final configuration of infiltration BMPs. • The City does not support the berm between the forebay and secondary cell with 300mm piped outlet from forebay to secondary cell due to concerns over hydraulic capacity. Please provide a standard weir overflow at permanent pool elevation between the forebay and the secondary cell. • Please provide preliminary details for each type of infiltration measure. o Details should include subsurface layers including media type, thickness, and if a subdrain is proposed.		
91	**Roads/Grading** 21. Acknowledged. 22. Acknowledged. a) Please review and revise grading within the SWM block if necessary to minimize grading within the wetland buffer. b) A turning circle is required at Rideau River Street above Block 18 in Stage 1. c) Access from the pond maintenance road to Pinery Trail should be included in Stage 2. This may require a turning circle and extension of stage boundary depending on the configuration of the revised pond maintenance road. d) Verify how the backyards of Lots 99 to 104 meet the grade requirement in Section 7.2.3 of the Engineering Design Manual which reads: *a. The minimum required outdoor living area is as follows:* *b. Single family — 56 square metres (600 square feet)* *c. Semi-detached —46 square metres (500 square feet)* *Townhouse — 37 square metres (400 square feet)* *d. The living area shall have a maximum slope of 5% and shall be a minimum of 6.0 metres in depth behind the rear of the house.*	Meritech	21. Noted 22. a) Reviewed and revised accordingly; please refer to revised Preliminary Servicing Report b) Turning circle not longer required c) Temporary road access included as Appendix D of revised Preliminary Servicing Report d) Detailed grading information for Block 27 (formerly Lots 99 to 104) to be provided at the time of Site Plan approval; depth of future units to be limited by need to achieve maximum slope permissions in rear yards e) Lotting has been revised; please refer to Block 27 (formerly Lots 99 to 104)

	e) Please show proposed driveway connections for lots 99, 100, and 101 to Rushing River Street. Driveways detract from minimum park frontage requirements. f) Please show trail slopes on grading plan. g) Ensure no ponding will occur on the trail adjacent to and behind Lots 99-104 and Block 105. Provide typical cross sections at the bend in trail behind lot 99 and behind lot 102. h) Please confirm that your grading plan has been coordinated with property owners to the west (i.e. the 'Brohman Lands'). Provide more detail in the Preliminary grading plan in this area to show feasibility of future development in that area.		f) Slopes have been identified for proposed trails; please refer to revised drawings g) No ponding will occur on the trail. Detailed grading deferred until detailed design phase h) Grading has previously been coordinated
92	**General** Confirm that Block 109 and associated open space is included in Stage 1. All Stage boundaries should be clearly shown on the Draft Plan of Subdivision.		Staging has been updated

GRCA Comments
(November 18, 2022)

93	Our previous concerns regarding water balance have not been addressed. As requested in our July 8, 2021 comments: a. Provide a monthly water balance that clearly demonstrates that this subdivision's infiltration targets are met. b. Provide the monthly water balance for each catchment (east and west) in the pre-development, post-development and post-development with mitigation conditions. c. Include the post-development infiltration volumes for the east and west catchments separately. to confirm that the infiltration rates specified for the Beaver Creek Meadows Communal SWM Facility and the North Waterloo Scoped Subwatershed Study (NWSSS) are being met. respectively.	Meritech	On July 26, 2023 a short phone call with GRCA staff assisted in clarifying some details. We understand that this comment is driven by the seasonal differences between groundwater and surface water contributions to the creek. There are a few considerations: first, that Beaver Creek is not only a groundwater feature – that there is a large upstream catchment that provides base stream flow. Second, that the water balance analysis compares post-development conditions to a target infiltration volume.

			Third, that the NWSSS requirements (both peak flow control and annual infiltration volume requirements) dictate the design for a SWM facility with essentially no 2-year outflows. The seasonal break-down of infiltration and surface water inputs is included in the updated Preliminary Stormwater Management Report. It shows that both the annual infiltration target and the annual pre-development surface water runoff volume contribution to Beaver Creek are maintained with development.
94	As requested in our July 8, 2021 comments, revise the environmental impact study (EIS) to interpret the requested revisions to the water balance assessment.	Meritech NRSI	Refer to revised Environmental Impact Statement (dated October 2023)
95	Please provide the following additional details for the SWM facility: a. Preliminary sizing calculations and a cross-section for the end of pipe infiltration facility. Please also denote the seasonal high groundwater elevation on the cross-section drawing. b. A preliminary stage-storage-discharge relationship table for end of pipe.	Meritech	Refer to updated Preliminary Stormwater Management Report.
96	Please clarify: a. How quantity control of stormwater management in the western portion of the site is being provided in winter conditions. It appears that in winter conditions, the valve from the forebay to the storage cell will be shut off and flows will discharge directly to the creek. b. How imperviousness for each catchment is being calculated. This calculation should reflect anticipated imperviousness *due* to building and road configuration. rather than being back-calculated based on a runoff coefficient.	Meritech	Refer to updated Preliminary Stormwater Management Report. The winter by-pass has been reconfigured. The impervious calculations are based on anticipated building coverages, standard driveway sizes; imperviousness in rights of way.

97	Any plans showing the wetland limit, including those in the EIS, should note or label that the boundary was verified by the GRCA on July 30, 2021.	GSP NRSI Meritech	All drawings updated with this wording.