TACC Whitevale East (Parcel 24, Seaton) - FSSR Comments (2019 Lebovic Submission) City of Pickering 24-Apr-24				
Department / Category	**Document / Sub Category**	**Comment No.**	**Comments**	**Response**
Ross Pym, Principal Planner, Strategic Initiatives	**General Comments**	1	Provide a study review fee of $7,500.00 in accordance with the City of Pickering 2019 Development Services Fee Schedule, to be paid at resubmission.	
		2	Provide both signed and sealed Functional Servicing and Stormwater Management Report (FSSR) in accordance with City of Pickering requirements.	The FSSR prepared by SMD Consultants Inc., dated December 2024 is signed and sealed by P. Eng.
		3	Provide updated reports previously submitted, as required, based on the revised Draft Plan of Subdivision and FSSR submitted.	The updated FSSR dated December 2024 correlates to the revised Draft Plan of Subdivision.
		4	Upon approval of the draft plan of subdivision the proposed unnamed streets will be assigned a street name by the City Development Department. The subdivider may suggest names for the City's consideration.	Acknowledged
	Draft Plan of Subdivision - WEDP-1	5	The combination of Streets 'A' and 'D' effectively act as a single long cul-de-sac as it only has one public access. As such, it can only be up to 150 metre long without a secondary access. The secondary access shown with dashed lines connecting Peter Matthews Drive and Street 'D' through the Natural Heritage System (NHS) will be required to be constructed as part of this development. The Official Plan Neighbourhood Plan requires an Environmental Assessment (EA) for the NHS crossing.	Secondary Access to the Site will be provided on Peter Mathews Drive.
		6	Review intersections for proposed Streets 'C' and 'B' where they intersect with Street 'A' as intersecting angles appear to be less than the allowable 70 degree threshold in accordance with City of Pickering Engineering Design Criteria. Also, confirm that the Region of Durham has no concerns with the Street 'A'/Peter Matthews Drive intersection configuration.	The intersection of the Street 'C' (now known as Street 'B') and Street 'A' and the southerly intersection of Street 'B' and Street 'A' have an angle of intersection of 75 degrees and 80 degrees. Both angles of intersection satisfy the minimum angle of intersection of 75 degrees as per City of Pickering Engineering Design Criteria for Local roads.
		7	If a centerline radius of 12.0 metre was used for the 90 degree elbows, the property rounding radius should maintain consistent offsets based on approved cross-sections for 17.0 metre and 15.5 metre right-of-ways. Clarify why 4.5 metre radii were provided.	The centreline radius at the 90 degree elbows have been revised to a minimum of 13.5m. The property rounding radius at these locations are consistent offset based on the right of way width of 17m and 15.35m. The property line roundings on the draft plan have been revised to Radius = 5.0m
		8	Continue 15.5 metre right-of-way along Street 'A' to intersection of Street 'A' with Street 'B'.	The right-of-way for Street 'A' between two intersections with Street 'B' have been revised to a right-of-way width of 15.35m.
		9	Turning circle at termination of Street 'A' to be revised in accordance with City of Pickering Engineering Design Criteria.	The turning circle at the termination of Street 'A' has been designed as per the City of Pickering Engineering Design Standard P-711 with a radius of 13.0m.
	Functional Servicing & Stormwater Management Report (FSSR)	10	Include information within report on how foundation drainage shall be accounted for Hydraulic Grade Line analysis to be provided as well.	Proposed house foundation drainage is now discussed in the FSSR (SMD, Dec. 2024), refer to Section 7.1.2. The 100-Year Hydraulic Grade line analysis shall be prepared at the detailed design stage.

Functional Grading Plan - GR-1	11	Revise “Floodling” to read “Floodline”.	Text spelling has been corrected.
	12	Revise “Retension” to read “Retention”. Clearly indicate the limits of proposed LID retention areas as shown on SER-1	The proposed Roofwater LID retention facility is now shown on the Functional Grading & Servicing Plans, located adjacent to SWMF 25.
	13	The proposed LID bio-retention gallery shall not be located within the proposed (fill) slopes. It has been the City of Pickering’s experience that the infiltration trenches constructed within fill, and in soils with a low permeability do not function according to design, causing seepage through the slope, which leads to slope failure.	There are no LID infiltration galleries proposed within Fill slopes in the current FSSR (SMD, Dec. 2024).
	14	Revise modified 15.5 metre cross-section to suit what is shown on the plan or clarify intent between cross-sections and Grading Plan.	The 15.5m ROW Cross Section is no longer used in the draft plan; and has been replaced with the 15.35m ROW Cross Section.
	15	Provide minimum width of 1.6 metre (15.5 metre ROW) and 2.4 metre (17 metre ROW) for the proposed boulevards in accordance with Proposed Standard Road Cross-Sections for Seaton Neighbourhoods.	The revised draft plan utilizes 15.35m ROW and 17.0m ROW, as per City Standard for Seaton Community P-744SE and P-746SE, respectively. Boulevard widths are shown as per these two cross section standards.
	16	Provide minimum offset of 3.5 metre (15.5 metre ROW) and 4.25 metre (17 metre ROW) from the proposed property limits to the proposed edge of curb in accordance with Proposed Standard Road Cross-Sections for Seaton Neighbourhoods.	Minimum boulevard widths for 15.35m ROW and 17.0m ROW are 2.6m and 4.25m, respectively, as per the above noted Seaton Community standards.
	17	Provide rounding for sidewalks along the proposed Street ‘C’ where it abuts proposed Lot 62 and at termination of the proposed Street ‘D’ where it abuts proposed Lot 88 to match the proposed curb radii.	Sidewalk roundings are updated to match the proposed curb radii.
	18	Indicate centerline of roadway curve radii.	Centerline of road curve radii are now labelled in both Functional Servicing and Grading Plans.
	19	Indicate proposed curb radii.	All curb radii are labelled on the Functional Servicing and Grading Plans.
	20	Indicate proposed pavement widths.	All pavement widths are labelled on the Functional Servicing and Grading Plans.
	21	Provide proposed grading information for all proposed lots, as grading information appears to be missing for some lots.	All lot grading info is shown on the Functional Grading Plan.
	22	Label proposed embankments with 3:1 max slope.	Slope embankments are labelled with appropriate labels, either 3:1 or 4:1.
	23	Check lot types with respect to drainage patterns. Some appear incorrect by label type (i.e., labelled as split drainage but grading illustrates front draining).	Lot type drainage patterns are labelled correctly on the Functional Grading Plan.
	24	Indicate proposed fencing.	Fencing type HAS NOT been shown on the functional plans. To be shown at the detailed design stage.
	25	Outlet for the proposed Overland Flow Route does not appear to be at a low point of the site based on grading information provided. Please review and revise accordingly.	Road low point and Overland Flow Route have been revised and are now coincident.
	26	Remove east-west sidewalk crossings at Street ‘B’ and Street ‘C’ intersections with Street ‘A’ as not required.	Redundant sidewalk crossings are no longer shown.
	27	Provide rounding of sidewalk adjacent to proposed Lot 20.	Sidewalk roundings are updated to match the proposed curb radii.
	28	Provide smooth curb transitions where 17.0 metre right-of-way width transitions to 15.5 metre right-of-way width.	Smoother curb tranisitions between 15.35m and 17.0m ROW's have been provided.

Function Servicing Plan - SER-1	29	Provide maintenance hole information for all proposed maintenance holes (i.e., top of lid elevation and inverts) as some appear missing. Ensure all proposed road grade elevations at proposed structures suit the proposed centerline of road grades illustrated on the Functional Grading Plan GR-1.	Each proposed maintenance hole is labelled with top and invert elevations.
	30	Adjust text of the proposed Bio-Retention Swale for Infiltration to make visible.	The Roadside Bio-Retention Swale is labelled along the west side of the site.
	31	Provide inverts for proposed storm and RDC outlets.	The previous design intent of utilzing RDC's and directing them to roadside infiltration trench is no longer proposed. Otherwise, all other storm inverts are shown.
	32	Low point appears to exist at maintenance hole fronting proposed Lots 11 and 20. Revise storm and RDC design accordingly.	Prop. MH Top Elev. Labels and road grades now match.
	33	Provide drop structures for RDC maintenance holes, where required. Confirm why RDC piping is proposed at a depth of 3.0 metre or greater	RDC sewers are no longer proposed within this subdivision.
	34	Provide rear lot catchbasins where swale length at rear lots exceed 60 metre in length where grading design cannot accommodate. Revise grading accordingly and provide easements (3.0 metre minimum width) where access is required for maintenance of rear lot catchbasins and associated piping.	Only 1 rear lot catchbasin is proposed within the subdivision with 3m wide easement in the rear yard and 2.4m wide easement between the houses, as the pipe will be encased in concrete.
	35	At detailed design, confirm proposed storm pipe sizes accommodate any external drainage from Peter Matthews Drive.	Proposed storm sewers will accommodate drainage from existing 375mm diameter storm sewer extending into the site from Peter Matthews Drive.
	36	In the Conclusion and Recommendation section of the report it references the report was completed in support of an amendment to the draft approved plan. This is not correct, the draft pan has not yet be approved. Please revise.	Conclusion is updated to remove such reference.
Water Resources Comments - Functional Servicing & Stormwater Management Report (FSSR)	37	Please be advised that this application has been reviewed for the functional design of the proposed subdivision. Detailed review of the control devices of the interim and ultimate stormwater management facilities (SWMFs) design shall be deferred to the detailed design stage. It is our understanding that the proponent wishes to construct the interim SWMF, matching the ultimate design, in order to accommodate drainage from Peter Mathews Drive. However, construction of the interim SWMF, prior to the City's final acceptance of the ultimate SWMF designs shall be at the proponent's own risk should design revisions be required. Furthermore, the functional design for the interim facility shows the ultimate outfall configuration. As such, an Environmental Compliance Approval (ECA) will be required for the interim outfall. The detailed design for the interim facility shall be submitted to the City for review and approval.	The proposed SWM Pond #25 has been revised in this FSSR (SMD, Dec. 2024) and no longer matches the interim pond footprint precisely.
	38	Site visits were conducted for all ponds in Seaton throughout the Master Environmental Servicing Plan Addendum (MESPA) and NFSSR submissions. These discussions typically covered a broad range of higher level issues, including a general discussion of potential outfall locations. With the submission of functional servicing designs which have a higher level of detail, the City recommends a site visit with the Consultant, TRCA staff, and City staff to review the proposed outfall location, and ensure it is appropriate.	A site meeting was held on June 25, 2020 with the previous consultant, Cole Engineering, along with City and TRCA staff to review the proposed storm pond outlet location to confirm it is appropriate.
	39	The City of Pickering Stormwater Management Design Guidelines and 1000-Series Standard Drawings were updated in July 2019. The updated Guidelines shall be used in the design. A copy of the updated guidelines is available at the following website: https://www.pickering.ca/en/business/DesignStandards.aspx	Noted.
	40	All supplemental reports provided in the FSSR must be final and must be signed, dated and sealed by qualified professional.	There are no supplemental reports provided in the FSSR. Geotechnical and Hydrogeological studies that accompany the draft plan application are stand-alone reports.
	41	The Erosion Criteria outlined in Section 1.2 of the FSSR should include full description of criteria as per Table B11.1 in the MESPA prepared for Seaton Community in July 2013. Please revise	Detailed stormwater criteria has been removed from the Introductory Section 1.2 of the FSSR and is only shown in a single report location, specifically Stormwater Section 6.1.

42	Section 4.1.1 of the report indicates that additional geotechnical and hydrogeological investigations will be required for the design of the SWMF. These investigations should be completed at this stage of the design to confirm feasibility of the functional design of the proposed SWMF and infiltration systems.	Sections 4.1 and 4.2 of the FSSR continues to indicate that additional geotech and hydrogeological investigation be provided to support SWM Pond liner requirements and confirm insitu infiltration rates at the Rooftop LID location. The SWM Pond has been designed with 90% imperviousness, already allowing for future expected liner requirements. Insitu testing will be completed in Spril 2025 (to re-confirm previous insitu testing by Golder HydroG Report).
43	Based on the information provided in the report, flows from the external areas EX1 and EX2 will be controlled in the proposed facility. Please explain how minor and major drainage from these external areas will be captured and conveyed through the development.	Minor and major storm runoff from External Woodlot areas EXT-1 and EXT-2 shall be captured within a DICB at the Woodlot and piped to the storm pond.
44	The major system (right-of-way and overland flow route/channel) conveyance capacity calculations should be provided in the report. An assumed 7 minute inlet time should be used in the functional design. Please refer to City's SWM Design Guidelines for major system and overland flow route design requirements.	Overland flow route calculations are discussed in Section 7.1.5, and Appendix C of the updated FSSR. Actual time of concentration (using 10 min starting time) have been used to calculate the flow rate at the two critical overland flow route locations, i) at 17.0m ROW Low Point and ii) along SWM Access Block.
45	The Directly Connected Imperviousness (XIMP) used in the Visual Otthymo model is too low. Please refer to Table 18 in the City of Pickering Stormwater Management Design Guidelines for XIMP values and revise the model accordingly. Also, please note that the Ia parametre used in model should be revised as per the updated City's SWM Design Guidelines.	Actual XIMP values have been determined based on the actual form of development, based on both Lots and ROW. Refer to figures IMP-1 and IMP-2 within the updated FSSR for XIMP values as used in the VO model. The Initial Abstraction values in the VO model are as per the City Standards Table 17-SWM Guidelines: 1.5mm for Urban and 10mm for Woodlots.
46	It should be noted that an imperviousness of 90% shall be used for the facility area with a liner. Please revise all calculations accordingly.	An imperviousness of 90% is used for the SWM Facility allowing for the use of a liner, if determined necessary by the geotechnical engineer.
47	The design storm hyetographs for Duffins Creek should be used in the Visual Otthymo (VO) modelling for the facility design. Please refer to 2012 DCHU for further information and revise the proposed design accordingly.	The VO model includes the 12-hour AES storms as provided within the 2012 DCHU.
48	Visual Otthymo model output files provided in the FSSR indicate that the Regional Road area of 0.78 hectare was included in the model as ReadHyd object. This area should be modelled as StandHyd object with the parametres provided in the report. Also, the diverted 10 year flow used in DuHyd object shall be based on the Regional storm sewer design flow. Please coordinate the design with Stantec and revise modelling accordingly.	The external area for Peter Matthews Drive of 0.78 ha has been included in the VO model as a StandHyd object with storm generation as per the 12-hour AES, same as the subdivision. The 10-year flow rate used by the Region for sizing storm sewers for the 0.78 ha area is based on the rational method which produces a much higher peak flow compared to 12-hour AES. We used the 10-year Rational Flow rate of 180 L/s (as per Stantec's storm design sheet) as the upper limit for diverted flow entering the Parcel 24 site.
49	Please include stage storage information for the proposed facilities in the report.	Refer to Table 6.9 in the FSSR for summarized Stage-Storage information, and Appedix B for detailed SS info.
50	The Visual Otthymo digital model was not included in the submission. Please provide a digital copy of the VO2 model in subsequent submissions.	A digital copy of the VO model is provided with this submission.
51	Please correct the name of the Target Discharge column in Table 6.8 of the FSSR. It should read "Interim Target Discharge".	The updated FSSR (SMD, Dec. 2024) no longer includes any discussion on the Interim Storm Pond, which was the subject of previous report(s) prepared by Cole Engineering.

SWM Facility Design	52	The length to width ratio of SWMF 25 has been measured as 3:1. This is less than the City's standard ratio of 4:1. Please revise the design	The SWM Pond 25 has been elongated to achieve the City's length to width standard ratio of 4:1.
	53	The overland (major system) flow should not be directed into the forebay to avoid re-suspension of settled sediment. Please revise accordingly.	The SWM Pond Access Block/Overland Flow route has been relocated to direct drainage towards the main cell.
	54	A maintenance access road is required to the proposed forebay. Please provide.	A maintenance access road is shown to the proposed forebay.
	55	The proposed facility is designed with approximately 2.5 metre height berm. All berms exceeding 2.0 metre in height must be designed as a dam by a Geotechnical Engineer with experience in the design of dams in accordance with the requirements of the Ontario Dam Safety Guidelines (MNR 1999) and the Lakes and River Improvement Act Technical Bulletins (MNR, 2011). The berm design should be provided at a detailed design stage and should include but not limited to the following: 1. The berm must be checked for appropriate load cases. 2. Seepage controls must be designed accordingly to address the groundwater interaction and the internal core of the berm (i.e., internal drains, toe berm/drains etc.). 3. The berm must have a liner to a maximum water surface elevation in pond (100 year elevation). 4.Maintenance holes and control structures should be avoided in the berm. 5. ll embedded conduits (pipes) in the earthen embankments must be designed with great are. Pipes shall be concrete, shall be minimized in length with one pipe segment only, and shall be perpendicular through the berm. 6. Access road proposed on the top of the berm must be paved to avoid infiltration into the berm. 6. A hydraulic jump analysis for the emergency spillway shall be included in the design and adequate erosion protection measures shall be designed accordingly. 7. The detailed design drawings shall specify type of berm material and berm construction methods such as built in lifts, soil compaction, etc. 8. If necessary, the City may request a peer review of the berm detailed design, at the proponent's cost. 9. The construction of the berm must be supervised and certified by a Geotechnical Engineer with experience in design and construction of dams. The appropriate notes shall be included in the detailed design drawing.	The berm design for locations exceeding 2.0m in height will be completed at the detailed design stage by the geotechnical engineer.
	56	Please label all proposed slopes on all relevant drawings and figures.	Pond side slopes, 3:1, 4:1, 6:1 etc are now labelled on the relevant drawings.
	57	Please show proposed access road grades and elevations on all relevant drawings and figures.	Access road grades and elevations are now shown on the Grading Plan. The access down from Street 'A' is max 10%.
	58	The design of the proposed outfall (including the outlet pipe) is not shown on drawings and figures. Please revise.	The Pond outlet pipe/headwall is now shown on the Functional Servicing & Grading Plans. In addition, the full extent of the proposed spillway channel to the watercourse is shown in a separate window.
	59	SWMF design figures shall be included in the report. The figures should show a plan view and a minimum of two cross-sections through the facility. Please ensure that a maximum berm height and groundwater level are shown on the cross-sections.	SWM Pond Plan View and Cross Section View drawings (2) have been included in the FSSR.
	60	Please specify dimensions of the proposed LID on Drawing SER-1 and provide a cross-section through the proposed LID. Also, the proposed LID shown on drawing SER-1 is different from the LID shown of Figure LID 25. Please verify and revise accordingly.	The proposed Roofwater LID retention facility is now shown on the Functional Grading & Servicing Plans, located adjacent to SWMF 25.