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July 6, 2023

Town of Stow
Planning Board
380 Great Road
Stow, MA 01775

Re: The Cottages at Wandering Pond Peer Review

Dear Members of the Board,

On behalf of our client, The Cottages at Wandering Pond Realty Trust, a revised Active Adult Neighborhood Plan Set, Stormwater Management (SW) Report, Lighting Plan, and revised Architectural Plans have been submitted for the referenced project. A Peer Review Comment Spreadsheet has also been submitted with our office's direct responses to comments received by Places Associates.

We offer the following in response to additional comments received by Places Associates pertaining to the SW Report and design:

1. Additional soil testing was conducted at the proposed Infiltration Basin and Roof Drywell locations where Estimated Seasonal High Groundwater (ESHGW) was flagged as questionable. The new soil logs have been added to the SW Report and are indicated as soil series "E-'X'".

2. Three "TP-'X'" soil log series have been identified on the plan. The soil logs have been renamed as series "TP 7-05-'X'", "TP 6-19-'X'", and "TP 5-02-'X'" and have been added to the SW Report. We have not been able to identify one group of three Test Pits and two Perc Tests located adjacent to Dwelling Unit LPL 1. The data is not critical for any of the stormwater or leaching area designs and has been removed from the plans.

3. Documentation with respect to TSS removal has been expanded upon. TSS calculations have been provided for each Stormwater control.

4. A Routing Diagram has been added to the SW Report.

5. According to the MA Stormwater Handbook, the water quality volume equals 1" from a land use with a higher potential pollutant load, within an area with a rapid infiltration rate (greater than 2.4 inches per hour), within a Zone II or Interim Wellhead Protection Area, and/or near or to critical areas. A few of the stormwater controls do not fall into this criteria and have instead been designed with 0.5" of runoff times the total impervious area.

6. Runoff from the entirety of Athens Lane as well as Wandering Pond Way from Sta. 9+12.53 to Sta. 15+30.00 is directed toward catch basins which then flows to drainage manholes. The manholes are equipped with Contech CDS Pretreatment Units to provide the appropriate Water Quality Volume and TSS removal prior to discharge. The treated runoff is then directed to Bordering Vegetated Wetland via flared end outlets. Calculations have been provided in the Stormwater Report and Pretreatment Units have been identified on the plan and profile sheets.

7. The Groundwater Mounding Analysis has been updated to reflect results from additional soil testing. References for the values used have been provided.

8. The infiltration basin detail and associated basin elevation data have been revised to reflect changes made to infiltration basins.

9. The Stormwater Management details have been revised to reflect changes to the Stormwater Structure designs.

10. The Rawl's Infiltration rate has been used for Drawdown Volume calculations provided in the Recharge Volume sheets.

11. The emergency overflow weirs are Infiltration Basin controls that are separate from the outlet structure "Stack Weirs". Details for each are provided.

12. Soil testing for the Roof Drywells has indicated different types of material for design considerations. Two Drywell models have been proposed (A and B) based on the observed soil data in surrounding test pits.

We thank you for your attention to this matter. If you have any questions regarding this matter, please feel free to contact our office.

Respectfully,

Stamski and McNary, Inc.

Robert Melvin

Robert Melvin, E.I.T.

George Dimakarakos, P.E.

Peer Review Comment Form

PROJECT NO. 3719C

NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
1	Sheet 1	PB signature box should include Date of Approval as well as Date of Endorsement	**Space for both the Date of Approval and Date of Endorsement are now provided.**		
2	Sheet 1	Sheet 32-41 should be 32-40	**Sheet 41 is part of the Phasing Plans.**		
3	Sheet 1	Sheet 52-50 should be 41-50	**The plan has been revised so that Sheet 42-50 is identified as the Erosion and Sedimentation Control Plan.**		
4	Sheet 1	No Cottage House Lane Profile? Where is info on the Clubhouse Lane drainage structures?	**A Cottage House Lane Plan & Profile Sheet has been added to the Plan Set on Sheet 65. Drainage structures are provided.**		
Misc.	Sheet 1		**Sheet numbering has been updated with new plan set layout. Updated sheet numbers have been referenced for each comment.**		
1	Survey Plans Sheets 2-7 (3-9)	Recommend a key Sheet for all survey plans as matchlines are not shown on all sheets and there is a lot of overlap between sheets.	A key sheet has been provided for the Record Plan on sheet 3.		
2	Survey Plans Sheets 2-7 (3-9)	It is unclear as to which parcels are owned by which owner on the plan view. Suggest deed division lines or other means of clarification.	A deed division plan has been provided on sheet 2.		
3	Survey Plans Sheets 2-7 (3-9)	It is not clear which parcels are in/out of the AAN Overlay District. It appears that Athens Lane is not in the AAN, is this allowed?	The Athens Street stub is not included in the AAN overlay district and work is only proposed for access through the parcel. The Athens Street stub that is not in the overlay district is not included in the calculations for density or Open Space. All remaining parcels included in this project are included in the AAN overlay district.		
1	Sheet 4 (6)	plans are inconsistent on showing Goshen Street - or the gravel road.	Goshen Lane nor the gravel road exist within the bounds of this sheet. Both are now clearly differentiated on remaining survey plan sheets.		
1	Sheet 5 (7)	Is the existing house 217 Hudson Road included in the AAN project? Is this to remain separate siince it is not in the overlay? If so an ANR plan may be required to separate lot. Easements should be provided for drainage and construction if separated.	The existing dwelling at 217 Hudson Road is not included in the AAN. The property is currently and shall remain as a separate parcel of land. An access, utility, and grading easement has been shown on 217 Hudson Road.		
`	Sheet 6 (8)	Does anyone have rights over the gravel drive where has been shown as Athens Lane or Goshen Street on maps? Plan does not show 10' wide easement to Maple Street - is this still valid? Extinguished?	Others may have rights, but the research has not been done to confirm. Rights in Goshen Lane as shown on Plan 306 of 1996 still exist. The easement has been shown extending to Maple St..		
2	Sheet 6 (8)	Why aren't the easements shown on sheet 17 shown on this survey plan??	The easements from sheet 17 have been shown on the survey plans.		
1	Sheet 10 (12)	Near wetland GC103, is there a culvert connection?	**There is a culvert near GC103, it is now shown.**		
1	Sheet 13 (15)	Flood plain not shown. Please show line with interpolated location of flood plain - not just note of elevation with most contours unlabeled and hard to dicern	The flood plain line has been added to the plan view.		
1	Sheet 13 (15)	Channel is shown through the pond and the limits of the pond are not clear. Please clarify plans.	The existing culverts located at proposed stream crossing 2 were sized inadequately resulting in upstream ponding. The wetlands have been mapped accurately as determined by the ANRAD plan.The pond is within the BVW, upstream of the crossing.		
1	Sheet 14 (16)	Previous review requested the flood plain LINE extrapolating the location based on the FEMA cross sections. Stating the elevation is inaccurate as the flood plain slopes.	The elevation of the flood plain at the location of the stream crossings have been determined by FEMA flood plain profiles. Flood plain in the areas between, upgradient, and downgradient of the crossings are sloping and is not necessary to show for proposed construction.		
2	Sheet 14 (16)	The culvert is listed as a 43" RCP - they don't make 43" - is it 48" filled with sediment?? Does it really have a negative slope??	The culvert has been measured again and corrected to 42" RCP. The inverts of the culvert were measured accurately by field survey.		
1	Sheet 15 (17)	Spot shots were requested adjacent to the crossings - both to see what the elevations through the wetlands were as well as to see how much weir flow over the roadway -NOT PROVIDED. Is flood plain being filled over the road?	Spot grades have been provided at both crossings. The crossings are proposed above the flood plain elevation, however, some flood plain is proposed to be filled for the construction of the road shoulders.		

Peer Review Comment Form

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NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
2	Sheet 15 (17)	No flood plain shown at all - only downstream, No spot elevations requested. Contours near crossing not labeled and hard to discern, no information on existing crossing - dimensions, inverts	The elevation of the flood plain at the location of the stream crossings have been determined by FEMA flood plain profiles. Flood plain in the areas between, upgradient, and downgradient of the crossings are sloping and is not necessary to show for proposed construction.		
3	Sheet 15 (17)	Contour labels too light!	Contour labels have been darkened.		
1	Sheet 16 (18)	217 Hudson 4.36 Ac label does not appear to belong in location shown	The 217 Hudson parcel label has been moved to the correct location.		
1	Sheet 16 (18)	Match lines are terrible (overlap, incomplete) , Sheet numbers incorrect	Match lines have been adjusted and the correct sheet numbers are referenced.		
1	Sheet 17 (19)	12' wide easement shown here but not on survey. What is it for, is it extinguished? Can housing units be placed on it???	The referenced easement has been identified on the Survey Plan sheets. The easement is for access through the parcel. Development of housing units will not hinder the ability to cross through the land.		
1	Sheet 20 (22)	Should be on survey plans so at registry.	The Master Plan sheet shall be recorded with the Record plan sheets at the Registry.		
1	Sheet 21 (23)	Matchlines not shown correctly on sheets and sheet numbers do not correlate to sheet numbers in title box.	The matchlines for the Site Development sheets have been corrected to reference the correct sheet number.		
1	Sheet 31 (33)	Area by clubhouse does not provide sufficient details - where is HP ramp? Is there curbing or berms? Accessible route? HP signage?	A handicap ramp and curb are now proposed for the meetinghouse parking area.		
2	Sheet 31 (33)	is the pool and pool area big enough for 141 units?	Yes, the pool covers over 800 square feet and pool area is of sufficient size.		
3	Sheet 31 (33)	Should there be a play area for kids?	Yes, a play area is shown adjacent to the community pool and sports court area.		
4	Sheet 31 (33)	Only 6 nonhp parking for 141 units? Many units >1000' away and likely to drive. Bicycle racks? Details on porous pavement and grass pavers. (Open cell with vegetation do not work with elderly	Additional parking spaces have been provided throughout each neighborhood. A summary of the total parking spaces proposed is provided in the Zoning Compliance Table on the Master Plan Sheet. Details for the porous pavement and grass pavers have been provided on the details sheets. The number of non handicap spaces with porous pavement has been increased to 14		
5	Sheet 31 (33)	Turnoff should be provided for fire cistern - where is dry hydrant , vent, filler etc? Water line goes through the cistern. (water 5' cover, cistern 3' cover or insulation) Is that a well to west of cistern? No wells for cisterns in Stow.	The fire cistern detail has been revised to meet the Town of Stow's Specifications and Requirements for Fire Protection Cisterns. The water line has been revised. There is no well existing or proposed for the fire cistern and the well has been removed from the plan.		
6	Sheet 31 (33)	Signage	Combination stop and street signs are proposed at all intersections and street signs where appropriate		
7	Sheet 31 (33)	Water line needs to be trimmed at Wandering Pond Way . Need to show water gates	The water line has been trimmed. Water gates have been shown on the plan view.		
8	Sheet 31 (33)	Where are mailboxes?	A cluster mailbox unit is shown on the plan.		
9	Sheet 31 (33)	Should have ramps and crosswalk.	A ramp is provided in line with the proposed Cottagehouse. Crosswalks are proposed on either entrance of Cottagehouse Lane		
10	Sheet 31 (33)	Lighting - at pool, at clubhouse, lighted pickleball courts?	A Site Lighting Plan has been drafted by Hawk Design, Inc. Street, clubhouse, and pickleball lighting is provided and are identified on the Site Development Plan sheets.		
1	Sheet 32 (34)	Phasing does not address utilities at end phase - will sewer lines be stubbed - how will drainage be addressed if it discharges in future plans?	The sewer will end at the sewer manholes as specified in each phase. Water and electric lines will be stubbed until future phases. Drain lines will discharge to temporary sediment basins until the appropriate basins are constructed.		
2	Sheet 32 (34)	40 units constructed before fire cistern? (not consistant with past practices)	Construction of the fire cistern has been specified prior to the construction of untis.		

Peer Review Comment Form

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NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
1	Sheet 33 (35)	Note 5 requires earthen berm to direct runoff as directed -Where is guidance?	An earthen berm detail has been provided on Phase 2 of the Erosion and Sediment Control sheet. Erosion and Sediment Control notes 7 & 8 also provide further guidence for the earthen berm and mountable stone berm.		
2	Sheet 33 (35)	Settling Basins 20 and 21 not visible (note 6)	Sheets 33 & 34 are part of the same phase as indicated by the plan titles: Phasing Plan: The Garden. Settling basins 20 and 21 are visible on sheet 41.		
3	Sheet 33 (35)	This phase should include Wandering Way to Stepping Stone - too much vehicular traffic with grading Stepping Stone, septic leaching area and well development to leave as is, including crossing	The construction of Stepping Stone lane has been added to phase 1		
4	Sheet 33 (35)	How far do utilities like CTE go? Will Athens be completed?	Utilities shall be stubbed or will end at manholes for each phase. The entirety of Athens steet will be completed in phase I.		
5	Sheet 33 (35)	Water gates not shown on plans - should allow isolation of phase & at intersections. No water line shown to WWTF	Water gates have been shown at intersections. The water line has been extended to the WWTP from Daisy Lane.		
6	Sheet 33 (35)	Suggest extend temp basin 5 to LP until drainage structures functional.	Temporary Sediment basin 5 has been extended towards the low point.		
7	Sheet 33 (35)	How does sewer end?	The sewer will end at the sewer manholes as specified in each phase.		
8	Sheet 33 (35)	Catchbasins on Wildflower discharge into basins constructed at future phases	Catch basins shall be directed to temporary sediment basins until the appropriate infiltration basins can be constructed.		
9	Sheet 33 (35)	Stub or Connect sewer lines where phase line not concurrent with SMH	The end of all phases have been revised to allow the sewer to end at a SMH.		
10	Sheet 33 (35)	Where is turnout for emergency vehicles? Suggest making end of phase sufficient for SU30 turnaround	The end of all phases include either a T-turnaround or a closed loop sufficient for SU-30 vehicle access.		
11	Sheet 33 (35)	Goes to basin not constructed.	All drainage outlets shall be directed toward temporary sediment basins. A note has been added to the sub-phasing plans.		
12	Sheet 33 (35)	Comment for all phases - where are foundation drains? Make sure discharge point is in same phase. Also, will there be gutters?	Foundation drains have been proposed for all units where the proposed foundation elevation is expected to intercept the ESHGW table. Discharge of the foundation drains will occur within the same phase as the associated units' construction. Gutters will be provided for each unit.		
1	Sheet 34 (36)	Will the wetlands crossing be installed in Phase 1? Concern to provide H-20 loading and stable in all weather suitable for emergency vehicles. Utilities can be installed once.	Both wetlands crossings are proposed to be installed early in phase 1A-3. The contractor shall verify the accessability of the road crossing for H20 loading after large storm events. Issues associated with erosion shall be addressed with backfilling until the crossing is suitable for construction vehicle access. A comment has been added to subphasing plan 1A.		
2	Sheet 34 (36)	Stepping stone has deep cuts; will road be rough grades so stable for trucks?	The roads are proposed to be rough graded for Stepping Stone Lane and has been indicated in Phase 1A-7.		
3	Sheet 34 (36)	Will road be rough graded for trucks for well and leach area?	The roads are proposed to be rough graded for the well and leaching areas and has been indicated in Phase 1A-7.		
4	Sheet 34 (36)	Is there a dewatering basin for well development?	A dewatering stilling basin has been shown on the plan view as well as on the details sheet.		
1	Sheet 35 (37)	drainage structures discharging to basins constructed in later phases. Where do CBs sta 8+50 go if DMH and outlet not until Phase 3?	All drainage outlets shall be directed toward temporary sediment basins. A note has been added to the sub-phasing plans.		
2	Sheet 35 (37)	Need watergates shown for future phases.	Water gates have been shown at intersections and coincide with the end of phases.		
3	Sheet 35 (37)	Suggest extend temp basin #6 up to LP until drainage structures functional.	Temporary Sediment basin 5 has been extended towards the low point.		
1	Sheet 36 (38)	Extend temp basin 8 up to low point in road until drainage functional.	Temporary Sediment basin 8 has been extended towards the low point.		
2	Sheet 36 (38)	what are drain lines behind LPL 13??	The drain lines behind LPL 13 are proposed for Infiltration Basin 10C to allow connection between the 2 separate basin structures.		

Peer Review Comment Form

PROJECT NO. 3719C

NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
3	Sheet 36 (38)	Outlet from basin behind LPL 19 not included in this phase.	The completion of the outlet from infiltration basin IB-10C has been included in the Limit of work. The outlet pipe has been specified to be constructed under Wildflower Way and stubbed during phase 2.		
1	Sheet 37 (39)	Which phase builds the basin between LPL 19 and WFW 61? When is outlet constructed?	Infiltration basin IB-10C will be constructed during phase 3. The outlet pipe will be constructed during phase 2.		
2	Sheet 37 (39)	Sewer line very close to fire cistern- cistern needs to go in before sewer. Turnoff should be provided for fire cistern - where is dry hydrant , vent, filler etc?	The fire cistern has been set further back to avoid conflict with the Sewer Main. The fire cistern detail has been revised to meet the Town of Stow's Specifications and Requirements for Fire Protection Cisterns.		
1	Sheet 38 (40)	Not all drainage structures on Clubhouse shown. What is the timing for construction of the porous pavement and grass pavement areas? (porous pavement very sensitive to heavy sediment loads)	All drainage structures have been shown on the plan.Porous pavement and grass parking at the Cottaghouse have been proposed to occur last to avoid excessive sediment loading.		
2	Sheet 38 (40)	Turnoff should be provided for fire cistern - where is dry hydrant , vent, filler etc? Water line goes through the cistern. (water 5' cover, cistern 3' cover or insulation) Is that a well to west of cistern	The fire cistern detail has been revised to meet the Town of Stow's Specifications and Requirements for Fire Protection Cisterns. There is no well existing or proposed for the fire cistern and the well has been removed from the plan.		
3	Sheet 38 (40)	Utilities not shown - water, sewer and electrical. Tree line in island not reflective of all utilities going through. Any consideration to keeping them in	All utilities have been shown on the plan. The treeline has been removed from the plans and the area is proposed to be cleared. New tree plantings are proposed where utilites will not conflict.		
1	Sheet 39 (41)	Recommend crossing as part of phase 1 to provide adequate and stable crossing for heavy equipment.	The construction of Stream Crosisng 2 has been added to phase 1.		
1	Sheet 40 (42)	Temporary settling basin 26 is adjacent to fire cisterm, making it difficult to maintain and potentially surcharging the soils around the cistern.	Temporary Sediment Basin 26 has been setback from the fire cistern.		
2	Sheet 40 (42)	Note 5 requires earthen berm to direct runoff as directed -Where is guidance?	An earthen berm detail has been provided on Phase 2 of the Erosion and Sediment Control sheet. Erosion and Sediment Control notes 7 & 8 also provide further guidence for the earthen berm and mountable stone berm.		
3	Sheet 40 (42)	Temporary Basins 24 and 25 will be ineffective unless extended behind units or a swale directing runof f is added behind all units. Same for road runoff until drainage structures installed	Temporary basins 24 & 25 have been extended behind all units on Daffodl Drive and Wandering Pond Way. Note #7 has been revised to include the direction of road runoff toward the Temporary basins.		
4	Sheet 40 (42)	Will basin 4A be used during construction where it is directly downgradient of units WPC1 andDFD11?	No, the temporary sediment basins have been designed to take runoff during construction to prevent the buildup of silt in the permanent basins.		
1	Sheet 41 (43)	Temporary basins or swales should extend behind all house sites to direct runoff into temp basins	The temporary sediment basins have been extended behond all units on Lupine Circle.		
2	Sheet 41 (43)	Temporary basins should be provided in center of circle to contain runoff from WPC 16-WPC 32.	Temporary Sediment Basin 32 has been designed for units WPC 16-32.		
1	Sheet 42 (44)	Will there be permanent construction trailer on site? Please identify location for port-a-johns, dumpsters and surplus erosion control materials. These should be accessible (end of Daisy not convenient for phase).	The locations of construction trailers, port-a-johns, dumpsters, and erosion control storage areas have been identified on the Erosion and Sediment Control sheets. Accessibility was a major consideration in the placement of these areas.		
2	Sheet 42 (44)	Recommend that the two crossing areas be their own separate phases as they are critical for access to the site.	The 2 stream crossings are now proposed to be completed early in the first phase of construction.		
1	Sheet 44 (46)	Erosion control verbiage is insufficient for a project of this magnitude. Additional provisions for intense precipitation is needed.	We have provided adequatly sized temporary sediment basins with calculations. Erosion control storage areas have been identified for each phase, so extra materials area available as needed. A SWPPP will be provided in the future which will include additional provisions for stormwater management and erosion control. Note 5 provides guidance for intense precipitation.		
2	Sheet 44 (46)	Note 7 - requiring a 1' high berm along the road is not feasible during unit construction when subcontractors park all over.	Note 8 has been added to the plan which specifies the use of a mountable stone berm for anticipated parking areas and driveway openings.		

Peer Review Comment Form

PROJECT NO. 3719C

NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
3	Sheet 44 (46)	Stump grindings should be considered for both temporary stabilization on steep slopes as well as a filter between lot development and the roadway.	Erosion and Sediment Control note #14 has been revised to include the referenced comment.		
4	Sheet 44 (46)	Catchbasins should remain at binder for no more than 2 weeks before finish paving.	Erosion and Sediment Control note #9 has been revised to include the referenced comment.		
5	Sheet 44 (46)	Velocity check dams should be sandbags , not straw bales, once the binder pavement is installed	Erosion and Sediment Control notes indicate the use of sandbags at binder grade. An additional note has been provided on the velocity check dam detail.		
6	Sheet 44 (46)	Notes do not adequately address individual lot development provisions	Note 24 has been added to the Erosion and Sedimentation Control Notes to addess individual lot development provisions.		
1	Sheet 51 (53) Athens St 0-8+0	Contech pretreatment units mentioned in drainage summary but not in plans. Presumably for structures in Athens	Manholes with Contech Pretreatment units have been identified on the plan.		
2	Sheet 51 (53)	Show stone wall - is it to be saved or ok to move?	The stone wall has been shown on the plan view. It shall be saved where possible and portions removed shall be reused		
3	Sheet 51 (53)	is there more rip rap along the base of the walls or weirs?	Rip rap is proposed beneath the culverts and between the weirs and headwalls. See stream crossing details for more information.		
4	Sheet 51 (53)	Show wet flag #'s	Wet Flags have been shown on the plan.		
5	Sheet 51 (53)	Show floodplain line! Contractor uses this sheet!	The flood plain line has been added to the plan view.		
6	Sheet 51 (53)	Near FP elevation…detail?	See stream crossing and wetland replication details.		
1	Sheet 52 (54) WPW 8-16+0	Wandering Pond Way 8-16 - Overlaps with Athens	The transition from Athens St. to Wandering Pond Way has been identified on the plan.		
2	Sheet 52 (54) WPW 8-16+0	22' w. pavement - concern is the number of units beyond the culvert - should it be 24' width?	All roadway widths have been discussed with the Fire Chief.		
3	Sheet 52 (54) WPW 8-16+0	Profile view - Where is existing culvert at Crossing?	The existing culverts have been identified on the plan and profile views.		
4	Sheet 52 (54) WPW 8-16+0	Where is data for SMH 9+10?	Data for all Sewer and Drain manholes and catch basins are shown in the profile view.		
5	Sheet 52 (54) WPW 8-16+0	No horizontal (elevations) on profile are shown	Horizontal elevations are now shown		
6	Sheet 52 (54) WPW 8-16+0	Water line cutting across cistern - move water.	The water line has been relocated to avoid the proposed Fire Cistern.		
7	Sheet 52 (54) WPW 8-16+0	Wild Flower, Cottage House Lane	Street labels have been added to the plan		
1	Sheet 53 (55) WPW 16-24+0	Doesn't show drain line crossing in profile at intersection with Wandering Pond Circle.	CB-WPC13 and DMH-WPC10 have been shown in the profile view for Wander Pond Way.		
2	Sheet 53 (55)	No data or detail for the drainage cleanout. What is its purpose?? Use std DMH If needed.	Drainage manholes have been proposed in place of the drainage cleanouts.		
3	Sheet 53 (55)	with depth of cut, subdrains needed - plan for them in the drainage structures	Subdrains have been proposed for roads in areas of deep cuts. We don't recommend the introduction of groundwater into the Stormwater management system.		
4	Sheet 53 (55)	Where is cross drain in profile 16+10 +?	Cross drain from DMH-WPW4 bas been shown on the profile.		
5	Sheet 53 (55)	Question practical offset b/N SMH and drainline. (see attached sketch	The location of the drain line has been adjusted to avoid conflict with SMH-WPW15.		
6	Sheet 53 (55)	Separation of drain and sewer! SMH WPW15, WPW CO @18+0,	Adequate separation between drainage and sewer has been provided at the referrenced locations.		

Peer Review Comment Form

PROJECT NO. 3719C

NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
1	Sheet 54 (56)	Sewer, water and drainage at similar elevations/insufficient clearance to service units. Please identify inverts at crossings to demonstrate constructability	Sewer inverts at the main line will be raised as appropriate. Sewer inverts will be provided on the Sewage Disposal Plan.		
2	Sheet 54 (56)	Retaining walls on X-section should show on plan view. Suggest top and toe of walls this sheet for clarity. Guardrail should be shown on top where no shoulder.	A retaining wall is no longer proposed on the right side of the road.The Stepping Stone Lane cross section has been revised to show a 2:1 slope up to existing grade.		
3	Sheet 54 (56)	Septic area extends over line into use area - will this impact a future Exclusive Use Area for unit SSL 8/SSL 15	The Exclusive Use Area has been revised to accommodate the Septic leaching area.		
4	Sheet 54 (56)	Double number - SSL 8 or SSL15?	Unit numbering has been adjusted.		
5	Sheet 54 (56)	Daffodil has confilcts/lack of clearance horizontally with drainage.	Drainage pipe and structure elevations have been adusted to relieve confilcts.		
6	Sheet 54 (56)	Cleanouts should be DMH on Daffodil.	All cleanouts have been specified as DMH.		
7	Sheet 54 (56)	DMH SSL-3 shows 4 pipes same elevation - inlet pipes crash and insufficient sidewall in DMH structure	The drainage network on Stepping Stone Lane has been substantially revised. DMH-SSL3 has been removed from the plan.		
1	Sheet 55 (57)	Question constructibility of SMH-WPC5 and CB WPC4 - scale 8' center to center	Additional separation has been provided between SMH-WPC5 and CB WPC4		
2	Sheet 55 (57)	Drainage I4+60 DMH WPC5 CBWPCS, WPC6 not shown on profile - question proximity of structures horizontally - vertically unknown	The referenced drainage structures are now shown in the profile view. No conflicts exist horizontally or vertically		
3	Sheet 55 (57)	CTB WPC-1 not at low point and CB WPC@ should be at intersection	CTB WPC-1 has been relocated to the low point and CB WPC2 has been moved to the intersection.		
4	Sheet 55 (57)	Drainage I4+60 DMH WPC5 CBWPCS, WPC6	DMH WPC5 CB-WPC5, & WPC6 have been shown in the profile view.		
1	Sheet 56 (58)	clearance issues SMH-WPC11 to drain line, CB-WPC9 to sewer line	Clearence issues between SMH-WPC11 to drain line and CB-WPC9 to sewer line have been resolved.		
2	Sheet 56 (58)	Angle of inlets to DMH -WPC8 - pipes crashing - no sidewall of DMH structure	Angle of inlets has been adjusted to accommodate sidewall between inlets.		
3	Sheet 56 (58)	No FES invert for Basin 2A-2 or 2A-1	Flared end inverts are now shown on Basin 2A-1 and 2A-2		
4	Sheet 56 (58)	No CTBs shown at LP 17+31	Catch basin CB-WPC1 has been moved to the low point.		
1	Sheet 57 (59)	Angle point in outlet to basins 7B (on left side roadway) and into Basin 8. DMH should be provided at angle points.	Drainage manholes have been proposed at angle points.		
2	Sheet 57 (59)	Structures not identified at sta 5+80± as well as drain from CB-WF5	Structures have been identified at sta 5+80+ as well as drain from CB-WF5 .		
3	Sheet 57 (59)	Concern of clearance with drainage and sewer near intersection with Buttercup	Clearence has been provided between sewer and drain crossings. Water, sewer, and drain crossings shall have adequate seperation or provide sleeve for water line in accordance with the Water and Sewer Crossing Detail.		
4	Sheet 57 (59)	Show SMH WPN -7 with data on this sheet- not found elsewhere	SMH-WPW7 data has been added to the profile view.		
5	Sheet 57 (59)	Show emergency overflow to basins 7B and 8 in profile section. Label inlets on plan view	Emergency Overflow pipes have been shown on profile view and inlets have been labeled on plan view.		
1	Sheet 58 (60)	Crash of sewer and drains near DMH WTW5 - vertically & questionalb horizontally	DMH-WPW5 has been relocated and pipe elevations adjusted to avoid crashing of utilities.		
2	Sheet 58 (60)	Crash of sewer and drains near CD-WFW14 - vertically & questionalb horizontally	Pipe invert elevations have been adjusted to avoid crashing utilities.		
3	Sheet 58 (60)	general concern about clearance between sewer and drainage lines with structures	Horizontal clearence between sewer and drainage pipes and structures had been achieved.		

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4	Sheet 58 (60)	general concern about sewer services crossing drain and water lines (WFW 1 through WFW 5)	The drainage and water lines have been lowered to accommodate sewer services. Sewer inverts at the main line will be raised as appropriate. Sewer inverts will be provided on the Sewage Disposal Plan.		
1	Sheet 59 (61)	Tight horizontal configuration around SMH WFW 14 and drainage structures- concern constructibility and drainage structures being on top of sewer lines.	SMH-WPW14 has been relocated to allowadditional horizontal clearence of the sewer line and drainage structures.		
1	Sheet 60 (62)	Tight horizontal configuration around SMH WFW 19 and CB WF24	SMH WFW19 has been relocated farther from CB WF24		
2	Sheet 60 (62)	Sewer service for WFW 61 vs drain lines?	The sewer service invert at the sewer main line for WFW 61 will be raised to clear drain line conflicts.Sewer inverts are provided on the Sewage Disposal Plan.		
3	Sheet 60 (62)	If Wildflower is crowned, aren't low points created at islands at the junctions?? (both cross sections on detail sheet show crown)	The cross section of the road at the split on Wildflower Way is now superelevated to allow drainage to flow away from the islands. Drainage structures have been revised as appropriate and an additional cross section has been added ot the details.		
1	Sheet 61 (63)	DMH -WF 18 - demonstrate that there will be sidewall on structure with all pipes. Not clear if even a 5' dia will work, can inverts be staggered in elevation? Why are CTB inverts so deep - more expensive.	CB-WF26 has been removed and sidewall has been checked for DMH-WF18. CB-WF25 invert has been raised.		
1	Sheet 62 (64)	Where is info on the drainage under driveways??? Rain garden details? Is there a specific volume required?? Siteplan identifies drop inlets - where are they??	The drainage system on Daisy Lane and Buttercup Lane involve the use of drainage swales and culverts which run underneath driveways. Drop Inletsa are proposed ath the low points, downstream of all swales and pipes, where water is ocnveyed to IB-7A. The swales are not considered rain gardens, nor basins and are not associated with a specific design volume. Drop Inlets have been identified on the plan and profile views.		
2	Sheet 62 (64)	Both Daisy & Buttercup need catchbasins at low points to prevent puddles if snowbanks present.	Catch basins have been proposed at the low points for both roads.		
3	Sheet 62 (64)	All drainage structures missing from profile. No data shown for drainage structures on either road in plan view	Data for the drainage structures has been provided on the profile view and data for the drainage pipes has been provieded on the plan view.		
4	Sheet 62 (64)	Basin 7A- angle points in inlets - should be DMH. Conflict with sewer line on overflow (no invert shown)	Drainage manhole shave been provided at angle points. Data for the overflow of IB-7A has been provided on the plan view.		
1	Sheet 63 (65)	how does sewer service get to LPL 1-5 with elevation of drain lines?? Will they have a force main?	The sewer service invert at the sewer main line for LPL 1-5 will be raised to clear drain line conflicts.Sewer inverts are provided on the Sewage Disposal Plan.		
1	Sheet 63 (65)	Drain line and DMH LP4 not shown on profile. Profile should show both sewer and drain lines even if not under pavement to identify potential conflicts. Show SMH near sta 0+0	All sewer and drainage lines and structures have been identified on the profile view. SMH-WPW3 has been shown on the profile view.		
2	Sheet 63 (65)	DMH LP3 invert out should be 225.03 per slope and FES	DMH-LP3 invert out has been revised to the correct invert elevation.		
3	Sheet 63 (65)	Potential conflict- sewer and outlet from DMH -LP1 sewer 224.12 Drain 222.25 depending which correct	Horizontal clearence between SMH-LPL1 and drainage line has been verified and is not an issue.		
4	Sheet 63 (65)	why sidewalks both sides of stub (By LPL-9)? Need HP ramp and crossing at intersection by Lily Pad	A handicap ramp and ramp have been shown on the plan. Sidwalk has been removed from one side of the road.		
5	Sheet 63 (65)	DMH LP1 - question whether any sidewall remaining even if a larger diameter structure used	The location of DMH-LPL1 has been adjusted to allow clearende between pipe inverts.		
6	Sheet 63 (65)	no sewer line info between SMH LP13 and SMH WF3	Information has been provided for the sewer line between SMH-LPL13 and SMH-WPW5.		
1	Sheet 64 (67)	Any street lights? Lights at Clubhouse/mailbox- no details on plans	A Site Lighting Plan has been drafted by Hawk Design, Inc. Street, clubhouse, and pickleball lighting is provided and are identified on the Site Development Plan sheets.		
2	Sheet 64 (67)	The pavement detail shows 5" of pavement which is typical for heavy duty pavement - is this to be used in front of fire cisterns?	Heavy duty pavement was not intended for the road design. A more typical pavement section is proposed.		
3	Sheet 64 (67)	verify if a guardrail not guiderail is needed at crossings due to height wall and on Stepping Stone retaining wall where it is adjacent to road.	Stream Crossing 1 will contain a gaurdrail and chainlink fence. A retaining wall is no longer proposed for Stepping Stone Lane.		
4	Sheet 64 (67)	Details missing - stop signs and sign posts	Signage details have been added to the plan.		

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5	Sheet 64 (67)	Details missing - porous pavement	A porous pavement detail has been added to the plan.		
6	Sheet 64 (67)	Detail missing Grass parking - any reinforcement?	A grass parking detail has been added to the plan.		
7	Sheet 64 (67)	Crosswalks detail	A crosswalk striping detail has been added to the plan.		
8	Sheet 64 (67)	Mailbox loc and detail	Mailbox to be provided in accordance with the US Post Office requirements.		
1	Sheet 65 (68)	Fire Cistern - this detail is not consistent with Stow Standard - detail indicates well- not standard	The fire cistern detail has been revised to meet the Town of Stow's Specifications and Requirements for Fire Protection Cisterns.		
2	Sheet 65 (68)	Cistern detail shows pump - Stow standard does not. Clarify the dry hydrant is 24" above pavement elevation at hydrant	The fire cistern detail has been revised to meet the Town of Stow's Specifications and Requirements for Fire Protection Cisterns.		
3	Sheet 65 (68)	Provide elevations for all cisterns to show total head meets requirements. Provide bouyancy calculations for all cisterns.	Elevations and bouyancy calculations have been provided for all cisterns.		
4	Sheet 65 (68)	where is Eone, low pressure pump required> if from WWTF then standard detail may not be sufficient. Specify pump and pump requirements	E-One pumps are no longer required for any of the units.		
5	Sheet 65 (68)	Antiseep Collar detail needed	An anti-seep collar detail has been provided.		
6	Sheet 65 (68)	There are locations when water main or services must go under sewer	Water, sewer, and drain crossings shall have adequate seperation or provide sleeve for water line in accordancew with the Water and Sewer Crossing Detail.		
1	Sheet 66 (69)	Impermeable core for basin is embedded in the berm, where in fill, not covering the bottom of the infiltration basin!! Recommend 3/4-1 1/2" washed stone on bottom of all basins.	The infiltration basin detail has been revised accordingly.		
2	Sheet 66 (69)	what is detail for Drainage cleanout (unless all replaced with DMH)	All drainage cleanouts have been replaced by DMH.		
3	Sheet 66 (69)	Drop inlet detail for Daisy + Buttercup - site plan calls for them.	Nyloplast drain basin shall be used for the drop inlets specified on Daisy Lane and Buttercup Lane. The detail reference has been updated to refelct its use for bothe drop inlets and outlet structures.		
4	Sheet 66 (69)	where are the CDS units required?? Provide sizing and identify model numbers for locations.	The Contech CDS Pretreatment units have been identified on the the Athens Street and Wandering Pond Way Profile Sheets. Sizing calculstions have been provided in the Stormwater Report.		
5	Sheet 66 (69)	Dry well detail - these are glacial till soils and may be into the water table. I.e. WPC 43 surface 294 bottom 288.5 - 7.5' below grade. Unlikely that ESHWT is deeper than 4-5' given the slopes. TESTING REQUIRED	Additional testing has been provided for the drywells and the soil logs have been added to the Stormwater Report. ESHGW for each drywell location has been identified in the detail.		
1	Sheet 67 (70)	Cross sections showing retaining walls within several feet of the travel lane should be reviewed for the height (no info found on plans)to determine if guard rails and potentially pedestrian barriers are needed	Guard rails have been provided adjacent to the retaining walls on stream crossings 1 and 2 and on Athens Lane Sta. 5+20.00. The gaurdrails have been labeled on the Road Cross Sections.		
1	Sheet 69 (72)	Overall the approach to the culvert replacement is not realistic. It cannot be constructed per the details shown and cannot be maintained, especially if privately owned by a homeowner's association. The design must be simplified.	The first stream crossing culvert replacement plan is now simplified. One large open bottom box culvert is proposed preceded by a weir with an opening that is sized to replicate existing flows under the access road.		
2	Sheet 69 (72)	Culvert should be 3 pieces so they can compact soils and place rip rap along stream channel. Rip rap should be used for stabilization - sized appropriately for velocities.	Culverts are now proposed as segmental to allow rip rap placement prior to top side of culvert installation. Construction sequence has been updated. 5"+ rip rap is proposed, adequate for expected velocities of 100-year storm		
3	Sheet 69 (72)	Large culvert bottlenecking into narrow culvert is dangerous. If blocked with debris, there is no way to clear obstructions - not safe for person and creates potential for breach or washout if debris cannot be removed. With no secondary access, this crossing must be overdesigned and maintainable	One singular culvert is now proposed, removing the potential for bottlenecking problems.		

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NO.	SHEET NO.	Places Comment	Applicant's RESPONSE	CONFIRMED BY	DATE
4	Sheet 69 (72)	The floodplain goes over the existing roadway. The flood plain **line** should be delineated. Spot elevations **must** be shown for compliance with the incremental compensatory flood plain requirements. Contours are not clearly labeled and we cannot discern the elevations throughout the work area.	The floodplain line is shown along with spot grades on the wetland and floodplain alteration detail sheets. A table of areas, filled and compensatory, is also now provided. According to the on-the-ground survey, the floodplain does not go on top of the existing paths above either stream crossing.		
5	Sheet 69 (72)	The construction phasing is insufficient. Consideration should be given to the location and size of equipment needed to excavate and place the footings and culvert, as well as location for backfill material, generator for pumps and staging for materials.	An area is shown on the "Culvert Replacement Detail" for both crane placement and material storage areas required for the crossings. The cranes are proposed directly adjacent to the existing gravel paths.		
6	Sheet 69 (72)	What is the lateral extent of rip rap? Please provide rip rap sizing calculations.	Rip rap is proposed beneath the culverts and between the weirs and headwalls. Rip rap sizing calculations are attached showing 3.14" minimum diameter rip-rap for 100-year storm flow rates through the culvert. 5"+ rip-rap is proposed.		
7	Sheet 69 (72)	On the downgradient side of the culvert, what are the proposed grades? It appears that the existing grades are lowered - slope stabilization is a big concern. What happens at PL? We question whether this work can be done without obtaining a temporary easement from the abutter.	The downgradient side of this first culvert is proposed to match the existing outlet elevation. The streambed is proposed to be stretched back to the new outlet location. A small area will need a 1:1 rip rap slope to keep work on the property. Spot grades have been added.		
8	Sheet 69 (72)	What is the minimum cover on the culvert to meet H20 Loading?/	There is typically no minimum cover requirement for concrete culverts, as they are H20 with just 3" of asphalt pavement directly on top of the slab.		
1	Sheet 70 (73)	Second Crossing see comments above for first crossing as most are applicable to both, especially with construction sequencing and placement of cranes.	There is adequate room on either side of both stream crossings for crane placement given there are existing crossings at the site. Areas for material staging and cranes are now shown in the "Culvert Replacement Detail" for both crossings.		
2	Sheet 70 (73)	Plans indicate existing culverts are 24" and 43". They don't make 43" round RCP -is it an eliptical pipe? please correct and model accordingly.	The existing RCP is actually 42". The models were adjusted accordingly, with the only change that comes from this being the orifice size in the weir box is slightly smaller to match flows through the existing 42" RCP.		
3	Sheet 70 (73)	6' inside height+ 1.5 footing =7.5' height wallt - 4' min cover=3.5' open space for manual compaction- cannot be constructed without flowable fill if single U-shaped culvert used.	A note has been added to the Open Bottom Culvert Details that the culvert shall be 3 separate pieces to allow for compaction of soils after walls are constructed. Otherwise, flowable fill would be required		
4	Sheet 70 (73)	what is the spacing of the various structures/orifices? Will there be riprap in the space between the orifices and the retaining wall/headwall at the crossing?	The location of the orifices are now dimensioned off the edge of the weir walls, and a label added that rip rap shall be placed in the space between the orifices and headwall and beneath the culverts.		
5	Sheet 70 (73)	the current culverts converge the flows to a common channel - the proposed box culverts are perpendicular to the roadway and split the flows. No topography or spot grades (as requested in previous reviews) are shown. As outlets are approximately 100' to abutting properties, will the flow paths alter wetlands on abutting property?	The angle of the proposed culverts is now the same as the existing pipes to keep existing flow paths. Existing and proposed spot grades are now shown on the wetland and floodplain alteration detail sheets.		
6	Sheet 70 (73)	It appears that the orifice elevations are to mimic existing conditions, particularly for low flow conditions. If that is the case, why do the diameters differ from the existing culverts?	The orifice elevations do match the existing culvert inverts. The orifices are slightly smaller than the existing culverts to allow similar flows, since orifices allow more water to pass than a same sized pipe because of friction losses.		
7	Sheet 70 (73)	Unrealiztic to show stabilization in culvert with vegetation - no light. Show appropriate sized rip rap and also include it at outlets.	Appropriately sized (5"+) rip rap is now shown beneath the culverts and at the outlets.		
8	Sheet 70 (73)	What elevation is the "create stream channel" at?? Slope? Shouldn't they match the elevation of the downstream end so a pond is not created at the outfall?	The grade at the downstream end is intended to allow a continuous flow of water towards the undisturbed portion of the stream. The existing streambed at the existing outlet is at elevation 210.49. The proposed outlet, a bit further upstream than the existing, is proposed at elevation 210.55, providing a slope of about 1%.		
1	Sheet 71 (74)	Area of wetlands alterations should include the riprap needed on inlet and outlet of the crossings.	Area of wetland alterations have been revised to include riprap at outlets.		
2	Sheet 71 (74)	There is insufficient information provided on the flood plain alterations and compensatory areas. Flood plain calculations should provide incremental volumes and 1' increments of the fill and compensatory areas.	A table of areas, filled and compensatory at incremental elevations, is now provided.		
3	Sheet 71 (74)	Wetlands replication area should be excavated below finish grade to accept the muck soils. Plans should address process if insufficient muck soils removed in crossing area.	Note 3 on "Procedure for Construction of Wetland Replication Area" says to excavate the area 1' below final grades. The wetland replication cross section also notes this.		
3	Sheet 71 (74)	It is recommended that the replication plan provide for invasives control program	Note 10 in the "Procedure for Construction of Wetland Replication Area" has been revised to note that an Invasive Management Plan must be submitted to the Conservation Commission if invasives have taken hold in the wetland replication area after the first and second growing season inspections.		

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1	Sheet 72 (75)	see comments for sheet 71	Addressed		
1	L4	Walking Trail lacks detail. How Made? Maintained? Is a Forestor or Arborist going to clear path, tree, etc?	See Landscape Architect Plans, to be provided at a later date.		
2	L4	Irrigation? If so, where? How is it supplied?	See Landscape Architect Plans, to be provided at a later date.		
3	L4	Only cottages have flowering trees.	See Landscape Architect Plans, to be provided at a later date.		
4	L4	Single Family lots have shade only.	See Landscape Architect Plans, to be provided at a later date.		
5	L4	Bloodgood Plane Trees becomes very large > 100' and have destructive roots. They are shown adjacent to the roadways - recommend other street trees	See Landscape Architect Plans, to be provided at a later date.		
6	L4	it appears there will be at least 4 kinds of grass seed mixes - lawn vs. slope mix vs. wildflower or low maintenance mix - please define locations	See Landscape Architect Plans, to be provided at a later date.		
7	L4	No specifications for loam	See Landscape Architect Plans, to be provided at a later date.		
8	L4	Details for signage? Lighting at street- not shown on civil site plans and Planner Memo indicated use of post lights that are not shown on Landscape plans. Clarification needed.	See Site Lighting Plans		
1	L5	Lighting at clubhouse area - pool? Pickleball Courts?	See Landscape Architect Plans, to be provided at a later date.		
1	L6	Screening between Daisy and WWTF in the understory is not shown per Jesse's memo.	See Landscape Architect Plans, to be provided at a later date.		