

Inland Wetlands Commission

MINUTES  
Public Hearing  
April 18, 2018

7:00 p.m. upper level meeting room

MEMBERS PRESENT: Mr. Bennett, Mr. Davis, Mr. LaMuniere,  
Mr. Papsin, Mr. Wadelton

ALTERNATES ABSENT: Mr. Kassis, Mr. Matthews

STAFF PRESENT: Mrs. Hill

ALSO PRESENT: Atty. Olson, Mr. Szymanski, Mr. Maynard,  
Mr. Boucher, Ms. Purnell, Mr. Rogness,  
Mr./Mrs. Solomon, Mrs. Giampietro,  
Mr. Schereschewsky, Residents

101 Wykeham Road, LLC./101 Wykeham Road/#IW-18-04/Inn

Mr. Wadelton reconvened the public hearing at 7:00 p.m. and seated Members Bennett, Davis, LaMuniere, Papsin, and Wadelton.

Mr. Szymanski, engineer for the applicant, represented the applicant. He first reviewed the record of revisions to the original permit made between 8/7/12 and 6/24/17. He noted the current proposed revisions were 1) concrete emergency access landings at each of the proposed buildings, including one at the spa building and three at the poolhouse, 2) pathways to meet handicapped access requirements, and 3) change in the location of the condenser pads.

Ms. Purnell, intervener, stated that an additional change was in the rear of the main building where additional drainage would be picked up within the regulated area.

There was a brief discussion about what was to be included in the record. Mr. Wadelton stated that at the request of the applicant, all previous submissions were to be included in the record.

Mr. Wadelton explained that in order for the IWC to reverse its previous approval there had to be significant changes to the approved plans or documentation from a qualified individual that shows the proposed changes were likely to have a significant adverse impact on the wetlands or watercourse.

Ms. Purnell stated it would be just as difficult to prove there would be no impacts or failures on site as it would be to prove there would be. She noted several previous large projects with 5% slopes where the erosion controls had failed and

sedimentation into either wetlands or watercourses had resulted; The Gunnery on Green Hill Road, Stiteler and Giddens on West Shore Road, and Montessori School on Litchfield Turnpike. She then read her letter dated 4/18/18 re: the history and background of the property and presented each of the 12 sheets of attachments. In it she compared the 2008 Wykeham Rise Inn, 2010 Wykeham University, 2012 Wykeham University II and III, 2012 Wykeham Project, 2014 and 2015 Palihouse Inn, 2017 Inn at Wykeham Rise, and the present plan and noted the progressive revisions to the original permit.

Mr. Maynard, engineer for the intervener, submitted his stormwater management report, dated 4/18/18. He summarized his concerns about the proposed stormwater management plan, which included: 1) the application did not include architectural plans to show the proposed roof lines, 2) no field sketch map had been submitted, 3) the data used to design the system had changed over the years; new tables show a 15% to 20% increase in yearly rainfall, which was not accounted for in the plans, 4) two different types of rainfall frequencies had been used in the analysis, which, he said, would skew the results, and 5) the volume of material to be removed, deposited, and stockpiled had not been provided. Mr. Maynard also stated that none of the existing culverts under the driveway had been analyzed or their elevations provided, that he believed the proposed construction entrance should be installed 50 feet uphill to better protect against sedimentation, that the plans contained numerous health code violations, the soil test results had not been submitted, and he did not think the DEEP could approve the septic system plan. He also stated the design for the wet ponds was inadequate, the proposed driveway was too narrow, locations for the generators were not shown, and that no construction plans had been submitted for the paths to the poolhouse, which would be located on top of the septic system. (See the entire report in Appendix A, attached.)

Mr. Boucher, engineer for the intervener, noted one key change since the 2008 permit approval was that the Judea water line had been moved to Wykeham Road. He said the plans show an internal connection that does not exist and that there is no current application to the water company for a connection. He thought a wetlands crossing for the water line connection might be proposed, and if so, a full IWC application would be necessary. He concluded saying currently there was no viable water supply for the property and no plans for service. He then said after contacting the DEEP it was unclear whether the entire septic system would be replaced or just the tanks and said, too, that the waste water management plans had not yet been approved.

Regarding the 2015 floor plans submitted to the DEEP for review, Mr. Boucher said up to date floor plans were needed by the DEEP in order to assess how the proposed uses will impact the waste water management plan. He also noted the applicant must prove that by the time the effluent discharge reaches the property line or the brook that it meets drinking water standards, but said he did not know whether this information had been submitted. Other points made by Mr. Boucher included: 1) there is no current DEEP approval to utilize the on site septic system, 2) the footing drains for buildings 1 and 2 are at the edge of the reserve area where they will tend to collect stormwater, 3) although Mr. Szymanski stated that only .004 acres of wetlands would be disturbed, he had not included the replacement of the culvert at wetlands flags #39-#40, the direct discharge from wetlands pond #2 to Kirby Brook, the removal of the retaining wall on the west side of the Boyd building, or the pipe on the east side of the tennis court in this calculation, and 4) he questioned whether the driveway as proposed and the 17 ft. wide western entrance would meet the fire code requirements and he noted that when this entrance was widened and the culvert extended, there would be a direct impact on Kirby Brook.

Mr. Bennett asked if the intervener anticipated further plan reviews. Ms. Purnell stated she had thought Mr. Szymanski had selected all important material to include in the file, but since it had now been made clear that all previously submitted files were incorporated in the record, she had not yet had the opportunity to review all of the documents in the boxes on file in Town Hall. She said there were serious concerns about the proposed stormwater management plan, which should be recalculated to industry standards, and that once done, she should have the opportunity to review it. She noted the 15% to 20% difference in precipitation values and compliance with the health code were very relevant. She asked the Commission to conduct a holistic review of the proposal, looking at all the elements together because they are all connected. Failure to do so, she said, could have unintended consequences.

Mr. LaMuniere noted that valid points had been made, but said they would be taken up by the Zoning Commission. He also noted that as revisions to the 2008 had been made, the Commission had had a third party consultant check them for potential impacts to the wetlands. He asked if Ms. Purnell was saying that the previous reviews by Land Tech Consultants were not valid.

Mr. Boucher responded that technical standards had changed since then and the current stormwater report was incomplete. He said he had only been able to review what had been submitted to

date. Mr. Szymanski pointed out data on pages 165 and 177 in his "Stormwater Management Report Prepared for Wykeham University, 101 Wykeham Road, Washington, Ct." dated 9/7/10 and revised to 8/16/12. He then described the changes proposed since 2017; regrading at the rear of the main building and retaining walls on the east side of the building, moving the 5' X 20' pull off parking area five feet further from the wetlands, adding concrete emergency access landings for all three buildings, and adding a few yard drains and asked how these changes would impact the wetlands.

Mr. Boucher again stated the rainfall data used in the computations was not current. Mr. Szymanski responded that was not a requirement of the Inland Wetlands Regulations and, in fact, was a "complete farce." He said none of the rain events referred to actually occur and that the peak rate of flow to the brook for the 2 to 100 year storm events would be reduced when the proposed plan was implemented. He noted he was not required to submit a drainage report; he only had to show there would be no impact to the wetlands and watercourses.

Mr. LaMunier noted there had been recent changes in rainfall; larger amounts in shorter durations; which does have an impact on wetlands and watercourses.

Mr. Szymanski explained the existing conditions; that the driveways and roofs already connect to a drainage system that collects runoff, which directly discharges into the brook and results in erosion near wetlands flag #14. He noted there is no water quality protection now and with the installation of the proposed ponds, fore bays, and rip rapped swales the impact would be that water quality protection would be improved.

Mr. LaMunier asked if there were any changes proposed that were so drastic that they could have a negative impact. Mr. Szymanski recommended the Commission refer this question to Land Tech for a review that the applicant would pay for.

Atty. Olson noted the general principle that boards and commissions should not overturn previous decisions unless there is a significant change in circumstances; and not just a change in the activities proposed, but in the impact to the wetlands. She added that a change in the statutory regulation requirements could also be a reason to consider overturning a previous decision.

Ms. Purnell said what is different in terms of the stormwater management system is that currently there are no vehicles driving on the property. She noted that a condition of the 2008 approval was preconstruction water quality monitoring of

Kirby Brook, but said this had never been enforced and later the Commission had struck it from the conditions. She stated that if the Commission now had 10 years of data on water quality, it could have been helpful in getting a handle on potential impacts. She said she was not suggesting the Commission deny the application, but that it conduct a diligent review of this 70 million dollar project in connection with state health department requirements and the waste water management plan.

Ms. Giampietro, adjoining property owner, said she was concerned about whether Aquarion would have enough water to serve the project, that toxic runoff from the fire debris was running off into the brook, that there were plans for construction over the septic fields, and that all of the issues raised had not been addressed.

Ms. Purnell spoke briefly about feasible and prudent alternatives. She noted the site plan proposed by Palihouse had preserved the entire forested area, said it was a viable option, and asked the Commission to consider it. She also stated there were other feasible and prudent alternatives that should be considered, but that since the site inspection had been conducted by the engineer, rather than the Commission, areas of concern such as the western spring, the brook, and the area where stonewalls had been rebuilt without a permit, had not been noted.

Mr. Wadelton asked the commissioners if they wanted to refer the application to a third party.

Atty. Olson stated that consideration of feasible and prudent alternatives was required only if the Commission found there was the likelihood of a significant impact.

Mr. LaMunier stated there was no road proposed over the septic system; only pervious pavers for emergency access required by the Fire Marshal. In response, Mr. Boucher noted the poolhouse would have a full bar and the driveway would be used to get supplies up there. Ms. Purnell said in addition to the bar, the poolhouse would have food service and that the tented events would require set ups, service, generators, swimming pool services, etc., which would be delivered by this driveway, meaning it would be used daily and would no longer serve only as an emergency access. Mr. LaMunier said it was important to know this was no longer just an emergency access because it could have an impact, but noted this information was not included in the Wetlands application.

There was a brief discussion regarding the information currently presented on the Wykeham Rise website and whether it represented what was included in the Zoning record.

Ms. Purnell noted there were also pathways to the pumphouse and to pond #1 for yearly maintenance, but that subsequent approvals meant the pathway would be used for fire service, too.

Mr. Solomon, adjoining property owner, was very concerned that the Inland Wetlands Commission did not understand that the driveway would be used for more than emergency access and that it did not understand the scope of the entire project, which, he said, had "morphed" considerably. For example, he stated that now that a ballroom was included, there was not enough parking. He urged the commissioners to read the application.

Mr. Wadelton stated the IWC could act only on what is within its jurisdiction and that comments must relate to direct impacts on the wetlands.

Mr. Solomon stated the project has grown 30% to 40% in size since first approved and asked the Commission to take its time to understand its size and scope. He also asked that the plans be referred to another expert engineer for review. He noted that it was not clear what is included in the record since there are so many boxes of previously submitted documents.

Atty. Olson noted that the Commission may not prohibit an applicant from including what he wants in the record. Mrs. Hill asked, however, that the Commission require the applicant to submit copies of all the documents to be included. Mr. Szymanski said he had included the peer review material and had prepared the binders in response to the question of what was to be included in the record, adding that he did not think it was important that the previous documents from all of the storage boxes be included. He offered to submit a copy of the soils report. Atty. Olson said it was up to Mr. Szymanski to decide and make clear what will be included and incorporated in the record. She added that the Commission must act on the application and information before it and must rely on the applicant's representations.

Mrs. Solomon noted that use up at the poolhouse would increase under the latest plan because there would be food service and because the poolhouse would be winterized. She thought it was understandable that the Commission did not understand the full extent of the application because an adequate description of the proposed uses had not been submitted. Because the permit had lapsed and there had been nine years of changes, she urged a review by a third party, who she thought would be helpful in determining what kind of monitoring should be required.

Atty. Olson said the driveway was for an emergency access only and if it was used for any other purpose, it would be a violation. She said the Commission is duty bound only to consider the application before it.

Mrs. Solomon thought the applicant should be required to provide comprehensive answers to address the issues raised for a large project like this. She said due to its size and complexity, the Commission would not be criticized for getting a third party review. She said she was critical of the process, but not of the Commission.

Mr. Wadelton noted a question for the third party expert to answer was, Does the intensity of use impact the wetlands? Mrs. Solomon thought that to get a more accurate answer, a better description of the proposed uses was needed. Mr. Wadelton noted another question for the expert to answer was, What is the adverse impact of increased travel on the driveways?

Ms. Giampietro told the Commission it was not getting the full story from the applicant.

Ms. Purnell said she and her engineers would continue to review the application and would point out additional concerns in a holistic manner.

Mr. Wadelton said the Commission wants to hear about adverse impact to the wetlands rather than about alternate plans, as any two engineers will design different plans.

Regarding the 2004 Ct. Stormwater Quality Manual, Mr. Szymanski said it was a guideline and not a requirement of the Inland Wetlands Regulations.

It was the consensus of the commissioners to refer the application to Land Tech Consultants for a third party review. Ms. Purnell thought the referral might be premature at this point. She said there could be information presented at the Zoning public hearing that could be relevant to the Wetlands Commission. She suggested the infiltrators could be crushed because the 6 inches of fill proposed for the top of the septic system does not meet the load requirement standards. She said if crushed, the effluent could get intercepted by the stormwater management system and directly impact the wetlands. She asked if the IWC would enforce keeping all but emergency vehicles from driving over the septic leaching fields.

Atty. Olson said any approval would be based on the Commission's understanding of the plans and if anything else impacts the wetlands and is likely to result in a significant

impact, it would be enforced. She added that Mr. Szymanski would go through the boxes of documents and submit any additional material he thinks is needed to make the application complete.

Mr. LaMunier stated that if the Zoning Commission approved the upper driveway for anything other than emergency access, the applicant would be required to come back to the IWC.

MOTION: Regarding Application #IW-18-04: to engage Land Tech Consultants to review all of the changes to the plans since its last review and specifically to review the new stormwater management report. By Mr. Davis, seconded by Mr. Papsin, passed 5-0.

Ms. Purnell complained that information was coming in piecemeal and that it was required to be submitted 15 days in advance of the public hearing per the Regulations. She said as the intervener she needed time to review all of the documents, too. She asked that the current architectural plans be submitted so the Commission would understand how the size, scope, and scale of the project could be linked to wetlands impacts. She also asked, if she completed a list of questions she thought were important, would the Commission refer them to Land Tech. Atty. Olson said it was up to her whether she wanted to submit her questions for the record, but up to the Commission whether they would be forwarded to Land Tech.

It was noted an extension of time in which to complete the public hearing would have to be granted. Mr. Szymanski submitted a letter dated 4/18/18 requesting a 21 day extension. Ms. Purnell asked if the applicant would have all new information in 15 days in advance of the continued hearing. Atty. Olson stated the applicant had agreed to do so.

MOTION: To continue the public hearing to consider Application #IW-10-04 submitted by 101 Wykeham Road, LLC. for an inn at 101 Wykeham Road to Wednesday, May 23, 2018 at 7:00 p.m. in the main level meeting room. By Mr. Davis, seconded by Mr. Papsin, and passed 5-0.

At 9:25 p.m. the hearing was continued to May 23, 2018 at 7:00 p.m.

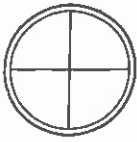
FILED SUBJECT TO APPROVAL

Respectfully submitted,

*Janet M. Hill*

Janet M. Hill, Land Use Administrator





# TOWNE ENGINEERING, INC.

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" ADDENDUM A "

DONALD R. AUBREY, P.E., L.S.

JOSEPH H. BOUCHER, M.S., L.S.

MATTHEW D. MAYNARD, P.E.

April 18, 2018

Inland Wetlands Commission  
Town of Washington  
2 Bryan Plaza  
Washington Depot, CT 06794

Attn: Steve Wadelton, Chairman

Re: #IW-18-04, Proposed Inn: 101 Wykeham Road, LLC.  
101 Wykeham Road, Washington, CT  
TEI Job No. #18-23

Material Reviewed: See Appendix A

Dear Commissioners,

Since the April 3, 2018 opening of the Public Hearing we have been able to review the Stormwater Management Report (SMR) submitted into the current application by the Applicant's Engineer for this project, along with the Town of Washington's Inland Wetlands Regulations and the current plans for this project. The following updated commentary is provided for your consideration of this application.

Based on our review of the materials submitted, we observed that a significant amount of supporting documentation that has not been provided to date, which is necessary to allow a full review of this application, the overall design of the proposed elements, and layout of the site and they are as follows:

- › Architectural plans for the proposed buildings
- › Any project approvals obtained from the CT DEEP (Onsite Waste Water Disposal), Fire Marshall, Water Company, etc.
- › Written wetlands report and field sketch by the project Soil Scientist as is required by your regulations

Based on our review of the SMR in conjunction with the submitted plan we would like to offer the following commentary:

1. In 2015, the CT DOT revised its Precipitation Frequency Estimates for CT and adopted NOAA Atlas 14 as the new standard. The drainage computations are from 2012 and have not been updated to meet the current regulations. The new regulations increase rainfall amounts, and therefore require a detailed assessment, and redesign of the proposed stormwater controls.

2. The SMR used two different precipitation estimates for design of the proposed stormwater elements. When the forebays are designed for ponds #1 & #2 the Applicant's Engineer uses a manual method of direct entry, while in the design of the swale to pond #2 he uses a different IDF file (CTDOT.idf). The use of two different Precipitation Estimates is inconsistent with standard professional practice for stormwater design.
  
3. The Applicant's Engineer has gone to great lengths to calculate the Time of Concentration for all of the individual sub-catchments of the proposed and existing watershed. The calculated Time of Concentration range from 8 to 16 minutes, but are unused in the actual SMR calculations. Based on the SMR narrative it is reported the computations will all utilize a 5 minute Time of Concentration for paved areas, and 10 minute for grassed areas. The DOT Drainage Manual still stipulates that method, but those are their recommended minimum values, and in my experience should only be used when designing very minimal drainage systems, and when the Time of Concentration of the individual watersheds is LESS than the 5 minute and 10 minute values published.
  - a. When utilizing the assumed 5 & 10 minute Time of Concentrations related to this design, the Applicant's Engineer is misreporting the proposed volume of stormwater, which will flow to the proposed stormwater elements, detention ponds, and into the wetlands and watercourses on site.
  
4. Currently this design will significantly change the VOLUME of storm water to the onsite wetlands and Kirby Brook. The following information comes directly from the SMR submitted for your review:

Storm	Pre-Dev	Post-Dev
	100	101
2 Yr	12,933 cf.	5,368 cf.
5 Yr	25,009 cf.	11,331 cf.
10 Yr	36,227 cf.	17,070 cf.
25 Yr	49,449 cf.	23,975 cf.
50 Yr	60,052 cf.	29,592 cf.
100 Yr	72,089 cf.	36,032 cf.

Storm	Pre-Dev	Post-Dev
	200	201
2 Yr	6,727 cf.	815 cf.
5 Yr	12,770 cf.	1,680 cf.
10 Yr	18,340 cf.	2,504 cf.
25 Yr	24,874 cf.	3,490 cf.
50 Yr	30,097 cf.	4,289 cf.

100 Yr	36,013 cf.	5,202 cf.
Storm	Pre-Dev 300	Post-Dev 301
2 Yr	28,295 cf.	41,613 cf.
5 Yr	53,715 cf.	78,072 cf.
10 Yr	77,146 cf.	111,567 cf.
25 Yr	104,629 cf.	150,781 cf.
50 Yr	126,599 cf.	182,092 cf.
100 Yr	151,485 cf.	217,529 cf.
Storm	Pre-Dev 400	Post-Dev 401
2 Yr	50,418 c.f.	34,125 cf.
5 Yr	91,074 cf.	66,548 cf.
10 Yr	127,757 cf.	96,779 cf.
25 Yr	170,217 cf.	132,487 cf.
50 Yr	203,855 cf.	161,166 cf.
100 Yr	241,715 cf.	193,760 cf.

5. Currently the Applicant's Engineer does not include any assessment of the existing culverts in Kirby Brook or the existing culvert on the west end of the property, which flows under Wykeham Road for the development proposed in the SMR. These are critical watersheds to analyze for a project of this magnitude in order to determine if and how often the access road and Wykeham Road will be overtopped by the runoff generated from this development.
6. Currently the Applicant's Engineer does not include any pond reports for proposed Pond #1 & 2 in our review of the SMR. These reports are required to understand exactly what was calculated and modeled for the ponds in relation to the proposed plans.
7. The Applicant's Engineer is not reporting the inverts of the two existing onsite culverts in Kirby Brook. That information will be required by the Water Company to assess the feasibility of the proposed wetlands crossing with the proposed water main. If it is necessary to install the water main under the Kirby Brook channel to prevent freezing of the new water main, this activity will be a significant wetlands impact.
8. It remains our concern that the location of the proposed construction entrance could be installed further up hill, and into the site to allow for any sediment, which comes out of the entrance to be directed into a silt trap or other engineered element. Currently the proposed silt fence is the only protection at that potential point of discharge directly into Kirby Brook.

9. The Plans contain numerous separation distance violations between proposed buildings, drains, rain gardens, the septic leach field, and the proposed septic system elements based on the current CT Public Health Code.
  - a. Per Table 1, item H of the Public Health Code requires a minimum separation distance of 75 ft. shall be provided between the proposed rain garden and a commercial septic system, and further requires that any septic tank shall be a minimum of 25 ft. from any rain garden.
  - b. Per Table 1, pg 14 of the Public Health Code requires a minimum separation distance of 10 ft. shall be provided between any proposed septic tank and a proposed water main.
  - c. Per Table 1, pg 14 of the Public Health Code requires a minimum separation distance of 5 ft. shall be provided between any proposed building sewer line and solid storm drainage pipe.
  - d. Per Table 1, pg 14 of the Public Health Code requires a minimum separation distance of 5 ft. shall be provided between any proposed building Septic tank or grease trap sewer line and solid storm drainage pipe using tight pipe and 25 ft. when using standard pipe.
  - e. The design includes multiple water main and sewage force main crossing with no details shown.
  - f. Currently only a septic tank is shown servicing the pool house, and if any food service is proposed for this facility, it will also need a grease trap, per the Public Health Code and the CT DEEP.
  - g. In our experience with septic systems of this size (over 10,000 gallons/day) any work proposed in the down gradient area of a septic system which results in grading, filling, or building construction will diminish the ability of the down gradient soils to further renovate, and treat the septic system effluent. With the proposed reduction to this area a breakout of the septic effluent is possible.
10. The proposed septic tanks, and pump chambers remain un-sized and are not currently proposed with any invert elevations.
  - a. Per our email conversation with the CT DEEP Agent assigned to this case, currently the Applicant has registered the site, and submitted a Wastewater Management Plan (WMP) to the DEEP, which has yet to be reviewed and approved. The only new information she has received to date is the floor plans of the proposed facility, and no new information or plans as of April 3, 2018. (See enclosed email dated April 3, 2018 from Emily Anness)

- b. It is currently not clear to us if the entire septic system including the leaching elements are being proposed to be replaced, or just the septic tanks, grease traps and pump chambers.
  - c. Currently the applicant does not include any significant details of the leaching system to understand if vehicle traffic can safely pass overtop without causing damage to the leach fields, or cause the effluent plume to interact and flow through and into the road base proposed in the down gradient soils of the septic system.
  - d. Per a review of the Washington Health Department files for this property, the existing leaching system was replaced in 1991 with a double row (two units side by side) of 16" tall plastic infiltrators. Based on the Proposed Septic Facilities Plan By Spath & Bjorklund which detail the leaching trench and the proposed product utilized, do not show the required H-20 loading specification required to allow vehicle traffic to access the pool house as currently designed. (see current h-20 load rated specification, along with detail form original 1991 design)
  - e. Based on the Proposed Septic Facilities Plan by Spath & Bjorklund there is a reserve septic system area shown which the current application does not acknowledge. The existing reserve septic system area is currently proposed with the roadway and corresponding cul-de-sac, along with portions of buildings #1, 2 & 3 inside the reserve area, which will impact the potential to repair this septic system in the future, and will not be permitted by the CT DEEP in our experience.
  - f. Currently the design plans for this project do not provide the working elevations of the existing or proposed septic system elements, and therefore we are unable to determine the extent in which this proposal will impact the septic system and the area reserved for its future potential repair area.
  - g. In our opinion, the septic tanks and pump chamber located to the north of buildings #2 & 3 will need access to facilitate inspection and cleaning. The septic tank pump truck required to clean these tanks in the future has an approximate maximum lift of 25 ft., and will not be able to clean these septic tanks as proposed.
11. The Site Plan shows test pits with no results provided for review. Per the 2004 CT Stormwater Quality Manual (SQM), any proposed rain garden (bioretention facility) shall be constructed a minimum of 3 ft above the

water table, and shall not be proposed on slopes of more than 6%, (see page 11-p4-4 in the manual).

12. The design of both Wet Ponds does not meet the current SQM, per the design criteria outlined on page 11-PI-5 (attached) the maximum depth of the Wet Pond shall be 8 ft, and shall have 3:1 or flatter sideslopes and with an aquatic bench. Both Wet Ponds are proposed with 2:1 sideslopes. Pond #1 is approximately 14.5 ft. deep and pond #2 is 8.5 ft. deep, and neither Wet Pond has an aquatic bench proposed.
13. It remains our Professional Opinion that the proposed access roads are too narrow and curvilinear to safely allow the site to function. The site cannot accommodate deliveries, refuse removal truck or emergency vehicles without the design vehicle in question using both lanes of the proposed roadway, or to make anticipated turning movements, such as turning around at the end of the proposed 35 ft. diameter cul-de-sac at the west end of the proposed road. Currently a design vehicle (WB-40) which is a very common wheelbase for a rural fire truck, cannot make the turn up and onto the proposed grass roadway to the proposed pool house.
14. The location and fuel source of any proposed generators should be detailed on the plans, which should include measures to contain any potential spills. In our experience, individual emergency backup power sources will be required for the proposed sewage pump stations, drinking water distribution and fire sprinkler system.
15. Per the Washington Inland Wetlands Regulations section 8.05.A a designated person should be identified as principal contact for the Agency with respect to the conduct and completion of regulated activities. Per a review of page SEQ.1, SEQ.2, SEQ.3, & SEQ.4 of the plan set no individual is specified.
16. Per a review of the notes on SEQ.1 through SEQ.4, the Applicant is proposing the area above the existing septic system will be utilized to store excavated material. The plans do not illustrate how this area will be accessed, the limit of stockpiles or final grading of this area, which is about 1.5 Ac. in size.
17. In the last IWC meeting on April 3, 2018 the issue of total volume of material to be removed, deposited or stockpiled was raised, and remains unanswered. Per a review of the Wetlands Application for this project #IW-18-04, Page 3, Section IV.2 request the amount, type, and location of material to be removed, deposited or stockpiled. The Applicant has only given a description of material, and does not specify its amount.

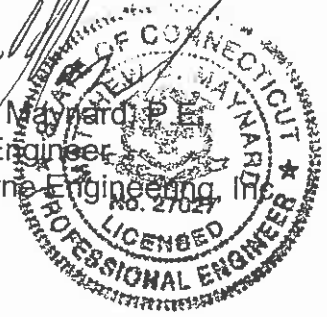
- 18. Currently there is a detail in the plan set for a dumpster pad, but no dumpster locations are shown.
- 19. Currently the plans do not specify any grade on the proposed mowed path to the pool house, or any details of its construction.
- 20. The Applicant's Engineer is currently showing just four topsoil stockpiles for all of the work proposed in this application. Based on our calculations each pile contains approximately 120 cu.yds. of material, which relates to an area of 80 ft. by 80 ft. with 6" deep of topsoil/subsoil, which seriously underestimates the areas required for material storage.

These are our review comments presented for your consideration of this application. If you have any further questions, require additional information, or have any questions regarding the information provide in this review please feel free to contact us anytime.

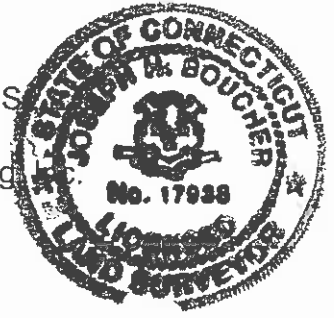
Sincerely,



Matthew Maynard, P.E.  
Project Engineer  
For: Towne Engineering, Inc.



Joseph H. Boucher, M.S.  
General Manager  
For: Towne Engineering



Enc.