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March 1, 2021

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Concord Zoning Board of Appeals
141 Keyes Road
Concord, MA 01742

Re: 246 Old Road to Nine Acre Corner –
Earth Removal Special Permit Application

Members of the Board,

On behalf of our client, Concord Country Club, we have revised the Irrigation Pond Plan, dated February 26, 2021. Changes have also been made in response to comments made by Justin Richardson, Assistant Town Engineer, in a memorandum, dated February 23, 2021. The changes are as follows:

Engineering Division Comments December 31, 2020:

1. The stormwater report includes the previous soil logs performed in March 2020 that were not observed by Town representatives and conflict with the soil logs performed in June and July that were observed by Town representatives. Why are the March 2020 soil logs included in the report if the information conflicts with newer/Town observed testing?
These soil logs have been removed from the Stormwater Management Report and the Irrigation Pond Plan. Please note that only the test pits witnessed by Town representatives were used in the design of the irrigation pond bottom to meet the required 4' separation to seasonal high groundwater.
2. The Stormwater Management portion of the Stormwater report states “Stormwater calculations show a 0.46 cfs increase to the peak flow leaving the project site for the 100-year design storm when compared to pre-development conditions. This represents a conservative peak flow increase of 0.29% on the 2014 FEMA survey; this de minimis increase will not result in an increase to offsite flooding.” This statement is incorrect - 0.46 cfs is not a 0.29% increase to an existing 1.809 cfs pre-development flow, it is actually a 25.3% increase. This is not a minor change in the 100-year design storm. Furthermore, it is Engineering’s recommendation that there be no increase in flow or volume in the 100-year design storm and that infiltration be maximized from the irrigation pond overflow because of the sites location in the Groundwater Conservancy District.
The 0.29% increase previously noted in the Stormwater Management Report narrative was calculated using the 160 cfs value provided in the FEMA for the 100-year design storm at the nearest downstream culvert. This 160 cfs value was mistakenly omitted from the previous iteration of the narrative. The proposed Irrigation Pond Plan has been revised so that the proposed irrigation pond volume has been slightly decreased to allow for the expansion of the proposed infiltration basin. The proposed design now results in a decrease in peak flow leaving the project site for the 100-year design storm.
3. A shutoff valve shall be incorporated into the design from the irrigation pond to the infiltration basin should be incorporated into the design in the event that any contamination of the irrigation pond occurs. This will provide further protection in the Groundwater Conservancy District.
A slide gate is now proposed along the irrigation pond outlet pipe. A detail of the proposed slide gate is also provided.
4. The pipe going from the irrigation pond to the infiltration basin is at a 11.5% slope and there appears to be minimal splash protection at the end of the pipe to prevent against scouring. Provide rational method

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calculation that includes pipe velocity and the proper mitigation for that velocity at the discharge inside the infiltration basin.

The irrigation pond outlet to the proposed infiltration basin has been revised to decrease the pipe slope so that the maximum discharge velocity is limited to a maximum of 10 fps, as shown in the Pond Report. Additionally, a pipe outlet detail is now provided

5. According to the Stormwater Calculations the basin is full at water elevation 156.00. The plans do not show any float valve or any mechanism that would stop the pumping into the irrigation pond. How is the maximum water elevation of 156.00 maintained?

The proposed wet well located within the pump house will be outfitted with floats to control intake into the irrigation pond. The pump house plans have been provided under separate cover.

6. The Engineering Divisions reserves the right to comment on future submittals related to any new or previously submitted information provided to the Town for review.

No response needed.

We look forward to discussing this matter at the upcoming public hearing. If you have any questions regarding this matter, please feel free to call.

Respectfully,
Stamski and McNary, Inc.



Paul Kirchner, E.I.T.



George Dimakarakos, P.E.