Supervisor ANTHONY S. COLAVITA

Council Members LUIGI V. MARCOCCIA JOSEPH D. DOOLEY THERESA V. NICHOLSON SHEILA MARCOTTE

Town Clerk LINDA D. LAIRD

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Director of Building and Planning Margaret H. Uhle, AICP, RLA

February 14, 2022

Chairman Antonio Leo and Members of the Planning Board Village of Tuckahoe 65 Main Street Tuckahoe, NY 10707

Re: Iona College Athletic Field Renovations

Dear Chairman Leo and Members of the Planning Board:

I am writing to you on behalf of the Town of Eastchester regarding the application for Iona College's proposed renovations to the athletic field located at the northeast corner of Rose Avenue and White Plains Road. The engineering drawings and Stormwater Pollution Prevention Plan (SWPP) were referred to the Town by the Village's Building Department and were reviewed by the Town's Civil Engineering Consultant, Joseph Cermele from Kellard Sessions. His comments on the proposed plans and SWPP are provided in the attached memorandum.

Most importantly, however, we want to emphasize that the area in the vicinity of the field and other campus facilities has historically experienced stormwater management and flooding issues that have negatively impacted properties within Bronxville, Tuckahoe and Eastchester. In 2007, the Town commissioned the Crawford Street Drainage Study, prepared by McLaren Engineering, to evaluate drainage conditions in the area. Recently, we retained Mr. Cermele to reevaluate these issues in coordination with the Town's Highway Superintendent. Therefore, we believe it is imperative to take this opportunity to bring representatives from Iona College, Bronxville, Tuckahoe and Eastchester together to collaborate and consider a more global approach to stormwater management efforts in the area and respectfully request that the Planning Board defer a final decision regarding the application until after such meeting occurs. This will provide an opportunity for the applicant to consider Mr. Cermele's comments in the attached memorandum as well. We will be happy to work with Village staff to coordinate the meeting as expeditiously as possible.

Sincerely,

Margaret H. Uhle, AICP, RLA

Director of Building & Planning

Margaret H. Ohle

attachment

cc: <u>Town of Eastchester</u>: Supervisor Anthony S. Colavita; Rocco Latella, Highway Superintendent; Joseph Cermele, Town Engineering Consultant; <u>Village of Tuckahoe</u>: David Burke, Village Administrator; Bill Williams, Building Inspector



MEMORANDUM

TO:

Margaret Uhle, Department Head/Director of Planning

CC:

James R. King, Town of Eastchester Building Inspector

FROM:

Joseph M. Cermele, P.E., CFM

Kellard Sessions Consulting Consulting Town Engineers

DATE:

February 11, 2022

RE:

Iona College Fields 200 White Plains Road

At the request of the Town of Eastchester Building & Planning Department, Kellard Sessions Consulting has reviewed the Site Plans and Stormwater Pollution Prevention Plan (SWPPP) for the above-referenced property, which were provided to the Town as a referral from the Village of Tuckahoe Planning Board. It is our understanding that Iona College has purchased the Concordia College facility, located in the Village of Bronxville, which also includes an existing ballfield located in the Village of Tuckahoe. Iona College, as part of this Site Plan Approval, proposes to redevelop an existing natural turf field with a synthetic turf system. Associated drainage improvements are also proposed. Our review of the plans and SWPPP was limited to the proposed stormwater management system and any potential impacts this development may have within the Town of Eastchester. Under existing and proposed development conditions, stormwater runoff from the ball field ultimately drains toward the Crawford Street neighborhood, which has historically experienced issues related to stormwater management and flooding. We have provided, below, preliminary comment and have identified items that we believe should be considered for further evaluation to address concerns raised by the Town of Eastchester in this regard.

The plans prepared for the proposed field include drainage systems and construction details typically associated with these types of facilities. Synthetic fields are desirable from an owner and player perspective because of their relatively low maintenance requirements and their ability to quickly drain stormwater runoff to either allow play during a storm event or immediately thereafter. The management of the collected stormwater runoff, therefore, is particularly critical in this instance given the potential stormwater related impacts noted above. The applicant has prepared a SWPPP to evaluate the hydrology under existing and proposed conditions and has indicated that peak stormwater runoff rates will be mitigated and significantly reduced through the 100-year storm event.

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In reviewing the proposed grading and drainage plans and the pre- and post-development watershed maps, we are in general agreement with the drainage areas illustrated and the methodology in which they have been evaluated. In reviewing the SWPPP, we did note a few items that we believe would benefit from additional clarification and further evaluation as noted below:

- 1. The SWPPP includes a discussion regarding the existing soil conditions and hydrologic soil groups based upon the USDA Soil Conservation Service mapping. As indicated in the soils report, soils associated with the existing ballfield are predominantly Udorthent soils (Ub). These soils are classified as Group D soils, which exhibit very low infiltration rates and high runoff potential. In addition, the soil strata typically exhibit a depth to groundwater of approximately 18 to 48 inches and depth to bedrock of approximately 40 to 60 inches. We would be interested to know whether the applicant, as part of their preparation of the SWPPP, performed any soil testing within the existing field to confirm whether these restrictive conditions exist. Given the overall depth of the turf field system and the relatively shallow depth to groundwater and/or bedrock, an understanding of any potential impact from either rock or groundwater to the functionality of the turf system would be beneficial. For instance, if shallow groundwater is experienced, the underdrain system for the field would continually discharge to the Town of Eastchester's stormwater system.
- 2. The hydrologic study conservatively did not account for any infiltration in the subsoils of the turf field. We agree with this approach since these systems are typically constructed on compacted subbase and the drainage system installed beneath the field is designed to quickly remove collected stormwater from the area. If shallow groundwater or bedrock is experienced, the required three (3) foot separation from the bottom of the system could not be provided and infiltration could not be considered. It appears, therefore, that the applicant has modeled the turf field system as a detention pond utilizing the gravel subbase as a temporary storage volume for the increased runoff. While the peak rates of runoff are reduced, the overall runoff volume has increased, as expected. As indicated in the model, the detention time within the system is very short. Modifications to the outlet controls should be considered to increase the detention time to release collected stormwater over a longer period of time.
- 3. The hydrologic model uses a curve number (CN) of 91 for the turf field under proposed conditions. Because the system as designed rapidly collects and conveys all of the stormwater runoff from the field, we would suggest that a curve number of 98 is more appropriate for the evaluation.
- 4. As noted above the hydrologic study appropriately models the turf field and drainage system as a storage pond to temporarily store and release collected stormwater runoff over time through an outlet structure comprised of various outlet controls including a 6-inch low-flow orifice and an overflow weir. The outlet as modeled, however, also includes a 12-inch diameter orifice. This

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larger orifice is the inlet pipe from the drainage system and does not control the discharge from the field. We would recommend that the model be revised to eliminate this larger orifice from the outlet control.

In addition to the field, associated improvements include walkways, bleachers, a press box, etc. Although the hydrologic study included these impervious areas in the overall design basin, the applicant should consider incorporating stormwater mitigation practices such as rain gardens, dry or wet sales, etc., closer to the source as opposed to the end-of-pipe solution to further mitigate the resulting runoff.

This project could provide an opportunity for the applicant to collaborate with the Villages of Bronxville and Tuckahoe and the Town of Eastchester to consider a more global approach to stormwater management in an effort to alleviate some of the stormwater related complications in this area. It would be helpful to understand whether any mitigation systems exist on the property. There is a substantial amount of impervious surface from buildings and parking lots that result in significant quantities of stormwater runoff if not adequately mitigated. Our office has had prior conversations with the Town Building & Planning and Highway Departments and have inquired about the ability to utilize a portion of the school campus at the far east end (adjacent to Crawford Street), to develop some form of stormwater retention/detention system to help alleviate some of the drainage problems in the area. We would welcome the ability to discuss this potential further.

JMC/dc

https://kellardsessionsconsult.sharepoint.com/sites/Kellard/Municipal/Eastchester/01 - Applications/Iona College Fields - 200 White Plains Road/Review Memo/2022-02-11_Uhie_Iona College Fields - 200 White Plains Road/Review Memo/2022-02-11_Uhie_Io