

March 8, 2022

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

Re: Concordia Campus – Rose Avenue Athletic Field
Town of Eastchester Review Comments dated February 14, 2022
Langan Project No.: 190074101

Dear Chairman Leo and Member of the Planning Board:

On behalf of the applicant, Iona College, below is an itemized response to the following technical comment letter issued by the Town of Eastchester dated February 14, 2022. Comments are italicized and our responses are in bold text.

Town of Eastchester Review Comments dated February 14, 2022

Comment 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 predominately 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 40-60 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.

Response 1: A complete Geotechnical investigation was performed and is referenced in the updated SWPPP. The geotechnical report indicates neither rock nor groundwater will impact the current stormwater management design.

Comment 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.

Response 2: The Geotechnical investigation included infiltration testing. Although the actual infiltration rates were higher, we have only included the minimum infiltration rate in our analysis. Based on the actual infiltration rates achieved during the field-testing, the stormwater rate of discharge will be less than presented in the SWPPP. In addition, better infiltration rates will reduce the volume of stormwater discharge from the site.

Comment 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.

Response 3: The hydraulic model has been modified using the adjusted CN suggested.

Comment 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 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.

Response 4: The outlet structure has been modified to match the outlet configuration included in the hydraulic model.

Comment 5. 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, the applicant should consider incorporating stormwater mitigation practices such as rain gardens, dry or we sales, etc. closer to the source as opposed to the end-of-pipe solution to further mitigate the resulting runoff.

Response 5: The current stormwater design meets and in fact, significantly exceeds the requirement set forth by the NYSDEC and the Tuckahoe stormwater regulations. It is our professional opinion that the proposed design significant mitigates the stormwater discharge from this site.

Comment 6. The 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.

Response 6: Comment Noted. Iona has expressed a willingness to meet with all parties involved as a good neighbor. In addition to addressing the comments from Eastchester, we have updated the Logistics plan to address comments we received from the Board at their work session.

If you have any questions or require any additional information, please do not hesitate to contact this office.

Sincerely,

**Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.**



W. Charles Utschig
Associate

WCU:ms

cc: