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Memorandum

TO:	**Town of Glastonbury, Suzanne Simone, Environmental Planner Conservation Commission**
FROM:	**Ryan Scrittorale, PE**
SUBJECT:	**Comment Response** **64 Unit Residential Planned Area Development,** **Glastonbury Housing Authority** **55 Nye Road**
DATE:	**November 01, 2023**

The project team is in receipt of a letter drafted by the Town of Glastonbury Engineering division dated October 19, 2023, which offers their comments following a preliminary review of the application materials for the above-mentioned project. The comments address as two parts of the application materials, first the stormwater management report, and second the construction plans. We offer the following responses to his comments and questions:

Stormwater Management Report

1. The Stormwater Management Report indicates that the project site meets the requirements for redevelopment relative to water quality volumes and the Town's MS4 permit standards however computations show that the existing site is approximately 22% impervious versus the 40% required for redevelopment. Based on the data provided the site does not appear to meet the redevelopment standard and therefore 100% of the water quality volume should be retained for this project. This could be accomplished by modifying the pervious paver areas to retain water below the level of the proposed underdrain or through other possible treatment mechanisms. Treatment systems designed for the water quality flow do not meet the requirements of the MS4 permit.
   Response: The proposed stormwater management system has been revised to retain the full water quality volume on site. The required 13,700 cubic feet of storage has been exceeded by providing 15,480 CF of storage within the permeable pavers and 3,350 CF of storage in the pond below the lowest proposed outlet invert.

2. A new Stormwater Quality Manual was issued on September 30, 2023, by the Department of Energy and Environmental (CTDEEP) which increases the water quality volume to include the first 1.3 inches of stormwater run-off and goes into effect upon issuance. A waiver is noted in the manual for projects that have surpassed 50% design at the time of issuance. Applicant should provide a statement in the report indicating level of design completed and the relevance of the new manual to the project.
   Response: The project team has decided to adopt the current stormwater quality manual and have revised the proposed design accordingly to account for a 1.3" water quality design storm depth.

3. Drainage computations do not account for off-site stormwater run-off coming from the drainage area to the north of the subject property. While this won't likely affect pre and post development analysis it will affect peak discharge computations and should be reviewed relative to the need for additional stormwater systems on the north side of the property, particularly above and below the proposed retaining walls and residential buildings in this area.

Response: Glastonbury GIS topography, provided by Town staff October 2023, has been reviewed to determine the offsite runoff contributing area and cover characteristics. This additional area has been added to the watershed maps included in the appendices of the stormwater report.

For hydrology analysis, the offsite areas were not accounted for within the existing watersheds. However, a portion of the offsite contributing area was accounted for in the proposed condition to confirm the proposed pond has the capacity to handle this additional flow. It should be noted that we only accounted for this additional area in the proposed condition and still maintained peak flow rates when compared to the existing condition indicating our proposed project is likely further reducing peak flow rates above what is indicated in the report tables.

Additionally, all anticipated offsite runoff is now accounted for in the hydraulic analysis for pipe sizing and is included on the catchment map as well as within the storm sewers calculations. These areas were also considered for the water quality calculations associated with proposed hydrodynamic separators.

4. Test pits to confirm soil type and groundwater levels in the areas of the proposed stormwater management facilities should be conducted as soon as possible to verify infiltration rates used and ensure feasibility of proposed design.
   Response: On-site subsurface investigations have been scheduled. Test pit and infiltration frequency for stormwater design have been proposed to follow the newest stormwater quality manual recommendations.

5. The Stormwater Management Report should include computations for outlet protection sizing as well as for channel lining analysis for proposed swales. Erosion control matting or other suitable channel lining should be shown on the plans for the swales with an appropriate detail.
   Response: Outlet protection sizing calculations have been included in Appendix C. Erosion control matting is shown on the E&S plans.

6. Many inconsistencies are noted between the Stormwater Management Report and the proposed drainage system shown on Sheet L3.0 of the plans. These will need to be corrected and resubmitted for further review.
   Response: Stormwater management report has been reviewed for inconsistencies and revised accordingly.

Construction Plans:

7. Sheet L1.0 and L1.1 – The address of the abutting Town property should be corrected to indicate 50 Nye Road, not 43-45 Nye Road.
   Response: The address has been amended.

8. Sheet L1.4 – Erosion and Sediment Control Narrative should include an estimate of disturbed area and a discussion of project sequence and phasing. Disturbance greater than 5 acres will require registration with the CTDEEP under the construction general permit.
   Response: The disturbed area has been added to the narrative.

9. Sheet L2.0 – Each proposed building in the project must be assigned a unique address and labeled as such on the plan per the Town's current addressing policy. Consideration should be given as to a name for the private road serving the facility or if these buildings will all be given Nye Road addresses. The Engineering Division should be consulted for further guidance on this item.
   Response: Engineering has been consulted and suggested building unit numbers added to L2.0.

10. Sheet L2.0 – 60-degree angled parking creates an 18'-9" vehicle projection from the curb which extends into the relatively narrow 14'-wide one-way roadway. This will create a particular problem where parallel spaces

are across the street from angled parking. It is suggested that the driveway be widened in these areas or the parallel parking be relocated. Parallel parking spaces should also be a minimum of 22' in length.
Response: The parallel parking spaces have been relocated and sized to 22' length. The 60 degree angled parking as designed provides 20'-9" depth. The Town permits 12' aisles for one way, the current design provide 2 feet additional. Details for angled and parallel parking have been added to sheet L6.1.

11. Sheet L2.0 – Proposed signage including stop signs, one ways signs, pedestrian crossing signs, etc. should be shown on this plan or a separate plan created for this purpose.
Response: Sign locations have added to L2.0.

12. Sheet L2.0 – Proposed pavement markings should be labeled with the size type and color of proposed markings. The stop bar northwest of the community building is located in the middle of a parking space. This parking space should be eliminated since the stop bar needs to be kept back a minimum of 4' from the pedestrian crosswalk.
Response: Crosswalk & stop bars have been adjusted to maintain 4 foot clearance.

13. Sheet L2.0 – Proposed speed tables will require supplemental pavement markings and signage. A detail for the proposed speed tables should be provided to clarify design intent.
Response: Speed table painted markings have been added to L6.1.

14. Sheet L2.0 – Identify the location of the central mailbox for the project according to new USPS regulations.
Response: The central location of the mailbox has been added to plan and unit numbers have been assigned to building.

15. Sheet L2.0 – A plan for snow storage should be considered based on the extent of hard surfaces to be maintained throughout the project. Specific snow storage areas should be designated on the plans for that purpose to ensure that the area is free of improvements that would be damaged.
Response: Snow storage areas have been added to Planting plan L4.0.

16. Sheet L2.0 – Applicant should consider use of clay brick pavers rather than concrete pavers to increase resistance to salt damage. Applicant should also consider use of alternates to concrete curbing to reduce potential for future spalling due to salt damage.
Response: Clay bricks are being considered and noted in legend on L2.0.

17. Sheet L2.1 – Applicant should consider other design vehicles including delivery trucks and moving trucks to ensure they can navigate the facility.
Response: Other trucks have been considered, and SU-30 has been superimposed on plan. Trash removal is being reviewed with a vendor.

18. Sheet L3.0 – Plans should depict the existing sidewalk in the Nye Road cul-de- sac, and the applicant should review options that would avoid steps where proposed sidewalk meets the cul-de-sac sidewalk for ADA accessibility.
Response: Existing sidewalk in Nye Road has been added, stairs eliminated and walk regraded to be HC accessible.

19. Sheet L3.0 - Consider constructability of a central crown in the 14'-wide one-way access road. Cross pitch to one side would seem easier to construct.
Response: We are currently evaluating the use of a cross slope rather than a cross slope. In the event that it is decided to utilize a cross slope we will resubmit a revised plan to Engineering for their review.

20. Sheet L3.0 – Label underdrains on the plan and show the line type in the legend.

Response: Permeable paver underdrains have been removed from the project. The underdrain in the proposed pond has been labeled with length, size, material, and slope.

21. Sheet L3.0 – The Town standard MS4 tracking table should be added to this sheet and a detailed maintenance plan for all stormwater facilities added to the plan set.
Response: The tracking table has been added to sheet L3.0, the maintenance schedule added to sheet L3.1.

22. Sheet L3.0 – Storm drain pipe between CCB S-2.6 and DMH S-2.31 is too close to the proposed residential building and should be relocated. The Pond outlet structure should also be labeled on the plan.
Response: The storm drain pipe in question has been revised to allow more clearance from structures and the outlet control structure has been labeled.

23. Sheet L3.0 - A gravel access way should be provided for Pond 2 to ensure equipment can reach all areas that would require maintenance.
Response: A gravel access way has been added to provide access to the outlet control structure and southern portion of the pond. A concrete sidewalk abuts the northern portion of the pond and will be available for maintenance access to other pond areas.

24. Sheet L3.0 – Proposed swale along the western property line should be captured into the storm drainage system rather than directing flow onto Nye Road.
Response: Additional drainage structures have been added to capture runoff from this area and route it below ground prior to Nye Road. While overall peak flow rates to Nye Road are reduced in the proposed condition, this modification results in an increase to the peak flow rate discharging into the existing on-site catch basin. Therefore, existing downstream pipes have been added to the hydraulic computations to confirm the downstream piping the capacity to handle the runoff proposed flow through the outlet south of Nye Road cul-de-sac.

25. Sheet L4.0 – Include root barriers in all areas where proposed trees abut new hardscape areas including sidewalk, roadways, and parking areas.
Response: Root barrier note has been added to sheet L4.1.

26. Sheet L4.0 – Consider the need for additional screening for the property to the west of the project site at 43-45 Nye Road.
Response: Additional screening has been provided along west portion of the site.

27. Sheet L5.0 – Sewer laterals must be 6” PVC and collectors must be 8” PVC. Provide a profile along all sewer collector pipes and depict storm drain and water crossings to review for possible conflicts.
Response: Sewer laterals and collectors have been revised to 6” & 8” respectively. Profiles are being developed and will be included in subsequent submissions.

28. Sheet L5.0 – Label building addresses and finish floor elevations on utility plan.
Response: Building address and finish floor elevation added.