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April 6, 2022

Franklin Zoning Board of Appeals
Bruce Hunchard, Chair
355 East Central Street
Franklin, MA 02038

Subject: Franklin Heights – Comprehensive Permit

Dear Mr. Chairman:

Hancock Associates has been retained by your Board to perform a civil engineering technical review of the Franklin Heights Comprehensive Permit. Hancock Associates has reviewed the Comprehensive Permit submission and offer the following as initial guidance to the Board.

Documents Reviewed

1. Project Change Request, dated 10-4-2021 from Delphic Associates
2. Site Plan prepared by Guerriere & Hanlon, Inc., dated 3-2-2022, unstamped, containing four sheets: Cover, Existing Conditions, Site Layout and Grading & Drainage.
3. Drainage Summary for Franklin Heights Parcel B, prepared by Guerriere & Hanlon, Inc., dated 3-2-2022, unstamped
4. Architectural Plans Franklin Heights A & B Duplex, Prepared by Reeves Associates, dated 1-25-2022.
5. Architectural Plans Franklin Heights B1 & B2 Duplex, Prepared by Reeves Associates, dated 1-25-2022.
6. Franklin Heights Parcel B Concept Plan, prepared by Hawk Design, Inc., dated 1-25-2022.
7. Franklin Heights Comprehensive Permit dated 12-7-2005
8. ZBA Amendment 12-7-2006
9. ZBA Amendment 3-26-2009
10. ZBA Amendment 7-25-2013
11. ZBA Amendment 8-7-2014
12. Franklin Heights Condominium Site Plan, prepared by Guerriere & Hanlon, Inc., dated 11-28-2005 and revised through 12-27-05, stamped by Paul B. Atwood, PLS and Gregory A Bunavicz, PE, containing 30 sheets.
13. Email from Michael Hasset of G & H to Hancock Associates re: drainage calculations

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New Documents Reviewed

14. Intersection Sketch, prepared by G & H, dated March 28, 2022
15. Response Letter prepared by G & H dated March 24, 2022
16. Revised Site Plan prepared by G & H, dated March 24, 2022 containing 5 sheets.
17. Plan for Wetland Crossing prepared by Creative Land & Water Engineering, LLC, dated March 24, 2022.

Review of Submission

760 CMR 56.05 contains the required elements of a submission of a Comprehensive Permit to the Zoning Board of Appeals. The following is a review of the submission with regard to these requirements:

- Preliminary site development plans with the locations and outlines of proposed buildings; the proposed locations, general dimensions, and materials for streets, drives, parking areas, walks and other paved areas; and proposed landscaping improvements. Any project of five or more units must have a site plan stamped by a registered professional architect or engineer.
The applicant has satisfied this requirement. A Plan set has been submitted prepared by Guerriere & Hanlon, Inc., dated 3-2-2022.
Plan set revised 3-24-22.
- An existing condition report on the proposed site and the surrounding areas.
The applicant has complied with this requirement. An existing condition plan is part of the site plan prepared by Guerriere & Hanlon, Inc., dated 3-2-2022.
- Preliminary, scaled architectural drawings prepared by a registered architect, with typical floor plans, elevations, and sections, including construction type and finishes.
The applicant has submitted architectural plans prepared by Reeves Associates 1-25-2022.
- Tabulation of proposed buildings by type, size, and footprint, impervious coverage, and open space, including percentage of tract to be occupied by buildings, parking and paved vehicular areas.
This information has been added to the revised plans. No further action required.
- A preliminary subdivision plan if the project involves a subdivision.
The project does not involve a subdivision. Parcel B was created through an Approval Not Required (ANR) Subdivision Plan endorsed by the Planning Board 3-20-2006. The parcel is currently owned by Nardelli Carmela Trust.
- A preliminary utilities plan (water, wastewater, drainage, and storm water management facilities).
The applicant has satisfied this requirement within the G & H plan set referenced above.

- A list of Waivers from local bylaws and regulations.
A list of waivers has been added to the plans. A waiver list should be generated in Word format to allow for inclusion in the decision.

Comments from other municipal boards and committees, town staff

The application has been distributed to town board and departments for comment. Hancock believes our technical review should be done in concert with town staff. We have not seen any correspondence to date.

The Board should seek input from the following:

Franklin Planning Board, Amy Love, Town Planner
Franklin Conservation Commission, William Batchelor, Chair
Franklin Board of Health, Ginny McNeil, Heath Agent
Franklin Public Works, Robert A. Cantoreggi, Director
Franklin Water/Sewer Division: Doug Martin, PE, Superintendent
Franklin Fire Department: James McLaughlin, Fire Chief
Franklin Police Department: Thomas Lynch, Police Chief
Franklin Building Commissioner: Lloyd "Gus" Brown

We will review additional comments as they are received.

Technical Review

Hancock has reviewed the plans and supporting documentation for soundness of methodology and calculations and conformity to standard engineering practice. We have also reviewed conformity to or deviation from by-laws, regulations and ordinances as they apply to issues of on-site engineering including grading, stormwater management, sewage and site traffic circulation. Lastly, we looked at off-site impacts. The review is all done within the context of the regulation's call for only the submission of preliminary plans. Our goal is to give the Board comfort that ultimately the project can be built in a manner that will protect the general public and future residents and visitors to the site through review, requests for additional information and suggestion of certain conditions of approval that will aid in meeting that goal.

Zoning Compliance

The project is proposed on a 20.3-acre parcel, Map 219 Parcel 178-2, also known as Parcel B. While the parcel has 687 feet of frontage on Lincoln Street, access to the parcel is from Trooper Paul Barry Way from Lincoln Street through the first phase of the Franklin Heights project. The existing portion of Franklin Heights is fully built and occupied with 50-unit condominiums. The roadways within the first phase do not constitute rights of ways under the Massachusetts Subdivision Control Law and therefore do not represent frontage for Parcel B. The current proposal calls for the construction of 60 duplex townhouse units, serviced by a loop road extension of Trooper Paul Barry

Way. Sixteen units will be located on two sub-loop drives off the new main loop road. The site is in Franklin's Rural Residential Zone II.

Comment Z1: The plans should be revised to detail zoning compliance and list requested waivers from the Franklin Zoning Bylaw.

Update: The plans have been revised accordingly. No further action required.

Comment Z2: The plans should be revised to enumerate parking required and provided.

Update: The plans have been revised accordingly. No further action required.

Stormwater

The proposed stormwater system proposes a closed drainage collection system comprised of catch basins and drain manholes throughout the proposed roadway system leading to one of three proposed infiltration basins depicted on the plans. A preliminary drainage summary has been submitted providing an overview of the proposed drainage system including a commitment to fully comply with the Massachusetts Stormwater Regulations. A detailed analysis is not provided. In an email from Michael Hasset of G & H to Hancock, additional information was provided comparing the total impervious area proposed now and on the 2005 approved plan and the total volume of stormwater storage provided in the three infiltration basins now and the volume provided within the 2005 approved system. Hancock has reviewed the 2005 approved plans, which provide significantly more detail than the current site plans. Based on the information provided, we believe given that there is a reduction in impervious and increase in volume provided, that ample area has been provided to ultimately address the project's stormwater needs. Final detail plans and supporting calculations will be required for further review prior to the Applicant making application to the Franklin Conservation Commission. The following comments are offered to guide the development of these details.

Comment S1: No detail for the proposed roadway wetland crossing is provided. The original plans called for a bridge with a 1,520 square foot wetland impact. The current plan calls for retaining walls and a 950 square foot wetland impact. The Applicant should provide additional information regarding the crossing envisioned. Future plans and supporting documentation should include details as to how the crossing will adhere to Army Corp of Engineers Stream Crossing Standards for both wildlife migration and hydraulic capacities.

Update: A plan prepared by CLWE has been submitted detailing this information. No further action required.

Comment S2: The Drainage Summary notes that stormwater treatment will be achieved through the use of proprietary hydrodynamic separators. The Applicant's Engineer should add the location of these separators to the Preliminary Plan and in the future provide make and model information and full supporting calculations.

Update: The plans have been revised accordingly. No further action required.

Comment S3: The 2005 Design included an underground infiltration system and one infiltration basin. Soil test pits are shown on the 2005 existing conditions plans. Hancock does not have access to the original soil test logs. Some test locations appear to be in the general area of the three infiltration basins currently proposed. The Applicant's Engineer has provided information on the plans indicating depth to groundwater between 12 and 36 inches from the surface. MassDEP requires a four-foot separation to groundwater, which can be reduced to 2 feet if mounding calculations are provided. The preliminary design of the three basins appears to be utilizing the reduced 2-foot offset. As this is critical to verifying design feasibility, additional testing will be required within the area of each infiltration basin and mounding calculation provided as outlined in the MassDEP Stormwater Handbook Volume 3 Chapter 1.

Update: The Applicant acknowledges this comment. We would recommend any approval contain a condition requiring additional soil testing be performed prior to completion of Final Plans.

Comment S4: The Applicant's Engineer provided information in his 3-4-22 email, regarding the required recharge volumes based on soil mapping to be 3,500 cubic feet, stating this requirement was being met in the storage volume of 5,400 cubic feet below the outlets of the three basins. The Applicant's Engineer should add sufficient detail to the Site Plan confirming this information.

Update: The plans have been revised accordingly. No further action required.

Comment S5: The Applicant's Engineer should revise the Preliminary Drainage Summary with the additional detail provided in the 3-4-2022 email and as requested herein prior to the Board acting on the requested modification.

Update: The Preliminary Drainage Study has been revised accordingly. No further action required.

Utilities

The project proposes connection to municipal sewer and water services located within Phase A of Franklin Heights. Insufficient information is provided on the Existing Conditions plan to verify the extent of work required to connect to the existing water, sewer, electric and telecommunication lines. The 2005 approved plans proposed a gravity sewer line 18 feet below the surface just before the wetland crossing into Phase B. The Applicant should provide additional details to describe the extent of work on the abutting property and provide clear limits of work and general information regarding the timeframes and duration of this work. Given that the Phase A condominium owners are now abutters to the project before the Board, the Board should understand impacts to these residents to allow proper conditioning of any approval.

Comment U1: The plan should be revised to depict water line size and material.

Update: The plans have been revised accordingly. No further action required.

Comment U2: The plans should be revised to show separate sewer and water connections to the units.

Update: The plans have been revised accordingly. No further action required.

Comment U3: The Applicant should provide water demand and projected sewer flows.

Update: The information has been added to the revised plans. The water demand and sewer outflow has been estimated at 19,800 gallons per day. The Board should seek input from Franklin Sewer and Water Departments with regard to the capacities of the existing system to handle these flows.

Traffic Circulation and Fire Access

The proposal calls for a looped access road from Leanne Way (Trooper Paul Barry Way) servicing the proposed 60 units. Phase A of the project has a single main access from Lincoln Street and features a gated emergency access drive out to Daniels Street from the southeast corner of the Leanne Way loop drive. Phase B does not have a secondary means of access as there is a single point of access at the wetland crossing. The National Fire Protection Association (NFPA) recommends a secondary means of access for residential projects exceeding 100 units. The Fire Department should be contacted for input.

Comment T1: The 2005 plan had Road A (Trooper Paul Barry Way) continuing into Phase B with Road B (Leanne Way) a defined loop road from Road A with 90-degree intersections with 25' radius roundings under stop sign control. Leanne Way was also to feature speed bumps at two locations that do not appear to have been installed. Leanne Way was constructed more as a loop road with a larger interior radius. The Applicant's Engineer should reevaluate the existing conditions, location of Phase A Building #5 and its driveway and provide more detail as to how this intersection can be configured to provide the level of safety envisioned under the approved plan.

Update: G & H submitted an Intersection Plan showing an overlay of the existing conditions with the original approved 2005 design. The plan shows fairly close compliance. The proposed plan should be updated indicating that a stop sign and stop bar be added to Leanne Circle.

Comment T2: The Applicant's Engineer should provide a swept path analysis for the project including the sub-loop driveways.

Update: The plans have been revised accordingly. No further action required.

Comment T3: The proposal calls for a 5' sidewalk on one side of the loop road with a 3' grass strip. The plan does not specify the type of curb to be used. Hancock recommends either a solid vertical granite or precast concrete curb given the small grass strip or widening the grass strip to 5' to improve pedestrian safety. Dimensions from garages to the back of sidewalk are depicted on the plan ranging from 22' to 29'. Hancock believes 20' is suitable to support one vehicle parked in front of the garage doors.

Update: G & H acknowledged the comment but has taken no further action. Hancock recommends a roadway cross section be provided committing to either a substantial curb or adequate green strip to ensure safety.

There are only a couple open items that remain. The Applicant should address the items allowing the engineering peer review to be completed.

We look forward to assisting the Board in this complex and dynamic process. Please do not hesitate to contact me should you have any questions or comments.

Sincerely,
Hancock Associates,



Joseph D. Peznola, PE
Director of Engineering