



City of Prospect Heights

Department of Engineering
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April 6, 2020

Mr. Dan Peterson
Building & Development Director
City of Prospect Heights
8 N. Elmhurst Road
Prospect Heights, Illinois 60070

Re: Prospect Pointe – Lexington Homes PZBA Submittal
999/1001 Oak Avenue
City Engineer Review

Dear Mr. Peterson:

The City recently received the following documents.

- Plan/Zoning Board of Appeals application, Prospect Pointe, 33 pages, submitted by Lexington Homes, undated.
- Traffic Impact Study for Proposed Residential Development, Prospect Heights Illinois, 110 pages, prepared by KLOA, Inc., dated March 25, 2020.
- Tentative Plat of Subdivision, Prospect Pointe, 1 sheet, prepared by Haeger Engineering, dated March 20, 2020.
- Preliminary engineering plans, Prospect Pointe, 18 sheets, prepared by Haeger Engineering, dated March 20, 2020.
- Stormwater management report, Prospect Pointe, 75 pages, prepared by Haeger Engineering, dated March 20, 2020.

We understand that this is a preliminary submittal intended to start the entitlement process, and that some of the comments below may be addressed as the design is further developed.

Engineering Plans:

General Comments

1. The applicant should copy the City on correspondence with other permitting agencies.
2. It is recommended that on all proposed condition sheets, items that are to be demolished/removed should be turned off for clarity. It is also recommended that proposed building numbers are shown on all sheets.

3. Provide data regarding the quality and quantity of groundwater available for the proposed water supply system as well as anticipated impacts on nearby private well supplies.
4. Provide sanitary sewer flow calculations for the proposed development.
5. Soil borings should be provided, and the groundwater / seasonal high groundwater table indicated.
6. When the required information for the preliminary plat is provided, additional engineering comments may be generated. It will also need to be confirmed that the Lot 13 and Lot 14 provisions include utility and stormwater language per City requirements.
7. It was discussed previously with the applicant that portions of Drake Terrace and the neighborhood to the north could potentially be drained into the proposed detention facility as part of the TIF development. If that is still the case, it should be considered in preliminary engineering.
8. When final engineering is submitted, the plans should include reference to Prospect Heights standard details and specifications for all utilities.

Engineering Plan Comments

9. A datum and benchmark should be provided on the cover sheet.
10. The mapped Zone A floodplain should be shown on all applicable pages of the engineering plans.
11. Sheet 2.0 does not indicate any water or sanitary services for the existing parcel. All existing lines should be shown.
12. Sheet 2.0 should indicate the sizes of existing utility lines.
13. Proposed sanitary and watermain sizes should be indicated on the plans.
14. It is our understanding IDPH is currently requiring fire hydrant leads on private property be less than 5'. We recommend the engineer review the current interpretation of the plumbing code by IDPH and adjust the plans accordingly.
15. Fire hydrant spacing should be reviewed by the Prospect Heights Fire District.
16. Valves should be placed on two legs of each three-legged junction.
17. A sidewalk should be provided along Oak Avenue to Drake Terrace.
18. Oak Avenue should be reconstructed as part of the project. A mill and overlay or reconstruction of Drake Terrace may be required as well.
19. A proposed typical street cross section that indicates width, type of curb, slopes, sidewalk width and slope, and easement width should be provided.
20. Additional information should be provided pertaining to the proposed retaining wall on the eastern property line (size, material, dimension from property line, etc.). It should be noted that a structural seal will be required for this wall at final engineering.

21. There are proposed storm sewer structures along the southern perimeter of the park with rim elevations below the HWL of the proposed pond they are draining to.
22. The perimeter grading on the south and southeastern corner of the park property creates some cut over an existing storm sewer system. It should be ensured adequate cover is still provided.
23. Additional information should be provided pertaining to the pump, pump structure, and box culvert overflow structure for the detention basin.
24. The proposed grading along the eastern property line does not appear to consider the retention of the pavement and concrete areas of Pleasant Run Park. Grading should be refined to reflect them and it should be ensured the cut does not undermine the areas or cause safety concerns for the park.
25. It is not recommended that roadway low points be located in the driveway aprons.

Stormwater Management Report Comments

26. Electronic stormwater models and schematic diagrams for modeling should be provided.
27. Updated Bulletin 75 rainfall data should be used for all calculations. The narrative refers to Bulletin 70 and TP 40 rainfall being utilized.
28. The existing conditions narrative and exhibit should be enhanced to show where each subarea drains to offsite and the critical duration rate at which it leaves. Outfall structures should be identified.
29. The proposed conditions narrative should describe how existing drainage patterns are maintained and how the proposed improvements will not adversely impact adjacent properties. In particular, the narrative and plans should include a clear indication of the point(s) of overland discharge if the receiving storm sewer is beyond capacity or fails.
30. The proposed narrative should describe, in more detail, the proposed detention basin design, including defining what is considered the "existing basin" and "proposed cistern", the purpose of the internal spillways, the proposed vegetation / NWL conditions, the connection downstream, the overall basin overflow weir, freeboard, and all other applicable information.
31. A pump and overflow structure are shown on the plans, but not incorporated into the stormwater report. Additional detail and calculations should be provided.
32. Adequate capacity should be demonstrated for the downstream storm sewer network the proposed basin is releasing to.
33. Per Section 6.5.2.B.1, the release will not cause the elevation of any receiving surface water to be increased by more than one-tenth foot (0.1') during the 100-year flood. Also release rate is determined by the lesser of 0.15 cfs/acre or the 3-year existing condition runoff rate. The report should provide calculations to comply with these requirements and illustrate which release rate is prevailing.
34. Per Section 6.5.2.B.1, a copy of the storm sewer system calculations should be provided with preliminary plans.

35. Per Section 7.1.6, a base flood elevation (BFE) determination must be provided. Compensatory storage at a ratio of 1.5:1 is required per Section 7.1.9.B.4 based on the computed BFE. If the applicant has data or documentation that the area was inadvertently/inaccurately mapped by FEMA, this documentation should be included in the report.
36. The report should separate out the calculations for the detention volume required for the Wheeling Park.
37. Overland flow paths from adjacent properties should be identified and considered. For instance, there are low points along the curb line of the western property that will overflow into the proposed site that must be accounted for.
38. The report and plans should indicate 100-year flow routes and specify if they are overland or in-pipe. Proposed spot elevations and rim grades are very close to existing grades at the property lines, and it must be ensured the 100-year flow is contained onsite.
39. Since the site is in a mapped Zone A, the narrative should address what process (LOMA, LOMR, etc) is proposed to remove proposed structures from the floodplain.
40. The report should be enhanced to address building protection standards for proposed and existing structures adjacent to the detention basin and overland flow paths.
41. The stormwater report should be enhanced to include a discussion of existing wetlands on the site, any impacts from the proposed development, and the applicable permit requirements.

Traffic Impact Study & Site Operations

Traffic Impact Study

42. The KLOA, Inc. Traffic Impact Study (TIS) dated March 25, 2020 follows guidelines established by the Institute of Transportation Engineers (ITE). We concur with the KLOA description of existing conditions.
43. Provide the crash history at the intersections serving the site. Have the narrow streets in the neighborhood contributed to any particular type of crash?
44. We generally concur with the KLOA traffic analyses, including the: a) traffic generations, b) trip distribution, c) traffic assignments, and d) capacity analyses results. However, is the Year 2026 too soon for the 5-year no-build traffic assignment? This suggests that site demolition, utility construction, and all 69 townhomes will be constructed and occupied by the end of 2021.
45. We concur that no intersection improvements are required to specifically accommodate site traffic. We also concur that the northbound left turn prohibition on Oak Avenue at Drake Terrace should be removed. This will help alleviate the need for any more site traffic to travel through the adjacent neighborhood than is oriented there.
46. The TIS should include traffic and parking demand generated by the athletic/recreational field south of the development.
47. An exhibit should be prepared that compares the previous uses' traffic generations with the proposed townhomes.

Haeger Engineering Plans

48. We concur that the 26-foot face-to-face (F:F) private street dimensions will adequately accommodate site traffic, as will the 24-foot F:F dimensions of the driveway aisles serving the garages.
49. AutoTurn should be run throughout the development for a larger automobile in/out of the garages and a fire truck along the internal streets. This data should be reviewed by the Prospect Heights Fire District.
50. KLOA noted that there were to be 40 guest spaces and 26 guest / shared spaces. Which spaces are to be designated as guest only and which one shared? These spaces are distributed fairly well throughout the site.
51. Clarify whether on-street parking is proposed as well as proposed enforcement procedures regarding parking in the proposed guest spaces.
52. The 5-foot sidewalks and 7-foot wide carriage (or attached) sidewalks are appropriate. Provide a discussion/rationale for not providing sidewalks on both sides of the subdivision streets.

Tentative Plat of Subdivision Comments:

Prospect Heights City Code section 6-3-2 Preliminary Plat Requirements:

- 1-b: Please add the legal description.
- 1-c: Shown on Engineering Plan not on this Preliminary Plat
- 1-d: Shown on Engineering Plan not on this Preliminary Plat
- 2-e: Shown on Engineering Plan not on this Preliminary Plat
- 2-f: No location map. The lot key map is insufficient.
- 2-g: Shown on Engineering Plan not on this Preliminary Plat
- 2-h: The plat needs to show the location of all survey monuments located, etc.
- 3-b: Street names are shown on Engineering Plan not on this Preliminary Plat.
- 3-e: Need to show building setback lines*.
- 3-f: The zoning for the subject property needs to be shown*.
- 3-h: Shown on Engineering Plan not on this Preliminary Plat

*Subject to P.U.D. requirements.

General Comments:

53. Please provide a complete copy of the title policy, including Schedule B.
54. The tentative plat should provide draft easement language for the ingress/egress, stormwater management, and utility easements. A blanket easement should also be granted to the Prospect Heights Fire District.

Again, we recognize that a number of these comments will likely be addressed as the development design progresses. We suggest that additional detail regarding the following issues will be required during the zoning/entitlement process:

- Adequacy of the proposed well system and impacts on nearby private wells.
- Comparison of traffic impacts from the proposed development/park with the prior school/park uses.
- Analysis of the capacity of the existing 36" storm sewer and emergency overflow from the proposed detention facility.
- Additional improvements that can be included in the project to address inadequate drainage in the neighborhood to the north.

If you have any other questions or need additional information, please feel free to contact me.

Sincerely,
City of Prospect Heights



Patrick J. Glenn, P.E., CFM
City Engineer

cc: Jodi McCarthy, P.E., CFM, GHA
William Grieve, GHA