

May 31, 2022

Leicester Planning Board
Town of Leicester
3 Washburn Square
Leicester, MA 01524-1333

Re: Stafford Street (Map 35 Parcel C7.1 and C12)
Warehouse and Office Development

To the Board:

This office has received the following information related to the site plan application for the proposed warehouse and office development of Stafford Street (Map 35 Parcel C7.1 and C12):

- A memorandum addressed to the Leicester Planning Board dated May 19, 2022 from Peter Lavoie of Tauper Land Surveying, Inc.
- A copy of the Site Plan Review & Special Permit Application Form.
- A single sheet document titled “Project Narrative for Stafford Street, Leicester MA”, not dated.
- A bound set of plans consisting of 10 sheets titled “Definitive Site Plan at Stafford Street Leicester, MA” prepared by Tauper Land Surveying, Inc. revised 5/18/22 including 2 sheets labeled A1 and A2 prepared by D.R. Poulin Construction Co. Inc. dated 5/9/22.
- An unbound set documents with cover page titled “Hydraulic / Hydrologic Calculations Site Plan Stafford Street Leicester Massachusetts” prepared by Tauper Land Surveying, Inc. dated May 19, 2022.

We have reviewed this submittal for responses to comments that this office provided in a letter to Leicester Planning Board dated April 26, 2022. Any changes made not in response to our comments must be identified by the applicant. Comments from the previously issued review memorandum can be seen below with supplemental comments noted in *italic* based on the Applicant’s responses. Comments that have been adequately addressed are prefaced with “**Resolved**”. Supplemental comments that require review by or input from the Board have been prefaced with “***This office defers to the Commission***”.

Zoning Bylaw

1. There appear to be issues with the Site Plan Review application form. This office defers to the Board if revisions to the application form are required.
 - a. The application lists the property as located in the SA district. The property is actually in the BR-1 district.

Resolved. *The application has been revised to read BR-1.*
 - b. It appears that the deed reference for Map 35 Parcel C12 is incorrect. The Assessors records identify the deed reference as Book 56941 Page 278.

Resolved. *The deed reference has been revised.*
 - c. Stafford Street Properties, LLC, owner of Map 35 Parcel C12, is not listed on the application as a property owner.

Resolved. *The application has been updated.*

- d. The proposed structure is listed on the application as 3,300 s.f. The actual structure being proposed is ±5,275 s.f.

Resolved. *The application has been updated.*

2. In order for the proposed building to meet the side yard setback requirement and for the site to accommodate the proposed work, the properties must either be combined or modified and easements provided. (Zoning Bylaw 4.2)

Resolved. *It is understood that lots will be combined after approval by the Conservation Commission and Planning Board.*

3. The proposed use is listed as “warehouse/office”. “Warehouse” is not specifically listed in the Zoning Bylaw Section 3.3. It appears that “Enclosed storage facilities” are allowed by Special Permit from the Planning Board under the Zoning Bylaw Section 3.3.aa. The submitted application does not indicate that a Special Permit has been applied for. This office defers to the Building Inspector and the Board regarding the interpretation and permitting requirements.
4. Greenery must extend 20 feet from the boundary of the lot. A landscape buffer between 10 feet and 18 feet wide has been proposed along Stafford Street. A 20 foot wide buffer is required. (Zoning Bylaw 4.4)

The driveway has been revised, however, the green space between the property boundary and proposed curb still measures less than 20 feet.

5. The Applicant must evaluate and comment on the sight distance at the proposed driveway locations. (Zoning Bylaw 5.2.05.B)

Resolved. *The sight distance is identified on the plan as over 600 feet.*

6. The Applicant must identify what type of lighting (if any) will be provided. (Zoning Bylaw 5.5.05.G, Parking IV.G, SPRR II.F.5)

This office defers to the Board. *A lighting plan has been provided in the updated submission. This office defers to the Board if the photometric properties of the lights are to be provided.*

Site Plan Review Regulations

7. The submitted Project Narrative is missing some of the items required under Site Plan Review Regulations II.E, including a summary of the parking calculations.

Resolved. *An updated narrative has been provided.*

8. The volume of material to be moved must be provided. (SPRR II.F.9)

Resolved. *The engineer has indicated that the proposed import is 28,000 cubic yards.*

9. Exterior elevations of the building facades must be provided. (SPRR II.F.9)

Resolved. *Elevations of the building have been provided.*

10. The locus plan provided does not meet some of the requirements specified in SPRR II.G.

The locus is still missing zoning district boundaries.

11. It is recommended that the Board of Health review/comment on the proposed leaching system. As proposed, it appears that the system will not have adequate cover. (SPRR II.I.b)

Resolved. *The engineer has indicated that the septic system will be submitted to the Board of Health once the site plan has been approved by the Conservation Commission and Planning Board.*

12. The building is dimensioned $\pm 30'$ x $\pm 175'$. This results in a footprint of $\pm 5,275$ ft.². The plan must be updated to identify $\pm 5,275$ ft.² (not 5,000 ft.²). (SPRR II.F.2)

Resolved. *The building label has been revised.*

Stormwater Regulations & MA DEP Stormwater Handbook

(Under Stormwater Regulations 5.0, all projects are required to comply with the MA DEP Stormwater Policy)

13. Results for T.P.#5 and T.P.#6 must be provided in the stormwater report. (Stormwater Regs. 4.0.A.12 and 19)

Resolved. *Results for T.P.#5 and T.P.#6 have been provided.*

14. Elevations for the chamber outlets, flared end section and basin spillway must be labeled on plan. (Stormwater Regs. 4.0.A.16)

Resolved. *The elevations have been provided.*

15. The staging area is depicted to be partially in the Stafford Street right of way and the straw wattle line is depicted in the Stafford Street traveled way. Those items must be removed from those areas. (Stormwater Regs. 4.0.A.20)

Resolved. *The staging area has been revised to be located on private property.*

16. A separate TSS worksheet must be provided for the “settling basin” since the treatment train is different from the worksheet provided. (Stormwater Regs. 5.0.A)

A separate worksheet has been provided. Also, the “settling basin” has been revised to a “forebay”. 80% credit has been claimed for the treatment units. The NJ DEP has independently evaluated the proposed treatment unit and found that a 50% rate is feasible assuming that the unit is adequately sized and maintained. It is recommended that the worksheets be updated to conservatively reflect the 50% value. (MA DEP Vol. 2, Ch. 4, page 4)

It appears that Standard #4 will be met at the discharge from the underground chambers with an assumed rate of 50% for the treatment unit. It also appears that the discharge from the “forebay” may be considered a de minimis discharge under the MA DEP Stormwater Handbook and Standard 4 would be met there as well assuming a rate of 50% for the treatment unit. The report should also be updated to reflect the de minimis discharge. (MA DEP Vol. 3, Ch. 1, page 35)

17. The discharge summary table in the stormwater report indicates the runoff flow to the wetland under the 2-year storm in both the pre-development and post-development conditions is 0.20 cfs. The HydroCAD data indicates that the flow under the post-development conditions is actually 0.21 cfs. This is a very minor increase. The Applicant should confirm that the increase will not affect downstream properties. (Zoning Bylaw 5.2.05.F, Stormwater Regs. 5.0 and MA DEP Vol. 3, Ch. 1 page 5)

Resolved. *The report has been revised. The report identifies that the post-development runoff rates are below the pre-development rates.*

18. There are issues with the recharge calculations and the groundwater mounding calculations. (Stormwater Regs. 5.0.E and MA DEP Vol. 3, Ch. 1 page 25):

- a. The recharge calculations are based on HSG C. Soils on site are identified by USGS as HSG B and HSG B has been used in the HydroCAD model. The recharge calculations must be updated. Other references to HSG C in the report should also be updated as well.

Resolved. *The report has been revised to HSG B.*

- b. The recharge calculations are based only on the chambers. Not all runoff is tributary to the chambers, therefore, a capture area adjustment is required. Alternatively, the “settling basin” could be included in the calculations. (MA DEP Vol. 3, Ch. 1, page 27)

A capture area adjustment has not been provided. It appears that the recharge system is adequate, however, the adjustment must be provided to confirm.

- c. The impervious area used in the recharge calculations doesn’t match the impervious area listed in the HydroCAD data.

Resolved. *The calculations have been revised.*

- d. The floor area used in the drawdown and stage/storage calculations doesn’t match that in the HydroCAD data.

Resolved. *The calculations have been revised.*

- e. Drawdown calculations must be based on the actual storage volume in the BMP, not the required volume.

Resolved. *The calculations have been revised.*

- f. The mounding calculations are based on a recharge period of 2 days, however, the recharge calculations identify that the system drawdown only takes 1 hour. The mounding calculations must be consistent with the drawdown calculations.

The engineer has indicated that the calculations have been revised, however, the recharge periods are still not consistent. The time period used in the calculations represents the duration of infiltration. A recharge time of 2.08 days has been used in the mounding calculations. The total drawdown time (ie. infiltration duration) has been calculated as 10 hours. The time periods must be consistent.

- g. The perc rate used in the mounding calculations must be consistent with the onsite soils.

The engineer has indicated that the calculations have been revised, however, the perc rates are still not consistent. A recharge rate of 0.384 ft./day (0.192 in./hour) has been used in the mounding calculations. The recharge rate of 1.02 in./hour has been used in the HydroCAD calculations. The recharge rates must be consistent.

- h. The mounding calculations must reflect the length and width of the proposed recharge system.

Resolved. *The calculations have been revised.*

19. Stormceptors are proposed for pre-treatment in the stormwater system. Information must be submitted to demonstrate that the Stormceptors are adequately sized in accordance with MA DEP *Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices*. (Stormwater Regs. 5.0.F)

Information has been provided related the manufacturer’s standards sizing methods. Information must be submitted to demonstrate the separators are sized in accordance with the MA DEP standards referenced above.

20. Calculations must be provided to verify the rip rap apron is adequately sized for the expected flows. (MA DEP Vol. 1, Ch. 1, page 4)

Rip rap sizing calculations have been provided. The dimensions for FES#1 provided in the report do not match those on the plan. The discrepancy must be resolved.

21. The site is tributary to the Chapin Brook which is a cold water fishery. Cold water fisheries are classified as “critical areas”. The stormwater report must be revised to reflect this. (MA DEP Vol. 1, Ch. 1, page 3)

Resolved. *The report has been updated to reflect that the site is tributary to a “critical area”.*

22. Water below the “settling basin” outlet will infiltrate/recharge making the “settling basin” an infiltration basin. Infiltration BMPs/Recharge BMPs must be 100 feet from private wells. Both the proposed recharge chambers and “settling basin” are approximately 25 feet to 30 feet from private wells. The recharge BMPs must be revised to meet this requirement. (MA DEP Vol. 1, Ch. 1, page 8 and Zoning Bylaw 5.2.05.F)

The “settling basin” has been revised to a “forebay” with a clay liner to prevent infiltration. The storage volume in the “forebay” below the outlet will not be capable of draining after a storm event. An outlet is recommended at the floor elevation in order to allow the “forebay” to drain between storm events.

23. Infiltration/recharge BMPs must be 50 feet from the BVW. The settling basin is approximately 40 feet from the BVW. A small portion of the recharge chambers is within 50 feet of the BVW. The BMPs must be revised to meet the requirement. (MA DEP Vol. 1, Ch. 1, page 8)

Resolved. *The chambers have been moved at least 50 feet from the BVW.*

24. Recharge BMPs must have a 2 foot vertical separation to the seasonal high groundwater table. Testing on site identifies that groundwater was found between 36 inches and 43 inches below the ground surface. A substantial portion of the chamber system will not meet the separation and, given the range of groundwater depths found, the “settling basin” may not meet the separation. The BMPs should be revised to meet the separation or a means for controlling ground water elevation must be provided. (MA DEP Vol. 1, Ch. 1, page 8)

Resolved. *The 2 foot vertical separation has been met based on the soil test pit results.*

25. There appears to be excess storage capacity under the 100-year storm conditions in the proposed chamber system. The Applicant may want to consider reducing the number of chambers and reconfiguring the outlets in order to reduce the system footprint.

Resolved. *The chamber system has been reconfigured.*

26. As depicted on the plan, the flared end discharge from the chambers is higher than the chamber outlets. The plan must be revised.

Resolved. *The flared end has been revised.*

27. The discharge pipes listed in the Flared End Rip Rap Outlet detail (sheet C-8.0) do not match the pipe depicted in the plan view.

Resolved. *The pipe diameters have been revised.*

28. There are two catch basins labelled CB#1 on the plan. The plan must be updated to differentiate between the two.

Resolved. *The catch basins have been differentiated.*

29. The Applicant must verify that the proposed drain pipes are adequately sized.

Resolved. *Drain pipe sizing has been provided.*

30. The Curb Inlet Catch Basin Detail (sheet C-8.0) depicts a frame with a side inlet. Both catch basins are depicted in the parking area so that the grates would require a top inlet (sheet C-4.0). The Applicant must clarify the catch basin design.

The engineer indicated that the detail has been revised, however, it doesn't appear to have been revised.

Landscaping Regulations

31. Trees are required along the street frontage at 35 foot spacing. (Landscape IV.B.1)

Resolved. Trees have been posed at 35 foot spacing along the frontage.

32. This office defers to the Board regarding the adequacy of the proposed landscape screening. (Landscape IV.B.2 and 3)

General Comments

33. DMH#2 is located partially in the Stafford Street right of way. The manhole must be relocated onto private property.

Resolved. The manhole has been removed from the right of way.

34. Portions of the existing 786 contour line are missing from the plan.

Resolved. The contour has been provided.

New Comments May 31, 2022

35. The Stormceptor detail provided on plan Sheet C-8.0 doesn't match the model/detail provided in the stormwater report. The plan set and stormwater report must be coordinated and evaluations of the treatment unit must reflect the proposed model.

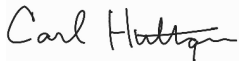
Recommended Conditions of Approval

The Board may wish to consider the following conditions if the proposed application is approved.

A. That the lots be combined prior to issuance of a building permit. (See comment 2)

B. That the septic system be submitted to and approved by the Board of Health prior to issuance of a building permit. (See comment 11)

Sincerely,
QUINN ENGINEERING, INC.



Carl Hultgren, PE
Senior Engineer

CC: Matt Schold – Applicant (via email)
Peter Lavoie - Tauper Land Surveying, Inc. (via email)
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