



Town of Walpole
Commonwealth of Massachusetts

Town Hall
135 School St.
Walpole, Ma. 02081
Phone (508) 660-7335
Fax (508) 668-1594

DPW/Town Engineer
Carl J. Balduf, P.E., P.L.S.

TO: Ashley Clark,
Director of Community and Economic Development

FROM: Carl Balduf,
Town Engineer

RE Proposed Multifamily Development 51-53-55 Summer Street
Aka Cedar Crossing and Cedar Edge Comprehensive Permit (40B) 1st Review

DATE: February 21, 2020

We have received a full initial submission package which included the following:

- A forty three (43) page 24”X36” Civil plan set titled “Site Plan For Proposed Multifamily Development 51-53-55 Summer Street Walpole, Ma.” dated January 10, 2020 and prepared by Howard Stein Hudson of Chelmsford, Ma for 55BHLC of Westford, Ma.
- A single page memorandum from the Board of Appeals dated January 21, 2020 to Town Departments requesting comments by February 18, 2020.
- A multi-page application binder with cover sheet titled “Cedar Crossing and Cedar Edge Greater Housing Choice”, applicant 55 SS LLC Westford, Ma.
- A multi-page binder with cover sheet titled “Traffic Impact and Access Study Proposed Residential Development 55 Summer Street Walpole, MA” dated January 6, 2020 Prepared by; Bayside Engineering of Woburn, Ma.
- A multi-page binder titled “Walpole, Massachusetts Proposed Multifamily Development Summer Street” Prepared for; 55 BH LLC Westford, Ma. 01886 dated January 2020.

In conjunction with the DPW Director, the Assistant Town Engineer and the Sewer & Water Superintendent the following comments are provided by the DPW. The comments apply to both the Rental & Condominium applications:

Related to MassHousing Determination and Recommendation dated January 13, 2020.

1. The current submission does not appear to comply with state law, regulations and standards related to stormwater management.
2. The applicant has not provided detailed information with regard to water & sewer use, potential impacts on existing capacity and appropriate mitigation (see memorandum from Sewer & Water Commission to Board of Appeals dated February 20, 2020)
3. The applicant has not addressed sidewalk connections and updated infrastructure within the submission (see discussion in this correspondence on workshop dated 2/13/2020)
4. There does not appear to be anything in the submission addressing partnering with Walpole's Emergency Management Cert Program or provide any proper emergency planning, evacuation and sheltering on site.
5. With the exception of a very brief discussion regarding the Energy Star program and the possibility of considering solar power the applicant does not appear to incorporate additional energy-saving and sustainability features into the project. We see no evidence of "trash and recycling efficiencies, renewable energy resources, geothermal heating and cooling, drought tolerant landscaping, pervious surfaces, green infrastructure, and/or bike storage and electric vehicle infrastructure" as required in the above noted Determination and Recommendation.

Related to Submission

6. The Traffic Impact and Access Study should be stamped by a Massachusetts Registered Professional Engineer.
7. The Existing Conditions Plans within the Civil plan set should be stamped by a Massachusetts Registered Land Surveyor.
8. The Civil plans are generally not complete;
 - a. Pipe sizes and types for water, sewer and drain mains are noted in some locations but are missing in many locations and are not noted for most services. All drains are sized at 12" which is not feasible. Larger sizes will be required on lower branches of the drainage system.
 - b. The sewer system lacks inverts.
 - c. Some labels for detention basins do not match the proposed contours.
 - d. Many curb radius do not match the opposite side or the labelled roadway width.
 - e. Proposed detention ponds 3, 4, & 5 appear to be designed in the groundwater table or at groundwater. DEP requires 2' separation minimum and possibly more.
 - f. The Fire Truck Turning Plan is not drafted at a scale that will allow proper review.
 - g. No roadway/utility profiles are included with the submission.

Related to Review

9. We recommend the Board of Appeals engage peer review for the entire submittal which should include review of the all the materials noted at the beginning of this memorandum. Although Town staff has considerable resources, peer review would bring expertise to all areas (transportation interior and exterior to the site, drainage, environmental, utility, grading and overall site design) and will help maintain the schedule for the expedited review as well as fill in gaps in Town review capability and workload. The peer review scope should include the current submission as well as subsequent submissions including any re-submission required as a condition of approval for bot site and offsite work.

General

10. Street names need to be verified and cleared with Police/Fire. Some observations;
 - a. Red Tail Drive may not be suitable as it is similar to an existing Red Gate Road.
 - b. Partridge Lane and Chestnut Lane are already used.
 - c. Spruce Lane & Balsam Lane should be verified with Police/Fire.
11. Although not within DPW jurisdiction, this department strongly recommends that a fence be installed along the entire site perimeter with the railroad (subject to discussion and approval with the Conservation Commission) for the safety of the proposed communities children and residents in general.

Roadway

12. 12' travel lanes are narrow. The interior roads excluding the double barrel main entry should follow Subdivision standards which are 13' travel lanes (26' width curb to curb). See also our comments in the Details section of this review for additional requirements.

Sewer

13. Reference is made to a memorandum from the Sewer & Water Commission to Board of Appeals dated February 20, 2020.
14. Invert elevations are not shown on the Utility Plans.
15. No details on sewer pump stations are shown. The Town specifies Gorman Rupp suction lift package stations which are recommended for this development. The Town will not accept or maintain any part of the private wastewater system.
16. Buildings 1, 2, 4, and the clubhouse should be modified to discharge directly into sewer manholes.

17. Sewer services for all 48 unit buildings should be 8" SDR 35. All other services shall be 6" SDR 35. All buildings are required under plumbing code to have either 4" cast iron (commercial) or 4" schedule 40 PVC to 10' outside building. All services should then transition to SDR 35.
18. Any 48 unit building with a garage will be required to have floor drains in the garage. Floor drains will need to drain to a properly vented oil/water separator which shall be connected to the sanitary wastewater system. This will require permitting with the Massachusetts Water Resources Authority (MWRA).
19. The 48 unit buildings with elevator will be required by code to have a sump pump in the elevator pit. The sump pump discharge shall be shown.
20. The current design shows 60 individual sewer injector pumps which serve the single family and some 3-4 unit multifamily homes. The injector pumps lift to a common force main which would then discharge to another sewer pump station. Given the sloping topography of the site we feel that a gravity collection system may be designed to drain to as few as two larger lift stations. This would be a better solution in the long run as a condominium association will be created and a professional manager will be present for the rental buildings and units. The Sewer & water Superintendent and myself would be available to advise on sewer lift station design.

Water

21. Reference is made to a memorandum from the Sewer & Water Commission to Board of Appeals dated February 20, 2020.
22. The water system is not looped. A loop is strongly encouraged.
23. The dead end to the north of Building #2 could be eliminated by routing the proposed water main to the west and north of Building #2 to connect where the fire hydrant is shown. The piece of main currently shown between Building #1 and #2 would not be necessary.
24. Triple water gate assemblies shall be shown at all intersecting ways including the connection within Summer Street. The triple valve assembly in Summer Street shall be connected to existing main with long body solid sleeves. All other triple gate intersections shall be a tee, nipple with mega-lugs and the (open left) water gate installed as an assembly.
25. All hydrant branches and building/fire services larger than 1" shall be served with an anchor tee and water gate.
26. All single family and multifamily units shall be served with 1" type K copper service with a curb shut off near the back of sidewalk or if there is not a sidewalk at similar distance off the back of curb (6'-7'). Curb shut offs shall be Buffalo style boxes.

Utilities

27. Throughout the site there is minimal separation between utilities. Water/Gas/Electric appear to be in the same trench. The utility layout should provide as much separation as possible.
28. The proposed electric service is not looped or multi sourced. If there is a problem with electricity the homes with injector pumps and small storage capacities will become a problem.
29. The applicant should verify that Columbia Gas will be able supply the new development without offsite improvements. If offsite gas main work is required plans will need to be submitted and there will be a requirement for curb to curb paving if main work is required. All offsite work will be secured either through the Board of Appeals or by the Board of Selectmen with values being approved by DPW/Engineering.

Details

30. The DPW's Typical Details for Water Main, Sewerage, Drainage, and Roadway construction shall be utilized and included in the design along with other site specific details provided by the designer. In general, the Town will apply design standards from its Subdivision Rules and Regulations where applicable and appropriate.
31. Sidewalks should be 5' wide excluding proposed curb.
32. Clay brick is required below frames and covers/grates and for sewer inverts.
33. 5' of cover is required for water mains and services.
34. See above comment in "Water" section for comments applicable to details.
35. We have numerous comments on the Cross Sections
 - a. Acceptable subgrade material should be specified.
 - b. All sidewalks shall be 5' wide excluding the curb.
 - c. Sidewalk cross slope should be specified as 1.6% with 2% max.
 - d. There should not be bituminous berm shown behind the sidewalk or vertical curb unless a very unusual situation occurs.
 - e. The material in the islands should be specified.
36. The entrance boulevard should have all granite curb. Vertical granite is preferred (TypeVB is acceptable except at rounding's into Summer St. which shall be VA4).
37. There should be cross section for each type/segment of roadway. This would appear to be;
 - a. Entrance boulevard with 16' travel lanes, granite curb, 8' island, and a bit sidewalk left side.
 - b. Transition section on boulevard to 16' travel lanes and 5' island with sidewalk left side.
 - c. Boulevard with 16' travel lanes, 5' island, and sidewalk left side.
 - d. Boulevard at bridge crossing. Note; we do not recommend reducing to 12' travel lanes.
 - e. 24' roadway with cape cod berm and sidewalk left side.

- f. 24' aisle with parking on one side or both sides and sidewalk on one side or both sides.

Traffic

- 38. The Traffic Impact Analysis Report should be peer reviewed by a consultant of the Board of Appeals choice. The developer should anticipate funding this effort which should include, initial review, follow up review, final reviews including several public hearings and review of items required under conditions of approval as well as internal coordination meetings. This effort should be coordinated through the Director of Community and Economic Development.

Preliminary Review;

- 39. The analysis discusses but does not model Gillette Stadium events at all. Furthermore, the impacts of the events on local roads are not discussed with or without the proposed development during such events
- 40. The analysis does not provide any analysis of proposed development internal circulation, geometric design, design speed, site distance, pedestrian movement, and signage.
- 41. The analysis does not analyze off site pedestrian travel at all. Concerns existing for the pedestrian travel through the train crossing on Summer Street, along Summer Street toward South Walpole Common and around the Common with the strongest emphasis on the route through the Common and to the Boyden School. The DPW is also concerned with connectivity and is concerned with a gap in the municipal sidewalk from Delapa Circle to Winter Street.
- 42. The analysis models five different intersections and eight different movements for the existing, future no-build, and future build conditions. While level of service (LOS) drops in some locations/movements for the future condition without development it drops additionally in several locations with the development. Given this scenario, we find it incomplete of the developer to have proposed only a Transportation Demand Program (TDM) for mitigation. While attempting to manage vehicle trips and encouraging alternative transportation is a worthy effort we would look for brick & mortar improvements in the surrounding area to be linked to this project.

Transportation Workshop held at Town Hall 2/13/20

Representatives Walpole Police, Fire, Economic Development, Zoning, DPW, and Town Administration met with David Hale and Ken Cram of the development team to discuss transportation items in an informal workshop setting. A brief summary of the items discussed is noted as follows;

- 43. Town officials asked that the applicant review and report on the feasibility of making the intersection of Washington St., Water St., Washington St. Ext., Summer St. and Neponset St. a roundabout. The applicant expressed concern about availability of right of way and impacts to the historic South Walpole Common, however, Town officials felt that this analysis/feasibility should be provided.

44. The developer wished to discuss the pedestrian route from the development to the Boyden School. The developer provided a printout of an aerial photo of the south Walpole area for discussion which was quickly noted to be outdated as DPW had paved Water Street recently and re-configured the pedestrian crossing at Water/Neponset/Summer Street. The developer proposed a flashing beacon at this location. Public Safety officials quickly requested a similar beacon at the pedestrian crossing at Washington/Water St.
45. Public Safety officials also requested school crossing guards at the same locations and requested that the developer/development fund this cost. The applicant did not agree to permanent funding scheme but was going to consider the request.
46. Public safety requested a speed study on Washington Street in South Walpole with the goal of being able to lower posted speeds (must be submitted and approved by MassDOT). The existing DOT approved speed limits were presented to the applicant and traffic engineer.
47. Town officials requested that the developer extend the sidewalk along the west side of Summer Street so that pedestrians would not have to cross Summer Street from the development side at the current crosswalk on the north side of the railroad tracks. The preferred pedestrian path to the Boyden School appears to be on the west side of Summer Street and the north side of Washington Street with a crossing at its current location at the School. It was quickly understood that limited right of way (40') and existing telephone poles at this part of Summer Street appear to make this challenging. The Town requested the developer survey this and evaluate three options:
 - a. Installing a sidewalk along this portion of Summer Street as it currently exists.
 - b. Installing a sidewalk with additional right of way acquisition on the west side.
 - c. Installing a sidewalk with curb and utility pole relocation which would slightly narrow the travelled way to keep the sidewalk within existing right of way.
48. The DPW also requested the relocation of an existing crosswalk on Washington Street at Water Street further to the south and east to improve site distance at the crossing.
49. The DPW requested that the project infill the gap in sidewalk from Delapa Circle to Winter Street.

Stormwater Report

50. We would prefer the soil test pit logs were furnished with the report. It would also be helpful for review if soil test pits are plotted on the Existing Watershed Plan, Existing Conditions Plan, and Grading and Drainage Plans.
51. The report assumes the site is entirely A soils (well drained) for the purposes of calculating recharge volume which is a conservative assumption that likely over estimates the required recharge volume. However, the report also utilizes an A soil (well drained) aggressive Rawls rate for stormwater infiltration of 2.41"/hour within the HydroCAD calculations and for proposed detention basin drawdowns. Soil maps show a variety of soils on the site and we feel that further investigation is required and that the 2.41" Rawls rate may not be appropriate for all detention

basins. If the rate is reduced to reflect C soils some of the basins as designed would not drawdown within the required 72 hours.

52. Proposed detention ponds 3, 4, & 5 appear to be designed in the groundwater table or at groundwater. DEP requires 2' separation minimum and possibly more if mounding calculations are required. The requirement for separation from groundwater is not negotiable as this area is within Walpole's well recharge and water quality is a concern.
53. Four of the five proposed detention basins (1, 2, 4, & 5) do not have the required 1' off freeboard capacity above the modelled 100 year storm elevation. They all should have this.
54. The report should include a Rational Method pipe sizing table for the 10 year storm along with a proposed catchment area map for all inlets. The plan is much easier to review if the proposed catchment areas show the various areas for each inlet. HydroCad would also be acceptable if it is run for all inlets and routed through the pipe design.

Waivers

55. The applicant lists many waivers from local regulations. Among the waivers is a blanket request to waive the Site Plan Review under Section 13 of the Zoning Bylaw. If the Board of Appeals grants this waiver we recommend that Section 13-9 & 13-10 General Site Development Standards and Guidelines and Drainage Standards not be waived as they provide guidelines no site should be without.
56. The request for waivers for Sewer & Water Fees is addressed in the memorandum of the Sewer & Water Commission to the Board of appeals dated February 20, 2020.

We consider the initial submission to be preliminary and reserve the right to provide comment on this submission and later submissions either on our own or through peer reviewers. We remain available should any items require further discussion.

Cc: R. Mattson, C. Johnson, B. Marshall, DPW
Sewer & Water Commission
Conservation Commission
Planning Board

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