



January 16, 2024

100 GROVE ST. | WORCESTER, MA 01605

Oxford Zoning Board of Appeals
325 Main Street
Oxford, MA 01540-1727

T 508-856-0321

F 508-856-0357

gravesengineering.com

**Subject: Zain Place
580 Main Street
Comprehensive Permit Plan Review**

Dear Zoning Board of Appeals Members:

We received the following documents in our office on November 7, 2023 via email:

- Plans entitled Site Plans for Zain Place, 580 Main Street, North Oxford, MA dated July 26, 2023, prepared by Land Design Collaborative for Ansari Builders. (12 sheets)
- Preliminary architectural plans entitled Proposed Apartments, Zain Place, 580 Main Street, North Oxford, Massachusetts dated April 12, 2023, prepared by Dimensions 2&3. (5 sheets)
- Document entitled Stormwater Management Report, 3-Story Apartment Building, 580 Main Street, Oxford, MA 01540 dated June 26, 2023, prepared by Land Design Collaborative for Ansari Builders.
- Document entitled Application to the Zoning Board of Appeals, Town of Oxford for a Comprehensive Permit; property location – 580 Main Street, Map 17, Parcel 7.4; applicant - Anari Builders.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' and supporting documents' conformance with applicable "Oxford Zoning By-Law", "Oxford Stormwater Management and Land Disturbance Regulations", the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices. GEI was authorized to proceed with this review on November 20, 2023. As part of our review GEI visited the site on December 14, 2023.

Our comments follow:

Zoning Bylaw Review

1. The site plans were prepared at a scale of 1" = 30' but a scale of 1" = 20' is required. GEI found the plans to be clearly legible. If a scale of 1" = 30' is acceptable to the Zoning Board of Appeals, then a waiver request should be submitted. (Chapter XV, §3.1)
2. The plans propose 9' x 18' parking spaces in the garage. However, the required dimensions for 90-degree parking are 9' x 19.' (Chapter XI, Table IV)
3. GEI has no issue with the proposed number of parking spaces (70 spaces). (Chapter XI, §3.0)

Oxford Stormwater Management and Land Disturbance Regulations

4. The Stormwater Management Report needs to include hydrologic calculations for a 25-year storm event. (§7.B.4.a)
5. The plans need to include soil test pit data and the locations of the testing to demonstrate the feasibility of groundwater infiltration at the “low area” that is proposed to serve as the site’s stormwater management area. (§7.B.5)
6. Rainfall data used in the hydrology computations needs to be that obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14... The data utilized for the ten-year and 100-year storm events were 0.25” and 0.91”, respectively, lower than the NOAA data GEI obtained. (§7.F.9)
7. The Stormwater Management Report needs to include pipe sizing calculations. (§7.F.12)

Hydrology & MassDEP Stormwater Management

8. GEI reviewed the hydrology computations and found them to be in order.
9. Compliance with the MassDEP Stormwater Handbook and Standards is reasonable provided Comment 4 and the following comment are addressed.
10. The plans do not include erosion and sediment control plan nor riprap aprons at stormwater discharge points. This level of detail will need to be addressed on construction plans if the project is approved.

General Engineering Comments

11. The plans show an existing cul-de-sac/vehicle turnaround area associated with the abutting Plymouth Village Condominiums. The cul-de-sac extends onto the Zain Place property and is proposed to be truncated at the property line – vehicles at the Plymouth Village Condominiums may have difficulty turning around in the truncated cul-de-sac. From Worcester District Registry of Deeds research, GEI understands that the Zain Place developer had been involved with the development of Plymouth Village Condominiums. GEI recommends the Zain Place plans be revised to address how the cul-de-sac/turnaround area will be reconfigured and how vehicle maneuverability will be maintained, presumably at the expense of the Zain Place project.
12. Sheet C-201 of the plans proposes earth fill along the eastern property line where runoff from the abutting Plymouth Village Condominiums flows westerly onto the Zain Place property – the affected area is approximately 230 feet long. The plans need to address how the stormwater flow path(s) from the abutting property will be maintained and will need to demonstrate adequate hydraulic capacity for any infrastructure designed to receive the off-site flow.
13. Page 1 of the Stormwater Management Report refers to a United States Army Corps of Engineers (US ACE) “flowage easement” and a requirement that US ACE approve any work in the flowage easement. The flowage easement is that portion of the site whose ground elevation is 504 feet or lower. The plans show the limit of the flowage easement as a wide dashed line. Sheet C-201 shows filling and work within the flowage easement – filling to

create the entrance driveway and filling at the northwest portion of the development area. GEI did not review the proposed replication area – the “Stormwater Basin & USACE Flood Compensation Area” for compliance with US ACE requirements. The Zoning Board of Appeals may wish to have the applicant solicit written comments from the US ACE to demonstrate the project’s viability relative to meeting US ACE requirements.

14. On Sheet C-201, the proposed 498 topographic contour drawn around the west side of the “Stormwater Basin & US ACE Flood Compensation” area should connect to the existing 498 topographic contour southwest of the stormwater basin instead of northwest of the stormwater basin. As currently drawn, the proposed 498 contour represents a fill condition along the tree line west of the stormwater basin.
15. On Sheet C-201, there is a proposed 500 topographic contour missing (perhaps at about the proposed tree line) west of headwall HW-20.
16. On Sheet C-201, the elevations for Pipe D-60 at the entrance driveway need to be relabeled to clearly show which end is the inlet and which end is the outlet.
17. The plans need to address grading at the curb line where pedestrians will pass from the aisle for the two accessible parking spaces to the sidewalk. The spot elevations at the curb line suggest the curb will be one-half foot to one foot high.
18. GEI recommends that the design engineer consider a chamfer in the curb line at the northern-most and southern-most ends of the parallel parking space area to allow vehicles parked at the ends to easily maneuver in and out of the end parking spaces.

General Comments

19. GEI understands that Main Street proximate to the project site is under MassDOT jurisdiction. The existing catch basin in Main Street at the proposed project entrance has a granite curb inlet stone. Reconfiguration of the catch basin inlet and driveway access permitting will have to be reviewed and approved by MassDOT.
20. The plans are missing signage for the accessible parking spaces. This level of detail will need to be addressed on construction plans if the project is approved. (521 CMR, §23.6)

Waiver Requests

21. GEI is not aware of there being any waiver requests. GEI will be prepared to assist the Zoning Board of Appeals if waiver requests are submitted.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Respectfully submitted,
Graves Engineering, Inc.



Jeffrey M. Walsh, P.E.
Principal

cc: Michael J. Scott, P.E.; Land Design Collaborative