



November 21, 2017

Wayland Zoning Board of Appeals  
Jonathan Sachs, Chair  
41 Cochituate Road  
Wayland, MA 01778

**Re: 40B - Peer Review  
Cascade Wayland  
113-119 Boston Post Road  
Wayland, Massachusetts**

Dear Chairman Sachs:

The following letter provides comments generated during the course of our review of applicant submittal materials and peer review comment letters related to the above-referenced project (Project). Our comments generally focus on substantive concerns that speak to issues whose eventual resolution may substantially impact Project design or could otherwise result in potentially unsafe conditions or unanticipated impacts to abutters. The following is a list of specific documents reviewed:

- *Cascade Wayland - Application for Comprehensive Permit (plans)* by Finegold and Alexander Architects and its sub-consultants dated July 21, 2017 (Rev 0) hereinafter referred to as "Site Plans".
- *Cascade Wayland Comprehensive Permit Application* by Eden Management, Inc. dated July 25, 2017 hereinafter referred to as "Application".
- *Stormwater Management Report – 113 & 115 Boston Post Road* by Beals and Thomas, Inc. dated November 10, 2017 hereinafter referred to as "Stormwater Report".
- *Cascade Wayland – Application for Comprehensive Permit (plans)* by Finegold and Alexander Architects and its sub-consultants dated July 21, 2017 (Rev 1) hereinafter referred to as "Updated Stormwater Plans".
- *Misc. Comment Letters*

## Comments

In general we found Project submittals to be professionally done, adequately reflect the proposed improvements and address most of the substantive design considerations. However we have two principal concerns. First, the program of improvements does not appear to consider significant limitations imposed by the Massachusetts Wetlands Protection Regulations (310 CMR 10) for work within Riverfront Areas and appears to significantly exceed development allowed under applicable Riverfront Area performance standards. Second, the proposed site layout and building design creates distinct barriers to emergency access most notably below building parking areas and at the rear of the property. These access limitations may present a safety risk to residents and first responders. The following comments address these and other concerns in more detail.

### Site Plans

1. Approximately 85% of the site is located within Riverfront Area which is an area subject to protection under the Massachusetts Wetlands Protection Act and related Wetlands Protection Regulations (310 CMR 10.00). Projects proposing work within the Riverfront Area are required to meet performance

standards noted under 310 CMR 10.58 which require the applicant to demonstrate that no practicable alternative exists that would result in less impact and that the project complies with certain minimum standards. It is our opinion that the project, as currently proposed, does not meet minimum standards required for approval, specifically criteria described at 310 CMR 10.58 (5)(a), (c) and (e). In particular, the proposed development will result in a significant net increase in degraded area within the riverfront where no increase is allowed. According to our estimates, the project would need to reduce the area of proposed work within the Riverfront Area by approximately 1.3 acres which does not seem achievable given the current development layout and density. A summary of our assessment of project riverfront impacts is provided in Table 1 and depicted on attached figures. Please note, "degraded" area limits identified are approximate and based on our initial assessments of the site and likely to be the subject of further debate. Final determination of degraded vs. non-degraded areas and evaluation of project net impacts on the Riverfront Area falls under the purview of the Wayland Conservation Commission. The information provided herein is for discussion purposes only and we defer to the Conservation Commission and its agents for final determinations.

**Table 1 – Riverfront Impact Summary**

Site Condition	Total Riverfront Area (acres)			Degraded Riverfront Area (acres)			
	Total	0'-100'	100'-200'	Total	0'-100'	100'-200'	Offset (feet)
Existing	5.5	3.0	2.5	1.5	0.5	1.0	40
Proposed	5.5	3.0	2.5	<b>2.8</b>	<b>1.1</b>	<b>1.7</b>	<b>37</b>
Net Change				+1.3	+0.6	+0.7	+3

- Portions of the Project Site are mapped within areas subject to inundation during the 100-year storm event (Bordering Land Subject to Flooding) however no specific flood elevation has been determined. The proposed redevelopment includes placement of buildings and changes in grade within the areas subject to inundation and the applicant must demonstrate that proposed changes will not result in increased flooding on adjacent properties. It is our understanding the applicant is conducting a flood study to assign flood elevations. Until the study is complete and findings are approved it is impossible to determine if applicable performance standards are met. Please note, current mapping indicates flooding to the 162 contour elevation and the proposed finish floor of the garage is set at elevation 160.
- The proposed infiltration basin consolidates flow and discharges immediately up-gradient from an abutting parcel resulting in an increase in runoff to the abutting parcel. The basin outlet should be relocated to an area where its discharge can be conveyed to the receiving water body without flowing over adjacent property.
- It is unclear how stormwater will be prevented from entering the garage. Flow from garage floor drains are considered sanitary waste and must be directed to the site's wastewater disposal system. Care should be taken to insure stormwater is not allowed to enter the sanitary sewer system as those flows can be significant and are not accounted for in system design.
- The plans indicate a large installation of tanks and related structures adjacent to Septic Area 2 but no access is provided for maintenance or other periodic operational needs.
- The plans include a retaining wall approximately 10 feet from the limit of Septic Area 2. Applicable regulations require a 15 foot setback to downhill slopes which is not met. It is also unclear how runoff patterns will be maintained so that runoff originating on the adjacent property does not accumulate along the face of wall.

7. The plans show only the Primary disposal area. Title 5 requires a suitable area be identified as Reserve disposal area in case of failure of the Primary. It is unclear where the Reserve disposal area could be located given the limited available area on-site.
8. Grading in and around Septic Area 1 and 2 appears to reflect groundwater conditions in the area. However separation from Estimated Seasonal High Groundwater should include consideration of information collected from recent test pits and for groundwater mounding. We expect that analysis will be included in the Hydrogeologic Study currently being completed.
9. Information submitted includes very little information on septic system design. Current layout of the subsurface soil absorption system shows very little, if any, available space to accommodate potential increases in size or modification of shape. We request the applicant provide details on the proposed system design including a summary of design flows, identification of applicable percolation rates and groundwater determinations and soil loading design.
10. Portions of the proposed on-site roadways drain directly to Route 20. All runoff from the site should be directed to the proposed on-site stormwater management system and not allowed to discharge to the public right of way.
11. Flow to the bio-retention areas is intended to occur via direct overland flow from paved surfaces but driveway slopes may result in system bypasses. Landscaping and other seasonal accumulation (snow/sand) can channelize flow along the paved edge causing flow along the paved edge in the rather than into the bio-retention areas resulting in runoff discharging at the low end of the paved area on to Route 20. We recommend catch basins be used to ensure flows are collected and treated as intended.

#### Emergency Access

12. Grading required to accommodate the proposed septic system and infiltration basin preclude emergency vehicle access to the rear of the building. Given the building's proposed height (40') and length (485') the lack of access for emergency responders may present an unsafe condition. Grading and access should be coordinated with the Wayland Fire and Police Departments to ensure suitable access. According to Massachusetts Fire Protection Regulations, for buildings with fully automatic sprinkler systems, the maximum allowable distance from an approved emergency access road to any portion of the building/wall is 250 feet. Based on our review of the proposed plans the required dimension is not met and approximately 225 feet of the building does not meet the standard. See
13. The garage is more than 450 feet long with only one means of vehicular access/egress and no provision for vehicle turnaround. In addition larger emergency vehicles have no direct access to the garage entry as the paved area outside the garage does not provide enough room to turn an emergency vehicle around. Access configuration and layout of the garage should be closely coordinated with the Wayland Fire and Police Departments to ensure adequate access is provided for emergency responders.

#### Stormwater Management Report

14. The Stormwater Report is professionally done, addresses key issues related to stormwater management and appears to meet applicable Stormwater Management Standards. However, we expect changes to the site plan are likely to result from on-going coordination between the Town and the applicant and to address applicable Riverfront and Bordering Land Subject to Flooding performance standards. These changes will require modification of the quantitative analysis so we have deferred detailed review of that analysis until issues related to Riverfront and Flood Plain are better understood and reflected in the design. We offer the following comments for consideration in future submittals.
15. Vegetated filter strips must be a minimum of 25'. The proposed design does not meet this requirement.

16. The drainage analysis assumes one common discharge point for the entire site when runoff from the site either discharges directly to Pine Brook or to the adjacent property to the west. The analysis should be modified to confirm no increase in runoff to either.
17. The drainage analysis models only two sub-watersheds which does not accurately reflect proposed runoff patterns. Watershed PDA-1B should be separated into at least two separate watersheds, one for areas flowing directly to Pine Brook and one for areas eventually discharging at FE-1.
18. Drainage analysis should include assessment of offsite flows originating from areas east of the site to confirm BMP sizing.

#### Comment Letters

19. Conservation Commission Letter dated November 6, 2017 – We agree with the comments provided and suggest the applicant prepare a response specifically addressing compliance with applicable wetlands regulations performance standards. Compliance with standards may result in significant modification of the proposed layout.
20. Planning Department Letter dated July 7, 2016 – The letter indicates Fire Chief McPherson recommends providing access around the perimeter of the building. The current layout only provides access for emergency vehicles along the front of the building. The letter also indicates prior activities at the site were considered an agricultural use. Certain agricultural uses can be considered exempt from Wetlands Protection Regulations whereas the proposed use of the site is not exempt.
21. Wayland Housing Partnership Letter dated September 21, 2016 – The letter suggests consideration for more 3-bedroom units. Please note, wastewater flows are calculated based on bedroom count and system size must be adjusted accordingly.
22. Wayland Board of Selectmen Letter dated July 26, 2016 – We concur with comment 3 noting concern related to fire protection, pedestrian access, septic design and riparian (riverfront area) impacts.
23. Pine Brook Neighborhood Association Letter dated June 2, 2016 – We concur with comments 3 and 5 noting concern regarding development impacts to riverfront and potential impacts from the septic system.

We are happy to discuss our comments at your request. Please don't hesitate to contact us with any questions, or if you require additional information.

Very truly yours,



Sean P. Reardon, P.E.,  
Vice President



(PUBLIC-50 WIDE)  
(1897 L.O. 248-2 + 248-3)

MASSACHUSETTS STATE PLANE (NAD83)

N/C  
CATHERINE BURNS  
AND TODD BURNS  
BOOK 66953, PAGE 157  
30-57

N/C  
CAROL B. GRUMMAN  
BOOK 12456, PAGE 224  
30-52A

N/C  
CLAUDIO DRAGONETTI  
BOOK 64386, PAGE 30-69

F.  
E.

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C000

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B-T FILE NO 204101P006A-001

SCALE: 1" = 20'

METERS  
0 10 20 30 40 50 60  
FEET

SHEET # **C101**

**C101**



BOSTON POST ROAD (ROUTE 20)  
(PUBLIC-50' WIDE)  
(1897 L.O. 248-2 + 248-3)

Finegold Alexander Architects

PROJECT TEAM

OWNER  
Eden Management Inc.  
60 Hope Ave. #512  
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508 259 8800

PREPARED BY:

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Southborough, MA 01772  
508 359 3560

SEAL  
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275 East Central Street, PMB 241  
Franklin, MA 02039  
508 553 0614

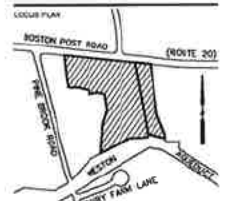
Geosphere Environmental Management,  
1000 Worcester Avenue  
Worcester, MA 01603  
508 773 0075  
Transmittal  
Vanasse Hangen Brustlin Inc.  
101 Walnut Street  
Waltham, MA 02452  
617 524 1770

N/F  
CLAUDIO DRAGONETTI  
BOOK 64365, PAGE  
30-68

FIG 2  
PROPOSED

DEGRADED AREA

FOR PERMITTING ONLY



PROJECT INFORMATION  
Cascadia Wayland

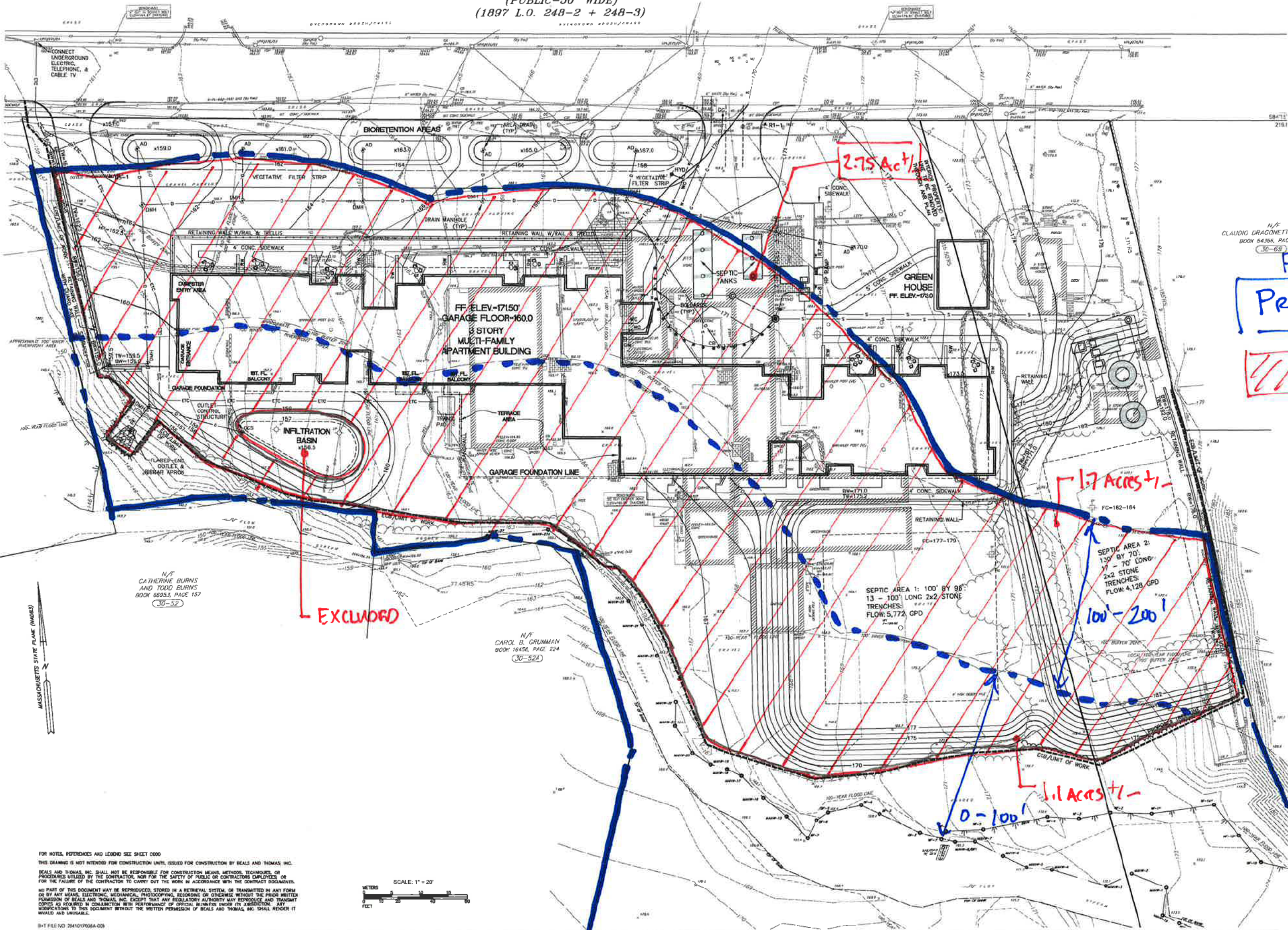
PROJECT # 2643 01  
PROJECT START DATE: 07/21/2017  
PROJECT STATUS: Comprehensive Permit

SHEET NAME:  
GRADING, DRAINAGE, AND  
UTILITY PLAN

DRAWING HISTORY  
NO. DATE DESCRIPTION  
1 07/21/2017 FOR PERMITTING

NO.	DATE	DESCRIPTION
1	07/21/2017	FOR PERMITTING

SHEET #  
C301

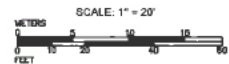


N/F  
CATHERINE BURNS  
AND TODD BURNS  
BOOK 66953, PAGE 157  
30-52

N/F  
CAROL B. GRUMMAN  
BOOK 16456, PAGE 224  
30-52A

MASSACHUSETTS STATE PLANE (NAD83)

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