

July 6, 2022

Billerica Planning Board  
365 Boston Road  
Billerica, MA

Attn: Ms. Erika Oliver Jerram, Director of Planning and Community Development

**Re: Response to Comments – Planning Board Peer Review  
161 Concord Road  
GMP Lab Building**

Dear Ms. Erika Oliver Jerram:

Below please find our responses to the Planning Board Peer Review letter, prepared by BETA Group, Inc., dated June 7, 2022. For clarity, the peer review comments are in bold italic text, while our responses are directly below in standard font type. Supplemental materials in support of these responses have been provided under separate cover, as outlined below:

- Proposed Site Plan Documents dated May 11, 2022, revised though July 6, 2022
- Response to Traffic Assessment Review dated July 6, 2022 (Vanasse & Associates, Inc)

**Zoning:**

***Z1. Revise limits of GEFP to coincide with actual surveyed topography. GEFP elevation appears to vary but can be estimated as elevation 177' NGVD in the area of Concord Road and 122' NGVD in the area of the Concord River. Note that a 3' rollback is applicable to the GEFP elevation for the portion along the Concord River.***

The limits of the GEFP have been revised to coincide with surveyed topography at the 122' contour along the Concord River and the 177' contour along Concord Road.

**Site Visit:**

***SV1. BETA notes that the existing Site includes a sign denoting the property's historical significance as part of the Middlesex Turnpike. BETA recommends the applicant consult with the Billerica Historical Commission to determine if any portion of the Site needs be preserved.***

The property is not within the Historic District. There are no existing structures on site that are included in the inventory of Billerica Historical Resources kept by the Billerica Historical Commission. Applicant has consulted with Alec Ingraham with the Billerica Historical Commission as suggested. Per Mr. Ingraham, the sign is a municipal sign placed by the Historical Commission seventeen years ago as part of the Town's 350th anniversary. The sign refers to the history of the Middlesex Turnpike. Mr. Ingraham has requested that proper care be taken of the sign during construction. Proper care will be taken to protect the sign during construction.

## Site Plan Approval:

### ***SP1. Provide profile for proposed drainage system (§6.E.4.p.).***

The drainage system is still being revised based on the Stormwater Peer Review, and profiles will be finalized as part of that work.

### ***SP2. Indicate bulb type for proposed luminaires (§6.E.4.q.).***

The proposed luminaries will be LED.

### ***SP3. Indicate if new rubbish collection areas are proposed (§6.E.4.s.).***

The trash refuse removal operations are proposed to take place internal to the building in the loading dock area.

### ***SP4. Provide description of the hours of operation of the proposed use (§6.E.4.ff).***

The proposed space will operate with multiple rotational working shifts which is typical format for this type of GMP lab facility use. Final hour of operation may vary tenant to tenant and will be provided to the Town when know.

## Dimensional Regulations:

### ***D1. Clarify if the two lots included in this project are to be combined.***

*The two lots are to be combined and the dimensional analysis was performed with this assumption.*

### ***D2. Provide required side yard. Provide additional spot grades for the western retaining wall to determine which portions are greater than six feet in height.***

Proposed retaining walls within side yard setbacks are less than six feet and are not considered structures under the bylaw. Additional spot grades have been provided on the Grading and Drainage Plan (C-402).

## Traffic Assessment Review:

### ***T1. Recommend showing the proposed bike path and how it relates to the Site, the Site Driveway, and the traffic signal.***

The applicant is proposing a 10' bike path along the Site Driveway up to the location where the proposed bike path leaves the limit of work for this project.

### ***T2. Crash rates were calculated based on PM Peak Hour volumes with a K-Factor of 0.09, which is understood to be the MassDOT default value when K-Factor is not known. BETA notes that Table 2 of the TIA lists the PM Peak Hour K-Factor as 0.095 which is slightly different. It is not expected that the difference in K-Factor would significantly change the conclusion listed in Table 4 of the TIA.***

See attached Response to Traffic Assessment Review.

***T3. BETA understands there are two similar cGMP buildings proposed for 600 Technology Park Drive and 300 Concord Road, as well as the commercial redevelopment of 480 Boston Road. Consider whether these projects will impact the Study Area.***

See attached Response to Traffic Assessment Review.

***T4. Clarify the necessity of the northern (right-in/right-out) driveway given the primary driveway is accommodated by a full-access traffic signal. It is generally expected that all trucks would use the main driveway.***

See attached Response to Traffic Assessment Review.

***T5. The TIA does not propose any alternative changes to the intersection beyond updates to timing and phasing. The existing Middlesex Turnpike provides a dedicated left turn lane and a shared left/thru/right lane. This two-lane left turning condition cannot receive a green signal at the same time as the Proposed Site Driveway without causing conflicts. The traffic signal analysis should be updated to show Split Phasing for the Site Driveway and Middlesex Turnpike.***

See attached Response to Traffic Assessment Review.

***T6. Consider whether changes to the lane uses for the Site Driveway may improve operations for Concord Road. A dedicated right turn lane exiting the Site could be run as an overlap with northbound left turns. This may be desirable in a condition where the northern site drive is not accessible/present.***

See attached Response to Traffic Assessment Review.

***T7. The intersection of Federal Street and the opposing driveway is unsignalized and generally found to operate with significant delays for the STOP controlled driveways. The TIA notes in the conclusion section that this intersection is controlled by a traffic detail during peak periods, which was not stated previously. Synchro cannot accurately model the actions of a traffic detail. The provided analysis does not provide significant detail for comparison of changes resulting from the Site Operations given it was recommended that the police detail be retained.***

See attached Response to Traffic Assessment Review.

***T8. Revise parking spaces to be a minimum of 19' deep (§8.C(1)).***

The parking lot layout has been updated to provide 19' deep parking stalls.

***T9. Indicate if modifications are proposed to the traffic signal at Concord Rd / Middlesex Turnpike to facilitate traffic into/out of the proposed development. Applicant should provide a traffic signal plan or any required updates to the existing traffic signal plan for review.***

See attached Response to Traffic Assessment Review.

***T10. Recommend restriping the existing pavement markings at the western site entrance, which were found to be partially faded during BETA's site visit.***

See attached Response to Traffic Assessment Review.

***T11. Provide calculations for design of proposed retaining walls.***

Retaining walls will be design/build by the contractor and retaining wall manufacturer. Design and calculations of proposed retaining walls will be submitted to the Town prior to building permit issuance.

### **Signs & Lighting:**

***L1. Relocate "Right Turn Only" and "No Left Turn" signs to the median at the eastern site egress to ensure visibility.***

The "No Left Turn" sign has been located to ensure visibility. "No Right Turn" signage is no longer needed with the new entrance only layout.

***L2. Provide detail or description for proposed sign at western Site entrance. Note that signs are considered structures under the bylaw and are subject to front/side yard requirements unless a variance is sought (§9.B(2)). Confirm that this sign is in compliance with §9.E, §9.F, and §9.G.***

The proponent will seek a variance for the sign within the front setback prior to building permit.

***L3. Provide detail for proposed traffic signs.***

Traffic sign details have been added to the detail sheets.

***L4. Indicate proposed treatment of the existing sign near the western site entrance which denotes the Middlesex Turnpike.***

The applicant is proposing to relocate the sign as shown on the updated site plan to be adjacent to the proposed bike path.

***L5. Provide detail of luminaire.***

A detail of the proposed luminaire has been added to the lighting plan sheets.

### **Utilities:**

***U1. Clarify design of sewer interconnection. As depicted, the proposed sewer connection terminates at a new doghouse SMH with no connection to an existing public sewer.***

DPW record plans indicate an existing public sewer at the connection location. Ongoing coordination on the sewer service is underway with the DPW.

***U2. Provide detail for crossing of water and sewer lines.***

A detail for water and sewer lines crossing has been provided on the Detail Sheet (Sheet C-902) of the Site Development Plans.

**U3. Provide information on expected domestic water required.**

Based on similar projects, it is anticipated that the sewer and water generation for the Project will be generally equivalent to an office use in terms of building functionality and associated Title V generation rates. There is currently no lab use generation rate provided under Title V, so this has been a commonly accepted approach in the industry. Accordingly, we have estimated the usage in the below table. The demand and usage can vary tenant to tenant and will be refined and reviewed further with the Town and DPW once a tenant has been identified.

**Proposed Sewer Generation**

Proposed Use	Quantity	Sewer Generation Rate*	Estimated Sewer Flow (GPD)
GMP Lab Facility (functionally office)	203,260 GSF	75 GPD/1000 GSF	15,245

\*Estimated sewer flows are based on 310 CMR 15.203.

**Proposed Water Generation**

Proposed Use	Prop. Sewer Flow (GPD)	Water Usage Factor	Estimated Water Usage (gpd)
GMP Lab Facility (functionally office)	15,245	1.1	16,770

**U4. Confirm that there is sufficient flow capacity and pressure to meet the fire services requirement.**

A fire flow test will be provided to the Town prior to building permit.

**U5. Indicate proposed treatment of the existing hydrant located along the former Middlesex Turnpike. If this hydrant is to be retained, confirm what water pipes to this hydrant are currently active.**

The existing hydrant will remain.

**Landscape Treatment:**

**LA1. BETA defers to the Town regarding the quality of proposed/existing screening. The proposed building floor elevation is located approximately 10' – 20' above the lot to the west and thus it may be readily visible from abutters.**

Understood. Additional screening and landscape buffer has been added based on Planning Board feedback and the newly available space based on the secondary access modifications. The proposed building is setback over 250 feet from Concord Road with a substantial landscape buffer. Adjacent buildings are as close to Concord Road as 140 feet.



**LA2. BETA defers to the Town regarding required widths for building perimeter green strips.**

Understood.

**LA3. Provide additional trees and shrubs for the building perimeter green strip. At least one native tree and 8 shrubs per 50 feet of green strip are required (§7.G(2)). For the proposed building perimeter of 1,680 ft ±, the required number of trees is 25 and the required number of shrubs is 202. Only 13 trees have been provided at the building perimeter.**

As part of the building perimeter green strip relief, the applicant is also requesting relief for the associated number of plantings.

**LA4. BETA defers to the Town regarding the lot perimeter green strip deficiency near the northeast corner of the building.**

Understood.

**LA5. Surveyed existing conditions data indicates several areas where existing vegetation does not provide a 20' green strip (e.g. near FES-2). Provide required green strip in such areas.**

Current Google aerial imagery indicates the lot perimeter is fully vegetated with the exception of the existing driveway at the intersection of Concord Road and Middlesex Turnpike. However, as noted above in LA4, the applicant is requesting relief for the lot perimeter green strip in the northeast corner in the proposed condition.

We trust the above is sufficient for your needs at this time for further review. Should you have any questions or require additional information, please do not hesitate to contact me at (617) 849-8040 or [wgranbery@bohlereng.com](mailto:wgranbery@bohlereng.com).

Sincerely,

**BOHLER ENGINEERING MA LLC**

**Will Granbery, P.E.**

**Zachary Richards, P.E.**