



November 17, 2023

Town of Pembroke
Zoning Board of Appeals
Town Hall
100 Center Street
Pembroke, MA 02359

**Re: Comprehensive Permit Peer Review
Mattakeesett Village
7/15 Mattakeesett Street, Pembroke, MA**

Dear Members of the Board:

This letter is being submitted in response to the peer review comments provided by Merrill Engineers and Land Surveyors (Merrill) via email on October 4, 2023, regarding the development of Mattakeesett Village at 7 and 15 Mattakeesett Street. Crocker Design Group, LLC (CDG) offers the following response to the comments below.

The letter follows the format of the original comments provided by Merrill. Peer review comments are indicated below in standard text and CDG's response in ***bold italic*** text.

COMPREHENSIVE PERMIT RULES AND REGULATIONS

3.01 The application for a Comprehensive Permit shall consist of:

The following is a listing of the items required by the Zoning Board of Appeals shown in *italic print* with our comments noted below.

- a) *Site Control: Evidence that the developer has control over the property in question; a copy of the deed, purchase and sale agreement or option agreement.*

The property deed has been provided.
Comment acknowledged.

- b) *Preliminary site development plans showing the locations and outlines of proposed buildings, the proposed locations, general dimensions and materials for streets, drives, parking areas, walks and paved areas; and proposed landscaping improvements and open areas within the site.*

A Comprehensive Permit Plan prepared by a registered professional engineer has been submitted for this project as required. The plan set consists of eleven sheets: Existing Conditions Plan, Demolition Plan, Site Layout Plan, Grading and Drainage Plan, Utility Plan, Test Pit Plan, and Construction Details Sheets 1-3. A Truck Turning Plan was also provided as a separate plan.

The dimensions and materials for the driveway and parking areas are shown on the Plans and Detail Sheets. The retaining wall along the easterly property line is extremely close to the property line. Can this wall be constructed without encroaching on the abutting property? Will a portion of the existing stone wall be removed? Additional information on how this retaining wall will be constructed should be provided.

Grading is proposed immediately adjacent to abutting properties at a number of locations. The existing hedge and fence along the easterly lot line look to be removed. We recommend a Landscape Plan be provided to maintain natural buffers along the property lines especially where adjacent to developed properties.

Retaining walls are proposed, many over 4 ft in height very close to walkways and property lines. The retaining walls are proposed with guardrail and or handrails. There is a modular block retaining wall detail but no detail for the guardrail or how the guardrail will be installed on top of the wall. Additional details on how these walls will be constructed should be provided. Top of wall and bottom of wall elevations should also be provided on the plans.

With the separation proposed between the retaining wall and the existing stonewall the construction will be within the limits of the locus property. However, there is a section of stone wall (approximately 30') that may be impacted by the excavation. If this occurs we are proposing to reconstruct the wall as needed.

Any wall exceeding four (4) feet of retained height shall be the subject to town approval and designed/stamped by a professional structural engineer. Retaining wall block cut sheets shall submitted to the town for review and approval prior to ordering materials to verify the walls meet the design and aesthetic requirements of the town.

A detail for the retaining wall abutting the road (east of Building A) has been added to the Detail Sheet C-7.3 that better describes the construction of the of the handrail or guardrail on top of the wall. Top and bottom of wall elevation labels have also been added to the Grading and Drainage Plan C-4.

We recommend that the following additional information be shown on the plans:

- Designated Open Areas, if any
Comment acknowledged.
- Additional Landscaping details, in particular for the areas in close proximity to abutting property – species and sizes of plantings etc.
Plantings have been shown along the abutting property lines, species and sizes are listed as well. See the Site Layout Plan C-3.
- Estimated earthwork quantities
A cut-fill analysis has been provided in the resubmittal package; the project will result in a net fill of 11,694± cubic yards.

- Provide clarification on the Pedestrian Crossing sign. Crosswalks should be provided at the two driveways with the stop line and sign setback 4 ft from the crosswalk.
The proposed pedestrian crossing sign was intended to provide warning for the existing crosswalk. The proposed sign has been removed and instead the existing crosswalk sign has been called out as "To be Retained" on the Demo Sheet C-2.
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A detail has been provided for the driveway entrance. See Sheet C-7.1.
 - Provide sight distances (sight triangles) for both driveways on the plans per the Traffic Impact and Access Study to ensure no conflicts with landscaping or signage.
A Sight Triangle Exhibit has been provided in the revised submittal.
 - Provide a photometric plan illustrating the site lighting will not interfere with abutting properties.
A photometric plan has been provided that illustrates the limits of light impact by proposed site lighting. See sheet L-1.
 - Please indicate loading areas on the plans.
Loading area for the tavern has been added to the Site Layout Plan C-3. The space is highlighted as a loading area during a designated time, outside of that the spaces will be used for employee parking.
 - Provide material stockpile areas, construction staging, temporary sedimentation basin and dewatering locations on the Demolition Plan, C-2. It is recommended to limit the construction activity over the infiltration and septic system locations.
The Demolition Plan C-2 has been revised to show stockpile areas, construction staging, temporary sedimentation basins, and dewatering locations.
 - Provide snow storage areas. There should be coordination of the snow storage areas with any proposed landscaping to avoid conflicts.
Snow storage areas have been depicted on the Site Layout Plan C-3.
- c) *A report on existing site conditions and a summary of conditions in the surrounding areas, showing the location and nature of existing buildings, existing street elevations, traffic patterns and character of open areas, if any, in the neighborhood.*

Information on the Existing Conditions has been provided and overall mapping is presented in the Comprehensive Permit and within the Stormwater Management Report showing the location and nature of existing buildings and existing streets. As required, a detailed Traffic Impact and Access Study prepared by Chappell Engineering Associates, LLC discussing both existing and future conditions has been submitted for this project. A peer review of the Transportation analysis can be performed if requested by the board. It should be noted that the Traffic Impact and Access Study did not include the Tavern as part of the development.

Soil Logs for soil testing performed between November 2021 through January 2023 are included in the submittal. The soil conditions are indicated as loamy sand to sand. Seasonal high groundwater as well as the infiltration capabilities of the soil have a significant impact on the size and elevation of the proposed stormwater basin and the proposed subsurface sewage disposal systems.

This may impact building placement as well as the elevation of the site and consequently the total amount of fill which may be necessary for construction. It is likely additional soil testing will be required for the septic design and will require review and approval from the Board of Health.

Comment acknowledged. A revised Traffic Impact and Access Study is provided in the revised submittal.

- d) *Preliminary, scaled, architectural drawings. For each building the drawings shall be signed by a registered architect, and shall include typical floor plans, typical elevations, and sections, and shall identify construction type and exterior finishes.*

Preliminary, scaled, architectural drawings showing typical floor plans, typical elevations, and typical sections with limited information on exterior materials and finishes are contained in the Comprehensive Permit Application document. A list of typical interior materials is not included. We recommend that the plans be updated with additional exterior and interior finishes etc. and be stamped by a registered architect.

Stamped architectural plans listing additional exterior and interior finishes has been included in the revised submittal.

- e) *A tabulation of proposed buildings by type, size (number of bedrooms, floor area) and ground coverage, and a summary showing the percentage of the tract to be occupied by buildings, by parking and other paved vehicular areas, and by open areas.*

A tabulation of proposed buildings by type, size (number of bedrooms, floor area) is contained within the preliminary Architecture Package. The overall impervious area and open space coverage percentages are provided with the Tabular Zoning Table. We recommend adding the building coverage within the table.



Building coverage has been added to the Tabular Zoning Table as requested.

- f) *Where a subdivision of land is involved, a Subdivision Plan conforming to all of the applicable requirements of the Planning Board's Rules and Regulations for the Subdivision of Land.*

Not applicable.

Comment acknowledged.

- g) *A utilities plan showing the proposed location and types of sewage, drainage, and water facilities, including hydrants. Adequate supporting information, including pre-construction and post-construction drainage calculations and soil testing results (which result shall have been witnessed by an appropriate and qualified Town Official or a qualified Town consultant) shall be provided to demonstrate that the proposed drainage system shall meet all Stormwater Management Guidelines promulgated by the Massachusetts Department of Environmental Protection, or best management practices, whichever is more stringent and shall result in no net increase in the rate or volume of stormwater runoff.*

A utility layout plan showing the proposed location of the two subsurface sewage disposal systems as well as the closed drainage system, stormwater management basin, water facilities, including hydrants, gas, electric, and telecom services.

We recommend that additional design information be provided to demonstrate that the size of the subsurface sewage disposal system has been adequately designed to meet the state and local regulations. This additional information should include additional soil testing results and a mounding analysis. The proposed septic systems are shown closer than 20 ft from the buildings. Since the buildings will have basements, please verify that adequate setbacks are provided. We recommend that the Board of Health review the septic system information provided and comment to the Board on the proposed system.

A separate septic design plan has been added to the plan set which provides this additional information.

A stormwater management report entitled "Stormwater Management Report" has been submitted and indicates that the overall stormwater management system will attenuate the post development stormwater flows to a level not exceeding the existing conditions.

We offer the following comments regarding the stormwater management system design and analysis:

- Watershed Plans for both the Existing and Post-Development Conditions have been provided. We recommend that both Watershed Plans and

drainage models be revised to include the offsite upgradient subcatchment area to the existing natural depression in the rear of the property. This depression area should also be included in the drainage models as it will collect and attenuate surface water from the site as well as offsite properties.

The watershed plans have been updated to account for the larger watershed area abutting the development. In addition to this, the existing depression located at the rear of the property has been called out on the watershed plans and has been added to the HydroCAD model.

- Within the existing conditions model, the existing basin's broad crested weir outlet length should be adjusted to approximately 8 ft.
The broad crested weir in the existing model (1P) has been revised to be 8 feet wide.
- We recommend reviewing the proposed forebay sizing. Expanding the surface area and lowering the stone berm will help reduce the surcharge within the closed drainage system.
The forebay has been revised as suggested, specifically the lowering of the stone berm by 1 foot.
- We recommend reviewing the proposed basin configuration. It seems that if the two basins could be combined into one basin to maximize the infiltration area, it may be possible to provide room to maintain a portion of the existing depression area along the property line to accommodate any offsite runoff that cannot enter the proposed stormwater basin.
The infiltration basin has been revised to remain outside of the existing depression. Please see both the Grading and Drainage Plan (C-4) as well as the revised Stormwater Report for corresponding calculation changes.
- We recommend the outlet structure be located on the opposite side of the emergency spillway for proper access.
With the elimination of the detention portion of the basin the emergency spillway and primary are contained with a single portion of berm. The 15-foot access way is maintained to this point, allowing for proper access.
- A cross-section of the stormwater infiltration basin is shown on sheet C-7.3 of the plans. We recommend that the elevation of the estimated seasonal high groundwater (ESHGW) be provided to demonstrate that the minimum separation to groundwater is provided. Also please provide a note indicating that unsuitable material shall be removed down to the sand layer and backfilled with appropriate sand material.
The cross section has been revised accordingly, please refer to the individual soil logs of TP-2 and TP-3 for the "remove and replace" to indicate the unsuitable material to be removed during construction of the basin. A note has been added indicating the proper placement of

material in the place of the unsuitable material.

- Mounding analysis is required when the separation from the bottom of an infiltration system to ESHGW is less than four (4) feet and the basin is used to attenuate peak discharges from the 10 year or higher 24-hour storm. This analysis has been provided but we recommend it be updated with any revisions to the infiltration system as necessary.

The mounding analysis has been updated to account for alterations to the basin.

- Although the stormwater design has been designed to meet or be below existing conditions for peak rate of volume, the design increases the peak volume in the 10 year and larger storm events. Please provide documentation that the increased volume will not adversely impact down gradient properties.

With revisions to the watershed and site design the post development runoff volumes are now below the existing conditions. Please refer to the Stormwater Report (section 1.8) for actual volume quantities.

It is general practice to design sites to comply with Massachusetts DEP Stormwater Management Regulations. The following section describes the 10 Standards for compliance with Stormwater Management Regulations and the status of the submittal relative to each standard.

Standard 1 – Untreated Stormwater

This standard requires that no new untreated point source discharges are created and that point source or sheet flow discharges do not result in erosion into or scour of down gradient property or wetlands.

A new point source discharge is proposed from the stormwater basin, calculations and details have been provided for the design of the plunge pool at the outlet of the basin.

Comment acknowledged. Please refer to the Grading and Drainage Plan (C-4) and Detail Sheet (C-7.3) for revised outlets.

Standard 2 – Post Development Peak Discharge Rates

This standard requires that the peak rate of discharge does not exceed pre-development conditions and that the design would not result in off-site flooding during the 100-year storm.

A stormwater management report entitled “Stormwater Management Report” has been submitted and indicates that the overall stormwater management system will attenuate the post development stormwater flows to a level not exceeding the existing conditions. Additional information as noted above is necessary.

As noted above, please refer to the revised Stormwater Report (section 1.8) for additional information pertaining to peak rates and volumes.



Standard 3 – Recharge to Groundwater

This standard requires that designs provide on-site recharge to mimic pre-development conditions.

Groundwater recharge calculations have been provided. The calculations should be updated with any changes due to the comments noted above.

Please refer to the revised Stormwater Report (section 4.1) for revised recharge to groundwater calculations.

Standard 4 – 80% Total Suspended Solids (TSS) Removal

This standard requires runoff to be treated to remove suspended solids (TSS) to at least 80% removal. In areas with a rapid infiltration, pretreatment of 44% is required prior to infiltration systems.

The Total Suspended Solids (TSS) calculation worksheet has been submitted for the stormwater basin providing 85% TSS. The pretreatment prior to the infiltration basin area is provided by the catch basin and sediment forebay.

Please provide a TSS calculation worksheet illustrating that the pretreatment BMPs will provide the required 44% TSS.

The water quality volume calculations have been provided. Water quality treatment is being addressed by the infiltration basin area. The WQV calculation should be updated with any changes to the basin due to the comments noted above.

Please refer to the revised Stormwater Report (section 4.3) for revised WQV calculations. An additional TSS worksheet has been provided to depict compliance with the 44% pretreatment requirement.

Standard 5 – Higher Potential Pollutant Loads

This project is not considered a source of higher pollutant loads. This Standard is not applicable.

Comment acknowledged.

Standard 6 – Protection of Critical Areas

The project is not located in a Critical Area based on DEP requirements. This standard is not applicable under DEP requirements.

Comment acknowledged.

Standard 7 – Redevelopment Projects

This project can be considered a mix of new development and redevelopment. The project is proposing to improve stormwater treatment and would meet this standard.

Comment acknowledged.

Standard 8 – Erosion/Sediment Control

This standard requires construction phase erosion controls.

A Construction Phase Pollution Prevention and Erosion and Sedimentation Plan document has not been provided.



The limits of erosion control barrier and location of construction entrances are indicated on the Demolition Plan including erosion control details. A 12" silt sock detail is provided; please provide material specification for the silt sock such as mulch, compost, or woodchips.

We also recommend detailed construction sequencing be provided and that the location of the construction staging, stockpile areas and temporary sedimentation basins be added to the plans.

An EPA Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP) will be required since the project proposes more than 1 acre of disturbance. If this project is approved and if acceptable to the Board of Appeals the submittal of this additional information could be made a Condition of Approval.

A draft SWPPP has been prepared and provided in the resubmittal, the final endorsed SWPPP will be provided prior to the start of construction and the applicant is amenable to a condition stating that requirement.

Standard 9 – Operation and Maintenance Plan

This standard requires long term maintenance of non-structural and structural BMP's and requires a specific inspection schedule, etc.

A Long-Term Stormwater Operation and Maintenance Plan (O&M) has been submitted. An estimated operation and maintenance budget should be provided. We recommend that the O&M be a standalone document including the O&M BMP Map.

Please review the BMP Inspection Matrix, some of the inspection/maintenance frequencies are not consistent with the requirements. There is also a stone trench within the matrix which is not proposed.

The O&M plan has been separated from the Stormwater Report. The BMP matrix has been revised to accurately depict only practices utilized in the proposed development.

Standard 10 – Illicit Discharges

An "Illicit Discharge Compliance Statement" meeting the requirements specified in the Stormwater Management Regulations has been submitted.

Comment acknowledged.

h) A Project Eligibility Letter that satisfies all of the requirements of 760 CMR 56.

A Project Eligibility Letter/Site Approval Letter from Mass Housing dated December 19, 2022, is included in the Comprehensive Permit Application.

Comment acknowledged.

i) A list of requested exemptions to local requirements and regulations, including local codes, ordinances, bylaws or regulations.

An updated List of Waivers and Exemptions Requested, no date has been



provided. A further review of the requested waivers will be required.

An updated List of Waivers and Exemptions has been provided in the resubmittal. Submitted under separate cover.

j) A complete copy of any and all materials and applications submitted by the applicant to any prospect subsidizing agency or source, including, but not limited to all applications for site approval.

It appears that copies of any and all materials and applications submitted by the applicant to any prospect subsidizing agency or source, including, but not limited to applications for site approval are included in the Comprehensive Permit Application. This should be confirmed by the Applicant.

Documentation providing the above information has been provided under separate cover.

k) A list of each member of the development and marketing team, including all contractors and subcontractors, to the extent known at the time of application. The Applicant shall also be required to disclose its relationship to all such entities.

Development Team List has been provided. Site contractor information was not provided at this time.

Site contractor has been added to the list.

l) A list of all prior development projects completed by the Applicant, along with a brief description of each such project.

A list of past projects by Bristol Brothers Development Corp. has been provided.

Comment acknowledged.

Should you have any questions or require any further information, please do not hesitate to contact Joshua Green, E.I.T. at jgreen@crockerdesigngroup.com or 781-919-0808.

Sincerely,
Crocker Design Group LLC

Joshua Green, E.I.T.
Senior Project Engineer



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The broad crested weir in the existing model (1P) has been revised to be 8 feet wide.
- We recommend reviewing the proposed forebay sizing. Expanding the surface area and lowering the stone berm will help reduce the surcharge within the closed drainage system.
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- We recommend reviewing the proposed basin configuration. It seems that if the two basins could be combined into one basin to maximize the infiltration area, it may be possible to provide room to maintain a portion of the existing depression area along the property line to accommodate any offsite runoff that cannot enter the proposed stormwater basin.
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material in the place of the unsuitable material.

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With revisions to the watershed and site design the post development runoff volumes are now below the existing conditions. Please refer to the Stormwater Report (section 1.8) for actual volume quantities.

It is general practice to design sites to comply with Massachusetts DEP Stormwater Management Regulations. The following section describes the 10 Standards for compliance with Stormwater Management Regulations and the status of the submittal relative to each standard.

Standard 1 – Untreated Stormwater

This standard requires that no new untreated point source discharges are created and that point source or sheet flow discharges do not result in erosion into or scour of down gradient property or wetlands.

A new point source discharge is proposed from the stormwater basin, calculations and details have been provided for the design of the plunge pool at the outlet of the basin.

Comment acknowledged. Please refer to the Grading and Drainage Plan (C-4) and Detail Sheet (C-7.3) for revised outlets.

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This standard requires that the peak rate of discharge does not exceed pre-development conditions and that the design would not result in off-site flooding during the 100-year storm.

A stormwater management report entitled “Stormwater Management Report” has been submitted and indicates that the overall stormwater management system will attenuate the post development stormwater flows to a level not exceeding the existing conditions. Additional information as noted above is necessary.

As noted above, please refer to the revised Stormwater Report (section 1.8) for additional information pertaining to peak rates and volumes.



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This standard requires that designs provide on-site recharge to mimic pre-development conditions.

Groundwater recharge calculations have been provided. The calculations should be updated with any changes due to the comments noted above.

Please refer to the revised Stormwater Report (section 4.1) for revised recharge to groundwater calculations.

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This standard requires runoff to be treated to remove suspended solids (TSS) to at least 80% removal. In areas with a rapid infiltration, pretreatment of 44% is required prior to infiltration systems.

The Total Suspended Solids (TSS) calculation worksheet has been submitted for the stormwater basin providing 85% TSS. The pretreatment prior to the infiltration basin area is provided by the catch basin and sediment forebay.

Please provide a TSS calculation worksheet illustrating that the pretreatment BMPs will provide the required 44% TSS.

The water quality volume calculations have been provided. Water quality treatment is being addressed by the infiltration basin area. The WQV calculation should be updated with any changes to the basin due to the comments noted above.

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Standard 5 – Higher Potential Pollutant Loads

This project is not considered a source of higher pollutant loads. This Standard is not applicable.

Comment acknowledged.

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The project is not located in a Critical Area based on DEP requirements. This standard is not applicable under DEP requirements.

Comment acknowledged.

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This project can be considered a mix of new development and redevelopment. The project is proposing to improve stormwater treatment and would meet this standard.

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A Construction Phase Pollution Prevention and Erosion and Sedimentation Plan document has not been provided.



The limits of erosion control barrier and location of construction entrances are indicated on the Demolition Plan including erosion control details. A 12" silt sock detail is provided; please provide material specification for the silt sock such as mulch, compost, or woodchips.

We also recommend detailed construction sequencing be provided and that the location of the construction staging, stockpile areas and temporary sedimentation basins be added to the plans.

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A Long-Term Stormwater Operation and Maintenance Plan (O&M) has been submitted. An estimated operation and maintenance budget should be provided. We recommend that the O&M be a standalone document including the O&M BMP Map.

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Comment acknowledged.

h) A Project Eligibility Letter that satisfies all of the requirements of 760 CMR 56.

A Project Eligibility Letter/Site Approval Letter from Mass Housing dated December 19, 2022, is included in the Comprehensive Permit Application.

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Documentation providing the above information has been provided under separate cover.

k) A list of each member of the development and marketing team, including all contractors and subcontractors, to the extent known at the time of application. The Applicant shall also be required to disclose its relationship to all such entities.

Development Team List has been provided. Site contractor information was not provided at this time.

Site contractor has been added to the list.

l) A list of all prior development projects completed by the Applicant, along with a brief description of each such project.

A list of past projects by Bristol Brothers Development Corp. has been provided.

Comment acknowledged.

Should you have any questions or require any further information, please do not hesitate to contact Joshua Green, E.I.T. at jgreen@crockerdesigngroup.com or 781-919-0808.

Sincerely,
Crocker Design Group LLC

Joshua Green, E.I.T.
Senior Project Engineer



November 17, 2023

Town of Pembroke
Zoning Board of Appeals
Town Hall
100 Center Street
Pembroke, MA 02359

**Re: Comprehensive Permit Peer Review
Mattakeesett Village
7/15 Mattakeesett Street, Pembroke, MA**

Dear Members of the Board:

This letter is being submitted in response to the peer review comments provided by Merrill Engineers and Land Surveyors (Merrill) via email on October 4, 2023, regarding the development of Mattakeesett Village at 7 and 15 Mattakeesett Street. Crocker Design Group, LLC (CDG) offers the following response to the comments below.

The letter follows the format of the original comments provided by Merrill. Peer review comments are indicated below in standard text and CDG's response in ***bold italic*** text.

COMPREHENSIVE PERMIT RULES AND REGULATIONS

3.01 The application for a Comprehensive Permit shall consist of:

The following is a listing of the items required by the Zoning Board of Appeals shown in *italic print* with our comments noted below.

- a) *Site Control: Evidence that the developer has control over the property in question; a copy of the deed, purchase and sale agreement or option agreement.*

The property deed has been provided.
Comment acknowledged.

- b) *Preliminary site development plans showing the locations and outlines of proposed buildings, the proposed locations, general dimensions and materials for streets, drives, parking areas, walks and paved areas; and proposed landscaping improvements and open areas within the site.*

A Comprehensive Permit Plan prepared by a registered professional engineer has been submitted for this project as required. The plan set consists of eleven sheets: Existing Conditions Plan, Demolition Plan, Site Layout Plan, Grading and Drainage Plan, Utility Plan, Test Pit Plan, and Construction Details Sheets 1-3. A Truck Turning Plan was also provided as a separate plan.

The dimensions and materials for the driveway and parking areas are shown on the Plans and Detail Sheets. The retaining wall along the easterly property line is extremely close to the property line. Can this wall be constructed without encroaching on the abutting property? Will a portion of the existing stone wall be removed? Additional information on how this retaining wall will be constructed should be provided.

Grading is proposed immediately adjacent to abutting properties at a number of locations. The existing hedge and fence along the easterly lot line look to be removed. We recommend a Landscape Plan be provided to maintain natural buffers along the property lines especially where adjacent to developed properties.

Retaining walls are proposed, many over 4 ft in height very close to walkways and property lines. The retaining walls are proposed with guardrail and or handrails. There is a modular block retaining wall detail but no detail for the guardrail or how the guardrail will be installed on top of the wall. Additional details on how these walls will be constructed should be provided. Top of wall and bottom of wall elevations should also be provided on the plans.

With the separation proposed between the retaining wall and the existing stonewall the construction will be within the limits of the locus property. However, there is a section of stone wall (approximately 30') that may be impacted by the excavation. If this occurs we are proposing to reconstruct the wall as needed.

Any wall exceeding four (4) feet of retained height shall be the subject to town approval and designed/stamped by a professional structural engineer. Retaining wall block cut sheets shall submitted to the town for review and approval prior to ordering materials to verify the walls meet the design and aesthetic requirements of the town.

A detail for the retaining wall abutting the road (east of Building A) has been added to the Detail Sheet C-7.3 that better describes the construction of the of the handrail or guardrail on top of the wall. Top and bottom of wall elevation labels have also been added to the Grading and Drainage Plan C-4.

We recommend that the following additional information be shown on the plans:

- Designated Open Areas, if any
Comment acknowledged.
- Additional Landscaping details, in particular for the areas in close proximity to abutting property – species and sizes of plantings etc.
Plantings have been shown along the abutting property lines, species and sizes are listed as well. See the Site Layout Plan C-3.
- Estimated earthwork quantities
A cut-fill analysis has been provided in the resubmittal package; the project will result in a net fill of 11,694± cubic yards.

- Provide clarification on the Pedestrian Crossing sign. Crosswalks should be provided at the two driveways with the stop line and sign setback 4 ft from the crosswalk.
The proposed pedestrian crossing sign was intended to provide warning for the existing crosswalk. The proposed sign has been removed and instead the existing crosswalk sign has been called out as "To be Retained" on the Demo Sheet C-2.
 - Provide a driveway entrance detail. It is recommended in the Traffic Impact and Access Study that the driveway ramp up to the sidewalk per MassDOT standard detail E107.7.0 and that the proposed sidewalk be cement concrete to match the existing sidewalk.
A detail has been provided for the driveway entrance. See Sheet C-7.1.
 - Provide sight distances (sight triangles) for both driveways on the plans per the Traffic Impact and Access Study to ensure no conflicts with landscaping or signage.
A Sight Triangle Exhibit has been provided in the revised submittal.
 - Provide a photometric plan illustrating the site lighting will not interfere with abutting properties.
A photometric plan has been provided that illustrates the limits of light impact by proposed site lighting. See sheet L-1.
 - Please indicate loading areas on the plans.
Loading area for the tavern has been added to the Site Layout Plan C-3. The space is highlighted as a loading area during a designated time, outside of that the spaces will be used for employee parking.
 - Provide material stockpile areas, construction staging, temporary sedimentation basin and dewatering locations on the Demolition Plan, C-2. It is recommended to limit the construction activity over the infiltration and septic system locations.
The Demolition Plan C-2 has been revised to show stockpile areas, construction staging, temporary sedimentation basins, and dewatering locations.
 - Provide snow storage areas. There should be coordination of the snow storage areas with any proposed landscaping to avoid conflicts.
Snow storage areas have been depicted on the Site Layout Plan C-3.
- c) *A report on existing site conditions and a summary of conditions in the surrounding areas, showing the location and nature of existing buildings, existing street elevations, traffic patterns and character of open areas, if any, in the neighborhood.*

Information on the Existing Conditions has been provided and overall mapping is presented in the Comprehensive Permit and within the Stormwater Management Report showing the location and nature of existing buildings and existing streets. As required, a detailed Traffic Impact and Access Study prepared by Chappell Engineering Associates, LLC discussing both existing and future conditions has been submitted for this project. A peer review of the Transportation analysis can be performed if requested by the board. It should be noted that the Traffic Impact and Access Study did not include the Tavern as part of the development.

Soil Logs for soil testing performed between November 2021 through January 2023 are included in the submittal. The soil conditions are indicated as loamy sand to sand. Seasonal high groundwater as well as the infiltration capabilities of the soil have a significant impact on the size and elevation of the proposed stormwater basin and the proposed subsurface sewage disposal systems.

This may impact building placement as well as the elevation of the site and consequently the total amount of fill which may be necessary for construction. It is likely additional soil testing will be required for the septic design and will require review and approval from the Board of Health.

Comment acknowledged. A revised Traffic Impact and Access Study is provided in the revised submittal.

- d) *Preliminary, scaled, architectural drawings. For each building the drawings shall be signed by a registered architect, and shall include typical floor plans, typical elevations, and sections, and shall identify construction type and exterior finishes.*

Preliminary, scaled, architectural drawings showing typical floor plans, typical elevations, and typical sections with limited information on exterior materials and finishes are contained in the Comprehensive Permit Application document. A list of typical interior materials is not included. We recommend that the plans be updated with additional exterior and interior finishes etc. and be stamped by a registered architect.

Stamped architectural plans listing additional exterior and interior finishes has been included in the revised submittal.

- e) *A tabulation of proposed buildings by type, size (number of bedrooms, floor area) and ground coverage, and a summary showing the percentage of the tract to be occupied by buildings, by parking and other paved vehicular areas, and by open areas.*

A tabulation of proposed buildings by type, size (number of bedrooms, floor area) is contained within the preliminary Architecture Package. The overall impervious area and open space coverage percentages are provided with the Tabular Zoning Table. We recommend adding the building coverage within the table.



Building coverage has been added to the Tabular Zoning Table as requested.

- f) *Where a subdivision of land is involved, a Subdivision Plan conforming to all of the applicable requirements of the Planning Board's Rules and Regulations for the Subdivision of Land.*

Not applicable.

Comment acknowledged.

- g) *A utilities plan showing the proposed location and types of sewage, drainage, and water facilities, including hydrants. Adequate supporting information, including pre-construction and post-construction drainage calculations and soil testing results (which result shall have been witnessed by an appropriate and qualified Town Official or a qualified Town consultant) shall be provided to demonstrate that the proposed drainage system shall meet all Stormwater Management Guidelines promulgated by the Massachusetts Department of Environmental Protection, or best management practices, whichever is more stringent and shall result in no net increase in the rate or volume of stormwater runoff.*

A utility layout plan showing the proposed location of the two subsurface sewage disposal systems as well as the closed drainage system, stormwater management basin, water facilities, including hydrants, gas, electric, and telecom services.

We recommend that additional design information be provided to demonstrate that the size of the subsurface sewage disposal system has been adequately designed to meet the state and local regulations. This additional information should include additional soil testing results and a mounding analysis. The proposed septic systems are shown closer than 20 ft from the buildings. Since the buildings will have basements, please verify that adequate setbacks are provided. We recommend that the Board of Health review the septic system information provided and comment to the Board on the proposed system.

A separate septic design plan has been added to the plan set which provides this additional information.

A stormwater management report entitled "Stormwater Management Report" has been submitted and indicates that the overall stormwater management system will attenuate the post development stormwater flows to a level not exceeding the existing conditions.

We offer the following comments regarding the stormwater management system design and analysis:

- Watershed Plans for both the Existing and Post-Development Conditions have been provided. We recommend that both Watershed Plans and

drainage models be revised to include the offsite upgradient subcatchment area to the existing natural depression in the rear of the property. This depression area should also be included in the drainage models as it will collect and attenuate surface water from the site as well as offsite properties.

The watershed plans have been updated to account for the larger watershed area abutting the development. In addition to this, the existing depression located at the rear of the property has been called out on the watershed plans and has been added to the HydroCAD model.

- Within the existing conditions model, the existing basin's broad crested weir outlet length should be adjusted to approximately 8 ft.
The broad crested weir in the existing model (1P) has been revised to be 8 feet wide.
- We recommend reviewing the proposed forebay sizing. Expanding the surface area and lowering the stone berm will help reduce the surcharge within the closed drainage system.
The forebay has been revised as suggested, specifically the lowering of the stone berm by 1 foot.
- We recommend reviewing the proposed basin configuration. It seems that if the two basins could be combined into one basin to maximize the infiltration area, it may be possible to provide room to maintain a portion of the existing depression area along the property line to accommodate any offsite runoff that cannot enter the proposed stormwater basin.
The infiltration basin has been revised to remain outside of the existing depression. Please see both the Grading and Drainage Plan (C-4) as well as the revised Stormwater Report for corresponding calculation changes.
- We recommend the outlet structure be located on the opposite side of the emergency spillway for proper access.
With the elimination of the detention portion of the basin the emergency spillway and primary are contained with a single portion of berm. The 15-foot access way is maintained to this point, allowing for proper access.
- A cross-section of the stormwater infiltration basin is shown on sheet C-7.3 of the plans. We recommend that the elevation of the estimated seasonal high groundwater (ESHGW) be provided to demonstrate that the minimum separation to groundwater is provided. Also please provide a note indicating that unsuitable material shall be removed down to the sand layer and backfilled with appropriate sand material.
The cross section has been revised accordingly, please refer to the individual soil logs of TP-2 and TP-3 for the "remove and replace" to indicate the unsuitable material to be removed during construction of the basin. A note has been added indicating the proper placement of

material in the place of the unsuitable material.

- Mounding analysis is required when the separation from the bottom of an infiltration system to ESHGW is less than four (4) feet and the basin is used to attenuate peak discharges from the 10 year or higher 24-hour storm. This analysis has been provided but we recommend it be updated with any revisions to the infiltration system as necessary.

The mounding analysis has been updated to account for alterations to the basin.

- Although the stormwater design has been designed to meet or be below existing conditions for peak rate of volume, the design increases the peak volume in the 10 year and larger storm events. Please provide documentation that the increased volume will not adversely impact down gradient properties.

With revisions to the watershed and site design the post development runoff volumes are now below the existing conditions. Please refer to the Stormwater Report (section 1.8) for actual volume quantities.

It is general practice to design sites to comply with Massachusetts DEP Stormwater Management Regulations. The following section describes the 10 Standards for compliance with Stormwater Management Regulations and the status of the submittal relative to each standard.

Standard 1 – Untreated Stormwater

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A new point source discharge is proposed from the stormwater basin, calculations and details have been provided for the design of the plunge pool at the outlet of the basin.

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Joshua Green, E.I.T.
Senior Project Engineer