

Turner Building Science & Design, LLC

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November 12, 2018

Mr. Theodore Hunyadi
Westport Public Schools – Facilities
One Canal Street
Westport, CT 06880

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Dear Mr. Hunyadi:

In order to provide you with information at the earliest possible time we have included herein our recommendations that are a result of our site visit in October. In addition, we have also included some recommendations with respect to air quality and mitigation control schemes that are focused on reoccupying the building.

These recommendations will be part of our final report scheduled for release this week.

Recommendations:

1. Re grade site to provide more robust pitch of the site finished grade away from perimeter of building.
2. Provide means to dehumidify the occupied environment in the classroom spaces, and other occupied spaces.
 - a. A separate Dedicated outdoor air system (DOAS) could be added to existing UV's, but would have major effects to the aesthetics of the facility.
 - b. The existing roof top units (RTU's) could also be retrofitted with a dehumidifying DOAS.
 - c. A new mechanical HVAC system(s) for the classrooms may be a better solution with respect to overall controllability, maintenance, effective humidity control, and aesthetics. However, the building may not easily lend itself to installation of ductwork and will require engineering services to implement.
 - d. If UVs are to be considered for reuse then modify the OA intake louvers and associated plenums to raise the air intakes 12 to 18 inches above finished grade.
3. Evaluate existing wall structures, consider disassembly of wall assemblies to verify wall assembly components and to determine water resistive functions of assemblies. (We understand this task has been completed, however we have not seen any results of the disassembly activities.

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4. Additionally, reported odors that may originate within the walls may require additional evaluation with respect to mold growth. Additional work to mitigate and repair the walls may be required.
5. Complete dew point calculations of proposed replacement / repaired wall assemblies. The determine the best arrangement of wall components to minimize condensation opportunities with in the wall structure.

Temporary RE-Occupancy of Building

In addition, if re-occupancy is being considered the following are recommendations to provide temporary repairs and modifications to the existing HVAC systems:

6. Reset controls to provide recommended ventilation air to occupied spaces.
7. Reset controls for occupied /unoccupied cycle.
8. Reset Economizer cooling control.
9. Provide temporary water dams or drainage trenches to divert rain water and other ground water away from building perimeter.
10. Provide dehumidification of occupied spaces. Note. Temporary systems will require additional heating of the air stream being delivered to the occupied classrooms to avoid depressed space temperatures and cold drafty conditions. RTUs may have the ability to heat air provided by a DOAS with dehumidification to meet acceptable occupied space temperatures.
11. Provide temporary water tight OA intake extensions to raise the OA intake louvers feeding the classroom UV's 12 to 18" above the finished grade.
12. Clean all UV's. Remove any debris found within the UV's and the OA plenums that serve the UV's. Clean drip pans, interior sides of cabinets and plenums, and coils. Provide new filters, and replace any moldy liners.
13. Clean all RTU's. Remove any debris found within the RTU's. Clean drip pans, interior sides of cabinets and plenums, and coils. Provide new filters, and replace any moldy liners.
14. Temporarily provide means to positively pressurize the existing spaces (5 to 8 Pascals) with respect to the outside to minimize the migration of odors originating in some wall sections into the occupied spaces. The amount of outdoor air being introduced into the space via the RTU's and UV's could be increased to provide the required pressurization or a separate DOAS could be added to the current HVAC system. **NOTE:** The operation of the HVAC system when providing additional OA will be noticeably more expensive



and is recommended only as a temporary system. Until the wall odors can be mitigated.
See recommendation #3 above for initial work to address the wall odor issue.

15. Repair all roof leaks and flashing failures.

Turner Building Science & Design, LLC appreciates the opportunity to offer our technical expertise in evaluating the air quality within the Coleytown Middle School. Please contact our offices either in Vermont or Maine with any follow-up questions regarding the nature of these recommendations. You can reach Jeff Prebble in the Maine office at (207) 583-4571, ext. 318 or Frederick McKnight in our Vermont office at (802) 684-2134.

Sincerely,

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