



Civil December 21, 2018

Site Utilities Ms. Joyce M. Stille  
Administrative Officer  
Town of Bolton  
222 Bolton Center Road  
Bolton, CT 06043

Structural

Re: Notch Road Municipal Center Project - North Section Roof Review  
104 Notch Road  
Bolton, Connecticut

Mechanical

Dear Joyce:

Electrical

BVH visited the site on November 8, 2018 to review the exploratory openings made by Town Personnel exposing the existing metal roof deck within the North Building roof system. The existing roof system comprises of roof membrane, felt, insulation, and metal deck. As mentioned in the August 27, 2018 Facility Study Report, the existing roof deck is 7 inches deep with a maximum span of approximately 29 feet.

Plumbing / Fire Protection

The exploratory openings were made at locations showing signs of leaks and rust staining inside the building as well as at locations showing no signs of leaks or rust. Holes were cut into the underside of the deck cover plate to expose the deck up-flute. As expected, the existing metal deck was in good condition at locations showing no signs of leaks or rusting. At locations showing signs of leaking and rust, surface rusting of the overall up-flute was observed to varying degrees but no significant loss of metal or holes in the deck were observed. We struck the underside of the deck with a hammer and tapped a blunt flathead screwdriver without significant deformation or puncture of the deck.

Technology

Commissioning

Two (2) exploratory holes were made in the roof system located at locations of consistent water ponding on the roof. The metal deck appeared to have a thin bituminous type coating over the surface of the deck that easily flaked off when scraped with a putty knife. Surface rusting of the deck was observed with some metal loss occurring. The top flute of the deck was struck with a hammer and tapped with a blunt flathead screwdriver without significant deformation or puncture of the deck.

Building Envelope

The existing roof is in very poor condition and has numerous leaks as mentioned in the Facility Study Report. In conversations with the Town, it is our understanding the roof is not currently being maintained or repaired, and no temporary means of protection or repairs are planned. At a minimum, we would recommend the roof drains be maintained and cleared of debris.

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Taking all of this into account as well as our observations, it is our opinion that the metal roof deck is not in an imminent state of failure, but the roof deck condition will continue to degrade over time. As such we would recommend the building be demolished within a time period of four (4) years or less. As the roof is not being maintained or repaired, we would recommend the condition of the roof deck be monitored on a yearly basis to observe if accelerated deterioration of the deck is occurring which would require the time line noted above to be revisited and shortened.

Additionally, our recommendations are based on an overall roof water/snow/ice load of approximately 30 psf; about 16 inches of snow with approximately 1" standing water. For comparison, 5 ½" of standing water equates to about 30 PSF of standing water.

If the snow/ice/water accumulation exceeds 30 PSF at any time, we would recommend clearing the roof as needed to reduce the overall rood load.

Please call if you have any questions or would like to discuss further.

Sincerely,

**BVH Integrated Services, P.C.**

A handwritten signature in blue ink that reads "Mark Allyn". The signature is written in a cursive, flowing style.

Mark Allyn, P.E.  
Vice President

MA/kac

Attachments: Photographs

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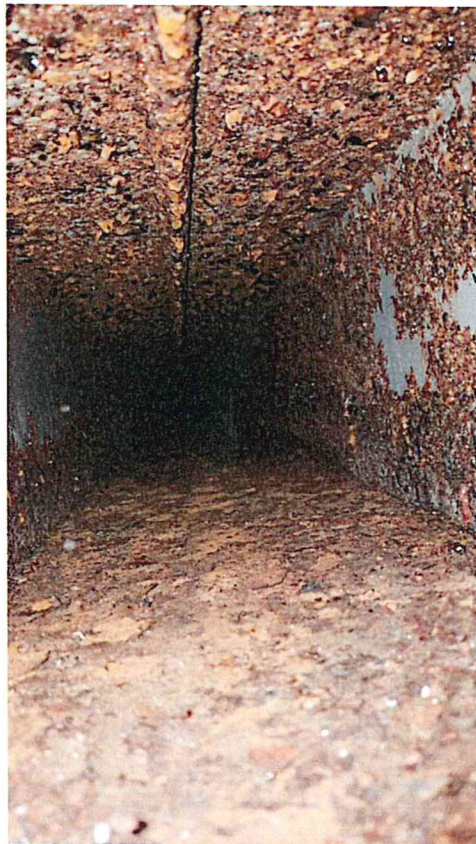
Existing Roof - North Building Roof



Exposed Roof Deck



**Interior Deck Access Openings**



**Inside Existing Roof Deck in  
Areas of Water Infiltration**



**Inside Existing Roof Deck  
No Water Infiltration Observed**