**DISTRICT OF HUDSON'S HOPE**
**SPECIAL COUNCIL MEETING AGENDA**
Council Chambers
Thursday, October 28th, 2021 at 6:00 p.m.

**1. Call to Order:**

**2. Adoption of Agenda by Consensus:**

**3. Declaration of Conflict of Interest:**

**4. Adoption of Minutes:**

**5. Staff Reports**



**7. Adjournment**

# REQUEST FOR DECISION

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| **RFD#: 2021MR31** | **Date: October 6, 2021** |
| **Meeting#: CM101221** | **Originator: Mokles Rahman** |
| **RFD TITLE: Building Envelope Assessment, Hudson's Hope Library** | |

**RECOMMENDATION / RESOLUTION:**

*THAT the report entitled Building Envelope Assessment be received for information and discussion.*

*THAT this item be included on the Agenda for the Strategic Planning session scheduled in November 2021.*

**BACKGROUND:**

At the October 26, 2020 Council Meeting, Council passed the following resolution;

Council motion

***RESOLUTION NO. 176/20***
***M/S Councillors Gibbs / Summer***
***THAT*** *the District of Hudson's Hope support the grant application to Northern Development Initiative Trust (NDIT) for the Hudson's Hope Public Library for the Project to Improve Library User Experience: Climate Control and Conservation.*
***CARRIED***

***RESOLUTION NO. 177/20***
***M/S Councillors Gibbs / Summer***
*Financial support from the District of Hudson's Hope for the District's portion of the Northern Development Initiative Trust Grant - Project to Improve Library User Experience: Climate Control and Conservation for the Hudson's Hope Public Library is contingent upon the District hiring a certified building inspector to conduct a full inspection of the library building, and funding from the District will further depend on the results of the building inspection.*
***CARRIED***

**DISCUSSION:**

As per Council direction District retained Force Engineering Group Inc to conduct the inspection and their scope of work were as follows;

1. Conduct a non-invasive, visual review of the building envelope.
2. Comment on the state and condition of the current building envelope
3. If available, interview operating staff as to functional and perceived issues with the building envelope.
4. Review landscape, drainage and other site concerns as they relate to the building envelope.
5. Provide a summary of our findings, recommendations, in an itemized report format.

Force Engineering submitted the final report dated August 10, 2021 on September 19, 2021. The report identified the following issues with the building. Please see the attached report to understand the details of the issues:

1. Roof Failure. Priority Replacement is Recommended.
2. Rot / Decay in Log Base Course. Limited area requires rebuild.
3. Insect Infestation. Priority fumigation and control required to limit decay
4. Horticultural Control. Trees Require pruning, and if assessed to be hazards, removal should be undertaken.
5. Grading. Grades should be adjusted to maintain min 6" between wood and Natural Grade/ Grass/
6. Door Adjustments. Recently upgraded exit doors should be refit, and adjusted to provide maximum seal and reduce air leakage.
7. Continued vigilance and maintenance of exterior wood finishes should be on a dedicated, pro-active schedule to ensure decay issues and further deterioration is minimal.

**ATTACHMENT:**

1. Building Envelope Assessment, Hudson's Hope Library.

Prepared by:

_____

Mokles Rahman, CAO

August 10th, 2021

**Mokles Rahman,** P.Eng, MBA
Chief Administrative Officer
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**RE: Building Envelope Assessment, Hudson Hope Library**

Dear Mokles:

Pursuant to your request, we have prepared the following field review summary, based on our proposal of July 13h, 2021 to conduct an engineering review of the Town of Hudson's Hope Library located at 9905 Dudley Drive. Specifically, as per our proposal, we would be retained to:

1. Conduct a non-invasive, visual review of the building envelope.
2. Comment on the state and condition of the current building envelope
3. If available, interview operating staff as to functional and perceived issues with the building envelope.
4. Review landscape, drainage and other site concerns as they relate to the building envelope.
5. Provide a summary of our findings, recommendations, in an itemized report format.

As noted, in addition to the above noted scope of the review, we supplement our comments with photographs, and illustrations of issues noted to enhance the report as may be required. All aspects reviewed will also offer comment as to recommended maintenance or replacement items.


Street Elevation Of Library

Riverside Elevation (First Addition to Right of Ladder, Reading Room Addition Left)

The Hudson's Hope public library is a single storey structure founded atop a cast in please concrete foundation The original building was constructed in ~1974. There is no crawlspace or basement, the main floor being a cast in place concrete slab founded directly atop grade. The building was constructed in three stages, an original "lathe turned" log wall building, a conventionally framed wood stud addition, and a conventionally framed wood stud framed Reading Room. The last addition to the building was done in 1994. Lathe turned buildings are commonly factory produced, and have better fit than hand hewn traditional log structures.

Heating is provided by a single forced air unit equipped with air conditioning, which we understand has been recently replaced. Electrical service is currently a recently updated 200amp service, provided as we understand to accommodate the added air conditioning compressor. No circuits other than the AC were moved to the newer 200amp panel, leaving significant capacity in breakers that can be added.

Some mention on site was made about the lack of fire ratings to the mechanical room, and we concur this is good practice, but not specifically required in this instance as the heating appliance is presumed to be a zero clearance unit, serving a single suite or occupancy.

The original log framed portion of the building appears in reasonable condition for its age. Caulking and chinking between the log courses is in sound condition except for a few minor areas. Thermal insulation for the walls is provided by the log density, as well as an interior framed wall. Cracking / Shrinkage of the logs is evident in a number of areas, and is a potential source of moisture ingress. It is recommended the cracks be filled appropriately during the next log refinishing. There is some outward creep of the logs noted at one doorway, though we assume the wall was strengthened at time of door installation, as no evidence of tearing sealant or finishes in the area was noted.



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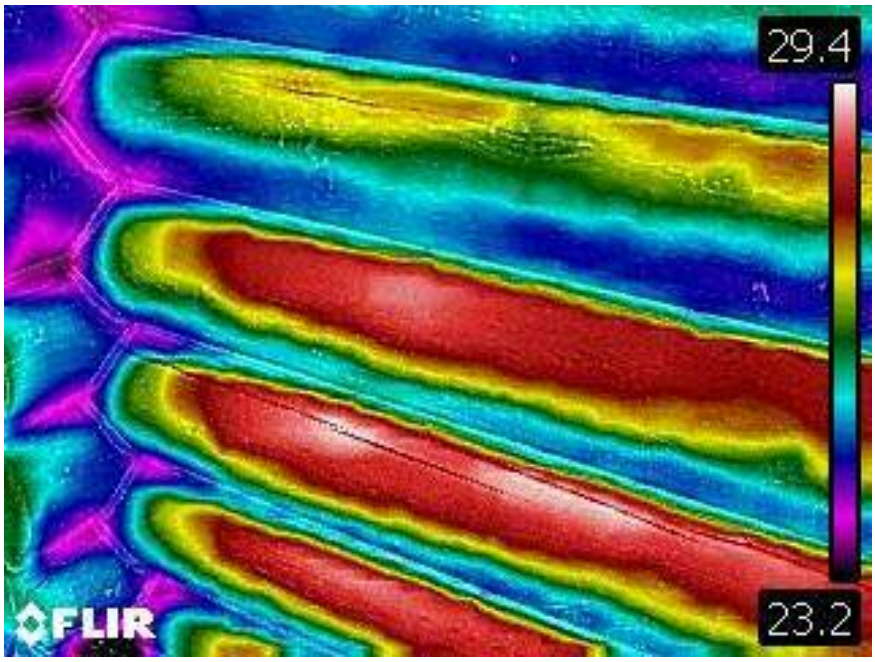
Plywood Waviness indicates Prior Movement

Thermal efficiency is as expected, reduced R-values are experienced where the wood timber cross section area is reduced at joints between courses. This is an inherent flaw in log building design. Any products used to refinish logs need to be carefully reviewed to ensure they can resist external wetting and sun deterioration, yet provide vapour diffusion from the logs

Log Chinking / Sealant Details

Significant Checking / Cracking of Log Due to Shrinkage




Variation in Emissivity due to Log Thickness

Sounding of the logs did not indicate significant decay in the log courses, save of the base course on the south wall, at the interface between the Reading Room and the South Exit Door. This course had a notable change in tone when struck, indicating appreciable decay.

Decayed Log Base Coursed, Right of Doorway

Of further note, when struck, an eruption of ants emerged from the wood, indicating infestation. Staff reports that ants are a frequent nuisance at their desk along the same south wall. During our roof inspection, we further noted ants on the logs as high as the gable framing. Fumigation, including exterior soil treatments is recommended to be performed immediately to limit damage, as well as landscape controls to be discussed in a subsequent paragraph.

Both the first addition, and Reading Room Addition as noted are conventionally framed and employ the use of a siding meant to resemble logs. Some caulking and maintenance is required, however, visual inspection did not reveal any significant defects.

First Addition, Uses original 1974 Windows Relocated

The roof of the original log building appears to be the original wood shake roof. The shakes have well exceeded their anticipated lifespan, and are in a near failure state with evidence of valley repairs having been conducted previously. Tree growth and branch wear is also shown on the vestibule, and it's recommended the tree be professionally pruned or removed altogether.

Valley Flashing at Entry Vestibule

Moss Covered and Brittle Original Wood Shakes

Only the westerly exposed roof appears original. The eastern, or river side roof, is an asphalt shingle, replacing the original shake roof at the time the Reading Room addition construction. At their current age, these shingles have also now exceeded their anticipated 25 year lifespan,

and show signs of granule loss, cupping and curving of the asphalt tabs, and wear/abrasion from overhanging trees. Drainage is obstructed by branches, and more tree pruning/removal is required.

General Asphalt Roof Condition

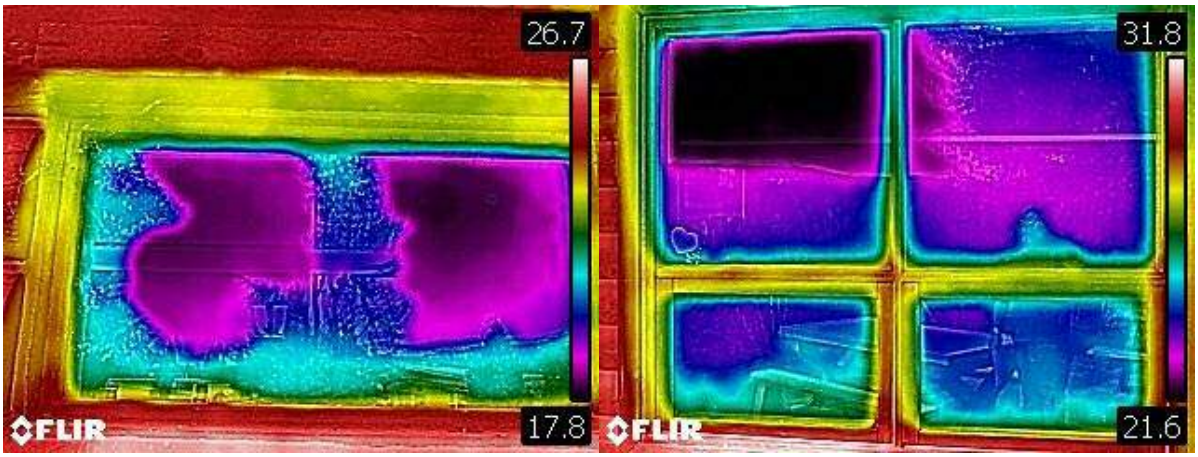
Our conclusion is that the complete building roof membrane is a loss and at risk of failure, and replacement should be scheduled as soon as possible. Recommended roof to maintain the aesthetic is the Decra Shake or Shake XD metal stamped wood shake (https://www.decra.com) , or Vic West equivalent. A metal roof should significantly extend the lifespan of the roof, and will reduce underwriter risk assessments versus a real shake roof.

Roof insulation is a fiberglass batt/blown material, held in place between joists with only the vapour barrier. Sealing of the vapour barrier appears to have been well executed, but if more insulation is contemplated to be added in the future, a proper structure will be needed to retain the added weight. Staff at the library did not advise that ice dams, icicles or other signs of poor insulation were experienced at the site, thus we infer that the insulation level is appropriate for the level of heating. Re-roofing should carefully consider and ensure attic ventilation is not diminished, and should be brought to modern levels to ensure continued performance.

Insulation and Vapour Barrier above False Ceilings.

Windows are a concern of the facility staff, and were found to be largely original units as well. Windows in use are casement, double paned, and wood sash units. All units appear to date from original construction, the first addition, merely relocating windows, but the Reading Room Addition windows are matched to the style of the original, and were new in 1994.

The thermal efficiency of the windows is on average for modern replacements. While modern windows can increase the thermal resistance of the assembly through the use of triple pane, low-E, argon filled, and heat mirror films, in practical sense the best available window typically only results in a window in the R5-R8 range. Often any improvement in the window is often negated if the window opens, as leakage past seals reduces overall efficiency.




Window Thermal Imaging
Original 1974 Window (Left) 1994 Reading Room (Right)

We did not observe any obvious defects, and staff did not indicate any excess condensation between panes to indicate glazing failure. Work is needed in exterior stain / maintenance, and we understand all windows are schedule for near term replacement.

Exterior Doors to the facility are largely new replacements. The newer three steel doors exist as emergency exit doors, two on the north wall, and one on the south wall. All three were found not to be fully installed to correct standards and are a significant air leakage source. Issues ranged from gaps in framing to flashing, and included lack of final adjustments to make the doors close properly and adjustment of sills and seals. Poor installation is contributing to a large energy loss, as evidenced by the daylight we could observe between gaps. Additionally,



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the doors only have the light galvanized factory finish, and have not been painted. Final adjustments should only be done after painting/finishing of the doors.

No Exterior Caulking (Left) Massive Seal Gaps (Right)

Daylight Showing Through Frame Components due to Improper Assembly

Entrance glazing and doors have been retrofitted for barrier free operation and are of a standard typical of the era of when they were constructed. We could not verify the thermal break in the mullions or door. Staff did not report any heaving, or heavy frost build up on doors during our review.


Entrance Door Thermograph

The library site is atop the river embankment, and as such, overall site drainage is good. Maturity of landscaping has reduced the vertical offset between wood framing and grade to almost zero in many instances, and as such some remedial work is required. The BC building Code requires earth to be a minimum of 6" (150mm) below any untreated wood element. We recommend regrading around the perimeter where this minimum is not met to also involve sloping the grade way from the building a minimum of 2% for the maximum practical distance, and incorporating swales if necessary. Offsetting the grade to the required minimum should also reduce, after fumigation, the tendency for insects (ants) to inhabit the wood elements.

Grade Proximity to Wood and Minimal Slope at Front Elevation

Grade Level, Damaged Flashing, South Emergency Exit.



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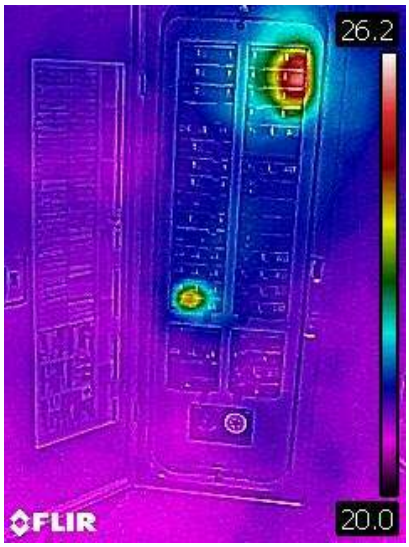
Of minor note, we observed the book drop to be a site fabricated door with no means of air leakage prevention or fire control. Upgrading the interior drop to a steel insulated box, with a door to prevent air leak, and contain any arson attempt is recommended.

Uninsulated Book Drop

During our field review, we employed a thermal imaging device. Although outside of our scope, the camera detected that circuit breakers were running hot, indicating overload. While this aspect is not part of our retained review parameters, we bring the issue to your attention for further investigation and resolution.




Warm Breakers.

In Summary, significant issues with the building involve:

1. Roof Failure. Priority Replacement is Recommended.
2. Rot / Decay in Log Base Course. Limited area requires Rebuild.
3. Insect Infestation. Priority fumigation and control required to limit decay
4. Horticultural Control. Trees Require pruning, and if assessed to be hazards, removal should be undertaken.
5. Grading. Grades should be adjusted to maintain min 6" between wood and Natural Grade/ Grass/
6. Door Adjustments. Recently upgrade exit doors should be refit, and adjusted to provide maximum seal and reduce air leakage.
7. Continued Vigilance and Maintenance of exterior wood finishes should be on a dedicated, pro-active schedule to ensure decay issues and further Deterioration is minimal.

Trusting this is the information you require at this time, we remain open to any further inquiries you may have.

Regards,

**FORCE ENGINEERING GROUP INC.**

Per
M.A.( Mike) Zygun
Project Manager / Principal

Content Review By

**FORCE ENGINEERING GROUP INC.**

Per

B.C. (Brad) Shipton P.Eng.
Senior Engineer / Principal



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COME IN, GO ANYWHERE!
HUDSON'S HOPE PUBLIC LIBRARY

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October 6, 2021

Mayor and Council of the District of Hudson's Hope,

The inspection of the library building identified a number of issues concerning the integrity of the building. We would like to have a delegation arrive at Council to present our response to the inspection report. I addition the Hudson's Hope Library Board would like to request a committee of the whole so that our board and management can sit down with council and management to discuss how we will move forward to manage these issues.

The library is a hub for our community and provides irreplaceable services to the community. The building inspection highlights the concerns from an inspection standpoint; when considering the needs of the building and for the needs of our community, it is important to consider the functionality of the building as well. Prior to the impacts of COVID-19 restrictions, the library provided a number of highly attended programs in particular for children and teens. Some of these patrons are a part of the Hudson's Hope community that does not have access to a lot of public programs due to financial constraints. There was difficulty supporting the programs during the COVID restrictions due to the normal high attendance and limited square footage. Awareness of these recent limitations is important when reviewing the overall application of the library building and the building inspection report.

The recommendations to bring the building to current maintenance standards are considerable. In moving forward with decisions for the library, it would be a benefit to identify the total costs for completing all of the projects to maintain the building. Based on those cost projections, a collaboration between the Library Board, Library Director, applicable District staff as well as the Mayor and Council should collectively lay out a plan about how to move forward with the library building. We are aware that decisions could range from the support and continued maintenance of the current building or to designing a building suited to our community needs.

Grant applications are sometimes limited by having access to a minimum of 50% of a project's overall cost from a secure source (such as the District). With financial support and partnership with the District, it increases access to new funding sources through grants to support library and community initiatives. Moving forward we would like to engage in a collaborative effort, not only in decision making for library building initiatives, but also pertaining to seeking grant funds for projects as the municipality and the library have different grant streams that are accessible.

Following completion of the maintenance identified by the building inspector, the Library Board would like to highlight that yearly maintenance is required to prevent the buildup of issues as currently experienced and future loss of structural integrity. Our Library Director has been working toward addressing many of the items listed in the inspection report for nearly a decade; policy and the capacity of Public Works with the District of Hudson's Hope have been a barrier.

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We are aware that decisions do need to be made in a timely matter as it is noted that the roof is in a current state of failure and there are concerns over the deteriorating logs on the south side of the building. The Hudson's Hope Public Library Board is requesting to be a part of these conversations as they happen, from planning through completion. We would like to meet as a committee of the whole or as a separate smaller committee to address and prioritize any work on the library moving forward as well as being part of the consultation process if quotes for repair and effort to repair the building outweigh the process to replace the library building all together.

The Library Board and Director look forward to collaborating with the district to finding the best path forward.

Thank you for considering our request.

Kind Regards,

Amber Norton – Secretary to the Board & Library Director

On behalf of Hudson's Hope Public Library Board & Executive
Lorna Winnicky – Chair
Tashana Winnicky – Vice Chair
Diana Jewan – Treasurer
Amber Norton
Hudson's Hope Public Library Director