



MEETING MINUTES

Minutes of the meeting held at City Hall in Conference Room A.
141 West 14th Street, North Vancouver, BC on February 20, 2024

The City of North Vancouver respectfully acknowledges that this meeting is held on the traditional and unceded territories of the Skwxwú7mesh (Squamish) and Saíl̓wətał (Tseil-Waututh) Nations.

<u>Members Present</u>	<u>Staff Present</u>
Councillor S. Shahriari C. Toyota R. Greene A. Enman D. Samaridis A. Enman J. Wegman J. Levine O. Bibby K. Bracewell	Tim Ryce, Chief Building Official Matthew Menzel Planner 3, Planning & Development Sarah Friesen, Administrative Coordinator I Shreeya Tandon, Committee Clerk Secretary Mike Friesen, Acting Manager, Development Planning
<u>Absent</u>	<u>Guests</u>
D. Jacobson M. Rahbar	Veronica Grant, Project Manager, SFU Renewable Cities Norm Coultie, President, Ecosse Development Corp. Gary Penway, Principal, Gary Penway Consulting Mesa Sherriff, Associate, ZGF Architects Maryam Alirezaei, Associate Principal, ZGF Architects

1. ADOPTION OF AGENDA

The Agenda for February 20, 2024 was adopted as circulated at 5:32 pm.

2. NEW MEMBER ORIENTATION

A round of introductions occurred at 5:28 pm.

An ADP Orientation was presented by staff to share the ADP’s purpose, duties and responsibilities of the members for the benefit of two new voting members.

Two noteworthy updates are that if a voting member misses three consecutive meetings, that individual will be removed from the committee (consideration will be taken for individuals experiencing legitimate barriers to attending). Secondly, the committee clerk and the chair will now sign the meeting minutes from the previous week.

A member expressed concern of not having an accessibility representative.

A vote occurred to elect a new chair and vice chair. Jordan Levine elected as Chair (majority vote) and Cynthia Toyota as Vice Chair (majority vote).

The orientation concluded at 5:45 pm.

3. ADOPTION OF MINUTES

Minutes of the meeting on January 16, 2024 was adopted as circulated.

4. BUSINESS ARISING FROM THE MINUTES

NIL.

5. PRESENTATION OF DESIGN SOLUTIONS TO PREFABRICATED MASS TIMBER CONSTRUCTION.

The delegation entered the conference room at 5:51 pm.

6. PRESENTATION OF DESIGN SOLUTIONS TO PREFABRICATED MASS TIMBER CONSTRUCTION.

Veronica Grant, Project Manager, began the presentation on SFU Renewable Cities at 5:52 pm.

Two primary guides supplementing this work are found in the Agenda Package sent out in advance of this presentation.

The most recent work enhances the guide books to support municipalities like the City of Kelowna and City of Coquitlam. Next week, new guidelines will be released with further information.

Manufactured Timber Design Features and Solutions: Structure and design is a key consideration when working with Mass Timber. There are structural logic regulations when working from the property lines in. Designers are seeking flexibility for complete bases to be formed rather than partial situations.

Barriers to construction include the following:

- Building Heights: Additional depths needed when working with timber. You may require an extra floor if you work to the same standards as regular buildings.
- Modulation – A one foot step back example to accommodate the extra space from a curtain wall system.
- Massive Bars – Overbearing, shadowing form which carry through the entire building.
- Public Ground Interface – Modifications required to allow space for the public to gather.
- Balconies – Bearing capacity in comparison to steel and concrete buildings, and the sequence of installation due to the sheer volume.
- Reduced Private Outdoor Space – Grouping amenity spaces requires less bolt on balconies.

This model is relevant to the Advisory Design Panel because of North Vancouver's need for housing to drive construction. It is a faster, quieter, greener, lower carbon footprint solution. By its very nature, construction causes conflict with municipalities because of the

time, uncertainty and risk. The province is immensely interested in the economic and environmental benefits (the BC Government has funded a number of these projects for this reason).

Challenges are presented at a variety of levels, with special attention to supply and demand dynamics. At present, there aren't enough raw materials to accommodate a sudden influx of these buildings, but incremental implementation is feasible.

Six storey buildings have become the "standard" for affordable housing. Municipalities don't typically operate with the 12 storey model because there aren't land use categories yet. Six storey footprints are quite large with high density in urban centres and lower mainland. Consider if there are opportunities in your communities for this (12 stories and beyond) because companies won't buy a spot worth high rise rates and build a squatter building on it.

Solutions guide overview:

- Integrating this work into community plans and zoning, long term policies, and project driven initiatives.
- Development permit controls and building permits.
- Long term: land use regulation. For a 12 storey height limit, you might lose a floor and it won't happen. Some municipalities are offering a bonus for companies who produce mass timber.

A case study was presented where one developer refused to include balconies in the designs because people have expressed feeling lonely in individual units. Instead, integrating common spaces gives residents a chance to increase quality of life.

Because the cost is similar to concrete, there are no financial advantages other than it is faster, which saves money. Prefabricated buildings considers the timeline for construction:

- Interest savings, reduces costs of rentals (cranes, labour, etc.)
- Interest savings will go towards lowering construction cost of homes (eventually).
- Tradespeople have less aggravation working with these homes, spending about 10% less time on the job site.
- The current process doesn't accommodate pre-fab, so a permit must be acquired >2-3 months earlier.

A demand increase is needed for production to increase, so collaborative action to make this happen looks like developers paying more upfront (developer applicant team actions), and senior government setting policies in motion which favour this model (building and fire code revisions; multi-level, multi-sectoral capacity building).

7. PRESENTATION OF DESIGN SOLUTIONS TO PREFABRICATED MASS TIMBER CONSTRUCTION - CONTINUED

Question & Answer Period - 6:20 pm

Question from SFU: How would you feel about seeing buildings like the ones you've seen on the screen here? This is going to be the solution to the housing crisis, even though the buildings won't look as interesting as some others that we've seen. Not every building has to be a beautiful landmark.

Question regarding permitting process and engaging in the municipalities in 37 jurisdictions (diagram overlap with pre-manufacturing): Pre-manufacturing is a costly proposition and requires a lot of design. Has there been discussion with the financial sector? What is their response or opinions on this? Will they provide the money upfront? We are seeking more than a good feeling from the building department.

- SFU Response: Acquire a building permit for 'excavation', which describes pre-manufacturing of building permits. The City of Vancouver seems comfortable with this.
- Tim Ryce: We've had a lot of luck in phasing application, namely the CP program (City of Vancouver). Depending on the building form, there's a concrete podium transition instead of standard wood and permit for standard construction. 'Adera' is in the program whose building permit took 4 months, but 2.5 weeks later, they had their permit and were able to start construction.

Regarding public realm – the space we have is precious. With the setbacks incurred, how do we find a balance between creating public spaces and dealing with large formal moves in the building? We want to do things in a way that are aligned with the requirements of the structure.

- Answer: Repeatable floors. From a builder's perspective, most people do 3.5, but this building is going to do 6.30. Here, you'll pass the threshold where you're going to incur all the extra costs anyways, and then go as high as you can with the structure. Utilize open space around the building, as it's not surpassing what you would have with a six storey building. The move towards 18 storeys is significant as it helps with views and open spaces. Around the world, people are doing a lot more than 18. Consider what kind of open space amenities you could put on the roof top to offset what you're missing out on the floor. Advocate for shared spaces and break the loneliness trends.

Request to clarify how the dimensions of mass timber will be accommodated.

- Answer: It's unique to each project. 10 feet is the widest you can bring on a conventional road. Notches which go up the full height. Have the notch fit the module. If you did a straight 10 ft module, you might have an 8 foot setback instead of a 10 or 16 ft. setback.

Can you take a notch out of the building and create a mid-building outdoor space?

- Answer: That's a design challenge, and anything can be solved through design solution. If the challenge is too great, sometimes you want to explore doing that in a different material.
- Coquitlam example is a small tower and very functional: add stick frames around the bottom to make it look a little different. Fake it to make it look like a three storey base with a beautiful exterior, but anything above is not visible, so not required to be fancy.
- Use mass timber so you can go beyond the six storeys. Adera did this for that reason. Figure out all the bugs with a smaller structure then work up to a higher structure. Because of the extreme slopes with Adera's foundation, they were able to get an extra floor in.
- Consider rainfall responses by drilling.

Requested clarity on the wise use of fibre.

- Different grades of wood 2x4, 2x6 work for the structural capacity and don't look very good. You can have nice wood on the bottom, and functional appearance on the top. Stick frame construction has people with stick saws. It incurs minimal waste that can fit into a wastebasket. The City Hall expansion is an example using fast growing wood which can be grown and replaced more quickly.

Are there sustainable practices used to source the materials?

- Yes, that's the hope. We aim for this, although it's beyond the scope of this project. The biggest concern is access to fibre, driven away from old growth.

What other levels of government to increase supply?

- This is a Provincial matter. Affordable housing fills up a bunch of its land that will go towards mass timber. It needs a kick start to generate demand with a guarantee that there will be x amount of years of work and production. 22 agencies are currently represented and 4 ministers are involved in this. The BC Government tops up grants to make the differences negligible.

How does this compare to low carbon concrete?

- Concrete has so far to go. It's not comparable yet but will come eventually. Someone's doing that work but we don't have an answer off the top of our head. It will be great if low carbon concrete arrives. There are many regions in the world which don't have access, BC is ideal because of our access to wood.
- Time savings is about 3 months on the projects, which balances out the cost of the timber until the cost of wood balances out.

As designers, we're starting to be faced with the footprint of any material. Where would you direct us to find some of that information? Some of it's coming from near, some far. We're wrestling with addressing lifecycle costs and emissions. Is there supporting data?

- Library of information from 'Woodworks'. It's not 'official', but this is where everyone shares their information.
- Aggregating raw material in the UK comparison?
- Greenwashing is happening. Where one is today, we don't know exactly where it will be in the future – it depends where the wood is.

We see a 6 storey discrepancy between where we're at and where we're going. How do we manage the difference?

- BC has been pioneering wood. We've been years ahead of the national building code of going to 12 storeys. We are one cycle ahead of the national building code. Mass timber is lighter than concrete, so the foundation can be lighter by using a quarter of the wood – this is outside local government jurisdiction. SFU assumes the building permits have dealt with seismic.

What is it going to take for developers to take the plunge?

- The incentive that customers move in 3 months earlier and get their money to be invested into the next project. The more supply is available, we'll see the cost coming down. Municipalities are moving towards LEED standardization to challenge developers to document their carbon footprint.

What is the City of North Van's timeline for changing land use?

- Matthew Menzel: This is under review. We need to start planning for this. ACP needs to consider this and develop interim guidelines until we have an answer.
- SFU – we'll watch the City of Coquitlam implement this as an example.

Request for contextualization to garner support for higher density.

- Amenity space, livability, access to higher light and air. Going from stick to mass doesn't make a huge difference if we don't have access to these things. This is refreshing to see a new style of buildings.
- SFU Commented on how buildings are designed to last, but their roofs have a lifecycle of about 20 years.

Balconies – we can do them, but they're expensive.

- Technical detail, time directly into the mass timber is expensive. It's more complicated and prone to problems and slower, although it can be done.
- Solution we've seen: clip on metal balcony systems. One foot inset – all that pain for one foot! If you want to make a move, make a big bold move, don't waste extreme cost for minor changes.

What is the energy performance compared to concrete?

- CLT and Steel, pass to pass building on concrete which are comparable. Step code is in favour.
- Tim Ryce provided an example: The building on #1 Lonsdale (PH 1) had 9 days from foundation to lock up. Passive House also had a pre-permit.
- Consider acoustics. There's a way to have the same acoustic results as a concrete building.

How does this get introduced into planning in a timely manner without generating so many extra questions? See Zoning and DP timelines compressed.

- There's a reason Adera did this at UBC first. Their approval processes are run by independent consultants instead of municipalities. You need to be confident that you'll get it – if it takes another year for permits, you'll lose spot in queue. Have confidence in the people you're applying with.
- Attitude: where you have guidelines of any kind, have language which accommodates this type of structure so people know what they're signing up for when presented with it.

8. PRESENTATION OF DESIGN SOLUTIONS TO PREFABRICATED MASS TIMBER CONSTRUCTION - CONTINUED

Parting thoughts for the designing panel:

Public amenity space in the past was a non-starter. We've expanded. Have you seen a response with insurance and warranties around the world? This is where we've gotten stuck before.

- Greater structural integrity when working with mass timber. Key essential design features are presented like rooftop gatherings. There needs to be a reconciliation between insurance companies and governments to permit insurance coverage.

Where are the green roofs?

- We need to meet city requirements. With the amount of materials leftover, you've had to put structures on the rooftops.

SFU encouraged the panel to keep an open mind about mass timber. Educating council is another way to work through the public process, as politicians are integral in making these projects happen.

9. DATE OF NEXT MEETING

The date of next regular meeting is scheduled for March 19, 2024.

10. ADJOURN

The Chair adjourned the meeting at 7:03 pm.

Committee Chair

Administrative Coordinator