INTRODUCTION

1

Welcome to the November 2014 Public Open House for the Hornby Island Fire Hall.

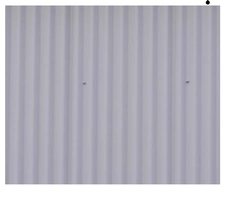
With the construction of this proposed new fire hall, the Hornby community will see improved fire protection as well as a safe, healthy workplace for your volunteer emergency responders. With the acquisition of an extra tanker truck and Superior Tanker Shuttle Accreditation, Hornby Island residents may receive a financial benefit with reduced fire insurance premiums.

What have we heard from the Community to date?

- That the fire hall be a highly functioning hall that fully supports the volunteer fire department.
- That the size of the fire hall allow the fire department to achieve superior tanker shuttle accreditation but also be sized appropriately for the community population found on Hornby Island
- That the design and construction of the hall be simple and cost effective.
- That the design meet Post Disaster requirements.
- That simple and thoughtful sustainable features are valued.

Design Features

- 4 Drive Through Apparatus Bays for Fire Trucks
- 1 Ambulance Apparatus Bay
- Post Disaster Design
- Meeting Room for CPR Training
- Passive House Construction for Reduced Operating and Maintenance Costs
- Cisterns for Rainwater Collection
- Training Area
- Concrete Aprons
- Auto Exhaust Extraction

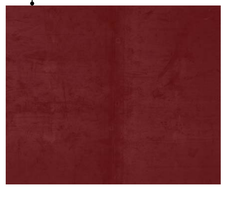


steel siding

CLT

wood windows

hardie panel



painted steel panel

SITE

2

LEGEND

1. Fire Hall
2. Fire Truck Apparatus Bays
3. Concrete Aprons (2% Slope)
4. Parking Locations
5. Access to Gravel Pit
6. Landscaping
7. Bio Swale

North-South Site Section

West Elevation

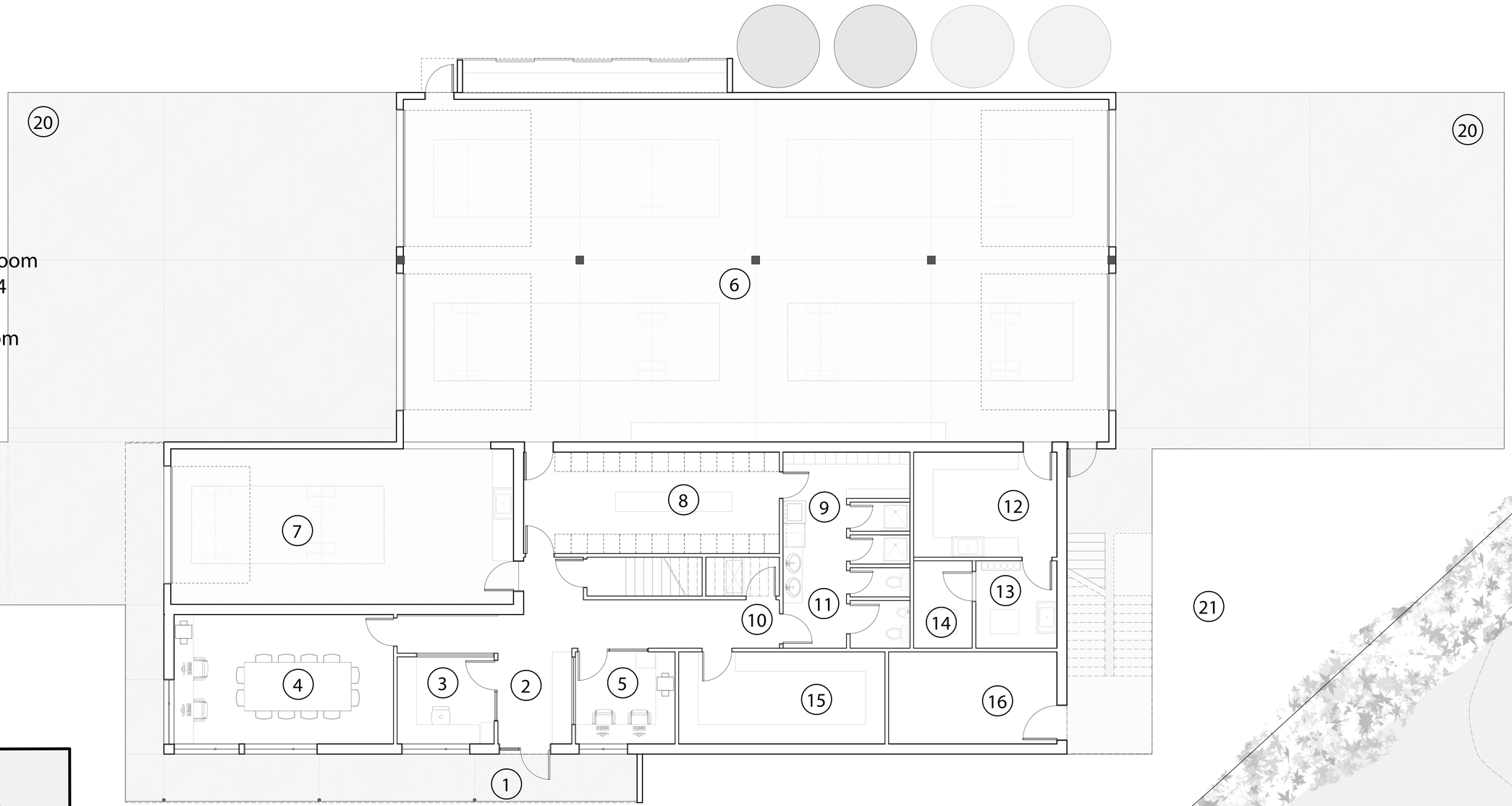
South Elevation

PLANNING

3

LEGEND

1. Entry
2. Foyer
3. Chief's Office
4. Meeting Room
5. Communication Room
6. Apparatus Bays 1-4
7. Ambulance Bay
8. Turn Out Gear Room
9. Laundry
10. Janitor
11. Facilities
12. Workshop
13. SCBA Room
14. Compressor
15. Storage
16. Mechanical
17. Common Space
18. Multi-Purpose
19. Kitchen
20. Concrete Apron
21. Training area



East Elevation

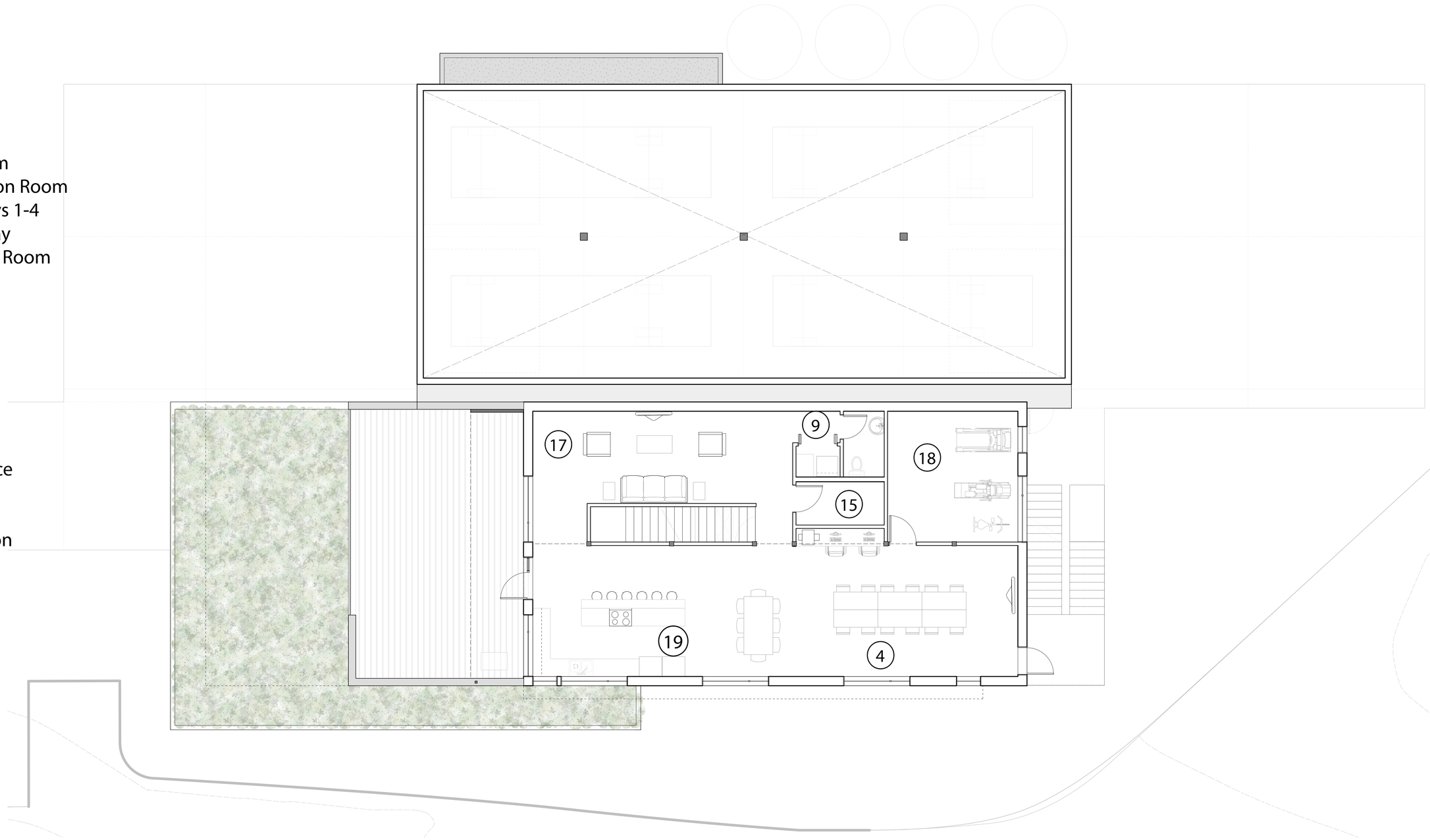
North Elevation

PLANNING

4

LEGEND

1. Entry
2. Foyer
3. Chief's Office
4. Meeting Room
5. Communication Room
6. Apparatus Bays 1-4
7. Ambulance Bay
8. Turn Out Gear Room
9. Laundry
10. Janitor
11. Facilities
12. Workshop
13. SCBA Room
14. Compressor
15. Storage
16. Mechanical
17. Common Space
18. Multipurpose
19. Kitchen
20. Concrete Apron
21. Training area



Construction waste diverted from the landfill by recycling or reuse

Building materials that will be made up of recycled content

Materials manufactured within 800km by road or 2400 km by boat or train

Reduction in water use due to low-flow plumbing fixtures and collecting rainwater for use in training exercises

Reduction in the energy consumption for heating and cooling due to high-performance building envelope

SUSTAINABILITY

5

Passive House

This standard certifies buildings with drastically reduced energy consumption and low-energy active HVAC components. Despite its name, the Passive House standard can be applied to any building type, not just homes. Using it in combination with LEED allows us to take a holistic and high-performance approach to sustainability.

Passive House Advantages

- Substantial energy savings, both in terms of peak load and overall consumption
- Resilience in the event of rising energy costs
- Lower operating & maintenance costs
- Lower mechanical capital costs
- A more steady and comfortable internal temperature, even when the mechanical system is turned off due to irregular building use or during a prolonged power outage
- Better indoor air quality
- Durability, thanks to a higher standard of construction quality with less moving parts (HVAC) than a conventional building

Prefabrication

The walls, roof and intermediary floor will be constructed off-site as panels 8'to 10'wide and up to 22'long. These panels will be shipped to Hornby Island and positioned in a few days using a crane and a small crew. All interior joints between panels will be sealed using specialized tapes that are durable and easy to use. Exterior membranes and cladding will be applied once all building panels are in place, and will conceal panel joints so that upon completion the building will look the same as its site-built equivalent.

Prefabrication Advantages

- Quality control
- Reduced escalation exposure from a trade labour shortage due to concurrent construction of the new Comox Valley Hospital
- A shorter construction schedule since off-site framing work can take place concurrently with on-site foundation work
- Less on-site construction waste, therefore less strain on the island's waste disposal facilities

LEED

Leadership in Energy & Environmental Design (LEED) is a certification standard that addresses sustainability based on seven broad categories, scored out of 100 potential points.

The Firehall will be built to LEED Silver standards, without pursuing certification with the Canadian Green Building Council (CaGBC).

Water Use

Water consumption is reduced by using low-flow plumbing fixtures. The rainwater that falls on the roof is collected and stored in cisterns until it can be used for firefighting training exercises.

Natural light

Naturally lit interior spaces reduce the need for artificial light during the day. The design team is using specialized software to assess whether the firehall's interior spaces are receiving the enough natural light, without being prone to overheating and glare issues.

Sustainability Strategies