Wood Innovation Research Laboratory – Phase 2 (Monitoring of Passive House Certified Laboratory Building)

https://research.thinkwood.com/en/permalink/catalogue2319

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Summary:

The WIRL has a footprint of 30m x 30m on a raft slab foundation and consists of shop space equipped with a concrete strong wall and floor and a crane bay, as well as a portion of the building that will consist of a two-storey office space. The structural system will be predominantly wood with glulam post and beam with a set of trusses for the middle span. The building envelope and mechanical systems is high performance in order to achieve Passive House certification. This phase 2 is for the data acquisition and analysis from the building sensors and energy meters. A data acquisition (DAQ) system will be created to monitor the performance of the building over the next few years and store the data in an accessible, organized fashion. The building temperature, relative humidity and metering data will be used to evaluate if all the models and calculations created for the WIRL during the design phase are reasonably close to reality and if the high performance wood structure is as energy efficient as predicted.