

**CLASSIFICATION OF FIRE RESISTANCE ACCORDING TO  
EN 13501-2: 2023 OF A LOADBEARING WALL WITH WOODEN  
FRAMES AND MAGOXX®BOARD MANUFACTURED BY SINH  
BUILDING SOLUTIONS BV**

Report no.	2023-Efectis-R001034
Sponsor	SINH Building Solutions BV  Saturnusstraat 60 U-67 2516 AH DEN HAAG THE NETHERLANDS
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## 1. INTRODUCTION

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This classification report defines the resistance to fire classification assigned to an in accordance with the procedures given in EN 13501-2:2023.

### 1.1 NORMATIVE REFERENCES

*Table 1.1: Normative references*

European standard	Part
EN 1363-1:2020	Fire resistance tests – Part 1: General requirements
EN 1363-2: 1999 + C1:2001	Fire resistance tests – Part 2: Alternative and additional procedures
EN 1365-1:2012	Fire resistance tests for loadbearing elements - Part 1: Walls
EN 13501-2:2023	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services

### 1.2 REVISION INFORMATION

This is the first issue of this report.

## 2. DETAILS OF CLASSIFIED PRODUCT

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### 2.1 GENERAL

The element was a double leaf loadbearing wall from the inside out consisting of timber frames, rockwool insulation, Fermacell and magnesium oxide MAGOXX®Boards. The construction was manufactured by SINH Building Solutions BV. The construction was fully symmetrical in built-up.

### 2.2 DESCRIPTION

The test specimen is fully described in a report with reference 2023-Efectis-R000847[Rev.1].

## 3. TEST REPORTS IN SUPPORT OF THE CLASSIFICATION

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### 3.1 TEST REPORTS

*Table 3.1: Details test reports*

Name of laboratory	Name of sponsor	Report ref. no	Test standard and Date
Efectis Nederland BV	SINH Building Solutions BV	2023-Efectis-R000847[Rev.1]	EN 1365-1:2012

3.2 RESULTS

Table 3.2: Summary of test results of 2023-Efectis-R000847[Rev.1]

Performances	Criteria	Time (completed minute)	Failure? (time min and sec or No)
<b>loadbearing capacity</b>	<i>max deformation</i> <ul style="list-style-type: none"> <li>• <i>Inner leave</i></li> <li>• <i>outer leave</i></li> </ul>	101	No
	<i>speed of deformation</i> <ul style="list-style-type: none"> <li>• <i>inner leave</i></li> <li>• <i>outer leave</i></li> </ul>		
<b>Integrity</b>	<i>Ignition of a cotton pad</i>	101	No
	<i>Sustained flaming</i>	101	No
	<i>Cracks or openings in excess of given dimensions</i>	101	No
<b>Insulation</b>	<i>Average temperature, increase of <math>\Delta 140^{\circ}K</math></i>	101	No
	<i>Maximum temperature, Increase of <math>\Delta 180^{\circ}K</math></i>	101	No
<b>Radiation</b>	<i>Maximum radiation value &gt; 5 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 10 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 15 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 20 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 25 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 30 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 35 kW/m<sup>2</sup></i>	101	No
	<i>Maximum radiation value &gt; 40 kW/m<sup>2</sup></i>	101	No
	<b>Termination of the test at 101 minutes for the following reason:</b> <i>Attainment of selected criteria</i>		

## 4. CLASSIFICATION AND FIELD OF APPLICATION

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### 4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with Clause 7 of EN 13501-2:2023.

### 4.2 CLASSIFICATION

The element, a double leaf loadbearing wall from the inside out consisting of timber frames, rockwool insulation, Fermacell and magnesium oxide MAGOXX®Boards is classified according to combinations of performance parameters and classes as described in Clause 6.7 of EN 13501-2:2023. The element was heated on the inside according to the standard fire curve.

**REI 90**  
**REW 90**

### 4.3 DIRECT FIELD OF APPLICATION

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability:

- a) decrease in height;
- b) increase in the thickness of the wall;
- c) increase in the thickness of component materials;
- d) decrease in linear dimensions of boards or dimensions of panels but not thickness;
- e) decrease in stud spacing;
- f) decrease in distance of fixing centres;
- h) decrease in the applied load;
- i) increase in the width provided that the specimen was tested at full width or 3 m wide, whichever is the larger;
- j) Every 3395 mm in width a double stud has to be present. This double stud has to be connected to the top and bottom beam with brackets.

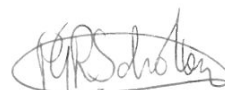
## 5. RESTRICTIONS

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This classification document does not represent type approval or certification of the product.



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6. DRAWINGS

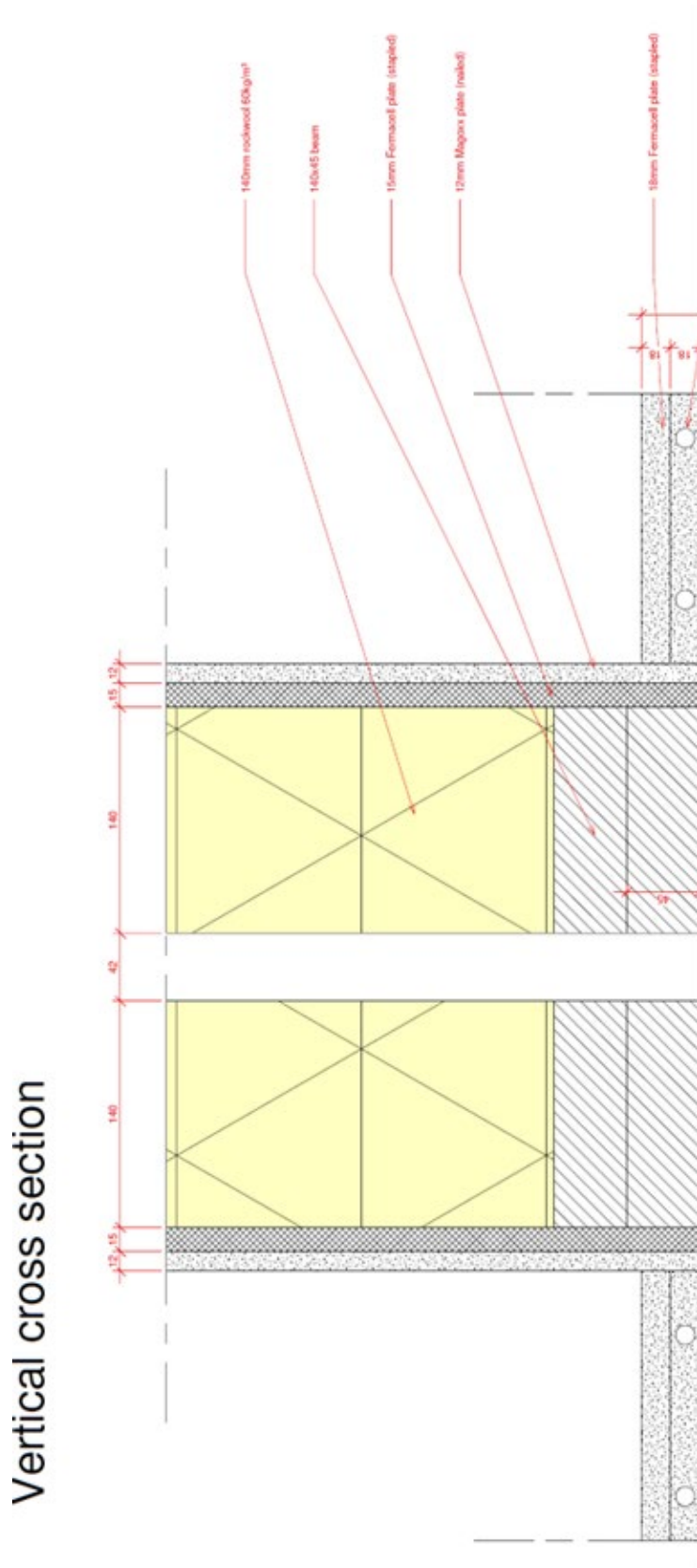


Figure 1: horizontal cross section view

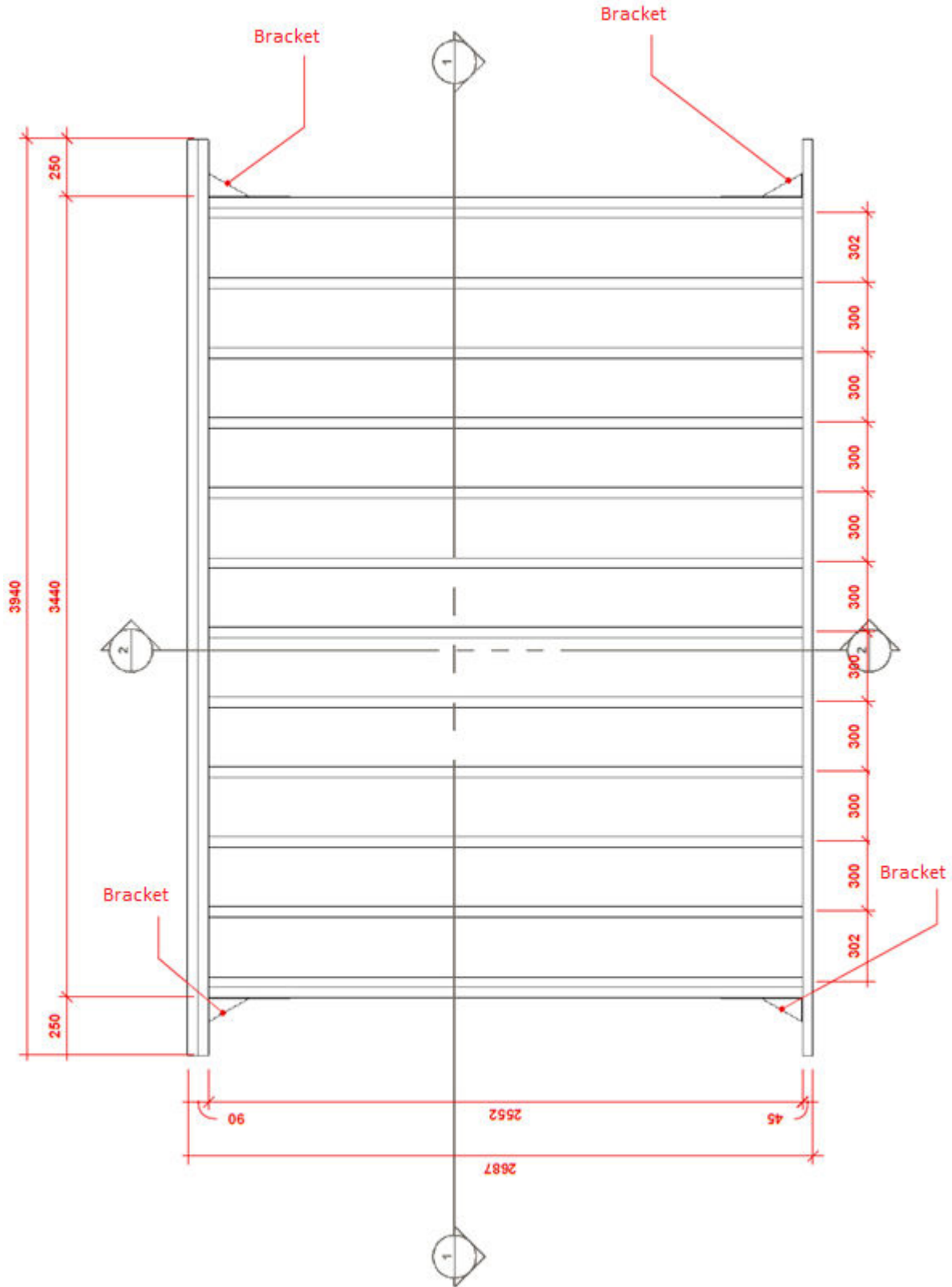


Figure 2: Framework front view.

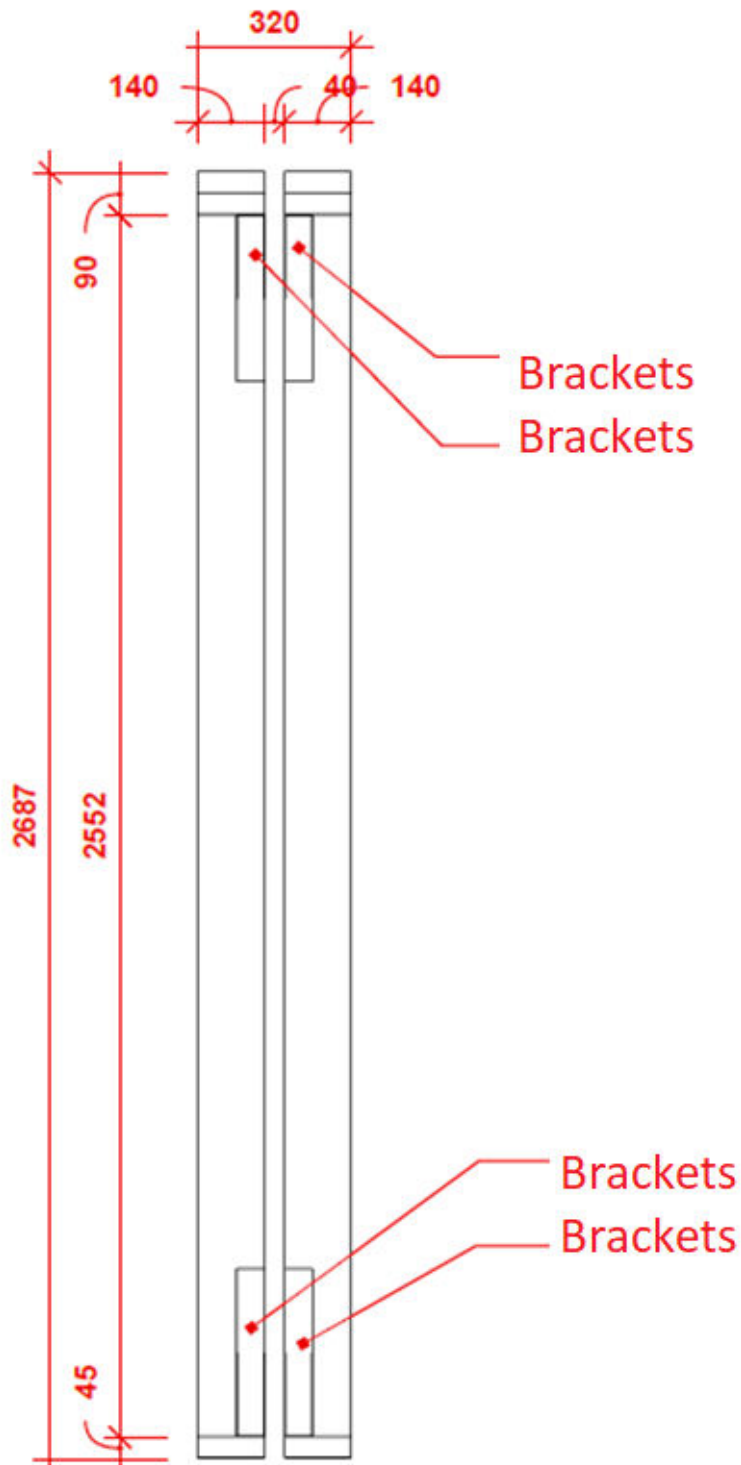


Figure 4: Framework side view.



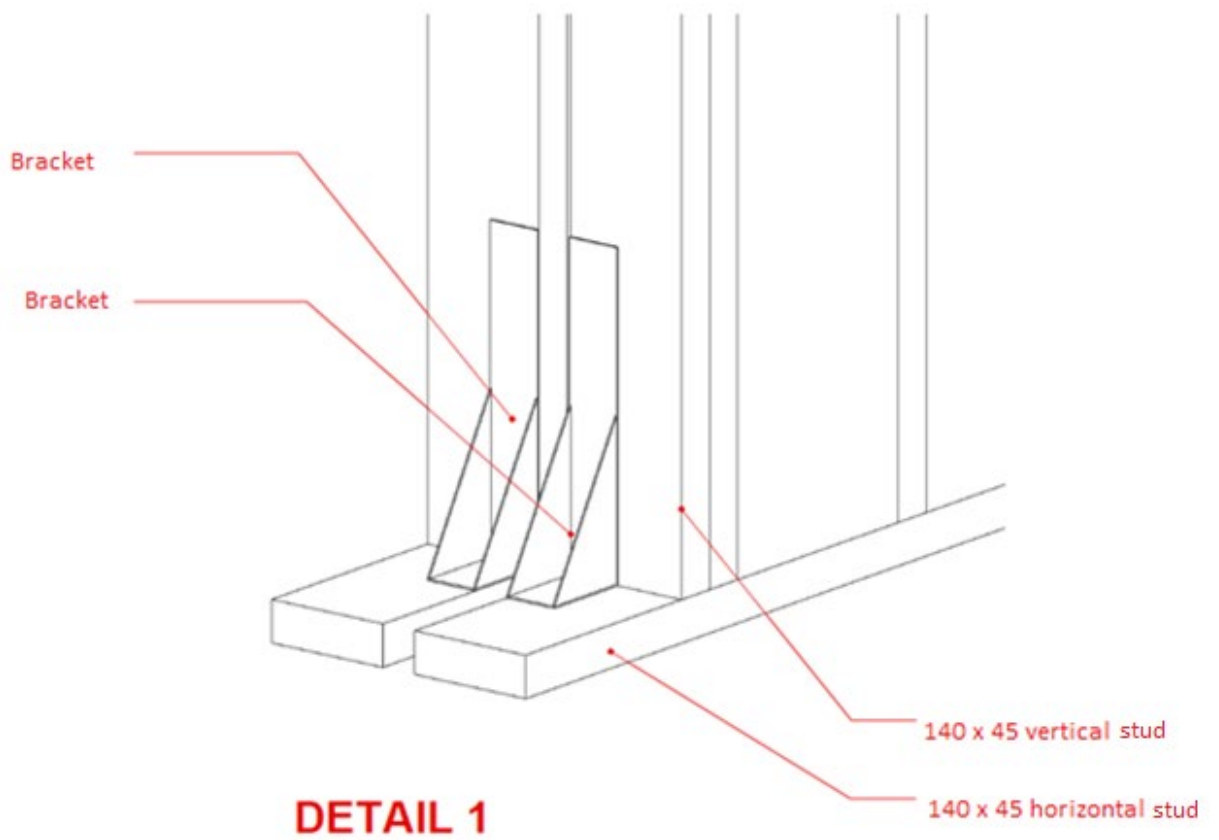


Figure 4: Framework side view

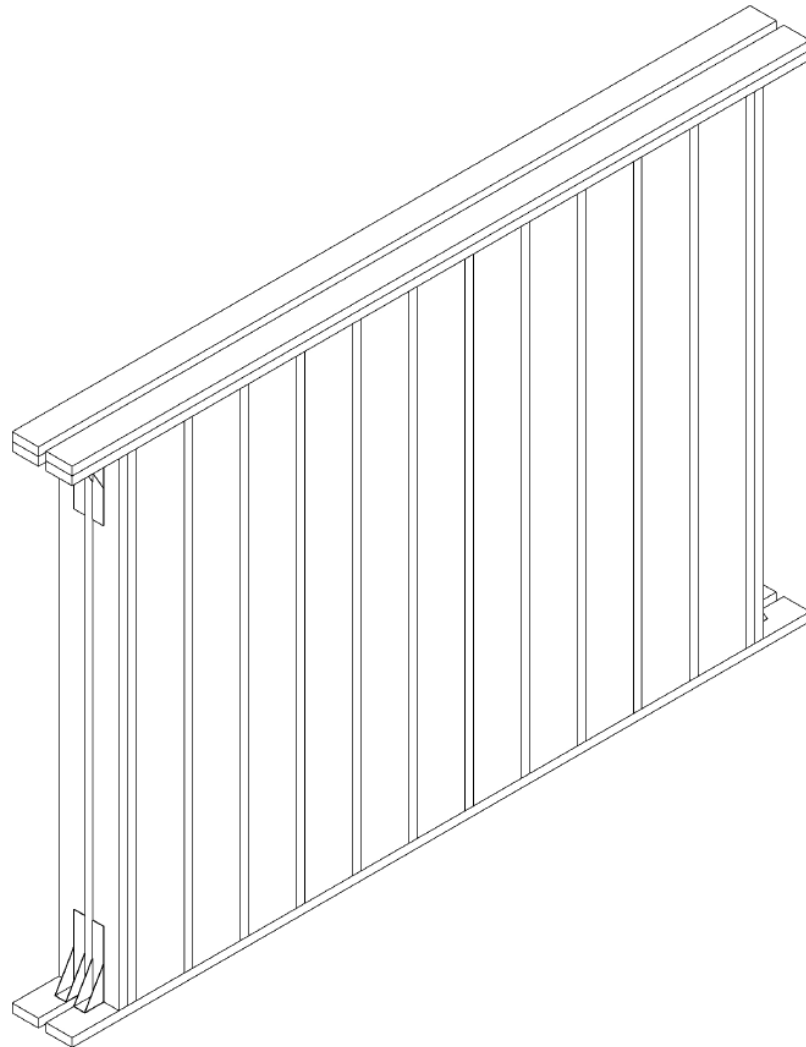


Figure 4: 3D overview