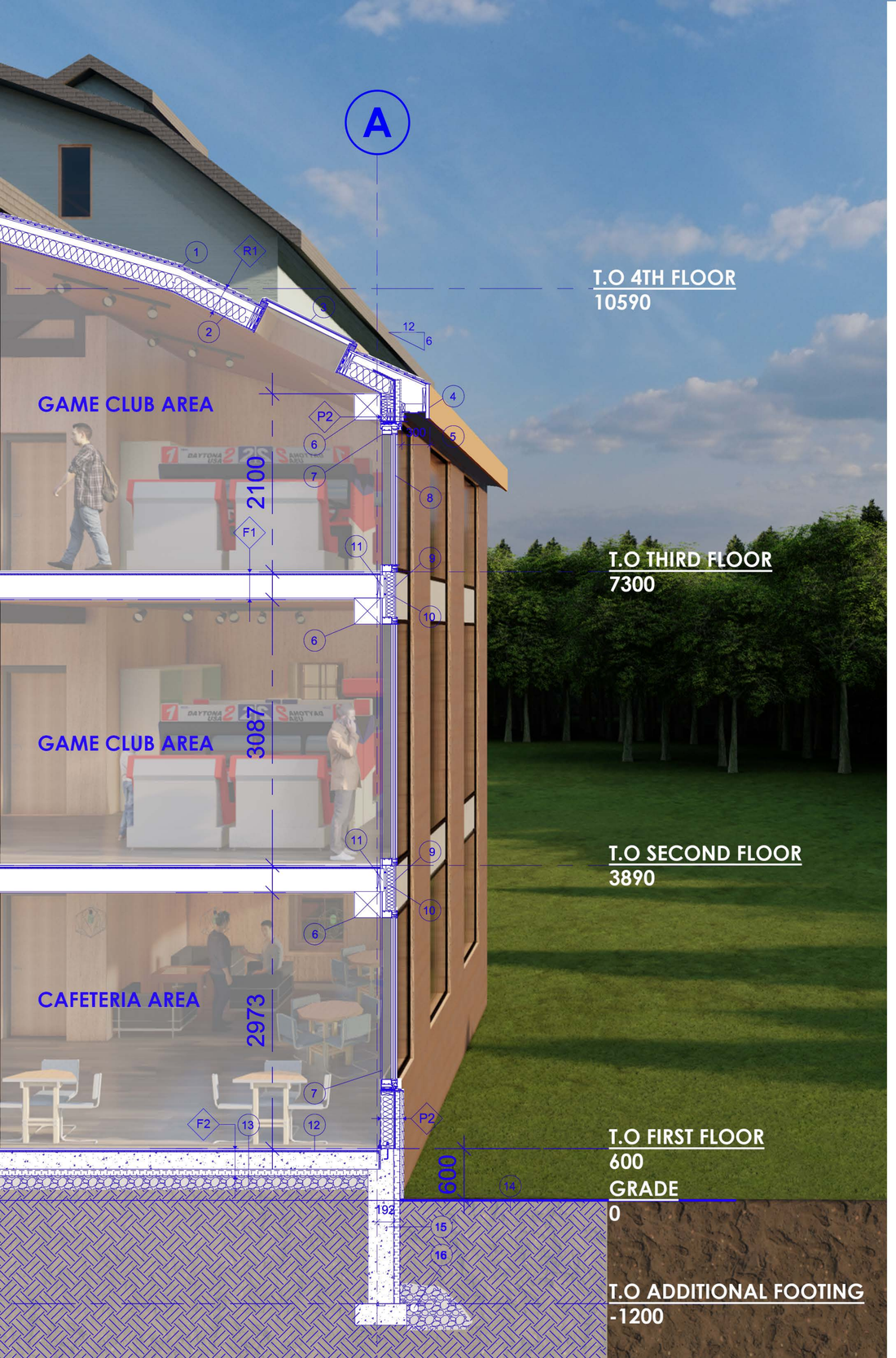
MAJOR PROJECT 2C
SUBMISSION OF 3D WALL SECTION

NAME: PHUONG UYEN TON
INSTRUCTOR: PETER KITCHEN
DATE: AUGUST 15TH 2021



LEGEND

1. ASPHALT SHINGLES ROOF
2. ROOF RAFTERS WITH INSULATION
3. SKYLIGHT
4. FASCIA BOARD
5. SOFFIT VENTILATION
6. ADDITIONAL BEAM
7. KAWNEER MULLION
8. DOUBLE GLASS CURTAIN WALL
9. SOLID SPANDREL PANEL
10. BACKPAN INSULATION
11. THERMAL BRIGDE
12. CONCRETE FOUNDATION
13. GRAVEL SOIL
14. EARTH
15. CONCRETE FOUNDATION WALL

R1-ADDITIONAL ROOF ASSEMBLY

ASPHALT SHINGLES ROOF
ROOF UNDERLAYMENT

19mm	ROOF SHEATHING
38x286mm	ROOF RAFTERS
200mm	MINERAL WOOL
6mil	VAPOUR BARRIER
13mm	WOOD BOARD FINISHED

F1-ADDITIONAL FLOOR ASSEMBLY

19mm	WOOD FLOOR FINISHED
19mm	WOOD SHEATHING
39x286mm	FLOOR JOIST
13mm	WOOD PANEL CEILING

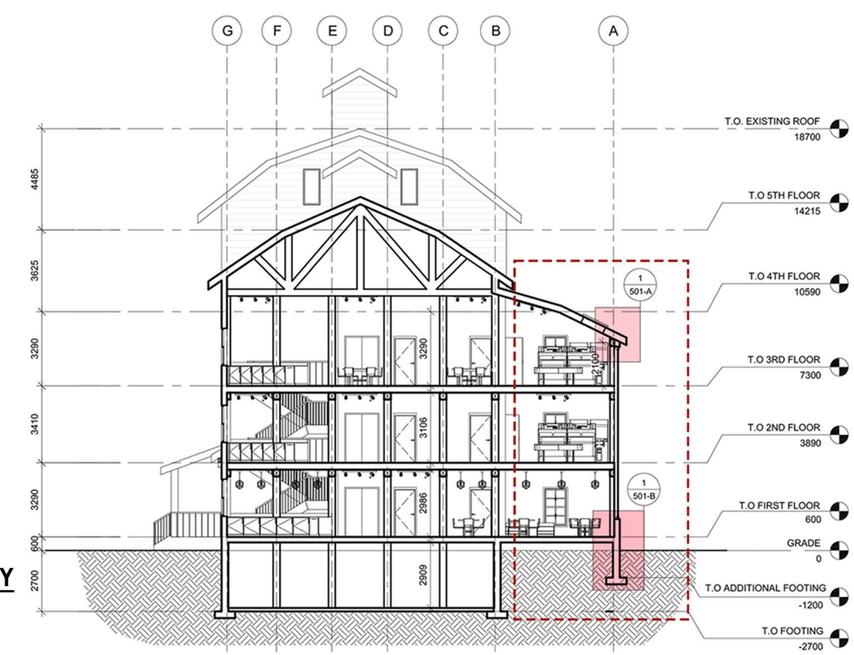
P2 - WOOD SIDING WALL ASSEMBLY

39mm WOOD SIDING
25mm AIR SPACE WITH FURRING TRIP
50mm RIGID INSULATION
19mm OSB SHEATHING
140mm 2x6 WOOD STUB WITH BATT INSULATION
6mil VAPOUR BARRIER
13mm WOOD BOARD FINISHED

F2-ADDITIONAL SLAB CONCRETE ASSEMBLY

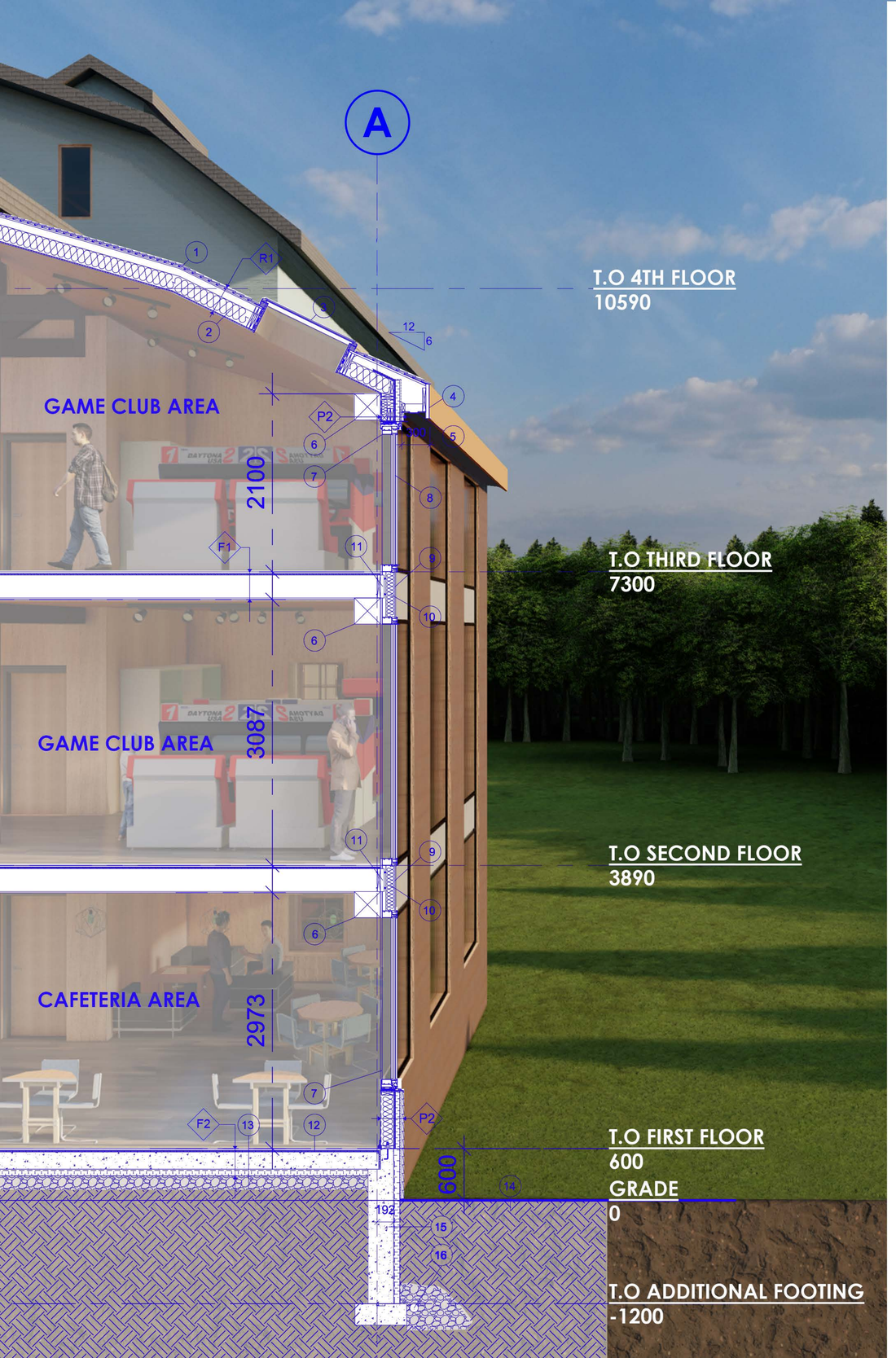
19mm WOOD FLOOR FINISHED
19mm WOOD SHEATHING
200mm CONCRETE SLAB
6mil VAPOUR BARRIER
50mm RIGID INSULATION
150mm GRAVEL FILL ON SOLID EARTH

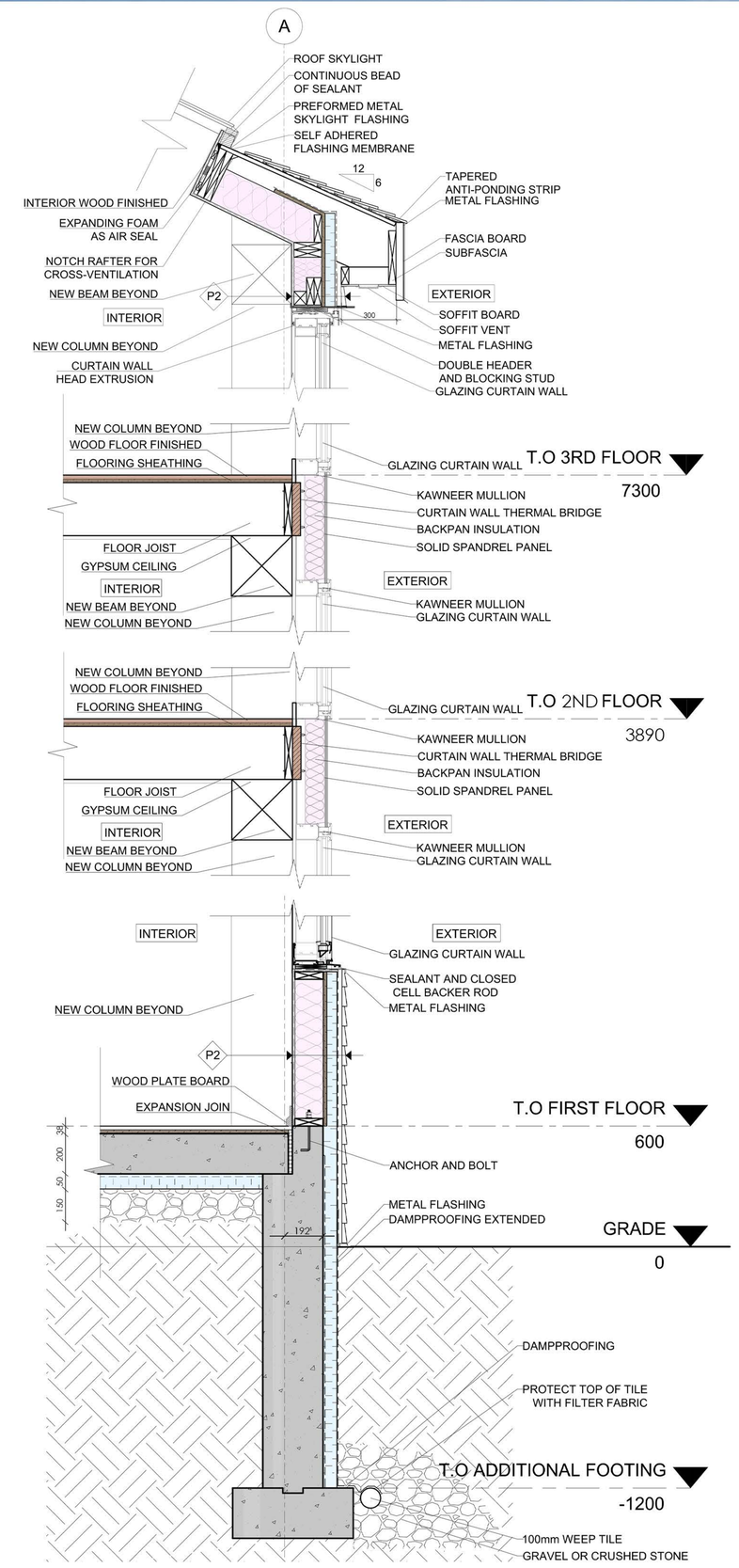
The section shows the additional wall on the north side of the building. To support the load of the cafeteria and game club areas above, the additional foundation was built with a depth of 1.2m using 300 mm concrete cast in place and 50mm rigid insulation and damp proofing outside. The rigid insulation is installed continuously at the top of the wall and is covered by outer wooden boards extending to the ground. The new wall has a wood siding exterior with dark brown tones to be highlighted and stand out from the existing light blue-coloured walls. The main structure of the wall is a wood stud with insulation layers such as batt insulation,19mm OSB sheathing, 50mm rigid insulation, air barrier. The inside is covered with wooden panels with a protective varnish and vapour barrier to prevent moisture and termites. The highlighted part of the section is the curtain wall extending from the top down through the 3 floors of the building. The wall is double glazing supported by a Kawneer aluminum frame. The spandrel panels with back panel insulation are installed at the floor and glass wall intersections to reduce pressure and heat loss for the wall; it ensures continuity and aesthetics for the design. Similar to the gambrel roof on the existing structure, the addition's roof is a wood gambrel roof with dark gray shingles. The rafter size is 39x286mm with 200mm mineral wool, sheathing, roof underlayment, and wood ceiling panel. In addition, the skylight details are also designed and ensured for the continuity and airtightness of the open areas.



KEYPLAN SECTION

0 5m 10m





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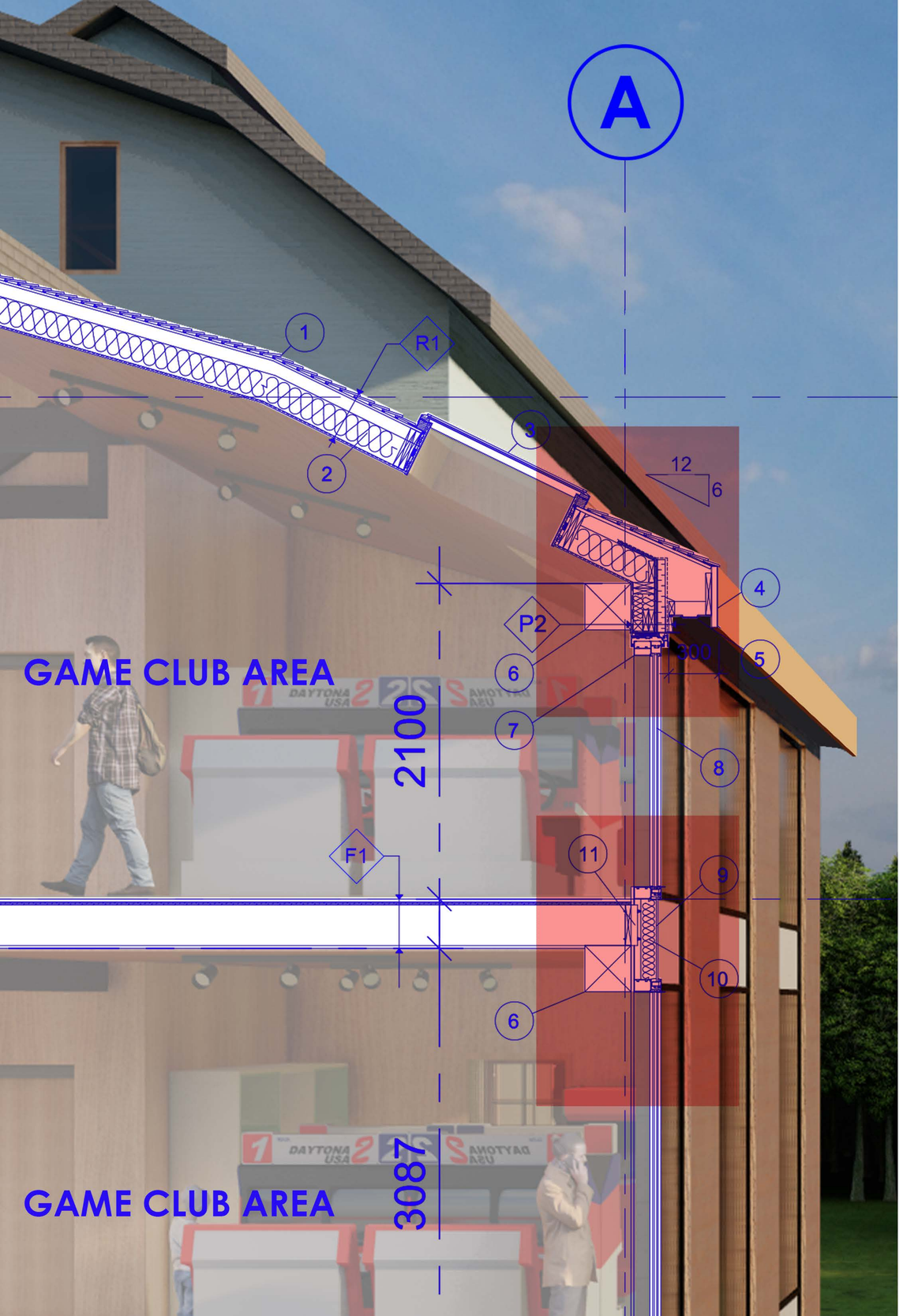

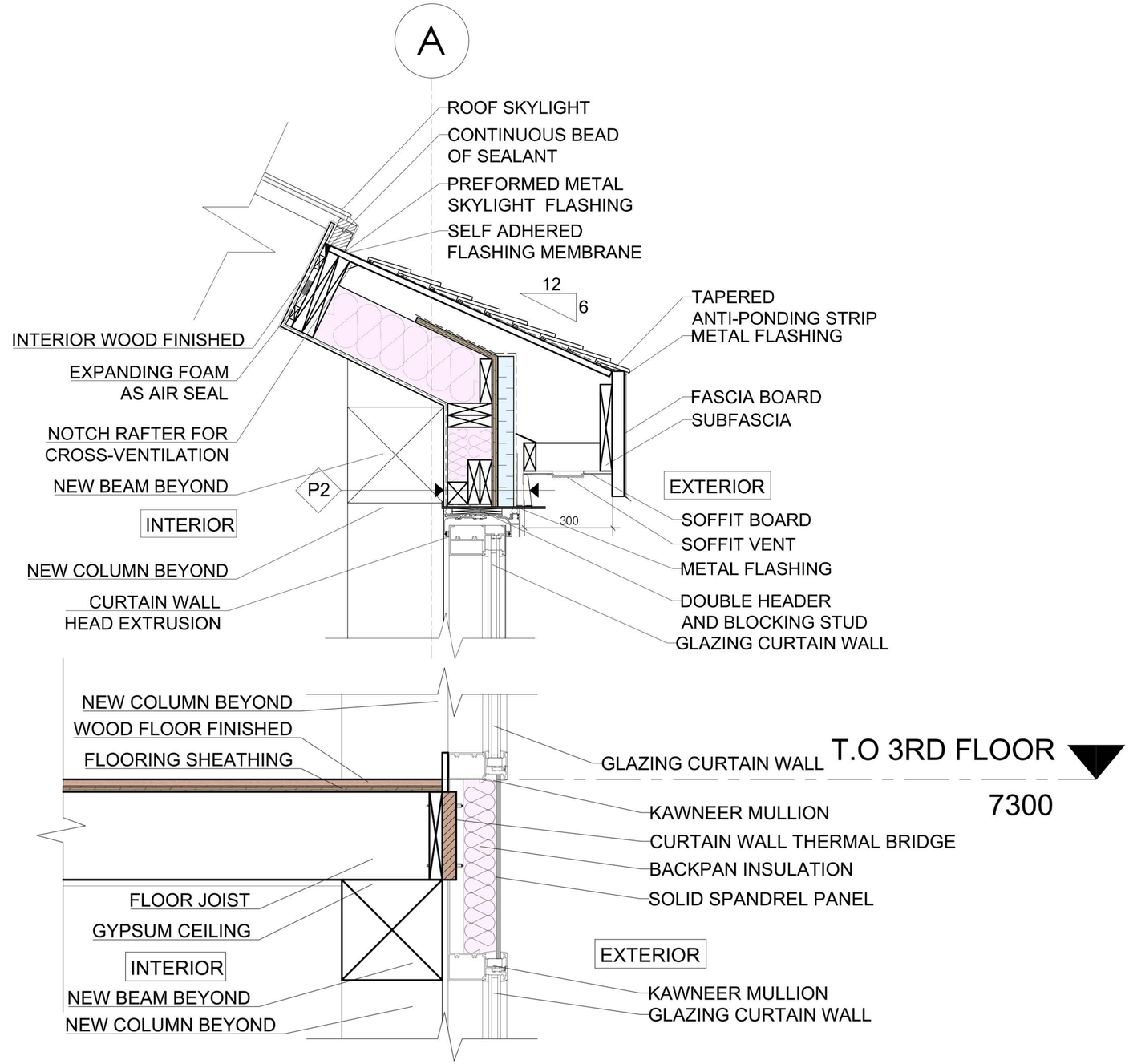

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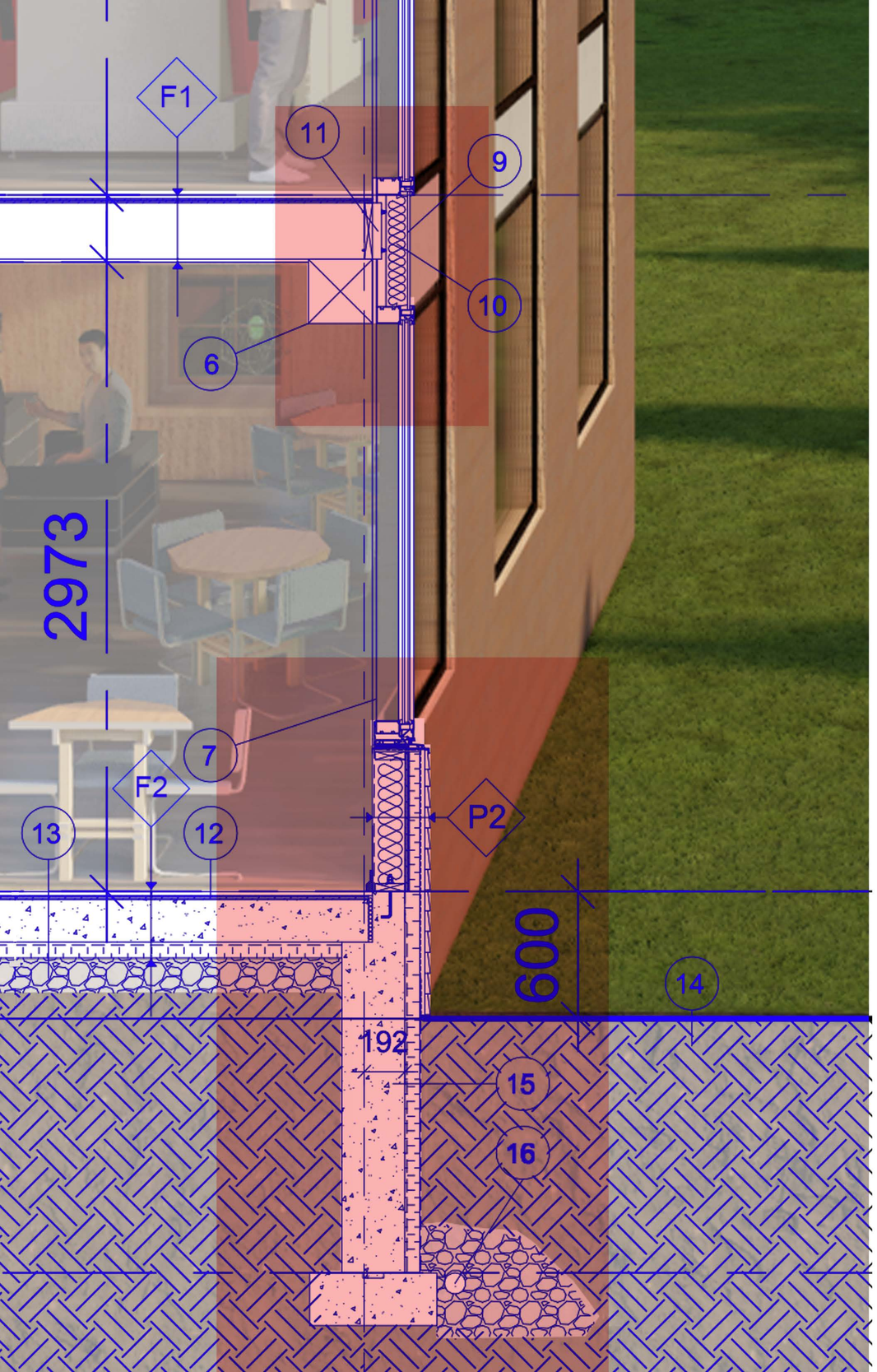

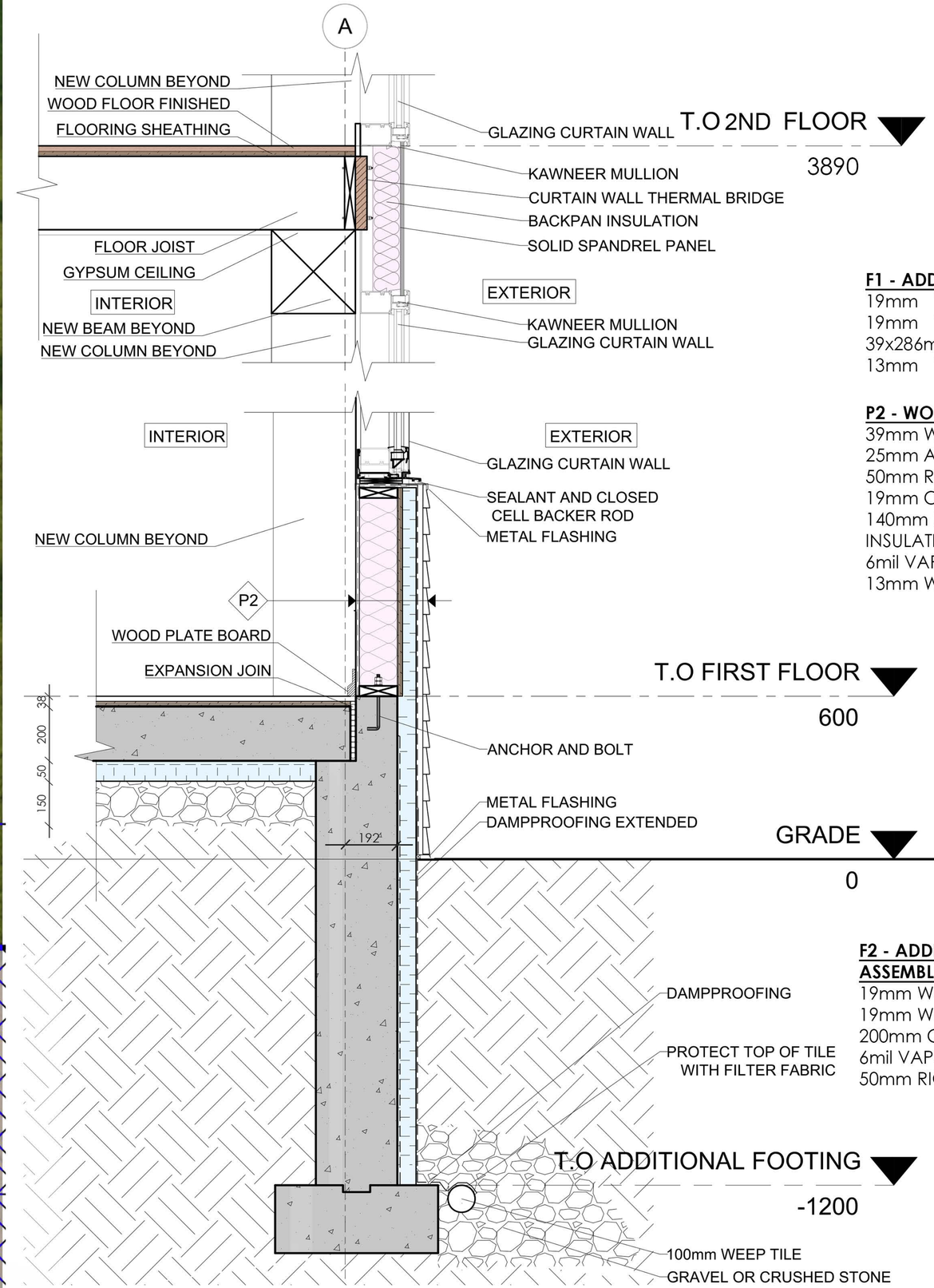

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